



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 250 ft Sabre Self Supporting Tower

Customer Name: SBA Communications Corp

Customer Site Number: FL10337-A

Customer Site Name: Truett/Ft. White

Carrier Name: Verizon (App#: 145709, V1)

Carrier Site ID / Name: 228806 / FORT WHITE ARP

Site Location: 19039 SW SR 47

Ft. White, Florida

Columbia County

Latitude: 29.912947

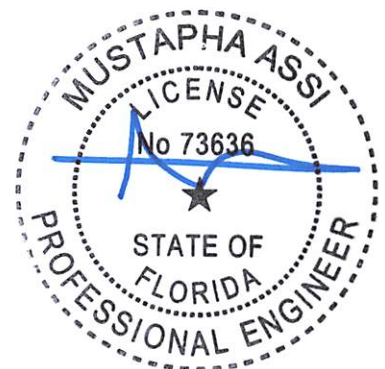
Longitude: -82.715206

Exp.02/28/2023



Mustapha Assi

Digitaly signed by Mustapha Assi
DN: CN=Mustapha Assi,
C=USA, OU=TOWER ENGINEERING SOLUTIONS LLC, O=TES,
Date: 2021.09.22 14:32:44-0700



09/22/2021

Analysis Result:

Max Structural Usage: 94.4% [Pass]

Max Foundation Usage: 89.9% [Pass]

Additional Usage Caused by Mount Modification: +0.9%

Report Prepared By: Sital Shrestha

TOWER ENGINEERING SOLUTIONS, LLC
1320 Greenway Dr., Ste 600
Irving, TX 75038
CA#30690



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Introduction

The purpose of this report is to summarize the analysis results on the 250 ft Sabre Self Supporting Tower to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Sabre, Job # 04-01026, dated 1/15/04
Foundation Drawing	Sabre, Job # 04-01026, dated 1/15/04
Geotechnical Report	FDH, Project # 1207609EG1, dated 8/20/12
Modification Drawings	FDH, Project # 11-04183E S2, dated 8/6/11
Mount Analysis	MA by MASER Consulting, Project No. 20944690A, dated 02/17/2021.

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using **TESTowers**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	120.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	30 mph (3-Sec. Gust) with 1/4" radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-H / 2018 IBC / Florida Building Code, 7th Edition (2020)
Exposure Category:	C
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_s = 0.079$, $S_1 = 0.048$

This structural analysis is based upon the tower being classified as a Risk Category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
-	246.0	6	JMA Wireless - X7CQAP-86-865-VRO - Panel	(3) Sector Frames (Super XLD VFA12-HD)	(15) 1 5/8" (1) 1-1/4" Hybrid (1) 1 5/8" Hybrid	Verizon
-		2	JMA Wireless - MX06FRO840-02 - Panel			
-		3	Commscope - TD 850B LTE78 43 - Diplexer			
-		4	Ericsson - 8843 - RRU			
-		3	Ericsson - 4449 B5/B12 - RRU			
-		1	Raycap - RCMDC-3315-PF-48 - OVP			
-		1	Raycap - RCMDC 6627 PF 48 - OVP			
8	212.0	6	BCD-80010	(3) Sector Frame*	(6) 1 5/8"	Nextel
9		9	PCSA065-19-0 – Panel*		(9) 1 5/8"*	
10	175.0	2	IP10 - TMA/TTA	Pipe	(4) CAT5 (2) LMR-400	North Florida Broadband
11		2	HPD6-59 - Dish			
12		4	Ubiquiti 5G-90-20 - Panel			

*Not installed. Nextel has installed only three BCD-80010 on three side Arms.

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	246.0	6	JMA Wireless X7CQAP-86-865-VRO- Panel	(3) Sector Frames (3) V-BRACING KIT (1) PIPE TO PIPE CLAMP SET (1) 36" LONG, P2.0 STD PIPE (1) 2' PANEL STAND-OFF MOUNT (2) ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY	(14) 1 5/8" Coax (2) 1 5/8" Hybrid (1) 1-1/4" Hybrid	Verizon
2		2	JMA Wireless MX06FRO840-02- Panel			
3		4	Ericsson AIR 6449- Panel			
4		4	Ericsson 8843- RRH			
5		3	Ericsson 4449 B5/B12- RRH			
6		3	Commscope CHB626-43-2X- Combiners			
7		2	Raycap RCMDC 6627 PF 48- OVP			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

Tower Component	Legs	Diagonals	Horizontals
Max. Usage:	94.1%	73.8%	62.6%
Pass/Fail	Pass	Pass	Pass

Foundations

	Compression (Kips)	Uplift (Kips)	Shear (Kips)
Analysis Reactions	410.3	350.6	37.5

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Service Load Condition (Rigidity):

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
175.0	HPD6-59 - Dish	North Florida Broadb	0.013	0.286

It is recommended that the carriers review the twist and sway values of the microwave dishes.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Structure: FL10337-A-SBA

Site Name: Truett/Ft. White

Code: EIA/TIA-222-H

9/22/2021

Type: Self Support

Base Shape: Triangle

Basic WS: 120.00

Height: 250.00 (ft)

Base Width: 25.00

Basic Ice WS: 30.00

Base Elev: 0.00 (ft)

Top Width: 5.00

Operational WS: 60.00

Page: 1



Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1	PX 8" DIA PIPE	SAE 3X3X0.375	SAU 3X3.5X0.25
2	PX 8" DIA PIPE	SAU 3.5X4X0.3125	
3	PX 8" DIA PIPE	SAU 3.5X4X0.25	
4	PX 8" DIA PIPE	SAE 3.5X3.5X0.25	
5	PX 8" DIA PIPE	SAU 3X3.5X0.25	
6	PX 6" DIA PIPE	SAE 3X3X0.25	
7	PX 6" DIA PIPE	SAE 3X3X0.1875	
8	PSP 5" SCH120	SAE 2.5X2.5X0.1875	
9	PSP 4" SCH160	SAE 2.5X2.5X0.1875	
10	PSP 4.5 x 0.438	SAE 2X2X0.1875	
11	PSP 3" SCHD 160	SAE 1.75X1.75X0.1875	SAE 1.75X1.75X0.1875
12	PXX 2-1/2" DIA PIPE	SAE 1.75X1.75X0.25	SAE 1.75X1.75X0.25
13-14	PST 2-1/2" DIA PIPE	SAE 1.75X1.75X0.1875	SAE 1.75X1.75X0.1875

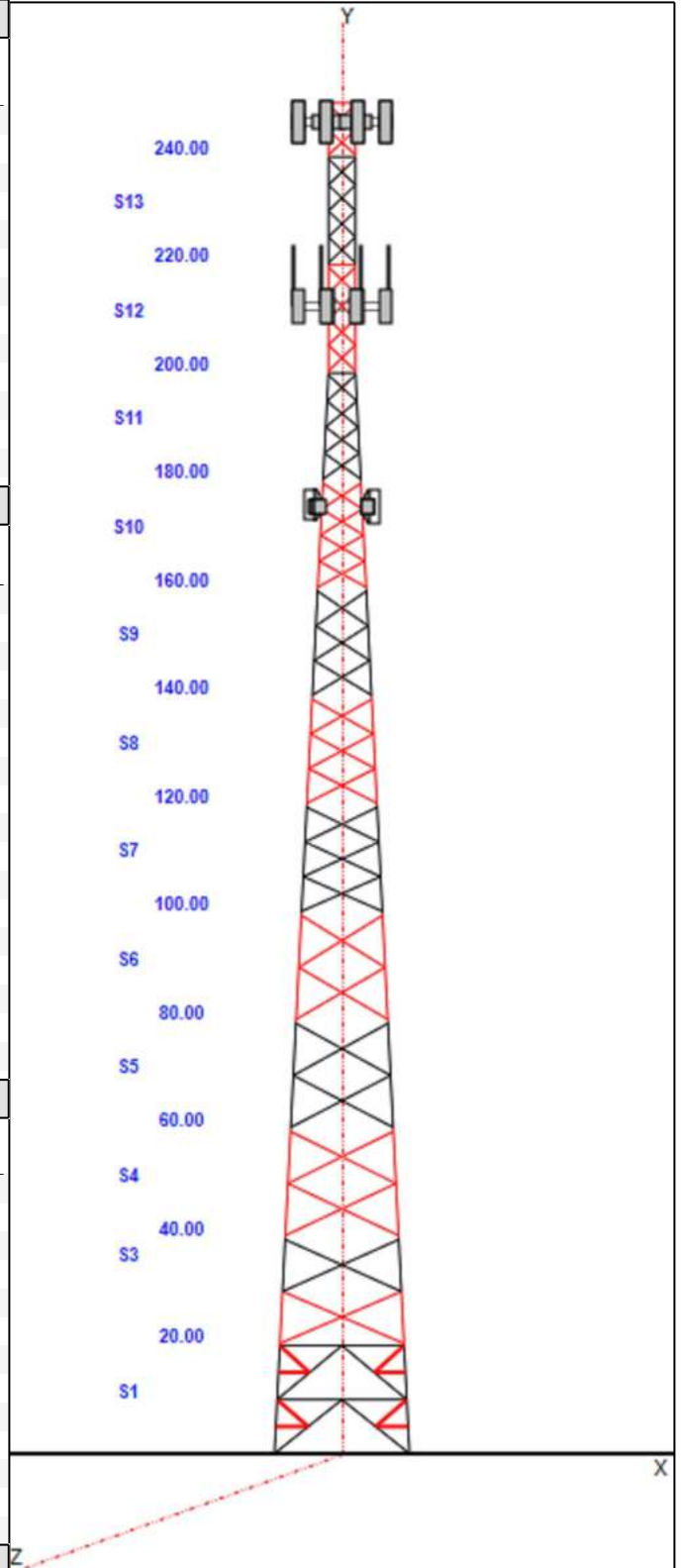
Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
250.00	250.00	1	Beacon
246.00	246.00	6	X7CQAP-86-865-VR0
246.00	246.00	2	MX06FRO840-02
246.00	246.00	4	8843
246.00	246.00	3	4449 B5/B12
246.00	246.00	1	(3) VFA12-HD w/ Mods
246.00	246.00	2	RCMDC-6627-PF-48 (32lb)
246.00	246.00	4	AIR 6449
246.00	246.00	1	(3) V-Braces
246.00	246.00	3	CHB626-43-2X
212.00	212.00	3	Sector Frame
212.00	217.67	6	BCD-80010
212.00	212.00	9	PCSA065-19-0;///?
175.00	175.00	2	IP10
175.00	175.00	2	HPD6-59
175.00	175.00	2	Pipe Mount
175.00	175.00	4	Ubquiti 5G-90-20

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Qty	Description
0.00	250.00	1	Climbing Ladder
0.00	250.00	1	Safety Cable
0.00	250.00	1	W/G Ladder
0.00	246.00	12	1 5/8" Coax
0.00	246.00	2	1 5/8" Coax
0.00	246.00	2	1 5/8" Hybrid
0.00	246.00	1	1-1/4" Hybrid
0.00	212.00	6	1 5/8" Coax
0.00	212.00	9	1 5/8" Coax
0.00	212.00	1	W/G Ladder
0.00	175.00	4	CAT5
0.00	175.00	2	LMR-400
0.00	175.00	1	W/G Ladder

Base Reactions



Structure: FL10337-A-SBA

Site Name: Truett/Ft. White	Code: EIA/TIA-222-H	9/22/2021
Type: Self Support	Base Shape: Triangle	Basic WS: 120.00
Height: 250.00 (ft)	Base Width: 25.00	Basic Ice WS: 30.00
Base Elev: 0.00 (ft)	Top Width: 5.00	Operational WS: 60.00



Page: 2

Leg

Overturning

Max Uplift: -350.58 (kips)	Moment: 8400.42 (ft-kips)
Max Down: 410.31 (kips)	Total Down: 66.94 (kips)
Max Shear: 37.48 (kips)	Total Shear: 60.98 (kips)

Structure: FL10337-A-SBA

Site Name: Truett/Ft. White

Code: EIA/TIA-222-H

9/22/2021

Type: Self Support

Base Shape: Triangle

Basic WS: 120.00

Height: 250.00 (ft)

Base Width: 25.00

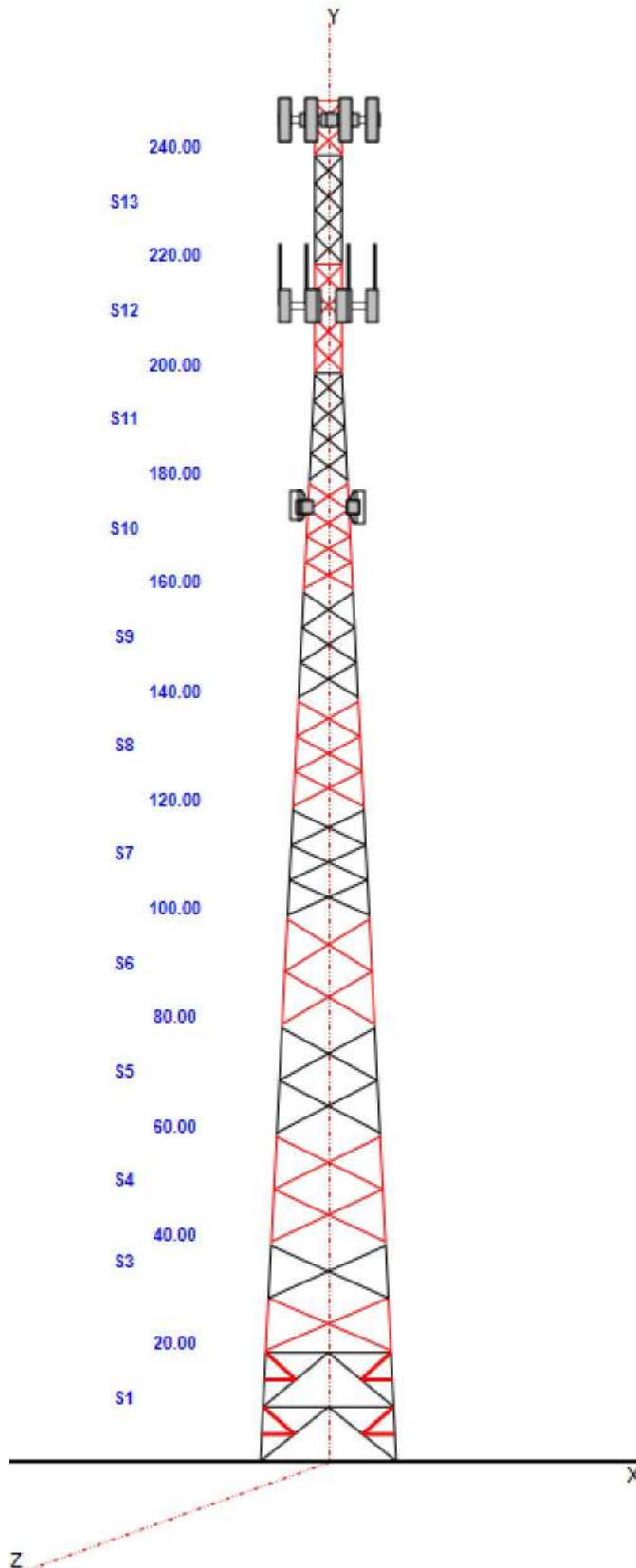
Basic Ice WS: 30.00

Base Elev: 0.00 (ft)

Top Width: 5.00

Operational WS: 60.00

Page: 3



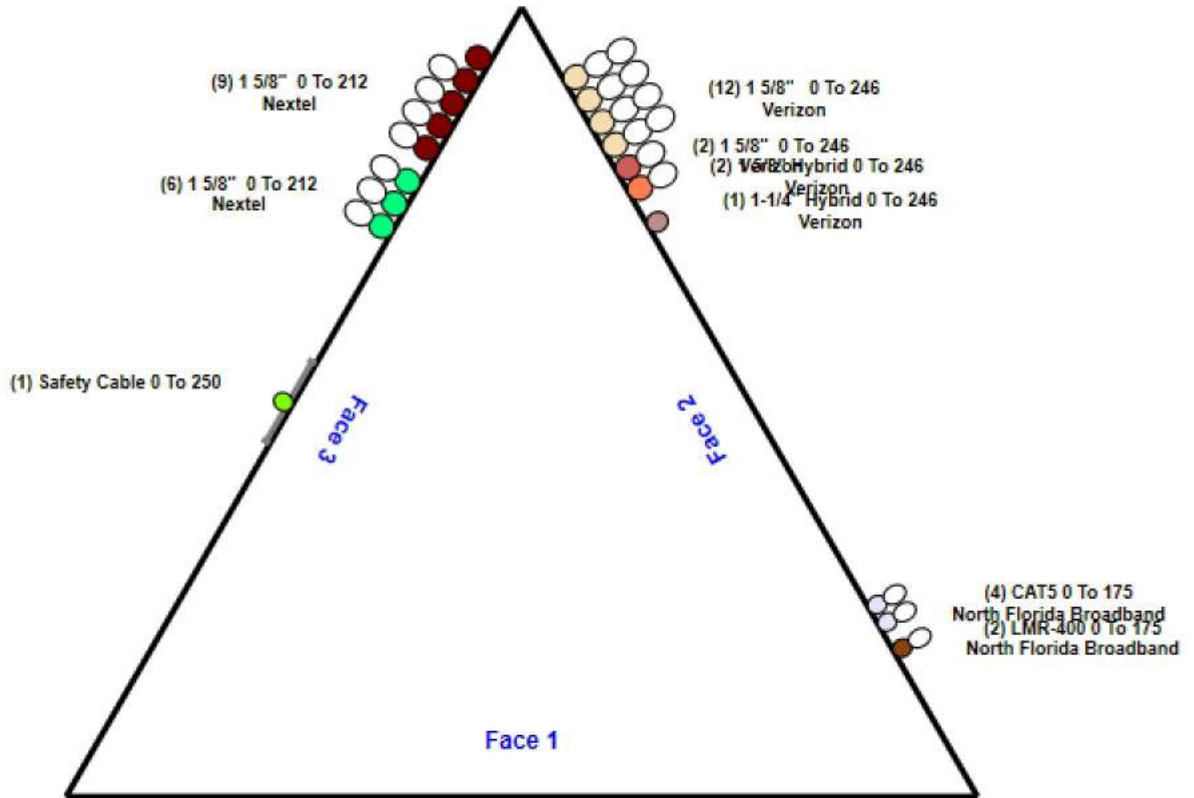
Structure: FL10337-A-SBA - Coax Line Placement

Type: Self Support
Site Name: Truett/Ft. White
Height: 250.00 (ft)

9/22/2021



Page: 4



Loading Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



Page: 5

Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice		Ice		Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
			Weight (lb)	CaAa (sf)	Weight (lb)	CaAa (sf)						
250.00	Beacon	1	36.00	2.720	59.32	2.886	28.000	17.500	17.500	1.00	1.00	0.000
246.00	X7CQAP-86-865-VR0	6	53.60	13.440	98.77	13.717	96.000	14.600	7.300	0.80	0.79	0.000
246.00	MX06FRO840-02	2	98.00	17.200	161.65	17.499	95.900	19.800	10.700	0.80	0.81	0.000
246.00	8843	4	70.00	1.650	87.11	1.751	15.000	13.200	11.100	0.80	0.67	0.000
246.00	4449 B5/B12	3	71.00	1.970	80.34	2.066	17.900	13.200	9.400	0.80	0.67	0.000
246.00	(3) VFA12-HD w/ Mods	1	4489.6	50.700	5257.67	61.852	0.000	0.000	0.000	0.75	1.00	0.000
246.00	RCMDC-6627-PF-48 (32lb)	2	32.00	2.610	44.99	2.723	19.000	16.500	12.600	0.80	0.50	0.000
246.00	AIR 6449	4	81.60	4.130	102.15	4.273	30.800	16.100	10.800	0.80	0.85	0.000
246.00	(3) V-Braces	1	366.00	6.700	455.45	7.928	0.000	0.000	0.000	0.75	1.00	0.000
246.00	CHB626-43-2X	3	9.51	0.990	13.35	1.135	7.120	14.600	3.400	0.80	1.00	0.000
212.00	Sector Frame	3	500.00	17.500	620.33	19.901	0.000	0.000	0.000	0.75	0.75	0.000
212.00	BCD-80010	6	26.50	2.950	42.08	3.645	136.000	2.600	2.600	1.00	1.00	5.667
212.00	PCSA065-19-0;///?	9	24.60	6.460	50.31	6.682	75.000	8.500	7.500	0.80	0.94	0.000
175.00	IP10	2	16.00	0.000	23.84	1.041	19.000	6.000	11.000	1.00	1.00	0.000
175.00	HPD6-59	2	251.00	35.670	370.85	36.258	72.000	72.000	0.000	1.00	1.00	0.000
175.00	Pipe Mount	2	100.00	2.000	114.14	2.236	0.000	0.000	0.000	1.00	1.00	0.000
175.00	Ubquiti 5G-90-20	4	13.00	1.480	18.81	1.568	27.500	6.000	3.500	1.00	1.00	0.000
Totals:		55	8,987.53		11,475.71					Number of Appurtenances : 17		

Loading Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



Page: 6

Linear Appurtenances Properties

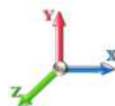
Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	250.00	Climbing Ladder	1	2.00	6.90	100.00	3	Individual NR		N	1.00	1.00	
0.00	250.00	Safety Cable	1	0.38	0.27	100.00	3	Individual NR		N	1.00	1.00	
0.00	250.00	W/G Ladder	1	2.00	6.00	100.00	2	Individual NR		N	1.00	1.00	
0.00	246.00	1 5/8" Coax	12	1.98	1.04	33.30	2	Block		N	0.50	1.00	
0.00	246.00	1 5/8" Coax	2	1.98	1.04	50.00	2	Block		N	0.50	1.00	
0.00	246.00	1 5/8" Hybrid	2	2.00	1.10	50.00	2	Block		N	1.00	1.00	
0.00	246.00	1-1/4" Hybrid	1	1.25	0.95	100.00	2	Individual NR		N	1.00	1.00	
0.00	212.00	1 5/8" Coax	6	1.98	1.04	50.00	3	Block		N	0.50	0.72	
0.00	212.00	1 5/8" Coax	9	1.98	1.04	50.00	3	Block		N	0.50	0.00	
0.00	212.00	W/G Ladder	1	2.00	6.00	100.00	3	Individual NR		N	1.00	1.00	
0.00	175.00	CAT5	4	0.25	0.04	50.00	2	Block		N	0.50	1.00	
0.00	175.00	LMR-400	2	0.41	0.07	50.00	2	Block		N	0.50	1.00	
0.00	175.00	W/G Ladder	1	2.00	6.00	100.00	2	Individual NR		N	1.00	1.00	

Section Forces

Structure: FL10337-A-SBA
 Site Name: Truett/Ft. White
 Height: 250.00 (ft)
 Base Elev: 0.000 (ft)
 Gh: 0.85

Topography: 1

Code: EIA/TIA-222-H
 Exposure: C
 Crest Height: 0.00
 Site Class: D - Stiff Soil
 Struct Class: II

9/22/2021

 Page: 7



Load Case: 1.2D + 1.0W Normal Wind

1.2D + 1.0W 120 mph Wind at Normal To Face

Wind Load Factor: 1.00
 Dead Load Factor: 1.20
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	26.56 40.001	28.80	0.00	0.14	2.81	1.00	1.00	0.00	51.90	52.28	0.00	8,433.6	0.0	3294.94	1069.12	4,364.05
2	25.0	29.54 15.825	14.40	0.00	0.13	2.85	1.00	1.00	0.00	21.71	26.14	0.00	3,604.8	0.0	1551.44	594.47	2,145.91
3	35.0	31.71 15.237	14.40	0.00	0.13	2.83	1.00	1.00	0.00	21.15	26.14	0.00	3,301.3	0.0	1614.99	638.11	2,253.10
4	50.0	34.18 25.059	28.80	0.00	0.13	2.85	1.00	1.00	0.00	36.83	52.28	0.00	6,351.8	0.0	3046.03	1375.73	4,421.76
5	70.0	36.69 22.979	28.80	0.00	0.14	2.82	1.00	1.00	0.00	34.87	52.28	0.00	6,061.8	0.0	3060.98	1476.72	4,537.70
6	90.0	38.68 18.124	22.12	0.00	0.12	2.88	1.00	1.00	0.00	27.48	52.28	0.00	4,743.9	0.0	2600.96	1556.95	4,157.92
7	110.0	40.35 22.277	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.80	52.28	0.00	4,660.5	0.0	3013.00	1624.14	4,637.14
8	130.0	41.80 16.435	18.57	0.00	0.14	2.81	1.00	1.00	0.00	25.12	52.28	0.00	4,222.7	0.0	2505.26	1682.28	4,187.53
9	150.0	43.07 14.389	15.02	0.00	0.14	2.80	1.00	1.00	0.00	22.10	52.28	0.00	3,778.0	0.0	2267.08	1733.73	4,000.80
10	170.0	44.22 11.955	15.02	0.00	0.16	2.73	1.00	1.00	0.00	19.70	50.86	0.00	3,354.5	0.0	2022.15	1725.44	3,747.59
11	190.0	45.27 9.330	11.69	0.00	0.17	2.71	1.00	1.00	0.00	15.85	46.61	0.00	2,753.7	0.0	1653.29	1598.71	3,252.00
12	210.0	46.24 8.511	9.58	0.00	0.17	2.69	1.00	1.00	0.00	13.98	40.65	0.00	2,595.9	0.0	1477.41	1452.05	2,929.45
13	230.0	47.13 8.511	9.58	0.00	0.17	2.69	1.00	1.00	0.00	13.98	31.71	0.00	1,574.4	0.0	1505.97	1203.82	2,709.80
14	245.0	47.76 4.528	4.79	0.00	0.18	2.67	1.00	1.00	0.00	7.26	10.97	0.00	717.3	0.0	787.78	434.59	1,222.38
													56,154.3	0.0			48,567.13

Load Case: 1.2D + 1.0W 60° Wind

1.2D + 1.0W 120 mph Wind at 60° From Face

Wind Load Factor: 1.00
 Dead Load Factor: 1.20
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

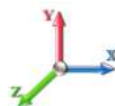
Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	26.56 40.001	28.80	0.00	0.14	2.81	0.80	1.00	0.00	43.90	52.28	0.00	8,433.6	0.0	2787.06	1069.12	3,856.17
2	25.0	29.54 15.825	14.40	0.00	0.13	2.85	0.80	1.00	0.00	18.55	26.14	0.00	3,604.8	0.0	1325.29	594.47	1,919.76
3	35.0	31.71 15.237	14.40	0.00	0.13	2.83	0.80	1.00	0.00	18.10	26.14	0.00	3,301.3	0.0	1382.26	638.11	2,020.37
4	50.0	34.18 25.059	28.80	0.00	0.13	2.85	0.80	1.00	0.00	31.82	52.28	0.00	6,351.8	0.0	2631.54	1375.73	4,007.28
5	70.0	36.69 22.979	28.80	0.00	0.14	2.82	0.80	1.00	0.00	30.27	52.28	0.00	6,061.8	0.0	2657.53	1476.72	4,134.25
6	90.0	38.68 18.124	22.12	0.00	0.12	2.88	0.80	1.00	0.00	23.85	52.28	0.00	4,743.9	0.0	2257.86	1556.95	3,814.81
7	110.0	40.35 22.277	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.35	52.28	0.00	4,660.5	0.0	2590.91	1624.14	4,215.05
8	130.0	41.80 16.435	18.57	0.00	0.14	2.81	0.80	1.00	0.00	21.84	52.28	0.00	4,222.7	0.0	2177.47	1682.28	3,859.75
9	150.0	43.07 14.389	15.02	0.00	0.14	2.80	0.80	1.00	0.00	19.22	52.28	0.00	3,778.0	0.0	1971.83	1733.73	3,705.56
10	170.0	44.22 11.955	15.02	0.00	0.16	2.73	0.80	1.00	0.00	17.31	50.86	0.00	3,354.5	0.0	1776.67	1725.44	3,502.11
11	190.0	45.27 9.330	11.69	0.00	0.17	2.71	0.80	1.00	0.00	13.99	46.61	0.00	2,753.7	0.0	1458.71	1598.71	3,057.42
12	210.0	46.24 8.511	9.58	0.00	0.17	2.69	0.80	1.00	0.00	12.27	40.65	0.00	2,595.9	0.0	1297.46	1452.05	2,749.51
13	230.0	47.13 8.511	9.58	0.00	0.17	2.69	0.80	1.00	0.00	12.27	31.71	0.00	1,574.4	0.0	1322.55	1203.82	2,526.37
14	245.0	47.76 4.528	4.79	0.00	0.18	2.67	0.80	1.00	0.00	6.36	10.97	0.00	717.3	0.0	689.57	434.59	1,124.16
													56,154.3	0.0			44,492.56

Section Forces

Structure: FL10337-A-SBA
 Site Name: Truett/Ft. White
 Height: 250.00 (ft)
 Base Elev: 0.000 (ft)
 Gh: 0.85

Topography: 1

Code: EIA/TIA-222-H
 Exposure: C
 Crest Height: 0.00
 Site Class: D - Stiff Soil
 Struct Class: II

9/22/2021

 Page: 8



Load Case: 1.2D + 1.0W 90° Wind

1.2D + 1.0W 120 mph Wind at 90° From Face

Wind Load Factor: 1.00
 Dead Load Factor: 1.20
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	26.56 40.001	28.80	0.00	0.14	2.81	0.85	1.00	0.00	45.90	52.28	0.00	8,433.6	0.0	2914.03	1069.12	3,983.14
2	25.0	29.54 15.825	14.40	0.00	0.13	2.85	0.85	1.00	0.00	19.34	26.14	0.00	3,604.8	0.0	1381.83	594.47	1,976.30
3	35.0	31.71 15.237	14.40	0.00	0.13	2.83	0.85	1.00	0.00	18.86	26.14	0.00	3,301.3	0.0	1440.44	638.11	2,078.55
4	50.0	34.18 25.059	28.80	0.00	0.13	2.85	0.85	1.00	0.00	33.07	52.28	0.00	6,351.8	0.0	2735.16	1375.73	4,110.90
5	70.0	36.69 22.979	28.80	0.00	0.14	2.82	0.85	1.00	0.00	31.42	52.28	0.00	6,061.8	0.0	2758.39	1476.72	4,235.11
6	90.0	38.68 18.124	22.12	0.00	0.12	2.88	0.85	1.00	0.00	24.76	52.28	0.00	4,743.9	0.0	2343.63	1556.95	3,900.59
7	110.0	40.35 22.277	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.46	52.28	0.00	4,660.5	0.0	2696.43	1624.14	4,320.57
8	130.0	41.80 16.435	18.57	0.00	0.14	2.81	0.85	1.00	0.00	22.66	52.28	0.00	4,222.7	0.0	2259.42	1682.28	3,941.69
9	150.0	43.07 14.389	15.02	0.00	0.14	2.80	0.85	1.00	0.00	19.94	52.28	0.00	3,778.0	0.0	2045.64	1733.73	3,779.37
10	170.0	44.22 11.955	15.02	0.00	0.16	2.73	0.85	1.00	0.00	17.90	50.86	0.00	3,354.5	0.0	1838.04	1725.44	3,563.48
11	190.0	45.27 9.330	11.69	0.00	0.17	2.71	0.85	1.00	0.00	14.45	46.61	0.00	2,753.7	0.0	1507.35	1598.71	3,106.06
12	210.0	46.24 8.511	9.58	0.00	0.17	2.69	0.85	1.00	0.00	12.70	40.65	0.00	2,595.9	0.0	1342.45	1452.05	2,794.49
13	230.0	47.13 8.511	9.58	0.00	0.17	2.69	0.85	1.00	0.00	12.70	31.71	0.00	1,574.4	0.0	1368.41	1203.82	2,572.23
14	245.0	47.76 4.528	4.79	0.00	0.18	2.67	0.85	1.00	0.00	6.58	10.97	0.00	717.3	0.0	714.13	434.59	1,148.72
													56,154.3	0.0			45,511.21

Load Case: 0.9D + 1.0W Normal Wind

0.9D + 1.0W 120 mph Wind at Normal To Face

Wind Load Factor: 1.00
 Dead Load Factor: 0.90
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

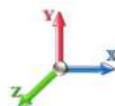
Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	26.56 40.001	28.80	0.00	0.14	2.81	1.00	1.00	0.00	51.90	52.28	0.00	6,325.2	0.0	3294.94	1069.12	4,364.05
2	25.0	29.54 15.825	14.40	0.00	0.13	2.85	1.00	1.00	0.00	21.71	26.14	0.00	2,703.6	0.0	1551.44	594.47	2,145.91
3	35.0	31.71 15.237	14.40	0.00	0.13	2.83	1.00	1.00	0.00	21.15	26.14	0.00	2,476.0	0.0	1614.99	638.11	2,253.10
4	50.0	34.18 25.059	28.80	0.00	0.13	2.85	1.00	1.00	0.00	36.83	52.28	0.00	4,763.9	0.0	3046.03	1375.73	4,421.76
5	70.0	36.69 22.979	28.80	0.00	0.14	2.82	1.00	1.00	0.00	34.87	52.28	0.00	4,546.3	0.0	3060.98	1476.72	4,537.70
6	90.0	38.68 18.124	22.12	0.00	0.12	2.88	1.00	1.00	0.00	27.48	52.28	0.00	3,557.9	0.0	2600.96	1556.95	4,157.92
7	110.0	40.35 22.277	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.80	52.28	0.00	3,495.4	0.0	3013.00	1624.14	4,637.14
8	130.0	41.80 16.435	18.57	0.00	0.14	2.81	1.00	1.00	0.00	25.12	52.28	0.00	3,167.0	0.0	2505.26	1682.28	4,187.53
9	150.0	43.07 14.389	15.02	0.00	0.14	2.80	1.00	1.00	0.00	22.10	52.28	0.00	2,833.5	0.0	2267.08	1733.73	4,000.80
10	170.0	44.22 11.955	15.02	0.00	0.16	2.73	1.00	1.00	0.00	19.70	50.86	0.00	2,515.9	0.0	2022.15	1725.44	3,747.59
11	190.0	45.27 9.330	11.69	0.00	0.17	2.71	1.00	1.00	0.00	15.85	46.61	0.00	2,065.3	0.0	1653.29	1598.71	3,252.00
12	210.0	46.24 8.511	9.58	0.00	0.17	2.69	1.00	1.00	0.00	13.98	40.65	0.00	1,946.9	0.0	1477.41	1452.05	2,929.45
13	230.0	47.13 8.511	9.58	0.00	0.17	2.69	1.00	1.00	0.00	13.98	31.71	0.00	1,180.8	0.0	1505.97	1203.82	2,709.80
14	245.0	47.76 4.528	4.79	0.00	0.18	2.67	1.00	1.00	0.00	7.26	10.97	0.00	538.0	0.0	787.78	434.59	1,222.38
													42,115.8	0.0			48,567.13

Section Forces

Structure: FL10337-A-SBA
 Site Name: Truett/Ft. White
 Height: 250.00 (ft)
 Base Elev: 0.000 (ft)
 Gh: 0.85

Topography: 1

Code: E IA/TIA-222-H
 Exposure: C
 Crest Height: 0.00
 Site Class: D - Stiff Soil
 Struct Class: II

9/22/2021

 Page: 9



Load Case: 0.9D + 1.0W 60° Wind

0.9D + 1.0W 120 mph Wind at 60° From Face

Wind Load Factor: 1.00
 Dead Load Factor: 0.90
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	26.56	40.001	28.80	0.00	0.14	2.81	0.80	1.00	0.00	43.90	52.28	0.00	6,325.2	0.0	2787.06	1069.12	3,856.17
2	25.0	29.54	15.825	14.40	0.00	0.13	2.85	0.80	1.00	0.00	18.55	26.14	0.00	2,703.6	0.0	1325.29	594.47	1,919.76
3	35.0	31.71	15.237	14.40	0.00	0.13	2.83	0.80	1.00	0.00	18.10	26.14	0.00	2,476.0	0.0	1382.26	638.11	2,020.37
4	50.0	34.18	25.059	28.80	0.00	0.13	2.85	0.80	1.00	0.00	31.82	52.28	0.00	4,763.9	0.0	2631.54	1375.73	4,007.28
5	70.0	36.69	22.979	28.80	0.00	0.14	2.82	0.80	1.00	0.00	30.27	52.28	0.00	4,546.3	0.0	2657.53	1476.72	4,134.25
6	90.0	38.68	18.124	22.12	0.00	0.12	2.88	0.80	1.00	0.00	23.85	52.28	0.00	3,557.9	0.0	2257.86	1556.95	3,814.81
7	110.0	40.35	22.277	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.35	52.28	0.00	3,495.4	0.0	2590.91	1624.14	4,215.05
8	130.0	41.80	16.435	18.57	0.00	0.14	2.81	0.80	1.00	0.00	21.84	52.28	0.00	3,167.0	0.0	2177.47	1682.28	3,859.75
9	150.0	43.07	14.389	15.02	0.00	0.14	2.80	0.80	1.00	0.00	19.22	52.28	0.00	2,833.5	0.0	1971.83	1733.73	3,705.56
10	170.0	44.22	11.955	15.02	0.00	0.16	2.73	0.80	1.00	0.00	17.31	50.86	0.00	2,515.9	0.0	1776.67	1725.44	3,502.11
11	190.0	45.27	9.330	11.69	0.00	0.17	2.71	0.80	1.00	0.00	13.99	46.61	0.00	2,065.3	0.0	1458.71	1598.71	3,057.42
12	210.0	46.24	8.511	9.58	0.00	0.17	2.69	0.80	1.00	0.00	12.27	40.65	0.00	1,946.9	0.0	1297.46	1452.05	2,749.51
13	230.0	47.13	8.511	9.58	0.00	0.17	2.69	0.80	1.00	0.00	12.27	31.71	0.00	1,180.8	0.0	1322.55	1203.82	2,526.37
14	245.0	47.76	4.528	4.79	0.00	0.18	2.67	0.80	1.00	0.00	6.36	10.97	0.00	538.0	0.0	689.57	434.59	1,124.16
														42,115.8	0.0	44,492.56		

Load Case: 0.9D + 1.0W 90° Wind

0.9D + 1.0W 120 mph Wind at 90° From Face

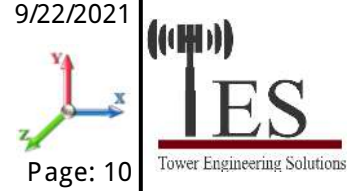
Wind Load Factor: 1.00
 Dead Load Factor: 0.90
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	26.56	40.001	28.80	0.00	0.14	2.81	0.85	1.00	0.00	45.90	52.28	0.00	6,325.2	0.0	2914.03	1069.12	3,983.14
2	25.0	29.54	15.825	14.40	0.00	0.13	2.85	0.85	1.00	0.00	19.34	26.14	0.00	2,703.6	0.0	1381.83	594.47	1,976.30
3	35.0	31.71	15.237	14.40	0.00	0.13	2.83	0.85	1.00	0.00	18.86	26.14	0.00	2,476.0	0.0	1440.44	638.11	2,078.55
4	50.0	34.18	25.059	28.80	0.00	0.13	2.85	0.85	1.00	0.00	33.07	52.28	0.00	4,763.9	0.0	2735.16	1375.73	4,110.90
5	70.0	36.69	22.979	28.80	0.00	0.14	2.82	0.85	1.00	0.00	31.42	52.28	0.00	4,546.3	0.0	2758.39	1476.72	4,235.11
6	90.0	38.68	18.124	22.12	0.00	0.12	2.88	0.85	1.00	0.00	24.76	52.28	0.00	3,557.9	0.0	2343.63	1556.95	3,900.59
7	110.0	40.35	22.277	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.46	52.28	0.00	3,495.4	0.0	2696.43	1624.14	4,320.57
8	130.0	41.80	16.435	18.57	0.00	0.14	2.81	0.85	1.00	0.00	22.66	52.28	0.00	3,167.0	0.0	2259.42	1682.28	3,941.69
9	150.0	43.07	14.389	15.02	0.00	0.14	2.80	0.85	1.00	0.00	19.94	52.28	0.00	2,833.5	0.0	2045.64	1733.73	3,779.37
10	170.0	44.22	11.955	15.02	0.00	0.16	2.73	0.85	1.00	0.00	17.90	50.86	0.00	2,515.9	0.0	1838.04	1725.44	3,563.48
11	190.0	45.27	9.330	11.69	0.00	0.17	2.71	0.85	1.00	0.00	14.45	46.61	0.00	2,065.3	0.0	1507.35	1598.71	3,106.06
12	210.0	46.24	8.511	9.58	0.00	0.17	2.69	0.85	1.00	0.00	12.70	40.65	0.00	1,946.9	0.0	1342.45	1452.05	2,794.49
13	230.0	47.13	8.511	9.58	0.00	0.17	2.69	0.85	1.00	0.00	12.70	31.71	0.00	1,180.8	0.0	1368.41	1203.82	2,572.23
14	245.0	47.76	4.528	4.79	0.00	0.18	2.67	0.85	1.00	0.00	6.58	10.97	0.00	538.0	0.0	714.13	434.59	1,148.72
														42,115.8	0.0	45,511.21		

Section Forces

Structure: FL10337-A-SBA	Code: E IA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 10



Load Case: 1.2D + 1.0Di + 1.0Wi Normal Wind	1.2D + 1.0Di + 1.0Wi 30 mph Wind at Normal From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 1.00	Ice Importance Factor: 1.00

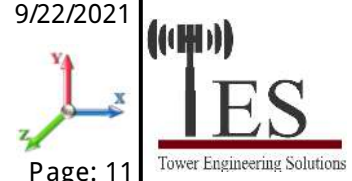
Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	1.66	40.001	34.36	5.56	0.15	2.77	1.00	1.00	0.22	59.50	59.68	1.48	9,725.8	1292.1	232.64	80.90	313.54
2	25.0	1.85	15.825	17.19	2.79	0.14	2.80	1.00	1.00	0.24	25.57	30.19	0.81	4,173.7	568.9	112.40	45.68	158.09
3	35.0	1.98	15.237	17.21	2.82	0.15	2.79	1.00	1.00	0.25	25.00	30.33	0.84	3,875.4	574.0	117.37	49.30	166.67
4	50.0	2.14	25.059	34.39	5.60	0.14	2.80	1.00	1.00	0.26	44.56	60.97	1.74	7,475.9	1124.1	226.28	106.98	333.26
5	70.0	2.29	22.979	34.27	5.47	0.15	2.76	1.00	1.00	0.27	42.44	61.27	1.80	7,155.1	1093.3	228.46	115.43	343.89
6	90.0	2.42	18.124	27.41	5.29	0.14	2.82	1.00	1.00	0.28	33.65	61.50	1.84	5,758.5	1014.6	194.93	122.44	317.37
7	110.0	2.52	22.277	28.35	6.23	0.17	2.69	1.00	1.00	0.28	38.44	61.68	1.88	5,775.6	1115.1	221.46	127.77	349.24
8	130.0	2.61	16.435	24.39	5.82	0.16	2.72	1.00	1.00	0.29	30.31	61.84	1.91	5,220.1	997.3	183.32	132.89	316.21
9	150.0	2.69	14.389	20.42	5.40	0.17	2.71	1.00	1.00	0.29	26.02	61.98	1.94	4,722.8	944.8	161.36	137.28	298.64
10	170.0	2.76	11.955	20.66	5.64	0.19	2.62	1.00	1.00	0.29	23.80	59.95	1.96	4,257.2	902.7	146.37	135.63	282.00
11	190.0	2.83	9.330	16.98	5.29	0.21	2.57	1.00	1.00	0.30	19.11	53.56	1.99	3,561.3	807.6	118.17	122.56	240.72
12	210.0	2.89	8.511	14.62	5.04	0.22	2.53	1.00	1.00	0.30	16.96	46.87	2.01	3,307.1	711.2	105.62	112.11	217.73
13	230.0	2.95	8.511	14.67	5.09	0.22	2.53	1.00	1.00	0.30	16.99	36.77	2.02	2,184.4	610.0	107.78	94.38	202.16
14	245.0	2.99	4.528	7.45	2.66	0.23	2.51	1.00	1.00	0.31	8.85	12.91	0.81	967.3	249.9	56.34	34.77	91.11
														68,160.1	12005.8			3,630.62

Load Case: 1.2D + 1.0Di + 1.0Wi 60° Wind	1.2D + 1.0Di + 1.0Wi 30 mph Wind at 60° From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 1.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	1.66	40.001	34.36	5.56	0.15	2.77	0.80	1.00	0.22	51.50	59.68	1.48	9,725.8	1292.1	201.36	80.90	282.26
2	25.0	1.85	15.825	17.19	2.79	0.14	2.80	0.80	1.00	0.24	22.40	30.19	0.81	4,173.7	568.9	98.49	45.68	144.17
3	35.0	1.98	15.237	17.21	2.82	0.15	2.79	0.80	1.00	0.25	21.95	30.33	0.84	3,875.4	574.0	103.06	49.30	152.36
4	50.0	2.14	25.059	34.39	5.60	0.14	2.80	0.80	1.00	0.26	39.55	60.97	1.74	7,475.9	1124.1	200.83	106.98	307.80
5	70.0	2.29	22.979	34.27	5.47	0.15	2.76	0.80	1.00	0.27	37.84	61.27	1.80	7,155.1	1093.3	203.72	115.43	319.15
6	90.0	2.42	18.124	27.41	5.29	0.14	2.82	0.80	1.00	0.28	30.02	61.50	1.84	5,758.5	1014.6	173.93	122.44	296.37
7	110.0	2.52	22.277	28.35	6.23	0.17	2.69	0.80	1.00	0.28	33.99	61.68	1.88	5,775.6	1115.1	195.80	127.77	323.57
8	130.0	2.61	16.435	24.39	5.82	0.16	2.72	0.80	1.00	0.29	27.03	61.84	1.91	5,220.1	997.3	163.44	132.89	296.33
9	150.0	2.69	14.389	20.42	5.40	0.17	2.71	0.80	1.00	0.29	23.14	61.98	1.94	4,722.8	944.8	143.51	137.28	280.80
10	170.0	2.76	11.955	20.66	5.64	0.19	2.62	0.80	1.00	0.29	21.41	59.95	1.96	4,257.2	902.7	131.67	135.63	267.29
11	190.0	2.83	9.330	16.98	5.29	0.21	2.57	0.80	1.00	0.30	17.24	53.56	1.99	3,561.3	807.6	106.63	122.56	229.18
12	210.0	2.89	8.511	14.62	5.04	0.22	2.53	0.80	1.00	0.30	15.26	46.87	2.01	3,307.1	711.2	95.02	112.11	207.13
13	230.0	2.95	8.511	14.67	5.09	0.22	2.53	0.80	1.00	0.30	15.29	36.77	2.02	2,184.4	610.0	96.98	94.38	191.36
14	245.0	2.99	4.528	7.45	2.66	0.23	2.51	0.80	1.00	0.31	7.94	12.91	0.81	967.3	249.9	50.58	34.77	85.35
														68,160.1	12005.8			3,383.13

Section Forces

Structure: FL10337-A-SBA	Code: E IA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 11



Load Case: 1.2D + 1.0Di + 1.0Wi 90° Wind	1.2D + 1.0Di + 1.0Wi 30 mph Wind at 90° From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 1.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	1.66 40.001	34.36	5.56	0.15	2.77	0.85	1.00	0.22	53.50	59.68	1.48	9,725.8	1292.1	209.18	80.90	290.08
2	25.0	1.85 15.825	17.19	2.79	0.14	2.80	0.85	1.00	0.24	23.20	30.19	0.81	4,173.7	568.9	101.97	45.68	147.65
3	35.0	1.98 15.237	17.21	2.82	0.15	2.79	0.85	1.00	0.25	22.71	30.33	0.84	3,875.4	574.0	106.64	49.30	155.94
4	50.0	2.14 25.059	34.39	5.60	0.14	2.80	0.85	1.00	0.26	40.80	60.97	1.74	7,475.9	1124.1	207.19	106.98	314.17
5	70.0	2.29 22.979	34.27	5.47	0.15	2.76	0.85	1.00	0.27	38.99	61.27	1.80	7,155.1	1093.3	209.90	115.43	325.33
6	90.0	2.42 18.124	27.41	5.29	0.14	2.82	0.85	1.00	0.28	30.93	61.50	1.84	5,758.5	1014.6	179.18	122.44	301.62
7	110.0	2.52 22.277	28.35	6.23	0.17	2.69	0.85	1.00	0.28	35.10	61.68	1.88	5,775.6	1115.1	202.21	127.77	329.99
8	130.0	2.61 16.435	24.39	5.82	0.16	2.72	0.85	1.00	0.29	27.85	61.84	1.91	5,220.1	997.3	168.41	132.89	301.30
9	150.0	2.69 14.389	20.42	5.40	0.17	2.71	0.85	1.00	0.29	23.86	61.98	1.94	4,722.8	944.8	147.98	137.28	285.26
10	170.0	2.76 11.955	20.66	5.64	0.19	2.62	0.85	1.00	0.29	22.01	59.95	1.96	4,257.2	902.7	135.34	135.63	270.97
11	190.0	2.83 9.330	16.98	5.29	0.21	2.57	0.85	1.00	0.30	17.71	53.56	1.99	3,561.3	807.6	109.51	122.56	232.07
12	210.0	2.89 8.511	14.62	5.04	0.22	2.53	0.85	1.00	0.30	15.69	46.87	2.01	3,307.1	711.2	97.67	112.11	209.78
13	230.0	2.95 8.511	14.67	5.09	0.22	2.53	0.85	1.00	0.30	15.71	36.77	2.02	2,184.4	610.0	99.68	94.38	194.06
14	245.0	2.99 4.528	7.45	2.66	0.23	2.51	0.85	1.00	0.31	8.17	12.91	0.81	967.3	249.9	52.02	34.77	86.79
													68,160.1	12005.8			3,445.00

Load Case: 1.0D + 1.0W Normal Wind	1.0D + 1.0W 60 mph Wind at Normal To Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.00	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

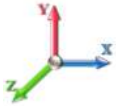
Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	6.64 40.001	28.80	0.00	0.14	2.81	1.00	1.00	0.00	56.24	52.28	0.00	7,028.0	0.0	892.51	267.28	1,159.79
2	25.0	7.38 15.825	14.40	0.00	0.13	2.85	1.00	1.00	0.00	23.81	26.14	0.00	3,004.0	0.0	425.25	148.62	573.87
3	35.0	7.93 15.237	14.40	0.00	0.13	2.83	1.00	1.00	0.00	23.14	26.14	0.00	2,751.1	0.0	441.72	159.53	601.25
4	50.0	8.54 25.059	28.80	0.00	0.13	2.85	1.00	1.00	0.00	40.65	52.28	0.00	5,293.2	0.0	840.51	343.93	1,184.45
5	70.0	9.17 22.979	28.80	0.00	0.14	2.82	1.00	1.00	0.00	38.42	52.28	0.00	5,051.5	0.0	843.25	369.18	1,212.43
6	90.0	9.67 18.124	22.12	0.00	0.12	2.88	1.00	1.00	0.00	30.63	52.28	0.00	3,953.2	0.0	724.77	389.24	1,114.01
7	110.0	10.09 22.277	22.12	0.00	0.15	2.76	1.00	1.00	0.00	34.84	52.28	0.00	3,883.7	0.0	825.09	406.03	1,231.12
8	130.0	10.45 16.435	18.57	0.00	0.14	2.81	1.00	1.00	0.00	26.96	52.28	0.00	3,518.9	0.0	672.07	420.57	1,092.64
9	150.0	10.77 14.389	15.02	0.00	0.14	2.80	1.00	1.00	0.00	22.90	52.28	0.00	3,148.4	0.0	587.46	433.43	1,020.90
10	170.0	11.06 11.955	15.02	0.00	0.16	2.73	1.00	1.00	0.00	20.50	50.86	0.00	2,795.4	0.0	526.18	431.36	957.54
11	190.0	11.32 9.330	11.69	0.00	0.17	2.71	1.00	1.00	0.00	15.99	46.61	0.00	2,294.8	0.0	416.73	399.68	816.40
12	210.0	11.56 8.511	9.58	0.00	0.17	2.69	1.00	1.00	0.00	13.98	40.65	0.00	2,163.2	0.0	369.35	363.01	732.36
13	230.0	11.78 8.511	9.58	0.00	0.17	2.69	1.00	1.00	0.00	13.98	31.71	0.00	1,312.0	0.0	376.49	300.96	677.45
14	245.0	11.94 4.528	4.79	0.00	0.18	2.67	1.00	1.00	0.00	7.26	10.97	0.00	597.8	0.0	196.95	108.65	305.59
													46,795.3	0.0			12,679.80

Section Forces

Structure: FL10337-A-SBA
 Site Name: Truett/Ft. White
 Height: 250.00 (ft)
 Base Elev: 0.000 (ft)
 Gh: 0.85

Topography: 1

Code: EIA/TIA-222-H
 Exposure: C
 Crest Height: 0.00
 Site Class: D - Stiff Soil
 Struct Class: II

9/22/2021

 Page: 12



Load Case: 1.0D + 1.0W 60° Wind

1.0D + 1.0W 60 mph Wind at 60° From Face

Wind Load Factor: 1.00
 Dead Load Factor: 1.00
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	6.64	40.001	28.80	0.00	0.14	2.81	0.80	1.00	0.00	48.24	52.28	0.00	7,028.0	0.0	765.54	267.28	1,032.82
2	25.0	7.38	15.825	14.40	0.00	0.13	2.85	0.80	1.00	0.00	20.64	26.14	0.00	3,004.0	0.0	368.72	148.62	517.33
3	35.0	7.93	15.237	14.40	0.00	0.13	2.83	0.80	1.00	0.00	20.09	26.14	0.00	2,751.1	0.0	383.54	159.53	543.07
4	50.0	8.54	25.059	28.80	0.00	0.13	2.85	0.80	1.00	0.00	35.64	52.28	0.00	5,293.2	0.0	736.89	343.93	1,080.82
5	70.0	9.17	22.979	28.80	0.00	0.14	2.82	0.80	1.00	0.00	33.83	52.28	0.00	5,051.5	0.0	742.39	369.18	1,111.57
6	90.0	9.67	18.124	22.12	0.00	0.12	2.88	0.80	1.00	0.00	27.00	52.28	0.00	3,953.2	0.0	639.00	389.24	1,028.23
7	110.0	10.09	22.277	22.12	0.00	0.15	2.76	0.80	1.00	0.00	30.38	52.28	0.00	3,883.7	0.0	719.57	406.03	1,125.60
8	130.0	10.45	16.435	18.57	0.00	0.14	2.81	0.80	1.00	0.00	23.67	52.28	0.00	3,518.9	0.0	590.13	420.57	1,010.70
9	150.0	10.77	14.389	15.02	0.00	0.14	2.80	0.80	1.00	0.00	20.03	52.28	0.00	3,148.4	0.0	513.65	433.43	947.08
10	170.0	11.06	11.955	15.02	0.00	0.16	2.73	0.80	1.00	0.00	18.11	50.86	0.00	2,795.4	0.0	464.81	431.36	896.17
11	190.0	11.32	9.330	11.69	0.00	0.17	2.71	0.80	1.00	0.00	14.12	46.61	0.00	2,294.8	0.0	368.08	399.68	767.76
12	210.0	11.56	8.511	9.58	0.00	0.17	2.69	0.80	1.00	0.00	12.27	40.65	0.00	2,163.2	0.0	324.37	363.01	687.38
13	230.0	11.78	8.511	9.58	0.00	0.17	2.69	0.80	1.00	0.00	12.27	31.71	0.00	1,312.0	0.0	330.64	300.96	631.59
14	245.0	11.94	4.528	4.79	0.00	0.18	2.67	0.80	1.00	0.00	6.36	10.97	0.00	597.8	0.0	172.39	108.65	281.04
														46,795.3	0.0			11,661.16

Load Case: 1.0D + 1.0W 90° Wind

1.0D + 1.0W 60 mph Wind at 90° From Face

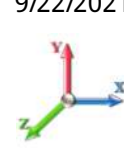
Wind Load Factor: 1.00
 Dead Load Factor: 1.00
 Ice Dead Load Factor: 0.00

Wind Importance Factor: 1.00
 Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	6.64	40.001	28.80	0.00	0.14	2.81	0.85	1.00	0.00	50.24	52.28	0.00	7,028.0	0.0	797.28	267.28	1,064.56
2	25.0	7.38	15.825	14.40	0.00	0.13	2.85	0.85	1.00	0.00	21.43	26.14	0.00	3,004.0	0.0	382.85	148.62	531.47
3	35.0	7.93	15.237	14.40	0.00	0.13	2.83	0.85	1.00	0.00	20.85	26.14	0.00	2,751.1	0.0	398.09	159.53	557.61
4	50.0	8.54	25.059	28.80	0.00	0.13	2.85	0.85	1.00	0.00	36.89	52.28	0.00	5,293.2	0.0	762.80	343.93	1,106.73
5	70.0	9.17	22.979	28.80	0.00	0.14	2.82	0.85	1.00	0.00	34.98	52.28	0.00	5,051.5	0.0	767.60	369.18	1,136.78
6	90.0	9.67	18.124	22.12	0.00	0.12	2.88	0.85	1.00	0.00	27.91	52.28	0.00	3,953.2	0.0	660.44	389.24	1,049.68
7	110.0	10.09	22.277	22.12	0.00	0.15	2.76	0.85	1.00	0.00	31.49	52.28	0.00	3,883.7	0.0	745.95	406.03	1,151.98
8	130.0	10.45	16.435	18.57	0.00	0.14	2.81	0.85	1.00	0.00	24.49	52.28	0.00	3,518.9	0.0	610.61	420.57	1,031.18
9	150.0	10.77	14.389	15.02	0.00	0.14	2.80	0.85	1.00	0.00	20.75	52.28	0.00	3,148.4	0.0	532.10	433.43	965.54
10	170.0	11.06	11.955	15.02	0.00	0.16	2.73	0.85	1.00	0.00	18.71	50.86	0.00	2,795.4	0.0	480.15	431.36	911.51
11	190.0	11.32	9.330	11.69	0.00	0.17	2.71	0.85	1.00	0.00	14.59	46.61	0.00	2,294.8	0.0	380.24	399.68	779.92
12	210.0	11.56	8.511	9.58	0.00	0.17	2.69	0.85	1.00	0.00	12.70	40.65	0.00	2,163.2	0.0	335.61	363.01	698.62
13	230.0	11.78	8.511	9.58	0.00	0.17	2.69	0.85	1.00	0.00	12.70	31.71	0.00	1,312.0	0.0	342.10	300.96	643.06
14	245.0	11.94	4.528	4.79	0.00	0.18	2.67	0.85	1.00	0.00	6.58	10.97	0.00	597.8	0.0	178.53	108.65	287.18
														46,795.3	0.0			11,915.82

Force/Stress Compression Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 13



LEG MEMBERS

Top Sect	Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
						X	Y	Z				
1	20	PX - 8" DIA PIPE	-397.48	1.2D + 1.0W Normal Wind	10.02	50	50	50	20.88	50.00	556.18	71.5 Member X
2	30	PX - 8" DIA PIPE	-374.96	1.2D + 1.0W Normal Wind	9.64	100	100	100	40.20	50.00	510.21	73.5 Member X
3	40	PX - 8" DIA PIPE	-361.79	1.2D + 1.0W Normal Wind	9.64	100	100	100	40.20	50.00	510.21	70.9 Member X
4	60	PX - 8" DIA PIPE	-346.92	1.2D + 1.0W Normal Wind	9.64	100	100	100	40.20	50.00	510.21	68.0 Member X
5	80	PX - 8" DIA PIPE	-318.50	1.2D + 1.0W Normal Wind	9.64	100	100	100	40.20	50.00	510.21	62.4 Member X
6	100	PX - 6" DIA PIPE	-290.11	1.2D + 1.0W Normal Wind	9.64	100	100	100	52.83	50.00	308.23	94.1 Member X
7	120	PX - 6" DIA PIPE	-263.90	1.2D + 1.0W Normal Wind	6.43	100	100	100	35.22	50.00	345.23	76.4 Member X
8	140	PSP - 5" SCH120	-235.00	1.2D + 1.0W Normal Wind	6.43	100	100	100	42.90	50.00	312.71	75.1 Member X
9	160	PSP - 4" SCH160	-205.55	1.2D + 1.0W Normal Wind	6.43	100	100	100	54.51	50.00	239.73	85.7 Member X
10	180	PSP - 4.5 x 0.438	-175.78	1.2D + 1.0W Normal Wind	4.82	100	100	100	40.27	50.00	223.39	78.7 Member X
11	200	PSP - 3" SCHD 160	-144.07	1.2D + 1.0W Normal Wind	4.82	100	100	100	53.07	50.00	154.01	93.5 Member X
12	220	PXX - 2-1/2" DIA PIPE	-107.62	1.2D + 1.0W Normal Wind	4.81	100	100	100	68.42	50.00	128.78	83.6 Member X
13	240	PST - 2-1/2" DIA PIPE	-46.82	1.2D + 1.0W Normal Wind	4.81	100	100	100	60.98	50.00	58.42	80.1 Member X
14	250	PST - 2-1/2" DIA PIPE	-11.55	1.2D + 1.0W Normal Wind	0.38	100	100	100	4.75	50.00	76.55	15.1 Member X

Splices

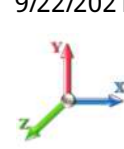
Top Sect	Elev	Load Case	Top Splice				Bottom Splice					
			Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts
1	20	1.2D + 1.0W Normal Wind	382.04	0.00	0.0			1.2D + 1.0W Normal Wind	411.21	0.00		
2	30	1.2D + 1.0W Normal Wind	368.45	0.00	0.0			1.2D + 1.0W Normal Wind	382.04	0.00	3/8 A325	6
3	40	1.2D + 1.0W Normal Wind	355.38	0.00	0.0			1.2D + 1.0W Normal Wind	368.45	0.00		
4	60	1.2D + 1.0W Normal Wind	326.79	0.00	0.0			1.2D + 1.0W Normal Wind	355.38	0.00	3/8 A325	6
5	80	1.2D + 1.0W Normal Wind	298.06	0.00	0.0			1.2D + 1.0W Normal Wind	326.79	0.00	3/8 A325	6
6	100	1.2D + 1.0W Normal Wind	269.74	0.00	0.0			1.2D + 1.0W Normal Wind	298.06	0.00	1/4 A325	6
7	120	1.2D + 1.0W Normal Wind	240.67	0.00	0.0			1.2D + 1.0W Normal Wind	269.74	0.00	1/4 A325	6
8	140	1.2D + 1.0W Normal Wind	211.40	0.00	0.0			1.2D + 1.0W Normal Wind	240.67	0.00	1/4 A325	6
9	160	1.2D + 1.0W Normal Wind	180.59	0.00	0.0			1.2D + 1.0W Normal Wind	211.40	0.00	1/4 A325	6
10	180	1.2D + 1.0W Normal Wind	147.90	0.00	0.0			1.2D + 1.0W Normal Wind	180.59	0.00	1 A325	4
11	200	1.2D + 1.0W Normal Wind	117.86	0.00	0.0			1.2D + 1.0W Normal Wind	147.90	0.00	1 A325	4
12	220	1.2D + 1.0W Normal Wind	52.87	0.00	0.0			1.2D + 1.0W Normal Wind	117.86	0.00	3/4 A325	4
13	240	1.2D + 1.0W Normal Wind	11.63	0.00	0.0			1.2D + 1.0W Normal Wind	52.87	0.00	3/4 A325	4
14	250	1.2D + 1.0Ev + 1.0Eh	0.70	0.00	0.0			1.2D + 1.0W Normal Wind	11.63	0.00	3/4 A325	4

HORIZONTAL MEMBERS

Top Sect	Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
						X	Y	Z								
1	20	SAU - 3X3.5X0.25	-8.04	0.9D + 1.0W 90° Wind	12.00	100	100	100	186.55	36.00	12.83	2	1	34.52	34.80	62.6 Member Z
2	30									0.00	0	0				
3	40									0.00	0	0				
4	60									0.00	0	0				
5	80									0.00	0	0				
6	100									0.00	0	0				
7	120									0.00	0	0				
8	140									0.00	0	0				
9	160									0.00	0	0				
10	180									0.00	0	0				
11	200	SAE - 1.75X1.75X0.1875	-0.80	1.2D + 1.0W 60° Wind	5.00	100	100	100	174.93	36.00	5.80	1	1	13.81	13.05	13.9 Member Z
12	220	SAE - 1.75X1.75X0.25	-0.35	0.9D + 1.0W Normal Wind	5.00	100	100	100	175.95	36.00	7.49	1	1	13.81	17.40	4.6 Member Z
13	240	SAE - 1.75X1.75X0.1875	-0.26	0.9D + 1.0W Normal Wind	5.00	100	100	100	174.93	36.00	5.80	1	1	13.81	13.05	4.5 Member Z

Force/Stress Compression Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 14



HORIZONTAL MEMBERS

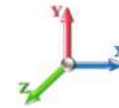
Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %				Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
						X	Y	Z	KL/R								
14	250	SAE - 1.75X1.75X0.1875	-0.59	1.2D + 1.0W Normal Wind	5.00	100	100	100	174.93	36.00	5.80	1	1	13.81	13.05	10.1	Member Z

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %				Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
						X	Y	Z	KL/R								
1	20	SAE - 3X3X0.375	-11.7	1.2D + 1.0W 90° Wind	15.62	50	100	50	185.07	36.00	17.63	2	1	27.62	52.2	66.4	Member Y
2	30	SAU - 3.5X4X0.3125	-8.77	0.9D + 1.0W 90° Wind	24.46	49	49	49	196.99	36.00	16.60	1	1	19.87	26.1	52.9	Member Z
3	40	SAU - 3.5X4X0.25	-8.86	0.9D + 1.0W 90° Wind	23.57	49	49	49	188.86	36.00	14.52	1	1	19.87	20.8	61.0	Member Z
4	60	SAE - 3.5X3.5X0.25	-8.33	0.9D + 1.0W 90° Wind	22.63	49	49	49	191.75	36.00	13.16	1	1	19.87	20.8	63.3	Member Z
5	80	SAU - 3X3.5X0.25	-7.68	0.9D + 1.0W 90° Wind	20.84	48	48	48	190.23	36.00	12.34	1	1	19.87	20.8	62.2	Member Z
6	100	SAE - 3X3X0.25	-6.99	0.9D + 1.0W 90° Wind	19.09	49	49	49	189.59	36.00	11.47	1	1	19.87	20.8	61.0	Member Z
7	120	SAE - 3X3X0.1875	-6.23	0.9D + 1.0W 90° Wind	15.99	48	48	48	154.51	36.00	13.07	1	1	19.87	15.6	47.7	Member Z
8	140	SAE - 2.5X2.5X0.1875	-5.44	1.2D + 1.0W 90° Wind	14.18	48	48	48	164.98	36.00	9.48	1	1	13.81	13.0	57.3	Member Z
9	160	SAE - 2.5X2.5X0.1875	-5.59	1.2D + 1.0W Normal Wind	11.35	48	48	48	132.05	36.00	14.80	1	1	13.81	13.0	42.8	Bolt Bear
10	180	SAE - 2X2X0.1875	-4.60	1.2D + 1.0W Normal Wind	9.96	47	47	47	142.61	36.00	9.99	1	1	13.81	13.0	46.0	Member Z
11	200	SAE - 1.75X1.75X0.1875	-3.35	1.2D + 1.0W 90° Wind	8.27	47	47	47	135.96	36.00	9.60	1	1	13.81	13.0	34.9	Member Z
12	220	SAE - 1.75X1.75X0.25	-7.88	1.2D + 1.0W 90° Wind	6.94	44	44	44	110.59	36.00	17.95	1	1	13.81	17.4	57.0	Bolt Shear
13	240	SAE - 1.75X1.75X0.1875	-4.67	1.2D + 1.0W 90° Wind	6.94	44	44	44	110.12	36.00	13.81	1	1	13.81	13.0	35.8	Bolt Bear
14	250	SAE - 1.75X1.75X0.1875	-3.53	1.2D + 1.0W 90° Wind	6.81	44	44	44	108.64	36.00	14.04	1	1	13.81	13.0	27.1	Bolt Bear

Force/Stress Tension Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 15



LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	20	PX - 8" DIA PIPE	340.65	0.9D + 1.0W 60éWind	50	574.20	59.3	Member
2	30	PX - 8" DIA PIPE	330.29	0.9D + 1.0W 60éWind	50	574.20	57.5	Member
3	40	PX - 8" DIA PIPE	312.87	0.9D + 1.0W 60éWind	50	574.20	54.5	Member
4	60	PX - 8" DIA PIPE	308.16	0.9D + 1.0W 60éWind	50	574.20	53.7	Member
5	80	PX - 8" DIA PIPE	285.26	0.9D + 1.0W 60éWind	50	574.20	49.7	Member
6	100	PX - 6" DIA PIPE	261.97	0.9D + 1.0W 60éWind	50	378.00	69.3	Member
7	120	PX - 6" DIA PIPE	238.29	0.9D + 1.0W 60éWind	50	378.00	63.0	Member
8	140	PSP - 5" SCH120	213.67	0.9D + 1.0W 60éWind	50	357.75	59.7	Member
9	160	PSP - 4" SCH160	188.34	0.9D + 1.0W 60éWind	50	297.90	63.2	Member
10	180	PSP - 4.5 x 0.438	161.00	0.9D + 1.0W 60éWind	50	251.51	64.0	Member
11	200	PSP - 3" SCHD 160	131.80	0.9D + 1.0W 60éWind	50	189.22	69.7	Member
12	220	PXX - 2-1/2" DIA PIPE	103.91	0.9D + 1.0W 60éWind	50	181.35	57.3	Member
13	240	PST - 2-1/2" DIA PIPE	45.64	0.9D + 1.0W 60éWind	50	76.68	59.5	Member
14	250	PST - 2-1/2" DIA PIPE	6.68	0.9D + 1.0W 60éWind	50	76.68	8.7	Member

Splices

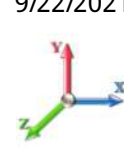
Sect	Top Elev	Top Splice					Bottom Splice					
		Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type
1	20	0.9D + 1.0W 60éWind	328.37	0.00	0.0			0.9D + 1.0W 60éWind	352.2	0.00		
2	30	0.9D + 1.0W 60éWind	317.84	0.00	0.0			0.9D + 1.0W 60éWind	328.3	545.68	60.2	1 3/8 A325 6
3	40	0.9D + 1.0W 60éWind	307.77	0.00	0.0			0.9D + 1.0W 60éWind	317.8	0.00		
4	60	0.9D + 1.0W 60éWind	284.89	0.00	0.0			0.9D + 1.0W 60éWind	307.7	545.68	56.4	1 3/8 A325 6
5	80	0.9D + 1.0W 60éWind	261.62	0.00	0.0			0.9D + 1.0W 60éWind	284.8	545.68	52.2	1 3/8 A325 6
6	100	0.9D + 1.0W 60éWind	238.02	0.00	0.0			0.9D + 1.0W 60éWind	261.6	457.92	57.1	1 1/4 A325 6
7	120	0.9D + 1.0W 60éWind	213.45	0.00	0.0			0.9D + 1.0W 60éWind	238.0	457.92	52.0	1 1/4 A325 6
8	140	0.9D + 1.0W 60éWind	188.14	0.00	0.0			0.9D + 1.0W 60éWind	213.4	457.92	46.6	1 1/4 A325 6
9	160	0.9D + 1.0W 60éWind	160.83	0.00	0.0			0.9D + 1.0W 60éWind	188.1	457.92	41.1	1 1/4 A325 6
10	180	0.9D + 1.0W 60éWind	131.68	0.00	0.0			0.9D + 1.0W 60éWind	160.8	212.04	75.8	1 A325 4
11	200	0.9D + 1.0W 60éWind	104.13	0.00	0.0			0.9D + 1.0W 60éWind	131.6	212.04	62.1	1 A325 4
12	220	0.9D + 1.0W 60éWind	45.53	0.00	0.0			0.9D + 1.0W 60éWind	104.1	120.40	86.5	3/4 A325 4
13	240	0.9D + 1.0W 60éWind	6.62	0.00	0.0			0.9D + 1.0W 60éWind	45.5	120.40	37.8	3/4 A325 4
14	250		0.00	0.00	0.0			0.9D + 1.0W 60éWind	6.62	120.40	5.5	3/4 A325 4

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	20	SAU - 3X3.5X0.25	8.32	0.9D + 1.0W 90éWind	36	44.78	2	1	34.52	34.80	22.68	36.7	Blck Shear
2	30	-			36	0.00	0	0					
3	40	-			36	0.00	0	0					
4	60	-			36	0.00	0	0					
5	80	-			36	0.00	0	0					
6	100	-			36	0.00	0	0					
7	120	-			36	0.00	0	0					
8	140	-			36	0.00	0	0					
9	160	-			36	0.00	0	0					
10	180	-			36	0.00	0	0					
11	200	SAE - 1.75X1.75X0.1875	0.54	0.9D + 1.0W Normal Wi	36	15.64	1	1	13.81	11.09	7.88	6.9	Blck Shear
12	220	SAE - 1.75X1.75X0.25	0.21	1.2D + 1.0W Normal Wi	36	20.31	1	1	13.81	14.79	10.50	2.0	Blck Shear
13	240	SAE - 1.75X1.75X0.1875	0.42	1.2D + 1.0W 60éWind	36	15.64	1	1	13.81	11.09	7.88	5.4	Blck Shear
14	250	SAE - 1.75X1.75X0.1875	0.48	0.9D + 1.0W 60éWind	36	15.64	1	1	13.81	11.09	7.88	6.1	Blck Shear

Force/Stress Tension Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 16



HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
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DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	20	SAE - 3X3X0.375	10.95	0.9D + 1.0W 90° Wind	36	59.66	2	1	27.62	52.20	34.02	39.6	Bolt Shear
2	30	SAU - 3.5X4X0.3125	8.39	0.9D + 1.0W 90° Wind	36	64.49	1	1	19.87	17.94	27.57	46.8	Bolt Bear
3	40	SAU - 3.5X4X0.25	8.62	0.9D + 1.0W 90° Wind	36	51.91	1	1	19.87	14.35	22.05	60.1	Bolt Bear
4	60	SAE - 3.5X3.5X0.25	8.10	0.9D + 1.0W 90° Wind	36	48.00	1	1	19.87	14.35	16.62	56.5	Bolt Bear
5	80	SAU - 3X3.5X0.25	7.51	0.9D + 1.0W 90° Wind	36	43.76	1	1	19.87	14.35	19.34	52.3	Bolt Bear
6	100	SAE - 3X3X0.25	6.81	0.9D + 1.0W 90° Wind	36	39.84	1	1	19.87	14.35	13.90	49.0	Blck Shear
7	120	SAE - 3X3X0.1875	6.07	0.9D + 1.0W 90° Wind	36	30.21	1	1	19.87	10.77	10.42	58.2	Blck Shear
8	140	SAE - 2.5X2.5X0.1875	5.44	0.9D + 1.0W 90° Wind	36	24.84	1	1	13.81	11.09	9.91	54.9	Blck Shear
9	160	SAE - 2.5X2.5X0.1875	4.98	0.9D + 1.0W 90° Wind	36	24.84	1	1	13.81	11.09	9.91	50.2	Blck Shear
10	180	SAE - 2X2X0.1875	4.54	1.2D + 1.0W Normal Wi	36	18.58	1	1	13.81	11.09	7.88	57.6	Blck Shear
11	200	SAE - 1.75X1.75X0.1875	3.91	0.9D + 1.0W 60° Wind	36	15.64	1	1	13.81	11.09	7.88	49.6	Blck Shear
12	220	SAE - 1.75X1.75X0.25	7.75	1.2D + 1.0W 90° Wind	36	20.31	1	1	13.81	14.79	10.50	73.8	Blck Shear
13	240	SAE - 1.75X1.75X0.1875	4.66	1.2D + 1.0W 90° Wind	36	15.64	1	1	13.81	11.09	7.88	59.2	Blck Shear
14	250	SAE - 1.75X1.75X0.1875	3.36	1.2D + 1.0W 90° Wind	36	15.64	1	1	13.81	11.09	7.88	42.7	Blck Shear

Seismic Section Forces

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



Page: 17

Load Case: 1.2D + 1.0Ev + 1.0Eh							
Dead Load Factor	1.20	Sds 0.084	Ss 0.0790	Fa 1.6000	Ke 1.3535	TL 8.0000	
Seismic Load Factor	1.00	Sd1 0.076	S1 0.0480	Fv 2.4000	Kg 0.0000	Cs 0.0300	
Seismic Importance Factor	1.00	W1 23.45	R 3.0000	Vs 1.6735	T 1.2070	f1 0.8285	

Sect #	Elev (ft)	Wz (lb)	Lateral Fsz (lbs)	Vertical Ev (lbs)
1	10.00	7028.0	8.13	118.51
2	25.00	3003.9	8.89	50.65
3	35.00	2751.0	12.45	46.39
4	50.00	5293.2	48.91	89.25
5	70.00	5051.4	72.39	85.18
6	90.00	3953.2	73.00	66.66
7	110.00	3883.7	93.51	65.49
8	130.00	3518.9	102.58	59.34
9	150.00	3148.3	107.10	53.09
10	170.00	3581.4	151.05	60.39
11	190.00	2294.7	96.12	38.69
12	210.00	4043.6	236.96	68.18
13	230.00	1312.0	58.41	22.12
14	245.00	6918.9	603.98	116.67

Load Case: 0.9D + 1.0Ev + 1.0Eh							
Dead Load Factor	0.90	Sds 0.084	Ss 0.0790	Fa 1.6000	Ke 1.3535	TL 8.0000	
Seismic Load Factor	1.00	Sd1 0.076	S1 0.0480	Fv 2.4000	Kg 0.0000	Cs 0.0300	
Seismic Importance Factor	1.00	W1 23.45	R 3.0000	Vs 1.6735	T 1.2070	f1 0.8285	

Sect #	Elev (ft)	Wz (lb)	Lateral Fsz (lbs)	Vertical Ev (lbs)
1	10.00	7028.0	8.13	118.51
2	25.00	3003.9	8.89	50.65
3	35.00	2751.0	12.45	46.39
4	50.00	5293.2	48.91	89.25
5	70.00	5051.4	72.39	85.18
6	90.00	3953.2	73.00	66.66
7	110.00	3883.7	93.51	65.49
8	130.00	3518.9	102.58	59.34
9	150.00	3148.3	107.10	53.09
10	170.00	3581.4	151.05	60.39
11	190.00	2294.7	96.12	38.69
12	210.00	4043.6	236.96	68.18
13	230.00	1312.0	58.41	22.12
14	245.00	6918.9	603.98	116.67

Support Forces Summary

Structure: FL10337-A-SBA
 Site Name: Truett/Ft. White
 Height: 250.00 (ft)
 Base Elev: 0.000 (ft)
 Gh: 0.85

Topography: 1

Code: E IA/TIA-222-H
 Exposure: C
 Crest Height: 0.00
 Site Class: D - Stiff Soil
 Struct Class: II

9/22/2021



Page: 18

Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal Wind	1	0.11	410.31	-37.48	
	1a	11.75	-171.64	-11.85	
	1b	-11.87	-171.73	-11.64	
1.2D + 1.0W 60° Wind	1	-3.71	206.51	-18.60	
	1a	-17.96	206.23	6.09	
	1b	-27.61	-345.80	-15.94	
1.2D + 1.0W 90° Wind	1	-4.56	22.35	-1.87	
	1a	-28.12	345.25	13.82	
	1b	-25.24	-300.66	-11.95	
0.9D + 1.0W Normal Wind	1	0.11	403.91	-37.00	
	1a	12.14	-176.82	-12.09	
	1b	-12.26	-176.89	-11.88	
0.9D + 1.0W 60° Wind	1	-3.72	200.53	-18.13	
	1a	-17.55	200.25	5.84	
	1b	-28.00	-350.58	-16.16	
0.9D + 1.0W 90° Wind	1	-4.58	16.76	-1.41	
	1a	-27.71	338.98	13.58	
	1b	-25.64	-305.54	-12.17	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.01	55.02	-4.46	
	1a	-0.64	13.14	0.01	
	1b	0.63	13.07	0.02	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.28	40.38	-3.08	
	1a	-2.81	40.36	1.30	
	1b	-0.52	0.49	-0.30	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.34	27.10	-1.86	
	1a	-3.56	50.49	1.87	
	1b	-0.35	3.64	-0.01	
1.2D + 1.0Ev + 1.0Eh	1	0.00	36.87	-2.13	
	1a	-0.53	15.51	0.24	
	1b	0.53	15.51	0.24	
0.9D + 1.0Ev + 1.0Eh	1	0.00	31.26	-1.66	
	1a	-0.13	9.94	0.01	
	1b	0.13	9.94	0.01	
1.0D + 1.0W Normal Wind	1	0.03	117.35	-10.78	
	1a	2.09	-30.74	-2.52	
	1b	-2.12	-30.82	-2.47	
1.0D + 1.0W 60° Wind	1	-1.00	65.55	-5.89	
	1a	-5.60	65.48	2.07	
	1b	-6.18	-75.25	-3.57	
1.0D + 1.0W 90° Wind	1	-1.21	18.62	-1.55	
	1a	-8.23	100.89	4.09	
	1b	-5.57	-63.72	-2.54	

Max Reactions

Leg		Overturning	
Max Uplift:	-350.58 (kips)	Moment:	8400.42 (ft-kips)
Max Down:	410.31 (kips)	Total Down:	66.94 (kips)
Max S hear:	37.48 (kips)	Total S hear:	60.98 (kips)

Analysis Summary

Structure: FL10337-A-SBA	Code: EIA/TIA-222-H	9/22/2021
Site Name: Truett/Ft. White	Exposure: C	
Height: 250.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 20



Max Reactions

Leg	Overturning
Max Uplift: -350.58 (kips)	Moment: 8400.42 (ft-kips)
Max Down: 410.31 (kips)	Total Down: 66.94 (kips)
Max Shear: 37.48 (kips)	Total Shear: 60.98 (kips)

Anchor Bolts

Bolt Size (in.): 1.50	Number Bolts: 8	Type: Grout Existing
Yield Strength (Ksi): 50.00	Tensile Strength (Ksi): 65.00	
	Length: 1.50	

Interaction Ratios:

Tensile: 0.65	Compression: OK!
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Max Usages

Max Leg: 94.1% (1.2D + 1.0W Normal Wind - Sect 6)
 Max Diag: 73.8% (1.2D + 1.0W 90° Wind - Sect 12)
 Max Horiz: 62.6% (0.9D + 1.0W 90° Wind - Sect 1)

Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.0Ev + 1.0Eh - Normal To Face	174.81	0.0616	0.0016	0.0539
	210.00	0.1055	0.0022	0.0936
	245.00	0.1719	0.0018	0.1138
	250.00	0.1824	0.0018	0.1300
0.9D + 1.0W 120 mph Wind at 60° From Face	174.81	1.3782	0.0976	1.0910
	210.00	2.2168	0.2035	1.6320
	245.00	3.3467	0.2058	1.9003
	250.00	3.5173	0.2063	1.9895
0.9D + 1.0W 120 mph Wind at 90° From Face	174.81	1.3933	-0.0466	1.1006
	210.00	2.2379	-0.0651	1.5911
	245.00	3.3752	-0.0651	1.9262
	250.00	3.5450	-0.0653	2.0049
0.9D + 1.0W 120 mph Wind at Normal To Face	174.81	1.4429	-0.0349	1.1322
	210.00	2.3141	-0.0443	1.8369
	245.00	3.4868	-0.0439	1.9732
	250.00	3.6623	-0.0439	2.0556
1.0D + 1.0W 60 mph Wind at 60° From Face	174.81	0.3490	0.0129	0.2746
	210.00	0.5603	0.0218	0.4116
	245.00	0.8448	0.0215	0.4769
	250.00	0.8876	0.0216	0.5032
1.0D + 1.0W 60 mph Wind at 90° From Face	174.81	0.3530	-0.0116	0.2777
	210.00	0.5659	-0.0160	0.4007
	245.00	0.8522	-0.0157	0.4847
	250.00	0.8949	-0.0157	0.5057

1.0D + 1.0W 60 mph Wind at Normal To Face	174.81	0.3651	-0.0085	0.2855
	210.00	0.5845	-0.0110	0.4611
	245.00	0.8794	-0.0105	0.4975
	250.00	0.9236	-0.0105	0.5199

1.2D + 1.0Di + 1.0Wi 30 mph Wind at 60° From Face	174.81	0.0995	0.0026	0.0775
	210.00	0.1589	0.0035	0.1163
	245.00	0.2387	0.0027	0.1376
	250.00	0.2510	0.0027	0.1465

1.2D + 1.0Di + 1.0Wi 30 mph Wind at 90° From Face	174.81	0.1009	-0.0031	0.0792
	210.00	0.1614	-0.0040	0.1138
	245.00	0.2424	-0.0034	0.1397
	250.00	0.2548	-0.0034	0.1518

1.2D + 1.0Di + 1.0Wi 30 mph Wind at Normal From Face	174.81	0.1038	-0.0022	0.0810
	210.00	0.1658	-0.0027	0.1306
	245.00	0.2491	-0.0023	0.1430
	250.00	0.2616	-0.0023	0.1565

1.2D + 1.0Ev + 1.0Eh - Normal To Face	174.81	0.0618	0.0016	0.0541
	210.00	0.1059	0.0022	0.0940
	245.00	0.1727	0.0018	0.1144
	250.00	0.1833	0.0018	0.1308

1.2D + 1.0W 120 mph Wind at 60° From Face	174.81	1.3828	0.0981	1.0959
	210.00	2.2257	0.2046	1.6417
	245.00	3.3625	0.2069	1.9115
	250.00	3.5342	0.2076	2.0031

1.2D + 1.0W 120 mph Wind at 90° From Face	174.81	1.3979	-0.0468	1.1056
	210.00	2.2468	-0.0654	1.6006
	245.00	3.3911	-0.0654	1.9381
	250.00	3.5620	-0.0658	2.0176

1.2D + 1.0W 120 mph Wind at Normal To Face	174.81	1.4477	-0.0350	1.1373
	210.00	2.3232	-0.0446	1.8466
	245.00	3.5031	-0.0441	1.9857
	250.00	3.6796	-0.0442	2.0676
