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

February 25, 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: 415438)
0 Old Shelton Rd (off Lane St) aka 15 Soundview Ave, Shelton, CT
N 41.295 // W -73.137

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains 15 antennas at the 120-foot level on the existing 120.6-foot monopine tower, located off Lane St (0 Old Shelton Rd) at the Harry B. Brownson Country Club, 15 Soundview Ave, Shelton, CT. The Council approved Verizon Wireless use of the tower in 2009. The tower is owned by American Tower. The property is owned by Harry B. Brownson Country Club. Verizon Wireless now intends to remove 9 of its existing antennas and to replace with 9 installing 6 on side-by-side mounts for the LTE (700/850/1900/2100/3500 MHz) PCS/AWS/CBRS upgrade. Additionally, Verizon Wireless will replace over-voltage protector (OVP) and remote radio head units (RRUs) with 9 new RRUs and 1 OVP, 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 City of Shelton's Mayor Mark A. Lauretti, to its Planning & Zoning Administrator Rick Schultz, to American Tower, the tower owner, and to the ground owner, Brownson Country Club.

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 February 18, 2020, structural analysis dated November 1, 2019 and antenna mount analysis dated January 22 and stamped February 12, 2020 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 November 1, 2019 and stamped November 4, 2019 and mount analysis dated January 22 and stamped February 12, 2020.

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
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

Attachments

cc: Mark A. Lauretti, Mayor, City of Shelton - as elected official
Richard Schultz, AICP, Planning & Zoning Administrator, City of Shelton - as P&Z official
Harry B. Brownson Country Club - as ground owner
American Tower Corporation - as tower owner

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

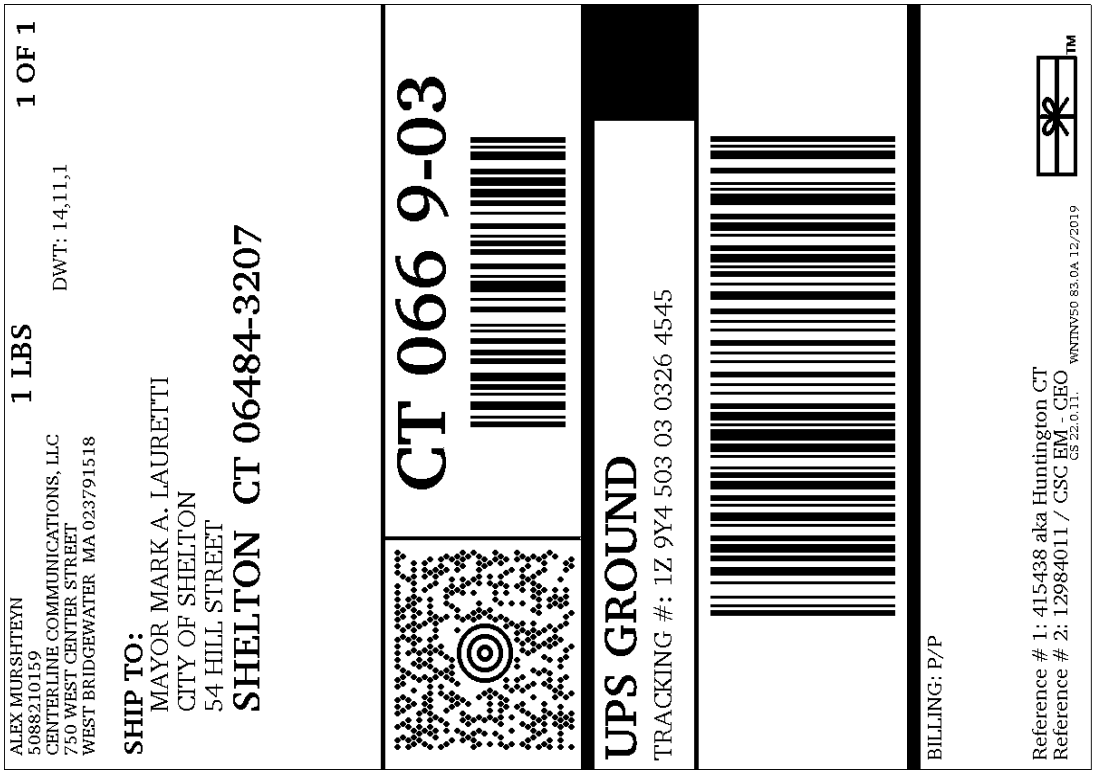
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

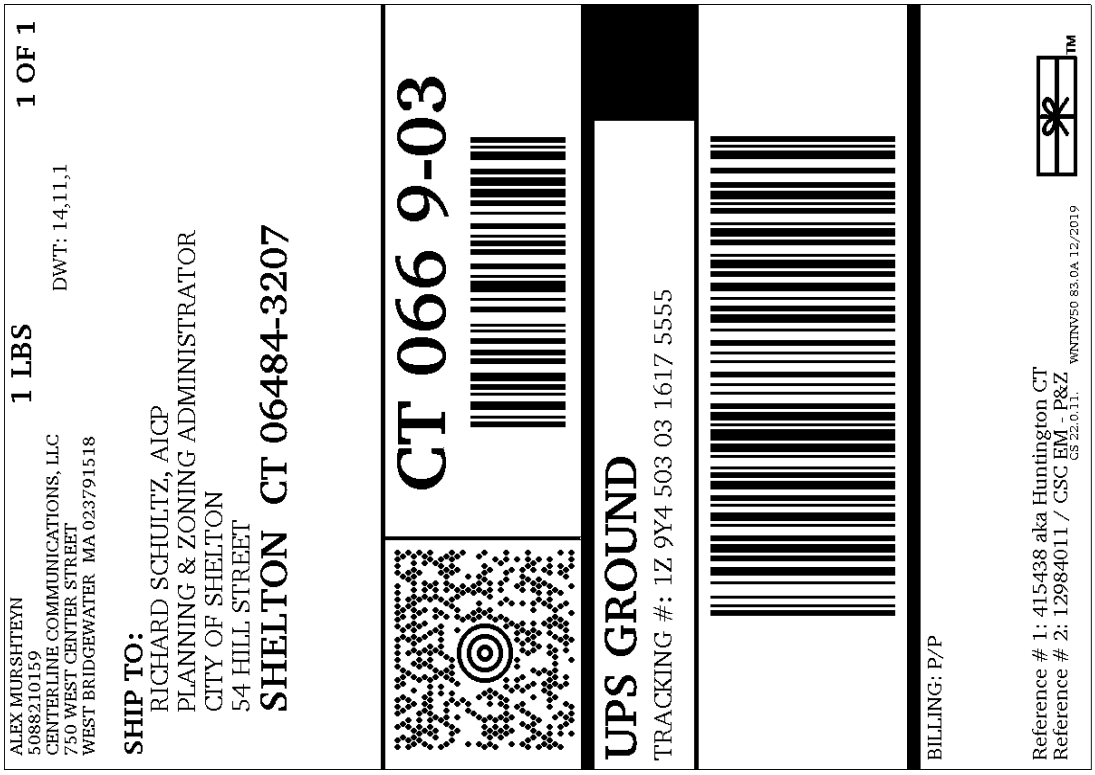
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

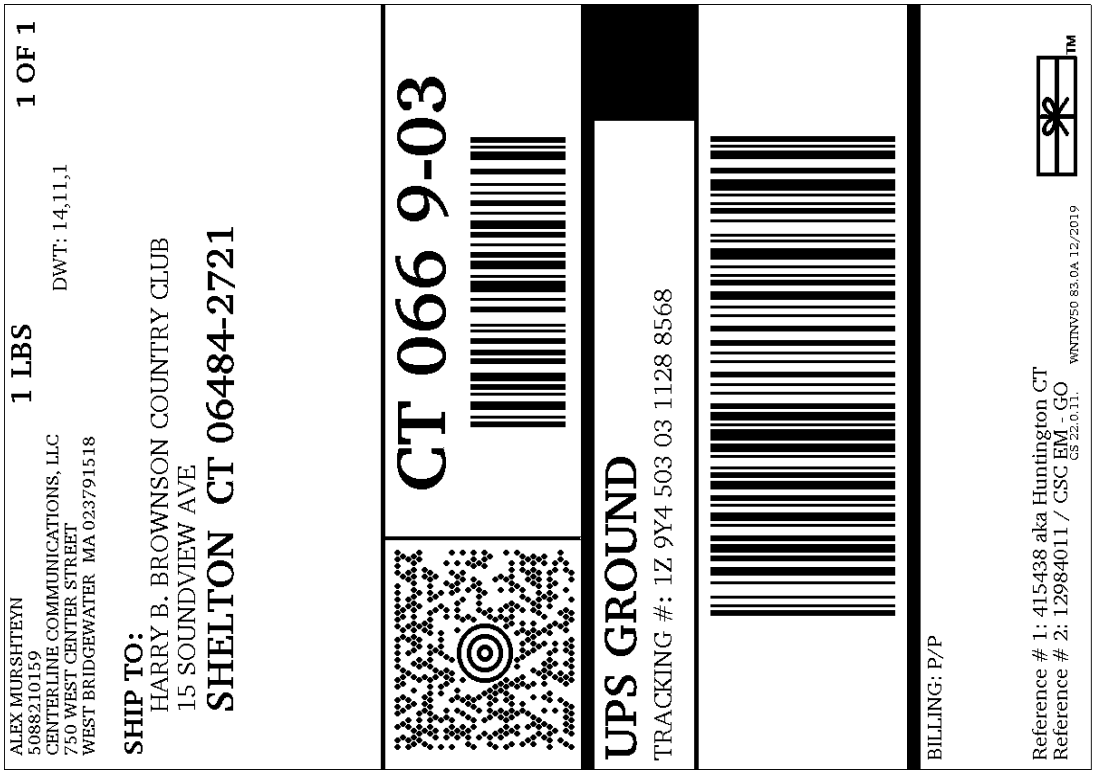
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE

DOCKET NO. 382 – Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public need for the construction, maintenance and operation of a telecommunications facility located off Lane Street, Shelton, Connecticut.	}	Connecticut Siting Council December 3, 2009

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership d/b/a Verizon Wireless, hereinafter referred to as the Certificate Holder, for a telecommunications facility located at the Brownson Country Club off Lane Street, Shelton, Connecticut.

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

1. The monopole tower shall be designed and constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of the Certificate Holder and other entities, both public and private, but such monopole shall not exceed a height of 120 feet above ground level. The Certificate Holder shall provide plans and photo-simulations of a monopole in the form of a simulated pine tree for Council consideration. The final form of the tower will be decided by the Council during the Development and Management Plan approval.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan with a monopole option and a stealth tree design option, shall be served on the City of Shelton for comment, and all parties and intervenors as listed in the service list, and submitted to the Council for review and approval 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) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
    c) the width of access road shall be minimized to the greatest practical extent.
    d) the access gate at the entrance on Lane Street shall conform to the character of the neighborhood; and
    e) screening vegetation along the west side of the compound.

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

4. 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.

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

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

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

8. Any request for extension of the time period referred to in Condition 7 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 City of Shelton. Any proposed modifications to this Decision and Order shall likewise be so served.

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

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

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

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

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

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 Sandy Carter, Regulatory Manager Verizon Wireless 99 East River Drive East Hartford, CT 06108

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**120.6 ft Monopine**
ATC Site Name	:	**Brownson Country Club CT, CT**
ATC Asset Number	:	**415438**
Engineering Number	:	**12984011_C3_03**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**Huntington CT**
Carrier Site Number	:	**468942**
Site Location	:	**15 Soundview Avenue** **SHELTON, CT 06484-2844** **41.295000,-73.137200**
County	:	**Fairfield**
Date	:	**November 1, 2019**
Max Usage	:	**49%**
Result	:	**Pass**

Prepared By:
Hansol Shin, E.I.
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32598
LICENSED
PROFESSIONAL ENGINEER

Jessica Schulman
Nov 4 2019 9:54 AM cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction 1

Supporting Documents 1

Analysis 1

Conclusion 1

Existing and Reserved Equipment 2

Equipment to be Removed 2

Proposed Equipment 2

Structure Usages 3

Foundations 3

Deflection and Sway 3

Standard Conditions 4

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 120.6 ft monopine to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	EEI Project #16219, dated March 1, 2012
Foundation Drawing	Mapping by TPS Report #TPS-FL-CT-438, dated September 10, 2015
Geotechnical Report	FDH Velocitel Project #15BXNW1600, dated August 21, 2015

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, Vasd) / 125 mph (3-Second Gust, Vult)
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 = 0.20, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
118.0	-	VZW Unused Reserve: 18030 sq. in.	-	-	VERIZON WIRELESS

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
120.0	1	RFS DB-T1-6Z-8AB-0Z	-	(17) 1 5/8" Coax (1) 1 5/8" Hybriflex	VERIZON WIRELESS
118.0	6	Commscope SBNHH-1D65B (72.9")			
	6	Decibel DB846F65ZAXY			
	3	Amphenol Antel BXA-70063-6CF-EDIN-2			
	3	Alcatel-Lucent RRH2X60-AWS			
	3	Alcatel-Lucent RRH2x60 700			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
120.0	3	Samsung Outdoor CBRS 20W RRH	T-Arm	(6) 1 5/8" Coax (1) 2.02 (51.2mm) Hybrid	VERIZON WIRELESS
	3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung B2/B66A RRH-BR049			
	1	RFS DB-C1-12C-24AB-0Z			
	6	Decibel DB846F65ZAXY			
	6	Quintel QS6656-5D			

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

Install proposed lines inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	49%	Pass
Shaft	48%	Pass
Base Plate	24%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	5,222.0	15%
Axial (Kips)	67.9	6%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
120.0	Samsung Outdoor CBRS 20W RRH	VERIZON WIRELESS	0.564	0.444
	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna			
	Samsung B5/B13 RRH-BR04C			
	Samsung B2/B66A RRH-BR049			
	RFS DB-C1-12C-24AB-0Z			
	Decibel DB846F65ZAXY			
	Quintel QS6656-5D			

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

AMERICAN TOWER®
CORPORATION

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:

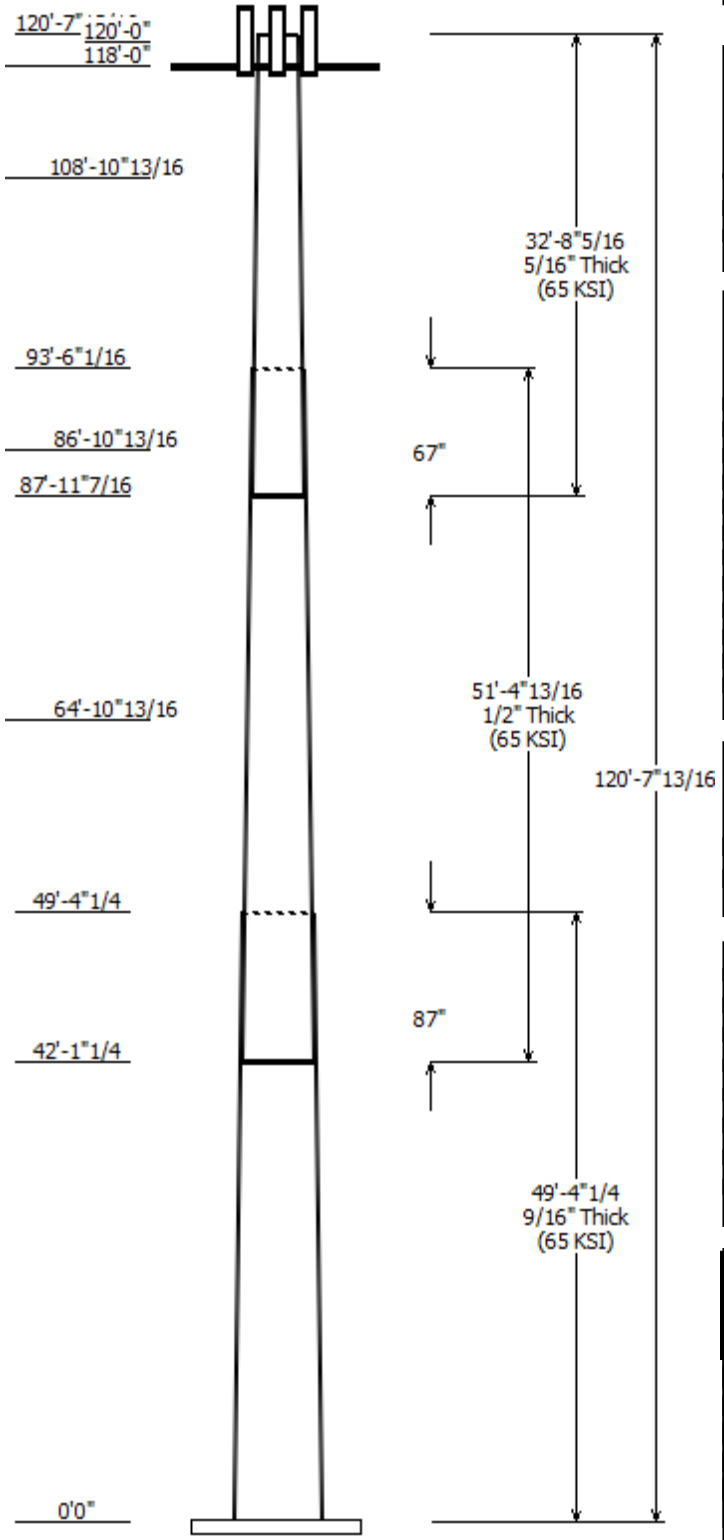
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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 :	415438
Code:	ANSI/TIA-222-G
Location :	Brownson Country Club CT, CT
Description :	Monopine
Struct Class :	II
Shape :	18 Sides
Exposure :	B
Height :	120.65 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.310041 (in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Steel Grade Shape	(ksi)
1	49.354	50.69	66.00	0.563		0.000	18 Sides	65
2	51.401	38.00	53.94	0.500	Slip Joint	86.969	18 Sides	65
3	32.694	30.21	40.35	0.313	Slip Joint	66.625	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
120.000	120.000	6	Quintel QS6656-5D
120.000	120.000	6	Decibel DB846F65ZAXY
120.000	120.000	1	RFS DB-C1-12C-24AB-0Z
120.000	120.000	3	Samsung B2/B66A RRH-BR049
120.000	120.000	3	Samsung B5/B13 RRH-BR04C
120.000	120.000	3	Samsung Outdoor CBRS 20W
120.000	120.000	3	Samsung Outdoor CBRS 20W
118.000	118.000	1	VZW Unused Reserve: 18030
118.000	118.000	3	Flat T-Arm
108.900	108.900	1	Branch 3
86.900	86.900	1	Branch 2
64.900	64.900	1	Branch 1

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	120.0	1 5/8" Coax	No
0.000	120.0	2.02 (51.2mm)	No

Load Cases

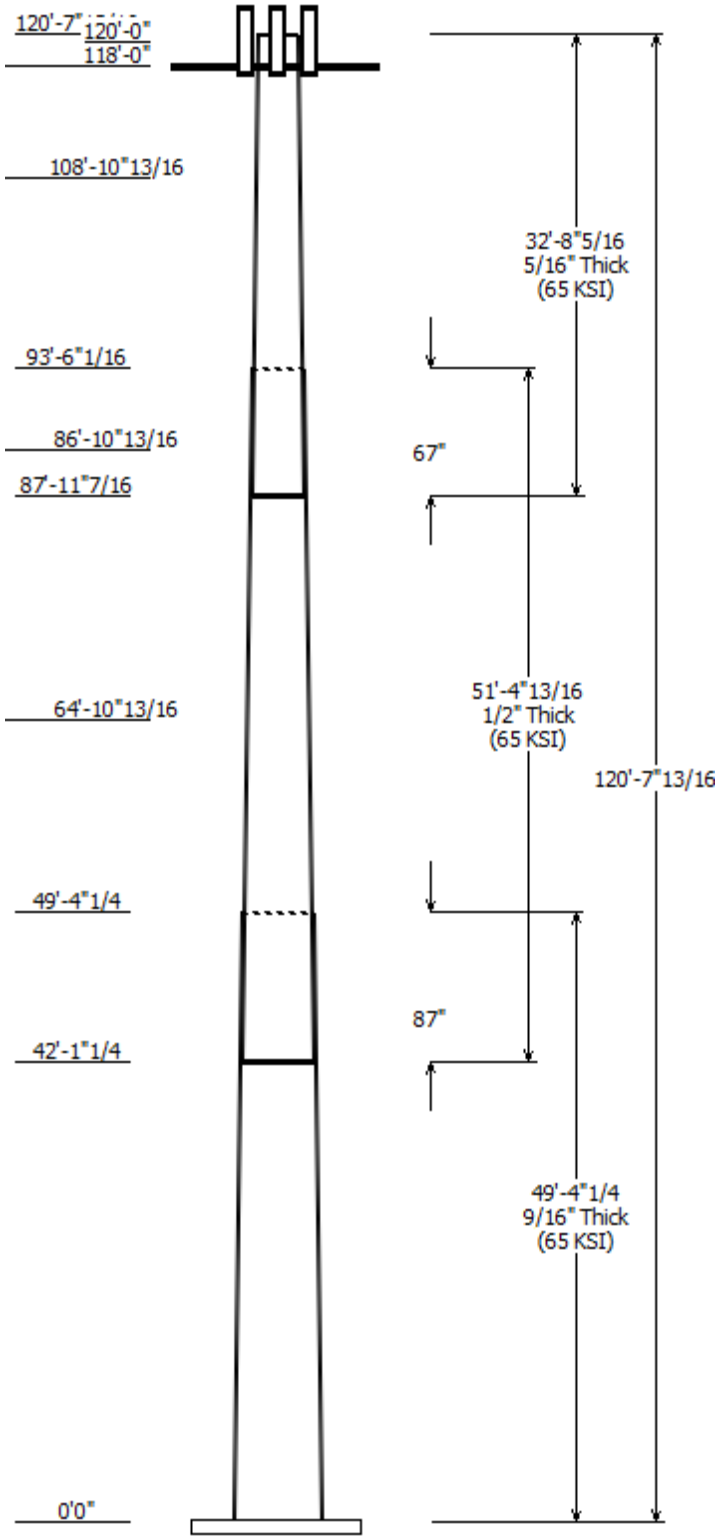
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL)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

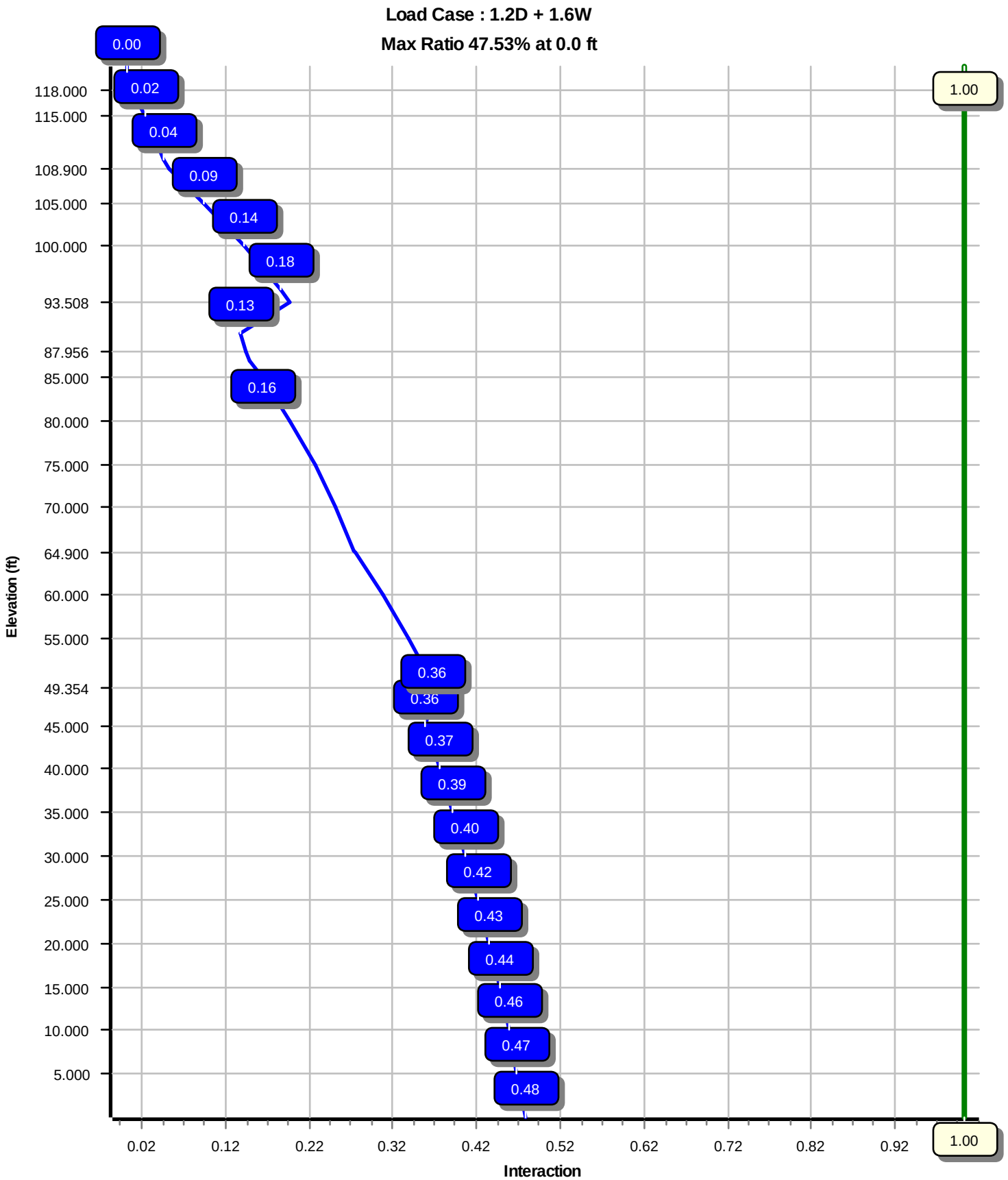
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	5222.01	61.41	50.95
0.9D + 1.6W	5210.12	61.40	38.20
1.2D + 1.0Di + 1.0Wi	1460.43	17.28	67.86
(1.2 + 0.2Sds) * DL + E ELFM	239.50	2.92	50.34
(1.2 + 0.2Sds) * DL + E EMAM	217.65	2.38	50.34
(0.9 - 0.2Sds) * DL + E ELFM	238.85	2.92	34.73
(0.9 - 0.2Sds) * DL + E EMAM	217.00	2.38	34.73

1.0D + 1.0W	1115.79	13.14	42.51

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 47.53% at 0.0 ft
0.00
0.02
0.04
0.09
0.14
0.18
0.13
0.16
0.36
0.36
0.37
0.39
0.40
0.42
0.43
0.44
0.46
0.47
0.48
1.00
1.00
118.000
115.000
108.900
105.000
100.000
93.508
87.956
85.000
80.000
75.000
70.000
64.900
60.000
55.000
49.354
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 415438 Code: ANSI/TIA-222-G

Site Name: Brownson Country Club CT, CT Engineering Number:12984011_C3_03 11/1/2019 3:42:57 PM

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	Fairfield County, CT	Height (ft) :	120.65
Code :	ANSI/TIA-222-G	Base Diameter (in) :	66.00
Shape :	18 Sides	Top Diameter (in) :	30.22
Pole Type :	Taper	Taper (in/ft) :	0.310
Pole Manfacturer :	EEI	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):	0.93				
T_L (sec):	6	p:	1	C_s:	0.069
S_s:	0.200	S_1:	0.060	C_s Max:	0.069
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.213	S_{d1}:	0.096		

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

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	49.354	0.5625	65		0.00	17,326	66.00	0.00	116.83	63204.4	19.28	117.33	50.69	49.35	89.51	28425.6	14.48	90.13	0.310041
2-18	51.401	0.5000	65	Slip	86.97	12,623	53.94	42.11	84.81	30608.5	17.61	107.89	38.00	93.51	59.52	10580.7	11.99	76.02	0.310041
3-18	32.694	0.3125	65	Slip	66.63	3,859	40.35	87.96	39.72	8045.7	21.36	129.14	30.21	120.65	29.66	3351.8	15.64	96.70	0.310041
				Shaft Weight		33,808													

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
120.00	Samsung Outdoor CBRS 20W	3	0.80	0.000	18.60	0.860	0.50	42.10	1.476	0.50
120.00	Samsung Outdoor CBRS 20W	3	0.80	0.000	4.40	0.890	0.50	22.03	1.514	0.50
120.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.880	0.50	126.31	2.766	0.50
120.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.880	0.50	146.86	2.766	0.50
120.00	RFS DB-C1-12C-24AB-0Z	1	0.80	0.000	32.00	4.060	1.00	156.44	5.398	1.00
120.00	Decibel DB846F65ZAXY	6	0.80	0.000	21.00	7.030	0.75	213.02	8.250	0.75
120.00	Quintel QS6656-5D	6	0.80	0.000	88.00	8.130	0.74	283.08	10.858	0.74
118.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	454.20	20.890	0.67
118.00	VZW Unused Reserve: 18030 sq	1	0.80	0.000	1,280.90	125.210	0.90	2,152.76	210.436	0.90
108.90	Branch 3	1	1.00	0.000	1,125.00	290.500	1.00	1,884.22	486.549	1.00
86.90	Branch 2	1	1.00	0.000	1,575.00	406.700	1.00	2,614.93	675.234	1.00
64.90	Branch 1	1	1.00	0.000	1,800.00	464.800	1.00	2,951.13	762.048	1.00
Totals	Num Loadings:12	32			7,750.00			15,110.58		

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	120.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	120.00	1	2.02 (51.2mm) Hybrid	2.02	3.04	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		0.5625	66.000	116.826	63,204.4	19.28	117.33	78.7	1886.	0.0	0.0
5.00		0.5625	64.450	114.059	58,818.0	18.79	114.58	79.3	1797.	0.0	1,964.1
10.00		0.5625	62.900	111.291	54,639.5	18.31	111.82	79.9	1711.	0.0	1,917.0
15.00		0.5625	61.349	108.523	50,663.7	17.82	109.07	80.4	1626.	0.0	1,870.0
20.00		0.5625	59.799	105.756	46,885.6	17.33	106.31	81.0	1544.	0.0	1,822.9
25.00		0.5625	58.249	102.988	43,300.1	16.85	103.55	81.6	1464.	0.0	1,775.8
30.00		0.5625	56.699	100.221	39,902.3	16.36	100.80	82.2	1386.	0.0	1,728.7
35.00		0.5625	55.149	97.453	36,687.0	15.88	98.04	82.6	1310.	0.0	1,681.6
40.00		0.5625	53.598	94.686	33,649.3	15.39	95.29	82.6	1236.	0.0	1,634.5
42.11	Bot - Section 2	0.5625	52.945	93.519	32,421.4	15.19	94.12	82.6	1206.	0.0	674.5
45.00		0.5625	52.048	91.918	30,784.1	14.90	92.53	82.6	1164.	0.0	1,740.9
49.35	Top - Section 1	0.5000	51.698	81.249	26,907.9	16.82	103.40	81.6	1025.	0.0	2,563.6
50.00		0.5000	51.498	80.931	26,593.4	16.75	103.00	81.7	1017.	0.0	178.3
55.00		0.5000	49.948	78.471	24,241.2	16.20	99.90	82.3	955.9	0.0	1,356.0
60.00		0.5000	48.398	76.011	22,032.0	15.66	96.80	82.6	896.6	0.0	1,314.2
64.90		0.5000	46.878	73.600	20,001.4	15.12	93.76	82.6	840.4	0.0	1,247.3
65.00		0.5000	46.847	73.551	19,961.3	15.11	93.69	82.6	839.2	0.0	25.0
70.00		0.5000	45.297	71.091	18,024.6	14.56	90.59	82.6	783.7	0.0	1,230.5
75.00		0.5000	43.747	68.630	16,217.4	14.02	87.49	82.6	730.2	0.0	1,188.6
80.00		0.5000	42.197	66.170	14,535.2	13.47	84.39	82.6	678.5	0.0	1,146.7
85.00		0.5000	40.647	63.710	12,973.6	12.92	81.29	82.6	628.7	0.0	1,104.9
86.90		0.5000	40.057	62.775	12,410.8	12.72	80.11	82.6	610.2	0.0	408.9
87.96	Bot - Section 3	0.5000	39.730	62.256	12,105.3	12.60	79.46	82.6	600.1	0.0	224.5
90.00		0.5000	39.096	61.250	11,528.0	12.38	78.19	82.6	580.8	0.0	703.7
93.51	Top - Section 2	0.3125	38.634	38.009	7,052.1	20.39	123.63	77.4	359.5	0.0	1,180.8
95.00		0.3125	38.171	37.550	6,799.7	20.13	122.15	77.7	350.9	0.0	191.9
100.0		0.3125	36.621	36.012	5,998.1	19.25	117.19	78.8	322.6	0.0	625.8
105.0		0.3125	35.071	34.475	5,262.2	18.38	112.23	79.8	295.5	0.0	599.6
108.9		0.3125	33.862	33.275	4,731.9	17.70	108.36	80.6	275.2	0.0	449.5
110.0		0.3125	33.521	32.937	4,589.1	17.50	107.27	80.8	269.6	0.0	123.9
115.0		0.3125	31.970	31.399	3,975.9	16.63	102.31	81.8	244.9	0.0	547.3
118.0		0.3125	31.040	30.477	3,635.7	16.10	99.33	82.5	230.7	0.0	315.8
120.0		0.3125	30.420	29.862	3,420.0	15.75	97.34	82.6	221.4	0.0	205.3
120.6		0.3125	30.219	29.662	3,351.8	15.64	96.70	82.6	218.5	0.0	65.8
											33,808.1

Site Number: 415438 Code: ANSI/TIA-222-G

Site Name: Brownson Country Club CT, CT Engineering Number:12984011_C3_03 11/1/2019 3:42:57 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.6W 97 mph with No Ice 17 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

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		252.8	0.0					0.0	0.0	252.8	0.0	0.0	0.0
5.00		499.7	2,357.0					0.0	47.8	499.7	2,404.7	0.0	0.0
10.00		487.7	2,300.4					0.0	47.8	487.7	2,348.2	0.0	0.0
15.00		475.6	2,243.9					0.0	47.8	475.6	2,291.7	0.0	0.0
20.00		463.6	2,187.4					0.0	47.8	463.6	2,235.2	0.0	0.0
25.00		451.6	2,130.9					0.0	47.8	451.6	2,178.7	0.0	0.0
30.00		444.8	2,074.4					0.0	47.8	444.8	2,122.2	0.0	0.0
35.00		446.8	2,017.9					0.0	47.8	446.8	2,065.7	0.0	0.0
40.00		320.1	1,961.4					0.0	47.8	320.1	2,009.2	0.0	0.0
42.11	Bot - Section 2	228.9	809.5					0.0	20.1	228.9	829.6	0.0	0.0
45.00		335.0	2,089.1					0.0	27.6	335.0	2,116.7	0.0	0.0
49.35	Top - Section 1	231.2	3,076.3					0.0	41.6	231.2	3,117.9	0.0	0.0
50.00		260.8	213.9					0.0	6.2	260.8	220.1	0.0	0.0
55.00		460.7	1,627.2					0.0	47.8	460.7	1,675.0	0.0	0.0
60.00		453.1	1,577.0					0.0	47.8	453.1	1,624.8	0.0	0.0
64.90		227.9	1,496.7					0.0	46.8	227.9	1,543.5	0.0	0.0
65.00		229.9	30.0					0.0	1.0	229.9	31.0	0.0	0.0
70.00		447.6	1,476.5					0.0	47.8	447.6	1,524.3	0.0	0.0
75.00		440.9	1,426.3					0.0	47.8	440.9	1,474.1	0.0	0.0
80.00		433.2	1,376.1					0.0	47.8	433.2	1,423.9	0.0	0.0
85.00		294.9	1,325.9					0.0	47.8	294.9	1,373.6	0.0	0.0
86.90		124.7	490.7					0.0	18.1	124.7	508.8	0.0	0.0
87.96	Bot - Section 3	131.0	269.4					0.0	10.1	131.0	279.5	0.0	0.0
90.00		233.4	844.5					0.0	19.5	233.4	864.0	0.0	0.0
93.51	Top - Section 2	208.4	1,417.0					0.0	33.5	208.4	1,450.5	0.0	0.0
95.00		264.9	230.2					0.0	14.3	264.9	244.5	0.0	0.0
100.00		400.7	750.9					0.0	47.8	400.7	798.7	0.0	0.0
105.00		347.5	719.6					0.0	47.8	347.5	767.3	0.0	0.0
108.90		191.6	539.5					0.0	37.3	191.6	576.7	0.0	0.0
110.00		227.0	148.7					0.0	10.5	227.0	159.2	0.0	0.0
115.00		293.4	656.8					0.0	47.8	293.4	704.5	0.0	0.0
118.00	Appurtenance(s)	178.8	379.0	4,573.2	0.0	0.0	2,437.1	0.0	28.7	4,751.9	2,844.7	0.0	0.0
120.00	Appurtenance(s)	93.4	246.4	2,685.3	0.0	0.0	1,462.9	0.0	19.1	2,778.7	1,728.4	0.0	0.0
120.65		22.7	79.0					0.0	0.0	22.7	79.0	0.0	0.0
								Totals:		17,862.9	45,615.9	0.00	0.00

Load Case: 1.2D + 1.6W 97 mph with No Ice 17 Iterations

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-50.95	-61.41	0.00	-5,222.01	0.00	5,222.01	8,277.51	4,138.76	22,240.6	11,136.8	0.00	0.00	0.475
5.00	-48.43	-61.00	0.00	-4,914.97	0.00	4,914.97	8,140.09	4,070.04	21,348.8	10,690.3	0.06	-0.11	0.466
10.00	-45.96	-60.60	0.00	-4,609.95	0.00	4,609.95	7,999.82	3,999.91	20,467.4	10,248.9	0.25	-0.23	0.456
15.00	-43.55	-60.20	0.00	-4,306.95	0.00	4,306.95	7,856.70	3,928.35	19,596.9	9,813.03	0.55	-0.35	0.445
20.00	-41.19	-59.81	0.00	-4,005.93	0.00	4,005.93	7,710.74	3,855.37	18,737.8	9,382.86	0.97	-0.46	0.433
25.00	-38.90	-59.42	0.00	-3,706.90	0.00	3,706.90	7,561.93	3,780.96	17,890.8	8,958.71	1.52	-0.58	0.419
30.00	-36.66	-59.02	0.00	-3,409.82	0.00	3,409.82	7,410.27	3,705.13	17,056.3	8,540.84	2.19	-0.70	0.404
35.00	-34.48	-58.62	0.00	-3,114.71	0.00	3,114.71	7,240.28	3,620.14	16,200.3	8,112.19	2.99	-0.81	0.389
40.00	-32.39	-58.31	0.00	-2,821.62	0.00	2,821.62	7,034.66	3,517.33	15,288.6	7,655.69	3.90	-0.93	0.373
42.11	-31.51	-58.10	0.00	-2,698.78	0.00	2,698.78	6,948.03	3,474.02	14,912.4	7,467.32	4.32	-0.98	0.366
45.00	-29.32	-57.77	0.00	-2,530.67	0.00	2,530.67	6,829.04	3,414.52	14,403.4	7,212.41	4.94	-1.04	0.355
49.35	-26.15	-57.51	0.00	-2,279.13	0.00	2,279.13	5,968.08	2,984.04	12,531.6	6,275.12	5.93	-1.14	0.368
50.00	-25.87	-57.27	0.00	-2,241.98	0.00	2,241.98	5,950.78	2,975.39	12,445.9	6,232.22	6.09	-1.15	0.364
55.00	-24.09	-56.82	0.00	-1,955.63	0.00	1,955.63	5,815.30	2,907.65	11,789.3	5,903.41	7.36	-1.27	0.336
60.00	-22.38	-56.37	0.00	-1,671.52	0.00	1,671.52	5,647.21	2,823.61	11,086.0	5,551.25	8.75	-1.37	0.305
64.90	-19.06	-39.72	0.00	-1,395.31	0.00	1,395.31	5,468.10	2,734.05	10,390.4	5,202.93	10.21	-1.47	0.272
65.00	-19.00	-39.51	0.00	-1,391.34	0.00	1,391.34	5,464.44	2,732.22	10,376.4	5,195.94	10.24	-1.47	0.271
70.00	-17.43	-39.05	0.00	-1,193.80	0.00	1,193.80	5,281.67	2,640.84	9,690.35	4,852.38	11.83	-1.56	0.250
75.00	-15.91	-38.59	0.00	-998.57	0.00	998.57	5,098.90	2,549.45	9,027.72	4,520.57	13.52	-1.65	0.224
80.00	-14.45	-38.13	0.00	-805.63	0.00	805.63	4,916.13	2,458.06	8,388.55	4,200.51	15.29	-1.73	0.195
85.00	-13.06	-37.80	0.00	-614.98	0.00	614.98	4,733.35	2,366.68	7,772.85	3,892.20	17.15	-1.80	0.161
86.90	-11.15	-22.07	0.00	-543.15	0.00	543.15	4,663.90	2,331.95	7,545.03	3,778.12	17.87	-1.82	0.146
87.96	-10.87	-21.93	0.00	-519.86	0.00	519.86	4,625.32	2,312.66	7,419.94	3,715.49	18.27	-1.84	0.142
90.00	-10.00	-21.67	0.00	-475.02	0.00	475.02	4,550.58	2,275.29	7,180.61	3,595.64	19.06	-1.86	0.134
93.51	-8.54	-21.42	0.00	-399.00	0.00	399.00	2,648.37	1,324.19	4,168.99	2,087.59	20.45	-1.90	0.195
95.00	-8.29	-21.15	0.00	-367.03	0.00	367.03	2,626.77	1,313.39	4,084.66	2,045.36	21.04	-1.91	0.183
100.00	-7.49	-20.73	0.00	-261.26	0.00	261.26	2,552.56	1,276.28	3,805.39	1,905.52	23.08	-1.98	0.140
105.00	-6.72	-20.36	0.00	-157.59	0.00	157.59	2,475.49	1,237.75	3,531.59	1,768.42	25.19	-2.03	0.092
108.90	-5.22	-8.27	0.00	-78.16	0.00	78.16	2,413.41	1,206.70	3,322.18	1,663.56	26.86	-2.05	0.049
110.00	-5.07	-8.03	0.00	-69.07	0.00	69.07	2,395.58	1,197.79	3,263.81	1,634.33	27.33	-2.06	0.044
115.00	-4.38	-7.72	0.00	-28.90	0.00	28.90	2,312.83	1,156.41	3,002.60	1,503.53	29.49	-2.07	0.021
118.00	-1.70	-2.87	0.00	-5.75	0.00	5.75	2,261.81	1,130.90	2,849.24	1,426.74	30.80	-2.08	0.005
120.00	-0.08	-0.03	0.00	-0.02	0.00	0.02	2,218.59	1,109.30	2,737.84	1,370.95	31.67	-2.08	0.000
120.65	0.00	-0.02	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	31.95	-2.08	0.000

Load Case: 0.9D + 1.6W 97 mph with No Ice (Reduced DL) 17 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		252.8	0.0					0.0	0.0	252.8	0.0	0.0	0.0
5.00		499.7	1,767.7					0.0	35.8	499.7	1,803.5	0.0	0.0
10.00		487.7	1,725.3					0.0	35.8	487.7	1,761.2	0.0	0.0
15.00		475.6	1,683.0					0.0	35.8	475.6	1,718.8	0.0	0.0
20.00		463.6	1,640.6					0.0	35.8	463.6	1,676.4	0.0	0.0
25.00		451.6	1,598.2					0.0	35.8	451.6	1,634.0	0.0	0.0
30.00		444.8	1,555.8					0.0	35.8	444.8	1,591.6	0.0	0.0
35.00		446.8	1,513.4					0.0	35.8	446.8	1,549.3	0.0	0.0
40.00		320.1	1,471.1					0.0	35.8	320.1	1,506.9	0.0	0.0
42.11	Bot - Section 2	228.9	607.1					0.0	15.1	228.9	622.2	0.0	0.0
45.00		335.0	1,566.8					0.0	20.7	335.0	1,587.6	0.0	0.0
49.35	Top - Section 1	231.2	2,307.2					0.0	31.2	231.2	2,338.4	0.0	0.0
50.00		260.8	160.4					0.0	4.6	260.8	165.1	0.0	0.0
55.00		460.7	1,220.4					0.0	35.8	460.7	1,256.2	0.0	0.0
60.00		453.1	1,182.7					0.0	35.8	453.1	1,218.6	0.0	0.0
64.90		227.9	1,122.5					0.0	35.1	227.9	1,157.7	0.0	0.0
65.00		229.9	22.5					0.0	0.7	229.9	23.2	0.0	0.0
70.00		447.6	1,107.4					0.0	35.8	447.6	1,143.2	0.0	0.0
75.00		440.9	1,069.7					0.0	35.8	440.9	1,105.6	0.0	0.0
80.00		433.2	1,032.1					0.0	35.8	433.2	1,067.9	0.0	0.0
85.00		294.9	994.4					0.0	35.8	294.9	1,030.2	0.0	0.0
86.90		124.7	368.0					0.0	13.6	124.7	381.6	0.0	0.0
87.96	Bot - Section 3	131.0	202.1					0.0	7.6	131.0	209.6	0.0	0.0
90.00		233.4	633.4					0.0	14.6	233.4	648.0	0.0	0.0
93.51	Top - Section 2	208.4	1,062.8					0.0	25.1	208.4	1,087.9	0.0	0.0
95.00		264.9	172.7					0.0	10.7	264.9	183.4	0.0	0.0
100.00		400.7	563.2					0.0	35.8	400.7	599.0	0.0	0.0
105.00		347.5	539.7					0.0	35.8	347.5	575.5	0.0	0.0
108.90		191.6	404.6					0.0	27.9	191.6	432.5	0.0	0.0
110.00		227.0	111.5					0.0	7.9	227.0	119.4	0.0	0.0
115.00		293.4	492.6					0.0	35.8	293.4	528.4	0.0	0.0
118.00	Appurtenance(s)	178.8	284.2	4,573.2	0.0	0.0	1,827.8	0.0	21.5	4,751.9	2,133.5	0.0	0.0
120.00	Appurtenance(s)	93.4	184.8	2,685.3	0.0	0.0	1,097.2	0.0	14.3	2,778.7	1,296.3	0.0	0.0
120.65		22.7	59.2					0.0	0.0	22.7	59.2	0.0	0.0
								Totals:		17,862.9	34,211.9	0.00	0.00

Load Case: 0.9D + 1.6W 97 mph with No Ice (Reduced DL) 17 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	-38.20	-61.40	0.00	-5,210.12	0.00	5,210.12	8,277.51	4,138.76	22,240.6	11,136.8	0.00	0.00	0.473
5.00	-36.27	-60.97	0.00	-4,903.15	0.00	4,903.15	8,140.09	4,070.04	21,348.8	10,690.3	0.06	-0.11	0.463
10.00	-34.39	-60.54	0.00	-4,598.32	0.00	4,598.32	7,999.82	3,999.91	20,467.4	10,248.9	0.24	-0.23	0.453
15.00	-32.55	-60.12	0.00	-4,295.61	0.00	4,295.61	7,856.70	3,928.35	19,596.9	9,813.03	0.55	-0.34	0.442
20.00	-30.76	-59.71	0.00	-3,994.98	0.00	3,994.98	7,710.74	3,855.37	18,737.8	9,382.86	0.97	-0.46	0.430
25.00	-29.01	-59.30	0.00	-3,696.43	0.00	3,696.43	7,561.93	3,780.96	17,890.8	8,958.71	1.52	-0.58	0.417
30.00	-27.30	-58.90	0.00	-3,399.91	0.00	3,399.91	7,410.27	3,705.13	17,056.3	8,540.84	2.19	-0.69	0.402
35.00	-25.64	-58.48	0.00	-3,105.42	0.00	3,105.42	7,240.28	3,620.14	16,200.3	8,112.19	2.98	-0.81	0.387
40.00	-24.06	-58.17	0.00	-2,813.01	0.00	2,813.01	7,034.66	3,517.33	15,288.6	7,655.69	3.89	-0.92	0.371
42.11	-23.38	-57.96	0.00	-2,690.46	0.00	2,690.46	6,948.03	3,474.02	14,912.4	7,467.32	4.31	-0.97	0.364
45.00	-21.72	-57.63	0.00	-2,522.77	0.00	2,522.77	6,829.04	3,414.52	14,403.4	7,212.41	4.92	-1.04	0.353
49.35	-19.33	-57.37	0.00	-2,271.87	0.00	2,271.87	5,968.08	2,984.04	12,531.6	6,275.12	5.92	-1.14	0.366
50.00	-19.10	-57.13	0.00	-2,234.81	0.00	2,234.81	5,950.78	2,975.39	12,445.9	6,232.22	6.07	-1.15	0.362
55.00	-17.75	-56.67	0.00	-1,949.18	0.00	1,949.18	5,815.30	2,907.65	11,789.3	5,903.41	7.34	-1.26	0.334
60.00	-16.44	-56.22	0.00	-1,665.81	0.00	1,665.81	5,647.21	2,823.61	11,086.0	5,551.25	8.72	-1.37	0.303
64.90	-14.04	-39.59	0.00	-1,390.33	0.00	1,390.33	5,468.10	2,734.05	10,390.4	5,202.93	10.18	-1.47	0.270
65.00	-13.99	-39.37	0.00	-1,386.37	0.00	1,386.37	5,464.44	2,732.22	10,376.4	5,195.94	10.21	-1.47	0.270
70.00	-12.80	-38.92	0.00	-1,189.50	0.00	1,189.50	5,281.67	2,640.84	9,690.35	4,852.38	11.80	-1.56	0.248
75.00	-11.65	-38.46	0.00	-994.92	0.00	994.92	5,098.90	2,549.45	9,027.72	4,520.57	13.48	-1.65	0.223
80.00	-10.55	-38.01	0.00	-802.62	0.00	802.62	4,916.13	2,458.06	8,388.55	4,200.51	15.25	-1.72	0.193
85.00	-9.50	-37.69	0.00	-612.57	0.00	612.57	4,733.35	2,366.68	7,772.85	3,892.20	17.10	-1.79	0.160
86.90	-8.19	-21.97	0.00	-540.96	0.00	540.96	4,663.90	2,331.95	7,545.03	3,778.12	17.82	-1.82	0.145
87.96	-7.98	-21.83	0.00	-517.77	0.00	517.77	4,625.32	2,312.66	7,419.94	3,715.49	18.22	-1.83	0.141
90.00	-7.33	-21.58	0.00	-473.13	0.00	473.13	4,550.58	2,275.29	7,180.61	3,595.64	19.01	-1.85	0.133
93.51	-6.24	-21.34	0.00	-397.42	0.00	397.42	2,648.37	1,324.19	4,168.99	2,087.59	20.39	-1.89	0.193
95.00	-6.04	-21.08	0.00	-365.56	0.00	365.56	2,626.77	1,313.39	4,084.66	2,045.36	20.98	-1.91	0.181
100.00	-5.44	-20.66	0.00	-260.18	0.00	260.18	2,552.56	1,276.28	3,805.39	1,905.52	23.02	-1.97	0.139
105.00	-4.86	-20.30	0.00	-156.87	0.00	156.87	2,475.49	1,237.75	3,531.59	1,768.42	25.11	-2.02	0.091
108.90	-3.85	-8.22	0.00	-77.70	0.00	77.70	2,413.41	1,206.70	3,322.18	1,663.56	26.78	-2.05	0.048
110.00	-3.73	-7.99	0.00	-68.67	0.00	68.67	2,395.58	1,197.79	3,263.81	1,634.33	27.25	-2.05	0.044
115.00	-3.21	-7.67	0.00	-28.74	0.00	28.74	2,312.83	1,156.41	3,002.60	1,503.53	29.41	-2.07	0.021
118.00	-1.25	-2.85	0.00	-5.71	0.00	5.71	2,261.81	1,130.90	2,849.24	1,426.74	30.71	-2.07	0.005
120.00	-0.06	-0.02	0.00	-0.02	0.00	0.02	2,218.59	1,109.30	2,737.84	1,370.95	31.58	-2.07	0.000
120.65	0.00	-0.02	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	31.86	-2.07	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 16 Iterations

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

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		80.2	0.0					0.0	0.0	80.2	0.0	0.0	0.0
5.00		158.9	2,833.3					0.0	47.8	158.9	2,881.0	0.0	0.0
10.00		155.7	2,820.6					0.0	47.8	155.7	2,868.4	0.0	0.0
15.00		152.3	2,778.7					0.0	47.8	152.3	2,826.5	0.0	0.0
20.00		148.8	2,727.2					0.0	47.8	148.8	2,775.0	0.0	0.0
25.00		145.3	2,670.8					0.0	47.8	145.3	2,718.5	0.0	0.0
30.00		143.4	2,611.2					0.0	47.8	143.4	2,658.9	0.0	0.0
35.00		144.4	2,549.4					0.0	47.8	144.4	2,597.1	0.0	0.0
40.00		103.6	2,486.0					0.0	47.8	103.6	2,533.7	0.0	0.0
42.11	Bot - Section 2	74.1	1,029.9					0.0	20.1	74.1	1,050.0	0.0	0.0
45.00		108.6	2,394.3					0.0	27.6	108.6	2,421.9	0.0	0.0
49.35	Top - Section 1	75.1	3,527.9					0.0	41.6	75.1	3,569.5	0.0	0.0
50.00		84.8	281.0					0.0	6.2	84.8	287.2	0.0	0.0
55.00		150.0	2,134.3					0.0	47.8	150.0	2,182.0	0.0	0.0
60.00		147.9	2,073.4					0.0	47.8	147.9	2,121.2	0.0	0.0
64.90		74.5	1,972.5					0.0	46.8	74.5	2,019.3	0.0	0.0
65.00		75.3	39.8					0.0	1.0	75.3	40.7	0.0	0.0
70.00		146.9	1,949.9					0.0	47.8	146.9	1,997.7	0.0	0.0
75.00		145.1	1,887.5					0.0	47.8	145.1	1,935.2	0.0	0.0
80.00		143.0	1,824.6					0.0	47.8	143.0	1,872.3	0.0	0.0
85.00		97.5	1,761.3					0.0	47.8	97.5	1,809.0	0.0	0.0
86.90		41.3	654.5					0.0	18.1	41.3	672.7	0.0	0.0
87.96	Bot - Section 3	43.4	359.9					0.0	10.1	43.4	370.0	0.0	0.0
90.00		77.5	1,020.0					0.0	19.5	77.5	1,039.5	0.0	0.0
93.51	Top - Section 2	69.3	1,711.2					0.0	33.5	69.3	1,744.7	0.0	0.0
95.00		88.3	354.3					0.0	14.3	88.3	368.5	0.0	0.0
100.00		133.9	1,151.8					0.0	47.8	133.9	1,199.6	0.0	0.0
105.00		116.6	1,106.2					0.0	47.8	116.6	1,154.0	0.0	0.0
108.90		64.4	832.4					0.0	37.3	64.4	869.7	0.0	0.0
110.00		76.6	230.7					0.0	10.5	76.6	241.2	0.0	0.0
115.00		99.3	1,014.2					0.0	47.8	99.3	1,062.0	0.0	0.0
118.00	Appurtenance(s)	60.7	588.3	1,268.1	0.0	0.0	3,515.4	0.0	28.7	1,328.8	4,132.3	0.0	0.0
120.00	Appurtenance(s)	31.8	383.6	576.6	0.0	0.0	3,868.5	0.0	19.1	608.4	4,271.2	0.0	0.0
120.65		7.7	123.4					0.0	0.0	7.7	123.4	0.0	0.0
								Totals:		5,311.17	60,413.9	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 16 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	-67.86	-17.28	0.00	-1,460.43	0.00	1,460.43	8,277.51	4,138.76	22,240.6	11,136.8	0.00	0.00	0.139
5.00	-64.97	-17.16	0.00	-1,374.01	0.00	1,374.01	8,140.09	4,070.04	21,348.8	10,690.3	0.02	-0.03	0.137
10.00	-62.09	-17.04	0.00	-1,288.21	0.00	1,288.21	7,999.82	3,999.91	20,467.4	10,248.9	0.07	-0.06	0.133
15.00	-59.25	-16.91	0.00	-1,203.03	0.00	1,203.03	7,856.70	3,928.35	19,596.9	9,813.03	0.15	-0.10	0.130
20.00	-56.47	-16.79	0.00	-1,118.46	0.00	1,118.46	7,710.74	3,855.37	18,737.8	9,382.86	0.27	-0.13	0.127
25.00	-53.74	-16.67	0.00	-1,034.50	0.00	1,034.50	7,561.93	3,780.96	17,890.8	8,958.71	0.43	-0.16	0.123
30.00	-51.08	-16.55	0.00	-951.15	0.00	951.15	7,410.27	3,705.13	17,056.3	8,540.84	0.61	-0.19	0.118
35.00	-48.47	-16.42	0.00	-868.41	0.00	868.41	7,240.28	3,620.14	16,200.3	8,112.19	0.83	-0.23	0.114
40.00	-45.93	-16.33	0.00	-786.30	0.00	786.30	7,034.66	3,517.33	15,288.6	7,655.69	1.09	-0.26	0.109
42.11	-44.88	-16.26	0.00	-751.91	0.00	751.91	6,948.03	3,474.02	14,912.4	7,467.32	1.21	-0.27	0.107
45.00	-42.45	-16.16	0.00	-704.87	0.00	704.87	6,829.04	3,414.52	14,403.4	7,212.41	1.38	-0.29	0.104
49.35	-38.87	-16.07	0.00	-634.53	0.00	634.53	5,968.08	2,984.04	12,531.6	6,275.12	1.66	-0.32	0.108
50.00	-38.58	-16.00	0.00	-624.15	0.00	624.15	5,950.78	2,975.39	12,445.9	6,232.22	1.70	-0.32	0.107
55.00	-36.39	-15.85	0.00	-544.16	0.00	544.16	5,815.30	2,907.65	11,789.3	5,903.41	2.06	-0.35	0.098
60.00	-34.27	-15.71	0.00	-464.89	0.00	464.89	5,647.21	2,823.61	11,086.0	5,551.25	2.44	-0.38	0.090
64.90	-29.32	-11.16	0.00	-387.92	0.00	387.92	5,468.10	2,734.05	10,390.4	5,202.93	2.85	-0.41	0.080
65.00	-29.28	-11.09	0.00	-386.80	0.00	386.80	5,464.44	2,732.22	10,376.4	5,195.94	2.86	-0.41	0.080
70.00	-27.28	-10.94	0.00	-331.37	0.00	331.37	5,281.67	2,640.84	9,690.35	4,852.38	3.30	-0.44	0.073
75.00	-25.34	-10.79	0.00	-276.69	0.00	276.69	5,098.90	2,549.45	9,027.72	4,520.57	3.77	-0.46	0.066
80.00	-23.47	-10.64	0.00	-222.75	0.00	222.75	4,916.13	2,458.06	8,388.55	4,200.51	4.27	-0.48	0.058
85.00	-21.66	-10.53	0.00	-169.57	0.00	169.57	4,733.35	2,366.68	7,772.85	3,892.20	4.78	-0.50	0.048
86.90	-18.41	-6.17	0.00	-149.56	0.00	149.56	4,663.90	2,331.95	7,545.03	3,778.12	4.98	-0.51	0.044
87.96	-18.04	-6.13	0.00	-143.05	0.00	143.05	4,625.32	2,312.66	7,419.94	3,715.49	5.10	-0.51	0.042
90.00	-17.00	-6.04	0.00	-130.52	0.00	130.52	4,550.58	2,275.29	7,180.61	3,595.64	5.32	-0.52	0.040
93.51	-15.25	-5.96	0.00	-109.32	0.00	109.32	2,648.37	1,324.19	4,168.99	2,087.59	5.70	-0.53	0.058
95.00	-14.88	-5.87	0.00	-100.42	0.00	100.42	2,626.77	1,313.39	4,084.66	2,045.36	5.87	-0.53	0.055
100.00	-13.68	-5.73	0.00	-71.07	0.00	71.07	2,552.56	1,276.28	3,805.39	1,905.52	6.44	-0.55	0.043
105.00	-12.53	-5.60	0.00	-42.42	0.00	42.42	2,475.49	1,237.75	3,531.59	1,768.42	7.02	-0.56	0.029
108.90	-9.81	-2.22	0.00	-20.56	0.00	20.56	2,413.41	1,206.70	3,322.18	1,663.56	7.49	-0.57	0.016
110.00	-9.57	-2.14	0.00	-18.12	0.00	18.12	2,395.58	1,197.79	3,263.81	1,634.33	7.62	-0.57	0.015
115.00	-8.51	-2.03	0.00	-7.42	0.00	7.42	2,312.83	1,156.41	3,002.60	1,503.53	8.22	-0.58	0.009
118.00	-4.39	-0.66	0.00	-1.33	0.00	1.33	2,261.81	1,130.90	2,849.24	1,426.74	8.58	-0.58	0.003
120.00	-0.12	-0.01	0.00	-0.01	0.00	0.01	2,218.59	1,109.30	2,737.84	1,370.95	8.82	-0.58	0.000
120.65	0.00	-0.01	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	8.90	-0.58	0.000

Load Case: 1.0D + 1.0W Serviceability 60 mph 16 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		54.1	0.0					0.0	0.0	54.1	0.0	0.0	0.0
5.00		106.9	1,964.1					0.0	39.8	106.9	2,003.9	0.0	0.0
10.00		104.3	1,917.0					0.0	39.8	104.3	1,956.8	0.0	0.0
15.00		101.8	1,870.0					0.0	39.8	101.8	1,909.8	0.0	0.0
20.00		99.2	1,822.9					0.0	39.8	99.2	1,862.7	0.0	0.0
25.00		96.6	1,775.8					0.0	39.8	96.6	1,815.6	0.0	0.0
30.00		95.2	1,728.7					0.0	39.8	95.2	1,768.5	0.0	0.0
35.00		95.6	1,681.6					0.0	39.8	95.6	1,721.4	0.0	0.0
40.00		68.5	1,634.5					0.0	39.8	68.5	1,674.3	0.0	0.0
42.11	Bot - Section 2	49.0	674.5					0.0	16.8	49.0	691.3	0.0	0.0
45.00		71.7	1,740.9					0.0	23.0	71.7	1,764.0	0.0	0.0
49.35	Top - Section 1	49.5	2,563.6					0.0	34.7	49.5	2,598.3	0.0	0.0
50.00		55.8	178.3					0.0	5.1	55.8	183.4	0.0	0.0
55.00		98.6	1,356.0					0.0	39.8	98.6	1,395.8	0.0	0.0
60.00		96.9	1,314.2					0.0	39.8	96.9	1,354.0	0.0	0.0
64.90		48.8	1,247.3					0.0	39.0	48.8	1,286.3	0.0	0.0
65.00		49.2	25.0					0.0	0.8	49.2	25.8	0.0	0.0
70.00		95.8	1,230.5					0.0	39.8	95.8	1,270.3	0.0	0.0
75.00		94.3	1,188.6					0.0	39.8	94.3	1,228.4	0.0	0.0
80.00		92.7	1,146.7					0.0	39.8	92.7	1,186.5	0.0	0.0
85.00		63.1	1,104.9					0.0	39.8	63.1	1,144.7	0.0	0.0
86.90		26.7	408.9					0.0	15.1	26.7	424.0	0.0	0.0
87.96	Bot - Section 3	28.0	224.5					0.0	8.4	28.0	232.9	0.0	0.0
90.00		49.9	703.7					0.0	16.3	49.9	720.0	0.0	0.0
93.51	Top - Section 2	44.6	1,180.8					0.0	27.9	44.6	1,208.8	0.0	0.0
95.00		56.7	191.9					0.0	11.9	56.7	203.7	0.0	0.0
100.00		85.7	625.8					0.0	39.8	85.7	665.6	0.0	0.0
105.00		74.4	599.6					0.0	39.8	74.4	639.4	0.0	0.0
108.90		41.0	449.5					0.0	31.0	41.0	480.6	0.0	0.0
110.00		48.6	123.9					0.0	8.8	48.6	132.7	0.0	0.0
115.00		62.8	547.3					0.0	39.8	62.8	587.1	0.0	0.0
118.00	Appurtenance(s)	38.2	315.8	978.5	0.0	0.0	2,030.9	0.0	23.9	1,016.7	2,370.6	0.0	0.0
120.00	Appurtenance(s)	20.0	205.3	574.5	0.0	0.0	1,219.1	0.0	15.9	594.5	1,440.3	0.0	0.0
120.65		4.9	65.8					0.0	0.0	4.9	65.8	0.0	0.0
								Totals:		3,821.96	38,013.2	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 16 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	-42.51	-13.14	0.00	-1,115.79	0.00	1,115.79	8,277.51	4,138.76	22,240.6	11,136.8	0.00	0.00	0.105
5.00	-40.50	-13.05	0.00	-1,050.10	0.00	1,050.10	8,140.09	4,070.04	21,348.8	10,690.3	0.01	-0.02	0.103
10.00	-38.54	-12.96	0.00	-984.87	0.00	984.87	7,999.82	3,999.91	20,467.4	10,248.9	0.05	-0.05	0.101
15.00	-36.62	-12.87	0.00	-920.08	0.00	920.08	7,856.70	3,928.35	19,596.9	9,813.03	0.12	-0.07	0.098
20.00	-34.76	-12.78	0.00	-855.74	0.00	855.74	7,710.74	3,855.37	18,737.8	9,382.86	0.21	-0.10	0.096
25.00	-32.93	-12.70	0.00	-791.82	0.00	791.82	7,561.93	3,780.96	17,890.8	8,958.71	0.33	-0.12	0.093
30.00	-31.16	-12.61	0.00	-728.34	0.00	728.34	7,410.27	3,705.13	17,056.3	8,540.84	0.47	-0.15	0.089
35.00	-29.43	-12.52	0.00	-665.28	0.00	665.28	7,240.28	3,620.14	16,200.3	8,112.19	0.64	-0.17	0.086
40.00	-27.76	-12.46	0.00	-602.66	0.00	602.66	7,034.66	3,517.33	15,288.6	7,655.69	0.83	-0.20	0.083
42.11	-27.06	-12.41	0.00	-576.42	0.00	576.42	6,948.03	3,474.02	14,912.4	7,467.32	0.92	-0.21	0.081
45.00	-25.29	-12.34	0.00	-540.51	0.00	540.51	6,829.04	3,414.52	14,403.4	7,212.41	1.05	-0.22	0.079
49.35	-22.69	-12.29	0.00	-486.77	0.00	486.77	5,968.08	2,984.04	12,531.6	6,275.12	1.27	-0.24	0.081
50.00	-22.51	-12.24	0.00	-478.83	0.00	478.83	5,950.78	2,975.39	12,445.9	6,232.22	1.30	-0.25	0.081
55.00	-21.11	-12.14	0.00	-417.66	0.00	417.66	5,815.30	2,907.65	11,789.3	5,903.41	1.57	-0.27	0.074
60.00	-19.75	-12.04	0.00	-356.96	0.00	356.96	5,647.21	2,823.61	11,086.0	5,551.25	1.87	-0.29	0.068
64.90	-16.68	-8.48	0.00	-297.95	0.00	297.95	5,468.10	2,734.05	10,390.4	5,202.93	2.18	-0.31	0.060
65.00	-16.65	-8.44	0.00	-297.10	0.00	297.10	5,464.44	2,732.22	10,376.4	5,195.94	2.19	-0.31	0.060
70.00	-15.38	-8.34	0.00	-254.92	0.00	254.92	5,281.67	2,640.84	9,690.35	4,852.38	2.53	-0.33	0.055
75.00	-14.15	-8.24	0.00	-213.23	0.00	213.23	5,098.90	2,549.45	9,027.72	4,520.57	2.89	-0.35	0.050
80.00	-12.96	-8.14	0.00	-172.03	0.00	172.03	4,916.13	2,458.06	8,388.55	4,200.51	3.27	-0.37	0.044
85.00	-11.82	-8.08	0.00	-131.30	0.00	131.30	4,733.35	2,366.68	7,772.85	3,892.20	3.66	-0.38	0.036
86.90	-9.84	-4.71	0.00	-115.96	0.00	115.96	4,663.90	2,331.95	7,545.03	3,778.12	3.82	-0.39	0.033
87.96	-9.61	-4.68	0.00	-110.99	0.00	110.99	4,625.32	2,312.66	7,419.94	3,715.49	3.90	-0.39	0.032
90.00	-8.89	-4.63	0.00	-101.42	0.00	101.42	4,550.58	2,275.29	7,180.61	3,595.64	4.07	-0.40	0.030
93.51	-7.68	-4.57	0.00	-85.19	0.00	85.19	2,648.37	1,324.19	4,168.99	2,087.59	4.37	-0.41	0.044
95.00	-7.47	-4.52	0.00	-78.36	0.00	78.36	2,626.77	1,313.39	4,084.66	2,045.36	4.50	-0.41	0.041
100.00	-6.81	-4.43	0.00	-55.78	0.00	55.78	2,552.56	1,276.28	3,805.39	1,905.52	4.93	-0.42	0.032
105.00	-6.17	-4.35	0.00	-33.63	0.00	33.63	2,475.49	1,237.75	3,531.59	1,768.42	5.38	-0.43	0.022
108.90	-4.58	-1.76	0.00	-16.67	0.00	16.67	2,413.41	1,206.70	3,322.18	1,663.56	5.74	-0.44	0.012
110.00	-4.45	-1.71	0.00	-14.73	0.00	14.73	2,395.58	1,197.79	3,263.81	1,634.33	5.84	-0.44	0.011
115.00	-3.86	-1.65	0.00	-6.16	0.00	6.16	2,312.83	1,156.41	3,002.60	1,503.53	6.30	-0.44	0.006
118.00	-1.50	-0.61	0.00	-1.23	0.00	1.23	2,261.81	1,130.90	2,849.24	1,426.74	6.58	-0.44	0.002
120.00	-0.07	-0.01	0.00	0.00	0.00	0.00	2,218.59	1,109.30	2,737.84	1,370.95	6.77	-0.44	0.000
120.65	0.00	0.00	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	6.83	-0.44	0.000

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.20	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10	
Seismic Response Coefficient (C_s):	0.07	
Upper Limit C_s	0.07	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	0.93	
Redundancy Factor (p):	1.00	
Seismic Force Distribution Exponent (k):	1.22	
Total Unfactored Dead Load:	42.51	k
Seismic Base Shear (E):	2.92	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)
33	120.32	66	22	0.004	10	82
32	119.00	221	74	0.012	35	275
31	116.50	340	110	0.018	52	422
30	112.50	587	183	0.029	86	730
29	109.45	133	40	0.006	19	165
28	106.95	481	141	0.023	66	597
27	102.50	639	178	0.029	83	795
26	97.50	666	174	0.028	82	827
25	94.25	204	51	0.008	24	253
24	91.75	1,209	294	0.047	138	1,502
23	88.98	720	169	0.027	79	895
22	87.43	233	53	0.009	25	289
21	85.95	424	95	0.015	45	527
20	82.50	1,145	245	0.039	115	1,422
19	77.50	1,187	235	0.038	110	1,474
18	72.50	1,228	224	0.036	105	1,526
17	67.50	1,270	213	0.034	100	1,579
16	64.95	26	4	0.001	2	32
15	62.45	1,286	196	0.031	92	1,598
14	57.50	1,354	187	0.030	87	1,683
13	52.50	1,396	172	0.028	81	1,735
12	49.68	183	21	0.003	10	228
11	47.18	2,598	282	0.045	132	3,229

10	43.55	1,764	173	0.028	81	2,192
9	41.05	691	63	0.010	30	859
8	37.50	1,674	137	0.022	64	2,081
7	32.50	1,721	119	0.019	56	2,139
6	27.50	1,768	99	0.016	47	2,198
5	22.50	1,816	80	0.013	37	2,256
4	17.50	1,863	60	0.010	28	2,315
3	12.50	1,910	41	0.007	19	2,373
2	7.50	1,957	23	0.004	11	2,432
1	2.50	2,004	6	0.001	3	2,490
Samsung Outdoor CBRS	120.00	56	19	0.003	9	69
Samsung Outdoor CBRS	120.00	13	4	0.001	2	16
Samsung B5/B13 RRH-B	120.00	211	71	0.011	33	262
Samsung B2/B66A RRH-	120.00	253	85	0.014	40	315
RFS DB-C1-12C-24AB-0	120.00	32	11	0.002	5	40
Decibel DB846F65ZAXY	120.00	126	42	0.007	20	157
Quintel QS6656-5D	120.00	528	178	0.029	83	656
Flat T-Arm	118.00	750	248	0.040	116	932
VZW Unused Reserve:	118.00	1,281	423	0.068	198	1,592
Branch 3	108.90	1,125	337	0.054	158	1,398
Branch 2	86.90	1,575	359	0.058	168	1,957
Branch 1	64.90	1,800	287	0.046	135	2,237
		42,513	6,231	1.000	2,921	52,830

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)
33	120.32	66	22	0.004	10	56
32	119.00	221	74	0.012	35	190
31	116.50	340	110	0.018	52	291
30	112.50	587	183	0.029	86	503
29	109.45	133	40	0.006	19	114
28	106.95	481	141	0.023	66	412
27	102.50	639	178	0.029	83	548
26	97.50	666	174	0.028	82	571
25	94.25	204	51	0.008	24	175
24	91.75	1,209	294	0.047	138	1,036
23	88.98	720	169	0.027	79	617
22	87.43	233	53	0.009	25	200
21	85.95	424	95	0.015	45	364
20	82.50	1,145	245	0.039	115	981
19	77.50	1,187	235	0.038	110	1,017
18	72.50	1,228	224	0.036	105	1,053
17	67.50	1,270	213	0.034	100	1,089
16	64.95	26	4	0.001	2	22
15	62.45	1,286	196	0.031	92	1,103
14	57.50	1,354	187	0.030	87	1,161
13	52.50	1,396	172	0.028	81	1,197
12	49.68	183	21	0.003	10	157
11	47.18	2,598	282	0.045	132	2,228
10	43.55	1,764	173	0.028	81	1,512
9	41.05	691	63	0.010	30	593
8	37.50	1,674	137	0.022	64	1,435
7	32.50	1,721	119	0.019	56	1,476
6	27.50	1,768	99	0.016	47	1,516
5	22.50	1,816	80	0.013	37	1,557
4	17.50	1,863	60	0.010	28	1,597
3	12.50	1,910	41	0.007	19	1,637
2	7.50	1,957	23	0.004	11	1,678

1	2.50	2,004	6	0.001	3	1,718
Samsung Outdoor CBRS	120.00	56	19	0.003	9	48
Samsung Outdoor CBRS	120.00	13	4	0.001	2	11
Samsung B5/B13 RRH-B	120.00	211	71	0.011	33	181
Samsung B2/B66A RRH-	120.00	253	85	0.014	40	217
RFS DB-C1-12C-24AB-0	120.00	32	11	0.002	5	27
Decibel DB846F65ZAXY	120.00	126	42	0.007	20	108
Quintel QS6656-5D	120.00	528	178	0.029	83	453
Flat T-Arm	118.00	750	248	0.040	116	643
VZW Unused Reserve:	118.00	1,281	423	0.068	198	1,098
Branch 3	108.90	1,125	337	0.054	158	964
Branch 2	86.90	1,575	359	0.058	168	1,350
Branch 1	64.90	1,800	287	0.046	135	1,543
		42,513	6,231	1.000	2,921	36,448

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	-50.34	-2.92	0.00	-239.50	0.00	239.50	8,277.51	4,138.76	22,240.6	11,136.8	0.00	0.00	0.028
5.00	-47.91	-2.91	0.00	-224.90	0.00	224.90	8,140.09	4,070.04	21,348.8	10,690.3	0.00	-0.01	0.027
10.00	-45.53	-2.90	0.00	-210.33	0.00	210.33	7,999.82	3,999.91	20,467.4	10,248.9	0.01	-0.01	0.026
15.00	-43.22	-2.87	0.00	-195.84	0.00	195.84	7,856.70	3,928.35	19,596.9	9,813.03	0.03	-0.02	0.025
20.00	-40.96	-2.84	0.00	-181.47	0.00	181.47	7,710.74	3,855.37	18,737.8	9,382.86	0.04	-0.02	0.025
25.00	-38.76	-2.79	0.00	-167.28	0.00	167.28	7,561.93	3,780.96	17,890.8	8,958.71	0.07	-0.03	0.024
30.00	-36.63	-2.74	0.00	-153.31	0.00	153.31	7,410.27	3,705.13	17,056.3	8,540.84	0.10	-0.03	0.023
35.00	-34.54	-2.68	0.00	-139.60	0.00	139.60	7,240.28	3,620.14	16,200.3	8,112.19	0.14	-0.04	0.022
40.00	-33.69	-2.65	0.00	-126.21	0.00	126.21	7,034.66	3,517.33	15,288.6	7,655.69	0.18	-0.04	0.021
42.11	-31.49	-2.57	0.00	-120.62	0.00	120.62	6,948.03	3,474.02	14,912.4	7,467.32	0.20	-0.04	0.021
45.00	-28.26	-2.44	0.00	-113.19	0.00	113.19	6,829.04	3,414.52	14,403.4	7,212.41	0.22	-0.05	0.020
49.35	-28.04	-2.43	0.00	-102.58	0.00	102.58	5,968.08	2,984.04	12,531.6	6,275.12	0.27	-0.05	0.021
50.00	-26.30	-2.35	0.00	-101.01	0.00	101.01	5,950.78	2,975.39	12,445.9	6,232.22	0.28	-0.05	0.021
55.00	-24.62	-2.26	0.00	-89.28	0.00	89.28	5,815.30	2,907.65	11,789.3	5,903.41	0.33	-0.06	0.019
60.00	-23.02	-2.17	0.00	-77.98	0.00	77.98	5,647.21	2,823.61	11,086.0	5,551.25	0.40	-0.06	0.018
64.90	-20.75	-2.03	0.00	-67.35	0.00	67.35	5,468.10	2,734.05	10,390.4	5,202.93	0.46	-0.07	0.017
65.00	-19.17	-1.93	0.00	-67.15	0.00	67.15	5,464.44	2,732.22	10,376.4	5,195.94	0.46	-0.07	0.016
70.00	-17.65	-1.82	0.00	-57.50	0.00	57.50	5,281.67	2,640.84	9,690.35	4,852.38	0.54	-0.07	0.015
75.00	-16.17	-1.71	0.00	-48.39	0.00	48.39	5,098.90	2,549.45	9,027.72	4,520.57	0.61	-0.08	0.014
80.00	-14.75	-1.60	0.00	-39.83	0.00	39.83	4,916.13	2,458.06	8,388.55	4,200.51	0.70	-0.08	0.012
85.00	-14.22	-1.55	0.00	-31.84	0.00	31.84	4,733.35	2,366.68	7,772.85	3,892.20	0.78	-0.08	0.011
86.90	-11.98	-1.36	0.00	-28.89	0.00	28.89	4,663.90	2,331.95	7,545.03	3,778.12	0.81	-0.08	0.010
87.96	-11.08	-1.28	0.00	-27.46	0.00	27.46	4,625.32	2,312.66	7,419.94	3,715.49	0.83	-0.08	0.010
90.00	-9.58	-1.14	0.00	-24.85	0.00	24.85	4,550.58	2,275.29	7,180.61	3,595.64	0.87	-0.09	0.009
93.51	-9.33	-1.11	0.00	-20.87	0.00	20.87	2,648.37	1,324.19	4,168.99	2,087.59	0.93	-0.09	0.014
95.00	-8.50	-1.03	0.00	-19.21	0.00	19.21	2,626.77	1,313.39	4,084.66	2,045.36	0.96	-0.09	0.013
100.00	-7.71	-0.94	0.00	-14.07	0.00	14.07	2,552.56	1,276.28	3,805.39	1,905.52	1.06	-0.09	0.010
105.00	-7.11	-0.88	0.00	-9.34	0.00	9.34	2,475.49	1,237.75	3,531.59	1,768.42	1.15	-0.10	0.008
108.90	-5.55	-0.70	0.00	-5.92	0.00	5.92	2,413.41	1,206.70	3,322.18	1,663.56	1.23	-0.10	0.006
110.00	-4.82	-0.61	0.00	-5.15	0.00	5.15	2,395.58	1,197.79	3,263.81	1,634.33	1.25	-0.10	0.005
115.00	-4.39	-0.56	0.00	-2.09	0.00	2.09	2,312.83	1,156.41	3,002.60	1,503.53	1.36	-0.10	0.003
118.00	-1.60	-0.21	0.00	-0.41	0.00	0.41	2,261.81	1,130.90	2,849.24	1,426.74	1.42	-0.10	0.001
120.00	0.00	0.00	0.00	0.00	0.00	0.00	2,218.59	1,109.30	2,737.84	1,370.95	1.46	-0.10	0.000
120.65	0.00	0.00	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	1.47	-0.10	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	-34.73	-2.92	0.00	-238.85	0.00	238.85	8,277.51	4,138.76	22,240.6	11,136.8	0.00	0.00	0.026
5.00	-33.05	-2.91	0.00	-224.25	0.00	224.25	8,140.09	4,070.04	21,348.8	10,690.3	0.00	-0.01	0.025
10.00	-31.41	-2.89	0.00	-209.70	0.00	209.70	7,999.82	3,999.91	20,467.4	10,248.9	0.01	-0.01	0.024
15.00	-29.82	-2.87	0.00	-195.22	0.00	195.22	7,856.70	3,928.35	19,596.9	9,813.03	0.03	-0.02	0.024
20.00	-28.26	-2.83	0.00	-180.88	0.00	180.88	7,710.74	3,855.37	18,737.8	9,382.86	0.04	-0.02	0.023
25.00	-26.74	-2.79	0.00	-166.71	0.00	166.71	7,561.93	3,780.96	17,890.8	8,958.71	0.07	-0.03	0.022
30.00	-25.27	-2.73	0.00	-152.77	0.00	152.77	7,410.27	3,705.13	17,056.3	8,540.84	0.10	-0.03	0.021
35.00	-23.83	-2.67	0.00	-139.10	0.00	139.10	7,240.28	3,620.14	16,200.3	8,112.19	0.14	-0.04	0.020
40.00	-23.24	-2.64	0.00	-125.74	0.00	125.74	7,034.66	3,517.33	15,288.6	7,655.69	0.18	-0.04	0.020
42.11	-21.73	-2.56	0.00	-120.17	0.00	120.17	6,948.03	3,474.02	14,912.4	7,467.32	0.20	-0.04	0.019
45.00	-19.50	-2.43	0.00	-112.76	0.00	112.76	6,829.04	3,414.52	14,403.4	7,212.41	0.22	-0.05	0.018
49.35	-19.34	-2.42	0.00	-102.18	0.00	102.18	5,968.08	2,984.04	12,531.6	6,275.12	0.27	-0.05	0.020
50.00	-18.15	-2.34	0.00	-100.62	0.00	100.62	5,950.78	2,975.39	12,445.9	6,232.22	0.28	-0.05	0.019
55.00	-16.98	-2.25	0.00	-88.93	0.00	88.93	5,815.30	2,907.65	11,789.3	5,903.41	0.33	-0.06	0.018
60.00	-15.88	-2.16	0.00	-77.67	0.00	77.67	5,647.21	2,823.61	11,086.0	5,551.25	0.40	-0.06	0.017
64.90	-14.32	-2.02	0.00	-67.08	0.00	67.08	5,468.10	2,734.05	10,390.4	5,202.93	0.46	-0.07	0.016
65.00	-13.23	-1.92	0.00	-66.88	0.00	66.88	5,464.44	2,732.22	10,376.4	5,195.94	0.46	-0.07	0.015
70.00	-12.17	-1.82	0.00	-57.27	0.00	57.27	5,281.67	2,640.84	9,690.35	4,852.38	0.54	-0.07	0.014
75.00	-11.16	-1.71	0.00	-48.19	0.00	48.19	5,098.90	2,549.45	9,027.72	4,520.57	0.61	-0.08	0.013
80.00	-10.18	-1.59	0.00	-39.66	0.00	39.66	4,916.13	2,458.06	8,388.55	4,200.51	0.69	-0.08	0.012
85.00	-9.81	-1.55	0.00	-31.71	0.00	31.71	4,733.35	2,366.68	7,772.85	3,892.20	0.78	-0.08	0.010
86.90	-8.26	-1.35	0.00	-28.77	0.00	28.77	4,663.90	2,331.95	7,545.03	3,778.12	0.81	-0.08	0.009
87.96	-7.65	-1.27	0.00	-27.35	0.00	27.35	4,625.32	2,312.66	7,419.94	3,715.49	0.83	-0.08	0.009
90.00	-6.61	-1.13	0.00	-24.75	0.00	24.75	4,550.58	2,275.29	7,180.61	3,595.64	0.87	-0.09	0.008
93.51	-6.43	-1.11	0.00	-20.78	0.00	20.78	2,648.37	1,324.19	4,168.99	2,087.59	0.93	-0.09	0.012
95.00	-5.86	-1.02	0.00	-19.13	0.00	19.13	2,626.77	1,313.39	4,084.66	2,045.36	0.96	-0.09	0.012
100.00	-5.32	-0.94	0.00	-14.01	0.00	14.01	2,552.56	1,276.28	3,805.39	1,905.52	1.05	-0.09	0.009
105.00	-4.90	-0.87	0.00	-9.30	0.00	9.30	2,475.49	1,237.75	3,531.59	1,768.42	1.15	-0.09	0.007
108.90	-3.83	-0.70	0.00	-5.89	0.00	5.89	2,413.41	1,206.70	3,322.18	1,663.56	1.23	-0.10	0.005
110.00	-3.32	-0.61	0.00	-5.13	0.00	5.13	2,395.58	1,197.79	3,263.81	1,634.33	1.25	-0.10	0.005
115.00	-3.03	-0.56	0.00	-2.08	0.00	2.08	2,312.83	1,156.41	3,002.60	1,503.53	1.35	-0.10	0.003
118.00	-1.10	-0.20	0.00	-0.41	0.00	0.41	2,261.81	1,130.90	2,849.24	1,426.74	1.41	-0.10	0.001
120.00	0.00	0.00	0.00	0.00	0.00	0.00	2,218.59	1,109.30	2,737.84	1,370.95	1.46	-0.10	0.000
120.65	0.00	0.00	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	1.47	-0.10	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):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	0.93
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)
33	120.32	66	1.880	1.927	1.121	0.434	19	82
32	119.00	221	1.839	1.720	1.045	0.405	60	275
31	116.50	340	1.762	1.372	0.914	0.355	80	422
30	112.50	587	1.643	0.919	0.730	0.283	111	730
29	109.45	133	1.555	0.647	0.611	0.234	21	165
28	106.95	481	1.485	0.465	0.525	0.199	64	597
27	102.50	639	1.364	0.219	0.396	0.145	62	795
26	97.50	666	1.234	0.039	0.281	0.097	43	827
25	94.25	204	1.153	-0.035	0.222	0.074	10	253
24	91.75	1,209	1.093	-0.074	0.183	0.060	48	1,502
23	88.98	720	1.028	-0.102	0.146	0.048	23	895
22	87.43	233	0.992	-0.112	0.128	0.043	7	289
21	85.95	424	0.959	-0.118	0.112	0.039	11	527
20	82.50	1,145	0.884	-0.121	0.081	0.032	25	1,422
19	77.50	1,187	0.780	-0.108	0.048	0.030	24	1,474
18	72.50	1,228	0.682	-0.081	0.027	0.033	27	1,526
17	67.50	1,270	0.592	-0.050	0.014	0.038	32	1,579
16	64.95	26	0.548	-0.034	0.010	0.041	1	32
15	62.45	1,286	0.506	-0.018	0.007	0.043	37	1,598
14	57.50	1,354	0.429	0.009	0.006	0.047	43	1,683
13	52.50	1,396	0.358	0.031	0.008	0.050	46	1,735
12	49.68	183	0.320	0.040	0.011	0.050	6	228
11	47.18	2,598	0.289	0.048	0.013	0.049	86	3,229
10	43.55	1,764	0.246	0.056	0.018	0.048	57	2,192
9	41.05	691	0.219	0.060	0.021	0.047	22	859
8	37.50	1,674	0.183	0.065	0.026	0.045	50	2,081
7	32.50	1,721	0.137	0.069	0.032	0.042	48	2,139
6	27.50	1,768	0.098	0.071	0.037	0.039	45	2,198
5	22.50	1,816	0.066	0.072	0.041	0.035	43	2,256
4	17.50	1,863	0.040	0.070	0.042	0.032	40	2,315
3	12.50	1,910	0.020	0.064	0.038	0.028	36	2,373
2	7.50	1,957	0.007	0.050	0.029	0.022	28	2,432
1	2.50	2,004	0.001	0.022	0.012	0.010	13	2,490
Samsung Outdoor	120.00	56	1.870	1.875	1.102	0.427	16	69

Samsung Outdoor	120.00	13	1.870	1.875	1.102	0.427	4	16
Samsung B5/B13 RRH-B	120.00	211	1.870	1.875	1.102	0.427	60	262
Samsung B2/B66A RRH-	120.00	253	1.870	1.875	1.102	0.427	72	315
RFS DB-C1-12C-24AB-0	120.00	32	1.870	1.875	1.102	0.427	9	40
Decibel DB846F65ZAXY	120.00	126	1.870	1.875	1.102	0.427	36	157
Quintel QS6656-5D	120.00	528	1.870	1.875	1.102	0.427	150	656
Flat T-Arm	118.00	750	1.808	1.575	0.991	0.385	192	932
VZW Unused Reserve:	118.00	1,281	1.808	1.575	0.991	0.385	329	1,592
Branch 3	108.90	1,125	1.540	0.604	0.591	0.226	170	1,398
Branch 2	86.90	1,575	0.980	-0.114	0.122	0.041	43	1,957
Branch 1	64.90	1,800	0.547	-0.033	0.010	0.041	49	2,237
		42,513	44.165	23.910	17.350	7.241	2,395	52,830

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)
33	120.32	66	1.880	1.927	1.121	0.434	19	56
32	119.00	221	1.839	1.720	1.045	0.405	60	190
31	116.50	340	1.762	1.372	0.914	0.355	80	291
30	112.50	587	1.643	0.919	0.730	0.283	111	503
29	109.45	133	1.555	0.647	0.611	0.234	21	114
28	106.95	481	1.485	0.465	0.525	0.199	64	412
27	102.50	639	1.364	0.219	0.396	0.145	62	548
26	97.50	666	1.234	0.039	0.281	0.097	43	571
25	94.25	204	1.153	-0.035	0.222	0.074	10	175
24	91.75	1,209	1.093	-0.074	0.183	0.060	48	1,036
23	88.98	720	1.028	-0.102	0.146	0.048	23	617
22	87.43	233	0.992	-0.112	0.128	0.043	7	200
21	85.95	424	0.959	-0.118	0.112	0.039	11	364
20	82.50	1,145	0.884	-0.121	0.081	0.032	25	981
19	77.50	1,187	0.780	-0.108	0.048	0.030	24	1,017
18	72.50	1,228	0.682	-0.081	0.027	0.033	27	1,053
17	67.50	1,270	0.592	-0.050	0.014	0.038	32	1,089
16	64.95	26	0.548	-0.034	0.010	0.041	1	22
15	62.45	1,286	0.506	-0.018	0.007	0.043	37	1,103
14	57.50	1,354	0.429	0.009	0.006	0.047	43	1,161
13	52.50	1,396	0.358	0.031	0.008	0.050	46	1,197
12	49.68	183	0.320	0.040	0.011	0.050	6	157
11	47.18	2,598	0.289	0.048	0.013	0.049	86	2,228
10	43.55	1,764	0.246	0.056	0.018	0.048	57	1,512
9	41.05	691	0.219	0.060	0.021	0.047	22	593
8	37.50	1,674	0.183	0.065	0.026	0.045	50	1,435
7	32.50	1,721	0.137	0.069	0.032	0.042	48	1,476
6	27.50	1,768	0.098	0.071	0.037	0.039	45	1,516
5	22.50	1,816	0.066	0.072	0.041	0.035	43	1,557
4	17.50	1,863	0.040	0.070	0.042	0.032	40	1,597
3	12.50	1,910	0.020	0.064	0.038	0.028	36	1,637
2	7.50	1,957	0.007	0.050	0.029	0.022	28	1,678
1	2.50	2,004	0.001	0.022	0.012	0.010	13	1,718
Samsung Outdoor	120.00	56	1.870	1.875	1.102	0.427	16	48
Samsung Outdoor	120.00	13	1.870	1.875	1.102	0.427	4	11
Samsung B5/B13 RRH-B	120.00	211	1.870	1.875	1.102	0.427	60	181
Samsung B2/B66A RRH-	120.00	253	1.870	1.875	1.102	0.427	72	217
RFS DB-C1-12C-24AB-0	120.00	32	1.870	1.875	1.102	0.427	9	27
Decibel DB846F65ZAXY	120.00	126	1.870	1.875	1.102	0.427	36	108
Quintel QS6656-5D	120.00	528	1.870	1.875	1.102	0.427	150	453
Flat T-Arm	118.00	750	1.808	1.575	0.991	0.385	192	643
VZW Unused Reserve:	118.00	1,281	1.808	1.575	0.991	0.385	329	1,098

Branch 3	108.90	1,125	1.540	0.604	0.591	0.226	170	964
Branch 2	86.90	1,575	0.980	-0.114	0.122	0.041	43	1,350
Branch 1	64.90	1,800	0.547	-0.033	0.010	0.041	49	1,543
		42,513	44.165	23.910	17.350	7.241	2,395	36,448

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	-50.34	-2.38	0.00	-217.65	0.00	217.65	8,277.51	4,138.76	22,240.65	11,136.8	0.00	0.00	0.026
5.00	-47.91	-2.36	0.00	-205.73	0.00	205.73	8,140.09	4,070.04	21,348.87	10,690.3	0.00	0.00	0.025
10.00	-45.53	-2.33	0.00	-193.93	0.00	193.93	7,999.82	3,999.91	20,467.44	10,248.9	0.01	-0.01	0.025
15.00	-43.22	-2.29	0.00	-182.29	0.00	182.29	7,856.70	3,928.35	19,596.93	9,813.03	0.02	-0.01	0.024
20.00	-40.96	-2.25	0.00	-170.84	0.00	170.84	7,710.74	3,855.37	18,737.88	9,382.86	0.04	-0.02	0.024
25.00	-38.77	-2.21	0.00	-159.59	0.00	159.59	7,561.93	3,780.96	17,890.83	8,958.71	0.06	-0.02	0.023
30.00	-36.63	-2.16	0.00	-148.55	0.00	148.55	7,410.27	3,705.13	17,056.33	8,540.84	0.09	-0.03	0.022
35.00	-34.55	-2.11	0.00	-137.74	0.00	137.74	7,240.28	3,620.14	16,200.30	8,112.19	0.13	-0.03	0.022
40.00	-33.69	-2.09	0.00	-127.17	0.00	127.17	7,034.66	3,517.33	15,288.65	7,655.69	0.17	-0.04	0.021
42.11	-31.49	-2.04	0.00	-122.76	0.00	122.76	6,948.03	3,474.02	14,912.47	7,467.32	0.18	-0.04	0.021
45.00	-28.27	-1.95	0.00	-116.87	0.00	116.87	6,829.04	3,414.52	14,403.41	7,212.41	0.21	-0.05	0.020
49.35	-28.04	-1.95	0.00	-108.37	0.00	108.37	5,968.08	2,984.04	12,531.62	6,275.12	0.25	-0.05	0.022
50.00	-26.30	-1.90	0.00	-107.12	0.00	107.12	5,950.78	2,975.39	12,445.95	6,232.22	0.26	-0.05	0.022
55.00	-24.62	-1.86	0.00	-97.62	0.00	97.62	5,815.30	2,907.65	11,789.30	5,903.41	0.32	-0.06	0.021
60.00	-23.02	-1.82	0.00	-88.34	0.00	88.34	5,647.21	2,823.61	11,086.03	5,551.25	0.38	-0.06	0.020
64.90	-20.75	-1.77	0.00	-79.41	0.00	79.41	5,468.10	2,734.05	10,390.42	5,202.93	0.44	-0.07	0.019
65.00	-19.17	-1.74	0.00	-79.24	0.00	79.24	5,464.44	2,732.22	10,376.46	5,195.94	0.44	-0.07	0.019
70.00	-17.65	-1.71	0.00	-70.56	0.00	70.56	5,281.67	2,640.84	9,690.35	4,852.38	0.52	-0.07	0.018
75.00	-16.17	-1.69	0.00	-62.01	0.00	62.01	5,098.90	2,549.45	9,027.72	4,520.57	0.59	-0.08	0.017
80.00	-14.75	-1.66	0.00	-53.58	0.00	53.58	4,916.13	2,458.06	8,388.55	4,200.51	0.68	-0.08	0.016
85.00	-14.22	-1.65	0.00	-45.28	0.00	45.28	4,733.35	2,366.68	7,772.85	3,892.20	0.77	-0.09	0.015
86.90	-11.98	-1.60	0.00	-42.15	0.00	42.15	4,663.90	2,331.95	7,545.03	3,778.12	0.80	-0.09	0.014
87.96	-11.08	-1.57	0.00	-40.46	0.00	40.46	4,625.32	2,312.66	7,419.94	3,715.49	0.82	-0.09	0.013
90.00	-9.58	-1.52	0.00	-37.24	0.00	37.24	4,550.58	2,275.29	7,180.61	3,595.64	0.86	-0.09	0.012
93.51	-9.33	-1.51	0.00	-31.91	0.00	31.91	2,648.37	1,324.19	4,168.99	2,087.59	0.93	-0.09	0.019
95.00	-8.50	-1.47	0.00	-29.65	0.00	29.65	2,626.77	1,313.39	4,084.66	2,045.36	0.96	-0.10	0.018
100.00	-7.70	-1.41	0.00	-22.31	0.00	22.31	2,552.56	1,276.28	3,805.39	1,905.52	1.06	-0.10	0.015
105.00	-7.11	-1.34	0.00	-15.28	0.00	15.28	2,475.49	1,237.75	3,531.59	1,768.42	1.17	-0.11	0.012
108.90	-5.54	-1.15	0.00	-10.05	0.00	10.05	2,413.41	1,206.70	3,322.18	1,663.56	1.26	-0.11	0.008
110.00	-4.82	-1.04	0.00	-8.78	0.00	8.78	2,395.58	1,197.79	3,263.81	1,634.33	1.28	-0.11	0.007
115.00	-4.39	-0.96	0.00	-3.60	0.00	3.60	2,312.83	1,156.41	3,002.60	1,503.53	1.40	-0.11	0.004
118.00	-1.60	-0.37	0.00	-0.74	0.00	0.74	2,261.81	1,130.90	2,849.24	1,426.74	1.47	-0.11	0.001
120.00	0.00	0.00	0.00	0.00	0.00	0.00	2,218.59	1,109.30	2,737.84	1,370.95	1.52	-0.11	0.000
120.65	0.00	0.00	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	1.53	-0.11	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	-34.73	-2.38	0.00	-217.00	0.00	217.00	8,277.51	4,138.76	22,240.65	11,136.8	0.00	0.00	0.024
5.00	-33.05	-2.36	0.00	-205.09	0.00	205.09	8,140.09	4,070.04	21,348.87	10,690.3	0.00	0.00	0.023
10.00	-31.41	-2.32	0.00	-193.30	0.00	193.30	7,999.82	3,999.91	20,467.44	10,248.9	0.01	-0.01	0.023
15.00	-29.82	-2.29	0.00	-181.67	0.00	181.67	7,856.70	3,928.35	19,596.93	9,813.03	0.02	-0.01	0.022
20.00	-28.26	-2.25	0.00	-170.24	0.00	170.24	7,710.74	3,855.37	18,737.88	9,382.86	0.04	-0.02	0.022
25.00	-26.74	-2.20	0.00	-159.01	0.00	159.01	7,561.93	3,780.96	17,890.83	8,958.71	0.06	-0.02	0.021
30.00	-25.27	-2.16	0.00	-148.00	0.00	148.00	7,410.27	3,705.13	17,056.33	8,540.84	0.09	-0.03	0.021
35.00	-23.83	-2.11	0.00	-137.23	0.00	137.23	7,240.28	3,620.14	16,200.30	8,112.19	0.13	-0.03	0.020
40.00	-23.24	-2.09	0.00	-126.69	0.00	126.69	7,034.66	3,517.33	15,288.65	7,655.69	0.16	-0.04	0.020
42.11	-21.73	-2.03	0.00	-122.30	0.00	122.30	6,948.03	3,474.02	14,912.47	7,467.32	0.18	-0.04	0.020
45.00	-19.50	-1.94	0.00	-116.43	0.00	116.43	6,829.04	3,414.52	14,403.41	7,212.41	0.21	-0.04	0.019
49.35	-19.34	-1.94	0.00	-107.97	0.00	107.97	5,968.08	2,984.04	12,531.62	6,275.12	0.25	-0.05	0.020
50.00	-18.15	-1.89	0.00	-106.71	0.00	106.71	5,950.78	2,975.39	12,445.95	6,232.22	0.26	-0.05	0.020
55.00	-16.98	-1.85	0.00	-97.26	0.00	97.26	5,815.30	2,907.65	11,789.30	5,903.41	0.31	-0.06	0.019
60.00	-15.88	-1.81	0.00	-88.01	0.00	88.01	5,647.21	2,823.61	11,086.03	5,551.25	0.38	-0.06	0.019
64.90	-14.32	-1.76	0.00	-79.13	0.00	79.13	5,468.10	2,734.05	10,390.42	5,202.93	0.44	-0.07	0.018
65.00	-13.23	-1.73	0.00	-78.95	0.00	78.95	5,464.44	2,732.22	10,376.46	5,195.94	0.44	-0.07	0.018
70.00	-12.17	-1.70	0.00	-70.31	0.00	70.31	5,281.67	2,640.84	9,690.35	4,852.38	0.51	-0.07	0.017
75.00	-11.16	-1.68	0.00	-61.79	0.00	61.79	5,098.90	2,549.45	9,027.72	4,520.57	0.59	-0.08	0.016
80.00	-10.18	-1.65	0.00	-53.40	0.00	53.40	4,916.13	2,458.06	8,388.55	4,200.51	0.68	-0.08	0.015
85.00	-9.81	-1.64	0.00	-45.14	0.00	45.14	4,733.35	2,366.68	7,772.85	3,892.20	0.76	-0.09	0.014
86.90	-8.26	-1.59	0.00	-42.01	0.00	42.01	4,663.90	2,331.95	7,545.03	3,778.12	0.80	-0.09	0.013
87.96	-7.64	-1.57	0.00	-40.34	0.00	40.34	4,625.32	2,312.66	7,419.94	3,715.49	0.82	-0.09	0.013
90.00	-6.61	-1.52	0.00	-37.13	0.00	37.13	4,550.58	2,275.29	7,180.61	3,595.64	0.86	-0.09	0.012
93.51	-6.43	-1.51	0.00	-31.81	0.00	31.81	2,648.37	1,324.19	4,168.99	2,087.59	0.93	-0.09	0.018
95.00	-5.86	-1.46	0.00	-29.56	0.00	29.56	2,626.77	1,313.39	4,084.66	2,045.36	0.96	-0.10	0.017
100.00	-5.31	-1.40	0.00	-22.24	0.00	22.24	2,552.56	1,276.28	3,805.39	1,905.52	1.06	-0.10	0.014
105.00	-4.90	-1.34	0.00	-15.24	0.00	15.24	2,475.49	1,237.75	3,531.59	1,768.42	1.17	-0.11	0.011
108.90	-3.82	-1.15	0.00	-10.02	0.00	10.02	2,413.41	1,206.70	3,322.18	1,663.56	1.26	-0.11	0.008
110.00	-3.32	-1.03	0.00	-8.76	0.00	8.76	2,395.58	1,197.79	3,263.81	1,634.33	1.28	-0.11	0.007
115.00	-3.03	-0.95	0.00	-3.59	0.00	3.59	2,312.83	1,156.41	3,002.60	1,503.53	1.40	-0.11	0.004
118.00	-1.10	-0.37	0.00	-0.74	0.00	0.74	2,261.81	1,130.90	2,849.24	1,426.74	1.47	-0.11	0.001
120.00	0.00	0.00	0.00	0.00	0.00	0.00	2,218.59	1,109.30	2,737.84	1,370.95	1.51	-0.11	0.000
120.65	0.00	0.00	0.00	0.00	0.00	0.00	2,203.74	1,101.87	2,701.12	1,352.57	1.53	-0.11	0.000

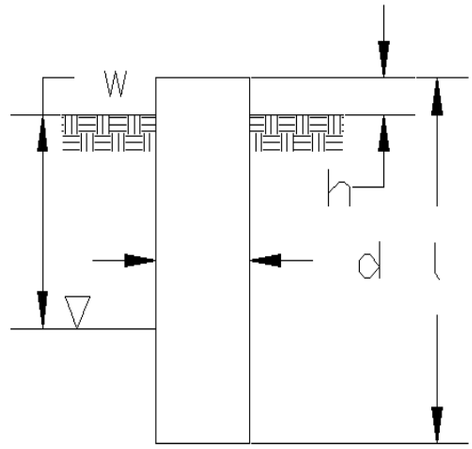
Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	61.41	0.00	50.95	0.00	0.00	5222.01	0.00	0.48
0.9D + 1.6W	61.40	0.00	38.20	0.00	0.00	5210.12	0.00	0.47
1.2D + 1.0Di + 1.0Wi	17.28	0.00	67.86	0.00	0.00	1460.43	0.00	0.14
(1.2 + 0.2Sds) * DL + E ELFM	2.92	0.00	50.34	0.00	0.00	239.50	0.00	0.03
(1.2 + 0.2Sds) * DL + E EMAM	2.38	0.00	50.34	0.00	0.00	217.65	0.00	0.03
(0.9 - 0.2Sds) * DL + E ELFM	2.92	0.00	34.73	0.00	0.00	238.85	0.00	0.03
(0.9 - 0.2Sds) * DL + E EMAM	2.38	0.00	34.73	0.00	0.00	217.00	0.00	0.02
1.0D + 1.0W	13.14	0.00	42.51	0.00	0.00	1115.79	0.00	0.11

Site Name: Brownson Country Club CT, CT
Site Number: 415438
Tower Type: MP
Design Base Loads (Factored) - Analysis per TIA-222-G Standards

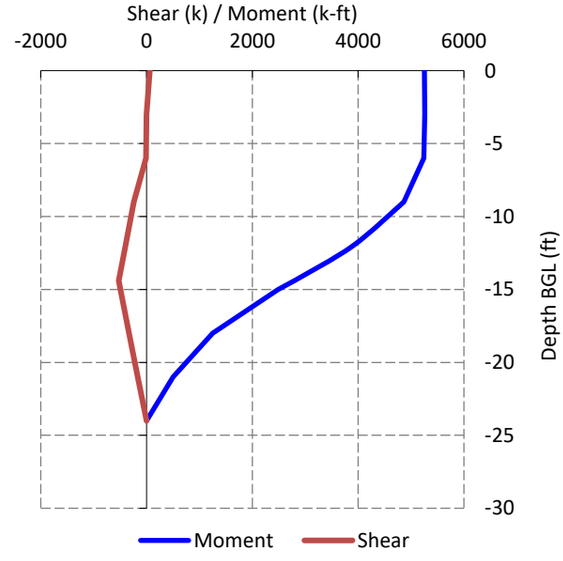
Pier Foundation Analysis

Foundation Analysis Parameters		
Analyze or Design a Foundation?	Analyze	-
Foundation Mapped:	Y	-
Moment (M):	5222.0	k-ft
Shear/Leg (V):	61.4	k
Axial Load (P):	51.0	k
Uplift/Leg (U):	0.0	k
Diameter of Caisson (d):	8	ft
Caisson Embedment (L-h):	24	ft
Caisson Height Above Ground (h):	0.5	ft
Depth Below Ground Surface to Water Table (w):	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Water:	62.4	pcf
Tension/Compression Skin Friction Factor:	1.00	-
Pullout Angle:	30	°



Depth (ft) Top	Depth (ft) Bottom	γ_{Soil} (pcf)	Cu (psf)	ϕ (degree)	Ultimate Skin Friction (psf)	Ultimate Bearing Pressure (psf)
0.0	2.0	135	0	0	0	0
2.0	4.0	115	0	30	0	0
4.0	6.0	135	0	36	0	0
6.0	9.0	150	15,000	0	0	0
9.0	25.0	140	10,000	0	0	30,000

Soil Strength Capacities		
Required Embedment:	13.2	ft
Volume of Concrete:	1231.5	ft^3
Buoyant Weight of Concrete:	184.7	k
Average Soil Unit Weight:	138.3	pcf
Skin Friction Resistance:	0.0	k
Compressive Bearing Resistance:	1508.0	k
Pullout Weight (Minus Concrete Weight):	1245.6	k
Nominal Uplift Capacity per Leg ($\phi_s T_n$):	0.0	k
Nominal Compressive Capacity per Leg ($\phi_s P_n$):	1131.0	k
T_u:	0.0	k
$T_u/\phi_s T_n$:	0%	Pass
P_u:	67.8	k
$P_u/\phi_s P_n$:	6%	Pass
Total Lateral Resistance:	11519.1	k
Inflection Point (Below Ground Surface):	14.4	ft
Moment At Inflection Point (M_D):	6136.7	k-ft
Nominal Moment Capacity ($\phi_s M_n$):	41123.1	k-ft
ϕ_s:	0.75	-
$M_D/\phi_s M_n$:	15%	Pass



Base Plate & Anchor Rod Analysis

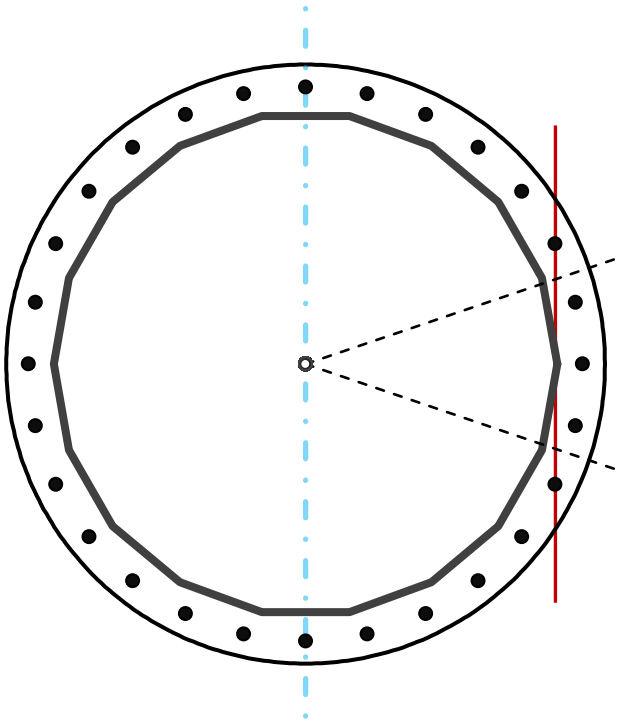
Pole Dimensions		
Number of Sides	18	-
Diameter	66	in
Thickness	0.5625	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	5222.0	k-ft
Axial, Pu	51.0	k
Shear, Vu	61.4	k
Neutral Axis	270	°

Report Capacities		
Component	Capacity	Result
Base Plate	24%	Pass
Anchor Rods	49%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	80	in
Thickness	3 1/4	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	783.1	k
Bending Stress, ϕMn	3272.9	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	28	-
Diameter, ø	2 1/4	in
Bolt Circle	74	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	8.3	in
Orientation Offset	0	°
Applied Force, Pu	126.8	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	61.4	5222.0	1.00
Anchor Rod Forces	61.4	5222.0	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	115.0514	6.3917	0.6770		61594.41
Bolt	3.9761	3.2477	0.8393	4.5	58337.37
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Round	-
Diameter, D	80	in
Thickness, t	3.25	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	45.211	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	28	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	74	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	126.8	k
Applied Shear, Vu	0.8	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.488	OK
Interaction Capacity	0.494	OK

External Base Plate		
Chord Length AA	38.252	in
Additional AA	6.000	in
Section Modulus, Z	116.852	in^3
Applied Moment, Mu	783.1	k-ft
Bending Capacity, ϕMn	5258.3	k-ft
Capacity, Mu/ϕMn	0.149	OK
Chord Length AB	36.424	in
Additional AB	6.000	in
Section Modulus, Z	112.027	in^3
Applied Moment, Mu	592.0	k-ft
Bending Capacity, ϕMn	5041.2	k-ft
Capacity, Mu/ϕMn	0.117	OK
Bend Line Length	27.543	in
Additional Bend Line	0.000	in
Section Modulus, Z	72.732	in^3
Applied Moment, Mu	783.1	k-ft
Bending Capacity, ϕMn	3272.9	k-ft
Capacity, Mu/ϕMn	0.239	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®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**Brownson Country Club CT, CT**
ATC Site Number	:	**415438**
Engineering Number	:	**12984011_C9_06**
Mount Elevation	:	**118 ft**
Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**Huntington CT**
Carrier Site Number	:	**468942**
Site Location	:	**15 Soundview Avenue** **SHELTON, CT 06484-2844** **41.2, -73.137**
County	:	**Fairfield**
Date	:	**January 22, 2020**
Max Usage	:	**95%**
Result	:	**Contingent Pass**

Prepared By:
Trevor Ridilla
Structural Engineer I

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED
PROFESSIONAL ENGINEER

COA: PEC.0001553

Authorized by "EOR"
12 Feb 2020 03:08:19

Table of Contents

Introduction 1

Supporting Documents 1

Analysis 1

Conclusion 1

Antenna Loading 2

Structure Usages 2

Mount Layout 3

Equipment Layout 4

Standard Conditions 5

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Verizon Wireless at 118 ft.

Supporting Documents

Mount Mapping	TEP Project #415438, dated August 12, 2015
RFDS	RFDS dated September 13, 2019
Photos	Site photos from 2019

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D v17

Basic Wind Speed:	97 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 / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.175, S_1 = 0.084
Site Class:	D - Stiff Soil - Default
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Refer to ATC Modification Drawing #12984011_C9_06

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.

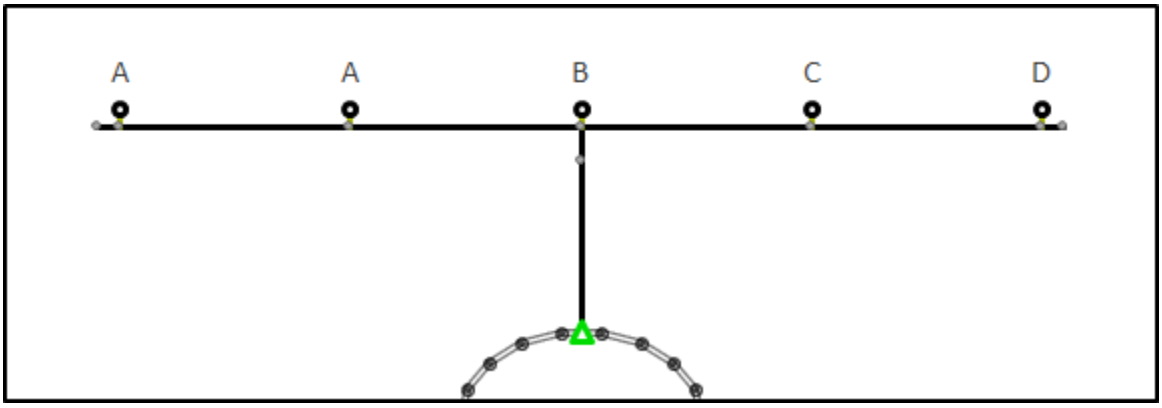
Application Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
118.0	120.0	3	Samsung Outdoor CBRS 20W RRH
		3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna
		3	Samsung B5/B13 RRH-BR04C
		3	Samsung B2/B66A RRH-BR049
		1	RFS DB-C1-12C-24AB-0Z
		6	Decibel DB846F65ZAXY
		6	Quintel QS6656-5D

Structure Usages

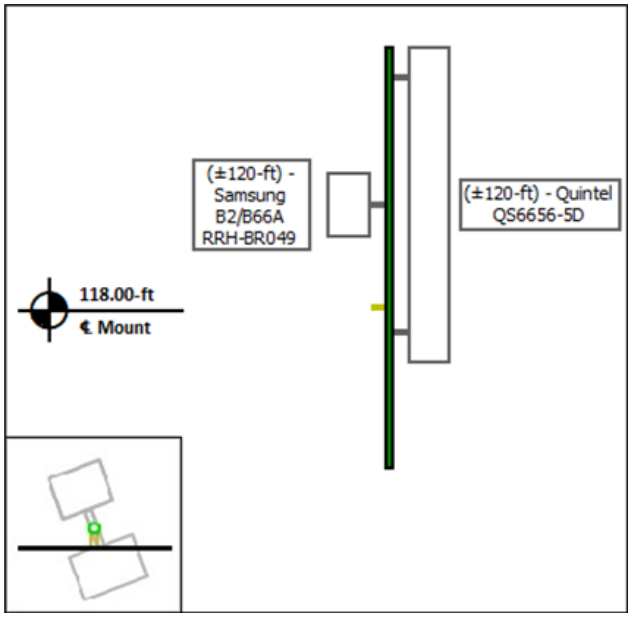
Structural Component	Controlling Usage	Pass/Fail
Horizontals	91%	Pass
Mount Pipes	95%	Pass
Mod-Kits	24%	Pass

Mount Layout

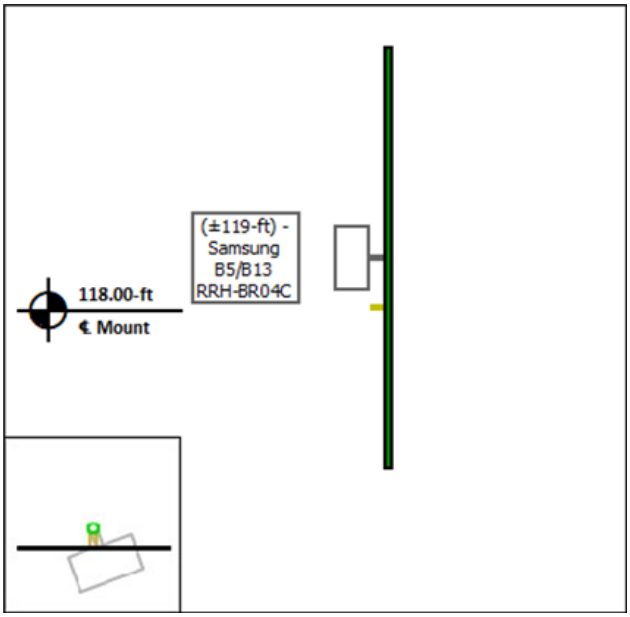


Equipment Layout

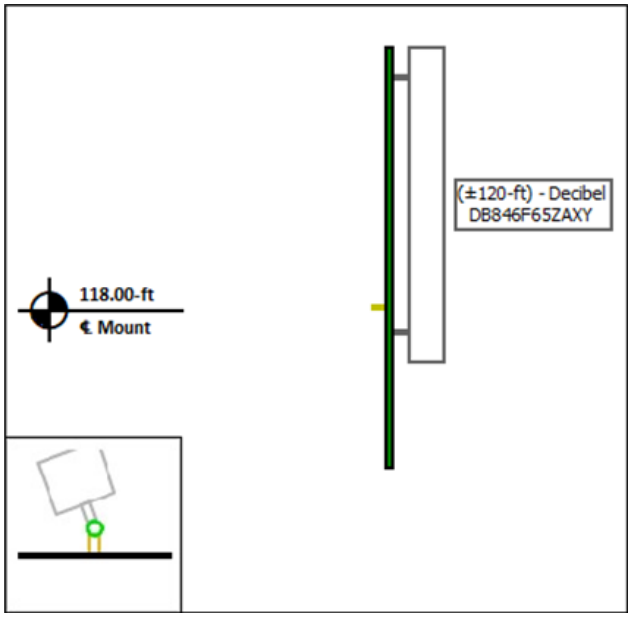
Mount Pipe A



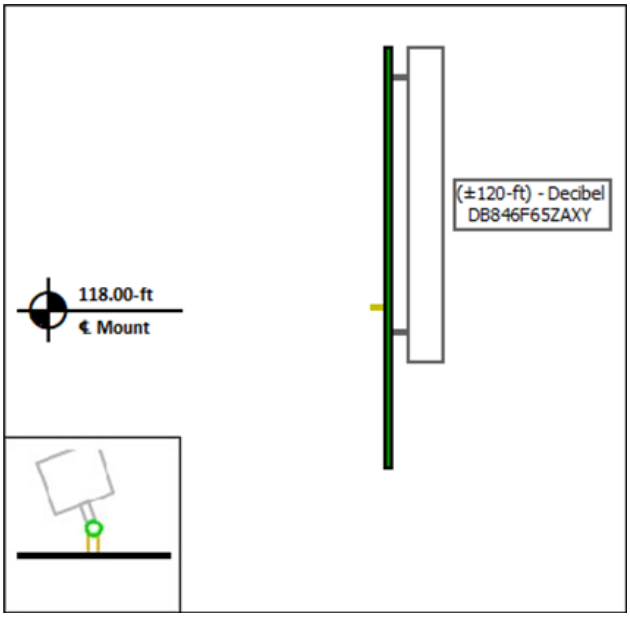
Mount Pipe B



Mount Pipe C

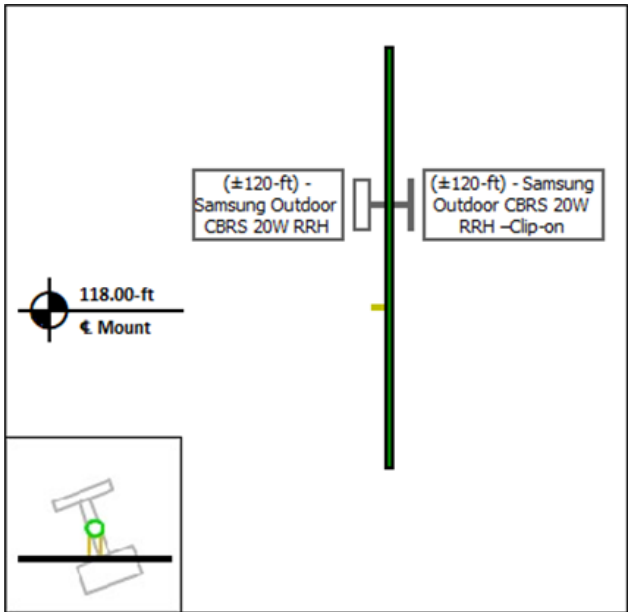


Mount Pipe D



Equipment Layout Cont'd.

Mount Pipe E



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

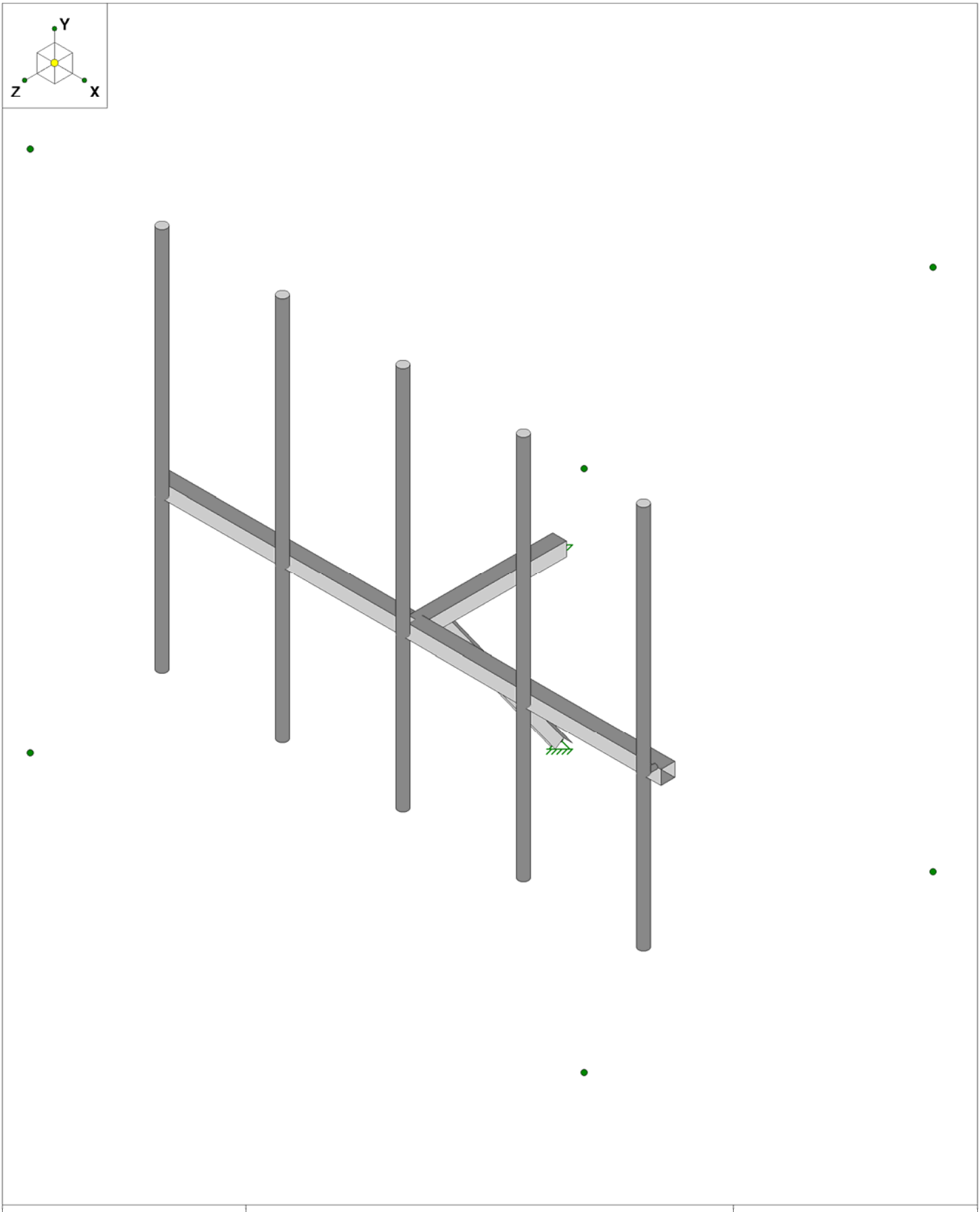
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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.

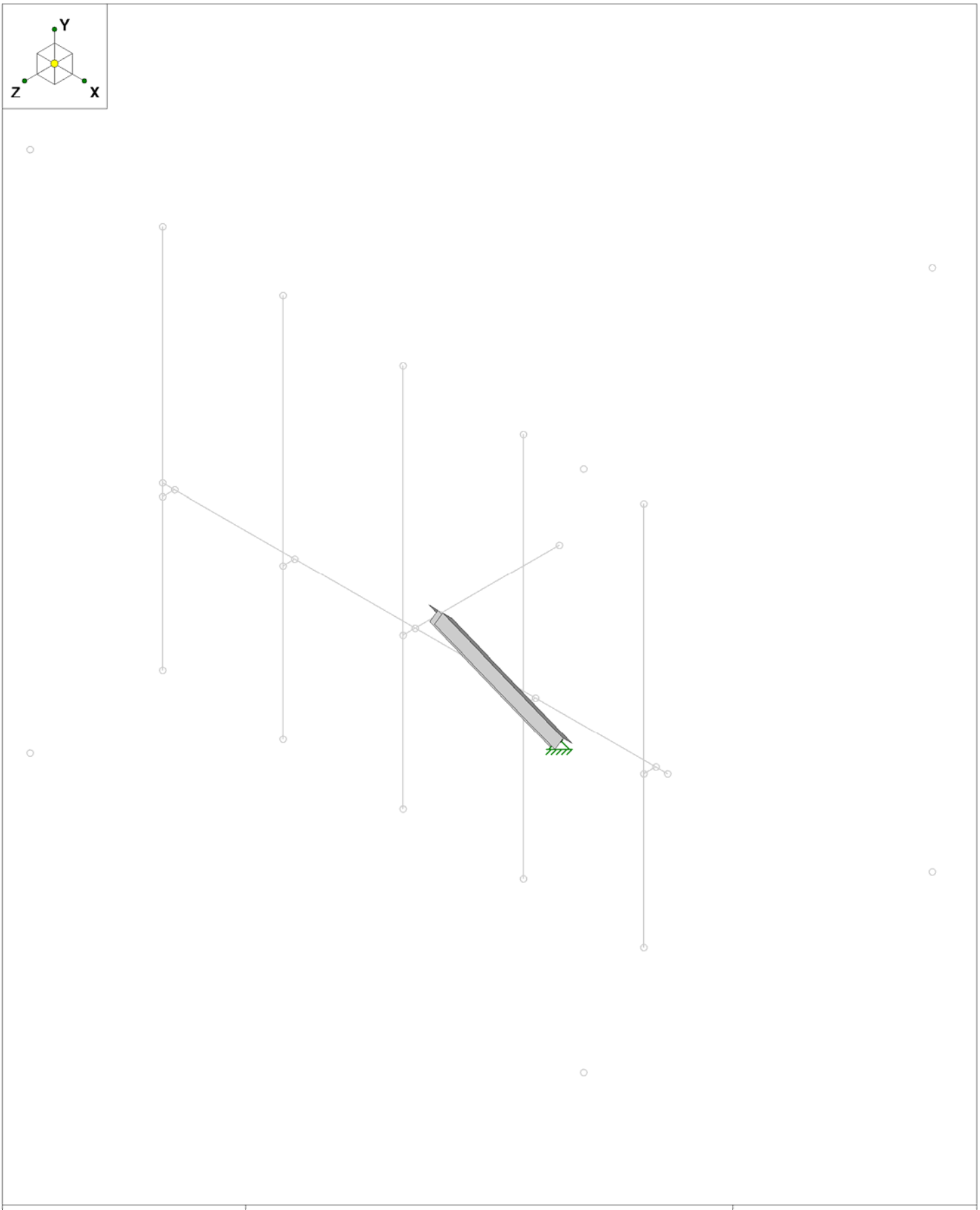
All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

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.

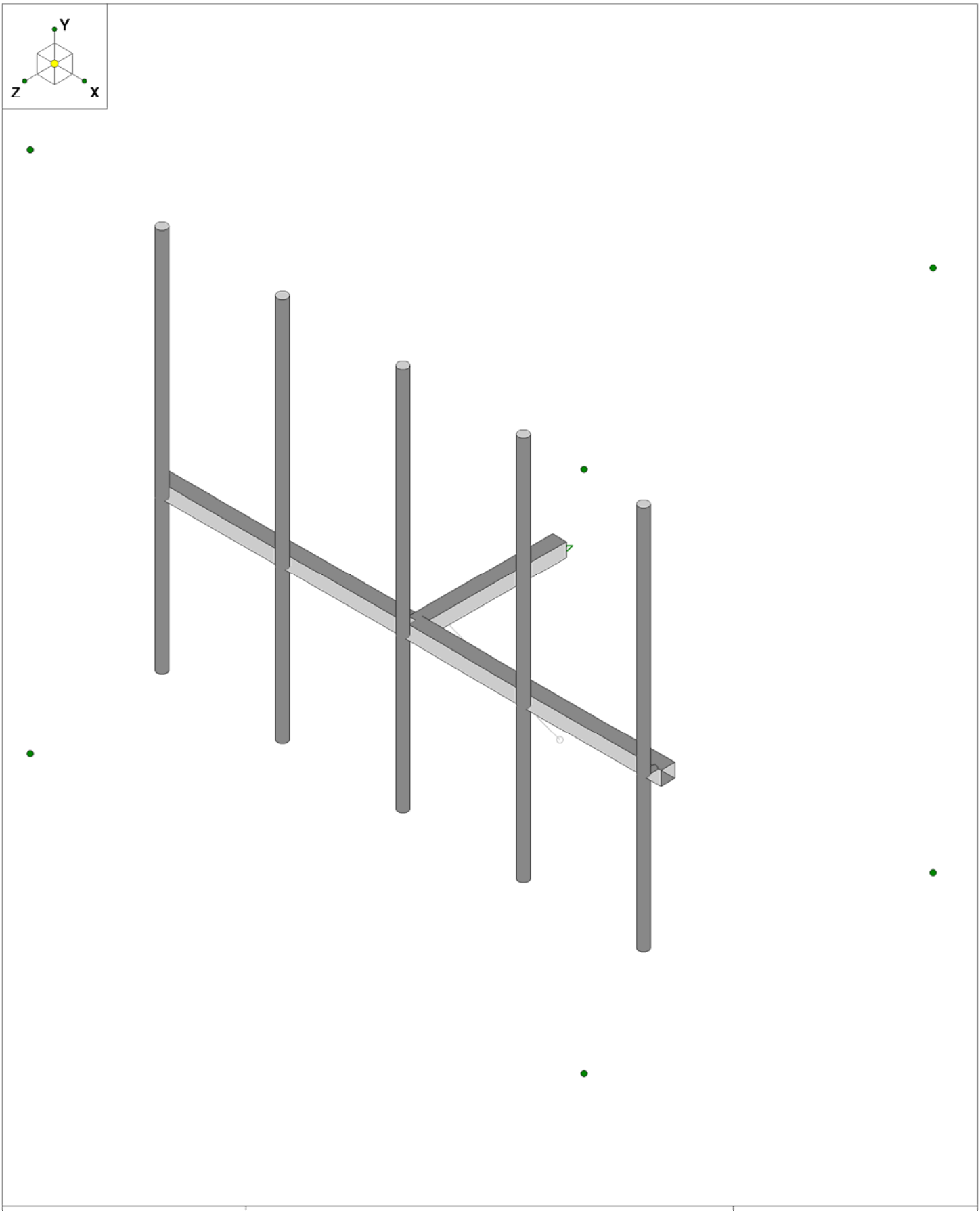
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



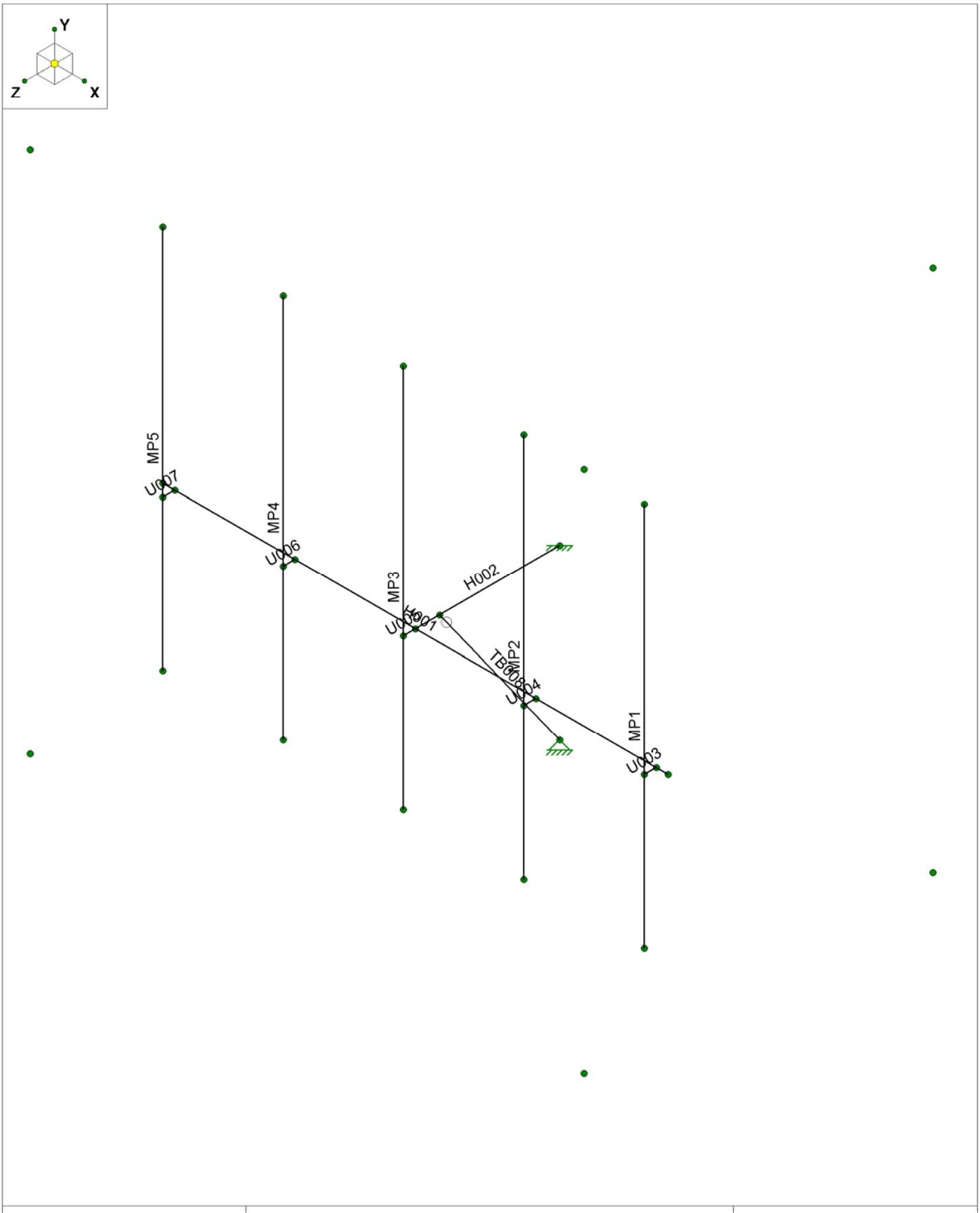
American Tower Corp.		SK - 1
Trevor.Ridilla	415438, Brownson Country Club CT	Jan 22, 2020 at 12:01 PM
12984011_C9_06	3D Rendering (Final Configuration)	R3D. VERIZON WIRELESS @ 415...



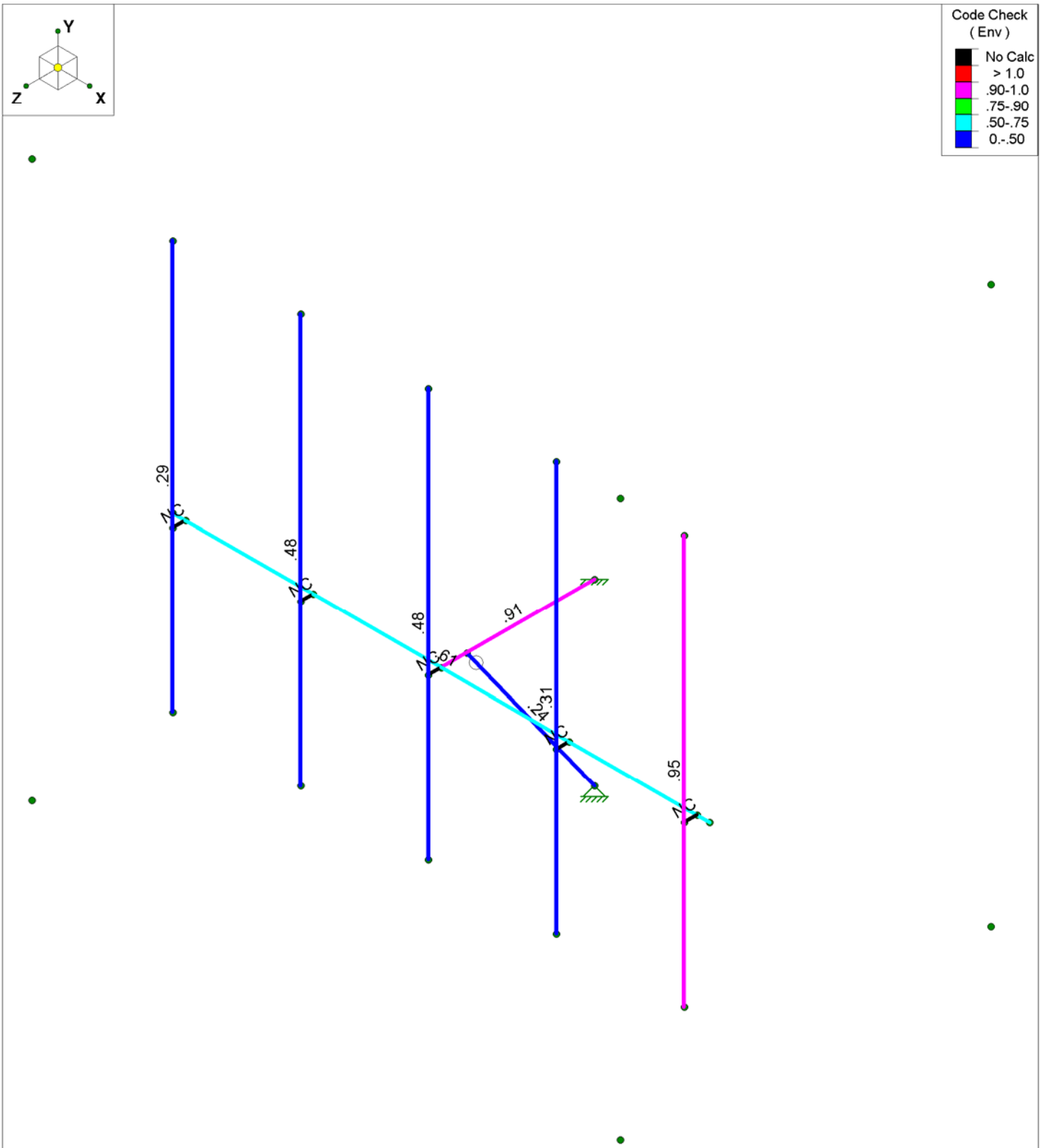
American Tower Corp.		SK - 2
Trevor.Ridilla	415438, Brownson Country Club CT	Jan 22, 2020 at 12:01 PM
12984011_C9_06	3D Rendering (Proposed Configuration)	R3D. VERIZON WIRELESS @ 415...



American Tower Corp.		SK - 3
Trevor.Ridilla	415438, Brownson Country Club CT	Jan 22, 2020 at 12:02 PM
12984011_C9_06	3D Rendering (Current Configuration)	R3D. VERIZON WIRELESS @ 415...

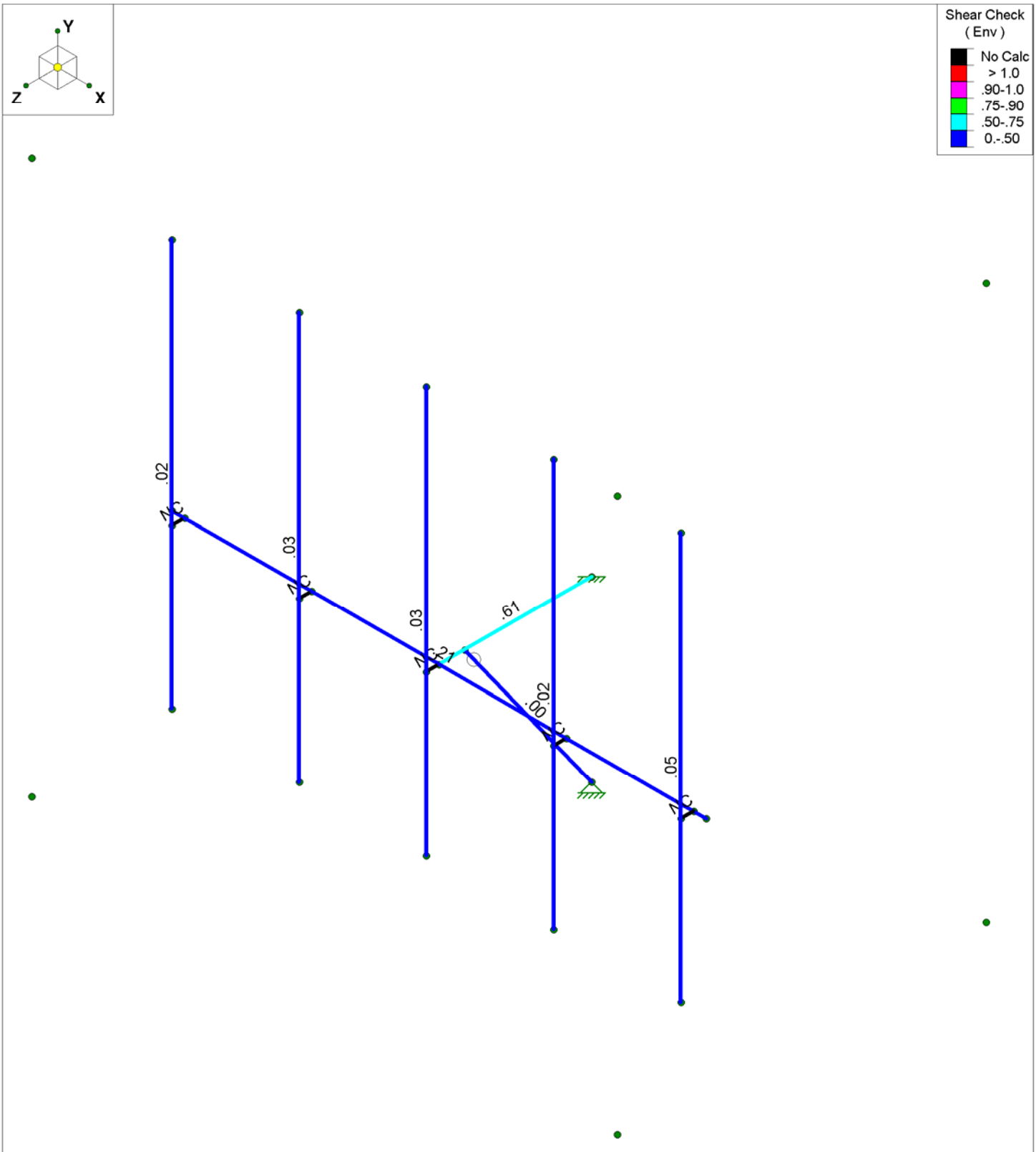


American Tower Corp.		SK - 4
Trevor.Ridilla	415438, Brownson Country Club CT	Jan 22, 2020 at 12:02 PM
12984011_C9_06	Member Labels	R3D. VERIZON WIRELESS @ 415...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 5
Trevor.Ridilla	415438, Brownson Country Club CT	Jan 22, 2020 at 12:02 PM
12984011_C9_06	Unity Bending Checks	R3D. VERIZON WIRELESS @ 415...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 6
Trevor.Ridilla	415438, Brownson Country Club CT	Jan 22, 2020 at 12:02 PM
12984011_C9_06	Shear Checks	R3D. VERIZON WIRELESS @ 415...

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm (/1...	Density[lb...	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(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	H001	N003	N004			HSS3.5x3.5x4	Beam	None	A500 Gr. ...	Typical
2	H002	N001	N002			HSS3.5x3.5x4	Beam	None	A500 Gr. ...	Typical
3	U003	N005	N010			(2) 1/2 U-Bolts	Beam	None	A36	Typical
4	U004	N006	N011			(2) 1/2 U-Bolts	Beam	None	A36	Typical
5	U005	N007	N002			(2) 1/2 U-Bolts	Beam	None	A36	Typical
6	U006	N008	N012			(2) 1/2 U-Bolts	Beam	None	A36	Typical
7	U007	N009	N013			(2) 1/2 U-Bolts	Beam	None	A36	Typical
8	TB008	N015	N014			LL2.5x2.5x3x6	Column	None	A36	Typical
9	MP1	MP1t	MP1b			PIPE_2.0	Column	None	A53 Gr. B	Typical
10	MP2	MP2t	MP2b			PIPE_2.0	Column	None	A53 Gr. B	Typical
11	MP3	MP3t	MP3b			PIPE_2.0	Column	None	A53 Gr. B	Typical
12	MP4	MP4t	MP4b			PIPE_2.0	Column	None	A53 Gr. B	Typical
13	MP5	MP5t	MP5b			PIPE_2.0	Column	None	A53 Gr. B	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface...
1	Dead	DL		-1			12			
2	Ice	IL					12	8		
3	Wind -Z	WLZ					12		1	
4	Wind -X	WLX					12		1	
5	Wind -Z (Ice)	WL-Z					12	8	1	
6	Wind -X (Ice)	WL-X					12	8	1	
7	Wind -Z (Working)	WLZP1					12		1	
8	Wind -X (Working)	WLXP1					12		1	
9	Ev -Y (Seismic)	ELY						8		
10	Eh -Z (Seismic)	ELZ						8		
11	Eh -X (Seismic)	ELX						8		
12	Lv (1)	LL					1			
13	Lv (2)	LL					1			
14	Lv (3)	LL				1				
15	Lv (4)	LL				1				
16	Lm (1)	LL				1				
17	Lm (2)	LL				1				
18	Lm (3)	LL				1				
19	Lm (4)	LL				1				
20	Lm (5)	LL				1				

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface...
21	BLC 3 Transient Area Loa...	None						7		
22	BLC 4 Transient Area Loa...	None						12		
23	BLC 5 Transient Area Loa...	None						7		
24	BLC 6 Transient Area Loa...	None						12		
25	BLC 7 Transient Area Loa...	None						7		
26	BLC 8 Transient Area Loa...	None						12		

Load Combinations

	Description	Solve	PDelta	SRSS	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		DL	1.4																				
2	1.2D + 1.6Wo [0°]	Yes	Y		DL	1.2	WLX	.001	W...	1.6																
3	1.2D + 1.6Wo [30°]	Yes	Y		DL	1.2	WLX	.8	W...	1....																
4	1.2D + 1.6Wo [60°]	Yes	Y		DL	1.2	WLX	1....	W...	.8																
5	1.2D + 1.6Wo [90°]	Yes	Y		DL	1.2	WLX	1.6	W...	.001																
6	1.2D + 1.6Wo [120°]	Yes	Y		DL	1.2	WLX	1....	W...	-.8																
7	1.2D + 1.6Wo [150°]	Yes	Y		DL	1.2	WLX	.8	W...	-1....																
8	1.2D + 1.6Wo [180°]	Yes	Y		DL	1.2	WLX	.001	W...	-1.6																
9	1.2D + 1.6Wo [210°]	Yes	Y		DL	1.2	WLX	-.8	W...	-1....																
10	1.2D + 1.6Wo [240°]	Yes	Y		DL	1.2	WLX	-1....	W...	-.8																
11	1.2D + 1.6Wo [270°]	Yes	Y		DL	1.2	WLX	-1.6	W...	.001																
12	1.2D + 1.6Wo [300°]	Yes	Y		DL	1.2	WLX	-1....	W...	.8																
13	1.2D + 1.6Wo [330°]	Yes	Y		DL	1.2	WLX	-.8	W...	1....																
14	0.9D + 1.6Wo [0°]	Yes	Y		DL	.9	WLX	.001	W...	1.6																
15	0.9D + 1.6Wo [30°]	Yes	Y		DL	.9	WLX	.8	W...	1....																
16	0.9D + 1.6Wo [60°]	Yes	Y		DL	.9	WLX	1....	W...	.8																
17	0.9D + 1.6Wo [90°]	Yes	Y		DL	.9	WLX	1.6	W...	.001																
18	0.9D + 1.6Wo [120°]	Yes	Y		DL	.9	WLX	1....	W...	-.8																
19	0.9D + 1.6Wo [150°]	Yes	Y		DL	.9	WLX	.8	W...	-1....																
20	0.9D + 1.6Wo [180°]	Yes	Y		DL	.9	WLX	.001	W...	-1.6																
21	0.9D + 1.6Wo [210°]	Yes	Y		DL	.9	WLX	-.8	W...	-1....																
22	0.9D + 1.6Wo [240°]	Yes	Y		DL	.9	WLX	-1....	W...	-.8																
23	0.9D + 1.6Wo [270°]	Yes	Y		DL	.9	WLX	-1.6	W...	.001																
24	0.9D + 1.6Wo [300°]	Yes	Y		DL	.9	WLX	-1....	W...	.8																
25	0.9D + 1.6Wo [330°]	Yes	Y		DL	.9	WLX	-.8	W...	1....																
26	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	.001	W...	1														
27	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	.5	W...	.866														
28	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	.866	W...	.5														
29	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	1	W...	.001														
30	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	.866	W...	-.5														
31	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	.5	W...	-.8...														
32	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	.001	W...	-1														
33	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	-.8...														
34	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	-.8...	W...	-.5														
35	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	-1	W...	.001														
36	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	-.8...	W...	.5														
37	1.2D + 1.0Di + 1.0...	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	.866														
38	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	1	E...	.001														
39	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	.866	E...	.5														
40	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	.5	E...	.866														
41	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	.001	E...	1														
42	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	-.5	E...	.866														
43	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	-.8...	E...	.5														
44	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	-1	E...	.001														
45	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	-.8...	E...	-.5														
46	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	-.5	E...	-.8...														

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
47	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	.001	E...	-1														
48	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	.5	E...	-.8...														
49	1.2D + 1.0Ev + 1.0...	Yes	Y		DL	1.2	ELY	1	E...	.866	E...	-.5														
50	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	1	E...	.001														
51	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	.866	E...	.5														
52	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	.5	E...	.866														
53	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	.001	E...	1														
54	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	-.5	E...	.866														
55	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	-.8...	E...	.5														
56	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	-1	E...	.001														
57	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	-.8...	E...	-.5														
58	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	-.5	E...	-.8...														
59	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	.001	E...	-1														
60	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	.5	E...	-.8...														
61	0.9D + 1.0Ev + 1.0...	Yes	Y		DL	.9	ELY	1	E...	.866	E...	-.5														
62	1.2D + 1.5Lv(1)	Yes	Y		DL	1.2	12	1.5																		
63	1.2D + 1.5Lv(2)	Yes	Y		DL	1.2	13	1.5																		
64	1.2D + 1.5Lv(3)	Yes	Y		DL	1.2	14	1.5																		
65	1.2D + 1.5Lv(4)	Yes	Y		DL	1.2	15	1.5																		
66	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	.001	W...	1														
67	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	.5	W...	.866														
68	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	.866	W...	.5														
69	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	1	W...	.001														
70	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	.866	W...	-.5														
71	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	.5	W...	-.8...														
72	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	.001	W...	-.5														
73	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	-.5	W...	-.8...														
74	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	-.8...	W...	-.5														
75	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	-1	W...	.001														
76	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	-.8...	W...	.5														
77	1.2D + 1.5Lm(1) +...	Yes	Y		DL	1.2	16	1.5	W...	-.5	W...	.866														
78	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	.001	W...	1														
79	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	.5	W...	.866														
80	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	.866	W...	.5														
81	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	1	W...	.001														
82	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	.866	W...	-.5														
83	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	.5	W...	-.8...														
84	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	.001	W...	-.5														
85	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	-.5	W...	-.8...														
86	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	-.8...	W...	-.5														
87	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	-1	W...	.001														
88	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	-.8...	W...	.5														
89	1.2D + 1.5Lm(2) +...	Yes	Y		DL	1.2	17	1.5	W...	-.5	W...	.866														
90	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	.001	W...	1														
91	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	.5	W...	.866														
92	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	.866	W...	.5														
93	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	1	W...	.001														
94	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	.866	W...	-.5														
95	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	.5	W...	-.8...														
96	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	.001	W...	-.5														
97	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	-.5	W...	-.8...														
98	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	-.8...	W...	-.5														
99	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	-1	W...	.001														
100	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	-.8...	W...	.5														
101	1.2D + 1.5Lm(3) +...	Yes	Y		DL	1.2	18	1.5	W...	-.5	W...	.866														
102	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	.001	W...	1														
103	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	.5	W...	.866														

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
104	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	.866	W...	.5														
105	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	1	W...	.001														
106	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	.866	W...	-.5														
107	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	.5	W...	-.8...														
108	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	.001	W...	-.5														
109	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	-.5	W...	-.8...														
110	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	-.8...	W...	-.5														
111	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	-1	W...	.001														
112	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	-.8...	W...	.5														
113	1.2D + 1.5Lm(4) +...	Yes	Y		DL	1.2	19	1.5	W...	-.5	W...	.866														
114	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	1														
115	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	.866														
116	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	.866	W...	.5														
117	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	1	W...	.001														
118	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	.866	W...	-.5														
119	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	-.8...														
120	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	-.5														
121	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	-.8...														
122	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	-.8...	W...	-.5														
123	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	-1	W...	.001														
124	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	1.5	W...	-.8...	W...	.5														
125	1.2D + 1.5Lm(5) +...	Yes	Y		DL	1.2	20	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	2177.129	5	1448.027	14	2786.489	14	1386.583	8	7446.471	18	5744.821	75
2		min	-2177.055	11	-1920.319	8	-4166.504	8	-1088.975	14	-7416.651	12	-2484.929	117
3	N015	max	31.99	17	3808.791	32	2683.704	32	0	125	0	125	0	125
4		min	-32.044	23	-810.863	14	-527.776	14	0	1	0	1	0	1
5	Totals:	max	2207.525	17	2456.362	37	2258.713	14						
6		min	-2207.525	11	637.163	14	-2258.713	8						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*...	phi*...	phi*...	phi*...	Cb	Eqn
1	H001	HSS3.5x...	.612	63	13	.212	63	z	8	1626...	1204...	12075	12075	1.537	H1-...
2	H002	HSS3.5x...	.910	0	12	.605	30	y	75	9649...	1204...	12075	12075	2.265	H3-6
3	TB008	LL2.5x2....	.237	25.269	32	.003	51.614	y	8	2057...	58320	4643...	2549...	1.136	H1-...
4	MP1	PIPE_2.0	.952	58	8	.048	58		8	3485...	32130	1871...	1871...	1.589	H1-...
5	MP2	PIPE_2.0	.307	58	87	.017	58		8	3485...	32130	1871...	1871...	1.823	H1-...
6	MP3	PIPE_2.0	.484	58	11	.025	58		11	3485...	32130	1871...	1871...	1.88	H1-...
7	MP4	PIPE_2.0	.485	58	11	.025	58		11	3485...	32130	1871...	1871...	1.88	H1-...
8	MP5	PIPE_2.0	.289	58	117	.016	58		8	3485...	32130	1871...	1871...	1.818	H1-...

AMERICAN TOWER®
CORPORATION

Site Number:	*415438*
Project Number:	*12984011_C9_06*
Carrier:	*Verizon Wireless*
Mount Elevation:	*118 ft*
Date:	1/22/2020

Mount Analysis Force Calculations

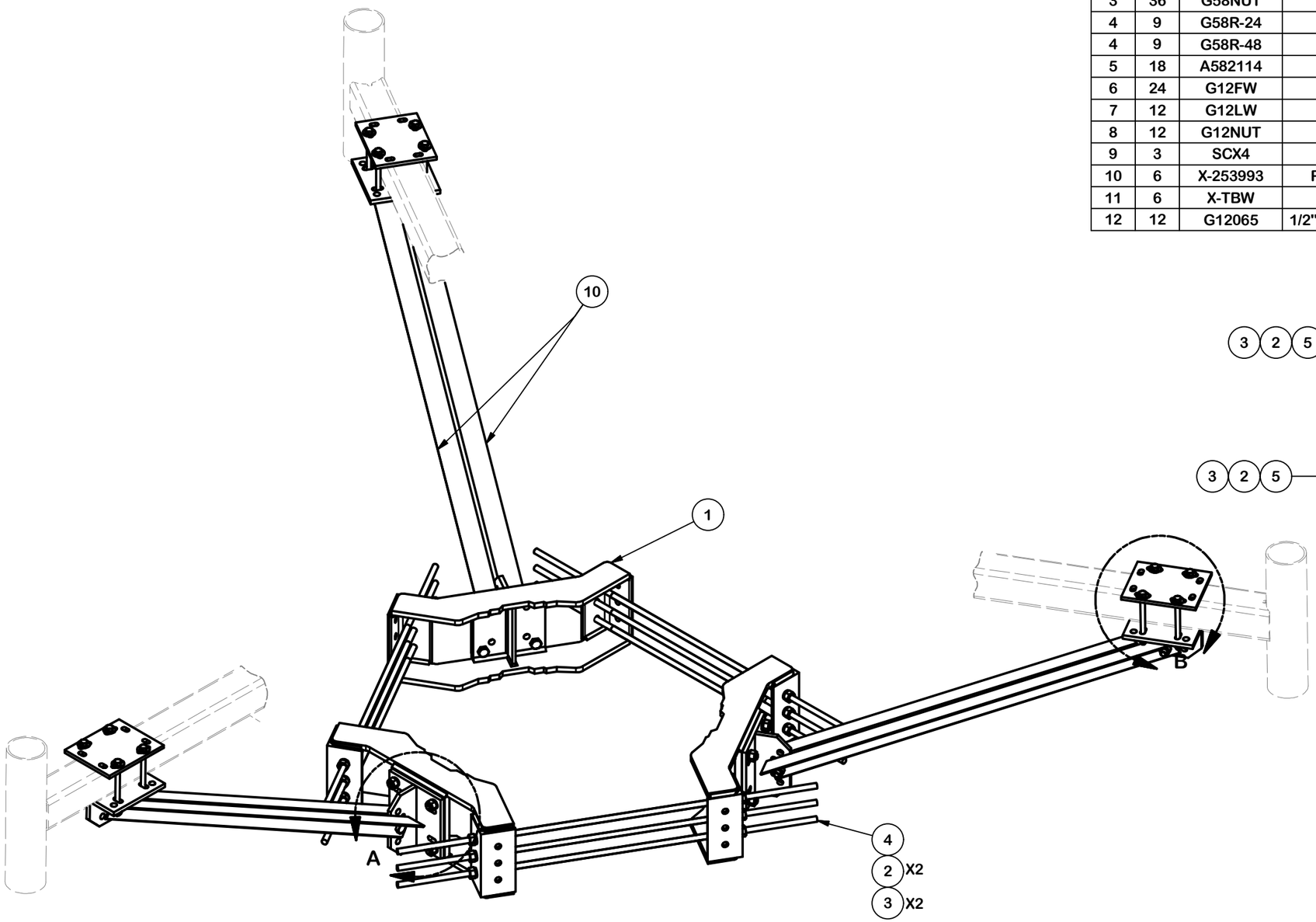
Wind & Ice Load Calculations			
Shielding Factor	K_z	1.31	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	1.00	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	97	mph
Velocity Pressure	q_z	30.0	psf
Height Escalation Factor	K_{iz}	1.14	
Thickness of Radial Glaze Ice	T_{iz}	1.70	in

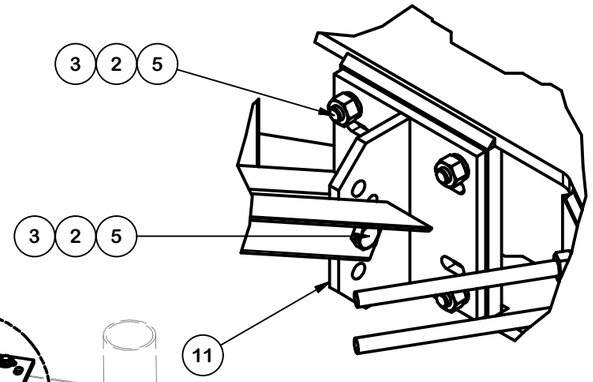
Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.140	
1 Second DSRAP	S_{D1}	0.134	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.070	
Amplification Factor	A	1.0	
Total Weight	W	624.0	lbs
Total Shear Force	V_S	43.7	lbs
Horizontal Seismic Load	Eh	43.7	lbs
Vertical Seismic Load	Ev	17.5	lbs

Antenna Calculations

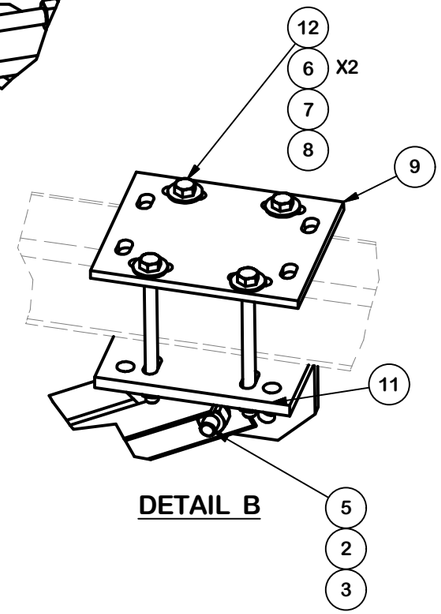
Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Samsung Outdoor CBRS 20W RRH	12.1	8.5	4.1	18.6	0.86	0.42	1.54	0.99
Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	12.3	8.7	1.4	4.4	0.89	0.17	1.58	0.76
Samsung B5/B13 RRH-BR04C	15.0	15.0	8.1	70.3	1.88	1.01	2.82	1.77
Samsung B2/B66A RRH-BR049	15.0	15.0	10.0	84.4	1.88	1.25	2.82	2.06
RFS DB-C1-12C-24AB-0Z	29.5	16.5	12.6	32.0	N/A	N/A		
Decibel DB846F65ZAXY	72.0	10.0	8.5	21.0	3.00	6.16	4.21	9.04
Quintel QS6656-5D	72.0	12.0	9.6	88.0	8.13	2.88	10.93	4.09

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	36	G58LW	5/8" HDG LOCKWASHER		0.03	0.94
3	36	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	4.68
4	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		2.09	18.82
4	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)		4.18	37.63
5	18	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	5.62
6	24	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.82
7	12	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.17
8	12	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.86
9	3	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	18.06
10	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
11	6	X-TBW	T-BRACKET WELDMENT		13.60	81.60
12	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	5 1/2 in	0.41	4.91
					TOTAL WT. #	466.20





DETAIL A



DETAIL B

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
B	CHANGED X-253992 TO X-TBW		CEK	9/19/2018
A	CHANGED ALL 5/8" BOLTS TO A582114	4488	CEK	10/1/2015

REVISION HISTORY

TOLERANCE NOTES

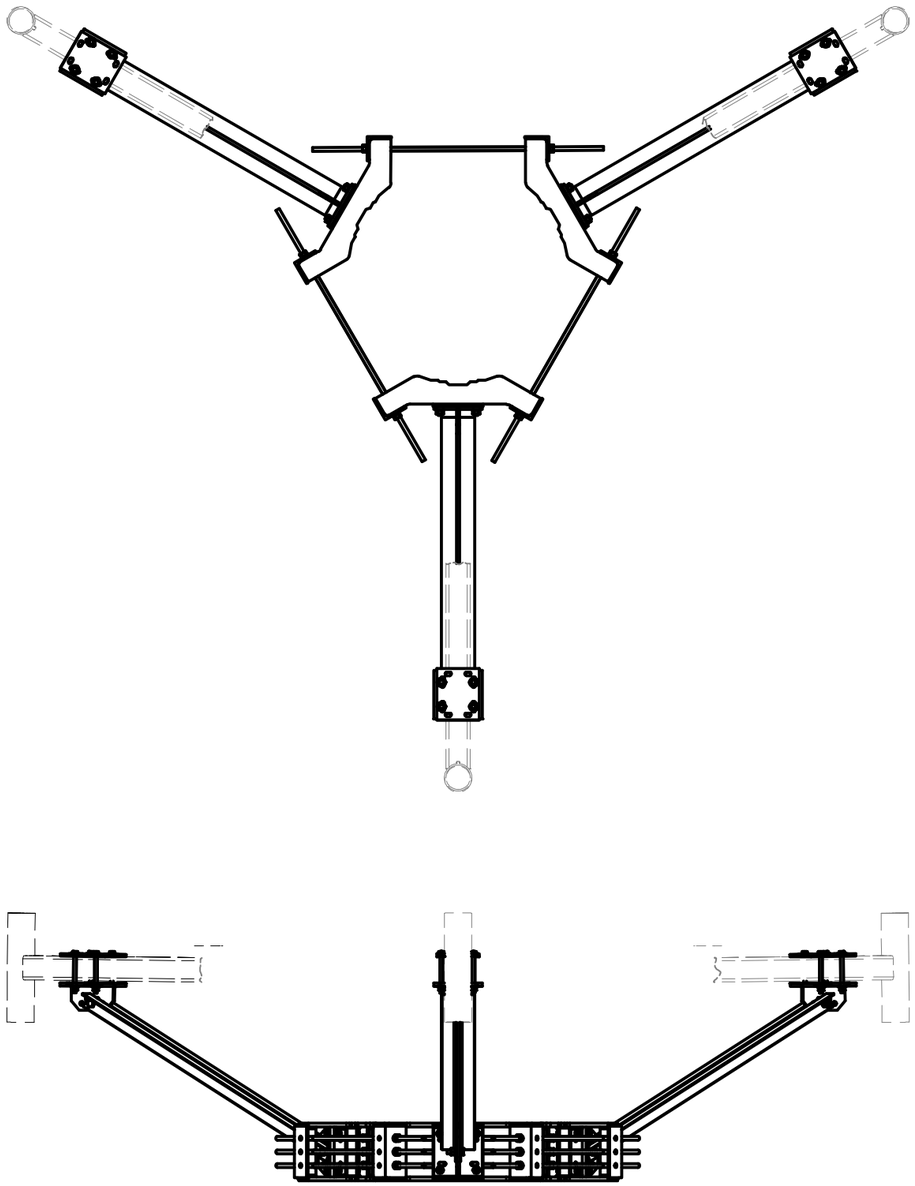
TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

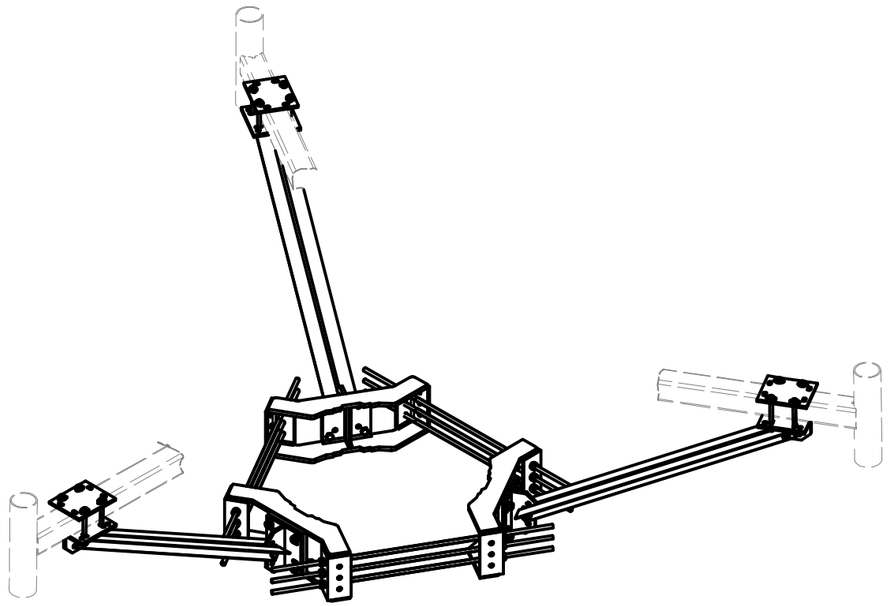
DESCRIPTION
PLATFORM RENIFORCEMENT
ON A 12" TO 45" POLE
4' 6" ANGLE

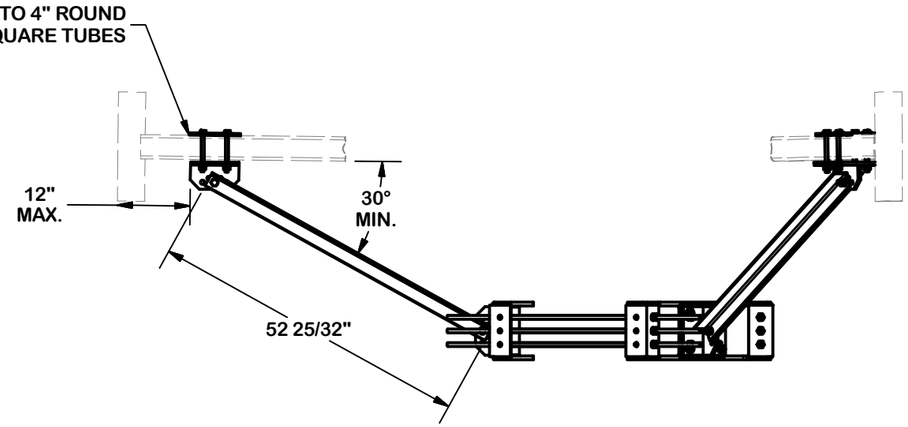
SITE PRO 1
A valmont COMPANY
Engineering Support Team:
1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
4488	CEK 4/11/2014		PRK-1245	1 OF 2

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 1/18/2016	PRK-1245







REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
B	CHANGED X-253992 TO X-TBW		CEK	9/19/2018
A	CHANGED ALL 5/8" BOLTS TO A582114	4488	CEK	10/1/2015

REVISION HISTORY

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

DESCRIPTION
PLATFORM RENIFORCEMENT
ON A 12" TO 45" POLE
4' 6" ANGLE

SITE PRO 1 — A valmont COMPANY

Engineering Support Team:
1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 4/11/2014		PRK-1245

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 1/18/2016	PRK-1245

Site Name: HUNTINGTON CT
Cumulative Power Density

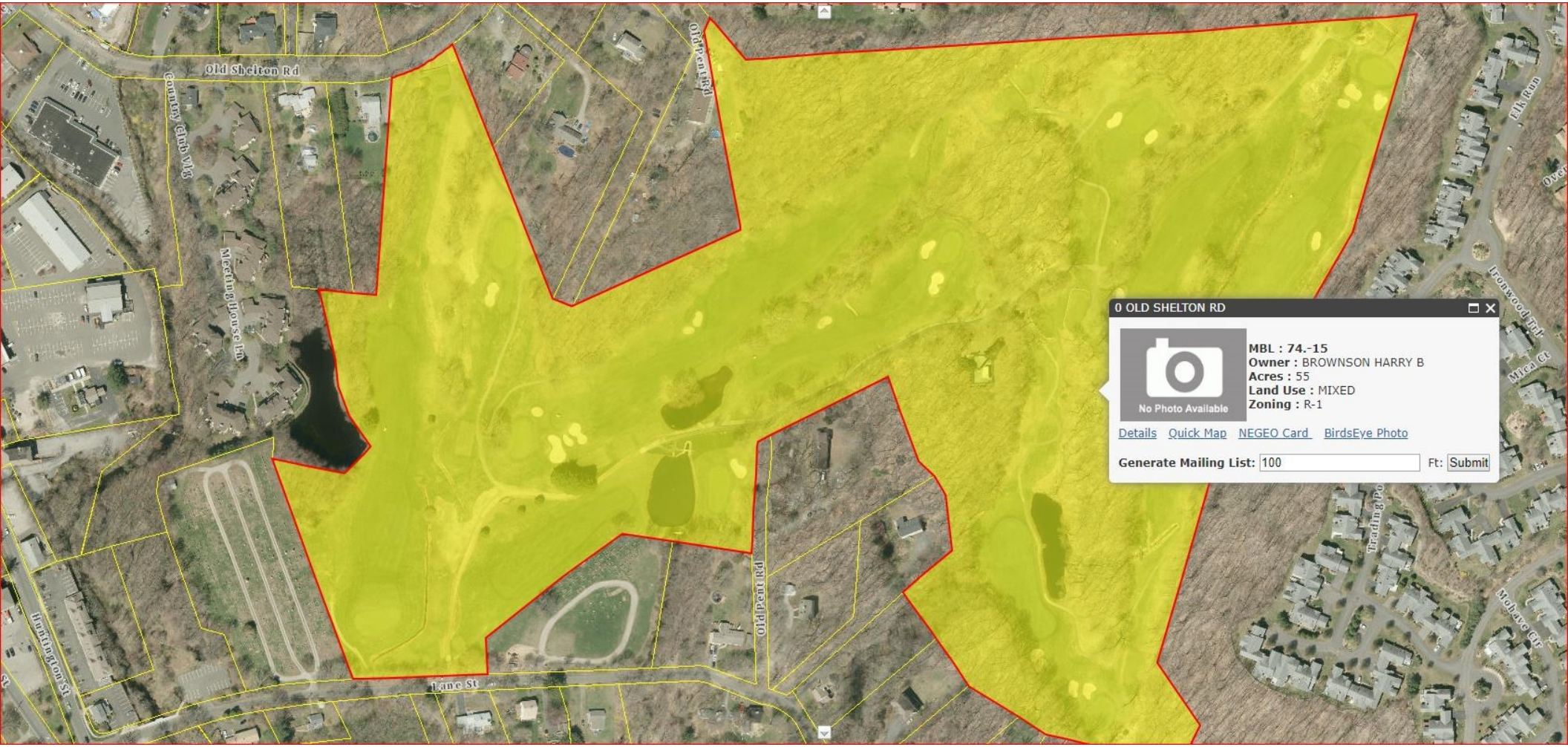
Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW PCS	1970	4	2137	8547.88	120	0.2135	1.0	21.35%
VZW Cellular CDMA	869	3	498	1494	120	0.0373	0.579333333	6.44%
VZW Cellular LTE	880	4	498	1992	120	0.0497	0.586666667	8.48%
VZW AWS	2145	4	2398	9590.88	120	0.2395	1.0	23.95%
VZW 700	746	4	589	2354.28	120	0.0588	0.497333333	11.82%
VZW CBRS	3550	4	31	122.24	120	0.0031	2.366666667	0.13%

Total Percentage of Maximum Permissible Exposure 72.17%

*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

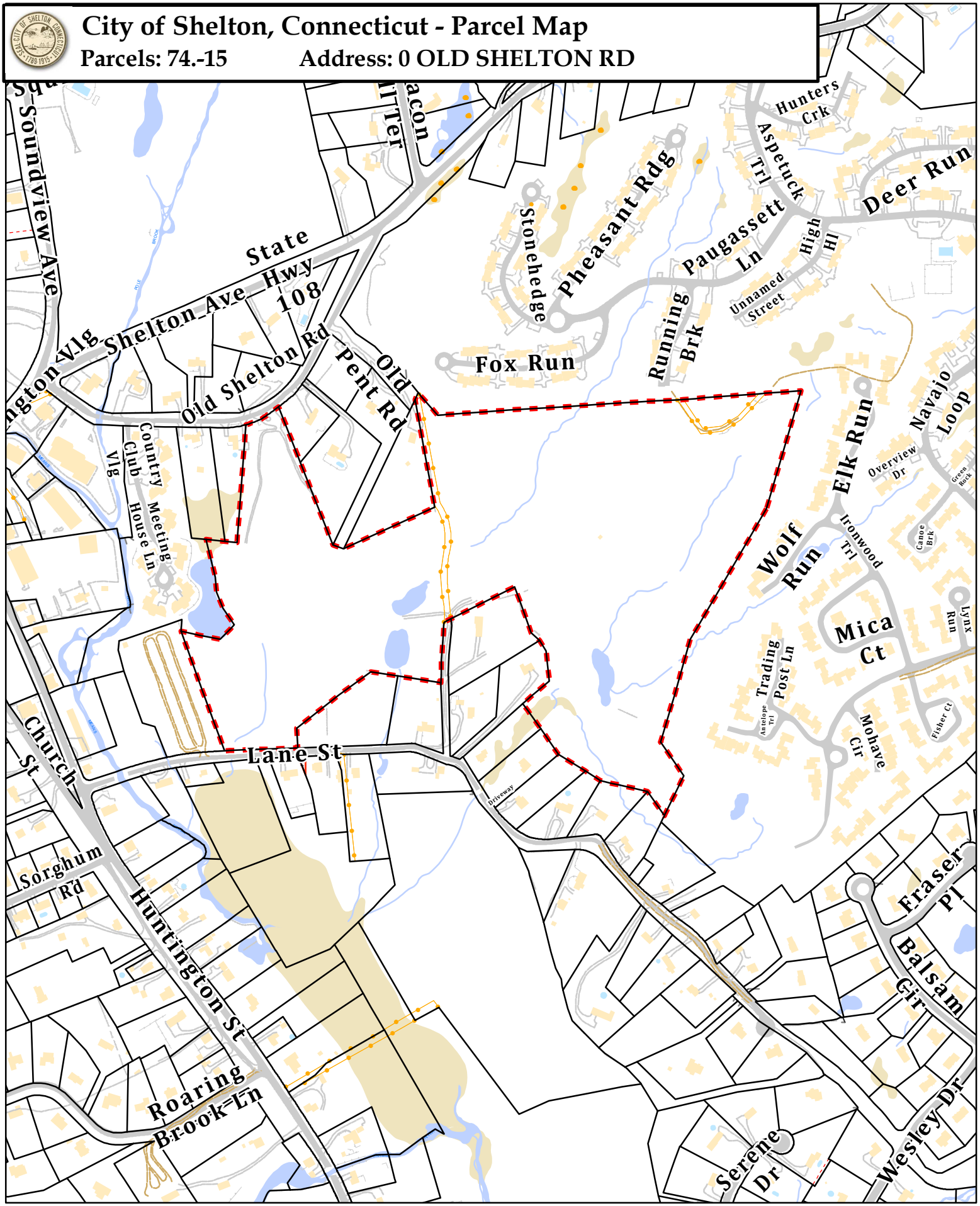
MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

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


Old Shelton Rd
Country Club Vlg
Meeting House Ln
Old Pent Rd
Old Pent Rd
Lane St
Huntington St
Elk Run
Ironwood Trl
Mica Ct
Trading Po
Mohave Cir
0 OLD SHELTON RD
No Photo Available
MBL : 74.-15
Owner : BROWNSON HARRY B
Acres : 55
Land Use : MIXED
Zoning : R-1
Details
Quick Map
NEGEO Card
BirdsEye Photo
Generate Mailing List: 100
Ft:
Submit

City of Shelton, Connecticut - Parcel Map

Parcels: 74.-15 **Address: 0 OLD SHELTON RD**



N

Approximate Scale: 1:6,000

50 0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 Feet

Map Produced April 2017

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The City of Shelton and its mapping contractors assume no legal responsibility for the information contained herein.

City of Shelton
Property Listing Report

Parcel ID 74.-15

Account 5747

Property Information

Owner	BROWNSON HARRY B
Address	0 OLD SHELTON RD
Mailing Address	15 SOUNDVIEW AVE SHELTON , CT 06484
Land Use	- MIXED
Land Class	2-5

Census Tract	1103
Neighborhood	
Zoning	R-1
Acreage	55
Utilities	ELECTRIC
Lot Setting/ Desc	/

Photo

PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings		
Outbuildings		
Improvements		
Extras		
Land		
Total	836900	585830
Previous		

Construction Details

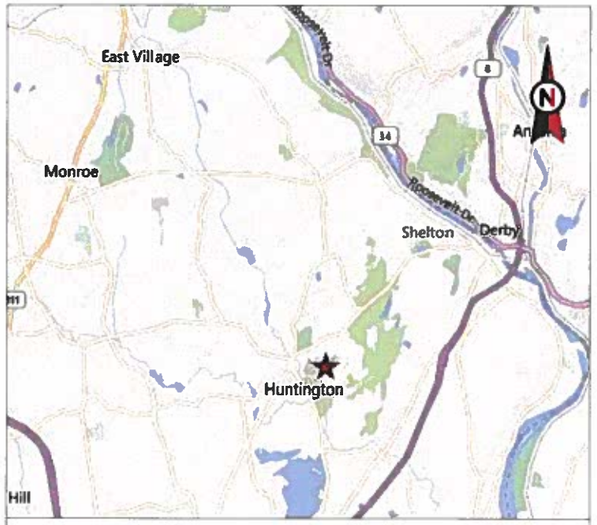
Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Total Rooms	
Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

EXTERIOR WALLS:	
Primary	
Secondary	
INTERIOR WALLS:	
Primary	
Secondary	
FLOORS:	
Primary	
Secondary	
HEATING/AC:	
Heating Type	
Heating Fuel	
AC Type	

BUILDING AREA:	
Effective Building Area	
Gross Building Area	
Total Living Area	

SALES HISTORY:	
Sale Date	19630912
Sale Price	0
Book/ Page	/

Report Created On 11/18/2019



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: BROWNSON COUNTRY CLUB CT
ATC SITE NUMBER: 415438
VERIZON SITE NAME: HUNTINGTON CT
VERIZON SITE NUMBER:468942
SITE ADDRESS: 15 SOUNDVIEW AVENUE SHELTON, CT 06484

VERIZON WIRELESS
ANTENNA AMENDMENT DRAWINGS

LOCATION MAP

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: NORTHEAST UTILITIES
PHONE: (800) 286-2000

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

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

PROJECT SUMMARY

SITE ADDRESS:

15 SOUNDVIEW AVENUE
SHELTON, CT 06484
COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.295
LONGITUDE: -73.137222
GROUND ELEVATION: 304' 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:

HARRY B BROWNSON COUNTRY CLUB INC
15 SOUNDVIEW AVE
SHELTON, CT 06484

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 (9) PANELS, (6) RRUs, (1) OVP, (12) 1-5/8" COAX CABLES, AND (1) 1-1/4" HYBRID CABLE

INSTALL (9) NEW PANELS, (9) RRUs, (1) OVP, (1) 2.02" HYBRID CABLE, (3) SIDE BY SIDE MOUNTS, AND MOUNT MODIFICATIONS

EXISTING (6) PANELS AND (6) 1-5/8" COAX CABLES 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

91 SOUTH TO CT-15 (WILBUR CROSS). EXIT 52 FOR RT 8 NORTH. EXIT 11 FOR HUNTINGTON RD. LEFT ON HUNTINGTON 3 MILES RIGHT ON LANE STREET. ACCESS RD DIRECTLY OFF LANE STREET AT ADDRESS 55

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	COVER SHEET	2	02/18/20	TR
G-002	GENERAL NOTES	0	02/18/20	TR
C-101	DETAILED SITE PLAN	0	02/18/20	TR
C-102	TOWER ELEVATION	2	02/18/20	TR
C-501	RF SCHEDULE AND ANTENNA INSTALLATION	2	02/18/20	TR
C-502	CONSTRUCTION DETAILS	2	02/18/20	TR
G-001	COVER			
G-002	IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION			
S-101	MODIFICATION PROFILE			
R-601	SUPPLEMENTAL			
R-602	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	TR	11/11/19
1	RAD HEIGHT AND RRUS	TR	12/02/19
2	PASSING MA	TR	02/18/20

ATC SITE NUMBER:
415438
ATC SITE NAME:
BROWNSON COUNTRY CLUB CT
SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

SEAL:

Authorized by "EOR"
Feb [illegible] 2020
verizon

DRAWN BY:	TR
APPROVED BY:	PBB
DATE DRAWN:	02/18/20
ATC JOB NO:	12984011
CUSTOMER ID:	HUNTINGTON CT
CUSTOMER #:	468942

COVER SHEET

SHEET NUMBER:	REVISION:
G-001	2

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

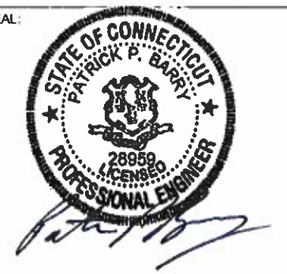
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TR	11/11/19
1			12/02/19
2			
3			
4			

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT

SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

SEAL:



Authorized by "EOR"
Feb [illegible]

verizon Design

DRAWN BY:	TR
APPROVED BY:	PBB
DATE DRAWN:	02/18/20
ATC JOB NO:	12984011
CUSTOMER ID:	HUNTINGTON CT
CUSTOMER #:	468942

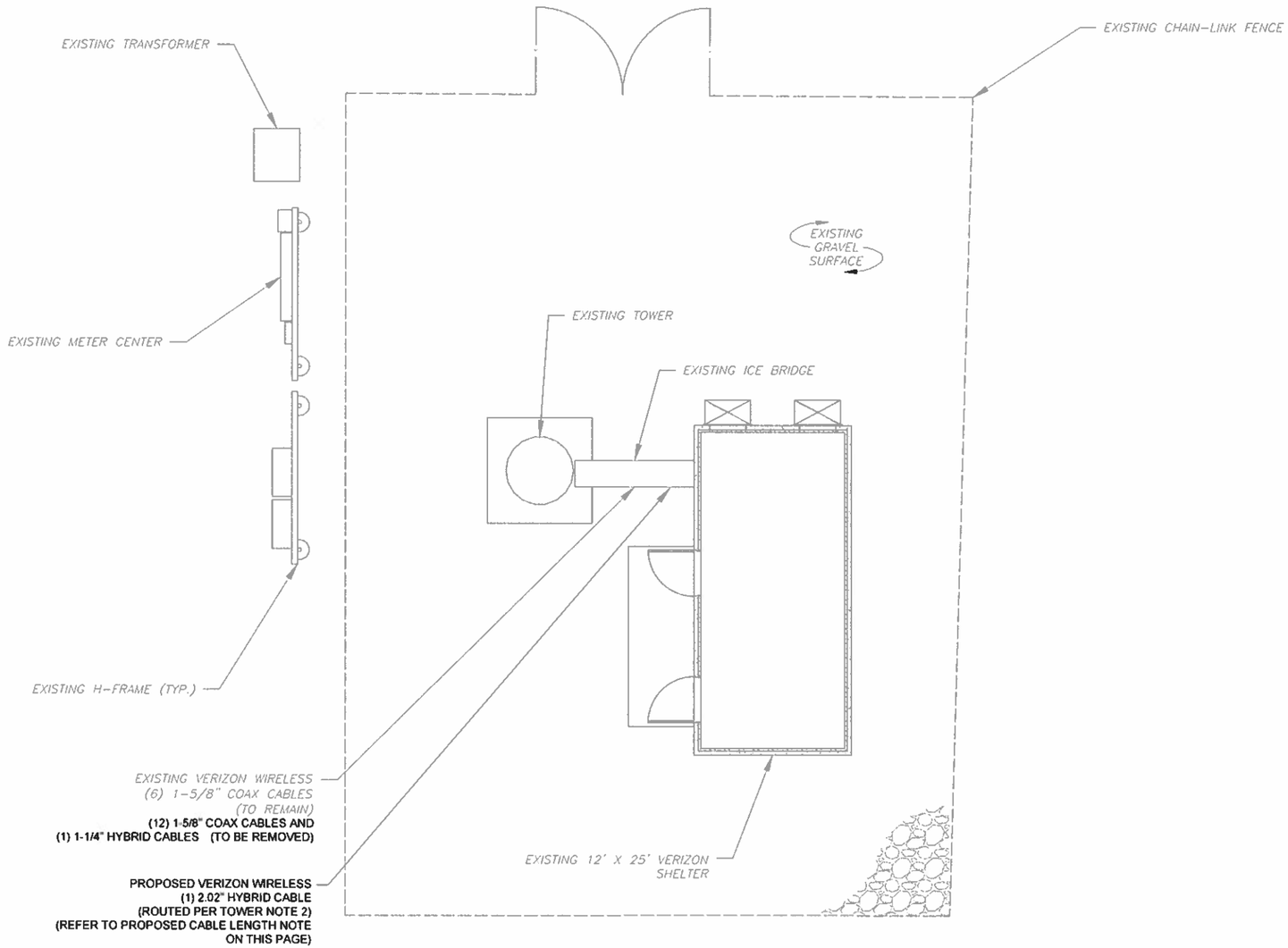
GENERAL NOTES

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.



PROPOSED CABLE LENGTH:

ESTIMATED LENGTH OF PROPOSED CABLE IS 160'. ESTIMATED LENGTH OF CABLE IS CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES).

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	TR	11/11/19

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT

SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

SEAL:

Authorized by "EOR"
Feb [illegible] 2020 [illegible]

verizon

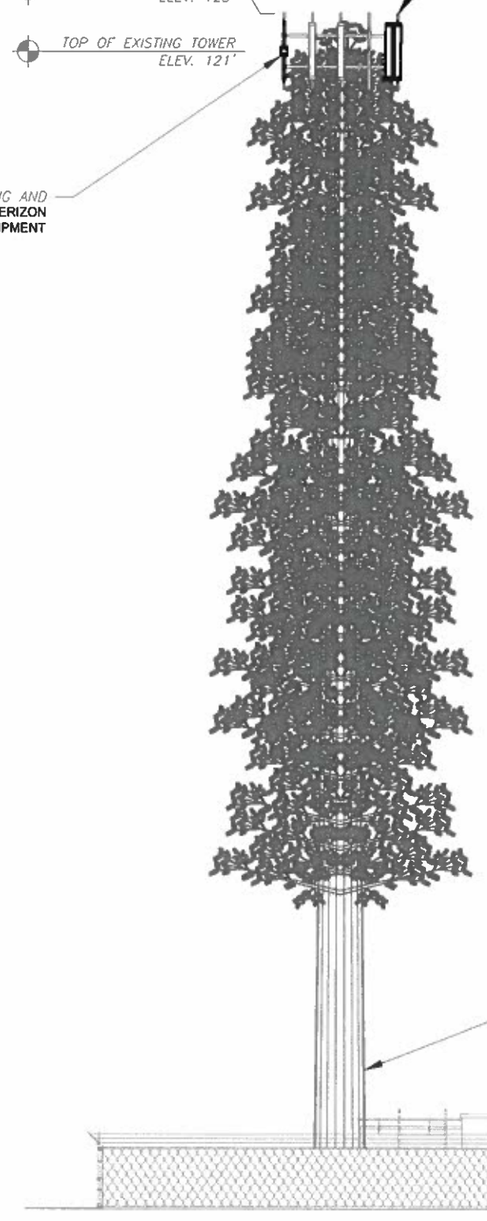
DRAWN BY:	TR
APPROVED BY:	PBB
DATE DRAWN:	02/18/20
ATC JOB NO:	12984011
CUSTOMER ID:	HUNTINGTON CT
CUSTOMER #:	468942

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	2

NOTES:
PROPOSED TOWER ELEVATION SHOWN FOR ILLUSTRATION PURPOSES ONLY ACTUAL VOLUME AND SPACING OF FOLIAGE VARIES BY MANUFACTURER.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER, DATED 02-12-20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 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. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATIONS.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

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.

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

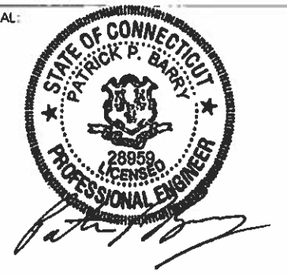
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TR	11/11/19
1	RAD HEIGHT AND RRUS	TR	12/02/19
2	PASSING MA	TR	02/18/20

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT

SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

SEAL:



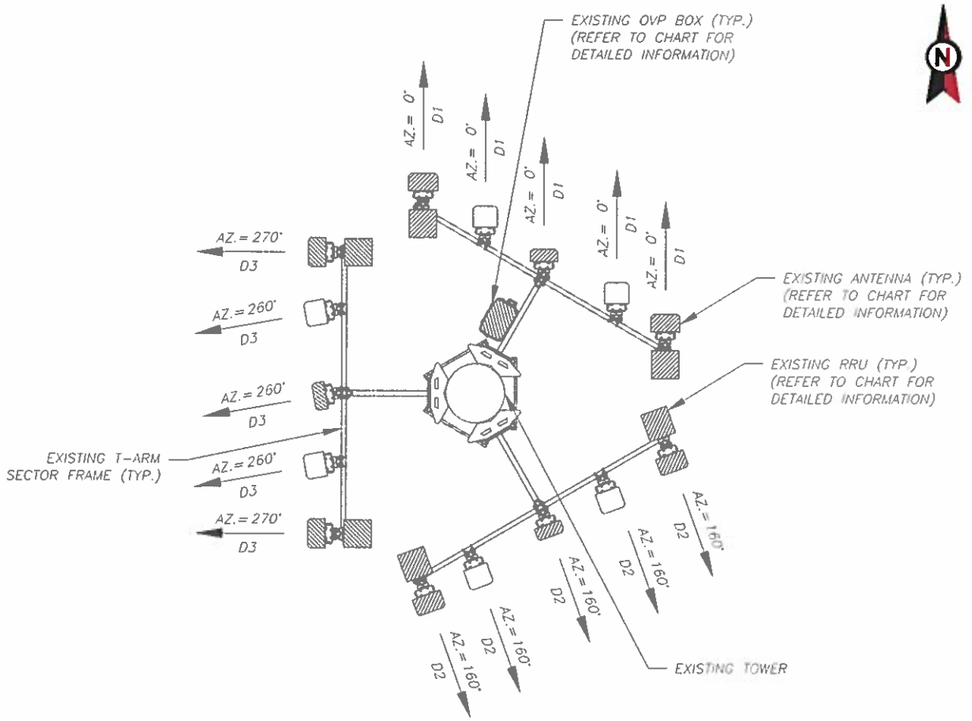
Authorized by "EOR"
Feb [illegible] verizon design

DRAWN BY:	TR
APPROVED BY:	PBB
DATE DRAWN:	02/18/20
ATC JOB NO:	12984011
CUSTOMER ID:	HUNTINGTON CT
CUSTOMER #:	468942

TOWER ELEVATION

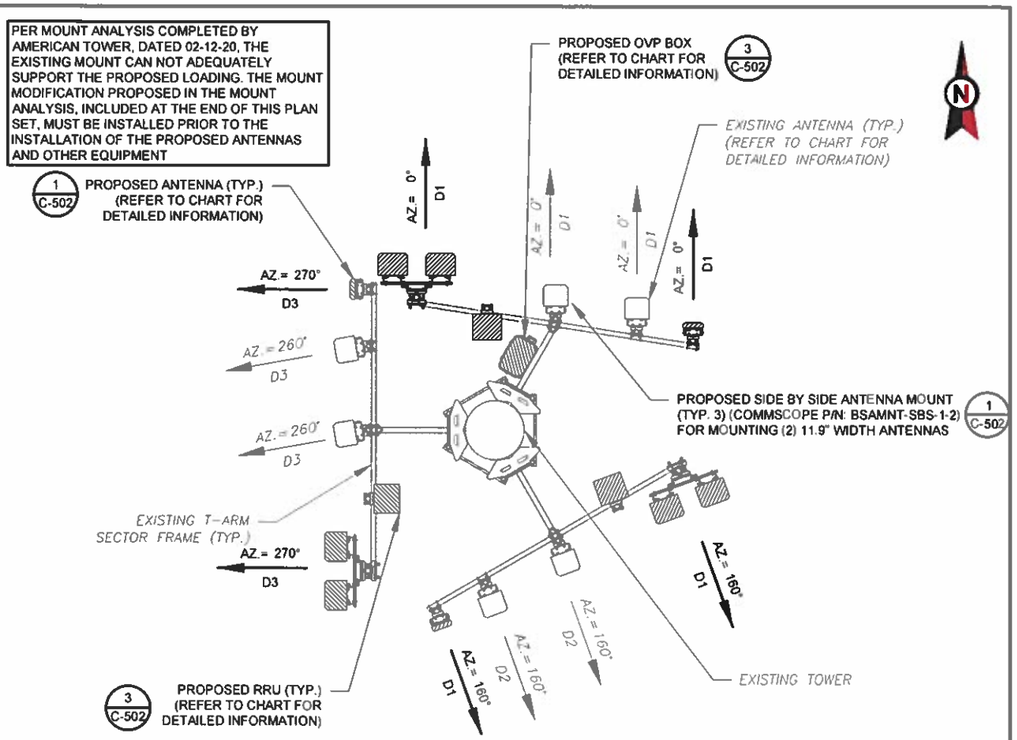
SHEET NUMBER: C-102

REVISION: 2



1 CURRENT ANTENNA PLAN

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER, DATED 02-12-20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



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	120'	0°	A1	SBNHH-1D65B	700, 2100 LTE	RMV	UHIE B66A RRH 4x45	RMV
			A2	DB846F65ZAXY	CDMA 850	REL	-	-
			A3	BXA-70063-6CF-EDIN-2	-	RMV	-	-
			A4	DB846F65ZAXY	CDMA 850	RMN	-	-
			A5	SBNHH-1D65B	700, 2100 LTE	RMV	UHBA B13 RRH 4x30	RMV
D2	120'	160°	B1	SBNHH-1D65B	700, 2100 LTE	RMV	UHIE B66A RRH 4x45	RMV
			B2	DB846F65ZAXY	CDMA 850	REL	-	-
			B3	BXA-70063-6CF-EDIN-2	-	RMV	-	-
			B4	DB846F65ZAXY	CDMA 850	RMN	-	-
			B5	SBNHH-1D65B	700, 2100 LTE	RMV	UHBA B13 RRH 4x30	RMV
D3	120'	270°	C1	SBNHH-1D65B	700, 2100 LTE	RMV	UHIE B66A RRH 4x45	RMV
		260°	C2	DB846F65ZAXY	CDMA 850	REL	-	-
			C3	BXA-70063-6CF-EDIN-2	-	RMV	-	-
			C4	DB846F65ZAXY	CDMA 850	RMN	-	-
		270°	C5	SBNHH-1D65B	700, 2100 LTE	RMV	UHBA B13 RRH 4x30	RMV

NOTES

1. BASED ON APPROVED ATC APPLICATION 12984011, DATED 10/18/2019. 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).
6. CONTRACTOR SHALL RE-ORIENT T-ARMS AS NECESSARY TO ACHIEVE PROPOSED ANTENNA AZIMUTHS.

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
D1	120'	0°	A1	(2) QS6656-5D	700, 850, 1900, 2100 LTE	ADD	-	-
			A2	-	-	-	B5/B13 RRHBR04C B2/B66A RRHBR049	ADD
			A3	DB846F65ZAXY	CDMA 850	REL	-	-
			A4	DB846F65ZAXY	CDMA 850	RMN	-	-
			A5	CBRS 20W RRH CLIP-ON ANTENNA	-	ADD	CBRS 20W RRH	ADD
D2	120'	160°	B1	(2) QS6656-5D	700, 850, 1900, 2100 LTE	ADD	-	-
			B2	-	-	-	B5/B13 RRHBR04C B2/B66A RRHBR049	ADD
			B3	DB846F65ZAXY	CDMA 850	REL	-	-
			B4	DB846F65ZAXY	CDMA 850	RMN	-	-
			B5	CBRS 20W RRH CLIP-ON ANTENNA	-	ADD	CBRS 20W RRH	ADD
D3	120'	270°	C1	(2) QS6656-5D	700, 850, 1900, 2100 LTE	ADD	-	-
			C2	-	-	-	B5/B13 RRHBR04C B2/B66A RRHBR049	ADD
			C3	DB846F65ZAXY	CDMA 850	REL	-	-
			C4	DB846F65ZAXY	CDMA 850	RMN	-	-
			C5	CBRS 20W RRH CLIP-ON ANTENNA	-	ADD	CBRS 20W RRH	ADD

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(1) DB-T1-6Z-8AB-0Z	RMV	(6) 1-5/8"	-	RMN
-	-	(12) 1-5/8"	(1) 1-1/4"	RMV

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 ANTENNA: 10'

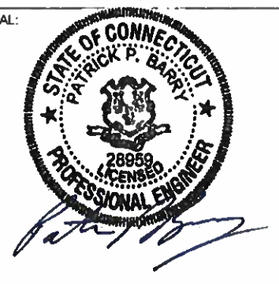
FINAL FIBER DISTRIBUTION/OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	-	RMN
(1) DB-C1-12C-24AB-0Z	ADD	-	(1) 2.02"	ADD

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	TR	11/11/19
1	RAD HEIGHT AND RRUS	TR	12/02/19
2	PASSING MA	TR	02/18/20

ATC SITE NUMBER:
415438
ATC SITE NAME:
BROWNSON COUNTRY CLUB CT
SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

SEAL:

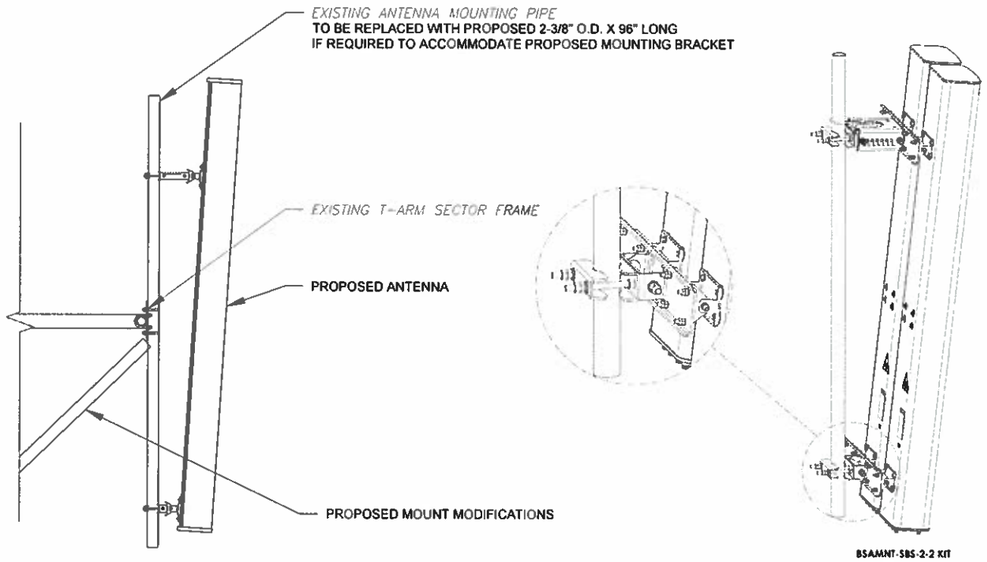


Authorized by "EOR"
Feb verizon Design

DRAWN BY:	TR
APPROVED BY:	PBB
DATE DRAWN:	02/18/20
ATC JOB NO:	12984011
CUSTOMER ID:	HUNTINGTON CT
CUSTOMER #:	468942

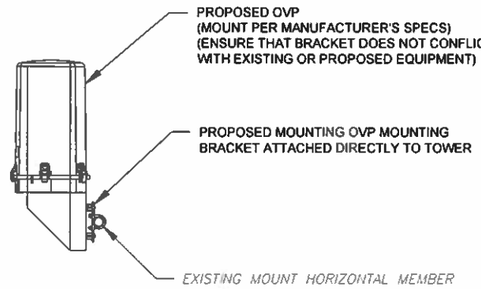
RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-501	2



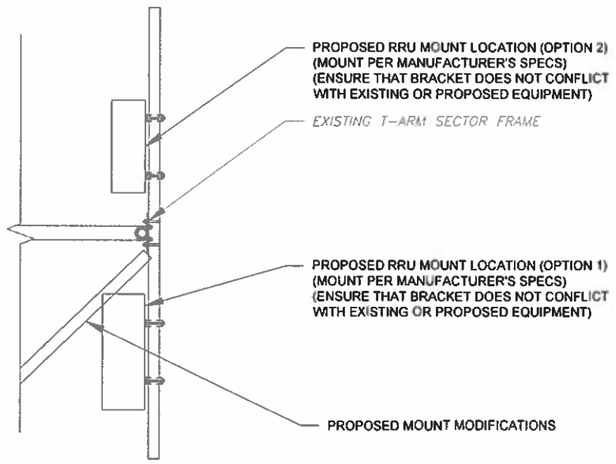
1 PROPOSED SIDE BY SIDE MOUNT

SCALE: NOT TO SCALE



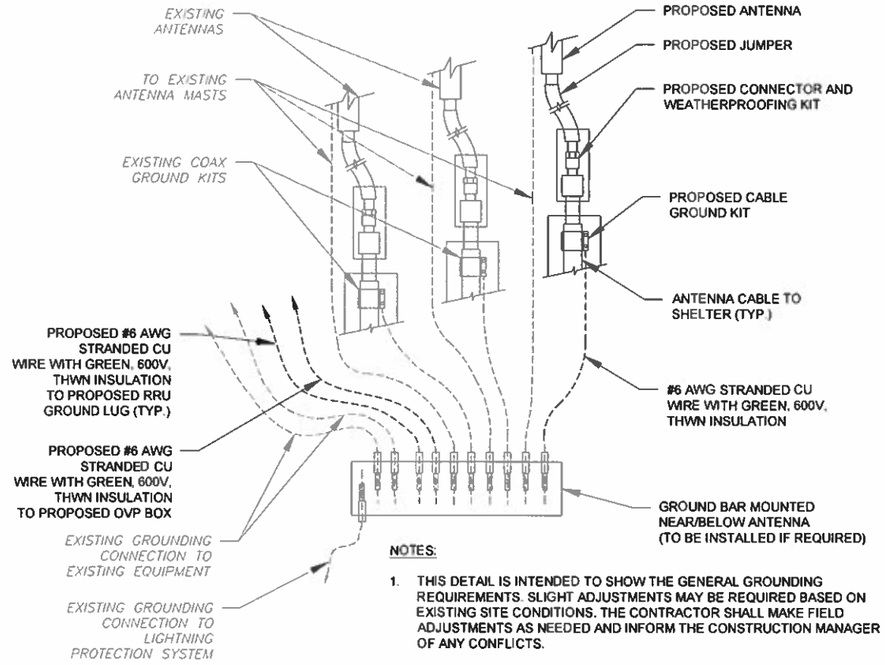
2 PROPOSED OVP MOUNTING

SCALE: NOT TO SCALE



3 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.

4 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: NOT TO SCALE

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

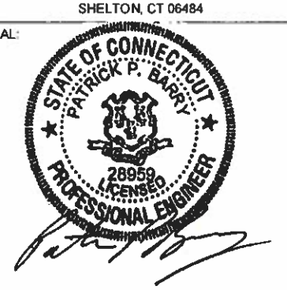
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TR	11/11/19
2	PASSING MA	TR	12/02/19

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT

SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

SEAL:



Authorized by "EOR"
Feb [illegible]

verizon design

DRAWN BY:	TR
APPROVED BY:	PBB
DATE DRAWN:	02/18/20
ATC JOB NO:	12984011
CUSTOMER ID:	HUNTINGTON CT
CUSTOMER #:	468942

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	2

VICINITY MAP

AMERICAN TOWER®

SITE NAME: BROWNSON COUNTRY CLUB CT
SITE NUMBER: 415438
ATC PROJECT NUMBER: 12984011_C9_06
SITE ADDRESS: 15 SOUNDVIEW AVENUE
SHELTON, CT 06484

LOCATION MAP

MOUNT REINFORCEMENT DRAWINGS PREPARED FOR VERIZON WIRELESS

PROJECT TEAM

TOWER OWNER
AMERICAN TOWER
10 PRESIDENTAL WAY
WOBURN, MA 01801

ENGINEERED BY
ATC TOWER SERVICES
3500 REGENCY PARKWAY, SUITE 100
CARY, NC 27518

CARRIER INFORMATION
CARRIER: VERIZON WIRELESS
CARRIER SITE NAME: HUNTINGTON CT
CARRIER SITE NUMBER: 468942

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

PROJECT DESCRIPTION

THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE MOUNT ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 12984011_C8_05 DATED 01/22/20. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE MOUNT MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE MOUNT ANALYSIS WAS COMPLETED.

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. ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-G EDITION)
2. INTERNATIONAL BUILDING CODE (2015 IBC)
3. CONNECTICUT STATE BUILDING CODE (2018)

PROJECT LOCATION

GEOGRAPHIC COORDINATES
LATITUDE: 41.295
LONGITUDE: -73.137222

SHEET	SHEET TITLE	REV.
G-002	IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION	0
S-101	MODIFICATION PROFILE	0
R-601	SUPPLEMENTAL	0
R-602	SUPPLEMENTAL	0

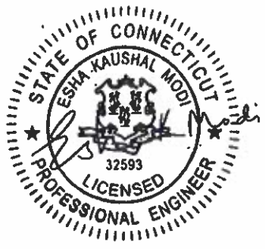
AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	LPG	02/03/20

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT
CONNECTICUT

SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484



DRAWN BY:	LPG
APPROVED BY:	CDW
DATE DRAWN:	02/03/20
ATC JOB NO:	12984011_C9_06

COVER

SHEET NUMBER:	REVISION:
G-001	0

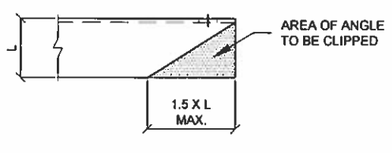
GENERAL

1. ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. 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.
3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & 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 MANUFACTURERS RECOMMENDATIONS.
6. ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
8. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

MAXIMUM ALLOWABLE ANGLE CLIP



PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER AND/OR BASE METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. IN CASES WHERE BASE METAL GRADE IS UNKNOWN, ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES; ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES, UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" 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.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
2. FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
3. IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

BOLT TIGHTENING PROCEDURE (CONTINUED)

4. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

   FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

   8.2.1 TURN-OF-NUT PRETENSIONING
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

5. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

   ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

MODIFICATION INSPECTION NOTES

THE MOUNT MODIFICATION INSPECTION (MMI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE MMI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR SUBMIT ALL REQUIRED PHOTOGRAPHS AND DRAWINGS TO AMERICAN TOWER CORPORATION (ATC).

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO:

- REVIEW THE REQUIREMENTS OF THE MMI CHECKLIST.
- UNDERSTAND ALL INSPECTION REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MMI CHECKLIST.

MOUNT MODIFICATION INSPECTION CHECKLIST

INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY
ON-SITE COLD GALVANIZING VERIFICATION	PHOTOGRAPHIC EVIDENCE OF COLD GALVANIZATION TYPE AND APPLICATION IN ALL APPLICABLE LOCATIONS TO BE INCLUDED WITHIN THE MMI REPORT	✔	GC
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	"AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO MMI FOR APPROVAL/REVIEW AND INCLUSION IN MMI REPORT	✔	GC
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF MOUNT MODIFICATION INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE MMI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN MMI REPORT.	✔	GC

TABLE KEY:
MMI - MOUNT MODIFICATION INSPECTION
GC - GENERAL CONTRACTOR
ATC - AMERICAN TOWER CORPORATION

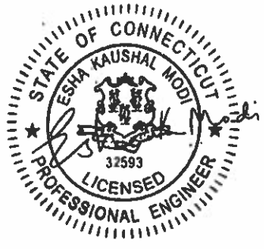
AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	LPG	02/03/20
△			
△			
△			
△			

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT
CONNECTICUT

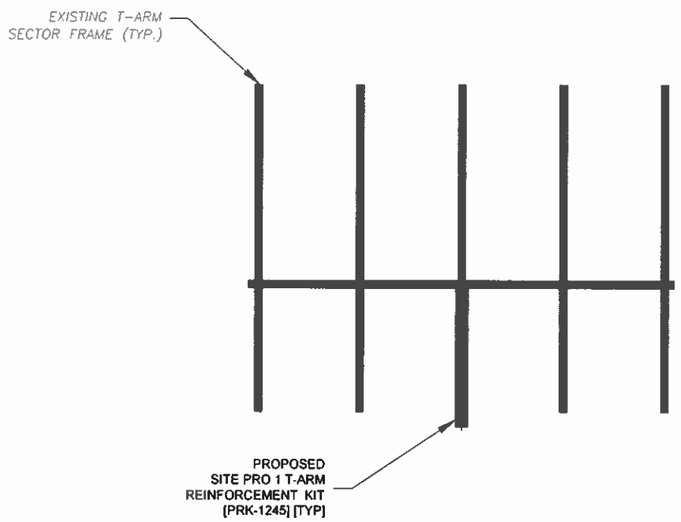
SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484



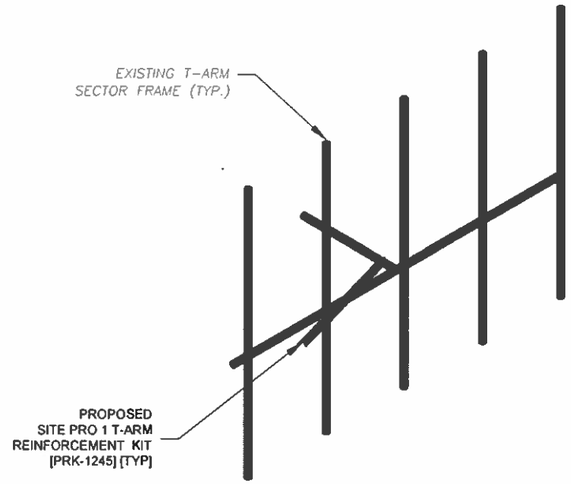
DRAWN BY:	LPG
APPROVED BY:	CDW
DATE DRAWN:	02/03/20
ATC JOB NO:	12984011_C9_06

IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION

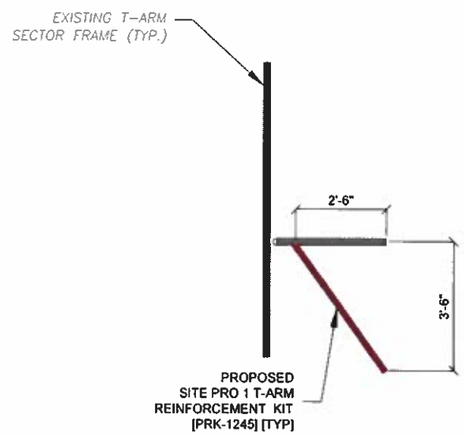
SHEET NUMBER:	REVISION:
G-002	0



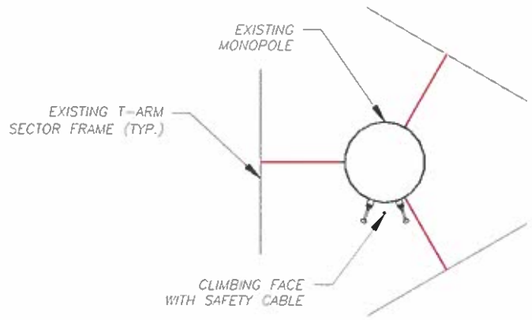
MOUNT MODIFICATION - TOP VIEW



MOUNT MODIFICATION - ISOMETRIC VIEW



MOUNT MODIFICATION - SIDE VIEW



SAFETY CLIMB LOCATION

NOTE:
CONTRACTOR TO INSTALL MOUNT MODIFICATIONS PER THE MANUFACTURERS SPECIFICATION. MODIFICATIONS SHALL NOT OBSTRUCT, INTERFERE, OR BLOCK EXISTING SAFETY CLIMB SYSTEM. IF ANY OF THESE OCCURS DURING INSTALLATION CONTACT THE AMERICAN TOWER PMI INBOX PMI@AMERICANTOWER.COM

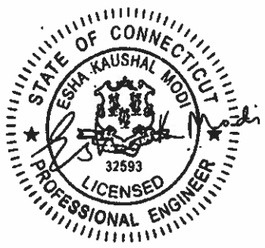
AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	LPG	02/03/20

ATC SITE NUMBER:
415438

ATC SITE NAME:
BROWNSON COUNTRY CLUB CT
CONNECTICUT

SITE ADDRESS:
15 SOUNDVIEW AVENUE
SHELTON, CT 06484

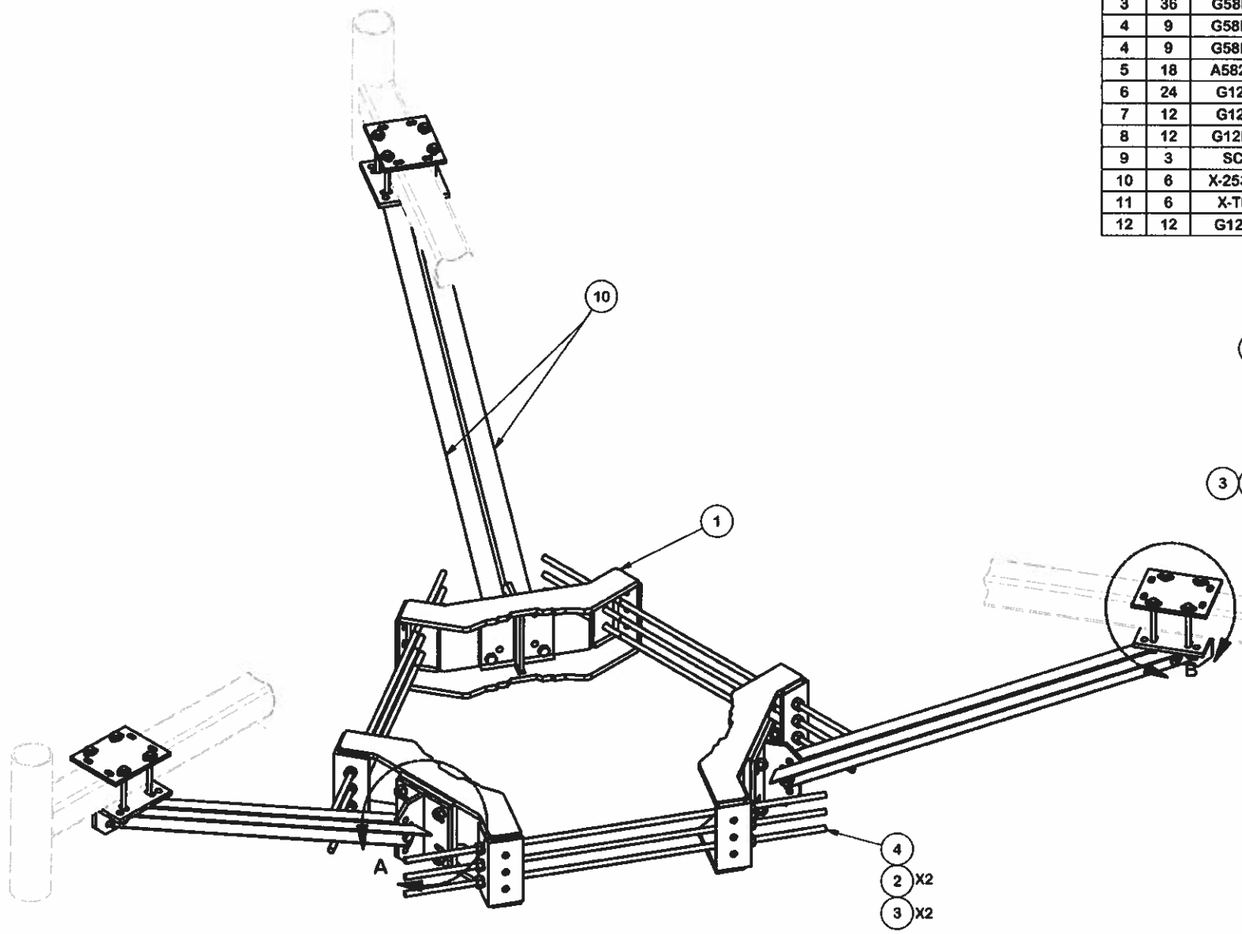


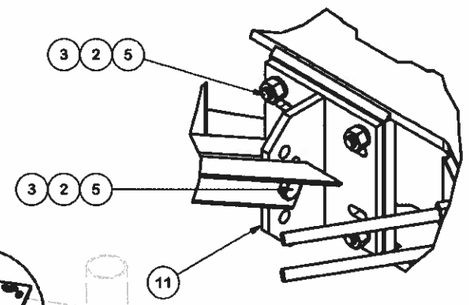
DRAWN BY:	LPG
APPROVED BY:	CDW
DATE DRAWN:	02/03/20
ATC JOB NO:	12984011_C9_06

MODIFICATION PROFILE

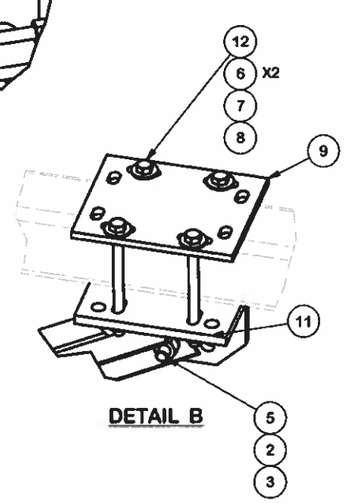
SHEET NUMBER:	REVISION:
S-101	0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	36	G58LW	5/8" HDG LOCKWASHER		0.03	0.94
3	36	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	4.68
4	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		2.09	18.82
4	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)		4.18	37.63
5	18	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	5.62
6	24	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.82
7	12	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.17
8	12	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.86
9	3	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	18.06
10	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
11	6	X-TBW	T-BRACKET WELDMENT		13.60	81.60
12	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	5 1/2 in	0.41	4.91
					TOTAL WT. #	466.20





DETAIL A



DETAIL B

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
	REVISION HISTORY			
B	CHANGED X-253992 TO X-TBW		CEK	9/19/2018
A	CHANGED ALL 5/8" BOLTS TO A582114	4488	CEK	10/1/2015

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

DESCRIPTION
PLATFORM RENIFORCEMENT
ON A 12" TO 45" POLE
4' 6" ANGLE

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
4488	CEK 4/11/2014		PRK-1245	1 OF 2
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 01	CUSTOMER	BMC 1/18/2016	PRK-1245	

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 VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**Brownson Country Club CT, CT**
ATC Site Number	:	**415438**
Engineering Number	:	**12984011_C9_06**
Mount Elevation	:	**118 ft**
Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**Huntington CT**
Carrier Site Number	:	**468942**
Site Location	:	**15 Soundview Avenue** **SHELTON, CT 06484-2844** **41.2, -73.137**
County	:	**Fairfield**
Date	:	**January 22, 2020**
Max Usage	:	**95%**
Result	:	**Contingent Pass**

Prepared By:
Trevor Ridilla
Structural Engineer I

Reviewed By:

COA: PEC.0001552

Authorized by "EOR"
12 Feb 2020 03:08:19

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Verizon Wireless at 118 ft.

Supporting Documents

Mount Mapping	TEP Project #415438, dated August 12, 2015
RFDS	RFDS dated September 13, 2019
Photos	Site photos from 2019

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D v17

Basic Wind Speed:	97 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 / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.175, S_1 = 0.084
Site Class:	D - Stiff Soil - Default
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Refer to ATC Modification Drawing #12984011_C9_06

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

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

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-602	0