Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
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Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

May 22, 2023

Via Hand Delivery

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification**
Travelers Championship – Temporary Telecommunications Facility
Cromwell, Connecticut

Dear Attorney Bachman:

Pursuant to R.C.S.A. Section 16-50j-72(d), this letter will serve as notice that Cellco Partnership d/b/a Verizon Wireless ("Cellco") intends to install a temporary wireless facility (a/k/a "Cell on Wheels" or "COW") for use prior to and during this year's Travelers Championship scheduled for June 22-25, 2023. Cellco intends to install the COW on a 104-acre parcel owned by Eversource Energy and leased to the Greater Hartford Community Foundation, (a.k.a. Travelers Championship) in Cromwell, Connecticut (the "Property"). Included in Attachment 1 is a letter from the authorizing the filing of this notice. Included in Attachment 2 is a Conceptual Site Plan and a Detailed Site Plan and Elevation drawing for the proposed COW. In accordance with R.C.S.A. Section 16-50j-73, a copy of this filing has been sent to Steve Fortenbach, Mayor for the Town of Cromwell and Stuart Popper, Cromwell's Director of Planning and Development.

The COW that Cellco intends to install at the Property is a trailer-mounted wireless facility with a retractable and guyed tower mast extending to a height of 60 feet above ground level ("AGL"). Cellco will attach two (2) panel antennas to the top of the mast at centerline heights of 58 feet AGL and 53 feet AGL. The equipment will be powered by a 50-kw diesel-fuel

generator with a 215 gallon double walled belly tank. Included in Attachment 3 is a Structural Analysis Report confirming that the COW can adequately support Cellco's temporary antennas.

The proposed temporary telecommunications facility satisfies the criteria set forth in R.C.S.A. Section 16-50j-72(d), as a facility that will provide temporary wireless service for an event of State-wide significance. The COW will provide additional network capacity to accommodate increased wireless voice and data services needed during the event. Cellco expects that the COW will be brought to the site prior to the start of the Tournament and will be removed on or about July 1, 2023.

The operation of the COW will not result in a total radio frequency (RF) emissions levels that exceed the Federal Communications Commission (FCC) safety standard. Included in Attachment 4 are Far Field Approximation Tables for the frequencies Cellco intends to deploy at this temporary facility. These tables demonstrate that the temporary facility will operate well within the FCC standard.

Finally, in Attachment 5 is a copy of the Town Assessor's parcel map including owner information for the Property. In accordance with R.C.S.A. Section 16-50j-73, a copy of this filing has been sent to Steve Fortenbach, Mayor of the Town of Cromwell, and Stuart Popper, Director of the Planning and Development. (*See* Attachment 6).

Based on the foregoing, Cellco respectfully requests acknowledgement of this notice for the installation of a temporary wireless facility at the Property. Please feel free to contact me if you have any questions or need any additional information.

Sincerely,

Kenneth C. Baldwin

Attachments
Copy to:
Steve Fortenbach, Mayor
Stuart Popper, Director of Planning and Development
Aleksey Tyurin, Verizon Wireless

ATTACHMENT 1

GREATER HARTFORD COMMUNITY FOUNDATION, INC.
90 State House Square, 11th Floor
Hartford, Connecticut 06103

RE: Evidence of Agreement and Landowner's Consent to File for Permits/Approvals to be Granted to Cellco Partnership d/b/a Verizon Wireless

To Whom It May Concern:

Greater Hartford Community Foundation, Inc. is the lessee of certain real property located in the Town of Cromwell at Golf Club Road and identified as Plat/Lot 00457800 on the tax map of the Town of Cromwell ("Subject Property").

Please be advised that Greater Hartford Community Foundation, Inc. has entered into an agreement with Cellco Partnership d/b/a Verizon Wireless ("Applicant") to install a temporary wireless communications facility on a portion of the Subject Property, and permission is hereby granted to Applicant to make application for Building, Zoning, Planning, or any other Land Use or Regulatory Permit(s) required to effectuate the installation of said wireless facility.

The Applicant, or its agent, is hereby authorized to execute the required application(s) regarding this matter. Permission is also hereby granted for public officials and Board, Commission or Council members, as required, to enter upon the Subject Property for the limited purpose of inspecting the specific site and access that are the subject of Applicant's proposed installation.

Sincerely,

GREATER HARTFORD COMMUNITY FOUNDATION, INC.

By _____
Name: Nathan Grube
Title: Nathan Grube
Date: May 19, 2023

ATTACHMENT 2

APPROXIMATE TRUE NORTH

SITE NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. NORTH SHOWN AS APPROXIMATE.
3. C.O.W. TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS & STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 05/17/2023.
4. THE ANALYSIS ONLY CONSIDERS THE TEMPORARY MAST TO BE A MAXIMUM EXTENSION OF 59'-8" (61'-8" A.G.L.) AND AT THE REFERENCED SITE FOR UNDER SIX WEEKS. DEWBERRY RECOMMENDS THAT THE TEMPORARY MAST BE TAKEN DOWN DURING ANY EXTREME WEATHER CONDITIONS.

CONCEPTUAL AERIAL PLAN 1

SCALE: 1"=160' FOR 11"x17"
1"=80' FOR 22"x34"

0' 80' 160'

COORDINATES:

41° 38' 12.65"N
72° 38' 08.72"W

GROUND ELEVATION:

158.0'± NAVD 88

verizon WIRELESS

VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01581

TRAVELERS GOLF C.O.W. CT 2023

LEASE EXHIBIT

3	05/17/23	FOR SUBMITTAL
2	05/03/23	FOR SUBMITTAL
1	04/28/23	FOR SUBMITTAL
0	04/11/23	FOR SUBMITTAL

Dewberry

Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

DRAWN BY: MR
REVIEWED BY: TJC
CHECKED BY: MFT
PROJECT NUMBER: 50121487
JOB NUMBER: 50158226
SITE NUMBER

5000233020

SITE ADDRESS

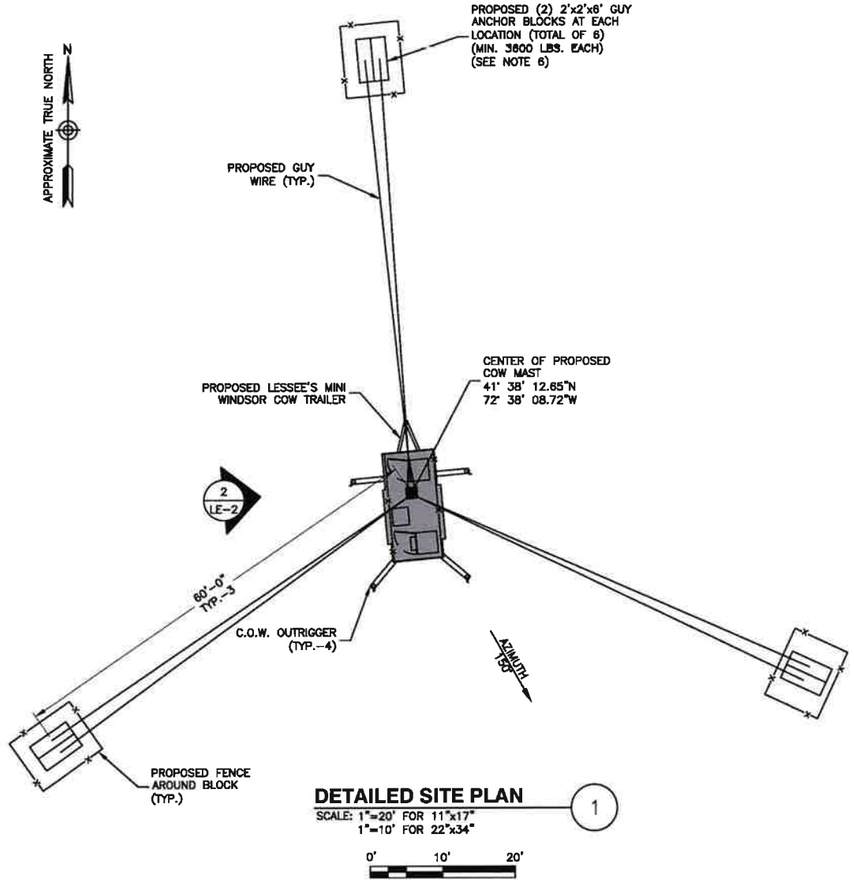
1 GOLF CLUB ROAD
CROMWELL, CT 06416

SHEET TITLE

CONCEPTUAL SITE PLAN

SHEET NUMBER

LE-1

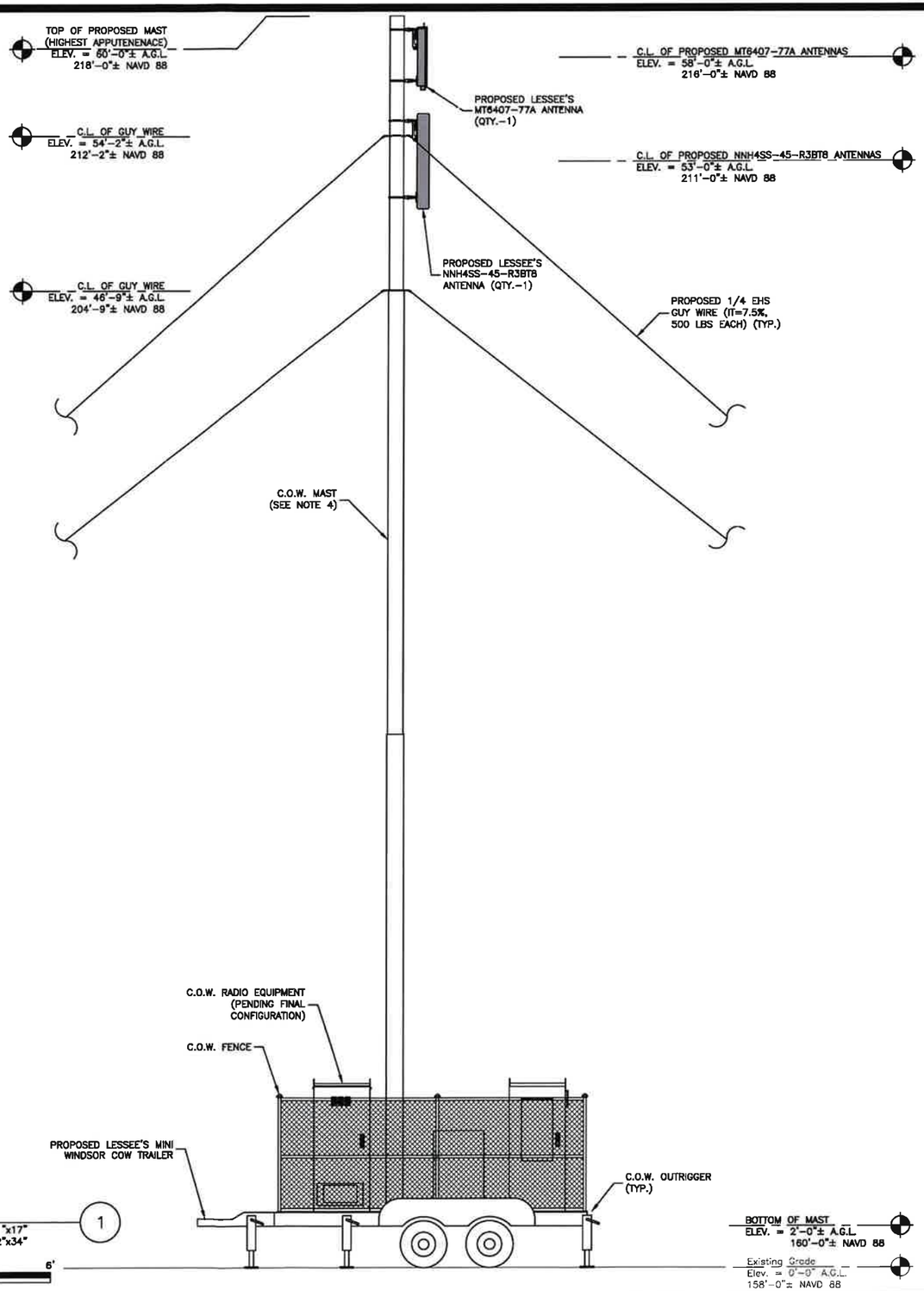


DETAILED SITE PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

1

0' 10' 20'



ELEVATION

SCALE: 1"=6' FOR 11"x17"
1"=3' FOR 22"x34"

1

0' 3' 6'

SITE NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. NORTH SHOWN AS APPROXIMATE.
3. A.G.L. = ABOVE GROUND LEVEL
   C.L. = CENTERLINE
   NAVD 88 = NORTH AMERICAN VERTICAL DATUM OF 1988
4. C.O.W. TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS & STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 05/17/2023.
5. THE ANALYSIS ONLY CONSIDERS THE TEMPORARY MAST TO BE A MAXIMUM EXTENSION OF 59'-8" (61'-8" A.G.L.) AND AT THE REFERENCED SITE FOR UNDER SIX WEEKS. DEWBERRY RECOMMENDS THAT THE TEMPORARY MAST BE TAKEN DOWN DURING ANY EXTREME WEATHER CONDITIONS.
6. CONCRETE BLOCK ARE A MINIMUM OF 2'X2'X6' WITH A MINIMUM WEIGHT OF 3600 LBS EACH.
7. EACH GUY WIRES SHALL HAVE 7.5% INITIAL TENSION = 500 LBS EACH.

verizon WIRELESS

VERIZON WIRELESS
900 CHELMSFORD STREET
TOWER 2 FLOOR 5
LOWELL, MA 01581

TRAVELERS GOLF C.O.W. CT 2023

LEASE EXHIBIT		
3	05/17/23	FOR SUBMITTAL
2	05/03/23	FOR SUBMITTAL
1	04/28/23	FOR SUBMITTAL
0	04/11/23	FOR SUBMITTAL

Dewberry®

Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

DRAWN BY:	MR
REVIEWED BY:	TJC
CHECKED BY:	MFT
PROJECT NUMBER:	50121487
JOB NUMBER:	50158226

SITE NUMBER

5000233020

SITE ADDRESS

1 GOLF CLUB ROAD
CROMWELL, CT 06416

SHEET TITLE

DETAILED SITE PLAN & ELEVATION

SHEET NUMBER

LE-2

ATTACHMENT 3

Structural Analysis Report for Temporary COW Monopole Tower

Site Name: Travelers Golf COW 2023
Site ID: 617385255
Fuze ID: 17059750
Site Address: 674 Main Street
Cromwell, CT 06416

Prepared for:
Verizon Wireless
900 Chelmsford Street
Tower 2 Floor 5
Lowell, MA 01851

May 16, 2023

Prepared by:
Dewberry Engineers Inc.
99 Summer Street, Suite 700
Boston, MA 02110
Dewberry Project Number: 50158226

Tower Controlling Member	% Capacity	Result
Monopole	29.1	Sufficient
Guyed Wires	27.0	Sufficient
Foundation	-	Sufficient

Tower/Foundation Previously Reinforced?	YES ☐ / NO ☒
Previous Reinforcement Verified?	YES ☐ / NO ☐ Date: **N/A**
Additional Reinforcement Required?	YES ☐ / NO ☒

Prepared by:

Ashley Deuschle, E.I.T. (FL)
Staff Engineer

Reviewed by:

Brandon Kelsey, P.E. (MA)
Structural Project Engineer

Approved by:

05/17/2023

Benjamin Revette, P.E (CT)
Associate Vice President

TABLE OF CONTENTS

1.0 INTRODUCTION AND PROJECT SUMMARY

The objective of this report is to assess the proposed installation of new antennas and support equipment on a proposed 59'-8" temporary monopole, on a stationary trailer, located in Cromwell, CT. This report is limited to the analysis of the tower only. The telecommunication upgrade is proposed by VZW at a centerline of 60 ft and 57 ft.

Analysis consists of the required configuration of the Peak Industries Mobile 60' Cell Tower at a maximum extension of 59'-8" (61'-8" AGL). Two guyed wire elevations are required at 54'-2" AGL and 44'-10" AGL. Please refer to latest Construction Drawings by Dewberry Engineers, Inc. for installation.

Please refer to the appendices for the structural analysis package regarding the structural analysis.

2.0 CODES, STANDARDS, AND REFERENCES

The structural analysis was completed according to the provisions of the following Codes and standards:

- *2022 Connecticut State Building Code*
- *International Building Code (IBC) 2021,* International Code Council
- *ASCE 7-16 Minimum design Loads for Buildings and Other Structures, American Society of Civil Engineers*
- *TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas*
- *Steel Construction Manual 15^{h} Ed,* American Institute of Steel Construction
- *Site Visit by Dewberry Engineers Inc. on 03/22/2023, 04/21/2023 and 05/11/2023*

The analysis was in compliance with the minimum requirements as specified by TIA-222-H for Cromwell, CT under the following load parameters:

Risk Category:	II	
Exposure Category:	C	IBC 2018
Design Ultimate Wind Speed	112 mph	ASCE 7-16 Hazard Tool
Design Basic Wind Speed	84 mph	Using 0.75 factor for temporary structures of 6 weeks or less
Design Ice Wind Speed:	40 mph	ASCE 7-16 Hazard Tool
Design Ice Thickness:	1.00 in.	ASCE 7-16 Hazard Tool
Serviceability Wind Speed:	60 mph	Sect. 2.8.3, TIA Rev H

The tower geometry, member sizes, existing antenna loading, and foundation design loading were referenced from the following reports:

- Peak Industries Drawings by Eclipse Engineering dated March 10, 2016
- Radio Frequency Design Sheet by Verizon Wireless dated May 9, 2023

Client: VZW
Site Name: Travelers Golf COW CT 2023
Date: May 16, 2023

3.0 EXISTING AND PROPOSED TOWER LOADING

3.1 Final Appurtenance Loading Configuration on Tower:

Mounting Elevation (ft)	Center Line Elevation (ft)	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
60	60	VZW	1	MT6407-77A 5G antenna w/ integrated RRH	(2) Hybrid
			1	8' long 2-3/8" OD Sch. 40 Pipe	
			1	Chain Mount	
57	57	VZW	1	NNH4SS-45A-R3BT8	
			1	8' long 2-3/8" OD Sch. 40 Pipe	
			1	Chain Mount	
54.2	54.2	-	3	1/4" EHS Guyed Wire (IT=7.5%)	-
46.8	46.8	-	3	1/4" EHS Guyed Wire (IT=7.5%)	-

3.2 Method:

tnxTower, a commercially available engineering software program, was used to create a three-dimensional model of the tower members and calculate primary member stresses under various loading conditions. Selected output from the analysis is included in Appendix A.

4.0 TOWER ANALYSIS RESULTS SUMMARY

4.1 Tower Structure Results

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	61.6667 - 54.1667	Pole	COW HSS4.5x4.5x3/16	1	-536.97	97254.10	11.5	Pass
L2	54.1667 - 46.8333	Pole	COW HSS5x5x3/16	2	-1876.36	116545.00	9.5	Pass
		Guy A@54.1667	1/4	12	1078.70	3990.00	27.0	Pass
		Guy B@54.1667	1/4	11	1031.01	3990.00	25.8	Pass
		Guy C@54.1667	1/4	10	1040.10	3990.00	26.1	Pass
L3	46.8333 - 39.7917	Pole	COW HSS6x6x0.25	3	-5264.41	18737.40	29.1	Pass
		Guy A@46.8333	1/4	15	1035.11	3990.00	25.9	Pass
		Guy B@46.8333	1/4	14	972.48	3990.00	24.4	Pass
		Guy C@46.8333	1/4	13	998.74	3990.00	25.0	Pass
L4	39.7917 - 33.0417	Pole	COW HSS7x7x/14	4	-5602.98	35705.20	16.9	Pass
L5	33.0417 - 26.5833	Pole	COW HSS8x8x1/4	5	-5952.69	51375.20	12.5	Pass
L6	26.5833 - 20.4167	Pole	COW HSS9x9x1/4	6	-6280.65	71068.00	9.3	Pass
L7	20.4167 - 14.5417	Pole	COW HSS10x10x1/4	7	-6615.45	109156.00	6.9	Pass
L8	14.5417 - 8.95834	Pole	COW HSS11x11x1/4	8	-4455.40	140917.00	7.8	Pass
L9	8.95834 - 2	Pole	COW HSS12x12x1/4	9	-4805.26	177472.00	10.3	Pass
							Summary	
						Pole (L3)	29.1	Pass
						Guy A (L2)	27.0	Pass
						Guy B (L2)	25.8	Pass
						Guy C (L2)	26.1	Pass
						RATING =	**29.1**	**Pass**

Table above displays the summary of the ratio (as the percentage) of force in the member to their capacities. Values greater than 100% indicate the maximum force in the member exceeds its capacity.

**Note: Capacities up to 105% are considered acceptable (where applicable)*

4.2 Guyed Wire Anchor Block Results

Guyed Wire Elevation (ft)	Type	Initial Tension (lb)	Radius (ft)	Guyed Wire Qty.	Anchor Block Qty.
54.2	1/4" EHS	500	60	3	3
46.8	1/4" EHS	500	60	3	3

Each proposed guyed wire connects to a corresponding anchor block. Each anchor block is a minimum size of 2'x2'x6' with a minimum weight of 3,600 lbs each.

5.0 CONCLUSIONS AND COMMENTARY

After analysis, it was determined that the proposed temporary tower structure, temporary guyed wires and temporary trailer foundation **is adequate** to support the proposed forces as a result of the telecommunication upgrade.

Note: This analysis only considers the temporary masts to be at a maximum extension of 59'-8" (61'-8" AGL) and at the referenced site for under six weeks. Dewberry recommends that the temporary mast be taken down during any extreme weather conditions.

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. Dewberry Engineers Inc. reserves the right to add to or modify this report if more information becomes available. The conclusions reached by Dewberry Engineers Inc. in this report are only applicable to the previously mentioned existing structural elements supporting the proposed wireless telecommunications installation. The results of this report are based on the assumption that existing structural elements have been installed per the original design documents, have been well maintained and are uncompromised. This report does not imply that a thorough inspection of the existing structure has been performed. Any deviation of the support condition, loading, location, placement, equipment configuration, etc, will require Dewberry Engineers Inc. to generate an additional structural analysis.

6.0 ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. Dewberry Engineers Inc. has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/ available and to have been properly installed.
10. Loading interpreted from photos is accurate to ±5' AGL, antenna size accurate to ±3.3 sf, and coax equal to the number of existing antennas without reserves

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Dewberry Engineering Inc. should be allowed to review any new information to determine its effect on the structural integrity of the tower.

7.0 DISCLAIMER OF WARRANTIES

If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by Dewberry Engineers Inc. in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

Dewberry Engineers Inc. does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. Dewberry Engineers Inc. provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail,

etc. The purpose of this report is to calculate the structural integrity for the existing tower under existing and proposed loadings.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing condition, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from Dewberry Engineering Inc., but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

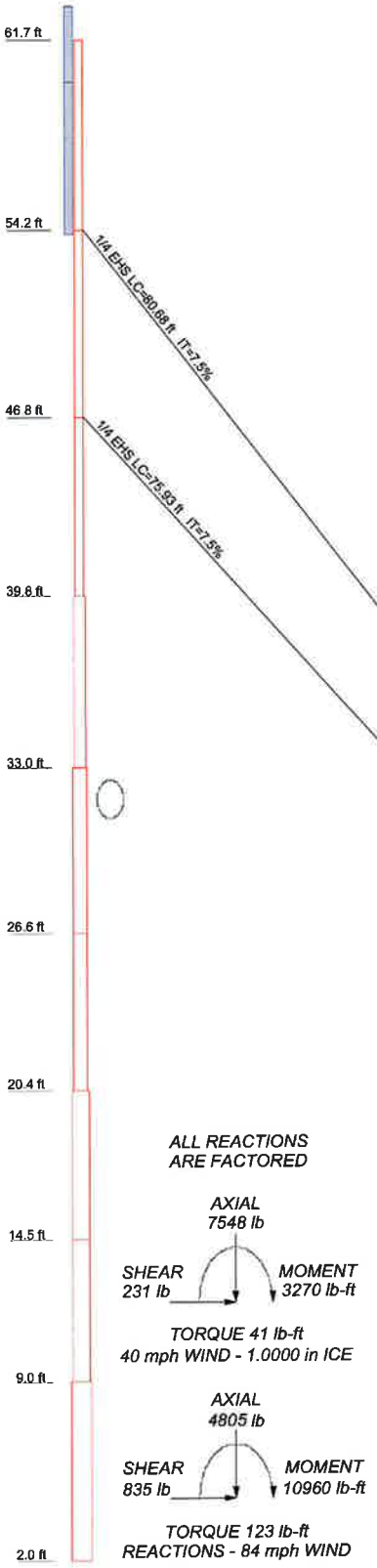
Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connections to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

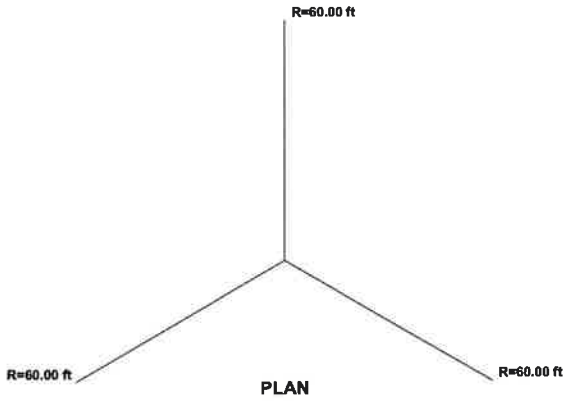
Dewberry Engineers Inc. makes no warranties, expresses and/or implied in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. Dewberry will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of Dewberry pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

tnxTOWER OUTPUT FOR PROPOSED LOADING

Section	Size	Length (ft)	Grade	Weight (lb)
1	COW HSS4.5x4.5x3/16	7.50	A500-46	72.3
2	COW HSS5x5x3/16	7.33		80.7
3	COW HSS6x6x0.25	7.04		117.6
4	COW HSS7x7x1/4	6.75		139.8
5	COW HSS8x8x1/4	6.46		151.0
6	COW HSS9x9x1/4	6.17		160.7
7	COW HSS10x10x1/4	5.88		176.6
8	COW HSS11x11x1/4	5.58		182.8
9	COW HSS12x12x1/4	6.96		246.4
				1328.0





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
CHM1 (VZW)	60	NNH4SS-45A-R3BT8 w/ 8' long pipe (VZW)	57
MT6407-77A w/ 8' long pipe (VZW)	60		
CHM1 (VZW)	57		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-46	46 ksi	62 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 84 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft

ALL REACTIONS ARE FACTORED

AXIAL 7548 lb

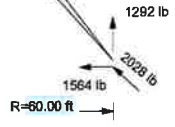
SHEAR 231 lb *MOMENT 3270 lb-ft*

TORQUE 41 lb-ft
40 mph WIND - 1.0000 in ICE

AXIAL 4805 lb

SHEAR 835 lb *MOMENT 10960 lb-ft*

TORQUE 123 lb-ft
REACTIONS - 84 mph WIND



ALL REACTIONS ARE FACTORED

Dewberry Engineers, Inc.
99 Summer Street, Suite 700
Boston, MA 02110
Phone: 617-531-0744
FAX: 631-836-1919

Job: *Lenox Tanglewood COW*			
Project: *Lenox Tanglewood COW*			
Client: VZW	Drawn by: adeuschle		App'd:
Code: TIA-222-H	Date: 05/16/23		Scale: NTS
Path:			Dwg No. E-1

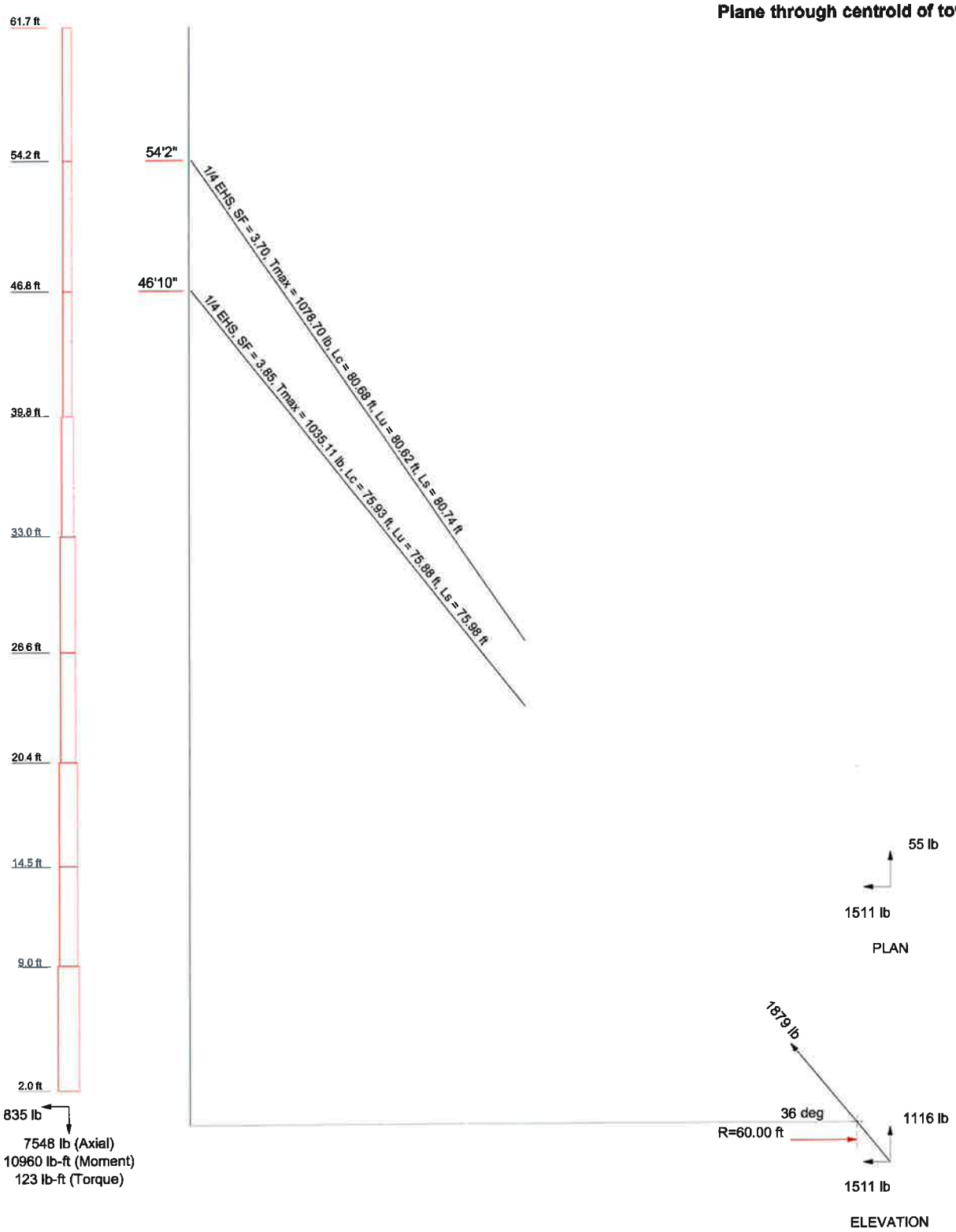
Guy Tensions and Tower Reactions

TIA-222-H - 84 mph/40 mph 1.0000 in Ice Exposure C

Maximum Values

Anchor 'C'@60 ft Azimuth 240 deg Elev 0 ft

Plane through centroid of tower

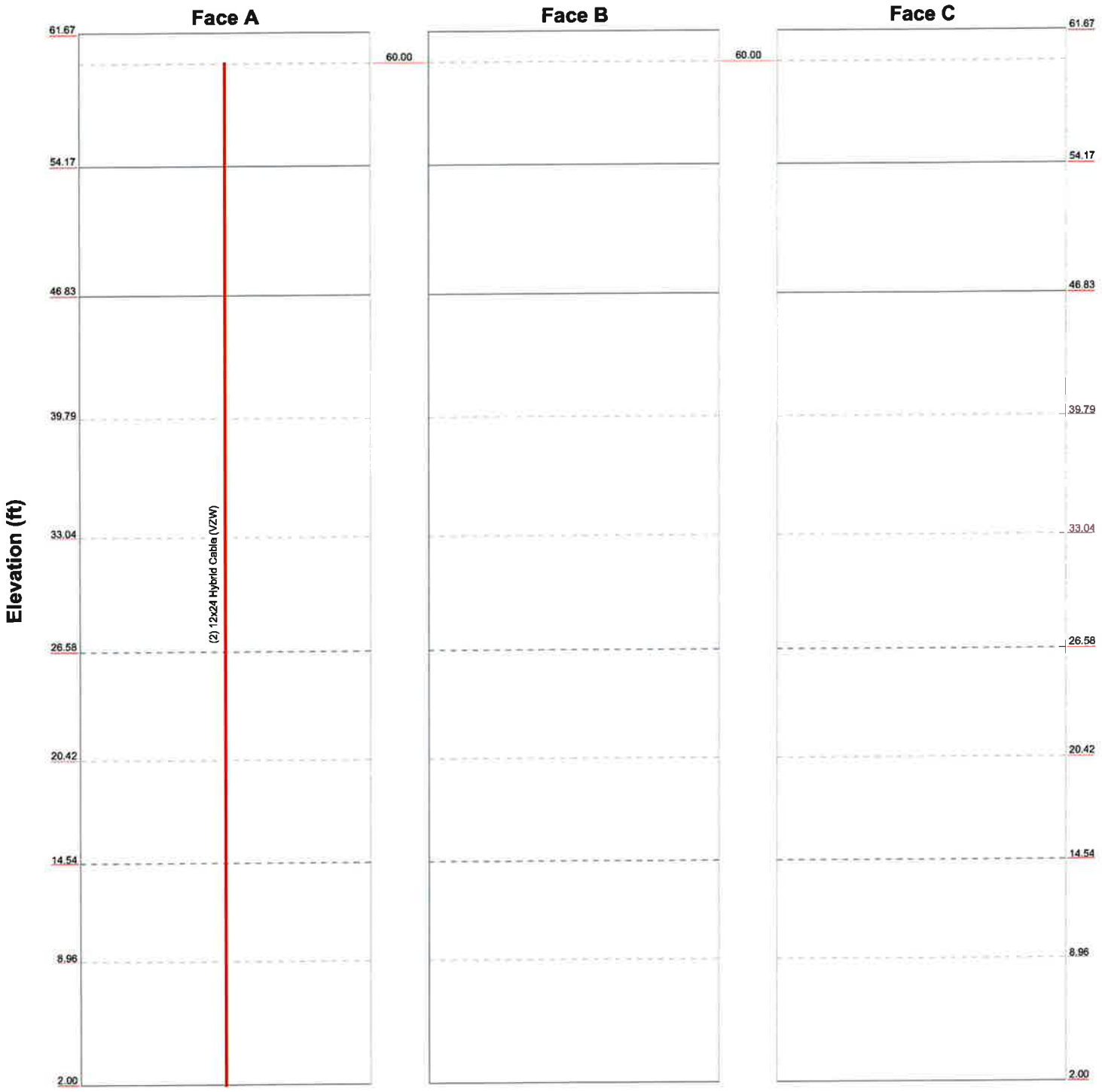


Dewberry Engineers, Inc.
99 Summer Street, Suite 700
Boston, MA 02110
Phone: 617-531-0744
FAX: 631-836-1919

Job: **Lenox Tanglewood COW**			
Project: **Lenox Tanglewood COW**			
Client: VZW	Drawn by: adeuschle		App'd:
Code: TIA-222-H	Date: 05/16/23		Scale: NTS
Path:			Dwg No. E-6

Feed Line Distribution Chart
2' - 61'8-1/32"

Round | Flat | App In Face | App Out Face | Truss Leg



Dewberry Engineers, Inc.
99 Summer Street, Suite 700
Boston, MA 02110
Phone: 617-531-0744
FAX: 631-836-1919

Job: Lenox Tanglewood COW			
Project: Lenox Tanglewood COW			
Client: VZW	Drawn by: adeuschle		App'd:
Code: TIA-222-H	Date: 05/16/23		Scale: NTS
Path:			Dwg No. E-7

tnxTower	Job	Page
ABC Engineering 1234 W. Jones St. Smallville, PA 12345 Phone: (555) 555-1234 FAX: (555) 555-1235	Lenox Tanglewood COW	1 of 23
	Project Lenox Tanglewood COW	Date 17:24:20 05/16/23
	Client VZW	Designed by bkelsey

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower base elevation above sea level: 2.00 ft.
- Basic wind speed of 84 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.0000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 40 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Safety factor used in guy design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r	√	All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys	√	Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice		Bypass Mast Stability Checks		Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
√	Include Bolts In Member Capacity	√	Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
√	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component		Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)	√	Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	61.67-54.17	7.50	COW HSS4.5x4.5x3/16	A500-46 (46 ksi)	
L2	54.17-46.83	7.33	COW HSS5x5x3/16	A500-46 (46 ksi)	
L3	46.83-39.79	7.04	COW HSS6x6x0.25	A500-46 (46 ksi)	
L4	39.79-33.04	6.75	COW HSS7x7x/14	A500-46 (46 ksi)	
L5	33.04-26.58	6.46	COW HSS8x8x1/4	A500-46 (46 ksi)	
L6	26.58-20.42	6.17	COW HSS9x9x1/4	A500-46 (46 ksi)	
L7	20.42-14.54	5.88	COW HSS10x10x1/4	A500-46 (46 ksi)	
L8	14.54-8.96	5.58	COW HSS11x11x1/4	A500-46 (46 ksi)	
L9	8.96-2.00	6.96	COW HSS12x12x1/4	A500-46 (46 ksi)	

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 61.67-54.17				1	1.05	1			
L2 54.17-46.83				1	1.05	1			
L3 46.83-39.79				1	1.05	1			
L4 39.79-33.04				1	1.05	1			
L5 33.04-26.58				1	1.05	1			
L6 26.58-20.42				1	1.05	1			
L7 20.42-14.54				1	1.05	1			
L8 14.54-8.96				1	1.05	1			
L9 8.96-2.00				1	1.05	1			

Guy Data

Guy Elevation ft	Guy Grade		Guy Size	Initial Tension lb	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
54.1667	EHS	A	1/4	498.75	7.5%	21000	0.121	80.62	60.00	0.0000	0.00	100%
		B	1/4	498.75	7.5%	21000	0.121	80.62	60.00	0.0000	0.00	100%
		C	1/4	498.75	7.5%	21000	0.121	80.62	60.00	0.0000	0.00	100%
46.8333	EHS	A	1/4	498.75	7.5%	21000	0.121	75.88	60.00	0.0000	0.00	100%
		B	1/4	498.75	7.5%	21000	0.121	75.88	60.00	0.0000	0.00	100%
		C	1/4	498.75	7.5%	21000	0.121	75.88	60.00	0.0000	0.00	100%

Guy Data *(cont'd)*

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
54.1667	Corner						
46.8333	Corner						

Guy Data (cont'd)

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
54.17	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
46.83	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A lb	Cable Weight B lb	Cable Weight C lb	Cable Weight D lb	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
54.1667	9.76	9.76	9.76		0.78 1.5 sec/pulse	0.78 1.5 sec/pulse	0.78 1.5 sec/pulse	
46.8333	9.18	9.18	9.18		0.69 1.4 sec/pulse	0.69 1.4 sec/pulse	0.69 1.4 sec/pulse	

Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
54.1667	No	No			1	1	1	1
46.8333	No	No			1	1	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
54.1667	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
46.8333	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
54.1667	A	27.08	16	4	0.9804
	B	27.08	16	4	0.9804
	C	27.08	16	4	0.9804
46.8333	A	23.42	16	4	0.9663
	B	23.42	16	4	0.9663
	C	23.42	16	4	0.9663

Guy-Tensioning Information

Guy Elevation ft		H ft	V ft	Temperature At Time Of Tensioning: 0 F Initial Tension lb	0 F Intercept ft	20 F Initial Tension lb	20 F Intercept ft	40 F Initial Tension lb	40 F Intercept ft	60 F Initial Tension lb	60 F Intercept ft	80 F Initial Tension lb	80 F Intercept ft	100 F Initial Tension lb	100 F Intercept ft	120 F Initial Tension lb	120 F Intercept ft
54.1667	A	59.79	54.17	654.607	0.60	602.418	0.65	550.439	0.71	498.750	0.78	447.471	0.87	396.790	0.98	347.016	1.12
	B	59.79	54.17	654.607	0.60	602.418	0.65	550.439	0.71	498.750	0.78	447.471	0.87	396.790	0.98	347.016	1.12
	C	59.79	54.17	654.607	0.60	602.418	0.65	550.439	0.71	498.750	0.78	447.471	0.87	396.790	0.98	347.016	1.12
46.8333	A	59.76	46.83	674.684	0.51	615.761	0.56	557.082	0.62	498.750	0.69	440.924	0.79	383.870	0.90	328.066	1.05
	B	59.76	46.83	674.684	0.51	615.761	0.56	557.082	0.62	498.750	0.69	440.924	0.79	383.870	0.90	328.066	1.05
	C	59.76	46.83	674.684	0.51	615.761	0.56	557.082	0.62	498.750	0.69	440.924	0.79	383.870	0.90	328.066	1.05

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
12x24 Hybrid Cable (VZW)	A	Yes	Surface Ar (CaAa)	60.00 - 2.00	2	1	0.000 0.000	1.6250		3.20

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight lb
L1	61.67-54.17	A	0.000	0.000	0.948	0.000	37.33
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L2	54.17-46.83	A	0.000	0.000	1.192	0.000	46.93
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L3	46.83-39.79	A	0.000	0.000	1.144	0.000	45.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L4	39.79-33.04	A	0.000	0.000	1.097	0.000	43.20

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L5	33.04-26.58	A	0.000	0.000	1.049	0.000	41.33
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L6	26.58-20.42	A	0.000	0.000	1.002	0.000	39.47
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L7	20.42-14.54	A	0.000	0.000	0.955	0.000	37.60
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L8	14.54-8.96	A	0.000	0.000	0.907	0.000	35.73
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L9	8.96-2.00	A	0.000	0.000	1.131	0.000	44.53
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	61.67-54.17	A	1.058	0.000	0.000	2.182	0.000	77.79
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L2	54.17-46.83	A	1.043	0.000	0.000	2.722	0.000	96.83
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L3	46.83-39.79	A	1.028	0.000	0.000	2.591	0.000	91.96
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L4	39.79-33.04	A	1.010	0.000	0.000	2.460	0.000	87.09
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L5	33.04-26.58	A	0.990	0.000	0.000	2.328	0.000	82.18
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L6	26.58-20.42	A	0.967	0.000	0.000	2.194	0.000	77.21
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L7	20.42-14.54	A	0.938	0.000	0.000	2.057	0.000	72.13
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L8	14.54-8.96	A	0.902	0.000	0.000	1.914	0.000	66.82
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L9	8.96-2.00	A	0.836	0.000	0.000	2.294	0.000	79.49
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	1	12x24 Hybrid Cable	54.17 - 60.00	1.0000	1.0000
L2	1	12x24 Hybrid Cable	46.83 - 54.17	1.0000	1.0000
L3	1	12x24 Hybrid Cable	39.79 - 46.83	1.0000	1.0000
L4	1	12x24 Hybrid Cable	33.04 - 39.79	1.0000	1.0000
L5	1	12x24 Hybrid Cable	26.58 - 33.04	1.0000	1.0000
L6	1	12x24 Hybrid Cable	20.42 - 26.58	1.0000	1.0000
L7	1	12x24 Hybrid Cable	14.54 - 20.42	1.0000	1.0000
L8	1	12x24 Hybrid Cable	8.96 - 14.54	1.0000	1.0000
L9	1	12x24 Hybrid Cable	2.00 - 8.96	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral / Vert	Azimuth Adjustment	Placement		C_AA_A Front	C_AA_A Side	Weight
			ft / ft / ft	°	ft		ft^2	ft^2	lb
CHM1 (VZW)	A	From Face	0.00 0.00 0.00	0.0000	60.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.00 0.00 0.00	52.00 67.60 83.20
MT6407-77A w/ 8' long pipe (VZW)	A	From Face	0.50 0.00 0.00	0.0000	60.00	No Ice 1/2" Ice 1" Ice	5.91 6.73 7.45	3.74 4.79 5.70	126.30 176.73 233.10
CHM1 (VZW)	A	From Face	0.00 0.00 0.00	0.0000	57.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.00 0.00 0.00	52.00 67.60 83.20
NNH4SS-45A-R3BT8 w/ 8' long pipe (VZW)	A	From Face	0.50 0.00 0.00	0.0000	57.00	No Ice 1/2" Ice 1" Ice	9.24 9.99 10.68	5.73 6.92 7.94	109.24 181.69 261.61

Tower Pressures - No Ice

$G_H = 1.100$

Section Elevation	z	K_Z	q_z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
L1 61.67-54.17	57.92	1.128	19	3.125	A	0.000	3.281	3.281	100.00	0.948	0.000
					B	0.000	3.281		100.00	0.000	0.000
					C	0.000	3.281		100.00	0.000	0.000
L2 54.17-46.83	50.50	1.096	19	3.468	A	0.000	3.641	3.641	100.00	1.192	0.000
					B	0.000	3.641		100.00	0.000	0.000
					C	0.000	3.641		100.00	0.000	0.000
L3 46.83-39.79	43.31	1.061	18	3.814	A	0.000	4.005	4.005	100.00	1.144	0.000
					B	0.000	4.005		100.00	0.000	0.000
					C	0.000	4.005		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L4 39.79-33.04	36.42	1.023	18	4.500	A	0.000	4.725	4.725	100.00	1.097	0.000
					B	0.000	4.725		100.00	0.000	0.000
					C	0.000	4.725		100.00	0.000	0.000
L5 33.04-26.58	29.81	0.981	17	4.844	A	0.000	5.086	5.086	100.00	1.049	0.000
					B	0.000	5.086		100.00	0.000	0.000
					C	0.000	5.086		100.00	0.000	0.000
L6 26.58-20.42	23.50	0.933	16	5.139	A	0.000	5.396	5.396	100.00	1.002	0.000
					B	0.000	5.396		100.00	0.000	0.000
					C	0.000	5.396		100.00	0.000	0.000
L7 20.42-14.54	17.48	0.877	15	5.630	A	0.000	5.912	5.912	100.00	0.955	0.000
					B	0.000	5.912		100.00	0.000	0.000
					C	0.000	5.912		100.00	0.000	0.000
L8 14.54-8.96	11.75	0.85	15	5.816	A	0.000	6.107	6.107	100.00	0.907	0.000
					B	0.000	6.107		100.00	0.000	0.000
					C	0.000	6.107		100.00	0.000	0.000
L9 8.96-2.00	5.48	0.85	15	7.828	A	0.000	8.220	8.220	100.00	1.131	0.000
					B	0.000	8.220		100.00	0.000	0.000
					C	0.000	8.220		100.00	0.000	0.000

Tower Pressure - With Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 61.67-54.17	57.92	1.128	4	1.0579	4.447	A	0.000	4.670	4.670	100.00	2.182	0.000
						B	0.000	4.670		100.00	0.000	0.000
						C	0.000	4.670		100.00	0.000	0.000
L2 54.17-46.83	50.50	1.096	4	1.0435	4.743	A	0.000	4.981	4.981	100.00	2.722	0.000
						B	0.000	4.981		100.00	0.000	0.000
						C	0.000	4.981		100.00	0.000	0.000
L3 46.83-39.79	43.31	1.061	4	1.0276	5.020	A	0.000	5.271	5.271	100.00	2.591	0.000
						B	0.000	5.271		100.00	0.000	0.000
						C	0.000	5.271		100.00	0.000	0.000
L4 39.79-33.04	36.42	1.023	4	1.0099	5.636	A	0.000	5.918	5.918	100.00	2.460	0.000
						B	0.000	5.918		100.00	0.000	0.000
						C	0.000	5.918		100.00	0.000	0.000
L5 33.04-26.58	29.81	0.981	4	0.9899	5.909	A	0.000	6.205	6.205	100.00	2.328	0.000
						B	0.000	6.205		100.00	0.000	0.000
						C	0.000	6.205		100.00	0.000	0.000
L6 26.58-20.42	23.50	0.933	4	0.9666	6.132	A	0.000	6.439	6.439	100.00	2.194	0.000
						B	0.000	6.439		100.00	0.000	0.000
						C	0.000	6.439		100.00	0.000	0.000
L7 20.42-14.54	17.48	0.877	3	0.9384	6.549	A	0.000	6.877	6.877	100.00	2.057	0.000
						B	0.000	6.877		100.00	0.000	0.000
						C	0.000	6.877		100.00	0.000	0.000
L8 14.54-8.96	11.75	0.85	3	0.9019	6.655	A	0.000	6.988	6.988	100.00	1.914	0.000
						B	0.000	6.988		100.00	0.000	0.000
						C	0.000	6.988		100.00	0.000	0.000
L9 8.96-2.00	5.48	0.85	3	0.8356	8.797	A	0.000	9.237	9.237	100.00	2.294	0.000
						B	0.000	9.237		100.00	0.000	0.000
						C	0.000	9.237		100.00	0.000	0.000

Tower Pressure - Service

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 61.67-54.17	57.92	1.128	9	3.125	A	0.000	3.281	3.281	100.00	0.948	0.000
					B	0.000	3.281		100.00	0.000	0.000
					C	0.000	3.281		100.00	0.000	0.000
L2 54.17-46.83	50.50	1.096	9	3.468	A	0.000	3.641	3.641	100.00	1.192	0.000
					B	0.000	3.641		100.00	0.000	0.000
					C	0.000	3.641		100.00	0.000	0.000
L3 46.83-39.79	43.31	1.061	8	3.814	A	0.000	4.005	4.005	100.00	1.144	0.000
					B	0.000	4.005		100.00	0.000	0.000
					C	0.000	4.005		100.00	0.000	0.000
L4 39.79-33.04	36.42	1.023	8	4.500	A	0.000	4.725	4.725	100.00	1.097	0.000
					B	0.000	4.725		100.00	0.000	0.000
					C	0.000	4.725		100.00	0.000	0.000
L5 33.04-26.58	29.81	0.981	8	4.844	A	0.000	5.086	5.086	100.00	1.049	0.000
					B	0.000	5.086		100.00	0.000	0.000
					C	0.000	5.086		100.00	0.000	0.000
L6 26.58-20.42	23.50	0.933	7	5.139	A	0.000	5.396	5.396	100.00	1.002	0.000
					B	0.000	5.396		100.00	0.000	0.000
					C	0.000	5.396		100.00	0.000	0.000
L7 20.42-14.54	17.48	0.877	7	5.630	A	0.000	5.912	5.912	100.00	0.955	0.000
					B	0.000	5.912		100.00	0.000	0.000
					C	0.000	5.912		100.00	0.000	0.000
L8 14.54-8.96	11.75	0.85	7	5.816	A	0.000	6.107	6.107	100.00	0.907	0.000
					B	0.000	6.107		100.00	0.000	0.000
					C	0.000	6.107		100.00	0.000	0.000
L9 8.96-2.00	5.48	0.85	7	7.828	A	0.000	8.220	8.220	100.00	1.131	0.000
					B	0.000	8.220		100.00	0.000	0.000
					C	0.000	8.220		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	37.33	72.35	A	1	1.2	19	1	1	3.281	140.04	18.67	C
61.67-54.17			B	1	1.2		1	1	3.281			
			C	1	1.2		1	1	3.281			
L2	46.93	80.66	A	1	1.125	19	1	1	3.641	159.04	21.69	C
54.17-46.83			B	1	1.2		1	1	3.641			
			C	1	1.2		1	1	3.641			
L3	45.07	117.62	A	1	0.998	18	1	1	4.005	160.08	22.73	C
46.83-39.79			B	1	1.2		1	1	4.005			
			C	1	1.2		1	1	4.005			
L4	43.20	139.81	A	1	0.826	18	1	1	4.725	168.48	24.96	C
39.79-33.04			B	1	1.2		1	1	4.725			
			C	1	1.2		1	1	4.725			
L5	41.33	151.03	A	1	0.75	17	1	1	5.086	167.11	25.87	C
33.04-26.58			B	1	1.2		1	1	5.086			
			C	1	1.2		1	1	5.086			
L6	39.47	160.69	A	1	0.692	16	1	1	5.396	163.17	26.46	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
26.58-20.42			B	1	1.2		1	1	5.396			
			C	1	1.2		1	1	5.396			
L7	37.60	176.64	A	1	0.621	15	1	1	5.912	161.37	27.47	C
20.42-14.54			B	1	1.2		1	1	5.912			
			C	1	1.2		1	1	5.912			
L8 14.54-8.96	35.73	182.79	A	1	0.6	15	1	1	6.107	158.10	28.32	C
			B	1	1.2		1	1	6.107			
			C	1	1.2		1	1	6.107			
L9 8.96-2.00	44.53	246.40	A	1	0.6	15	1	1	8.220	208.76	30.00	C
			B	1	1.2		1	1	8.220			
			C	1	1.2		1	1	8.220			
Sum Weight:	371.20	1327.98								1486.17		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	37.33	72.35	A	1	1.2	19	1	1	3.281	140.04	18.67	C
61.67-54.17			B	1	1.2		1	1	3.281			
			C	1	1.2		1	1	3.281			
L2	46.93	80.66	A	1	1.2	19	1	1	3.641	159.04	21.69	C
54.17-46.83			B	1	1.125		1	1	3.641			
			C	1	1.2		1	1	3.641			
L3	45.07	117.62	A	1	1.2	18	1	1	4.005	160.08	22.73	C
46.83-39.79			B	1	0.998		1	1	4.005			
			C	1	1.2		1	1	4.005			
L4	43.20	139.81	A	1	1.2	18	1	1	4.725	168.48	24.96	C
39.79-33.04			B	1	0.826		1	1	4.725			
			C	1	1.2		1	1	4.725			
L5	41.33	151.03	A	1	1.2	17	1	1	5.086	167.11	25.87	C
33.04-26.58			B	1	0.75		1	1	5.086			
			C	1	1.2		1	1	5.086			
L6	39.47	160.69	A	1	1.2	16	1	1	5.396	163.17	26.46	C
26.58-20.42			B	1	0.692		1	1	5.396			
			C	1	1.2		1	1	5.396			
L7	37.60	176.64	A	1	1.2	15	1	1	5.912	161.37	27.47	C
20.42-14.54			B	1	0.621		1	1	5.912			
			C	1	1.2		1	1	5.912			
L8 14.54-8.96	35.73	182.79	A	1	1.2	15	1	1	6.107	158.10	28.32	C
			B	1	0.6		1	1	6.107			
			C	1	1.2		1	1	6.107			
L9 8.96-2.00	44.53	246.40	A	1	1.2	15	1	1	8.220	208.76	30.00	C
			B	1	0.6		1	1	8.220			
			C	1	1.2		1	1	8.220			
Sum Weight:	371.20	1327.98								1486.17		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	37.33	72.35	A	1	1.2	19	1	1	3.281	159.55	21.27	A
61.67-54.17			B	1	1.2		1	1	3.281			
			C	1	1.2		1	1	3.281			
L2	46.93	80.66	A	1	1.2	19	1	1	3.641	182.87	24.94	A
54.17-46.83			B	1	1.125		1	1	3.641			
			C	1	1.125		1	1	3.641			
L3	45.07	117.62	A	1	1.2	18	1	1	4.005	182.23	25.88	A
46.83-39.79			B	1	0.998		1	1	4.005			
			C	1	0.998		1	1	4.005			
L4	43.20	139.81	A	1	1.2	18	1	1	4.725	188.95	27.99	A
39.79-33.04			B	1	0.826		1	1	4.725			
			C	1	0.826		1	1	4.725			
L5	41.33	151.03	A	1	1.2	17	1	1	5.086	185.88	28.78	A
33.04-26.58			B	1	0.75		1	1	5.086			
			C	1	0.75		1	1	5.086			
L6	39.47	160.69	A	1	1.2	16	1	1	5.396	180.22	29.23	A
26.58-20.42			B	1	0.692		1	1	5.396			
			C	1	0.692		1	1	5.396			
L7	37.60	176.64	A	1	1.2	15	1	1	5.912	176.64	30.07	A
20.42-14.54			B	1	0.621		1	1	5.912			
			C	1	0.621		1	1	5.912			
L8 14.54-8.96	35.73	182.79	A	1	1.2	15	1	1	6.107	172.17	30.84	A
			B	1	0.6		1	1	6.107			
			C	1	0.6		1	1	6.107			
L9 8.96-2.00	44.53	246.40	A	1	1.2	15	1	1	8.220	226.29	32.52	A
			B	1	0.6		1	1	8.220			
			C	1	0.6		1	1	8.220			
Sum Weight:	371.20	1327.98								1654.79		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	77.79	131.07	A	1	1.2	4	1	1	4.670	43.03	5.74	C
61.67-54.17			B	1	1.2		1	1	4.670			
			C	1	1.2		1	1	4.670			
L2	96.83	143.47	A	1	1.2	4	1	1	4.981	47.49	6.48	C
54.17-46.83			B	1	1.2		1	1	4.981			
			C	1	1.2		1	1	4.981			
L3	91.96	184.16	A	1	1.2	4	1	1	5.271	46.76	6.64	C
46.83-39.79			B	1	1.2		1	1	5.271			
			C	1	1.2		1	1	5.271			
L4	87.09	214.84	A	1	1.2	4	1	1	5.918	47.71	7.07	C
39.79-33.04			B	1	1.2		1	1	5.918			
			C	1	1.2		1	1	5.918			
L5	82.18	229.05	A	1	1.2	4	1	1	6.205	46.44	7.19	C
33.04-26.58			B	1	1.2		1	1	6.205			
			C	1	1.2		1	1	6.205			
L6	77.21	240.55	A	1	1.2	4	1	1	6.439	44.58	7.23	C
26.58-20.42			B	1	1.2		1	1	6.439			
			C	1	1.2		1	1	6.439			

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L7	72.13	260.42	A	1	1.2	3	1	1	6.877	43.18	7.35	C
20.42-14.54			B	1	1.2		1	1	6.877			
			C	1	1.2		1	1	6.877			
L8 14.54-8.96	66.82	265.24	A	1	1.2	3	1	1	6.988	41.68	7.47	C
			B	1	1.2		1	1	6.988			
			C	1	1.2		1	1	6.988			
L9 8.96-2.00	79.49	348.24	A	1	1.2	3	1	1	9.237	54.07	7.77	C
			B	1	1.2		1	1	9.237			
			C	1	1.2		1	1	9.237			
Sum Weight:	731.51	2017.06								414.92		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	77.79	131.07	A	1	1.2	4	1	1	4.670	43.03	5.74	C
61.67-54.17			B	1	1.2		1	1	4.670			
			C	1	1.2		1	1	4.670			
L2	96.83	143.47	A	1	1.2	4	1	1	4.981	47.49	6.48	C
54.17-46.83			B	1	1.2		1	1	4.981			
			C	1	1.2		1	1	4.981			
L3	91.96	184.16	A	1	1.2	4	1	1	5.271	46.76	6.64	C
46.83-39.79			B	1	1.2		1	1	5.271			
			C	1	1.2		1	1	5.271			
L4	87.09	214.84	A	1	1.2	4	1	1	5.918	47.71	7.07	C
39.79-33.04			B	1	1.2		1	1	5.918			
			C	1	1.2		1	1	5.918			
L5	82.18	229.05	A	1	1.2	4	1	1	6.205	46.44	7.19	C
33.04-26.58			B	1	1.2		1	1	6.205			
			C	1	1.2		1	1	6.205			
L6	77.21	240.55	A	1	1.2	4	1	1	6.439	44.58	7.23	C
26.58-20.42			B	1	1.2		1	1	6.439			
			C	1	1.2		1	1	6.439			
L7	72.13	260.42	A	1	1.2	3	1	1	6.877	43.18	7.35	C
20.42-14.54			B	1	1.2		1	1	6.877			
			C	1	1.2		1	1	6.877			
L8 14.54-8.96	66.82	265.24	A	1	1.2	3	1	1	6.988	41.68	7.47	C
			B	1	1.2		1	1	6.988			
			C	1	1.2		1	1	6.988			
L9 8.96-2.00	79.49	348.24	A	1	1.2	3	1	1	9.237	54.07	7.77	C
			B	1	1.2		1	1	9.237			
			C	1	1.2		1	1	9.237			
Sum Weight:	731.51	2017.06								414.92		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	77.79	131.07	A	1	1.2	4	1	1	4.670	47.95	6.39	A
61.67-54.17			B	1	1.2		1	1	4.670			
			C	1	1.2		1	1	4.670			
L2	96.83	143.47	A	1	1.2	4	1	1	4.981	53.49	7.29	A
54.17-46.83			B	1	1.2		1	1	4.981			
			C	1	1.2		1	1	4.981			
L3	91.96	184.16	A	1	1.2	4	1	1	5.271	52.33	7.43	A
46.83-39.79			B	1	1.2		1	1	5.271			
			C	1	1.2		1	1	5.271			
L4	87.09	214.84	A	1	1.2	4	1	1	5.918	52.85	7.83	A
39.79-33.04			B	1	1.2		1	1	5.918			
			C	1	1.2		1	1	5.918			
L5	82.18	229.05	A	1	1.2	4	1	1	6.205	51.14	7.92	A
33.04-26.58			B	1	1.2		1	1	6.205			
			C	1	1.2		1	1	6.205			
L6	77.21	240.55	A	1	1.2	4	1	1	6.439	48.84	7.92	A
26.58-20.42			B	1	1.2		1	1	6.439			
			C	1	1.2		1	1	6.439			
L7	72.13	260.42	A	1	1.2	3	1	1	6.877	46.98	8.00	A
20.42-14.54			B	1	1.2		1	1	6.877			
			C	1	1.2		1	1	6.877			
L8 14.54-8.96	66.82	265.24	A	1	1.2	3	1	1	6.988	45.18	8.09	A
			B	1	1.2		1	1	6.988			
			C	1	1.2		1	1	6.988			
L9 8.96-2.00	79.49	348.24	A	1	1.2	3	1	1	9.237	58.40	8.39	A
			B	1	1.2		1	1	9.237			
			C	1	1.2		1	1	9.237			
Sum Weight:	731.51	2017.06								457.17		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	37.33	72.35	A	1	1.2	9	1	1	3.281	63.93	8.52	C
61.67-54.17			B	1	1.2		1	1	3.281			
			C	1	1.2		1	1	3.281			
L2	46.93	80.66	A	1	1.2	9	1	1	3.641	72.60	9.90	C
54.17-46.83			B	1	1.2		1	1	3.641			
			C	1	1.2		1	1	3.641			
L3	45.07	117.62	A	1	1.2	8	1	1	4.005	73.08	10.38	C
46.83-39.79			B	1	1.2		1	1	4.005			
			C	1	1.2		1	1	4.005			
L4	43.20	139.81	A	1	1.157	8	1	1	4.725	76.91	11.39	C
39.79-33.04			B	1	1.2		1	1	4.725			
			C	1	1.2		1	1	4.725			
L5	41.33	151.03	A	1	1.05	8	1	1	5.086	76.28	11.81	C
33.04-26.58			B	1	1.2		1	1	5.086			
			C	1	1.2		1	1	5.086			
L6	39.47	160.69	A	1	0.969	7	1	1	5.396	74.49	12.08	C
26.58-20.42			B	1	1.2		1	1	5.396			
			C	1	1.2		1	1	5.396			
L7	37.60	176.64	A	1	0.869	7	1	1	5.912	73.67	12.54	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
20.42-14.54			B	1	1.2		1	1	5.912			
			C	1	1.2		1	1	5.912			
L8 14.54-8.96	35.73	182.79	A	1	0.812	7	1	1	6.107	72.17	12.93	C
			B	1	1.2		1	1	6.107			
			C	1	1.2		1	1	6.107			
L9 8.96-2.00	44.53	246.40	A	1	0.752	7	1	1	8.220	95.30	13.70	C
			B	1	1.2		1	1	8.220			
			C	1	1.2		1	1	8.220			
Sum Weight:	371.20	1327.98								678.43		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	37.33	72.35	A	1	1.2	9	1	1	3.281	63.93	8.52	C
61.67-54.17			B	1	1.2		1	1	3.281			
			C	1	1.2		1	1	3.281			
L2	46.93	80.66	A	1	1.2	9	1	1	3.641	72.60	9.90	C
54.17-46.83			B	1	1.2		1	1	3.641			
			C	1	1.2		1	1	3.641			
L3	45.07	117.62	A	1	1.2	8	1	1	4.005	73.08	10.38	C
46.83-39.79			B	1	1.2		1	1	4.005			
			C	1	1.2		1	1	4.005			
L4	43.20	139.81	A	1	1.2	8	1	1	4.725	76.91	11.39	C
39.79-33.04			B	1	1.157		1	1	4.725			
			C	1	1.2		1	1	4.725			
L5	41.33	151.03	A	1	1.2	8	1	1	5.086	76.28	11.81	C
33.04-26.58			B	1	1.05		1	1	5.086			
			C	1	1.2		1	1	5.086			
L6	39.47	160.69	A	1	1.2	7	1	1	5.396	74.49	12.08	C
26.58-20.42			B	1	0.969		1	1	5.396			
			C	1	1.2		1	1	5.396			
L7	37.60	176.64	A	1	1.2	7	1	1	5.912	73.67	12.54	C
20.42-14.54			B	1	0.869		1	1	5.912			
			C	1	1.2		1	1	5.912			
L8 14.54-8.96	35.73	182.79	A	1	1.2	7	1	1	6.107	72.17	12.93	C
			B	1	0.812		1	1	6.107			
			C	1	1.2		1	1	6.107			
L9 8.96-2.00	44.53	246.40	A	1	1.2	7	1	1	8.220	95.30	13.70	C
			B	1	0.752		1	1	8.220			
			C	1	1.2		1	1	8.220			
Sum Weight:	371.20	1327.98								678.43		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
L1	37.33	72.35	A	1	1.2	9	1	1	3.281	72.83	9.71	A
61.67-54.17			B	1	1.2		1	1	3.281			
			C	1	1.2		1	1	3.281			
L2	46.93	80.66	A	1	1.2	9	1	1	3.641	83.48	11.38	A
54.17-46.83			B	1	1.2		1	1	3.641			
			C	1	1.2		1	1	3.641			
L3	45.07	117.62	A	1	1.2	8	1	1	4.005	83.19	11.81	A
46.83-39.79			B	1	1.2		1	1	4.005			
			C	1	1.2		1	1	4.005			
L4	43.20	139.81	A	1	1.2	8	1	1	4.725	86.25	12.78	A
39.79-33.04			B	1	1.157		1	1	4.725			
			C	1	1.157		1	1	4.725			
L5	41.33	151.03	A	1	1.2	8	1	1	5.086	84.86	13.14	A
33.04-26.58			B	1	1.05		1	1	5.086			
			C	1	1.05		1	1	5.086			
L6	39.47	160.69	A	1	1.2	7	1	1	5.396	82.27	13.34	A
26.58-20.42			B	1	0.969		1	1	5.396			
			C	1	0.969		1	1	5.396			
L7	37.60	176.64	A	1	1.2	7	1	1	5.912	80.63	13.73	A
20.42-14.54			B	1	0.869		1	1	5.912			
			C	1	0.869		1	1	5.912			
L8 14.54-8.96	35.73	182.79	A	1	1.2	7	1	1	6.107	78.59	14.08	A
			B	1	0.812		1	1	6.107			
			C	1	0.812		1	1	6.107			
L9 8.96-2.00	44.53	246.40	A	1	1.2	7	1	1	8.220	103.30	14.85	A
			B	1	0.752		1	1	8.220			
			C	1	0.752		1	1	8.220			
Sum Weight:	371.20	1327.98								755.41		

Force Totals (Does not include forces on guys)

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Torques lb-ft
Leg Weight	1327.98			
Bracing Weight	0.00			
Total Member Self-Weight	1327.98			
Guy Weight	56.81			
Total Weight	2095.53			
Wind 0 deg - No Ice		-52.43	-1718.39	-123.89
Wind 90 deg - No Ice		951.97	52.43	-71.53
Wind 180 deg - No Ice		52.43	1718.39	123.89
Member Ice	689.07			
Guy Ice	683.33			
Total Weight Ice	4172.25			
Wind 0 deg - Ice		-9.31	-487.14	-41.01
Wind 90 deg - Ice		361.82	9.31	-23.67
Wind 180 deg - Ice		9.31	487.14	41.01
Total Weight	2095.53			
Wind 0 deg - Service		-23.94	-784.44	-56.55
Wind 90 deg - Service		512.93	23.94	-32.65
Wind 180 deg - Service		23.94	784.44	56.55

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Ice+1.0 Temp+Guy
6	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
7	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
9	Dead+Wind 0 deg - Service+Guy
10	Dead+Wind 90 deg - Service+Guy
11	Dead+Wind 180 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L1	61.6667 - 54.1667	Pole	Max Tension	7	0.03	-0.08	-0.08
			Max. Compression	7	-982.25	-60.51	184.30
			Max. Mx	3	-536.60	-1309.67	-96.89
			Max. My	2	-536.97	410.99	1586.10
			Max. Vy	3	380.10	-1309.67	-96.89
			Max. Vx	4	375.43	-10.94	-1359.24
			Max. Torque	4			-123.43
L2	54.1667 - 46.8333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-3185.48	320.88	488.66
			Max. Mx	3	-1892.61	-1505.02	-235.99
			Max. My	2	-1876.36	354.38	1491.70
			Max. Vy	3	77.42	-1505.02	-235.99
			Max. Vx	4	77.11	-149.50	-1264.05
			Max. Torque	2			123.24
		Guy A	Bottom Tension	8	1054.60		
			Top Tension	4	1078.70		
			Top Cable Vert	8	770.86		
			Top Cable Norm	8	754.57		
			Top Cable Tan	8	0.04		
			Bot Cable Vert	4	-698.69		
			Bot Cable Norm	4	789.94		
			Bot Cable Tan	4	0.10		
		Guy B	Bottom Tension	6	944.77		
			Top Tension	6	1031.01		
			Top Cable Vert	6	735.02		
			Top Cable Norm	6	722.39		
			Top Cable Tan	6	29.96		
			Bot Cable Vert	6	-589.48		
			Bot Cable Norm	6	737.74		
			Bot Cable Tan	6	29.04		
		Guy C	Bottom Tension	7	953.86		
			Top Tension	7	1040.10		
			Top Cable Vert	7	744.81		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Top Cable Norm	7	725.84		
			Top Cable Tan	7	14.45		
			Bot Cable Vert	7	-591.99		
			Bot Cable Norm	7	747.80		
			Bot Cable Tan	7	13.67		
L3	46.8333 - 39.7917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-5264.41	226.43	-251.80
			Max. Mx	3	-2938.00	-1447.54	-230.34
			Max. My	2	-2902.23	352.92	1401.80
			Max. Vy	3	-189.24	-1447.54	-230.34
			Max. Vx	2	368.60	352.92	1401.80
			Max. Torque	2			123.12
		Guy A	Bottom Tension	8	974.75		
			Top Tension	4	1035.11		
			Top Cable Vert	8	684.21		
			Top Cable Norm	8	776.73		
			Top Cable Tan	8	0.02		
			Bot Cable Vert	4	-592.98		
			Bot Cable Norm	4	773.63		
			Bot Cable Tan	4	0.05		
		Guy B	Bottom Tension	6	899.68		
			Top Tension	6	972.48		
			Top Cable Vert	6	643.02		
			Top Cable Norm	6	729.06		
			Top Cable Tan	6	26.66		
			Bot Cable Vert	6	-510.15		
			Bot Cable Norm	6	740.61		
			Bot Cable Tan	6	25.95		
		Guy C	Bottom Tension	7	925.95		
			Top Tension	7	998.74		
			Top Cable Vert	7	662.05		
			Top Cable Norm	7	747.68		
			Top Cable Tan	7	12.35		
			Bot Cable Vert	7	-523.59		
			Bot Cable Norm	7	763.61		
			Bot Cable Tan	7	11.83		
L4	39.7917 - 33.0417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-5602.98	127.18	-601.35
			Max. Mx	7	-5567.09	422.04	217.20
			Max. My	2	-3316.89	153.44	-1472.70
			Max. Vy	3	-112.39	-384.55	-147.59
			Max. Vx	2	209.18	253.68	-636.73
			Max. Torque	2			123.11
L5	33.0417 - 26.5833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-5952.69	29.61	-620.06
			Max. Mx	7	-5625.37	427.51	221.74
			Max. My	2	-3355.34	137.22	-1500.10
			Max. Vy	3	-36.96	120.11	-64.39
			Max. Vx	4	151.19	-93.96	1005.50
			Max. Torque	2			123.11
L6	26.5833 - 20.4167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-6310.47	-63.95	-348.13
			Max. Mx	7	-5916.79	365.28	243.76
			Max. My	2	-3547.45	55.67	-1169.62
			Max. Vy	3	100.06	-284.40	93.61
			Max. Vx	4	315.54	-74.35	-434.58
			Max. Torque	2			123.11

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L7	20.4167 - 14.5417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-6685.86	-152.50	172.82
			Max. Mx	3	-4080.45	-1049.86	166.80
			Max. My	4	-4193.09	-55.10	-2760.80
			Max. Vy	3	160.52	-1049.86	166.80
			Max. Vx	4	476.33	-55.10	-2760.80
			Max. Torque	2			123.11
L8	14.5417 - 8.95834	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-7061.62	-235.71	904.32
			Max. Mx	3	-4342.68	-2107.75	235.79
			Max. My	4	-4455.40	-36.58	-5854.73
			Max. Vy	3	218.51	-2107.75	235.79
			Max. Vx	4	632.18	-36.58	-5854.73
			Max. Torque	2			123.11
L9	8.95834 - 2	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-7547.58	-337.56	2141.56
			Max. Mx	3	-4691.91	-3896.44	320.70
			Max. My	4	-4805.26	-13.44	-10960.42
			Max. Vy	3	295.56	-3896.44	320.70
			Max. Vx	4	835.61	-13.44	-10960.42
			Max. Torque	2			123.11

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Mast	Max. Vert	6	7547.58	-14.51	204.04
	Max. H_x	4	4805.37	3.33	-834.97
	Max. H_z	2	4656.31	-14.94	816.85
	Max. M_x	2	10330.53	-14.94	816.85
	Max. M_z	3	3896.44	-295.56	12.11
	Max. Torsion	2	123.11	-14.94	816.85
	Min. Vert	1	4006.41	-4.60	-2.66
	Min. H_x	3	4691.91	-295.56	12.11
	Min. H_z	4	4805.37	3.33	-834.97
	Min. M_x	4	-10960.42	3.33	-834.97
	Min. M_z	4	13.44	3.33	-834.97
	Min. Torsion	4	-122.89	3.33	-834.97
Guy C @ 60 ft Elev 0 ft Azimuth 240 deg	Max. Vert	4	-536.85	-560.94	290.82
	Max. H_x	4	-536.85	-560.94	290.82
	Max. H_z	6	-1075.40	-1229.64	773.50
	Min. Vert	7	-1115.59	-1321.67	733.62
	Min. H_x	7	-1115.59	-1321.67	733.62
	Min. H_z	4	-536.85	-560.94	290.82
Guy B @ 60 ft Elev 0 ft Azimuth 120 deg	Max. Vert	3	-367.53	364.68	225.84
	Max. H_x	6	-1099.63	1252.80	786.80
	Max. H_z	6	-1099.63	1252.80	786.80
	Min. Vert	6	-1099.63	1252.80	786.80
	Min. H_x	3	-367.53	364.68	225.84
	Min. H_z	3	-367.53	364.68	225.84

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Guy A @ 60 ft Elev 0 ft Azimuth 0 deg	Max. Vert	2	-183.79	0.02	-206.82
	Max. H_x	6	-773.46	0.05	-1019.76
	Max. H_z	2	-183.79	0.02	-206.82
	Min. Vert	4	-1291.67	-0.15	-1563.57
	Min. H_x	7	-984.68	-68.69	-1312.24
	Min. H_z	8	-1164.06	0.01	-1569.01

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	4006.41	4.60	2.66	66.61	-115.38	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	4656.31	14.94	-816.85	-10330.53	-316.94	-123.11
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	4691.91	295.56	-12.11	-320.70	-3896.44	-72.87
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	4805.37	-3.33	834.97	10960.42	-13.44	122.89
1.2 Dead+1.0 Ice+1.0 Temp+Guy	7347.42	12.71	7.34	179.59	-311.06	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	7547.58	14.51	-204.04	-2141.56	-337.56	-40.74
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	7511.69	156.33	-2.41	-318.59	-1833.67	-27.29
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	7477.23	11.19	230.87	3256.21	-296.74	40.52
Dead+Wind 0 deg - Service+Guy	4049.86	8.76	-372.77	-4643.17	-195.88	-56.26
Dead+Wind 90 deg - Service+Guy	4058.15	193.47	-2.84	-79.58	-2569.72	-33.33
Dead+Wind 180 deg - Service+Guy	4069.83	0.53	380.36	4900.69	-41.42	56.20

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	% Error
1	0.00	-2095.53	0.00	-0.08	2095.53	-0.05	0.005%
2	-52.43	-2512.86	-1847.78	52.44	2512.86	1847.69	0.003%
3	1081.07	-2503.28	52.43	-1080.94	2503.27	-52.26	0.008%
4	52.43	-2493.69	1847.78	-51.16	2493.69	-1848.12	0.042%
5	0.00	-4579.99	0.00	-0.39	4579.99	-0.23	0.010%
6	-9.31	-4599.09	-745.08	8.70	4599.09	744.59	0.017%
7	619.18	-4579.99	9.31	-618.97	4579.99	-10.64	0.029%
8	9.31	-4560.89	745.08	-9.46	4560.89	-743.89	0.026%
9	-23.94	-2099.91	-843.51	24.08	2099.91	843.49	0.006%
10	571.87	-2095.53	23.94	-571.89	2095.53	-23.65	0.013%
11	23.94	-2091.15	843.51	-23.81	2091.15	-843.64	0.008%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	10	0.00000001	0.00005575
3	Yes	9	0.00000001	0.00006491
4	Yes	7	0.00000001	0.00010988
5	Yes	6	0.00000001	0.00004582
6	Yes	6	0.00000001	0.00004993
7	Yes	7	0.00000001	0.00005955
8	Yes	7	0.00000001	0.00005601
9	Yes	6	0.00000001	0.00000001
10	Yes	6	0.00000001	0.00003498
11	Yes	6	0.00000001	0.00000001

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	61.6667 - 54.1667	0.626	9	0.2046	0.0373
L2	54.1667 - 46.8333	0.373	11	0.1279	0.0272
L3	46.8333 - 39.7917	0.295	11	0.0296	0.0147
L4	39.7917 - 33.0417	0.292	11	0.0111	0.0086
L5	33.0417 - 26.5833	0.265	11	0.0323	0.0056
L6	26.5833 - 20.4167	0.209	11	0.0508	0.0035
L7	20.4167 - 14.5417	0.139	11	0.0554	0.0021
L8	14.5417 - 8.95834	0.074	11	0.0481	0.0013
L9	8.95834 - 2	0.026	11	0.0319	0.0006

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
60.00	CHM1	9	0.554	0.1908	0.0354	4123
57.00	CHM1	11	0.437	0.1628	0.0315	4123
54.17	Guy	11	0.373	0.1279	0.0272	3223
46.83	Guy	11	0.295	0.0296	0.0147	6282

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	61.6667 - 54.1667	1.495	2	0.4407	0.0815

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L2	54.1667 - 46.8333	0.962	4	0.3481	0.0594
L3	46.8333 - 39.7917	0.736	4	0.1205	0.0322
L4	39.7917 - 33.0417	0.696	4	0.0470	0.0189
L5	33.0417 - 26.5833	0.616	4	0.0837	0.0122
L6	26.5833 - 20.4167	0.477	4	0.1202	0.0078
L7	20.4167 - 14.5417	0.314	4	0.1273	0.0047
L8	14.5417 - 8.95834	0.166	4	0.1091	0.0028
L9	8.95834 - 2	0.058	4	0.0718	0.0014

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
60.00	CHM1	4	1.348	0.4288	0.0774	2108
57.00	CHM1	4	1.132	0.4008	0.0690	2108
54.17	Guy	4	0.962	0.3481	0.0596	1627
46.83	Guy	4	0.736	0.1205	0.0322	2466

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T_u lb	Allowable ϕT_n lb	Required S.F.	Actual S.F.
L2	54.17 (A) (12)	1/4 EHS	498.75	6649.98	1078.70	3990.00	1.000	3.699 ✔
	54.17 (B) (11)	1/4 EHS	498.75	6649.98	1031.01	3990.00	1.000	3.870 ✔
	54.17 (C) (10)	1/4 EHS	498.75	6649.98	1040.10	3990.00	1.000	3.836 ✔
L3	46.83 (A) (15)	1/4 EHS	498.75	6649.98	1035.11	3990.00	1.000	3.855 ✔
	46.83 (B) (14)	1/4 EHS	498.75	6649.98	972.48	3990.00	1.000	4.103 ✔
	46.83 (C) (13)	1/4 EHS	498.75	6649.98	998.74	3990.00	1.000	3.995 ✔

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	61.6667 - 54.1667 (1)	COW HSS4.5x4.5x3/16	7.50	7.50	52.9	2.8348	-536.97	97254.10	0.006
L2	54.1667 - 46.8333 (2)	COW HSS5x5x3/16	7.33	7.33	45.3	3.2324	-1876.36	116545.00	0.016

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L3	46.8333 - 39.7917 (3)	COW HSS6x6x0.25	7.04	44.83	243.3	4.9087	-5264.41	18737.40	0.281
L4	39.7917 - 33.0417 (4)	COW HSS7x7x/14	6.75	44.83	196.2	6.0868	-5602.98	35705.20	0.157
L5	33.0417 - 26.5833 (5)	COW HSS8x8x1/4	6.46	44.83	173.8	6.8722	-5952.69	51375.20	0.116
L6	26.5833 - 20.4167 (6)	COW HSS9x9x1/4	6.17	44.83	156.0	7.6576	-6280.65	71068.00	0.088
L7	20.4167 - 14.5417 (7)	COW HSS10x10x1/4	5.88	44.83	135.2	8.8357	-6615.45	109156.00	0.061
L8	14.5417 - 8.95834 (8)	COW HSS11x11x1/4	5.58	44.83	124.2	9.6211	-4455.40	140917.00	0.032
L9	8.95834 - 2 (9)	COW HSS12x12x1/4	6.96	44.83	114.8	10.4065	-4805.26	177472.00	0.027

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	61.6667 - 54.1667 (1)	COW HSS4.5x4.5x3/16	1638.48	14989.33	0.109	0.00	14989.33	0.000
L2	54.1667 - 46.8333 (2)	COW HSS5x5x3/16	1533.22	19486.67	0.079	0.00	19486.67	0.000
L3	46.8333 - 39.7917 (3)	COW HSS6x6x0.25	338.63	33709.42	0.010	0.00	33709.42	0.000
L4	39.7917 - 33.0417 (4)	COW HSS7x7x/14	614.65	51821.92	0.012	0.00	51821.92	0.000
L5	33.0417 - 26.5833 (5)	COW HSS8x8x1/4	620.77	66053.17	0.009	0.00	66053.17	0.000
L6	26.5833 - 20.4167 (6)	COW HSS9x9x1/4	415.85	82009.42	0.005	0.00	82009.42	0.000
L7	20.4167 - 14.5417 (7)	COW HSS10x10x1/4	951.05	107717.50	0.009	0.00	107717.50	0.000
L8	14.5417 - 8.95834 (8)	COW HSS11x11x1/4	5854.85	125673.33	0.047	0.00	125673.33	0.000
L9	8.95834 - 2 (9)	COW HSS12x12x1/4	10960.42	144985.00	0.076	0.00	144985.00	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	61.6667 - 54.1667 (1)	COW HSS4.5x4.5x3/16	378.89	35208.20	0.011	123.41	14896.83	0.008
L2	54.1667 - 46.8333 (2)	COW HSS5x5x3/16	76.83	40146.50	0.002	123.23	19368.75	0.006
L3	46.8333 - 39.7917 (3)	COW HSS6x6x0.25	84.30	60966.50	0.001	40.73	33500.50	0.001
L4	39.7917 - 33.0417 (4)	COW HSS7x7x/14	38.13	75598.50	0.001	40.73	51510.33	0.001
L5	33.0417 - 26.5833 (5)	COW HSS8x8x1/4	26.02	85353.10	0.000	40.73	65661.00	0.001

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L6	26.5833 - 20.4167 (6)	COW HSS9x9x1/4	68.59	95107.80	0.001	40.74	81526.75	0.000
L7	20.4167 - 14.5417 (7)	COW HSS10x10x1/4	139.79	109740.00	0.001	40.52	108541.67	0.000
L8	14.5417 - 8.95834 (8)	COW HSS11x11x1/4	632.19	119494.00	0.005	122.89	128695.83	0.001
L9	8.95834 - 2 (9)	COW HSS12x12x1/4	835.62	129249.00	0.006	122.89	150565.00	0.001

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	61.6667 - 54.1667 (1)	0.006	0.109	0.000	0.011	0.008	0.115 ✔	1.000	4.8.2 ✔
L2	54.1667 - 46.8333 (2)	0.016	0.079	0.000	0.002	0.006	0.095 ✔	1.000	4.8.2 ✔
L3	46.8333 - 39.7917 (3)	0.281	0.010	0.000	0.001	0.001	0.291 ✔	1.000	4.8.2 ✔
L4	39.7917 - 33.0417 (4)	0.157	0.012	0.000	0.001	0.001	0.169 ✔	1.000	4.8.2 ✔
L5	33.0417 - 26.5833 (5)	0.116	0.009	0.000	0.000	0.001	0.125 ✔	1.000	4.8.2 ✔
L6	26.5833 - 20.4167 (6)	0.088	0.005	0.000	0.001	0.000	0.093 ✔	1.000	4.8.2 ✔
L7	20.4167 - 14.5417 (7)	0.061	0.009	0.000	0.001	0.000	0.069 ✔	1.000	4.8.2 ✔
L8	14.5417 - 8.95834 (8)	0.032	0.047	0.000	0.005	0.001	0.078 ✔	1.000	4.8.2 ✔
L9	8.95834 - 2 (9)	0.027	0.076	0.000	0.006	0.001	0.103 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	61.6667 - 54.1667	Pole	COW HSS4.5x4.5x3/16	1	-536.97	97254.10	11.5	Pass
L2	54.1667 - 46.8333	Pole	COW HSS5x5x3/16	2	-1876.36	116545.00	9.5	Pass
		Guy A@54.1667	1/4	12	1078.70	3990.00	27.0	Pass
		Guy B@54.1667	1/4	11	1031.01	3990.00	25.8	Pass
		Guy C@54.1667	1/4	10	1040.10	3990.00	26.1	Pass
L3	46.8333 - 39.7917	Pole	COW HSS6x6x0.25	3	-5264.41	18737.40	29.1	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Guy A@46.8333	1/4	15	1035.11	3990.00	25.9	Pass
		Guy B@46.8333	1/4	14	972.48	3990.00	24.4	Pass
		Guy C@46.8333	1/4	13	998.74	3990.00	25.0	Pass
L4	39.7917 - 33.0417	Pole	COW HSS7x7x/14	4	-5602.98	35705.20	16.9	Pass
L5	33.0417 - 26.5833	Pole	COW HSS8x8x1/4	5	-5952.69	51375.20	12.5	Pass
L6	26.5833 - 20.4167	Pole	COW HSS9x9x1/4	6	-6280.65	71068.00	9.3	Pass
L7	20.4167 - 14.5417	Pole	COW HSS10x10x1/4	7	-6615.45	109156.00	6.9	Pass
L8	14.5417 - 8.95834	Pole	COW HSS11x11x1/4	8	-4455.40	140917.00	7.8	Pass
L9	8.95834 - 2	Pole	COW HSS12x12x1/4	9	-4805.26	177472.00	10.3	Pass
							Summary	
						Pole (L3)	29.1	Pass
						Guy A (L2)	27.0	Pass
						Guy B (L2)	25.8	Pass
						Guy C (L2)	26.1	Pass
						RATING =	**29.1**	**Pass**

Dewberry

Calculation Sheet

Designer AMD Date 05/16/23 Checker BGK Date 05/16/23
Title Traveler Cow Job No.
Subject Overturn / Uplift Calcs. Sheet No. of

Info

- 2 guyed wires @ 60° radius.
- blocks are 2'×2'×6' concrete (3600 lbs ea.)

Calc

- 2 blocks per guyed location
  (2) × 3600 lbs/ea. = 7200 lbs total
- tnx output:
  - Shear - 1562 lbs
  - Uplift - 1292 lbs
- Net weight
  7200 lbs - 1292 lbs = 5908 lbs net.
- Weight to resist sliding
  - coeff. friction = 0.35

$$\frac{1562 \text{ lbs}}{0.35} = 4463 \text{ lbs}$$

- Ratio for Sliding

$$5908 / 4463 = \underline{1.3 \text{ FS}}$$

- Uplift Check

$$\frac{7200 \text{ lbs}}{1292 \text{ lbs}} = 5.6 > 1.0 \quad \underline{\text{OKAY}}$$

APPENDIX B

REFERENCE MATERIAL

GENERAL NOTES - PEAK INDUSTRIES MOBILE 80' (SHORT SECTIONS) CELL TOWER

A. DESIGN CRITERIA:
   1. CODE: 2012 INTERNATIONAL BUILDING CODE, TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-G, 2008, ASCE 7-10
   2. WIND DESIGN DATA: BASIC WIND SPEEDS - 90 MPH, EXP. C
   3. ICE LOADING - ½" RADIAL ICE
B. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, SHORTING OF EXISTING BUILDING ELEMENTS, ETC, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE ERECTION OF THE FRAMING AND UNTIL THE LATERAL-LOAD-RESISTING SYSTEM IS COMPLETE.
C. MAXIMUM ANTENNA AREA AT TOP OF POLE = 100 FT²; MAX EXPOSED AREA = 40 FT²

STRUCTURAL STEEL:
A. DESIGN STANDARDS:
   1. STRUCTURAL STEEL FOR THIS PROJECT IS DESIGNED IN ACCORDANCE WITH AISC "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN (ASD)," FOURTEENTH EDITION (2011)

B. REFERENCE STANDARDS:
   1. AISC SPECIFICATION: AISC-ASD (2010), "SPECIFICATION OF STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN."
   2. BOLT SPECIFICATION: RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS," JUNE 30, 2004, APPENDIX B, ASD ALTERNATIVE.
   3. WELDING CODE: AWS D1.1-2008 "STRUCTURAL WELDING CODE – STEEL."

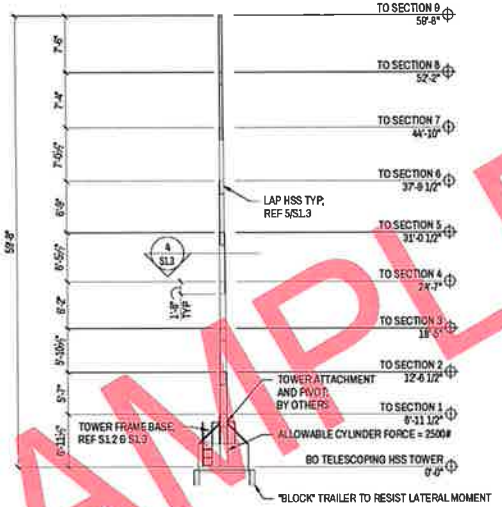
C. MATERIAL:
   1. SHAPES, PLATES, AND BARS (EXCEPT W-SHAPES): ASTM A36, Fy = 36KSI
   2. SMOOTH RODS: ASTM A36, GRADE 36, Fy = 36KSI
   3. GUYS: ¼" DIAMETER GALVANIZED STEEL STRAND: ASTM A476, 1x7 (6,850# MINIMUM BREAKING STRENGTH) 3/8" DIAMETER GALVANIZED STEEL STRAND: ASTM A475, 1x7 (15,400# MINIMUM BREAKING STRENGTH)
   4. TUBES (INCLUDING HSS): ASTM A500, GRADE B, Fy = 46KSI OR GREATER.
   5. REBAR: ASTM A615, GRADE 60 FOR #4 BARS AND LARGER
   6. STEEL CABLES: PRE-STRETCH, BUT DO NOT EXCEED 55% OF THE MINIMUM BREAKING FORCE.
   7. CONCRETE ANCHOR ADHESIVE SHALL BE SIMPSON SET-XP, HILTI HIT-HY200, OR EQUIVALENT.

D. BOLTS:
   1. ASTM 307 MACHINE BOLTS (MB)

E. WELDING ELECTRODES OR WIRES:
   1. AWS A5.1 OR A5.5, E70XX: AWS A5.18, E70S-X.
   2. WELDING SHALL CONFORM TO AWS S1.1
   3. ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER.

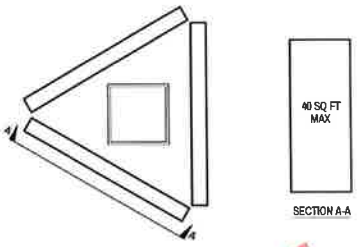
F. GALVANIZING:
   1. STRUCTURAL STEEL AND FASTENERS THAT ARE PERMANENTLY EXPOSED TO THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ASTM A153. REPAIR GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A780.

G. SOIL:
   1. SOIL SHALL BE CAPABLE OF SUPPORTING 1,500 PSF BEARING PRESSURE.

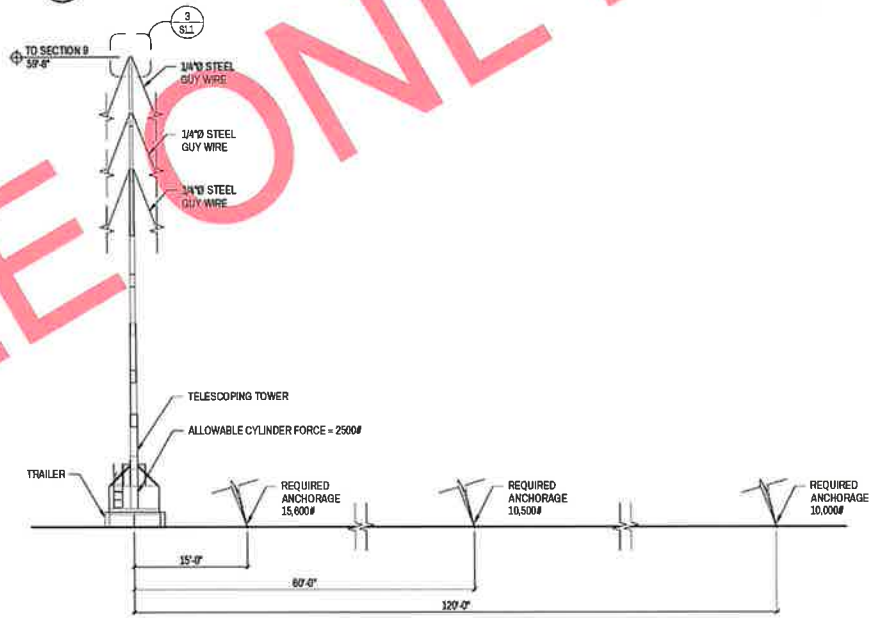


1 TOWER FRONT ELEVATION
SCALE: 1/16" = 1'-0"

TOWER SECTION SIZING INFORMATION		
SECTION	SIZE	LENGTH
1	HSS12x12x¼"	6'-11 1/2"
2	HSS11x11x¼"	7'-5"
3	HSS10x10x¼"	7'-6 1/2"
4	HSS8x8x¼"	7'-10"
5	HSS8x8x¼"	8'-1 1/2"
6	HSS7x7x¼"	8'-5"
7	HSS6x6x¼"	8'-8 1/2"
8	HSS5x5x5/16"	9'-0"
9	HSS4½x4½x5/16"	9'-2"



3 PLAN - ANTENNA AT TOP OF POLE
SCALE: 1/8" = 1'-0"



2 GUY WIRE ANCHORAGE ELEVATION
SCALE: 1/16" = 1'-0"

SHEET SCHEDULE	
S1.1	GENERAL NOTES AND TOWER ELEVATION
S1.2	TOWER FRAME BASE
S1.3	DETAILS

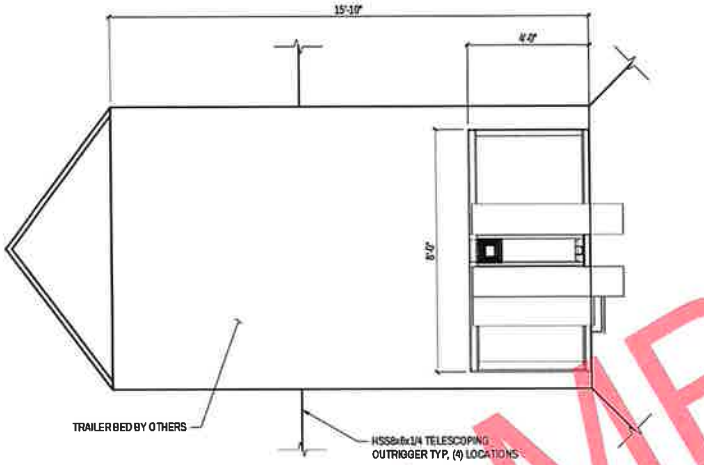
ECLIPSE ENGINEERING
401 W. RIVERSIDE AVE. SUITE 421
SPOKANE, WA 99201
ECLIPSE-ENGINEERING.COM
(888) - 823-7721

PEAK INDUSTRIES

REVISIONS

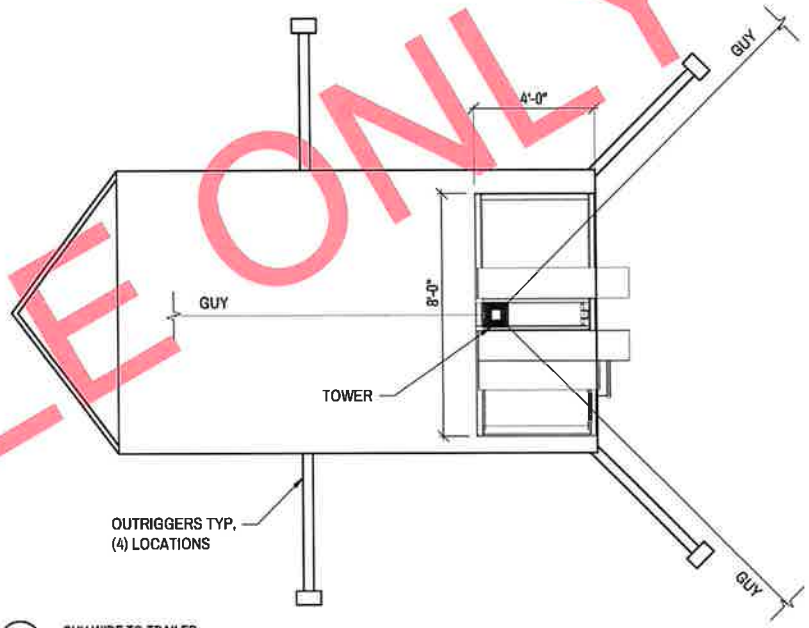
GENERAL NOTES AND TOWER ELEVATION

PROJ. #:
CHECKED BY: SS
DRAWN BY:
DATE: 03.10.2016
SHEET
S1.1



NOTE: PROVIDE 150# OF LATERAL RESISTANCE AT EACH OUTRIGGER.

1 PLAN - TRAILER AND FRAME
SCALE: 1/4" = 1'-0"



2 GUY WIRE TO TRAILER
SCALE: 1/4" = 1'-0"

NOTES:

1. PROVIDE GUY ANCHORAGE MASS AS INDICATED OR PROVIDE SOIL ANCHORS W/ CAPACITY INDICATED.
2. GUY WIRES PER GENERAL STRUCTURAL NOTES, (McMASTER-CARR PART NO. 3498T54 OR EQUAL).
3. (9) TOTAL GUY WIRES REQUIRED: (3) AT TOP, (3) AT 80'-0", (3) AT 60'-0". WIRES LOCATED EVERY 120° AROUND TOWER, REF 3/S1.3.

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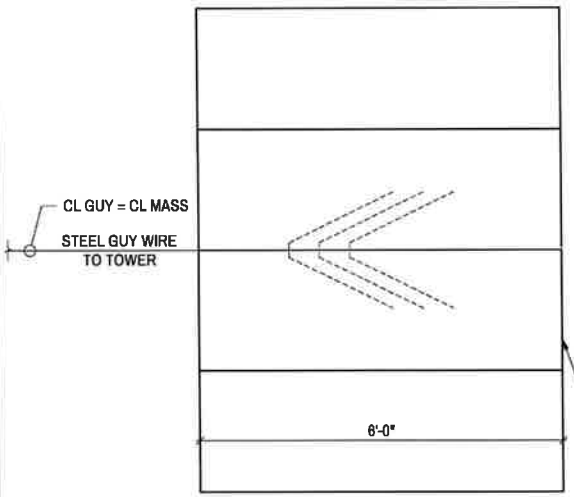
SPOKANE, WA 99201
ECLIPSE-ENGINEERING.COM
(509) - 623-7721

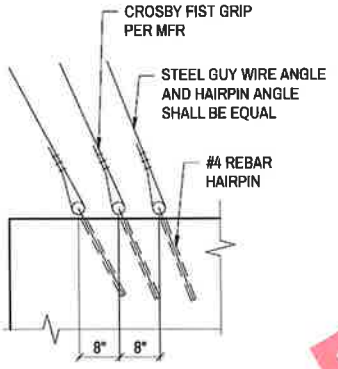
PEAK INDUSTRIES

REVISIONS

TOWER FRAME
BASE

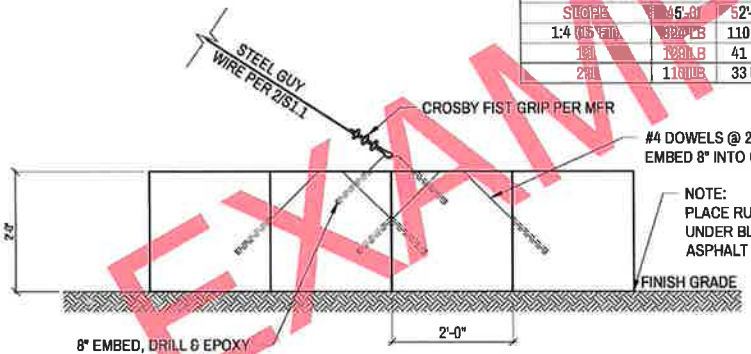
PROJ. #:
CHECKED BY: SS
DRAWN BY:
DATE: 03.10.2016
SHEET
S1.2



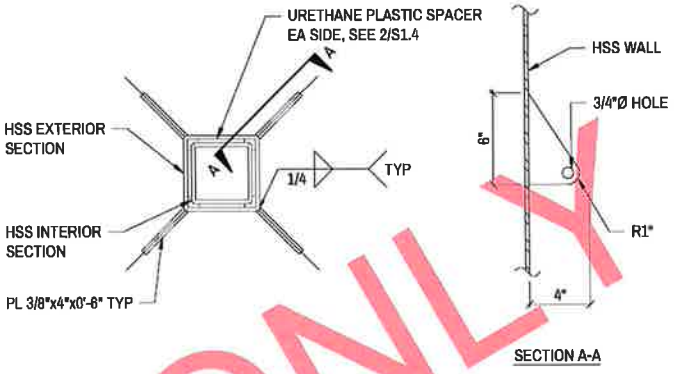


PROVIDE CONCRETE BLOCKS AT EA GUYWIRE TO MATCH OR EXCEED MASS AS LISTED
EA BLOCK WEIGHS 3600 lb

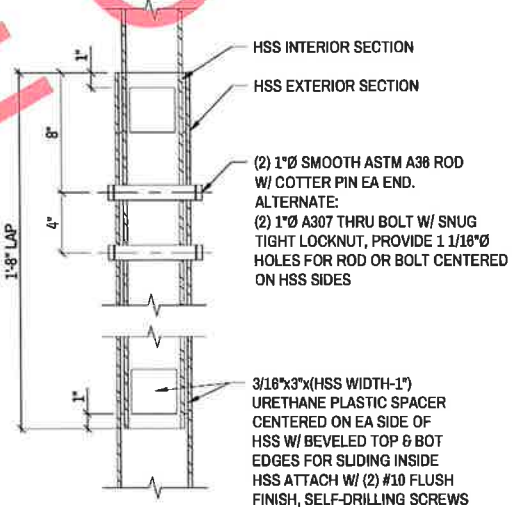
PRE-STRESSING AT ERECTION			
SLOPE	45'-0"	52'-0"	60'-0"
1:4	322 LB	110 LB	814 LB
1:3	1290 LB	41 LB	281 LB
2:1	1180 LB	33 LB	222 LB



3 TOWER BLOCKS
1/2" = 1'-0" SCALE



4 TOWER SECTION
1 1/2" = 1'-0" SCALE



5 TOWER SECTION
1 1/2" = 1'-0" SCALE

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PEAK INDUSTRIES

REVISIONS

DETAILS

PROJ. #:
CHECKED BY: SBS
DRAWN BY:
DATE: 03.10.2016
SHEET

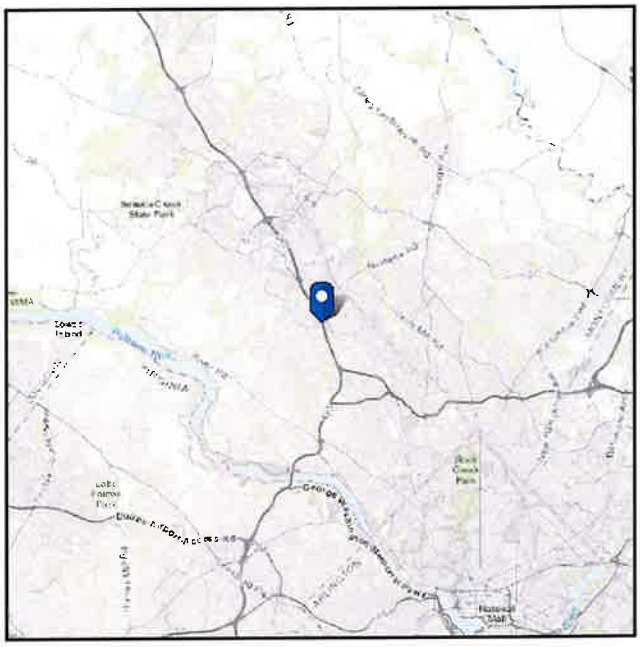
S1.3

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: undefined

Latitude: 39.060562
Longitude: -77.156776
Elevation: 0 ft (NAVD 88)



Wind

Results:

Wind Speed	112 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	89 Vmph
100-year MRI	95 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Tue May 09 2023

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

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Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	40 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Tue May 09 2023

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Snow

Results:

Ground Snow Load, p_g:	25 lb/ft^2
Mapped Elevation:	0.0 ft
Data Source:	ASCE/SEI 7-16, Table 7.2-8
Date Accessed:	Tue May 09 2023

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

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In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

verizon fuze | RFDS

EAST > North East > New England > New England West > TRAVELLERS GOLF COW 2023

RF Submit by: Cheiban, Ziad - ziad.cheiban@verizonwireless.com - 5/9/2023, 6:06:24 AM

EE Submit by: , - -

Project Details

FUZE Project ID: 17059750
Project Name: COW Special Event
Project Alt Name: TRAVELLERS GOLF COW CT 2023
Project Type: Initial Build
Modification Type:
Designed Sector Carrier 4G: 5
Designed Sector Carrier 5G: N/A
Additional Sector Carrier 4G: N/A
Additional Sector Carrier 5G: N/A
FP Solution Type & Tech Type: MCR;4G_700,4G_850,4G_AWS,4G_CBRS,4G_PCS,5G_L-Sub6
Carrier Aggregation: false
MPT Id:
eCIP-0: false
Suffix: Rev0_2023-05-02

Location Information

Site ID: 617385255
E-NodeB ID: 64900,068200
MDG Location ID: 5000233020
PSLC:
Switch Name: Windsor 1
Tower Owner:
Tower Type: COW/COLT
Site Type: TEMPORARY
Site Sub Type: COW
Street Address: 674 Main Street
City: Cromwell
State: CT
Zip Code: 06416
County: Middlesex
Latitude: 41.636903 / 41° 38' 12.8508" N
Longitude: -72.635924 / 72° 38' 9.3264" W

RFDS Project Scope: Mini-COW deployment

Rev0_2023-05-02: Initial

Antenna Summary

Added

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
				5G	Samsung	MT6407-77A	58	59.5	150(0001)		false	PHYSICAL	1	
LTE	LTE	LTE	LTE		CommScope	NNH4SS-45A-R3BT8	53	55.5	150(01)		false	PHYSICAL	1	

Removed

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID

No data available.

Retained

700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID

No data available.

Added: 2 **Removed: 0** **Retained: 0**

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower	LTE	LTE				Samsung	B5/B13 RRH ORAN (RF4440d-13A)			PHYSICAL	1	
RRU	Tower					5G	Samsung	MT6407-77A			PHYSICAL	0	
RRU	Tower			LTE	LTE		Samsung	B2/B66A RRH ORAN (RF4439d-25A)			PHYSICAL	1	
Coaxial Cables	Tower						N/A	1/2" Coax			PHYSICAL	12	
Hybrid Cable	Tower						N/A	1x2 Hybrid Jumper			PHYSICAL	1	
Other	Ground (Outdoor)		LTE				KAELUS	BSF0020F3V1-1			PHYSICAL	2	

Removed

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID

No data available.

Retained

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID

No data available.

Service Info

700 MHz LTE	0002
Sector	**01**
Azimuth	**150**
Cell / ENode B ID	068200
Antenna Model	NNH4SS-45A-R3BT8
Antenna Make	CommScope
Antenna Centerline(Ft)	53
Mechanical Down-Tilt(Deg.)	0
Electrical Down-Tilt	2
Tip Height	55.5
Regulatory Power	37.39
DLEARFCN	5230
Channel Bandwidth(MHz)	10
Total ERP (W)	336.51
TMA Make	
TMA Model	
RRU Make	Samsung
RRU Model	B5/B13 RRH ORAN (RF4440d-13A)
Number of Tx, Rx Lines	4,4
Position	
Transmitter Id	16816312
Source	ATOLL_API

850 MHz LTE	0002
Sector	**01**
Azimuth	150
Cell / ENode B ID	068200
Antenna Model	NNH4SS-45A-R3BT8
Antenna Make	CommScope
Antenna Centerline(Ft)	53
Mechanical Down-Tilt(Deg.)	0
Electrical Down-Tilt	2
Tip Height	55.5
Regulatory Power	210.29
DLEARFCN	2450
Channel Bandwidth(MHz)	10
Total ERP (W)	473.15
TMA Make	
TMA Model	
RRU Make	Samsung
RRU Model	B5/B13 RRH ORAN (RF4440d-13A)
Number of Tx, Rx Lines	4,4
Position	
Transmitter Id	16897091
Source	ATOLL_API

1900 MHz LTE		0002
Sector	**01**	
Azimuth	150	
Cell / ENode B ID	068200	
Antenna Model	NNH4SS-45A-R3BT8	
Antenna Make	CommScope	
Antenna Centerline(Ft)	53	
Mechanical Down-Tilt(Deg.)	0	
Electrical Down-Tilt	0	
Tip Height	55.5	
Regulatory Power	151.97	
DLEARFCN	1050	
Channel Bandwidth(MHz)	10	
Total ERP (W)	833.68	
TMA Make		
TMA Model		
RRU Make	Samsung	
RRU Model	B2/B66A RRH ORAN (RF4439d-25A)	
Number of Tx, Rx Lines	4,4	
Position		
Transmitter Id	16897093	
Source	ATOLL_API	

2100 MHz LTE		0002
Sector	**01**	
Azimuth	150	
Cell / ENode B ID	068200	
Antenna Model	NNH4SS-45A-R3BT8	
Antenna Make	CommScope	
Antenna Centerline(Ft)	53	
Mechanical Down-Tilt(Deg.)	0	
Electrical Down-Tilt	0	
Tip Height	55.5	
Regulatory Power	85.06	
DLEARFCN	2050	
Channel Bandwidth(MHz)	20	
Total ERP (W)	933.25	
TMA Make		
TMA Model		
RRU Make	Samsung	
RRU Model	B2/B66A RRH ORAN (RF4439d-25A)	
Number of Tx, Rx Lines	4,4	
Position		
Transmitter Id	16897092	
Source	ATOLL_API	

nL-Sub6

Sector	**0001**	0002
Azimuth	150	
Cell / ENode B ID	64900	
Antenna Model	MT6407-77A	
Antenna Make	Samsung	
Antenna Centerline(Ft)	58	
Mechanical Down-Tilt(Deg.)	0	
Electrical Down-Tilt	6	
Tip Height	59.5	
Regulatory Power	1276.98	
DLEARFCN	648672	
Channel Bandwidth(MHz)	60	
Total ERP (W)	11091.75	
TMA Make		
TMA Model		
RRU Make	Samsung	
RRU Model	MT6407-77A	
Number of Tx, Rx Lines	4,4	
Position		
Transmitter Id	16897109	
Source	ATOLL_API	

Service Comments

Callsigns Per Antenna

Sector	Antenna Make	Antenna Model	Ant CL Height AGL	Tip Height	Azimuth (TN)	Elec Tilt	Mech Tilt	Gain	Beam Width	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
01	CommScope	NNH4SS-45A-R3BT8	53	55.5	150	2	0	11	41	210.29 - PSD		KNKA404					
01	CommScope	NNH4SS-45A-R3BT8	53	55.5	150	0	0	13.14	41	151.97			KNLH251 WPOJ730				
01	CommScope	NNH4SS-45A-R3BT8	53	55.5	150	0	0	13.39	38	85.06				WQGA906 WQGB276			
0001	Samsung	MT6407-77A	58	59.5	150	6	0	23.35	100	1276.98							
01	CommScope	NNH4SS-45A-R3BT8	53	55.5	150	2	0	9.49	48	37.39	WQJQ689						

Callsigns

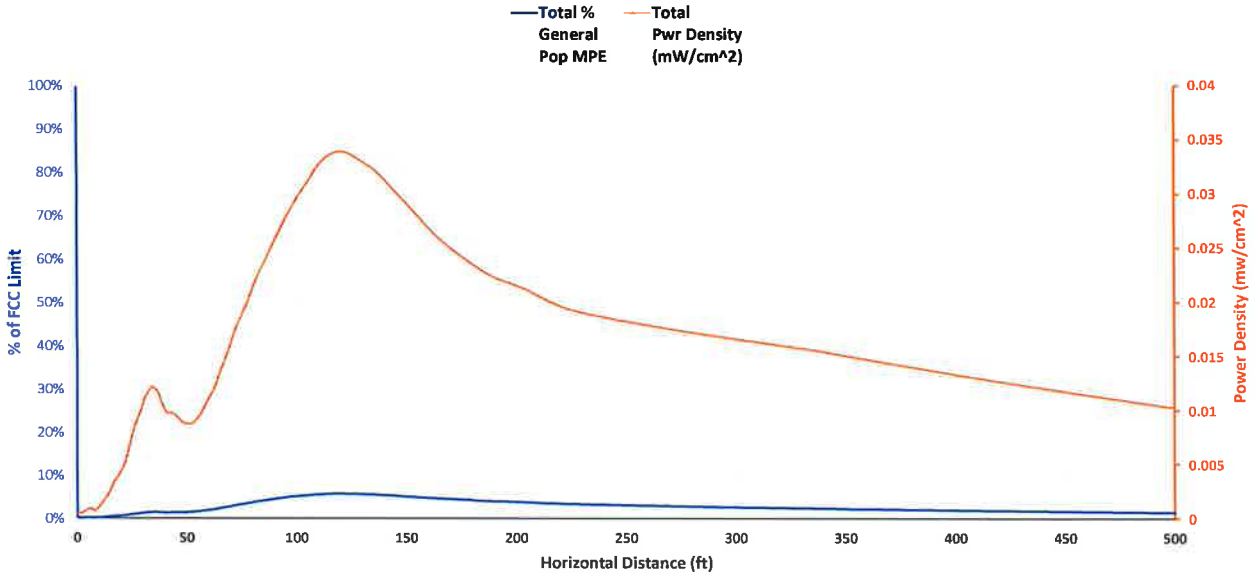
Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs /Sq Mi	Status	Action	Approved for Insvc
WRBA711	Hartford, CT	UU	BTA184	L2	9007	Middlese	Cellco Partnership	Yes	325.000	27925.000-28050.000	28150.000-28350.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	9007	Middlese	Cellco Partnership	Yes	100.000	38100.000-38200.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
KNLH251	Hartford, CT	CW	BTA184	F	9007	Middlese	Cellco Partnership	Yes	10.000	1890.000-1895.000	1970.000-1975.000	.000-.000	.000-.000	151.97	1640	444.75	Active	added	Yes
WRNE584	New York, NY	PM	PEA001	A4	9007	Middlese	Cellco Partnership	Yes	20.000	3760.000-3780.000	.000-.000	.000-.000	.000-.000		1640	444.75	Active		No
KNKA404	Hartford-New Britain-Bristol, CT	CL	CMA032	A	9007	Middlese	Cellco Partnership	Yes	25.000	824.000-835.000	869.000-880.000	845.000-846.500	890.000-891.500	210.29 - PSD	400	444.75	Active	added	Yes
WRNE585	New York, NY	PM	PEA001	A5	9007	Middlese	Cellco Partnership	Yes	20.000	3780.000-3800.000	.000-.000	.000-.000	.000-.000		1640	444.75	Active		No
WRHD617	New York, NY	UU	PEA001	M8	9007	Middlese	Cellco Partnership	Yes	100.000	38300.000-38400.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WPOJ730	Hartford, CT	CW	BTA184	C	9007	Middlese	Cellco Partnership	Yes	10.000	1895.000-1900.000	1975.000-1980.000	.000-.000	.000-.000	151.97	1640	444.75	Active	added	Yes
WQGB276	Hartford-New Britain-Bristol, CT	AW	CMA032	A	9007	Middlese	Cellco Partnership	Yes	20.000	1710.000-1720.000	2110.000-2120.000	.000-.000	.000-.000	85.06	1640	444.75	Active	added	Yes
WRNE583	New York, NY	PM	PEA001	A3	9007	Middlese	Cellco Partnership	Yes	20.000	3740.000-3760.000	.000-.000	.000-.000	.000-.000	1276.98	1640	444.75	Active	added	Yes
WRNE586	New York, NY	PM	PEA001	B1	9007	Middlese	Cellco Partnership	Yes	20.000	3800.000-3820.000	.000-.000	.000-.000	.000-.000		1640	444.75	Active		Yes
WRHD610	New York, NY	UU	PEA001	M10	9007	Middlese	Cellco Partnership	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WQGA906	New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-	AW	BEA010	B	9007	Middlese	Cellco Partnership	Yes	20.000	1720.000-1730.000	2120.000-2130.000	.000-.000	.000-.000	85.06	1640	444.75	Active	added	Yes
WRBA710	Hartford, CT	UU	BTA184	L1	9007	Middlese	Cellco Partnership	Yes	325.000	27500.000-27600.000	27700.000-27925.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD614	New York, NY	UU	PEA001	M5	9007	Middlese	Cellco Partnership	Yes	100.000	38000.000-38100.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRNE582	New York, NY	PM	PEA001	A2	9007	Middlese	Cellco Partnership	Yes	20.000	3720.000-3740.000	.000-.000	.000-.000	.000-.000	1276.98	1640	444.75	Active	added	Yes
WRNE587	New York, NY	PM	PEA001	B2	9007	Middlese	Cellco Partnership	Yes	20.000	3820.000-3840.000	.000-.000	.000-.000	.000-.000		1640	444.75	Active		Yes
WRHD609	New York, NY	UU	PEA001	M1	9007	Middlese	Cellco Partnership	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD611	New York, NY	UU	PEA001	M2	9007	Middlese	Cellco Partnership	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD619	New York, NY	UU	PEA001	N1	9007	Middlese	Cellco Partnership	Yes	100.000	38600.000-38700.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WQJQ689	Northeast	WU	REA001	C	9007	Middlese	Cellco Partnership	Yes	22.000	746.000-757.000	776.000-787.000	.000-.000	.000-.000	37.39	1000	444.75	Active	added	Yes

WRNE581	*New York, NY*	*PM*	*PEA001*	*A1*	*9007*	*Middlese*	*Cellco Partnership*	*Yes*	*20.000*	*3700.000-3720.000*	*.000-.000*	*.000-.000*	*.000-.000*	*1276.98*	*1640*	*444.75*	*Active*	*added*	*Yes*
WRHD616	New York, NY	UU	PEA001	M7	9007	Middlese	Cellco Partnership	Yes	100.000	38200.000-38300.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD618	New York, NY	UU	PEA001	M9	9007	Middlese	Cellco Partnership	Yes	100.000	38400.000-38500.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD613	New York, NY	UU	PEA001	M4	9007	Middlese	Cellco Partnership	Yes	100.000	37900.000-38000.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRHD612	New York, NY	UU	PEA001	M3	9007	Middlese	Cellco Partnership	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000		0	444.75	Active		Yes
WRNE588	New York, NY	PM	PEA001	B3	9007	Middlese	Cellco Partnership	Yes	20.000	3840.000-3860.000	.000-.000	.000-.000	.000-.000		1640	444.75	Active		Yes

ATTACHMENT 4

Location	TRAVELERS GOLF COW CT 2023 - Part 2 of 2			
Date	5/9/2023			
Band	AWS	PCS	850-LTE	700
Operating Frequency (MHz)	2,145	1,970	860	746
General Population MPE (mW/cm^2)	1	1	0.586666667	0.497333333
ERP Per Transmitter (Watts)	933	834	473	337
Number of Transmitters	4	4	4	4
Antenna Centerline (feet)	53	53	53	53
Total ERP (Watts)	3,733	3,335	1,893	1,346
Total ERP (dBm)	66	65	63	61
Maximum % of General Population Limit	5.7%			

RF Exposure 6ft Above Ground Level
Far Field Formula (per FCC OET65)

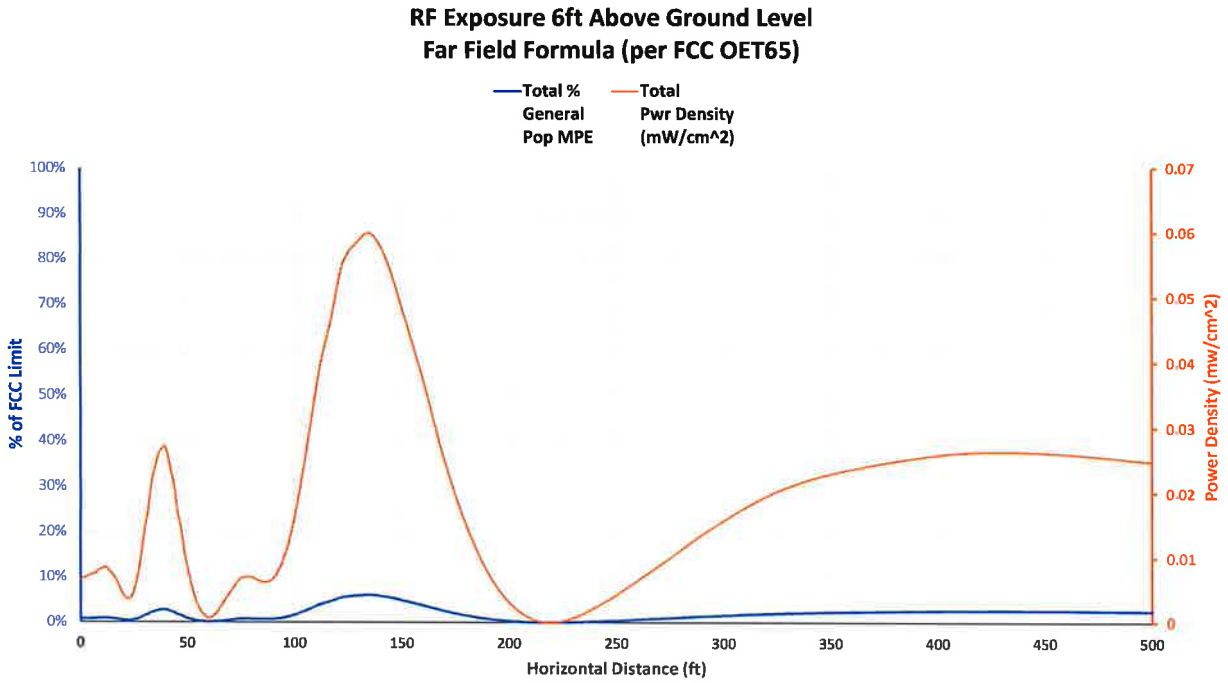


Angle Below Horizon	Power Density (mW/cm^2)				Percent of General Population MPE									Distance	Total Pwr Density (mW/cm^2)	Total % General Pop MPE
	AWS	PCS	850-LTE	700 MHz	39GHz	28GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz			
90	7.65079E-05	3.75584E-05	0.000228406	6.46705E-05	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.04%	0.00%	0.01%	0	0.000407142	0.06%
89	7.64846E-05	2.91457E-05	0.000262165	7.5958E-05	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.04%	0.00%	0.02%	0.820388052	0.000443753	0.07%
88	7.64147E-05	6.51896E-06	0.000307736	7.94652E-05	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.05%	0.00%	0.02%	1.641276166	0.000470134	0.08%
87	9.60539E-05	8.78044E-06	0.000329242	8.69991E-05	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.06%	0.00%	0.02%	2.463165626	0.000521076	0.08%
86	0.000141771	6.3473E-05	0.000360237	9.51892E-05	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.06%	0.00%	0.02%	3.286560161	0.00066067	0.10%
85	0.00020912	8.73768E-05	0.000359249	9.4928E-05	0.00%	0.00%	0.00%	0.00%	0.02%	0.01%	0.06%	0.00%	0.02%	4.111967186	0.000750673	0.11%
84	0.000274748	0.000102314	0.000349893	9.90683E-05	0.00%	0.00%	0.00%	0.00%	0.03%	0.01%	0.06%	0.00%	0.02%	4.939899057	0.000826024	0.12%
83	0.000336672	0.000104282	0.000325243	0.000100974	0.00%	0.00%	0.00%	0.00%	0.03%	0.01%	0.06%	0.00%	0.02%	5.770874362	0.000867171	0.12%
82	0.000367461	0.000101441	0.000281976	0.000107699	0.00%	0.00%	0.00%	0.00%	0.04%	0.01%	0.05%	0.00%	0.02%	6.605419231	0.000858577	0.12%
81	0.000374064	1.96765E-05	0.000150642	0.000107139	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.03%	0.00%	0.02%	7.444068695	0.000651521	0.09%

80	0.000380548	0.000110004	0.000156823	0.000116791	0.00%	0.00%	0.00%	0.00%	0.04%	0.01%	0.03%	0.00%	0.02%	8.287368093	0.000764166	0.10%
79	0.000434109	0.000173221	0.000166955	0.000130196	0.00%	0.00%	0.00%	0.00%	0.04%	0.02%	0.03%	0.00%	0.03%	9.135874529	0.000904482	0.12%
78	0.000542644	0.000248609	0.00017763	0.000145049	0.00%	0.00%	0.00%	0.00%	0.05%	0.02%	0.03%	0.00%	0.03%	9.990158398	0.001113931	0.14%
77	0.000647372	0.000289838	0.000188866	0.000157817	0.00%	0.00%	0.00%	0.00%	0.06%	0.03%	0.03%	0.00%	0.03%	10.85080498	0.001283894	0.16%
76	0.000703905	0.000315149	0.000382398	0.000183871	0.00%	0.00%	0.00%	0.00%	0.07%	0.03%	0.07%	0.00%	0.04%	11.71841613	0.001585323	0.20%
75	0.00074747	0.000312317	0.000535297	0.000219075	0.00%	0.00%	0.00%	0.00%	0.07%	0.03%	0.09%	0.00%	0.04%	12.59361204	0.001814158	0.24%
74	0.000830595	0.000295387	0.000715139	0.000254911	0.00%	0.00%	0.00%	0.00%	0.08%	0.03%	0.12%	0.00%	0.05%	13.47703313	0.002096032	0.29%
73	0.000965826	0.00027919	0.000850941	0.000289667	0.00%	0.00%	0.00%	0.00%	0.10%	0.03%	0.15%	0.00%	0.06%	14.36934203	0.002385624	0.33%
72	0.001122325	0.000302775	0.000988825	0.000314137	0.00%	0.00%	0.00%	0.00%	0.11%	0.03%	0.17%	0.00%	0.06%	15.27122572	0.002728063	0.37%
71	0.001273639	0.000394501	0.001096597	0.000340444	0.00%	0.00%	0.00%	0.00%	0.13%	0.04%	0.19%	0.00%	0.07%	16.18339782	0.003105181	0.42%
70	0.00137936	0.000537872	0.001187623	0.000352109	0.00%	0.00%	0.00%	0.00%	0.14%	0.05%	0.20%	0.00%	0.07%	17.10660101	0.003456965	0.46%
69	0.001492827	0.00069986	0.001227469	0.000347544	0.00%	0.00%	0.00%	0.00%	0.15%	0.07%	0.21%	0.00%	0.07%	18.04160965	0.0037677	0.50%
68	0.001577749	0.000869039	0.001267765	0.000342798	0.00%	0.00%	0.00%	0.00%	0.16%	0.09%	0.22%	0.00%	0.07%	18.98923261	0.00405735	0.53%
67	0.001666319	0.00107835	0.001249566	0.00032267	0.00%	0.00%	0.00%	0.00%	0.17%	0.11%	0.21%	0.00%	0.06%	19.95031636	0.004316905	0.55%
66	0.001841478	0.001337112	0.00125941	0.000310575	0.00%	0.00%	0.00%	0.00%	0.18%	0.13%	0.21%	0.00%	0.06%	20.92574821	0.004748575	0.59%
65	0.00208093	0.001619045	0.001239534	0.000320079	0.00%	0.00%	0.00%	0.00%	0.21%	0.16%	0.21%	0.00%	0.06%	21.91645993	0.005259588	0.65%
64	0.00251783	0.001914379	0.001191317	0.000369851	0.00%	0.00%	0.00%	0.00%	0.25%	0.19%	0.20%	0.00%	0.07%	22.92343166	0.005993377	0.72%
63	0.003044163	0.002210392	0.001170762	0.000427039	0.00%	0.00%	0.00%	0.00%	0.30%	0.22%	0.20%	0.00%	0.09%	23.94769613	0.006852356	0.81%
62	0.003677697	0.00243544	0.00112351	0.000492692	0.00%	0.00%	0.00%	0.00%	0.37%	0.24%	0.19%	0.00%	0.10%	24.99034329	0.007729339	0.90%
61	0.004239793	0.00262027	0.001052799	0.000555066	0.00%	0.00%	0.00%	0.00%	0.42%	0.26%	0.18%	0.00%	0.11%	26.05252542	0.008467928	0.98%
60	0.004772736	0.002690102	0.000985753	0.000624838	0.00%	0.00%	0.00%	0.00%	0.48%	0.27%	0.17%	0.00%	0.13%	27.13546265	0.009073429	1.04%
59	0.005368306	0.002696738	0.000901235	0.000686811	0.00%	0.00%	0.00%	0.00%	0.54%	0.27%	0.15%	0.00%	0.14%	28.24044909	0.00965309	1.10%
58	0.006033191	0.002701149	0.000786227	0.000771875	0.00%	0.00%	0.00%	0.00%	0.60%	0.27%	0.13%	0.00%	0.16%	29.36885954	0.010292442	1.16%
57	0.006774682	0.002766243	0.000685314	0.00086674	0.00%	0.00%	0.00%	0.00%	0.68%	0.28%	0.12%	0.00%	0.17%	30.52215688	0.011092979	1.25%
56	0.007258628	0.002703061	0.000569974	0.000972421	0.00%	0.00%	0.00%	0.00%	0.73%	0.27%	0.10%	0.00%	0.20%	31.70190029	0.011504085	1.29%
55	0.007770253	0.002578912	0.000484659	0.001115412	0.00%	0.00%	0.00%	0.00%	0.78%	0.26%	0.08%	0.00%	0.22%	32.9097543	0.011949235	1.34%
54	0.008121222	0.002347593	0.000461979	0.001278266	0.00%	0.00%	0.00%	0.00%	0.81%	0.23%	0.08%	0.00%	0.26%	34.14749882	0.012209061	1.38%
53	0.008098477	0.001947174	0.000482397	0.001463536	0.00%	0.00%	0.00%	0.00%	0.81%	0.19%	0.08%	0.00%	0.29%	35.41704035	0.011991583	1.38%
52	0.008068084	0.001540891	0.000480586	0.001674058	0.00%	0.00%	0.00%	0.00%	0.81%	0.15%	0.08%	0.00%	0.34%	36.72042445	0.011763618	1.38%
51	0.007493959	0.001060993	0.000467425	0.001912984	0.00%	0.00%	0.00%	0.00%	0.75%	0.11%	0.08%	0.00%	0.38%	38.05984956	0.010935361	1.32%
50	0.006953669	0.000713207	0.000443828	0.002183806	0.00%	0.00%	0.00%	0.00%	0.70%	0.07%	0.08%	0.00%	0.44%	39.43768267	0.01029451	1.28%
49	0.006445637	0.000468023	0.000411402	0.002490381	0.00%	0.00%	0.00%	0.00%	0.64%	0.05%	0.07%	0.00%	0.50%	40.85647668	0.009815443	1.26%
48	0.005832477	0.000753103	0.000389811	0.002772382	0.00%	0.00%	0.00%	0.00%	0.58%	0.08%	0.07%	0.00%	0.56%	42.31899008	0.009747772	1.28%
47	0.005151824	0.001103983	0.000395332	0.003082911	0.00%	0.00%	0.00%	0.00%	0.52%	0.11%	0.07%	0.00%	0.62%	43.82820905	0.00973405	1.31%
46	0.004242035	0.001375865	0.000419349	0.003424319	0.00%	0.00%	0.00%	0.00%	0.42%	0.14%	0.07%	0.00%	0.69%	45.38737242	0.009461568	1.32%
45	0.003181824	0.0016737	0.00046524	0.003799059	0.00%	0.00%	0.00%	0.00%	0.32%	0.17%	0.08%	0.00%	0.76%	47	0.009119823	1.33%
44	0.002224583	0.001942004	0.000552395	0.004113852	0.00%	0.00%	0.00%	0.00%	0.22%	0.19%	0.09%	0.00%	0.83%	48.66992475	0.008832833	1.34%
43	0.001449682	0.002149187	0.000640138	0.004552739	0.00%	0.00%	0.00%	0.00%	0.14%	0.21%	0.11%	0.00%	0.92%	50.40132937	0.008791746	1.38%
42	0.000901006	0.002216814	0.000740847	0.004917313	0.00%	0.00%	0.00%	0.00%	0.09%	0.22%	0.13%	0.00%	0.99%	52.1987882	0.008775981	1.43%
41	0.000627469	0.002231482	0.000836744	0.005427401	0.00%	0.00%	0.00%	0.00%	0.06%	0.22%	0.14%	0.00%	1.09%	54.06731514	0.009123096	1.52%
40	0.000660452	0.002243068	0.000880728	0.005845761	0.00%	0.00%	0.00%	0.00%	0.07%	0.22%	0.15%	0.00%	1.18%	56.01241885	0.00963001	1.62%
39	0.000778843	0.002303834	0.000904587	0.006433535	0.00%	0.00%	0.00%	0.00%	0.08%	0.23%	0.15%	0.00%	1.29%	58.04016636	0.010420799	1.76%
38	0.00087577	0.002417639	0.000885913	0.007069522	0.00%	0.00%	0.00%	0.00%	0.09%	0.24%	0.15%	0.00%	1.42%	60.15725671	0.011248844	1.90%
37	0.001006079	0.00253299	0.000949802	0.007579353	0.00%	0.00%	0.00%	0.00%	0.10%	0.25%	0.16%	0.00%	1.52%	62.37110662	0.012068224	2.04%
36	0.001236356	0.002589076	0.001279807	0.008301249	0.00%	0.00%	0.00%	0.00%	0.12%	0.26%	0.22%	0.00%	1.67%	64.68995026	0.013406488	2.27%
35	0.001482138	0.002581607	0.001761528	0.008869287	0.00%	0.00%	0.00%	0.00%	0.15%	0.26%	0.30%	0.00%	1.78%	67.12295632	0.01469456	2.49%
34	0.00165512	0.002569395	0.002420083	0.009458655	0.00%	0.00%	0.00%	0.00%	0.17%	0.26%	0.41%	0.00%	1.90%	69.68036552	0.016103252	2.74%
33	0.001721566	0.002494164	0.003169016	0.010302049	0.00%	0.00%	0.00%	0.00%	0.17%	0.25%	0.54%	0.00%	2.07%	72.3736533	0.017686795	3.03%
32	0.001706576	0.002472447	0.004046936	0.010693639	0.00%	0.00%	0.00%	0.00%	0.17%	0.25%	0.69%	0.00%	2.15%	75.21572286	0.018919597	3.26%
31	0.001612073	0.00250257	0.004924766	0.01133404	0.00%	0.00%	0.00%	0.00%	0.16%	0.25%	0.84%	0.00%	2.28%	78.22113567	0.02037345	3.53%
30	0.001484725	0.002646351	0.005979253	0.011985222	0.00%	0.00%	0.00%	0.00%	0.15%	0.26%	1.02%	0.00%	2.41%	81.40638796	0.022095553	3.84%
29	0.001302712	0.002791579	0.007077004	0.012355165	0.00%	0.00%	0.00%	0.00%	0.13%	0.28%	1.21%	0.00%	2.48%	84.7902445	0.02352646	4.10%
28	0.001166607	0.003005565	0.008164424	0.012703537	0.00%	0.00%	0.00%	0.00%	0.12%	0.30%	1.39%	0.00%	2.55%	88.39414387	0.025040133	4.36%
27	0.001066104	0.003081776	0.009179108	0.013329063	0.00%	0.00%	0.00%	0.00%	0.11%	0.31%	1.56%	0.00%	2.68%	92.24269376	0.026656051	4.66%
26	0.001167858	0.003223973	0.01028942	0.013626679	0.00%	0.00%	0.00%	0.00%	0.12%	0.32%	1.75%	0.00%	2.74%	96.36428055	0.028307929	4.93%
25	0.001605472	0.003362049	0.010980029	0.013886814	0.00%	0.00%	0.00%	0.00%	0.16%	0.34%	1.87%	0.00%	2.79%	100.7918253	0.029834363	5.16%
24	0.002250778	0.003575478	0.011677061	0.013782649	0.00%	0.00%	0.00%	0.00%	0.23%	0.36%	1.99%	0.00%	2.77%	105.5637284	0.031285966	5.34%
23	0.002934014	0.003617958	0.012372657	0.0139464	0.00%	0.00%	0.00%	0.00%	0.29%	0.36%	2.11%	0.00%	2.80%	110.7250612	0.032871029	5.57%
22	0.003474217	0.003482237	0.012760209	0.014055844	0.00%	0.00%	0.00%	0.00%	0.35%	0.35%	2.18%	0.00%	2.83%	116.3290821	0.033772507	5.70%
21	0.003822649	0.003186881	0.013102835	0.013783656	0.00%	0.00%	0.00%	0.00%	0.38%	0.32%	2.23%	0.00%	2.77%	122.439186	0.033896021	5.71%
20	0.003906695	0.002709012	0.013086103	0.0134527	0.00%	0.00%	0.00%	0.00%	0.39%	0.27%	2.23%	0.00%	2.70%	129.1314387	0.033154509	5.60%
19	0.003622346	0.002137919	0.013304262	0.013061406	0.00%	0.00%	0.00%	0.00%	0.36%	0.21%	2.27%	0.00%	2.63%	136.4979113	0.032125933	5.47%
18	0.003116527	0.001495107	0.013142309	0.012608715	0.00%	0.00%	0.00%	0.00%	0.31%	0.15%	2.24%	0.00%	2.54%	144.6511262	0.030362657	5.24%
17	0.002429835	0.000947498	0.012899641	0.012094189	0.00%	0.00%	0.00%	0.00%	0.24%	0.09%	2.20%	0.00%	2.43%	153.7300731	0.028371164	4.97%
16	0.001715467	0.000596189	0.012571384	0.011255952	0.00%	0.00%	0.00%	0.00%	0.17%	0.06%	2.14%	0.00%	2.26%	163.9084789	0.026138992	4.64%
15	0.00120143	0.000525654	0.011876799	0.010634046	0.00%	0.00%	0.00%	0.00%	0.12%	0.05%	2.02%	0.00%	2.14%	175.406388	0.02423793	4.34%
14	0.001025785	0.000619524	0.011118784	0.009728736	0.00%	0.00%	0.00%	0.00%	0.10%	0.06%	1.90%	0.00%	1.96%	188.5067039	0.02249283	4.02%

13	0.001042035	0.000909669	0.010541029	0.008808098	0.00%	0.00%	0.00%	0.00%	0.10%	0.09%	1.80%	0.00%	1.77%	203.5793661	0.021300832	3.76%
12	0.001070197	0.001381864	0.009428981	0.007699525	0.00%	0.00%	0.00%	0.00%	0.11%	0.14%	1.61%	0.00%	1.55%	221.1176151	0.019580567	3.40%
11	0.001302878	0.001976538	0.008509512	0.006790532	0.00%	0.00%	0.00%	0.00%	0.13%	0.20%	1.45%	0.00%	1.37%	241.7940388	0.01857946	3.14%
10	0.001790798	0.002594466	0.007551747	0.005755016	0.00%	0.00%	0.00%	0.00%	0.18%	0.26%	1.29%	0.00%	1.16%	266.5502455	0.017692027	2.88%
9	0.002411965	0.003114386	0.006417588	0.004779373	0.00%	0.00%	0.00%	0.00%	0.24%	0.31%	1.09%	0.00%	0.96%	296.7463212	0.016723312	2.61%
8	0.002956764	0.003481915	0.005318848	0.003870942	0.00%	0.00%	0.00%	0.00%	0.30%	0.35%	0.91%	0.00%	0.78%	334.422377	0.015628469	2.33%
7	0.003202544	0.003519625	0.004173457	0.003037351	0.00%	0.00%	0.00%	0.00%	0.32%	0.35%	0.71%	0.00%	0.61%	382.7842821	0.013932977	1.99%
6	0.003178156	0.003259692	0.003141782	0.002286521	0.00%	0.00%	0.00%	0.00%	0.32%	0.33%	0.54%	0.00%	0.46%	447.1751293	0.011866152	1.64%
5	0.002781622	0.00272458	0.00223511	0.001589638	0.00%	0.00%	0.00%	0.00%	0.28%	0.27%	0.38%	0.00%	0.32%	537.2124582	0.00933095	1.25%
4	0.002142275	0.002003902	0.001465129	0.001042018	0.00%	0.00%	0.00%	0.00%	0.21%	0.20%	0.25%	0.00%	0.21%	672.1313141	0.006653324	0.87%
3	0.001384543	0.001265633	0.000843932	0.000586552	0.00%	0.00%	0.00%	0.00%	0.14%	0.13%	0.14%	0.00%	0.12%	896.8134243	0.00408066	0.53%
2	0.000675063	0.000617086	0.000375271	0.000266897	0.00%	0.00%	0.00%	0.00%	0.07%	0.06%	0.06%	0.00%	0.05%	1345.903904	0.001934318	0.25%
1	0.000180891	0.000161591	9.38464E-05	6.67447E-05	0.00%	0.00%	0.00%	0.00%	0.02%	0.02%	0.02%	0.00%	0.01%	2692.628197	0.000503073	0.06%

Location	TRAVELERS GOLF COW CT 2023 - Part 1 of 2
Date	5/9/2023
Band	C-Band
Operating Frequency (MHz)	3,700
General Population MPE (mW/cm^2)	1
ERP Per Transmitter (Watts)	13,000
Number of Transmitters	2
Antenna Centerline (feet)	58
Total ERP (Watts)	26,000
Total ERP (dBm)	74
Maximum % of General Population Limit	6.0%



Angle Below Horizon	Power Density (mW/cm^2) C-Band	Percent of General Population MPE 39GHz	28GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz	Distance	Total Pwr Density (mW/cm^2)	Total % General Pop MPE
90	0.006742338	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0	0.006742338	0.67%
89	0.006740284	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.907663376	0.006740284	0.67%
88	0.006890984	0.00%	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.815880014	0.006890984	0.69%
87	0.007040756	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.725204523	0.007040756	0.70%
86	0.007189391	0.00%	0.00%	0.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.636194221	0.007189391	0.72%
85	0.007336669	0.00%	0.00%	0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.549410503	0.007336669	0.73%
84	0.00748237	0.00%	0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.465420234	0.00748237	0.75%

83	0.00745267	0.00%	0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.384797167	0.00745267	0.75%
82	0.007768122	0.00%	0.00%	0.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.308123405	0.007768122	0.78%
81	0.008091897	0.00%	0.00%	0.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.235990897	0.008091897	0.81%
80	0.008232153	0.00%	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.169002997	0.008232153	0.82%
79	0.00836958	0.00%	0.00%	0.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.10777608	0.00836958	0.84%
78	0.008503922	0.00%	0.00%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.05294121	0.008503922	0.85%
77	0.008438366	0.00%	0.00%	0.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.00514594	0.008438366	0.84%
76	0.008177466	0.00%	0.00%	0.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.96505615	0.008177466	0.82%
75	0.007739235	0.00%	0.00%	0.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.93335801	0.007739235	0.77%
74	0.007490206	0.00%	0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.91076006	0.007490206	0.75%
73	0.00691836	0.00%	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.89799544	0.00691836	0.69%
72	0.006385915	0.00%	0.00%	0.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.8958242	0.006385915	0.64%
71	0.005625364	0.00%	0.00%	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.90503589	0.005625364	0.56%
70	0.004839295	0.00%	0.00%	0.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.92645218	0.004839295	0.48%
69	0.004160198	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.96092982	0.004160198	0.42%
68	0.003742331	0.00%	0.00%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.00936374	0.003742331	0.37%
67	0.003604646	0.00%	0.00%	0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.07269044	0.003604646	0.36%
66	0.00371767	0.00%	0.00%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	23.15189164	0.00371767	0.37%
65	0.004201089	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.24799822	0.004201089	0.42%
64	0.005446668	0.00%	0.00%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.36209461	0.005446668	0.54%
63	0.007056222	0.00%	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	26.49532337	0.007056222	0.71%
62	0.009134407	0.00%	0.00%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.64889045	0.009134407	0.91%
61	0.011815416	0.00%	0.00%	1.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.82407068	0.011815416	1.18%
60	0.014583836	0.00%	0.00%	1.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	30.022214	0.014583836	1.46%
59	0.016785786	0.00%	0.00%	1.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	31.24475219	0.016785786	1.68%
58	0.020213963	0.00%	0.00%	2.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	32.4932063	0.020213963	2.02%
57	0.022698298	0.00%	0.00%	2.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.76919485	0.022698298	2.27%
56	0.02431974	0.00%	0.00%	2.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.07444288	0.02431974	2.43%
55	0.026033918	0.00%	0.00%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	36.41079199	0.026033918	2.60%
54	0.026590456	0.00%	0.00%	2.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.78021146	0.026590456	2.66%
53	0.027133619	0.00%	0.00%	2.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	39.18481061	0.027133619	2.71%
52	0.025815158	0.00%	0.00%	2.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.62685258	0.025815158	2.58%
51	0.023432341	0.00%	0.00%	2.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	42.10876973	0.023432341	2.34%
50	0.021248018	0.00%	0.00%	2.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	43.63318082	0.021248018	2.12%
49	0.01715419	0.00%	0.00%	1.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.20291037	0.01715419	1.72%
48	0.014486298	0.00%	0.00%	1.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	46.8210103	0.014486298	1.45%
47	0.010890941	0.00%	0.00%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	48.49078448	0.010890941	1.09%
46	0.007992427	0.00%	0.00%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.21581629	0.007992427	0.80%
45	0.005342943	0.00%	0.00%	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	52	0.005342943	0.53%
44	0.003329301	0.00%	0.00%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	53.84757632	0.003329301	0.33%
43	0.001846618	0.00%	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.76317292	0.001846618	0.18%
42	0.000999614	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	57.75185077	0.000999614	0.10%
41	0.000649675	0.00%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	59.81915718	0.000649675	0.06%
40	0.00096593	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	61.97118681	0.00096593	0.10%
39	0.001764226	0.00%	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	64.21465214	0.001764226	0.18%
38	0.003002579	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.55696487	0.003002579	0.30%
37	0.004243621	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	69.00633072	0.004243621	0.42%
36	0.005460694	0.00%	0.00%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	71.57185986	0.005460694	0.55%
35	0.00669874	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	74.26369635	0.00669874	0.67%
34	0.00698126	0.00%	0.00%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	77.09317036	0.00698126	0.70%
33	0.006934706	0.00%	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	80.07297812	0.006934706	0.69%
32	0.006415491	0.00%	0.00%	0.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	83.21739551	0.006415491	0.64%
31	0.006201392	0.00%	0.00%	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	86.54253308	0.006201392	0.62%
30	0.006866738	0.00%	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	90.06664199	0.006866738	0.69%
29	0.009119121	0.00%	0.00%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	93.81048327	0.009119121	0.91%
28	0.013244302	0.00%	0.00%	1.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	97.7977762	0.013244302	1.32%
27	0.020086489	0.00%	0.00%	2.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	102.0557463	0.020086489	2.01%
26	0.029006439	0.00%	0.00%	2.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	106.6157998	0.029006439	2.90%
25	0.038967901	0.00%	0.00%	3.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	111.5143599	0.038967901	3.90%
24	0.046498302	0.00%	0.00%	4.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	116.7939122	0.046498302	4.65%
23	0.055279807	0.00%	0.00%	5.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	122.504323	0.055279807	5.53%
22	0.058339316	0.00%	0.00%	5.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	128.7045164	0.058339316	5.83%
21	0.059905793	0.00%	0.00%	5.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	135.4646314	0.059905793	5.99%
20	0.055835944	0.00%	0.00%	5.58%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	142.8688258	0.055835944	5.58%

19	0.047216559	0.00%	0.00%	4.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	151.0189656	0.047216559	4.72%
18	0.037048892	0.00%	0.00%	3.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	160.0395439	0.037048892	3.70%
17	0.024585621	0.00%	0.00%	2.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	170.0843362	0.024585621	2.46%
16	0.013787536	0.00%	0.00%	1.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	181.3455511	0.013787536	1.38%
15	0.005430039	0.00%	0.00%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	194.066642	0.005430039	0.54%
14	0.000805677	0.00%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	208.5606085	0.000805677	0.08%
13	0.000230668	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	225.2367455	0.000230668	0.02%
12	0.003195717	0.00%	0.00%	0.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	244.6407657	0.003195717	0.32%
11	0.008317795	0.00%	0.00%	0.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	267.5168088	0.008317795	0.83%
10	0.014728244	0.00%	0.00%	1.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	294.9066546	0.014728244	1.47%
9	0.02077186	0.00%	0.00%	2.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	328.3150788	0.02077186	2.08%
8	0.024317622	0.00%	0.00%	2.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	369.9992256	0.024317622	2.43%
7	0.02633901	0.00%	0.00%	2.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	423.5060143	0.02633901	2.63%
6	0.024962014	0.00%	0.00%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	494.7469516	0.024962014	2.50%
5	0.020389309	0.00%	0.00%	2.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	594.3627197	0.020389309	2.04%
4	0.015345447	0.00%	0.00%	1.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	743.6346453	0.015345447	1.53%
3	0.009045047	0.00%	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	992.2191078	0.009045047	0.90%
2	0.004115748	0.00%	0.00%	0.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1489.085171	0.004115748	0.41%
1	0.001053225	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2979.078005	0.001053225	0.11%

ATTACHMENT 5

TOWN OF CROMWELL

Printed By: Shawna 11/04/2022 2:23:00PM

Parcel ID: **00095700** ***Location:*** 674 MAIN STREET ***Map-Lot*** 60-77 ***Last Revaluation - October 1, 2022***

Current Owner	***Percent***
CONNECTICUT LIGHT POWER	100

PO BOX 270

HARTFORD CT 06106

Previous Owner(s)

Current Value Information

Mkt Adj Cost

Use Code	Land Value	PA 490 Value	Building Value	Outbuildings	Total Value	Total Assessed
200	5,121,900	0	0	0	5,121,900	3,585,330
TOTAL	**5,121,900**	**0**	**0**	**0**	**5,121,900**	**3,585,330**

Patriot
Properties Inc.

Property Factors

Census	5703
Flood:	
Topo:	
Street:	Paved
Dev. Map	ZZ-35;YY-3
Dev. Map	

Zoning Data

Desc.	%
BP	100.00

Utilities

4	Sewer Avail
7	Water Avail

BAA

Previous Value Information

Tax Yr	Land Value	Bldg Value	Outbuildings	Total Value	Total Assessment
2021	4,794,300	0	0	4,794,300	3,356,010
2020	4,794,300	0	0	4,794,300	3,356,010
2019	4,794,300	0	0	4,794,300	3,356,010
2018	4,794,300	0	0	4,794,300	3,356,010
2017	4,794,300	0	0	4,794,300	3,356,010
2016	4,397,490	0	0	4,397,490	3,078,250

General Notes

Sales Information

Grantee	Vol-Page	Type	SaleDate	SalePrice	Sale Verif	GeneralNotes
CONNECTICUT LIGHT	89-703		07/07/1971	0		

Activity Information

Date	Results	Visited By
07/28/2022	Change - Value Change Company	DM
09/09/2017	Change - Value Change Company	John Valente
05/17/2017	No Change - Field Review	Dave Stannard
01/20/2011	Map Filed Acreage Chg	Shawna Baron
02/09/2010	Map Filed Acreage Chg	
12/26/2006	Measure & Inspected	

Building Permit Information

Date	Permit #	Description	Amount	% Comp	Visit Date	CO Date	GeneralNotes
05/07/2020	26780	Electric	50,000	0			COMMUNICATION POLE
10/04/2019	26421	Electric	1,175	0			SUB PANEL-PUMP HOUSE

Land Data

Use	Description	Units	Unit Type	Neigh	Land Adjustments	Special Land Calc	Appraised Value	PA 490 Asmt	Neigh Order	Notes
200	Commercial Vac	43,560	SF	CL	Utility 300%		2,439,400	0	4280	
200	Commercial Vac	102.190	AC	CL			2,682,500	0	4280	

Total Area: 103.19 **PA 490 Use Asmt: 0** **Total Appraised: 5,121,900** **Assessed Value: 3,585,330**

Town of Cromwell, CT

May 18, 2023

Property Information

Property ID	00095700
Location	674 MAIN STREE
Owner	
Owner Address	
Map Block Lot	

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of Cromwell, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 6/30/2022
Data updated on a daily basis

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

ATTACHMENT 6

Travelers Championship - Temp

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	2	2	OLD STATE HOUSE STATION 06106 MAY 22 2023 USPS neopost 05/22/2023 US POSTAGE $003.10 ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Steve Fortenbach, Mayor Town of Cromwell 41 West Street Cromwell, CT 06416				
2.	Stuart Popper, Director of Planning and Development Town of Cromwell 41 West Street Cromwell, CT 06416				
3.					
4.					
5.					
6.					

See Reverse for Instructions