



Date: **September 2, 2021**

B+T Group
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Subject: **Structural Analysis Report**

Carrier Designation:

Site Number: 9JK2317S
Site Name: JA33XC017

Crown Castle Designation:

BU Number: 870145
Site Name: Lake City (US 41 & I-10)
JDE Job Number: 683137
Work Order Number: 2015046
Order Number: 583050 Rev. 0

Engineering Firm Designation:

B+T Group Project Number: 116502.002.01

Site Data:

2993 NW County Road 25A, Lake City, Columbia County, FL
Latitude 30° 14' 38.6", Longitude -82° 40' 12.2"
500 Foot - Guyed Tower

B+T Group is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

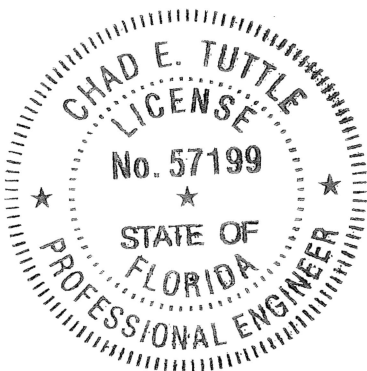
LC5: Proposed Equipment Configuration

Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2020 Florida Building Code 7th Edition. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Mahsa Abdeveis

Respectfully submitted by: B+T Engineering,
Inc. COA: 27496



CHAD TUTTLE, P.E.
B&T ENGINEERING, INC

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Chad E. Tuttle, P.E.

tnxTower Report - version 8.1.1.0

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1) INTRODUCTION

This tower is a 500 ft. Guyed tower mapped by TEP in August of 2008.

The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision: TIA-222-H
Risk Category: II
Wind Speed: 118 mph
Exposure Category: C
Topographic Factor: 1
Service Wind Speed: 60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
286.0	286.0	3	Commscope	FFVV-65C-R3-V1_TMO	2	1-5/8
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
		3	Sabre	C10857001C Mount		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
499.0	509.0	1	Sinclair	SRL-210C-4	1	7/8
	508.0	1	Sinclair	SRL-210C-4	1	1-5/8
494.0	508.0	1	Sinclair	SRL-210C-4	1	1-5/8
	504.0	1	Andrew	DB314		
	502.0	1	Sinclair	SRL-210C-4		
	494.0	1	--	Sector Mount [SM 516-3]		
477.0	477.0	1	--	Side Arm Mount [SO 309-1]	1	1-5/8
464.0	464.0	1	Decibel	DB212-1	1	7/8
446.0	456.0	2	Decibel	DB224	5 1	7/8 1-5/8
		1	Decibel	DB420		
	446.0	1	--	Sector Mount [SM 516-3]		
440.0	440.0	1	Decibel	DB212-1	--	--
420.0	420.0	1	Decibel	DB212-1	2 1	1-1/4 7/8
396.0	402.0	1	Kathrein	OG-4	1	7/8
	396.0	1	--	Sector Mount [SM 516-3]		
314.0	324.0	1	Rfs Celwave	220-6N	2	7/8
		1	Sinclair	SRL-210C-4		
	314.0	2	--	Pirot 6' Side Mount Standoff (1)		
303.0	303.0	1	--	Side Arm Mount [SO 301-1]	--	--

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
295.0	305.0	1	Decibel	DB264-A	2	7/8
	295.0	1	--	Pirot 6' Side Mount Standoff (1)		
	285.0	1	Decibel	DB264-A		
234.0	235.0	1	Nokia	FRBG	10 1 1	1-5/8 1-1/4 1-3/5
		2	Nokia	FXFB		
		2	Nokia	FXFC		
		1	Raycap	RNSDC-7771-PF-48		
	234.0	3	Cellmax Tech.	CMA-BDHH/6521/E0-6		
		3	Commscope	FF-65C-R1		
		1	--	Sector Mount [SM 502-3]		
195.0	195.0	1	Marti Electronics	SC-48	1	5/16
		1	--	Side Arm Mount [SO 601-1]	1	1/2
149.0	149.0	1	Radiowaves	HPD6-11	2	3/8
		1	Ceragon	FIBEAIR RFU-C		
		1	Ceragon	RFU-HP		
		1	Radiowaves	HPLPD2-11		
		2	--	Pipe Mount [PM 601-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Mapping	1536613	CCI Sites
Post Modification Inspection	1956392	CCI Sites
Tower Modification Drawing	7317197	CCI Sites
Post Modification Inspection	7615099	CCI Sites
Foundation Mapping	1341156	CCI Sites
Geotech Report	1535646	CCI Sites
Geotech Report	2336768	CCI Sites
Crown CAD Package	Date: 08/25/2021	CCI Sites

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

3.2) Assumptions

- 1) The tower and structures were maintained in accordance with the - TIA-222 standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P _{allow} (K)	% Capacity	Pass / Fail
T1	500 - 492	Leg	Bent PL 14x1/4"	1	-5.639	123.663	4.6	Pass
T2	492 - 472	Leg	Bent PL 14x1/4"	21	-38.711	123.663	31.3	Pass
T3	472 - 452	Leg	Bent PL 14x1/4"	54	-43.281	123.663	35.0	Pass
T4	452 - 432	Leg	Bent PL 14x1/4"	85	-41.575	123.663	33.6	Pass
T5	432 - 424	Leg	Bent PL 14x1/4"	120	-47.804	123.663	38.7	Pass
T6	424 - 408	Leg	Bent PL 14x1/4"	135	-57.479	123.663	46.5	Pass
T7	408 - 388	Leg	Bent PL 14x1/4"	162	-58.376	123.663	47.2	Pass
T8	388 - 368	Leg	Bent PL 14x3/8"	193	-93.440	209.351	44.6	Pass
T9	368 - 356	Leg	Bent PL 14x5/16"	227	-109.540	175.712	62.3	Pass
T10	356 - 336	Leg	Bent PL 14x5/16"	248	-97.444	175.712	55.5	Pass
T11	336 - 316	Leg	Bent PL 14x5/16"	281	-84.011	175.712	47.8	Pass
T12	316 - 296	Leg	Bent PL 14x5/16"	313	-88.222	175.712	50.2	Pass
T13	296 - 276	Leg	Bent PL 14x5/16"	348	-97.945	175.712	55.7	Pass
T14	276 - 256	Leg	Bent PL 14x5/16"	380	-96.426	175.712	54.9	Pass
T15	256 - 241.583	Leg	Bent PL 14x5/16"	412	-121.001	174.271	69.4	Pass
T16	241.583 - 221.583	Leg	BentPL14x5/16 +C5x9	438	-132.850	286.196	46.4	Pass
T17	221.583 - 201.583	Leg	BentPL14x5/16 +C5x9	471	-132.529	286.196	46.3	Pass
T18	201.583 - 181.583	Leg	Bent PL 14x5/16"	502	-120.431	175.712	68.5	Pass
T19	181.583 - 174.167	Leg	BentPL14x5/16 +C5x9	537	-128.558	291.735	44.1	Pass
T20	174.167 - 154.167	Leg	Bent PL 14x1/2"	552	-125.679	275.060	45.7	Pass
T21	154.167 - 134.167	Leg	Bent PL 14x1/2"	585	-143.521	275.060	52.2	Pass
T22	134.167 - 126.75	Leg	Bent PL 14x1/2"	618	-150.223	280.614	53.5	Pass
T23	126.75 - 106.75	Leg	Bent PL 14x1/2"	633	-146.948	275.060	53.4	Pass
T24	106.75 - 86.75	Leg	Bent PL 14x1/2"	664	-145.832	275.060	53.0	Pass
T25	86.75 - 66.75	Leg	Bent PL 14x1/2"	697	-172.815	275.060	62.8	Pass
T26	66.75 - 46.75	Leg	Bent PL 14x5/8"	731	-187.993	338.650	55.5	Pass
T27	46.75 - 26.75	Leg	Bent PL 14x5/8"	764	-206.947	338.650	61.1	Pass
T28	26.75 - 6.75	Leg	Bent PL 14x0.75	797	-237.202	395.465	60.0	Pass
T29	6.75 - 0	Leg	Bent PL 14x0.75	830	-250.409	414.468	60.4	Pass
T1	500 - 492	Diagonal	L2 1/2x2 1/2x3/16	9	-3.446	21.083	16.3	Pass
T2	492 - 472	Diagonal	L2 1/2x2 1/2x3/16	51	-4.810	21.083	22.8	Pass
T3	472 - 452	Diagonal	L2 1/2x2 1/2x3/16	83	-1.902	21.083	9.0	Pass
T4	452 - 432	Diagonal	L2 1/2x2 1/2x3/16	90	-7.160	21.083	34.0	Pass
T5	432 - 424	Diagonal	L2 1/2x2 1/2x3/16	132	7.230	25.279	28.6	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P _{allow} (K)	% Capacity	Pass / Fail
T6	424 - 408	Diagonal	L2 1/2x2 1/2x3/16	158	-2.899	21.083	13.8	Pass
T7	408 - 388	Diagonal	L2 1/2x2 1/2x3/16	164	-5.026	21.083	23.8	Pass
T8	388 - 368	Diagonal	L2 1/2x2 1/2x3/16	197	-7.748	21.083	36.7	Pass
T9	368 - 356	Diagonal	L2 1/2x2 1/2x3/16	245	-8.429	21.083	40.0	Pass
T10	356 - 336	Diagonal	L 2 x 2 x 3/16	277	-3.835	13.523	28.4	Pass
T11	336 - 316	Diagonal	L 2 x 2 x 3/16	284	-2.160	13.523	16.0	Pass
T12	316 - 296	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	334	-6.203	26.645	23.3	Pass
T13	296 - 276	Diagonal	L 2 x 2 x 3/16	373	-4.189	13.523	31.0	Pass
T14	276 - 256	Diagonal	L 2 x 2 x 3/16	386	-6.947	13.523	51.4	Pass
T15	256 - 241.583	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	424	-7.962	26.633	29.9	Pass
T16	241.583 - 221.583	Diagonal	L 2 x 2 x 3/16	466	-5.982	13.523	44.2	Pass
T17	221.583 - 201.583	Diagonal	L 2 x 2 x 3/16	473	-5.030	13.523	37.2	Pass
T18	201.583 - 181.583	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	506	-8.446	26.645	31.7	Pass
T19	181.583 - 174.167	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	548	-8.908	26.672	33.4	Pass
T20	174.167 - 154.167	Diagonal	L 2 x 2 x 3/16	580	-3.551	13.523	26.3	Pass
T21	154.167 - 134.167	Diagonal	L 2 x 2 x 3/16	586	-3.667	13.523	27.1	Pass
T22	134.167 - 126.75	Diagonal	L 2 x 2 x 3/16	628	-3.917	13.933	28.1	Pass
T23	126.75 - 106.75	Diagonal	L 2 x 2 x 3/16	662	-3.304	13.523	24.4	Pass
T24	106.75 - 86.75	Diagonal	L 2 x 2 x 1/4	670	-2.395	17.472	13.7	Pass
T25	86.75 - 66.75	Diagonal	L 2 x 2 x 1/4	703	-4.492	17.472	25.7	Pass
T26	66.75 - 46.75	Diagonal	L 2 x 2 x 1/4	760	-4.895	17.472	28.0	Pass
T27	46.75 - 26.75	Diagonal	L2 1/2x2 1/2x1/4	766	-4.378	27.688	15.8	Pass
T28	26.75 - 6.75	Diagonal	L2 1/2x2 1/2x1/4	799	-5.575	27.688	20.1	Pass
T29	6.75 - 0	Diagonal	L2 1/2x2 1/2x1/4	832	-6.947	28.184	24.6	Pass
T1	500 - 492	Top Girt	L2 1/2x2 1/2x3/16	6	-0.116	21.478	0.5	Pass
T2	492 - 472	Guy A@488 (-1.7 deg)	9/16	849	13.479	22.050	61.1	Pass
		Guy A@488	9/16	852	13.481	22.050	61.1	Pass
		Guy A@488 (1.7 deg)	9/16	855	13.475	22.050	61.1	Pass
T5	432 - 424	Guy A@430 (-1.7 deg)	9/16	861	13.778	22.050	62.5	Pass
		Guy A@430	9/16	864	13.780	22.050	62.5	Pass
		Guy A@430 (1.7 deg)	9/16	867	13.773	22.050	62.5	Pass
T9	368 - 356	Guy A@364 (-1.7 deg)	9/16	873	13.229	22.050	60.0	Pass
		Guy A@364	9/16	876	13.231	22.050	60.0	Pass
		Guy A@364 (1.7 deg)	9/16	879	13.225	22.050	60.0	Pass
T12	316 - 296	Guy A@312 (-1.7 deg)	7/16	885	8.179	13.104	62.4	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
		Guy A@312	7/16	888	8.111	13.104	61.9	Pass
		Guy A@312 (1.7 deg)	7/16	891	8.194	13.104	62.5	Pass
T15	256 - 241.583	Guy A@251.881 (-2.6 deg)	1/2	897	12.186	16.947	71.9	Pass
		Guy A@251.881	1/2	900	11.817	16.947	69.7	Pass
		Guy A@251.881 (2.6 deg)	1/2	903	12.188	16.947	71.9	Pass
T19	181.583 - 174.167	Guy A@177.875 (-2.6 deg)	7/16	909	9.111	13.104	69.5	Pass
		Guy A@177.875	7/16	912	8.844	13.104	67.5	Pass
		Guy A@177.875 (2.6 deg)	7/16	915	9.027	13.104	68.9	Pass
T22	134.167 - 126.75	Guy A@130.458 (-2.6 deg)	3/8	921	5.459	9.702	56.3	Pass
		Guy A@130.458	3/8	924	5.330	9.702	54.9	Pass
		Guy A@130.458 (2.6 deg)	3/8	927	5.363	9.702	55.3	Pass
T26	66.75 - 46.75	Guy A@62.75 (-2.6 deg)	3/8	933	3.277	9.702	33.8	Pass
		Guy A@62.75	3/8	936	3.283	9.702	33.8	Pass
		Guy A@62.75 (2.6 deg)	3/8	939	3.286	9.702	33.9	Pass
T2	492 - 472	Guy B@488 (-1.7 deg)	9/16	848	13.360	22.050	60.6	Pass
		Guy B@488	9/16	851	13.365	22.050	60.6	Pass
		Guy B@488 (1.7 deg)	9/16	854	13.363	22.050	60.6	Pass
T5	432 - 424	Guy B@430 (-1.7 deg)	9/16	860	13.642	22.050	61.9	Pass
		Guy B@430	9/16	863	13.647	22.050	61.9	Pass
		Guy B@430 (1.7 deg)	9/16	866	13.644	22.050	61.9	Pass
T9	368 - 356	Guy B@364 (-1.7 deg)	9/16	872	13.080	22.050	59.3	Pass
		Guy B@364	9/16	875	13.085	22.050	59.3	Pass
		Guy B@364 (1.7 deg)	9/16	878	13.083	22.050	59.3	Pass
T12	316 - 296	Guy B@312 (-1.7 deg)	7/16	884	8.047	13.104	61.4	Pass
		Guy B@312	7/16	887	8.025	13.104	61.2	Pass
		Guy B@312 (1.7 deg)	7/16	890	8.146	13.104	62.2	Pass
T15	256 - 241.583	Guy B@251.881 (-2.6 deg)	1/2	896	12.024	16.947	71.0	Pass
		Guy B@251.881	1/2	899	11.819	16.947	69.7	Pass
		Guy B@251.881 (2.6 deg)	1/2	902	12.192	16.947	71.9	Pass
T19	181.583 - 174.167	Guy B@177.875 (-2.6 deg)	7/16	908	9.021	13.104	68.8	Pass
		Guy B@177.875	7/16	911	8.871	13.104	67.7	Pass
		Guy B@177.875 (2.6 deg)	7/16	914	9.141	13.104	69.8	Pass
T22	134.167 - 126.75	Guy B@130.458 (-2.6 deg)	3/8	920	5.422	9.702	55.9	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
		Guy B@130.458	3/8	923	5.416	9.702	55.8	Pass
		Guy B@130.458 (2.6 deg)	3/8	926	5.486	9.702	56.5	Pass
T26	66.75 - 46.75	Guy B@62.75 (-2.6 deg)	3/8	932	3.355	9.702	34.6	Pass
		Guy B@62.75	3/8	935	3.352	9.702	34.5	Pass
		Guy B@62.75 (2.6 deg)	3/8	938	3.345	9.702	34.5	Pass
T2	492 - 472	Guy C@488 (-1.7 deg)	9/16	844	13.362	22.050	60.6	Pass
		Guy C@488	9/16	850	13.366	22.050	60.6	Pass
		Guy C@488 (1.7 deg)	9/16	853	13.362	22.050	60.6	Pass
T5	432 - 424	Guy C@430 (-1.7 deg)	9/16	856	13.630	22.050	61.8	Pass
		Guy C@430	9/16	862	13.635	22.050	61.8	Pass
		Guy C@430 (1.7 deg)	9/16	865	13.631	22.050	61.8	Pass
T9	368 - 356	Guy C@364 (-1.7 deg)	9/16	868	13.066	22.050	59.3	Pass
		Guy C@364	9/16	874	13.071	22.050	59.3	Pass
		Guy C@364 (1.7 deg)	9/16	877	13.068	22.050	59.3	Pass
T12	316 - 296	Guy C@312 (-1.7 deg)	7/16	880	8.142	13.104	62.1	Pass
		Guy C@312	7/16	886	8.024	13.104	61.2	Pass
		Guy C@312 (1.7 deg)	7/16	889	8.031	13.104	61.3	Pass
T15	256 - 241.583	Guy C@251.881 (-2.6 deg)	1/2	892	12.193	16.947	71.9	Pass
		Guy C@251.881	1/2	898	11.825	16.947	69.8	Pass
		Guy C@251.881 (2.6 deg)	1/2	901	12.023	16.947	70.9	Pass
T19	181.583 - 174.167	Guy C@177.875 (-2.6 deg)	7/16	904	9.122	13.104	69.6	Pass
		Guy C@177.875	7/16	910	8.856	13.104	67.6	Pass
		Guy C@177.875 (2.6 deg)	7/16	913	9.082	13.104	69.3	Pass
T22	134.167 - 126.75	Guy C@130.458 (-2.6 deg)	3/8	916	5.450	9.702	56.2	Pass
		Guy C@130.458	3/8	922	5.381	9.702	55.5	Pass
		Guy C@130.458 (2.6 deg)	3/8	925	5.476	9.702	56.4	Pass
T26	66.75 - 46.75	Guy C@62.75 (-2.6 deg)	3/8	928	3.304	9.702	34.1	Pass
		Guy C@62.75	3/8	934	3.306	9.702	34.1	Pass
		Guy C@62.75 (2.6 deg)	3/8	937	3.304	9.702	34.1	Pass
T2	492 - 472	Top Guy Pull-Off@488	L 2 x 2 x 3/16	847	9.559	24.324	39.3	Pass
T5	432 - 424	Top Guy Pull-Off@430	L 2 x 2 x 3/16	858	10.488	24.324	43.1	Pass
T9	368 - 356	Top Guy Pull-Off@364	L 2 x 2 x 3/16	871	10.972	24.324	45.1	Pass
T12	316 - 296	Top Guy Pull-Off@312	L 2 x 2 x 3/16	882	7.896	24.324	32.5	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P _{allow} (K)	% Capacity	Pass / Fail
T15	256 - 241.583	Top Guy Pull-Off@251.881	L 2 x 2 x 3/16	893	9.475	24.324	39.0	Pass
T19	181.583 - 174.167	Top Guy Pull-Off@177.875	L 2 x 2 x 3/16	905	8.005	24.324	32.9	Pass
T22	134.167 - 126.75	Top Guy Pull-Off@130.458	L 2 x 2 x 3/16	919	6.154	24.324	25.3	Pass
T26	66.75 - 46.75	Top Guy Pull-Off@62.75	L 2 x 2 x 3/16	931	4.256	24.324	17.5	Pass
							Summary	
						Leg (T15)	69.4	Pass
						Diagonal (T14)	51.4	Pass
						Top Girt (T1)	0.5	Pass
						Guy A (T15)	71.9	Pass
						Guy B (T15)	71.9	Pass
						Guy C (T15)	71.9	Pass
						Top Guy Pull-Off (T9)	45.1	Pass
						Bolt Checks	75.9	Pass
						Rating =	75.9	Pass

Table 5 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Base Foundation (Structural)	Base	57.1	Pass
1	Base Foundation (Soil Interaction)	Base	70.3	Pass
1	Outer Fan Plate(B)	Base	99.8	Pass
1	Outer Fan Plate(A & C)	Base	43.5	Pass
1	Inner Guy Anchor Shaft	Base	9.8	Pass
1	Inner Guy Anchor Foundation (Structure)	Base	51.8	Pass
1	Inner Guy Anchor Foundation (Soil Interaction)	Base	44.3	Pass
1	Outer Guy Anchor Shaft	Base	99.3	Pass
1	Outer Guy Anchor Foundation (Structure)	Base	23.1	Pass
1	Outer Guy Anchor Foundation (Soil Interaction)	Base	70.1	Pass

Structure Rating (max from all components) =	99.8%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Rating per TIA-222-H Section 15.5

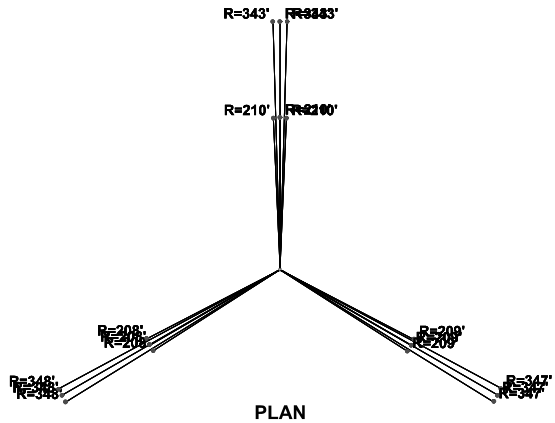
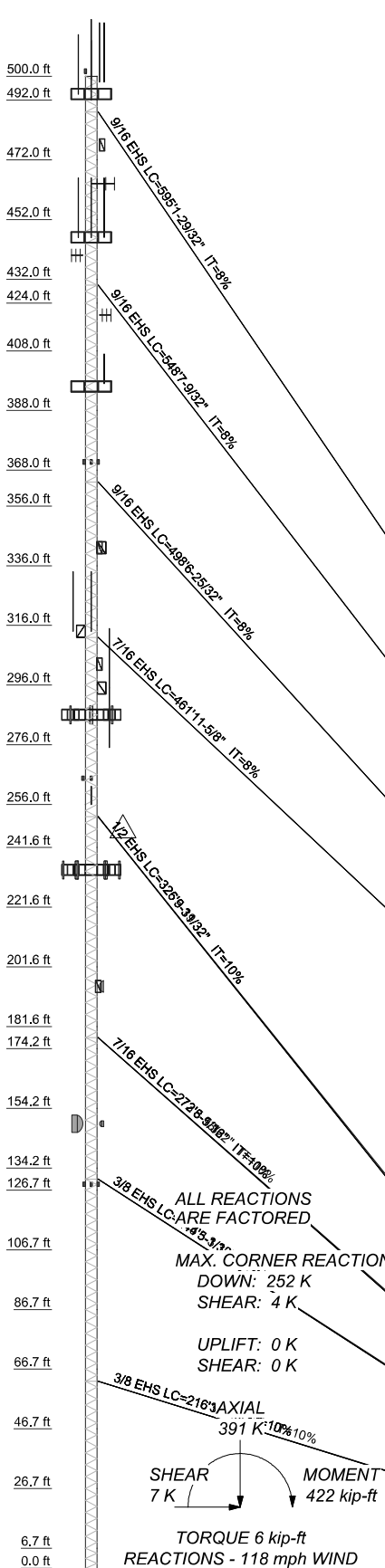
4.1) Recommendations

The tower and its base and anchor foundations have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

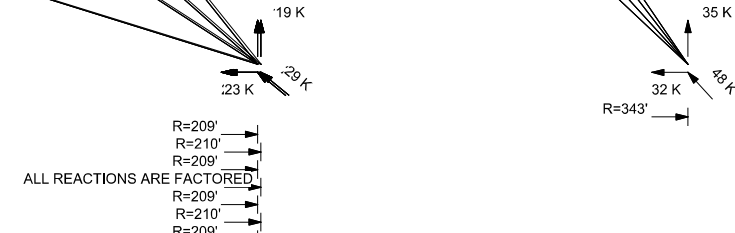
Section	T28	T28	T27	T26	T25	T24	T23	T22	T21	T20	T19	C	B	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1						
Legs	D				Bent PL 14x5/8"				Bent PL 14x1/2"				B	C	B				Bent PL 14x5/16"								A	Bent PL 14x1/4"							
Leg Grade	A572-50																																		
Diagonals	L2 1/2x2 1/2x1/4				L2 x 2 x 1/4				L2 x 2 x 3/16				E	L2 x 2 x 3/16				E	L2 x 2 x 3/16				E	L2 x 2 x 3/16				L2 1/2x2 1/2x3/16							
Diagonal Grade	A36																																		
Top Girts	N.A.																																		
Top Guy Pull-Offs	N.A.				H				N.A.				H	N.A.				H	N.A.				H	N.A.				H	N.A.				H	G	
Face Width (ft)	4																																		
# Panels @ (ft)	60 @ 2				J				20 @ 2				J	30 @ 2				I	122 @ 2																
Weight (K)	48.5	3.2	2.8	2.7	2.2	2.2	2.1	0.8	2.1	2.1	1.0	1.9	2.2	2.2	1.4	1.5	1.5	1.9	1.5	1.5	1.0	1.8	1.4	1.1	0.6	1.4	1.4	1.4	0.6						



MARK		SIZE	
A	Bent PL 14x3/8"	G	N.A.
B	Bent PL 14x5/16 + C5x9	H	L 2 x 2 x 3/16
C	Bent PL 14x5/16"	I	7 @ 2.05952
D	Bent PL 14x0.75	J	4 @ 1.85417
E	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	K	4 @ 1.6875
F	L2 1/2x2 1/2x3/16		

GRADE		Fy		Fu	
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

- TOWER DESIGN NOTES**
1. Tower is located in Columbia County, Florida.
 2. Tower designed for Exposure C to the TIA-222-H Standard.
 3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
 4. Deflections are based upon a 60 mph wind.
 5. Tower Risk Category II.
 6. Topographic Category 1 with Crest Height of 0'
 7. TIA-222-H Annex S.
 8. TOWER RATING: 75.9%



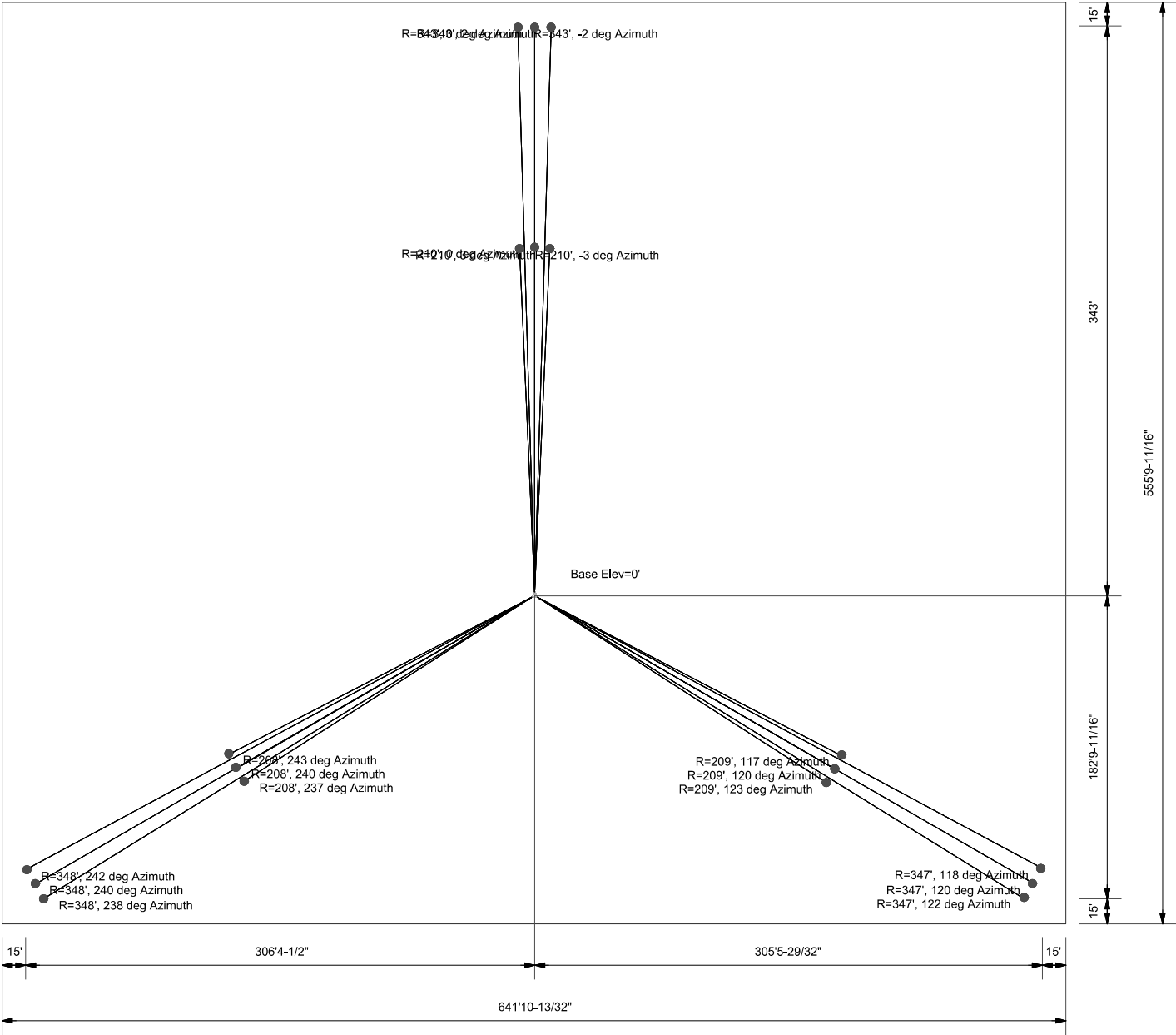


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Job: 14-002.01--Lake City (US 41 & I-10), FL (BU#87014)

Client: Crown Castle	Drawn by: Sudhanva	App'd:
Code: TIA-222-H	Date: 08/31/21	Scale: NTS
Path:		Dwg No. E-1

Plot Plan
Total Area - 8.19 Acres



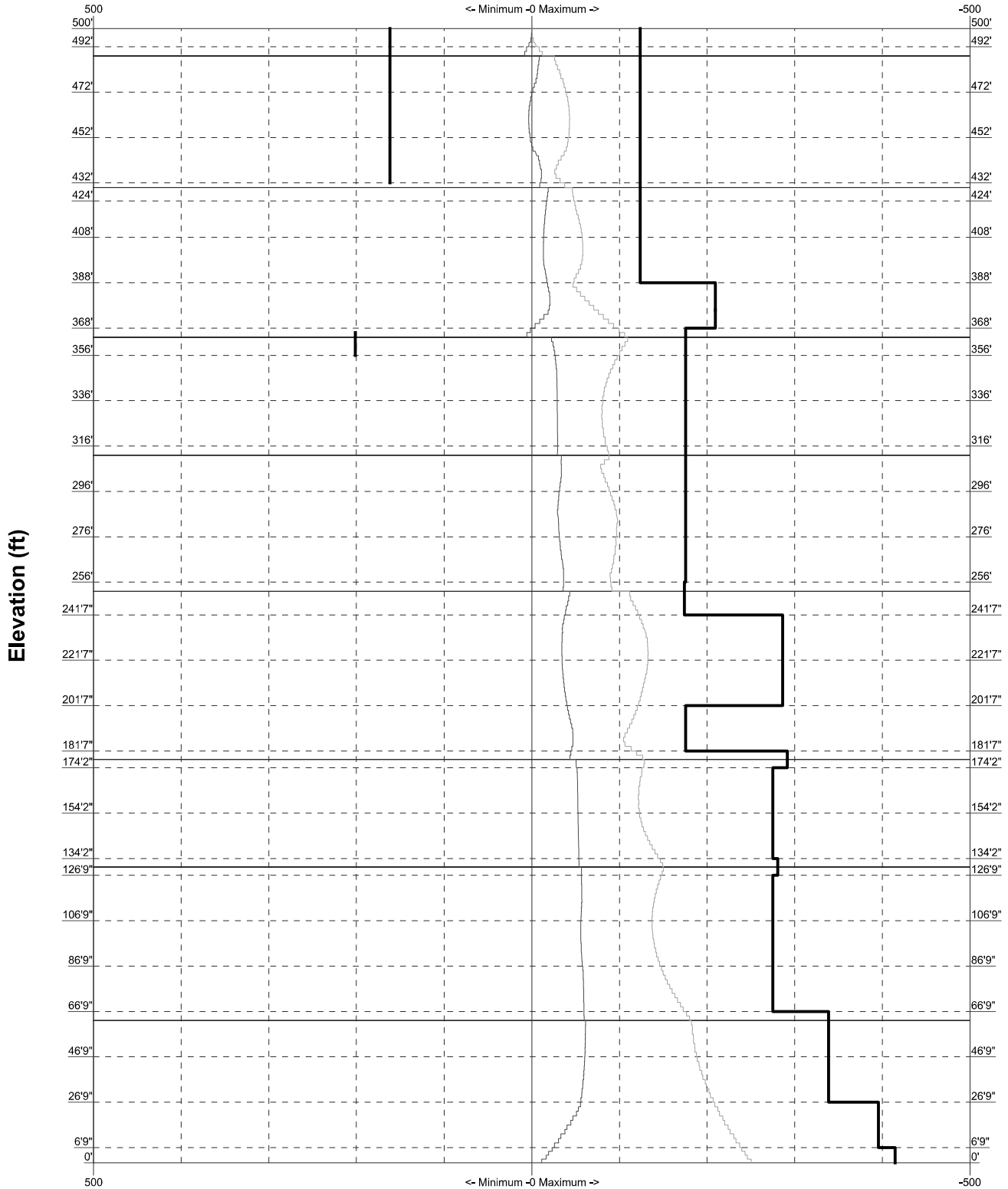
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FAX: (918) 295-0265

Job: 116502.002.01--Lake City (US 41 & I-10),FL(BU#87014)		
Project:		
Client: Crown Castle	Drawn by: Sudhanva	App'd:
Code: TIA-222-H	Date: 08/31/21	Scale: NTS
Path:	Dwg No. E-2	

TIA-222-H - 118 mph Exposure C

Leg Capacity ———

Leg Compression (K)



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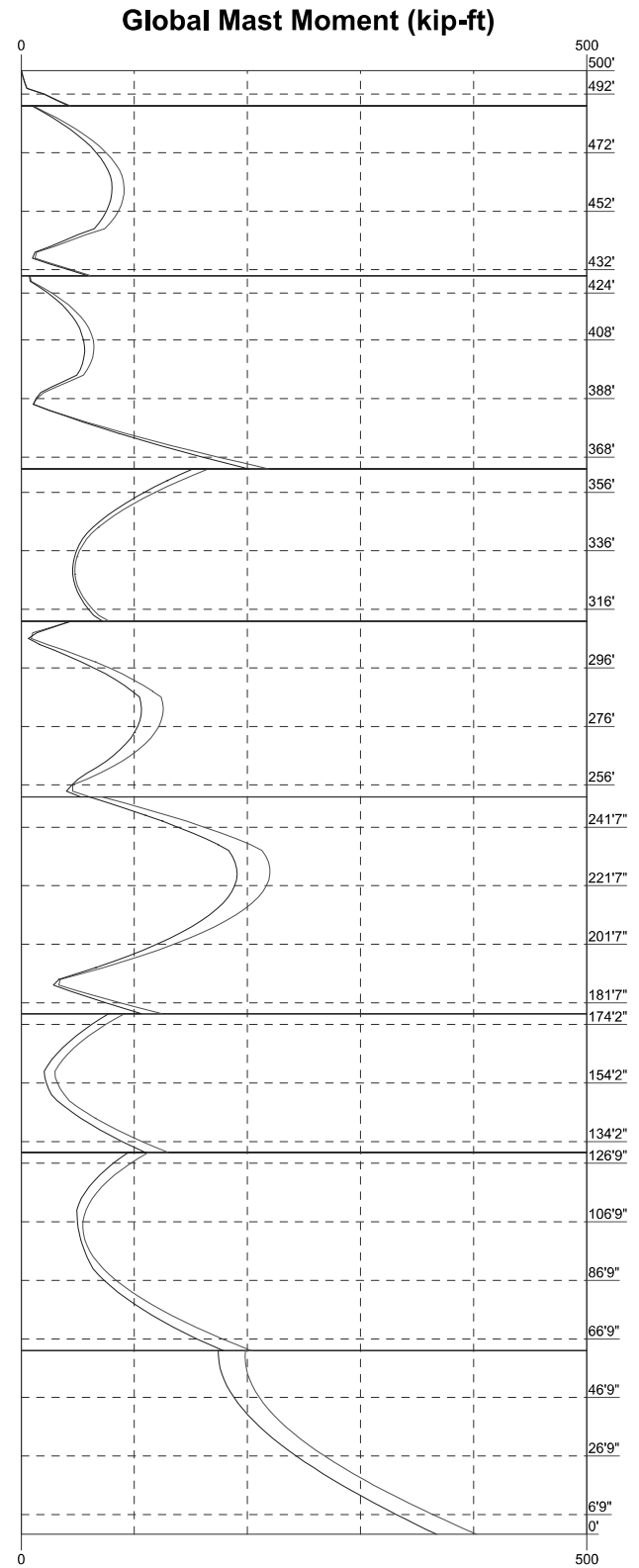
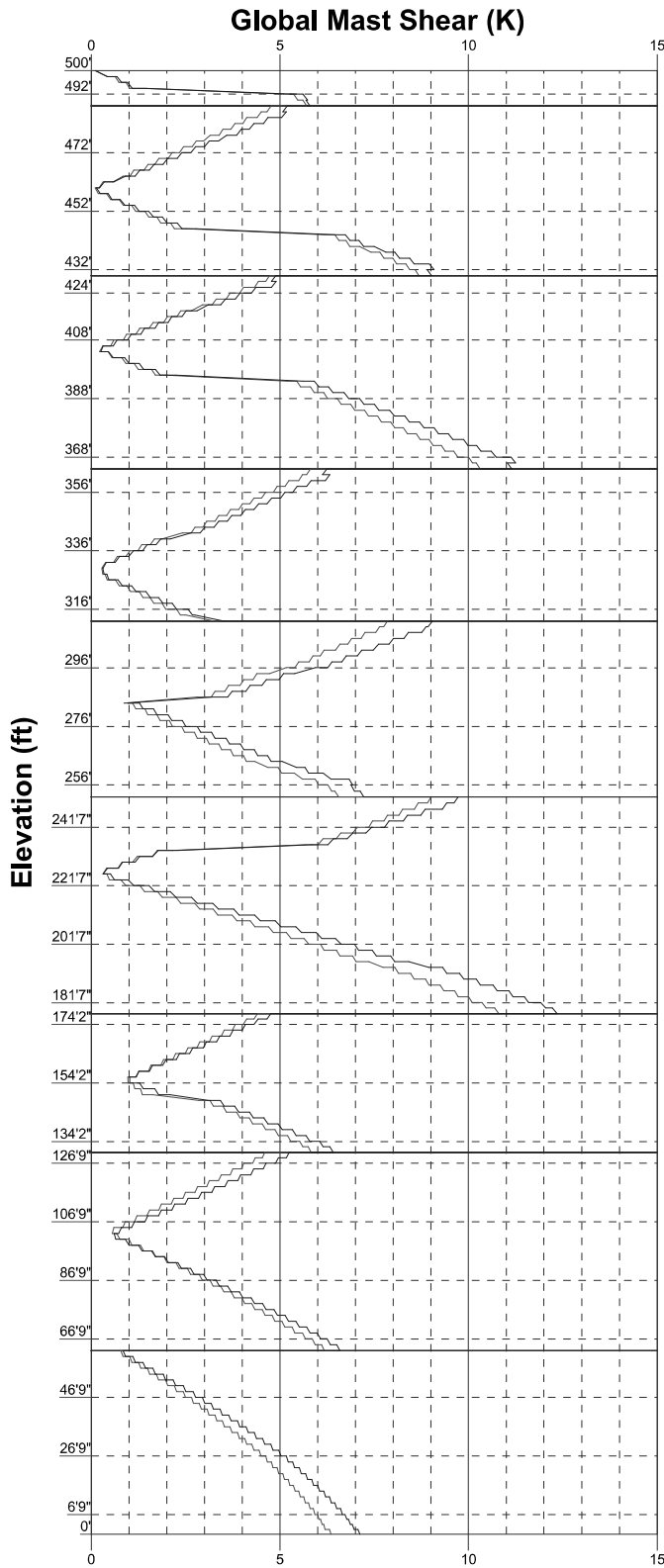
Job: 116502.002.01--Lake City (US 41 & I-10),FL(BU#87014)		
Project:		
Client: Crown Castle	Drawn by: Sudhanva	App'd:
Code: TIA-222-H	Date: 08/31/21	Scale: NTS
Path:	Dwg No. E-3	

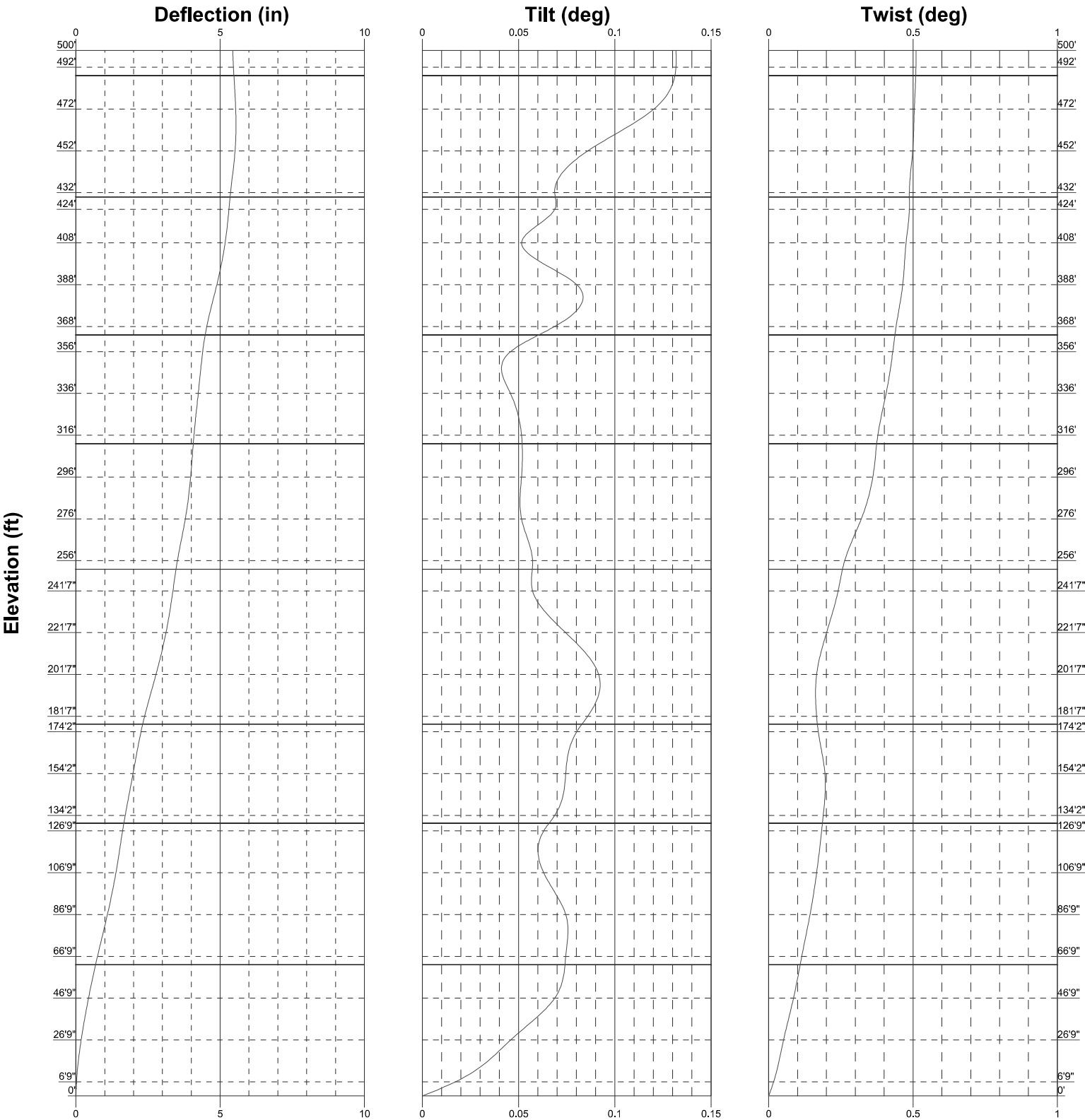
Vx

Vz

Mx

Mz





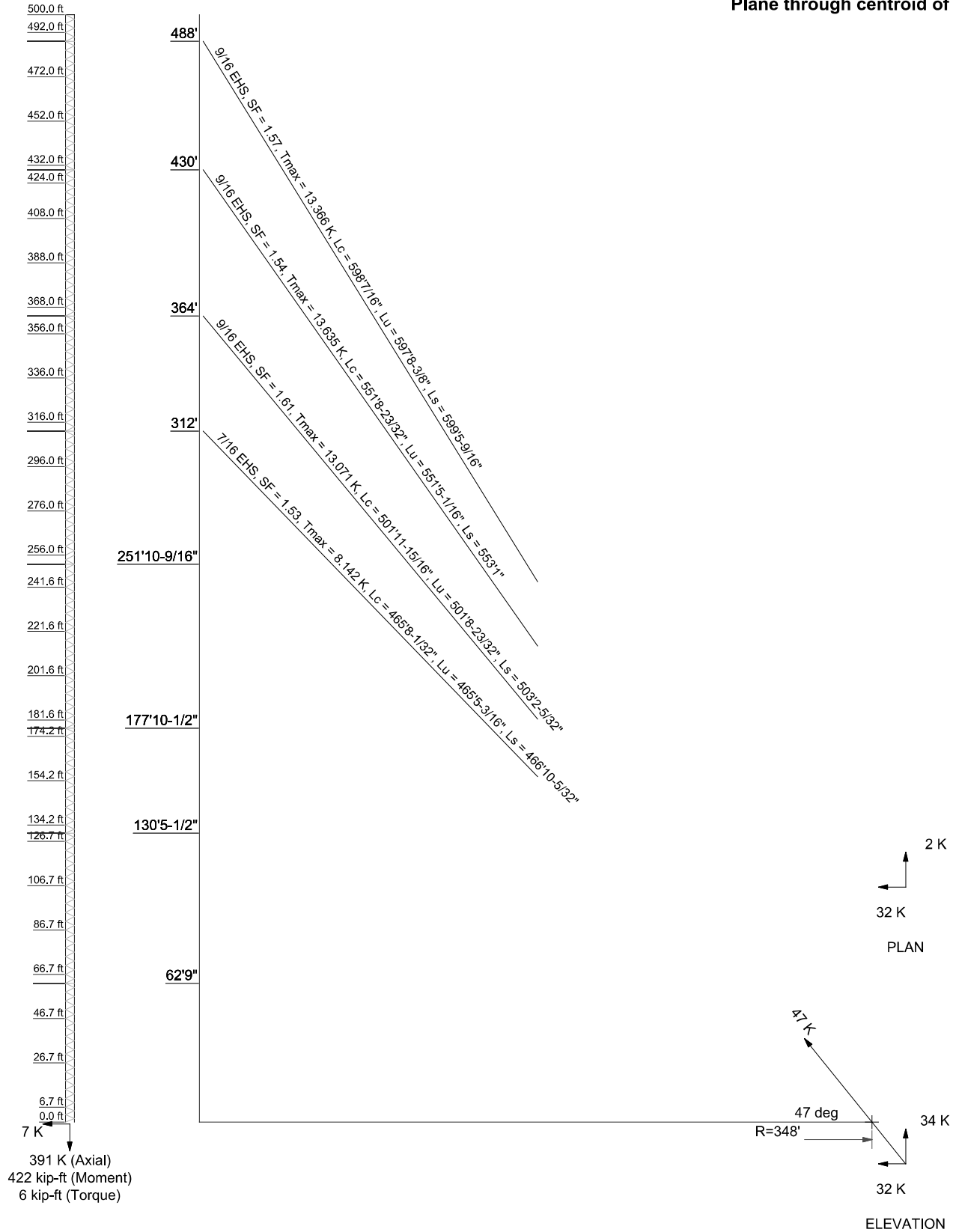
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Job: 116502.002.01--Lake City (US 41 & I-10),FL(BU#87014)		
Project:		
Client: Crown Castle	Drawn by: Sudhanva	App'd:
Code: TIA-222-H	Date: 08/31/21	Scale: NTS
Path:	Dwg No. E-5	

Guy Tensions and Tower Reactions

TIA-222-H - 118 mph Exposure C

Maximum Values
Anchor 'C'@348 ft Azimuth 238 deg Elev 0 ft
Plane through centroid of tower



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Job: **116502.002.01--Lake City (US 41 & I-10),FL(BU#87014)**
Project:
Client: Crown Castle
Code: TIA-222-H
Path:
Drawn by: Sudhanva
Date: 08/31/21
App'd:
Scale: NTS
Dwg No. E-6

Feed Line Distribution Chart
0' - 500'

Round

Flat

App In Face

App Out Face

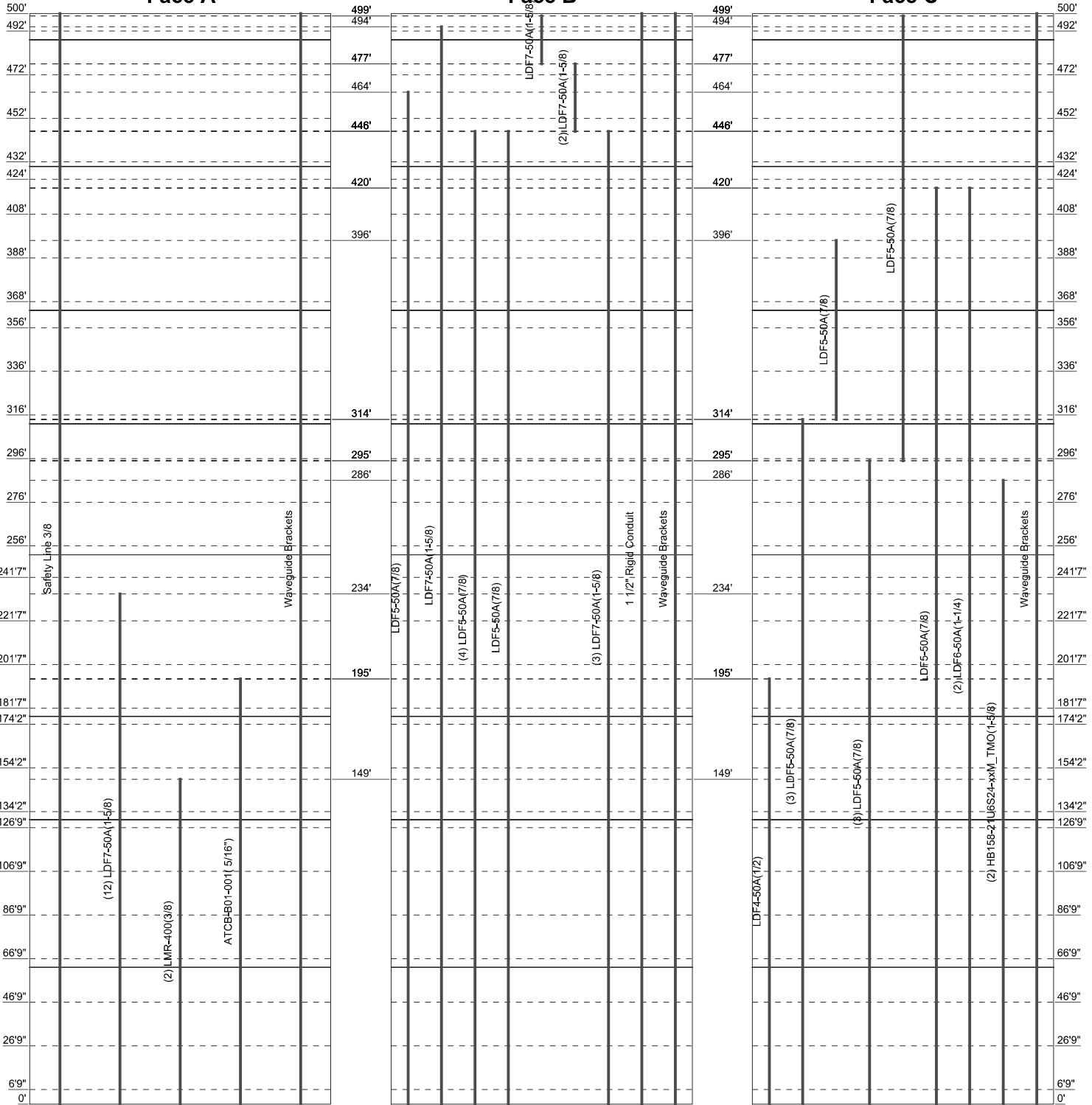
Truss Leg

Face A

Face B

Face C

Elevation (ft)



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	Project	Date 17:19:09 08/31/21
	Client Crown Castle	Designed by Sudhanva

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 500' above the ground line.

The base of the tower is set at an elevation of 0' above the ground line.

The face width of the tower is 4' at the top and 4' at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Columbia County, Florida.

Tower base elevation above sea level: 127'.

Basic wind speed of 118 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0'.

Deflections calculated using a wind speed of 60 mph.

TIA-222-H Annex S.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Safety factor used in guy design is 1.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used: $K_{es}(F_w) = 0.95$.

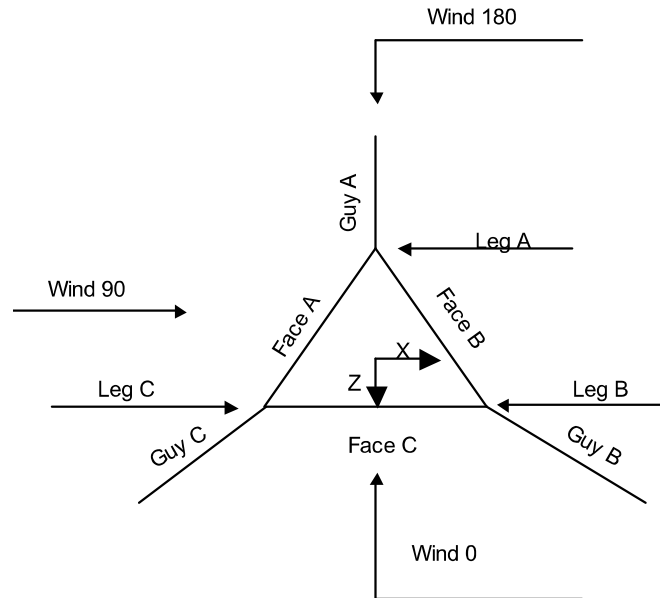
Maximum demand-capacity ratio is: 1.05.

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

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	Client Crown Castle	Designed by Sudhanva



Corner & Starmount Guyed Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	500'-492'			4'	1	8'
T2	492'-472'			4'	1	20'
T3	472'-452'			4'	1	20'
T4	452'-432'			4'	1	20'
T5	432'-424'			4'	1	8'
T6	424'-408'			4'	1	16'
T7	408'-388'			4'	1	20'
T8	388'-368'			4'	1	20'
T9	368'-356'			4'	1	12'
T10	356'-336'			4'	1	20'
T11	336'-316'			4'	1	20'
T12	316'-296'			4'	1	20'
T13	296'-276'			4'	1	20'
T14	276'-256'			4'	1	20'
T15	256'-241'7"			4'	1	14'5"
T16	241'7"-221'7"			4'	1	20'
T17	221'7"-201'7"			4'	1	20'
T18	201'7"-181'7"			4'	1	20'
T19	181'7"-174'2"			4'	1	7'5"
T20	174'2"-154'2"			4'	1	20'
T21	154'2"-134'2"			4'	1	20'
T22	134'2"-126'9"			4'	1	7'5"

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	Project	Date
	Client	Designed by
	Crown Castle	Sudhanva

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T23	126'9"-106'9"			4'	1	20'
T24	106'9"-86'9"			4'	1	20'
T25	86'9"-66'9"			4'	1	20'
T26	66'9"-46'9"			4'	1	20'
T27	46'9"-26'9"			4'	1	20'
T28	26'9"-6'9"			4'	1	20'
T29	6'9"-0'			4'	1	6'9"

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	500'-492'	2'	K Brace Left	No	No	0.000	0.000
T2	492'-472'	2'	K Brace Left	No	No	0.000	0.000
T3	472'-452'	2'	K Brace Left	No	No	0.000	0.000
T4	452'-432'	2'	K Brace Left	No	No	0.000	0.000
T5	432'-424'	2'	K Brace Left	No	No	0.000	0.000
T6	424'-408'	2'	K Brace Left	No	No	0.000	0.000
T7	408'-388'	2'	K Brace Left	No	No	0.000	0.000
T8	388'-368'	2'	K Brace Left	No	No	0.000	0.000
T9	368'-356'	2'	K Brace Left	No	No	0.000	0.000
T10	356'-336'	2'	K Brace Left	No	No	0.000	0.000
T11	336'-316'	2'	K Brace Left	No	No	0.000	0.000
T12	316'-296'	2'	K Brace Left	No	No	0.000	0.000
T13	296'-276'	2'	K Brace Left	No	No	0.000	0.000
T14	276'-256'	2'	K Brace Left	No	No	0.000	0.000
T15	256'-241'7"	2'23/32"	K Brace Left	No	No	0.000	0.000
T16	241'7"-221'7"	2'	K Brace Left	No	No	0.000	0.000
T17	221'7"-201'7"	2'	K Brace Left	No	No	0.000	0.000
T18	201'7"-181'7"	2'	K Brace Left	No	No	0.000	0.000
T19	181'7"-174'2"	1'10-1/4"	K Brace Left	No	No	0.000	0.000
T20	174'2"-154'2"	2'	K Brace Left	No	No	0.000	0.000
T21	154'2"-134'2"	2'	K Brace Left	No	No	0.000	0.000
T22	134'2"-126'9"	1'10-1/4"	K Brace Left	No	No	0.000	0.000
T23	126'9"-106'9"	2'	K Brace Left	No	No	0.000	0.000
T24	106'9"-86'9"	2'	K Brace Left	No	No	0.000	0.000
T25	86'9"-66'9"	2'	K Brace Left	No	No	0.000	0.000
T26	66'9"-46'9"	2'	K Brace Left	No	No	0.000	0.000
T27	46'9"-26'9"	2'	K Brace Left	No	No	0.000	0.000
T28	26'9"-6'9"	2'	K Brace Left	No	No	0.000	0.000
T29	6'9"-0'	1'8-1/4"	K Brace Left	No	No	0.000	0.000

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
<i>ft</i>						
T1 500'-492'	Arbitrary Shape	Bent PL 14x1/4"	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T2 492'-472'	Arbitrary Shape	Bent PL 14x1/4"	A572-50	Equal Angle	L2 1/2x2 1/2x3/16	A36

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	Client Crown Castle	Designed by Sudhanva

<i>Tower Elevation ft</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
T3 472'-452'	Arbitrary Shape	Bent PL 14x1/4"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T4 452'-432'	Arbitrary Shape	Bent PL 14x1/4"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T5 432'-424'	Arbitrary Shape	Bent PL 14x1/4"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T6 424'-408'	Arbitrary Shape	Bent PL 14x1/4"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T7 408'-388'	Arbitrary Shape	Bent PL 14x1/4"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T8 388'-368'	Arbitrary Shape	Bent PL 14x3/8"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T9 368'-356'	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x3/16	(36 ksi) A36
T10 356'-336'	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T11 336'-316'	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T12 316'-296'	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Double Equal Angle	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	(36 ksi) A36
T13 296'-276'	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T14 276'-256'	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T15 256'-241'7"	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Double Equal Angle	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	(36 ksi) A36
T16 241'7"-221'7"	Arbitrary Shape	Bent PL 14x5/16 +C5x9	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T17 221'7"-201'7"	Arbitrary Shape	Bent PL 14x5/16 +C5x9	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T18 201'7"-181'7"	Arbitrary Shape	Bent PL 14x5/16"	(50 ksi) A572-50	Double Equal Angle	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	(36 ksi) A36
T19 181'7"-174'2"	Arbitrary Shape	Bent PL 14x5/16 +C5x9	(50 ksi) A572-50	Double Equal Angle	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	(36 ksi) A36
T20 174'2"-154'2"	Arbitrary Shape	Bent PL 14x1/2"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T21 154'2"-134'2"	Arbitrary Shape	Bent PL 14x1/2"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T22 134'2"-126'9"	Arbitrary Shape	Bent PL 14x1/2"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T23 126'9"-106'9"	Arbitrary Shape	Bent PL 14x1/2"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 3/16	(36 ksi) A36
T24 106'9"-86'9"	Arbitrary Shape	Bent PL 14x1/2"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 1/4	(36 ksi) A36
T25 86'9"-66'9"	Arbitrary Shape	Bent PL 14x1/2"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 1/4	(36 ksi) A36
T26 66'9"-46'9"	Arbitrary Shape	Bent PL 14x5/8"	(50 ksi) A572-50	Equal Angle	L 2 x 2 x 1/4	(36 ksi) A36
T27 46'9"-26'9"	Arbitrary Shape	Bent PL 14x5/8"	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36
T28 26'9"-6'9"	Arbitrary Shape	Bent PL 14x0.75	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36
T29 6'9"-0'	Arbitrary Shape	Bent PL 14x0.75	(50 ksi) A572-50	Equal Angle	L2 1/2x2 1/2x1/4	(36 ksi) A36

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	Client Crown Castle	Designed by Sudhanva

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 500'-492'	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Gusset Area <i>ft²</i> (per face)	Gusset Thickness <i>in</i>	Gusset Grade	Adjust. Factor <i>A_f</i>	Adjust. Factor <i>A_r</i>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals <i>in</i>	Double Angle Stitch Bolt Spacing Horizontals <i>in</i>	Double Angle Stitch Bolt Spacing Redundants <i>in</i>
T1 500'-492'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T2 492'-472'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T3 472'-452'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T4 452'-432'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T5 432'-424'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T6 424'-408'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T7 408'-388'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T8 388'-368'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T9 368'-356'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T10 356'-336'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T11 336'-316'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T12 316'-296'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T13 296'-276'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T14 276'-256'	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T15 256'-241'7"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T16 241'7"-221'7"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T17 221'7"-201'7"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T18 201'7"-181'7"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T19 181'7"-174'2"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T20 174'2"-154'2"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T21 154'2"-134'2"	0.000	0.000	A36 (36 ksi)	1.4	1	1.25	36.000	36.000	36.000
T22	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000

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<i>Tower Elevation</i>	<i>Gusset Area (per face)</i>	<i>Gusset Thickness</i>	<i>Gusset Grade</i>	<i>Adjust. Factor A_f</i>	<i>Adjust. Factor A_r</i>	<i>Weight Mult.</i>	<i>Double Angle Stitch Bolt Spacing Diagonals in</i>	<i>Double Angle Stitch Bolt Spacing Horizontals in</i>	<i>Double Angle Stitch Bolt Spacing Redundants in</i>
<i>ft</i>	<i>ft²</i>	<i>in</i>							
134'2"-126'9"			(36 ksi)						
T23	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000
126'9"-106'9"			(36 ksi)						
T24	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000
106'9"-86'9"			(36 ksi)						
T25 86'9"-66'9"	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000
			(36 ksi)						
T26 66'9"-46'9"	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000
			(36 ksi)						
T27 46'9"-26'9"	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000
			(36 ksi)						
T28 26'9"-6'9"	0.000	0.000	A36	1.4	1	1.25	36.000	36.000	36.000
			(36 ksi)						
T29 6'9"-0'	0.000	0.000	A36	1	1	1	36.000	36.000	36.000
			(36 ksi)						

Tower Section Geometry (cont'd)

<i>Tower Elevation</i>	<i>Calc K Single Angles</i>	<i>Calc K Solid Rounds</i>	<i>Legs</i>	<i>K Factors¹</i>						
				<i>X Brace Diags</i>	<i>K Brace Diags</i>	<i>Single Diags</i>	<i>Girts</i>	<i>Horiz.</i>	<i>Sec. Horiz.</i>	<i>Inner Brace</i>
				<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>	<i>X</i> <i>Y</i>
<i>ft</i>										
T1 500'-492'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T2 492'-472'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T3 472'-452'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T4 452'-432'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T5 432'-424'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T6 424'-408'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T7 408'-388'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T8 388'-368'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T9 368'-356'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T10 356'-336'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T11 336'-316'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T12 316'-296'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T13 296'-276'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T14 276'-256'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T15	Yes	No	1	1	1	1	1	1	1	1
256'-241'7"				1	1	1	1	1	1	1
T16	Yes	No	1	1	1	1	1	1	1	1

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Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T11 336'-316'	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12 316'-296'	Sleeve DS	0.750	36	0.500	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13 296'-276'	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14 276'-256'	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15 256'-241'7"	Sleeve DS	0.750	36	0.500	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16 241'7"-221'7"	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17 221'7"-201'7"	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18 201'7"-181'7"	Sleeve DS	0.750	36	0.500	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T19 181'7"-174'2"	Sleeve DS	0.750	36	0.500	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T20 174'2"-154'2"	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T21 154'2"-134'2"	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T22 134'2"-126'9"	Sleeve DS	0.750	36	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T23 126'9"-106'9"	Sleeve DS	0.750	48	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T24 106'9"-86'9"	Sleeve DS	0.750	48	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T25 86'9"-66'9"	Sleeve DS	0.750	48	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T26 66'9"-46'9"	Sleeve DS	0.750	48	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T27 46'9"-26'9"	Sleeve DS	0.750	56	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T28 26'9"-6'9"	Sleeve DS	0.750	56	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T29 6'9"-0'	Sleeve DS	0.750	56	0.750	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Guy Data

Guy Elevation	Guy Grade	Guy Size	Initial Tension	%	Guy Modulus	Guy Weight	L _u	Anchor Radius	Anchor Azimuth Adj.	Anchor Elevation	End Fitting Efficiency
ft			K		ksi	plf	ft	ft	°	ft	%
488	EHS	A 9/16	2.800	8%	23000.000	0.671	594'10-15/16	343'	-1.700	0'	100%
		B 9/16	2.800	8%	23000.000	0.671	"	347'	-1.700	0'	100%
		C 9/16	2.800	8%	23000.000	0.671	597'2-9/16"	348'	-1.700	0'	100%
							597'9-1/2"				
488	EHS	A 9/16	2.800	8%	23000.000	0.671	594'10-15/16	343'	0.000	0'	100%
		B 9/16	2.800	8%	23000.000	0.671	"	347'	0.000	0'	100%
		C 9/16	2.800	8%	23000.000	0.671	597'2-17/32"	348'	0.000	0'	100%
							597'9-15/32"				

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488	EHS	A	9/16	2.800	8%	23000.000	0.671	594'10-15/16	343'	1.700	0'	100%
		B	9/16	2.800	8%	23000.000	0.671	"	347'	1.700	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	597'2-9/16"	348'	1.700	0'	100%
430	EHS	A	9/16	2.800	8%	23000.000	0.671	597'9-1/2"				
		B	9/16	2.800	8%	23000.000	0.671	548'4-5/8"	343'	-1.700	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	550'10-9/16"	347'	-1.700	0'	100%
430	EHS	A	9/16	2.800	8%	23000.000	0.671	551'6-3/32"	348'	-1.700	0'	100%
		B	9/16	2.800	8%	23000.000	0.671	548'4-19/32"	343'	0.000	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	550'10-9/16"	347'	0.000	0'	100%
430	EHS	A	9/16	2.800	8%	23000.000	0.671	551'6-1/16"	348'	0.000	0'	100%
		B	9/16	2.800	8%	23000.000	0.671	548'4-5/8"	343'	1.700	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	550'10-9/16"	347'	1.700	0'	100%
364	EHS	A	9/16	2.800	8%	23000.000	0.671	551'6-3/32"	348'	1.700	0'	100%
		B	9/16	2.800	8%	23000.000	0.671	498'4-13/32"	343'	-1.700	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	501'1-5/16"	347'	-1.700	0'	100%
364	EHS	A	9/16	2.800	8%	23000.000	0.671	501'9-19/32"	348'	-1.700	0'	100%
		B	9/16	2.800	8%	23000.000	0.671	498'4-13/32"	343'	0.000	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	501'1-5/16"	347'	0.000	0'	100%
364	EHS	A	9/16	2.800	8%	23000.000	0.671	501'9-9/16"	348'	0.000	0'	100%
		B	9/16	2.800	8%	23000.000	0.671	498'4-13/32"	343'	1.700	0'	100%
		C	9/16	2.800	8%	23000.000	0.671	501'1-5/16"	347'	1.700	0'	100%
312	EHS	A	7/16	1.664	8%	23000.000	0.399	501'9-19/32"	348'	1.700	0'	100%
		B	7/16	1.664	8%	23000.000	0.399	461'9-15/32"	343'	-1.700	0'	100%
		C	7/16	1.664	8%	23000.000	0.399	464'8-31/32"	347'	-1.700	0'	100%
312	EHS	A	7/16	1.664	8%	23000.000	0.399	465'5-7/8"	348'	-1.700	0'	100%
		B	7/16	1.664	8%	23000.000	0.399	461'9-7/16"	343'	0.000	0'	100%
		C	7/16	1.664	8%	23000.000	0.399	464'8-31/32"	347'	0.000	0'	100%
312	EHS	A	7/16	1.664	8%	23000.000	0.399	465'5-7/8"	348'	0.000	0'	100%
		B	7/16	1.664	8%	23000.000	0.399	461'9-15/32"	343'	1.700	0'	100%
		C	7/16	1.664	8%	23000.000	0.399	464'8-31/32"	347'	1.700	0'	100%
251.881	EHS	A	1/2	2.690	10%	23000.000	0.517	465'5-7/8"	348'	1.700	0'	100%
		B	1/2	2.690	10%	23000.000	0.517	326'2-23/32"	210'	-2.600	0'	100%
		C	1/2	2.690	10%	23000.000	0.517	325'7-3/32"	209'	-2.600	0'	100%
251.881	EHS	A	1/2	2.690	10%	23000.000	0.517	324'11-1/2"	208'	-2.600	0'	100%
		B	1/2	2.690	10%	23000.000	0.517	326'2-11/16"	210'	0.000	0'	100%
		C	1/2	2.690	10%	23000.000	0.517	325'7-3/32"	209'	0.000	0'	100%
251.881	EHS	A	1/2	2.690	10%	23000.000	0.517	324'11-15/32"	208'	0.000	0'	100%
		B	1/2	2.690	10%	23000.000	0.517	"				
		C	1/2	2.690	10%	23000.000	0.517					
251.881	EHS	A	1/2	2.690	10%	23000.000	0.517	326'2-23/32"	210'	2.600	0'	100%
		B	1/2	2.690	10%	23000.000	0.517	325'7-3/32"	209'	2.600	0'	100%
		C	1/2	2.690	10%	23000.000	0.517	324'11-1/2"	208'	2.600	0'	100%
177.875	EHS	A	7/16	2.080	10%	23000.000	0.399	324'11-1/2"	208'	2.600	0'	100%
		B	7/16	2.080	10%	23000.000	0.399	273'3-1/32"	210'	-2.600	0'	100%
		C	7/16	2.080	10%	23000.000	0.399	272'5-15/16"	209'	-2.600	0'	100%
177.875	EHS	A	7/16	2.080	10%	23000.000	0.399	271'8-27/32"	208'	-2.600	0'	100%
		B	7/16	2.080	10%	23000.000	0.399	273'3"	210'	0.000	0'	100%
		C	7/16	2.080	10%	23000.000	0.399	272'5-29/32"	209'	0.000	0'	100%
177.875	EHS	A	7/16	2.080	10%	23000.000	0.399	271'8-13/16"	208'	0.000	0'	100%
		B	7/16	2.080	10%	23000.000	0.399	273'3-1/32"	210'	2.600	0'	100%
		C	7/16	2.080	10%	23000.000	0.399	272'5-15/16"	209'	2.600	0'	100%
130.458	EHS	A	3/8	1.540	10%	23000.000	0.273	271'8-27/32"	208'	2.600	0'	100%
		B	3/8	1.540	10%	23000.000	0.273	245'27/32"	210'	-2.600	0'	100%
		C	3/8	1.540	10%	23000.000	0.273	244'2-11/16"	209'	-2.600	0'	100%
130.458	EHS	A	3/8	1.540	10%	23000.000	0.273	243'4-9/16"	208'	-2.600	0'	100%
		B	3/8	1.540	10%	23000.000	0.273	245'13/16"	210'	0.000	0'	100%
		C	3/8	1.540	10%	23000.000	0.273	244'2-11/16"	209'	0.000	0'	100%
130.458	EHS	A	3/8	1.540	10%	23000.000	0.273	243'4-17/32"	208'	0.000	0'	100%
		B	3/8	1.540	10%	23000.000	0.273	245'27/32"	210'	2.600	0'	100%
		C	3/8	1.540	10%	23000.000	0.273	244'2-11/16"	209'	2.600	0'	100%
62.75	EHS	A	3/8	1.540	10%	23000.000	0.273	243'4-9/16"	208'	2.600	0'	100%
		B	3/8	1.540	10%	23000.000	0.273	216'9-17/32"	210'	-2.600	0'	100%
		C	3/8	1.540	10%	23000.000	0.273	215'10-1/32"	209'	-2.600	0'	100%
								214'10-9/16"	208'	-2.600	0'	100%

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62.75	EHS	A	3/8	1.540	10%	23000.000	0.273	216'9-1/2"	210'	0.000	0'	100%
		B	3/8	1.540	10%	23000.000	0.273	215'10"	209'	0.000	0'	100%
		C	3/8	1.540	10%	23000.000	0.273	214'10-17/32"	208'	0.000	0'	100%
62.75	EHS	A	3/8	1.540	10%	23000.000	0.273	216'9-17/32"	210'	2.600	0'	100%
		B	3/8	1.540	10%	23000.000	0.273	215'10-1/32"	209'	2.600	0'	100%
		C	3/8	1.540	10%	23000.000	0.273	214'10-9/16"	208'	2.600	0'	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
488	Corner						
488	Corner						
488	Corner						
430	Corner						
430	Corner						
430	Corner						
364	Corner						
364	Corner						
364	Corner						
312	Corner						
312	Corner						
312	Corner						
251.881	Corner						
251.881	Corner						
251.881	Corner						
177.875	Corner						
177.875	Corner						
177.875	Corner						
130.458	Corner						
130.458	Corner						
130.458	Corner						
62.75	Corner						
62.75	Corner						
62.75	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
488'	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L 2 x 2 x 3/16
488'	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L 2 x 2 x 3/16
488'	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L 2 x 2 x 3/16
430'	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L 2 x 2 x 3/16
430'	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L 2 x 2 x 3/16
430'	A572-50	Solid Round			No	A36	Equal Angle	L 2 x 2 x 3/16

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Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
364'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
364'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
364'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
312'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
312'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
312'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
251'10-9/16"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
251'10-9/16"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
251'10-9/16"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
177'10-1/2'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
177'10-1/2'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
177'10-1/2'	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
130'5-1/2"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
130'5-1/2"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
130'5-1/2"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
62'9"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
62'9"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16
62'9"	(50 ksi) A572-50	Solid Round			No	(36 ksi) A36	Equal Angle	L 2 x 2 x 3/16

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
488	0.399	0.401	0.401		40'1-3/8"	40'5-3/32"	40'6-1/16"	
					10.9 sec/pulse	11.0 sec/pulse	11.0 sec/pulse	
488	0.399	0.401	0.401		40'1-3/8"	40'5-3/32"	40'6-1/32"	
					10.9 sec/pulse	11.0 sec/pulse	11.0 sec/pulse	
488	0.399	0.401	0.401		40'1-3/8"	40'5-3/32"	40'6-1/16"	
					10.9 sec/pulse	11.0 sec/pulse	11.0 sec/pulse	
430	0.368	0.370	0.370		34'3-23/32"	34'7-15/32"	34'8-7/16"	
					10.1 sec/pulse	10.2 sec/pulse	10.2 sec/pulse	
430	0.368	0.370	0.370		34'3-23/32"	34'7-15/32"	34'8-7/16"	
					10.1 sec/pulse	10.2 sec/pulse	10.2 sec/pulse	
430	0.368	0.370	0.370		34'3-23/32"	34'7-15/32"	34'8-7/16"	
					10.1 sec/pulse	10.2 sec/pulse	10.2 sec/pulse	

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<i>Guy Elevation</i>	<i>Cable Weight A K</i>	<i>Cable Weight B K</i>	<i>Cable Weight C K</i>	<i>Cable Weight D K</i>	<i>Tower Intercept A ft</i>	<i>Tower Intercept B ft</i>	<i>Tower Intercept C ft</i>	<i>Tower Intercept D ft</i>
364	0.334	0.336	0.337		28'6-5/8"	28'10-13/32"	28'11-11/32"	
					9.2 sec/pulse	9.3 sec/pulse	9.3 sec/pulse	
364	0.334	0.336	0.337		28'6-5/8"	28'10-13/32"	28'11-11/32"	
					9.2 sec/pulse	9.3 sec/pulse	9.3 sec/pulse	
364	0.334	0.336	0.337		28'6-5/8"	28'10-13/32"	28'11-11/32"	
					9.2 sec/pulse	9.3 sec/pulse	9.3 sec/pulse	
312	0.184	0.185	0.186		24'8-3/32"	24'11-29/32"	25'7/8"	
					8.6 sec/pulse	8.6 sec/pulse	8.6 sec/pulse	
312	0.184	0.185	0.186		24'8-3/32"	24'11-29/32"	25'7/8"	
					8.6 sec/pulse	8.6 sec/pulse	8.6 sec/pulse	
312	0.184	0.185	0.186		24'8-3/32"	24'11-29/32"	25'7/8"	
					8.6 sec/pulse	8.6 sec/pulse	8.6 sec/pulse	
251.881	0.169	0.168	0.168		9'11-15/16"	9'11-15/32"	9'11"	
					5.5 sec/pulse	5.4 sec/pulse	5.4 sec/pulse	
251.881	0.169	0.168	0.168		9'11-15/16"	9'11-15/32"	9'11"	
					5.5 sec/pulse	5.4 sec/pulse	5.4 sec/pulse	
251.881	0.169	0.168	0.168		9'11-15/16"	9'11-15/32"	9'11"	
					5.5 sec/pulse	5.4 sec/pulse	5.4 sec/pulse	
177.875	0.109	0.109	0.108		7'9/16"	7'3/32"	6'11-5/8"	
					4.6 sec/pulse	4.6 sec/pulse	4.6 sec/pulse	
177.875	0.109	0.109	0.108		7'9/16"	7'3/32"	6'11-5/8"	
					4.6 sec/pulse	4.6 sec/pulse	4.6 sec/pulse	
177.875	0.109	0.109	0.108		7'9/16"	7'3/32"	6'11-5/8"	
					4.6 sec/pulse	4.6 sec/pulse	4.6 sec/pulse	
130.458	0.067	0.067	0.066		5'3-7/32"	5'2-25/32"	5'2-11/32"	
					4.0 sec/pulse	3.9 sec/pulse	3.9 sec/pulse	
130.458	0.067	0.067	0.066		5'3-7/32"	5'2-25/32"	5'2-11/32"	
					4.0 sec/pulse	3.9 sec/pulse	3.9 sec/pulse	
130.458	0.067	0.067	0.066		5'3-7/32"	5'2-25/32"	5'2-11/32"	
					4.0 sec/pulse	3.9 sec/pulse	3.9 sec/pulse	
62.75	0.059	0.059	0.059		4'1-3/4"	4'1-5/16"	4'7/8"	
					3.5 sec/pulse	3.5 sec/pulse	3.5 sec/pulse	
62.75	0.059	0.059	0.059		4'1-3/4"	4'1-5/16"	4'7/8"	
					3.5 sec/pulse	3.5 sec/pulse	3.5 sec/pulse	
62.75	0.059	0.059	0.059		4'1-3/4"	4'1-5/16"	4'7/8"	
					3.5 sec/pulse	3.5 sec/pulse	3.5 sec/pulse	

Guy Data (cont'd)

<i>Guy Elevation ft</i>	<i>Calc K Single Angles</i>	<i>Calc K Solid Rounds</i>	<i>Torque Arm</i>		<i>Pull Off</i>		<i>Diagonal</i>	
			<i>K_x</i>	<i>K_y</i>	<i>K_x</i>	<i>K_y</i>	<i>K_x</i>	<i>K_y</i>
488	No	No			1	1	1	1
488	No	No			1	1	1	1
488	No	No			1	1	1	1
430	No	No			1	1	1	1
430	No	No			1	1	1	1
430	No	No			1	1	1	1
364	No	No			1	1	1	1
364	No	No			1	1	1	1
364	No	No			1	1	1	1
312	No	No			1	1	1	1
312	No	No			1	1	1	1
312	No	No			1	1	1	1
251.881	No	No			1	1	1	1

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Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
251.881	No	No			1	1	1	1
251.881	No	No			1	1	1	1
177.875	No	No			1	1	1	1
177.875	No	No			1	1	1	1
177.875	No	No			1	1	1	1
130.458	No	No			1	1	1	1
130.458	No	No			1	1	1	1
130.458	No	No			1	1	1	1
62.75	No	No			1	1	1	1
62.75	No	No			1	1	1	1
62.75	No	No			1	1	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
488	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
488	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
488	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
430	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
430	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
430	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
364	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
364	0.000	0	0.000	1	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
364	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
312	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
312	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
312	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
251.881	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
251.881	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
251.881	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
177.875	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
177.875	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			
177.875	0.625	0	0.000	0.75	0.625	0	0.000	0.75	0.625	0	0.000	0.75
	A325N				A325N				A325N			

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Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
130.458	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
130.458	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
130.458	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
62.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
62.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
62.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q _z ksf	q _z Ice ksf	Ice Thickness in
488	A	244'	0.044		
	B	244'	0.044		
	C	244'	0.044		
488	A	244'	0.044		
	B	244'	0.044		
	C	244'	0.044		
488	A	244'	0.044		
	B	244'	0.044		
	C	244'	0.044		
430	A	215'	0.043		
	B	215'	0.043		
	C	215'	0.043		
430	A	215'	0.043		
	B	215'	0.043		
	C	215'	0.043		
430	A	215'	0.043		
	B	215'	0.043		
	C	215'	0.043		
364	A	182'	0.041		
	B	182'	0.041		
	C	182'	0.041		
364	A	182'	0.041		
	B	182'	0.041		
	C	182'	0.041		
364	A	182'	0.041		
	B	182'	0.041		
	C	182'	0.041		
312	A	156'	0.040		
	B	156'	0.040		
	C	156'	0.040		
312	A	156'	0.040		
	B	156'	0.040		
	C	156'	0.040		
312	A	156'	0.040		
	B	156'	0.040		
	C	156'	0.040		
251.881	A	125'11-9/32"	0.038		

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<i>Guy Elevation ft</i>	<i>Guy Location</i>	<i>z ft</i>	<i>q_z ksf</i>	<i>q_z Ice ksf</i>	<i>Ice Thickness in</i>
	B	125'11-9/32"	0.038		
	C	125'11-9/32"	0.038		
251.881	A	125'11-9/32"	0.038		
	B	125'11-9/32"	0.038		
	C	125'11-9/32"	0.038		
251.881	A	125'11-9/32"	0.038		
	B	125'11-9/32"	0.038		
	C	125'11-9/32"	0.038		
177.875	A	88'11-1/4"	0.035		
	B	88'11-1/4"	0.035		
	C	88'11-1/4"	0.035		
177.875	A	88'11-1/4"	0.035		
	B	88'11-1/4"	0.035		
	C	88'11-1/4"	0.035		
177.875	A	88'11-1/4"	0.035		
	B	88'11-1/4"	0.035		
	C	88'11-1/4"	0.035		
130.458	A	65'2-3/4"	0.033		
	B	65'2-3/4"	0.033		
	C	65'2-3/4"	0.033		
130.458	A	65'2-3/4"	0.033		
	B	65'2-3/4"	0.033		
	C	65'2-3/4"	0.033		
130.458	A	65'2-3/4"	0.033		
	B	65'2-3/4"	0.033		
	C	65'2-3/4"	0.033		
62.75	A	31'4-1/2"	0.028		
	B	31'4-1/2"	0.028		
	C	31'4-1/2"	0.028		
62.75	A	31'4-1/2"	0.028		
	B	31'4-1/2"	0.028		
	C	31'4-1/2"	0.028		
62.75	A	31'4-1/2"	0.028		
	B	31'4-1/2"	0.028		
	C	31'4-1/2"	0.028		

Guy-Mast Forces (Excluding Wind) - No Ice

<i>Guy Elevation</i>	<i>Guy Location</i>	<i>Chord Angle</i>	<i>Guy Tension Top Bottom K</i>	<i>F_x</i>	<i>F_y</i>	<i>F_z</i>	<i>M_x</i>	<i>M_y</i>	<i>M_z</i>
<i>ft</i>		<i>°</i>		<i>K</i>	<i>K</i>	<i>K</i>	<i>kip-ft</i>	<i>kip-ft</i>	<i>kip-ft</i>
488	A	55.080	3.127 2.800	-0.050	2.629	-1.693	-6.071	0.116	0.000
	B	54.765	3.127 2.800	1.503	2.620	0.809	3.026	0.117	-5.241
	C	54.687	3.127 2.800	-1.455	2.618	0.899	3.023	0.117	5.236
			Sum:	-0.002	7.868	0.015	-0.022	0.350	-0.004
488	A	55.080	3.127 2.800	0.000	2.629	-1.694	-6.071	0.000	0.000
	B	54.765	3.127 2.800	1.478	2.620	0.853	3.026	0.000	-5.241
	C	54.687	3.127 2.800	-1.481	2.618	0.855	3.023	0.000	5.236
			Sum:	-0.003	7.868	0.015	-0.022	0.000	-0.004
488	A	55.080	3.127	0.050	2.629	-1.693	-6.071	-0.116	0.000

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	Project	Date
	Client	Designed by
	Crown Castle	Sudhanva

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
			2.800						
	B	54.765	3.127	1.452	2.620	0.897	3.026	-0.117	-5.241
			2.800						
	C	54.687	3.127	-1.506	2.618	0.811	3.023	-0.117	5.236
			2.800						
			Sum:	-0.003	7.868	0.015	-0.022	-0.350	-0.004
430	A	51.610	3.088	-0.054	2.491	-1.825	-5.753	0.125	0.000
			2.800						
	B	51.284	3.088	1.619	2.481	0.872	2.865	0.126	-4.963
			2.800						
	C	51.203	3.088	-1.567	2.479	0.968	2.863	0.126	4.958
			2.800						
			Sum:	-0.002	7.452	0.015	-0.025	0.377	-0.005
430	A	51.610	3.088	0.000	2.491	-1.826	-5.753	0.000	0.000
			2.800						
	B	51.284	3.088	1.592	2.481	0.919	2.865	0.000	-4.963
			2.800						
	C	51.203	3.088	-1.595	2.479	0.921	2.863	0.000	4.958
			2.800						
			Sum:	-0.003	7.452	0.015	-0.025	0.000	-0.005
430	A	51.610	3.088	0.054	2.491	-1.825	-5.753	-0.125	0.000
			2.800						
	B	51.284	3.088	1.564	2.481	0.966	2.865	-0.126	-4.963
			2.800						
	C	51.203	3.088	-1.622	2.479	0.873	2.863	-0.126	4.958
			2.800						
			Sum:	-0.003	7.452	0.015	-0.025	-0.377	-0.005
364	A	46.894	3.044	-0.059	2.300	-1.993	-5.312	0.137	0.000
			2.800						
	B	46.561	3.044	1.767	2.289	0.951	2.643	0.137	-4.579
			2.800						
	C	46.478	3.044	-1.710	2.287	1.056	2.640	0.138	4.573
			2.800						
			Sum:	-0.002	6.876	0.014	-0.028	0.412	-0.005
364	A	46.895	3.044	0.000	2.300	-1.994	-5.312	0.000	0.000
			2.800						
	B	46.561	3.044	1.738	2.289	1.003	2.643	0.000	-4.579
			2.800						
	C	46.478	3.044	-1.740	2.287	1.005	2.640	0.000	4.573
			2.800						
			Sum:	-0.003	6.876	0.014	-0.028	0.000	-0.005
364	A	46.894	3.044	0.059	2.300	-1.993	-5.312	-0.137	0.000
			2.800						
	B	46.561	3.044	1.707	2.289	1.054	2.643	-0.137	-4.579
			2.800						
	C	46.478	3.044	-1.769	2.287	0.953	2.640	-0.138	4.573
			2.800						
			Sum:	-0.003	6.876	0.014	-0.028	-0.412	-0.005
312	A	42.483	1.788	-0.038	1.258	-1.271	-2.904	0.087	0.000
			1.664						
	B	42.150	1.788	1.125	1.251	0.606	1.444	0.088	-2.502
			1.664						
	C	42.067	1.788	-1.089	1.249	0.673	1.442	0.088	2.498
			1.664						
			Sum:	-0.001	3.758	0.008	-0.018	0.262	-0.003
312	A	42.483	1.788	0.000	1.258	-1.271	-2.904	0.000	0.000
			1.664						
	B	42.150	1.788	1.107	1.251	0.639	1.444	0.000	-2.502
			1.664						

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	Project	Date
	Client	Designed by
	Crown Castle	Sudhanva

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
312	C	42.068	1.788 1.664 Sum:	-1.108 -0.001	1.249 3.758	0.640 0.008	1.442 -0.018	0.000 0.000	2.498 -0.003
	A	42.483	1.788 1.664 Sum:	0.038	1.258	-1.271	-2.904	-0.087	0.000
	B	42.150	1.788 1.664 Sum:	1.088	1.251	0.672	1.444	-0.088	-2.502
251.881	C	42.067	1.788 1.664 Sum:	-1.127	1.249	0.607	1.442	-0.088	2.498
	A	50.492	2.820 2.690 Sum:	-0.002 -0.079	3.758 2.210	0.008 -1.750	-0.018 -5.103	-0.262 0.184	-0.003 0.000
	B	50.628	2.820 2.690 Sum:	1.551	2.214	0.804	2.556	0.183	-4.428
251.881	C	50.764	2.820 2.690 Sum:	-1.468	2.218	0.939	2.561	0.182	4.436
	A	50.492	2.820 2.690 Sum:	0.004 0.000	6.641 2.210	-0.008 -1.752	0.014 -5.103	0.549 0.000	0.008 0.000
	B	50.628	2.820 2.690 Sum:	1.513	2.214	0.874	2.556	0.000	-4.428
251.881	C	50.764	2.820 2.690 Sum:	-1.509	2.218	0.871	2.561	0.000	4.436
	A	50.492	2.820 2.690 Sum:	0.004 0.079	6.641 2.210	-0.008 -1.750	0.014 -5.103	0.000 -0.184	0.008 0.000
	B	50.628	2.820 2.690 Sum:	1.472	2.214	0.941	2.556	-0.183	-4.428
177.875	C	50.764	2.820 2.690 Sum:	-1.547	2.218	0.802	2.561	-0.182	4.436
	A	40.578	2.151 2.080 Sum:	-0.073	1.430	-1.605	-3.304	0.168	0.000
	B	40.714	2.151 2.080 Sum:	1.423	1.434	0.738	1.656	0.168	-2.868
177.875	C	40.852	2.151 2.080 Sum:	-1.348	1.438	0.862	1.660	0.168	2.876
	A	40.578	2.151 2.080 Sum:	0.003 0.000	4.303 1.430	-0.005 -1.606	0.013 -3.304	0.504 0.000	0.007 0.000
	B	40.715	2.151 2.080 Sum:	1.388	1.434	0.801	1.656	0.000	-2.868
177.875	C	40.852	2.151 2.080 Sum:	-1.385	1.438	0.800	1.660	0.000	2.876
	A	40.578	2.151 2.080 Sum:	0.003 0.073	4.303 1.430	-0.005 -1.605	0.013 -3.304	0.000 -0.168	0.007 0.000
	B	40.714	2.151 2.080 Sum:	1.350	1.434	0.864	1.656	-0.168	-2.868
130.458	C	40.852	2.151 2.080 Sum:	-1.420	1.438	0.736	1.660	-0.168	2.876
	A	32.134	1.576 1.540 Sum:	-0.060	0.862	-1.318	-1.991	0.138	0.000
	B	32.259	1.576 1.540 Sum:	1.169	0.865	0.606	0.999	0.138	-1.730
	C	32.384	1.576 1.540 Sum:	-1.108	0.868	0.709	1.002	0.138	1.735
				0.001	2.594	-0.003	0.010	0.414	0.006

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	Client Crown Castle	Designed by Sudhanva

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
130.458	A	32.134	1.576 1.540	0.000	0.862	-1.319	-1.991	0.000	0.000
	B	32.259	1.576 1.540	1.141	0.865	0.659	0.999	0.000	-1.730
	C	32.385	1.576 1.540	-1.139	0.868	0.658	1.002	0.000	1.735
130.458	A	32.134	Sum: 1.576 1.540	0.002 0.060	2.594 0.862	-0.003 -1.318	0.010 -1.991	0.000 -0.138	0.006 0.000
	B	32.259	1.576 1.540	1.110	0.865	0.710	0.999	-0.138	-1.730
	C	32.384	1.576 1.540	-1.168	0.868	0.605	1.002	-0.138	1.735
62.75	A	16.811	Sum: 1.557 1.540	0.002 -0.067	2.594 0.477	-0.003 -1.481	0.010 -1.103	-0.414 0.155	0.006 0.000
	B	16.888	1.557 1.540	1.315	0.479	0.682	0.553	0.155	-0.959
	C	16.965	1.557 1.540	-1.248	0.481	0.798	0.556	0.155	0.962
62.75	A	16.811	Sum: 1.557 1.540	0.000 0.000	1.438 0.477	-0.001 -1.482	0.006 -1.103	0.466 0.000	0.004 0.000
	B	16.888	1.557 1.540	1.283	0.479	0.741	0.553	0.000	-0.959
	C	16.965	1.557 1.540	-1.283	0.481	0.740	0.556	0.000	0.962
62.75	A	16.811	Sum: 1.557 1.540	0.001 0.067	1.438 0.477	-0.001 -1.481	0.006 -1.103	0.000 -0.155	0.004 0.000
	B	16.888	1.557 1.540	1.248	0.479	0.798	0.553	-0.155	-0.959
	C	16.965	1.557 1.540	-1.315	0.481	0.682	0.556	-0.155	0.962
			Sum:	0.001	1.438	-0.001	0.006	-0.466	0.004

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
488	A	55.080	3.127 2.800	-0.050	2.629	-1.693	-6.071	0.116	0.000
	B	54.765	3.127 2.800	1.503	2.620	0.809	3.026	0.117	-5.241
	C	54.687	3.127 2.800	-1.455	2.618	0.899	3.023	0.117	5.236
488	A	55.080	Sum: 3.127 2.800	-0.002 0.000	7.868 2.629	0.015 -1.694	-0.022 -6.071	0.350 0.000	-0.004 0.000
	B	54.765	3.127 2.800	1.478	2.620	0.853	3.026	0.000	-5.241

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	Project	Date
	Client	Designed by
	Crown Castle	Sudhanva

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
488	C	54.687	3.127 2.800	-1.481	2.618	0.855	3.023	0.000	5.236
			Sum:	-0.003	7.868	0.015	-0.022	0.000	-0.004
	A	55.080	3.127 2.800	0.050	2.629	-1.693	-6.071	-0.116	0.000
	B	54.765	3.127 2.800	1.452	2.620	0.897	3.026	-0.117	-5.241
430	C	54.687	3.127 2.800	-1.506	2.618	0.811	3.023	-0.117	5.236
			Sum:	-0.003	7.868	0.015	-0.022	-0.350	-0.004
	A	51.610	3.088 2.800	-0.054	2.491	-1.825	-5.753	0.125	0.000
	B	51.284	3.088 2.800	1.619	2.481	0.872	2.865	0.126	-4.963
430	C	51.203	3.088 2.800	-1.567	2.479	0.968	2.863	0.126	4.958
			Sum:	-0.002	7.452	0.015	-0.025	0.377	-0.005
	A	51.610	3.088 2.800	0.000	2.491	-1.826	-5.753	0.000	0.000
	B	51.284	3.088 2.800	1.592	2.481	0.919	2.865	0.000	-4.963
430	C	51.203	3.088 2.800	-1.595	2.479	0.921	2.863	0.000	4.958
			Sum:	-0.003	7.452	0.015	-0.025	0.000	-0.005
	A	51.610	3.088 2.800	0.054	2.491	-1.825	-5.753	-0.125	0.000
	B	51.284	3.088 2.800	1.564	2.481	0.966	2.865	-0.126	-4.963
364	C	51.203	3.088 2.800	-1.622	2.479	0.873	2.863	-0.126	4.958
			Sum:	-0.003	7.452	0.015	-0.025	-0.377	-0.005
	A	46.894	3.044 2.800	-0.059	2.300	-1.993	-5.312	0.137	0.000
	B	46.561	3.044 2.800	1.767	2.289	0.951	2.643	0.137	-4.579
364	C	46.478	3.044 2.800	-1.710	2.287	1.056	2.640	0.138	4.573
			Sum:	-0.002	6.876	0.014	-0.028	0.412	-0.005
	A	46.895	3.044 2.800	0.000	2.300	-1.994	-5.312	0.000	0.000
	B	46.561	3.044 2.800	1.738	2.289	1.003	2.643	0.000	-4.579
364	C	46.478	3.044 2.800	-1.740	2.287	1.005	2.640	0.000	4.573
			Sum:	-0.003	6.876	0.014	-0.028	0.000	-0.005
	A	46.894	3.044 2.800	0.059	2.300	-1.993	-5.312	-0.137	0.000
	B	46.561	3.044 2.800	1.707	2.289	1.054	2.643	-0.137	-4.579
312	C	46.478	3.044 2.800	-1.769	2.287	0.953	2.640	-0.138	4.573
			Sum:	-0.003	6.876	0.014	-0.028	-0.412	-0.005
	A	42.483	1.788 1.664	-0.038	1.258	-1.271	-2.904	0.087	0.000
	B	42.150	1.788 1.664	1.125	1.251	0.606	1.444	0.088	-2.502
312	C	42.067	1.788 1.664	-1.089	1.249	0.673	1.442	0.088	2.498
			Sum:	-0.001	3.758	0.008	-0.018	0.262	-0.003

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	Project	Date
	Client	Designed by
	Crown Castle	Sudhanva

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
312	A	42.483	1.788 1.664	0.000	1.258	-1.271	-2.904	0.000	0.000
	B	42.150	1.788 1.664	1.107	1.251	0.639	1.444	0.000	-2.502
	C	42.068	1.788 1.664	-1.108	1.249	0.640	1.442	0.000	2.498
312			Sum:	-0.001	3.758	0.008	-0.018	0.000	-0.003
	A	42.483	1.788 1.664	0.038	1.258	-1.271	-2.904	-0.087	0.000
	B	42.150	1.788 1.664	1.088	1.251	0.672	1.444	-0.088	-2.502
251.881	C	42.067	1.788 1.664	-1.127	1.249	0.607	1.442	-0.088	2.498
			Sum:	-0.002	3.758	0.008	-0.018	-0.262	-0.003
	A	50.492	2.820 2.690	-0.079	2.210	-1.750	-5.103	0.184	0.000
251.881	B	50.628	2.820 2.690	1.551	2.214	0.804	2.556	0.183	-4.428
	C	50.764	2.820 2.690	-1.468	2.218	0.939	2.561	0.182	4.436
			Sum:	0.004	6.641	-0.008	0.014	0.549	0.008
251.881	A	50.492	2.820 2.690	0.000	2.210	-1.752	-5.103	0.000	0.000
	B	50.628	2.820 2.690	1.513	2.214	0.874	2.556	0.000	-4.428
	C	50.764	2.820 2.690	-1.509	2.218	0.871	2.561	0.000	4.436
251.881			Sum:	0.004	6.641	-0.008	0.014	0.000	0.008
	A	50.492	2.820 2.690	0.079	2.210	-1.750	-5.103	-0.184	0.000
	B	50.628	2.820 2.690	1.472	2.214	0.941	2.556	-0.183	-4.428
177.875	C	50.764	2.820 2.690	-1.547	2.218	0.802	2.561	-0.182	4.436
			Sum:	0.005	6.641	-0.007	0.014	-0.549	0.008
	A	40.578	2.151 2.080	-0.073	1.430	-1.605	-3.304	0.168	0.000
177.875	B	40.714	2.151 2.080	1.423	1.434	0.738	1.656	0.168	-2.868
	C	40.852	2.151 2.080	-1.348	1.438	0.862	1.660	0.168	2.876
			Sum:	0.003	4.303	-0.005	0.013	0.504	0.007
177.875	A	40.578	2.151 2.080	0.000	1.430	-1.606	-3.304	0.000	0.000
	B	40.715	2.151 2.080	1.388	1.434	0.801	1.656	0.000	-2.868
	C	40.852	2.151 2.080	-1.385	1.438	0.800	1.660	0.000	2.876
177.875			Sum:	0.003	4.303	-0.005	0.013	0.000	0.007
	A	40.578	2.151 2.080	0.073	1.430	-1.605	-3.304	-0.168	0.000
	B	40.714	2.151 2.080	1.350	1.434	0.864	1.656	-0.168	-2.868
130.458	C	40.852	2.151 2.080	-1.420	1.438	0.736	1.660	-0.168	2.876
			Sum:	0.003	4.303	-0.005	0.013	-0.504	0.007
	A	32.134	1.576 1.540	-0.060	0.862	-1.318	-1.991	0.138	0.000
	B	32.259	1.576	1.169	0.865	0.606	0.999	0.138	-1.730

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	Client Crown Castle	Designed by Sudhanva

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
130.458	C	32.384	1.540						
			1.576	-1.108	0.868	0.709	1.002	0.138	1.735
			1.540						
			Sum:	0.001	2.594	-0.003	0.010	0.414	0.006
			1.576	0.000	0.862	-1.319	-1.991	0.000	0.000
130.458	A	32.134	1.540						
			1.576	1.141	0.865	0.659	0.999	0.000	-1.730
			1.540						
			Sum:	0.002	2.594	-0.003	0.010	0.000	0.006
			1.576	0.060	0.862	-1.318	-1.991	-0.138	0.000
130.458	B	32.259	1.540						
			1.576	1.110	0.865	0.710	0.999	-0.138	-1.730
			1.540						
			Sum:	0.002	2.594	-0.003	0.010	-0.414	0.006
			1.576	-1.168	0.868	0.605	1.002	-0.138	1.735
62.75	C	32.384	1.540						
			1.576	-1.139	0.868	0.658	1.002	0.000	1.735
			1.540						
			Sum:	0.002	2.594	-0.003	0.010	0.000	0.006
			1.576	0.060	0.862	-1.318	-1.991	-0.138	0.000
62.75	A	16.811	1.540						
			1.576	1.110	0.865	0.710	0.999	-0.138	-1.730
			1.540						
			Sum:	0.002	2.594	-0.003	0.010	-0.414	0.006
			1.576	-1.168	0.868	0.605	1.002	-0.138	1.735
62.75	B	16.888	1.540						
			1.576	1.315	0.479	0.682	0.553	0.155	-0.959
			1.540						
			Sum:	0.000	1.438	-0.001	0.006	0.466	0.004
			1.576	0.000	0.477	-1.481	-1.103	0.155	0.000
62.75	C	16.965	1.540						
			1.576	-1.248	0.481	0.798	0.556	0.155	0.962
			1.540						
			Sum:	0.000	1.438	-0.001	0.006	0.466	0.004
			1.576	0.000	0.477	-1.482	-1.103	0.000	0.000
62.75	A	16.811	1.540						
			1.576	1.283	0.479	0.741	0.553	0.000	-0.959
			1.540						
			Sum:	0.001	1.438	-0.001	0.006	0.000	0.004
			1.576	0.067	0.477	-1.481	-1.103	-0.155	0.000
62.75	B	16.888	1.540						
			1.576	1.248	0.479	0.798	0.553	-0.155	-0.959
			1.540						
			Sum:	0.001	1.438	-0.001	0.006	0.000	0.004
			1.576	-1.315	0.481	0.682	0.556	-0.155	0.962
62.75	C	16.965	1.540						
			1.576	-1.315	0.481	0.682	0.556	-0.155	0.962
			1.540						
			Sum:	0.001	1.438	-0.001	0.006	-0.466	0.004
			1.576	0.001	1.438	-0.001	0.006	-0.466	0.004

Guy-Tensioning Information

Temperature At Time Of Tensioning																	
Guy Elevation	H	V	0 F		20 F		40 F		60 F		80 F		100 F		120 F		
			Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	
			K	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K	ft	
			ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	
488	A	340.69	488.00	3.157	35.78	3.035	37.15	2.911	38.66	2.800	40.11	2.695	41.60	2.594	43.12	2.499	44.68
	B	344.69	488.00	3.160	36.03	3.037	37.42	2.919	38.85	2.800	40.43	2.694	41.93	2.593	43.47	2.498	45.04
	C	345.69	488.00	3.160	36.09	3.037	37.49	2.920	38.93	2.800	40.50	2.694	42.02	2.593	43.56	2.497	45.14
488	A	340.69	488.00	3.157	35.78	3.035	37.15	2.911	38.66	2.800	40.11	2.695	41.60	2.594	43.12	2.499	44.68
	B	344.69	488.00	3.160	36.03	3.037	37.42	2.919	38.85	2.800	40.43	2.694	41.93	2.593	43.47	2.498	45.04
	C	345.69	488.00	3.160	36.09	3.037	37.49	2.920	38.93	2.800	40.50	2.694	42.02	2.593	43.56	2.497	45.14
488	A	340.69	488.00	3.157	35.78	3.035	37.15	2.911	38.66	2.800	40.11	2.695	41.60	2.594	43.12	2.499	44.68
	B	344.69	488.00	3.160	36.03	3.037	37.42	2.919	38.85	2.800	40.43	2.694	41.93	2.593	43.47	2.498	45.04
	C	345.69	488.00	3.160	36.09	3.037	37.49	2.920	38.93	2.800	40.50	2.694	42.02	2.593	43.56	2.497	45.14
430	A	340.69	430.00	3.213	30.07	3.068	31.43	2.931	32.85	2.800	34.31	2.677	35.82	2.560	37.36	2.451	38.94

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		17:19:09 08/31/21
	Client	Designed by
	Crown Castle	Sudhanva

Temperature At Time Of Tensioning																
Guy Elevation ft	H ft	V ft	0 F		20 F		40 F		60 F		80 F		100 F		120 F	
			Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft
430	B	344.69	430.00	3.215	30.33	3.070	31.71	2.931	33.14	2.800	34.62	2.676	36.15	2.560	37.72	2.450
	C	345.69	430.00	3.216	30.39	3.070	31.78	2.931	33.21	2.800	34.70	2.676	36.23	2.560	37.80	2.450
	A	340.69	430.00	3.213	30.07	3.068	31.43	2.931	32.85	2.800	34.31	2.677	35.82	2.560	37.36	2.451
430	B	344.69	430.00	3.215	30.33	3.070	31.71	2.931	33.14	2.800	34.62	2.676	36.15	2.560	37.72	2.450
	C	345.69	430.00	3.216	30.39	3.070	31.78	2.931	33.21	2.800	34.70	2.676	36.23	2.560	37.80	2.450
	A	340.69	430.00	3.213	30.07	3.068	31.43	2.931	32.85	2.800	34.31	2.677	35.82	2.560	37.36	2.451
364	B	344.69	364.00	3.303	24.34	3.125	25.68	2.957	27.09	2.800	28.55	2.653	30.07	2.517	31.63	2.390
	C	345.69	364.00	3.305	24.60	3.126	25.96	2.958	27.38	2.800	28.87	2.653	30.40	2.516	31.99	2.390
	A	340.69	364.00	3.303	24.34	3.125	25.68	2.957	27.09	2.800	28.55	2.653	30.07	2.517	31.63	2.390
364	B	344.69	364.00	3.305	24.66	3.127	26.03	2.958	27.46	2.800	28.95	2.653	30.49	2.516	32.07	2.390
	C	345.69	364.00	3.305	24.60	3.126	25.96	2.958	27.38	2.800	28.87	2.653	30.40	2.516	31.99	2.390
	A	340.69	364.00	3.303	24.34	3.125	25.68	2.957	27.09	2.800	28.55	2.653	30.07	2.517	31.63	2.390
364	B	344.69	364.00	3.305	24.66	3.127	26.03	2.958	27.46	2.800	28.95	2.653	30.49	2.516	32.07	2.390
	C	345.69	364.00	3.305	24.60	3.126	25.96	2.958	27.38	2.800	28.87	2.653	30.40	2.516	31.99	2.390
	A	340.69	364.00	3.303	24.34	3.125	25.68	2.957	27.09	2.800	28.55	2.653	30.07	2.517	31.63	2.390
312	B	344.69	312.00	2.015	20.49	1.890	22.16	1.773	23.51	1.664	24.67	1.564	26.20	1.472	27.78	1.388
	C	345.69	312.00	2.016	20.81	1.890	22.16	1.773	23.58	1.664	25.07	1.564	26.62	1.472	28.22	1.388
	A	340.69	312.00	2.015	20.49	1.890	22.16	1.773	23.51	1.664	24.67	1.564	26.20	1.472	27.78	1.388
312	B	344.69	312.00	2.016	20.75	1.890	22.09	1.773	23.51	1.664	24.99	1.564	26.54	1.472	28.13	1.388
	C	345.69	312.00	2.016	20.81	1.890	22.16	1.773	23.58	1.664	25.07	1.564	26.62	1.472	28.22	1.388
	A	340.69	312.00	2.015	20.49	1.890	22.16	1.773	23.51	1.664	24.67	1.564	26.20	1.472	27.78	1.388
251.881	B	207.69	251.88	3.174	8.50	3.010	8.95	2.848	9.45	2.690	9.99	2.535	10.59	2.385	11.24	2.239
	C	205.69	251.88	3.170	8.44	3.007	8.89	2.847	9.38	2.690	9.92	2.537	10.50	2.387	11.14	2.243
	A	207.69	251.88	3.174	8.50	3.010	8.95	2.848	9.45	2.690	9.99	2.535	10.59	2.385	11.24	2.239
251.881	B	206.69	251.88	3.172	8.47	3.009	8.92	2.848	9.42	2.690	9.96	2.536	10.55	2.386	11.19	2.241
	C	205.69	251.88	3.170	8.44	3.007	8.89	2.847	9.38	2.690	9.92	2.537	10.50	2.387	11.14	2.243
	A	207.69	251.88	3.174	8.50	3.010	8.95	2.848	9.45	2.690	9.99	2.535	10.59	2.385	11.24	2.239
251.881	B	206.69	251.88	3.172	8.47	3.009	8.92	2.848	9.42	2.690	9.96	2.536	10.55	2.386	11.19	2.241
	C	205.69	251.88	3.170	8.44	3.007	8.89	2.847	9.38	2.690	9.92	2.537	10.50	2.387	11.14	2.243
	A	207.69	251.88	3.174	8.50	3.010	8.95	2.848	9.45	2.690	9.99	2.535	10.59	2.385	11.24	2.239
177.875	B	207.69	177.87	2.617	5.62	2.434	6.04	2.255	6.51	2.080	7.05	1.911	7.66	1.750	8.35	1.597
	C	205.69	177.87	2.614	5.56	2.432	5.97	2.254	6.44	2.080	6.97	1.912	7.57	1.751	8.26	1.599
	A	207.69	177.87	2.617	5.62	2.434	6.04	2.255	6.51	2.080	7.05	1.911	7.66	1.750	8.35	1.597
177.875	B	206.69	177.87	2.615	5.59	2.433	6.01	2.254	6.47	2.080	7.01	1.912	7.62	1.751	8.30	1.598
	C	205.69	177.87	2.614	5.56	2.432	5.97	2.254	6.44	2.080	6.97	1.912	7.57	1.751	8.26	1.599
	A	207.69	177.87	2.617	5.62	2.434	6.04	2.255	6.51	2.080	7.05	1.911	7.66	1.750	8.35	1.597
177.875	B	206.69	177.87	2.615	5.59	2.433	6.01	2.254	6.47	2.080	7.01	1.912	7.62	1.751	8.30	1.598
	C	205.69	177.87	2.614	5.56	2.432	5.97	2.254	6.44	2.080	6.97	1.912	7.57	1.751	8.26	1.599
	A	207.69	177.87	2.617	5.62	2.434	6.04	2.255	6.51	2.080	7.05	1.911	7.66	1.750	8.35	1.597
130.458	B	206.69	130.46	2.009	4.05	1.849	4.39	1.693	4.80	1.540	5.27	1.392	5.82	1.251	6.47	1.119
	C	205.69	130.46	2.008	4.02	1.848	4.36	1.693	4.76	1.540	5.23	1.392	5.78	1.252	6.42	1.119
	A	207.69	130.46	2.009	4.05	1.849	4.39	1.693	4.80	1.540	5.27	1.392	5.82	1.251	6.47	1.119
130.458	B	206.69	130.46	2.008	4.02	1.848	4.34	1.692	4.73	1.540	5.20	1.393	5.74	1.252	6.38	1.120
	C	205.69	130.46	2.007	4.00	1.848	4.34	1.692	4.73	1.540	5.20	1.393	5.74	1.252	6.38	1.120
	A	207.69	130.46	2.009	4.05	1.849	4.39	1.693	4.80	1.540	5.27	1.392	5.82	1.251	6.47	1.119
130.458	B	206.69	130.46	2.008	4.02	1.849	4.36	1.693	4.76	1.540	5.23	1.392	5.78	1.252	6.42	1.119
	C	205.69	130.46	2.007	4.00	1.848	4.34	1.692	4.73	1.540	5.20	1.393	5.74	1.252	6.38	1.120
	A	207.69	130.46	2.009	4.05	1.849	4.39	1.693	4.80	1.540	5.27	1.392	5.82	1.251	6.47	1.119
62.75	B	206.69	62.75	2.143	2.98	1.937	3.30	1.736	3.68	1.540	4.15	1.353	4.72	1.177	5.42	1.018
	C	205.69	62.75	2.143	2.93	1.937	3.24	1.736	3.62	1.540	4.07	1.352	4.64	1.177	5.32	1.017
	A	207.69	62.75	2.143	2.98	1.937	3.30	1.736	3.68	1.540	4.15	1.353	4.72	1.177	5.42	1.018
62.75	B	206.69	62.75	2.143	2.96	1.937	3.27	1.736	3.65	1.540	4.11	1.353	4.68	1.177	5.37	1.018
	C	205.69	62.75	2.143	2.93	1.937	3.24	1.736	3.62	1.540	4.07	1.352	4.64	1.177	5.32	1.017
	A	207.69	62.75	2.143	2.98	1.937	3.30	1.736	3.68	1.540	4.15	1.353	4.72	1.177	5.42	1.018
62.75	B	206.69	62.75	2.143	2.96	1.937	3.27	1.736	3.65	1.540	4.11	1.353	4.68	1.177	5.37	1.018
	C	205.69	62.75	2.143	2.93	1.937	3.24	1.736	3.62	1.540	4.07	1.352	4.64	1.177	5.32	1.017
	A	207.69	62.75	2.143	2.98	1.937	3.30	1.736	3.68	1.540	4.15	1.353	4.72	1.177	5.42	1.018

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
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Face A

tnxTower B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job 116502.002.01--Lake City (US 41 & I-10),FL(BU#870145)	Page 25 of 84
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	Client Crown Castle	Designed by Sudhanva

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
Safety Line 3/8 ***	A	No	No	Ar (CaAa)	500' - 0'	0.000	0.5	1	1	0.375	0.375		0.000
LDF7-50A(1- 5/8)	A	No	No	Ar (CaAa)	234' - 0'	0.000	-0.35	12	4	1.000 0.500	1.980		0.001
LMR-400(3/8)	A	No	No	Ar (CaAa)	149' - 0'	0.000	0.2	2	2	0.405	0.405		0.000
ATCB-B01-00 1(5/16") **Face B**	A	No	No	Ar (CaAa)	195' - 0'	0.000	0.18	1	1	0.315	0.315		0.000
LDF5-50A(7/ 8)	B	No	No	Ar (CaAa)	464' - 0'	2.000	-0.4	1	1	1.090	1.090		0.000
LDF7-50A(1- 5/8)	B	No	No	Ar (CaAa)	494' - 0'	0.000	-0.4	1	1	1.980	1.980		0.001
LDF5-50A(7/ 8)	B	No	No	Ar (CaAa)	446' - 0'	0.000	0	4	2	0.500	1.090		0.000
LDF5-50A(7/ 8)	B	No	No	Ar (CaAa)	446' - 0'	0.000	-0.3	1	1	0.500	1.090		0.000
LDF7-50A(1- 5/8)	B	No	No	Ar (CaAa)	499' - 477'	0.000	-0.1	1	1	1.980 0.500	1.980		0.001
LDF7-50A(1- 5/8)	B	No	No	Ar (CaAa)	477' - 446'	0.000	-0.1	2	2	1.980 0.500	1.980		0.001
LDF7-50A(1- 5/8)	B	No	No	Ar (CaAa)	446' - 0'	0.000	-0.1	3	2	0.500	1.980		0.001
1 1/2" Rigid Conduit **Face C**	B	No	No	Ar (CaAa)	500' - 0'	0.000	0.4	1	1	1.500	1.500		0.001
LDF4-50A(1/ 2)	C	No	No	Ar (CaAa)	195' - 0'	0.000	-0.25	1	1	0.630	0.630		0.000
LDF5-50A(7/ 8)	C	No	No	Ar (CaAa)	314' - 0'	0.000	-0.1	3	2	0.500	1.090		0.000
LDF5-50A(7/ 8)	C	No	No	Ar (CaAa)	396' - 314'	0.000	-0.1	1	1	0.500	1.090		0.000
LDF5-50A(7/ 8)	C	No	No	Ar (CaAa)	295' - 0'	0.000	0	3	2	0.500	1.090		0.000
LDF5-50A(7/ 8)	C	No	No	Ar (CaAa)	499' - 295'	0.000	0	1	1	0.500	1.090		0.000
LDF5-50A(7/ 8)	C	No	No	Ar (CaAa)	420' - 0'	0.000	-0.4	1	1	0.500	1.090		0.000
LDF6-50A(1- 1/4) ***	C	No	No	Ar (CaAa)	420' - 0'	0.000	0.4	2	2	0.500	1.550		0.001
HB158-21U6S 24-xxM_TMO (1-5/8) *	C	No	No	Ar (CaAa)	286' - 0'	-1.000	0.3	2	2	0.850 0.750	1.996		0.003
Waveguide Brackets	A	No	No	Af (CaAa)	500' - 0'	0.000	0	1	1	1.750	1.750		0.001
Waveguide Brackets	B	No	No	Af (CaAa)	500' - 0'	0.000	0	1	1	1.750	1.750		0.001
Waveguide Brackets	C	No	No	Af (CaAa)	500' - 0'	0.000	0	1	1	1.750	1.750		0.001

Feed Line/Linear Appurtenances Section Areas

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	Crown Castle	Sudhanva

<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A_R</i> <i>ft²</i>	<i>A_F</i> <i>ft²</i>	<i>C_AA_A</i> <i>In Face ft²</i>	<i>C_AA_A</i> <i>Out Face ft²</i>	<i>Weight K</i>
T1	500'-492'	A	0.000	0.000	2.633	0.000	0.012
		B	0.000	0.000	5.315	0.000	0.026
		C	0.000	0.000	3.096	0.000	0.012
T2	492'-472'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	17.743	0.000	0.082
		C	0.000	0.000	8.013	0.000	0.032
T3	472'-452'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	22.021	0.000	0.099
		C	0.000	0.000	8.013	0.000	0.032
T4	452'-432'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	33.295	0.000	0.136
		C	0.000	0.000	8.013	0.000	0.032
T5	432'-424'	A	0.000	0.000	2.633	0.000	0.012
		B	0.000	0.000	15.101	0.000	0.060
		C	0.000	0.000	3.205	0.000	0.013
T6	424'-408'	A	0.000	0.000	5.267	0.000	0.024
		B	0.000	0.000	30.203	0.000	0.120
		C	0.000	0.000	11.439	0.000	0.044
T7	408'-388'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	17.265	0.000	0.065
T8	388'-368'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	18.573	0.000	0.069
T9	368'-356'	A	0.000	0.000	3.950	0.000	0.018
		B	0.000	0.000	22.652	0.000	0.090
		C	0.000	0.000	11.144	0.000	0.041
T10	356'-336'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	18.573	0.000	0.069
T11	336'-316'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	18.573	0.000	0.069
T12	316'-296'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	22.497	0.000	0.081
T13	296'-276'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	31.067	0.000	0.145
T14	276'-256'	A	0.000	0.000	6.583	0.000	0.030
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	35.277	0.000	0.196
T15	256'-241'7"	A	0.000	0.000	4.745	0.000	0.021
		B	0.000	0.000	27.214	0.000	0.109
		C	0.000	0.000	25.429	0.000	0.141
T16	241'7"-221'7"	A	0.000	0.000	36.085	0.000	0.152
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	35.277	0.000	0.196
T17	221'7"-201'7"	A	0.000	0.000	54.103	0.000	0.227
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	35.277	0.000	0.196
T18	201'7"-181'7"	A	0.000	0.000	54.526	0.000	0.228
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.123	0.000	0.198
T19	181'7"-174'2"	A	0.000	0.000	20.297	0.000	0.085
		B	0.000	0.000	14.000	0.000	0.056
		C	0.000	0.000	13.549	0.000	0.074
T20	174'2"-154'2"	A	0.000	0.000	54.733	0.000	0.228
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T21	154'2"-134'2"	A	0.000	0.000	55.935	0.000	0.230

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A_R</i> <i>ft²</i>	<i>A_F</i> <i>ft²</i>	<i>C_AA_A</i> <i>In Face ft²</i>	<i>C_AA_A</i> <i>Out Face ft²</i>	<i>Weight K</i>
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T22	134'2"-126'9"	A	0.000	0.000	20.898	0.000	0.086
		B	0.000	0.000	14.000	0.000	0.056
		C	0.000	0.000	13.549	0.000	0.074
T23	126'9"-106'9"	A	0.000	0.000	56.353	0.000	0.231
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T24	106'9"-86'9"	A	0.000	0.000	56.353	0.000	0.231
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T25	86'9"-66'9"	A	0.000	0.000	56.353	0.000	0.231
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T26	66'9"-46'9"	A	0.000	0.000	56.353	0.000	0.231
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T27	46'9"-26'9"	A	0.000	0.000	56.353	0.000	0.231
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T28	26'9"-6'9"	A	0.000	0.000	56.353	0.000	0.231
		B	0.000	0.000	37.753	0.000	0.151
		C	0.000	0.000	36.537	0.000	0.199
T29	6'9"-0'	A	0.000	0.000	19.019	0.000	0.078
		B	0.000	0.000	12.742	0.000	0.051
		C	0.000	0.000	12.331	0.000	0.067

Feed Line Center of Pressure

<i>Section</i>	<i>Elevation</i>	<i>CP_x</i>	<i>CP_z</i>	<i>CP_x</i>	<i>CP_z</i>
	<i>ft</i>	<i>in</i>	<i>in</i>	<i>Ice in</i>	<i>Ice in</i>
T1	500'-492'	0.780	-0.246	0.780	-0.246
T2	492'-472'	0.949	-0.945	0.949	-0.945
T3	472'-452'	1.173	-1.464	1.173	-1.464
T4	452'-432'	1.831	-2.252	1.831	-2.252
T5	432'-424'	2.025	-2.431	2.025	-2.431
T6	424'-408'	1.635	-1.947	1.635	-1.947
T7	408'-388'	1.512	-1.673	1.512	-1.673
T8	388'-368'	1.538	-1.528	1.538	-1.528
T9	368'-356'	1.512	-1.503	1.512	-1.503
T10	356'-336'	1.587	-1.574	1.587	-1.574
T11	336'-316'	1.587	-1.574	1.587	-1.574
T12	316'-296'	1.646	-1.096	1.646	-1.096
T13	296'-276'	1.257	-0.390	1.257	-0.390
T14	276'-256'	0.898	-0.169	0.898	-0.169
T15	256'-241'7"	0.887	-0.167	0.887	-0.167
T16	241'7"-221'7"	-0.623	0.341	-0.623	0.341
T17	221'7"-201'7"	-1.409	0.604	-1.409	0.604
T18	201'7"-181'7"	-1.532	0.698	-1.532	0.698
T19	181'7"-174'2"	-1.281	0.610	-1.281	0.610
T20	174'2"-154'2"	-1.511	0.711	-1.511	0.711
T21	154'2"-134'2"	-1.544	0.606	-1.544	0.606
T22	134'2"-126'9"	-1.510	0.553	-1.510	0.553
T23	126'9"-106'9"	-1.556	0.569	-1.556	0.569
T24	106'9"-86'9"	-1.556	0.569	-1.556	0.569
T25	86'9"-66'9"	-1.556	0.569	-1.556	0.569
T26	66'9"-46'9"	-1.542	0.564	-1.542	0.564

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Section	Elevation	CP _X	CP _Z	CP _X Ice	CP _Z Ice
	ft	in	in	in	in
T27	46'9"-26'9"	-1.518	0.556	-1.518	0.556
T28	26'9"-6'9"	-1.518	0.556	-1.518	0.556
T29	6'9"-0'	-1.669	0.607	-1.669	0.607

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	2	Safety Line 3/8	492.00 - 500.00	0.6000	0.6000
T1	9	LDF7-50A(1-5/8)	492.00 - 494.00	0.6000	0.6000
T1	12	LDF7-50A(1-5/8)	492.00 - 499.00	0.6000	0.6000
T1	15	1 1/2" Rigid Conduit	492.00 - 500.00	0.6000	0.6000
T1	21	LDF5-50A(7/8)	492.00 - 499.00	0.6000	0.6000
T1	27	Waveguide Brackets	492.00 - 500.00	0.6000	0.6000
T1	28	Waveguide Brackets	492.00 - 500.00	0.6000	0.6000
T1	29	Waveguide Brackets	492.00 - 500.00	0.6000	0.6000
T2	2	Safety Line 3/8	472.00 - 492.00	0.6000	0.6000
T2	9	LDF7-50A(1-5/8)	472.00 - 492.00	0.6000	0.6000
T2	12	LDF7-50A(1-5/8)	477.00 - 492.00	0.6000	0.6000
T2	13	LDF7-50A(1-5/8)	472.00 - 477.00	0.6000	0.6000
T2	15	1 1/2" Rigid Conduit	472.00 - 492.00	0.6000	0.6000
T2	21	LDF5-50A(7/8)	472.00 - 492.00	0.6000	0.6000
T2	27	Waveguide Brackets	472.00 - 492.00	0.6000	0.6000
T2	28	Waveguide Brackets	472.00 - 492.00	0.6000	0.6000
T2	29	Waveguide Brackets	472.00 - 492.00	0.6000	0.6000
T3	2	Safety Line 3/8	452.00 - 472.00	0.6000	0.6000
T3	8	LDF5-50A(7/8)	452.00 - 464.00	0.6000	0.6000
T3	9	LDF7-50A(1-5/8)	452.00 - 472.00	0.6000	0.6000
T3	13	LDF7-50A(1-5/8)	452.00 - 472.00	0.6000	0.6000
T3	15	1 1/2" Rigid Conduit	452.00 - 472.00	0.6000	0.6000
T3	21	LDF5-50A(7/8)	452.00 - 472.00	0.6000	0.6000
T3	27	Waveguide Brackets	452.00 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T3	28	Waveguide Brackets	472.00 - 452.00	0.6000	0.6000
T3	29	Waveguide Brackets	472.00 - 452.00	0.6000	0.6000
T4	2	Safety Line 3/8	472.00 - 432.00	0.6000	0.6000
T4	8	LDF5-50A(7/8)	452.00 - 432.00	0.6000	0.6000
T4	9	LDF7-50A(1-5/8)	452.00 - 432.00	0.6000	0.6000
T4	10	LDF5-50A(7/8)	452.00 - 432.00	0.6000	0.6000
T4	11	LDF5-50A(7/8)	446.00 - 432.00	0.6000	0.6000
T4	13	LDF7-50A(1-5/8)	446.00 - 452.00	0.6000	0.6000
T4	14	LDF7-50A(1-5/8)	452.00 - 432.00	0.6000	0.6000
T4	15	1 1/2" Rigid Conduit	446.00 - 432.00	0.6000	0.6000
T4	21	LDF5-50A(7/8)	452.00 - 432.00	0.6000	0.6000
T4	27	Waveguide Brackets	452.00 - 432.00	0.6000	0.6000
T4	28	Waveguide Brackets	452.00 - 432.00	0.6000	0.6000
T4	29	Waveguide Brackets	452.00 - 432.00	0.6000	0.6000
T5	2	Safety Line 3/8	452.00 - 424.00	0.6000	0.6000
T5	8	LDF5-50A(7/8)	432.00 - 424.00	0.6000	0.6000
T5	9	LDF7-50A(1-5/8)	432.00 - 424.00	0.6000	0.6000
T5	10	LDF5-50A(7/8)	432.00 - 424.00	0.6000	0.6000
T5	11	LDF5-50A(7/8)	432.00 - 424.00	0.6000	0.6000
T5	14	LDF7-50A(1-5/8)	432.00 - 424.00	0.6000	0.6000
T5	15	1 1/2" Rigid Conduit	432.00 - 424.00	0.6000	0.6000
T5	21	LDF5-50A(7/8)	432.00 - 424.00	0.6000	0.6000
T5	27	Waveguide Brackets	432.00 - 424.00	0.6000	0.6000
T5	28	Waveguide Brackets	432.00 - 424.00	0.6000	0.6000
T5	29	Waveguide Brackets	432.00 - 424.00	0.6000	0.6000
T6	2	Safety Line 3/8	424.00 - 408.00	0.6000	0.6000
T6	8	LDF5-50A(7/8)	424.00 - 408.00	0.6000	0.6000
T6	9	LDF7-50A(1-5/8)	424.00 - 408.00	0.6000	0.6000
T6	10	LDF5-50A(7/8)	424.00 - 408.00	0.6000	0.6000
T6	11	LDF5-50A(7/8)	424.00 - 408.00	0.6000	0.6000
T6	14	LDF7-50A(1-5/8)	424.00 - 408.00	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
			424.00		
T6	15	1 1/2" Rigid Conduit	408.00 -	0.6000	0.6000
			424.00		
T6	21	LDF5-50A(7/8)	408.00 -	0.6000	0.6000
			424.00		
T6	22	LDF5-50A(7/8)	408.00 -	0.6000	0.6000
			420.00		
T6	23	LDF6-50A(1-1/4)	408.00 -	0.6000	0.6000
			420.00		
T6	27	Waveguide Brackets	408.00 -	0.6000	0.6000
			424.00		
T6	28	Waveguide Brackets	408.00 -	0.6000	0.6000
			424.00		
T6	29	Waveguide Brackets	408.00 -	0.6000	0.6000
			424.00		
T7	2	Safety Line 3/8	388.00 -	0.6000	0.6000
			408.00		
T7	8	LDF5-50A(7/8)	388.00 -	0.6000	0.6000
			408.00		
T7	9	LDF7-50A(1-5/8)	388.00 -	0.6000	0.6000
			408.00		
T7	10	LDF5-50A(7/8)	388.00 -	0.6000	0.6000
			408.00		
T7	11	LDF5-50A(7/8)	388.00 -	0.6000	0.6000
			408.00		
T7	14	LDF7-50A(1-5/8)	388.00 -	0.6000	0.6000
			408.00		
T7	15	1 1/2" Rigid Conduit	388.00 -	0.6000	0.6000
			408.00		
T7	19	LDF5-50A(7/8)	388.00 -	0.6000	0.6000
			396.00		
T7	21	LDF5-50A(7/8)	388.00 -	0.6000	0.6000
			408.00		
T7	22	LDF5-50A(7/8)	388.00 -	0.6000	0.6000
			408.00		
T7	23	LDF6-50A(1-1/4)	388.00 -	0.6000	0.6000
			408.00		
T7	27	Waveguide Brackets	388.00 -	0.6000	0.6000
			408.00		
T7	28	Waveguide Brackets	388.00 -	0.6000	0.6000
			408.00		
T7	29	Waveguide Brackets	388.00 -	0.6000	0.6000
			408.00		
T8	2	Safety Line 3/8	368.00 -	0.6000	0.6000
			388.00		
T8	8	LDF5-50A(7/8)	368.00 -	0.6000	0.6000
			388.00		
T8	9	LDF7-50A(1-5/8)	368.00 -	0.6000	0.6000
			388.00		
T8	10	LDF5-50A(7/8)	368.00 -	0.6000	0.6000
			388.00		
T8	11	LDF5-50A(7/8)	368.00 -	0.6000	0.6000
			388.00		
T8	14	LDF7-50A(1-5/8)	368.00 -	0.6000	0.6000
			388.00		
T8	15	1 1/2" Rigid Conduit	368.00 -	0.6000	0.6000
			388.00		
T8	19	LDF5-50A(7/8)	368.00 -	0.6000	0.6000
			388.00		
T8	21	LDF5-50A(7/8)	368.00 -	0.6000	0.6000
			388.00		
T8	22	LDF5-50A(7/8)	368.00 -	0.6000	0.6000

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<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
			388.00		
T8	23	LDF6-50A(1-1/4)	368.00 - 388.00	0.6000	0.6000
T8	27	Waveguide Brackets	368.00 - 388.00	0.6000	0.6000
T8	28	Waveguide Brackets	368.00 - 388.00	0.6000	0.6000
T8	29	Waveguide Brackets	368.00 - 388.00	0.6000	0.6000
T9	2	Safety Line 3/8	356.00 - 368.00	0.6000	0.6000
T9	8	LDF5-50A(7/8)	356.00 - 368.00	0.6000	0.6000
T9	9	LDF7-50A(1-5/8)	356.00 - 368.00	0.6000	0.6000
T9	10	LDF5-50A(7/8)	356.00 - 368.00	0.6000	0.6000
T9	11	LDF5-50A(7/8)	356.00 - 368.00	0.6000	0.6000
T9	14	LDF7-50A(1-5/8)	356.00 - 368.00	0.6000	0.6000
T9	15	1 1/2" Rigid Conduit	356.00 - 368.00	0.6000	0.6000
T9	19	LDF5-50A(7/8)	356.00 - 368.00	0.6000	0.6000
T9	21	LDF5-50A(7/8)	356.00 - 368.00	0.6000	0.6000
T9	22	LDF5-50A(7/8)	356.00 - 368.00	0.6000	0.6000
T9	23	LDF6-50A(1-1/4)	356.00 - 368.00	0.6000	0.6000
T9	27	Waveguide Brackets	356.00 - 368.00	0.6000	0.6000
T9	28	Waveguide Brackets	356.00 - 368.00	0.6000	0.6000
T9	29	Waveguide Brackets	356.00 - 368.00	0.6000	0.6000
T10	2	Safety Line 3/8	336.00 - 356.00	0.6000	0.6000
T10	8	LDF5-50A(7/8)	336.00 - 356.00	0.6000	0.6000
T10	9	LDF7-50A(1-5/8)	336.00 - 356.00	0.6000	0.6000
T10	10	LDF5-50A(7/8)	336.00 - 356.00	0.6000	0.6000
T10	11	LDF5-50A(7/8)	336.00 - 356.00	0.6000	0.6000
T10	14	LDF7-50A(1-5/8)	336.00 - 356.00	0.6000	0.6000
T10	15	1 1/2" Rigid Conduit	336.00 - 356.00	0.6000	0.6000
T10	19	LDF5-50A(7/8)	336.00 - 356.00	0.6000	0.6000
T10	21	LDF5-50A(7/8)	336.00 - 356.00	0.6000	0.6000
T10	22	LDF5-50A(7/8)	336.00 - 356.00	0.6000	0.6000
T10	23	LDF6-50A(1-1/4)	336.00 - 356.00	0.6000	0.6000
T10	27	Waveguide Brackets	336.00 - 356.00	0.6000	0.6000
T10	28	Waveguide Brackets	336.00 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T10	29	Waveguide Brackets	356.00 336.00 -	0.6000	0.6000
T11	2	Safety Line 3/8	356.00 316.00 -	0.6000	0.6000
T11	8	LDF5-50A(7/8)	336.00 316.00 -	0.6000	0.6000
T11	9	LDF7-50A(1-5/8)	336.00 316.00 -	0.6000	0.6000
T11	10	LDF5-50A(7/8)	336.00 316.00 -	0.6000	0.6000
T11	11	LDF5-50A(7/8)	336.00 316.00 -	0.6000	0.6000
T11	14	LDF7-50A(1-5/8)	336.00 316.00 -	0.6000	0.6000
T11	15	1 1/2" Rigid Conduit	336.00 316.00 -	0.6000	0.6000
T11	19	LDF5-50A(7/8)	336.00 316.00 -	0.6000	0.6000
T11	21	LDF5-50A(7/8)	336.00 316.00 -	0.6000	0.6000
T11	22	LDF5-50A(7/8)	336.00 316.00 -	0.6000	0.6000
T11	23	LDF6-50A(1-1/4)	336.00 316.00 -	0.6000	0.6000
T11	27	Waveguide Brackets	336.00 316.00 -	0.6000	0.6000
T11	28	Waveguide Brackets	336.00 316.00 -	0.6000	0.6000
T11	29	Waveguide Brackets	336.00 316.00 -	0.6000	0.6000
T12	2	Safety Line 3/8	296.00 - 316.00	0.6000	0.6000
T12	8	LDF5-50A(7/8)	296.00 - 316.00	0.6000	0.6000
T12	9	LDF7-50A(1-5/8)	296.00 - 316.00	0.6000	0.6000
T12	10	LDF5-50A(7/8)	296.00 - 316.00	0.6000	0.6000
T12	11	LDF5-50A(7/8)	296.00 - 316.00	0.6000	0.6000
T12	14	LDF7-50A(1-5/8)	296.00 - 316.00	0.6000	0.6000
T12	15	1 1/2" Rigid Conduit	296.00 - 316.00	0.6000	0.6000
T12	18	LDF5-50A(7/8)	296.00 - 314.00	0.6000	0.6000
T12	19	LDF5-50A(7/8)	314.00 - 316.00	0.6000	0.6000
T12	21	LDF5-50A(7/8)	296.00 - 316.00	0.6000	0.6000
T12	22	LDF5-50A(7/8)	296.00 - 316.00	0.6000	0.6000
T12	23	LDF6-50A(1-1/4)	296.00 - 316.00	0.6000	0.6000
T12	27	Waveguide Brackets	296.00 - 316.00	0.6000	0.6000
T12	28	Waveguide Brackets	296.00 - 316.00	0.6000	0.6000
T12	29	Waveguide Brackets	296.00 - 316.00	0.6000	0.6000
T13	2	Safety Line 3/8	276.00 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T13	8	LDF5-50A(7/8)	296.00 276.00 - 296.00	0.6000	0.6000
T13	9	LDF7-50A(1-5/8)	276.00 - 296.00	0.6000	0.6000
T13	10	LDF5-50A(7/8)	276.00 - 296.00	0.6000	0.6000
T13	11	LDF5-50A(7/8)	276.00 - 296.00	0.6000	0.6000
T13	14	LDF7-50A(1-5/8)	276.00 - 296.00	0.6000	0.6000
T13	15	1 1/2" Rigid Conduit	276.00 - 296.00	0.6000	0.6000
T13	18	LDF5-50A(7/8)	276.00 - 296.00	0.6000	0.6000
T13	20	LDF5-50A(7/8)	276.00 - 295.00	0.6000	0.6000
T13	21	LDF5-50A(7/8)	295.00 - 296.00	0.6000	0.6000
T13	22	LDF5-50A(7/8)	276.00 - 296.00	0.6000	0.6000
T13	23	LDF6-50A(1-1/4)	276.00 - 296.00	0.6000	0.6000
T13	25	HB158-21U6S24-xxM_TMO (1-5/8)	276.00 - 286.00	0.6000	0.6000
T13	27	Waveguide Brackets	276.00 - 296.00	0.6000	0.6000
T13	28	Waveguide Brackets	276.00 - 296.00	0.6000	0.6000
T13	29	Waveguide Brackets	276.00 - 296.00	0.6000	0.6000
T14	2	Safety Line 3/8	256.00 - 276.00	0.6000	0.6000
T14	8	LDF5-50A(7/8)	256.00 - 276.00	0.6000	0.6000
T14	9	LDF7-50A(1-5/8)	256.00 - 276.00	0.6000	0.6000
T14	10	LDF5-50A(7/8)	256.00 - 276.00	0.6000	0.6000
T14	11	LDF5-50A(7/8)	256.00 - 276.00	0.6000	0.6000
T14	14	LDF7-50A(1-5/8)	256.00 - 276.00	0.6000	0.6000
T14	15	1 1/2" Rigid Conduit	256.00 - 276.00	0.6000	0.6000
T14	18	LDF5-50A(7/8)	256.00 - 276.00	0.6000	0.6000
T14	20	LDF5-50A(7/8)	256.00 - 276.00	0.6000	0.6000
T14	22	LDF5-50A(7/8)	256.00 - 276.00	0.6000	0.6000
T14	23	LDF6-50A(1-1/4)	256.00 - 276.00	0.6000	0.6000
T14	25	HB158-21U6S24-xxM_TMO (1-5/8)	256.00 - 276.00	0.6000	0.6000
T14	27	Waveguide Brackets	256.00 - 276.00	0.6000	0.6000
T14	28	Waveguide Brackets	256.00 - 276.00	0.6000	0.6000
T14	29	Waveguide Brackets	256.00 - 276.00	0.6000	0.6000
T15	2	Safety Line 3/8	241.58 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T15	8	LDF5-50A(7/8)	256.00 241.58 -	0.6000	0.6000
T15	9	LDF7-50A(1-5/8)	256.00 241.58 -	0.6000	0.6000
T15	10	LDF5-50A(7/8)	256.00 241.58 -	0.6000	0.6000
T15	11	LDF5-50A(7/8)	256.00 241.58 -	0.6000	0.6000
T15	14	LDF7-50A(1-5/8)	256.00 241.58 -	0.6000	0.6000
T15	15	1 1/2" Rigid Conduit	256.00 241.58 -	0.6000	0.6000
T15	18	LDF5-50A(7/8)	256.00 241.58 -	0.6000	0.6000
T15	20	LDF5-50A(7/8)	256.00 241.58 -	0.6000	0.6000
T15	22	LDF5-50A(7/8)	256.00 241.58 -	0.6000	0.6000
T15	23	LDF6-50A(1-1/4)	256.00 241.58 -	0.6000	0.6000
T15	25	HB158-21U6S24-xxM_TMO (1-5/8)	256.00 241.58 -	0.6000	0.6000
T15	27	Waveguide Brackets	256.00 241.58 -	0.6000	0.6000
T15	28	Waveguide Brackets	256.00 241.58 -	0.6000	0.6000
T15	29	Waveguide Brackets	256.00 241.58 -	0.6000	0.6000
T16	2	Safety Line 3/8	241.58 - 221.58 -	0.5892	0.5892
T16	4	LDF7-50A(1-5/8)	234.00 221.58 -	0.5892	0.5892
T16	8	LDF5-50A(7/8)	241.58 - 221.58 -	0.5892	0.5892
T16	9	LDF7-50A(1-5/8)	241.58 - 221.58 -	0.5892	0.5892
T16	10	LDF5-50A(7/8)	241.58 - 221.58 -	0.5892	0.5892
T16	11	LDF5-50A(7/8)	241.58 - 221.58 -	0.5892	0.5892
T16	14	LDF7-50A(1-5/8)	241.58 - 221.58 -	0.5892	0.5892
T16	15	1 1/2" Rigid Conduit	241.58 - 221.58 -	0.5892	0.5892
T16	18	LDF5-50A(7/8)	241.58 - 221.58 -	0.5892	0.5892
T16	20	LDF5-50A(7/8)	241.58 - 221.58 -	0.5892	0.5892
T16	22	LDF5-50A(7/8)	241.58 - 221.58 -	0.5892	0.5892
T16	23	LDF6-50A(1-1/4)	241.58 - 221.58 -	0.5892	0.5892
T16	25	HB158-21U6S24-xxM_TMO (1-5/8)	241.58 - 221.58 -	0.5892	0.5892
T16	27	Waveguide Brackets	241.58 - 221.58 -	0.5892	0.5892
T16	28	Waveguide Brackets	241.58 - 221.58 -	0.5892	0.5892
T16	29	Waveguide Brackets	241.58 - 221.58 -	0.5892	0.5892
T17	2	Safety Line 3/8	201.58 -	0.5892	0.5892

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T17	4	LDF7-50A(1-5/8)	221.58 201.58 -	0.5892	0.5892
T17	8	LDF5-50A(7/8)	221.58 201.58 -	0.5892	0.5892
T17	9	LDF7-50A(1-5/8)	221.58 201.58 -	0.5892	0.5892
T17	10	LDF5-50A(7/8)	221.58 201.58 -	0.5892	0.5892
T17	11	LDF5-50A(7/8)	221.58 201.58 -	0.5892	0.5892
T17	14	LDF7-50A(1-5/8)	221.58 201.58 -	0.5892	0.5892
T17	15	1 1/2" Rigid Conduit	221.58 201.58 -	0.5892	0.5892
T17	18	LDF5-50A(7/8)	221.58 201.58 -	0.5892	0.5892
T17	20	LDF5-50A(7/8)	221.58 201.58 -	0.5892	0.5892
T17	22	LDF5-50A(7/8)	221.58 201.58 -	0.5892	0.5892
T17	23	LDF6-50A(1-1/4)	221.58 201.58 -	0.5892	0.5892
T17	25	HB158-21U6S24-xxM_TMO (1-5/8)	221.58 201.58 -	0.5892	0.5892
T17	27	Waveguide Brackets	221.58 201.58 -	0.5892	0.5892
T17	28	Waveguide Brackets	221.58 201.58 -	0.5892	0.5892
T17	29	Waveguide Brackets	221.58 201.58 -	0.5892	0.5892
T18	2	Safety Line 3/8	201.58 181.58 -	0.6000	0.6000
T18	4	LDF7-50A(1-5/8)	201.58 181.58 -	0.6000	0.6000
T18	6	ATCB-B01-001(5/16")	201.58 181.58 -	0.6000	0.6000
T18	8	LDF5-50A(7/8)	195.00 181.58 -	0.6000	0.6000
T18	9	LDF7-50A(1-5/8)	201.58 181.58 -	0.6000	0.6000
T18	10	LDF5-50A(7/8)	201.58 181.58 -	0.6000	0.6000
T18	11	LDF5-50A(7/8)	201.58 181.58 -	0.6000	0.6000
T18	14	LDF7-50A(1-5/8)	201.58 181.58 -	0.6000	0.6000
T18	15	1 1/2" Rigid Conduit	201.58 181.58 -	0.6000	0.6000
T18	17	LDF4-50A(1/2)	195.00 181.58 -	0.6000	0.6000
T18	18	LDF5-50A(7/8)	201.58 181.58 -	0.6000	0.6000
T18	20	LDF5-50A(7/8)	201.58 181.58 -	0.6000	0.6000
T18	22	LDF5-50A(7/8)	201.58 181.58 -	0.6000	0.6000
T18	23	LDF6-50A(1-1/4)	201.58 181.58 -	0.6000	0.6000
T18	25	HB158-21U6S24-xxM_TMO (1-5/8)	201.58 181.58 -	0.6000	0.6000
T18	27	Waveguide Brackets	181.58 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T18	28	Waveguide Brackets	201.58 181.58 - 201.58	0.6000	0.6000
T18	29	Waveguide Brackets	181.58 - 201.58	0.6000	0.6000
T19	2	Safety Line 3/8	174.17 - 181.58	0.5607	0.5607
T19	4	LDF7-50A(1-5/8)	174.17 - 181.58	0.5607	0.5607
T19	6	ATCB-B01-001(5/16")	174.17 - 181.58	0.5607	0.5607
T19	8	LDF5-50A(7/8)	174.17 - 181.58	0.5607	0.5607
T19	9	LDF7-50A(1-5/8)	174.17 - 181.58	0.5607	0.5607
T19	10	LDF5-50A(7/8)	174.17 - 181.58	0.5607	0.5607
T19	11	LDF5-50A(7/8)	174.17 - 181.58	0.5607	0.5607
T19	14	LDF7-50A(1-5/8)	174.17 - 181.58	0.5607	0.5607
T19	15	1 1/2" Rigid Conduit	174.17 - 181.58	0.5607	0.5607
T19	17	LDF4-50A(1/2)	174.17 - 181.58	0.5607	0.5607
T19	18	LDF5-50A(7/8)	174.17 - 181.58	0.5607	0.5607
T19	20	LDF5-50A(7/8)	174.17 - 181.58	0.5607	0.5607
T19	22	LDF5-50A(7/8)	174.17 - 181.58	0.5607	0.5607
T19	23	LDF6-50A(1-1/4)	174.17 - 181.58	0.5607	0.5607
T19	25	HB158-21U6S24-xxM_TMO (1-5/8)	174.17 - 181.58	0.5607	0.5607
T19	27	Waveguide Brackets	174.17 - 181.58	0.5607	0.5607
T19	28	Waveguide Brackets	174.17 - 181.58	0.5607	0.5607
T19	29	Waveguide Brackets	174.17 - 181.58	0.5607	0.5607
T20	2	Safety Line 3/8	154.17 - 174.17	0.6000	0.6000
T20	4	LDF7-50A(1-5/8)	154.17 - 174.17	0.6000	0.6000
T20	6	ATCB-B01-001(5/16")	154.17 - 174.17	0.6000	0.6000
T20	8	LDF5-50A(7/8)	154.17 - 174.17	0.6000	0.6000
T20	9	LDF7-50A(1-5/8)	154.17 - 174.17	0.6000	0.6000
T20	10	LDF5-50A(7/8)	154.17 - 174.17	0.6000	0.6000
T20	11	LDF5-50A(7/8)	154.17 - 174.17	0.6000	0.6000
T20	14	LDF7-50A(1-5/8)	154.17 - 174.17	0.6000	0.6000
T20	15	1 1/2" Rigid Conduit	154.17 - 174.17	0.6000	0.6000
T20	17	LDF4-50A(1/2)	154.17 - 174.17	0.6000	0.6000
T20	18	LDF5-50A(7/8)	154.17 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T20	20	LDF5-50A(7/8)	174.17 154.17 -	0.6000	0.6000
T20	22	LDF5-50A(7/8)	174.17 154.17 -	0.6000	0.6000
T20	23	LDF6-50A(1-1/4)	174.17 154.17 -	0.6000	0.6000
T20	25	HB158-21U6S24-xxM_TMO (1-5/8)	174.17 154.17 -	0.6000	0.6000
T20	27	Waveguide Brackets	174.17 154.17 -	0.6000	0.6000
T20	28	Waveguide Brackets	174.17 154.17 -	0.6000	0.6000
T20	29	Waveguide Brackets	174.17 154.17 -	0.6000	0.6000
T21	2	Safety Line 3/8	174.17 134.17 -	0.6000	0.6000
T21	4	LDF7-50A(1-5/8)	154.17 134.17 -	0.6000	0.6000
T21	5	LMR-400(3/8)	154.17 134.17 -	0.6000	0.6000
T21	6	ATCB-B01-001(5/16")	149.00 134.17 -	0.6000	0.6000
T21	8	LDF5-50A(7/8)	154.17 134.17 -	0.6000	0.6000
T21	9	LDF7-50A(1-5/8)	154.17 134.17 -	0.6000	0.6000
T21	10	LDF5-50A(7/8)	154.17 134.17 -	0.6000	0.6000
T21	11	LDF5-50A(7/8)	154.17 134.17 -	0.6000	0.6000
T21	14	LDF7-50A(1-5/8)	154.17 134.17 -	0.6000	0.6000
T21	15	1 1/2" Rigid Conduit	154.17 134.17 -	0.6000	0.6000
T21	17	LDF4-50A(1/2)	154.17 134.17 -	0.6000	0.6000
T21	18	LDF5-50A(7/8)	154.17 134.17 -	0.6000	0.6000
T21	20	LDF5-50A(7/8)	154.17 134.17 -	0.6000	0.6000
T21	22	LDF5-50A(7/8)	154.17 134.17 -	0.6000	0.6000
T21	23	LDF6-50A(1-1/4)	154.17 134.17 -	0.6000	0.6000
T21	25	HB158-21U6S24-xxM_TMO (1-5/8)	154.17 134.17 -	0.6000	0.6000
T21	27	Waveguide Brackets	154.17 134.17 -	0.6000	0.6000
T21	28	Waveguide Brackets	154.17 134.17 -	0.6000	0.6000
T21	29	Waveguide Brackets	154.17 134.17 -	0.6000	0.6000
T22	2	Safety Line 3/8	154.17 126.75 -	0.6000	0.6000
T22	4	LDF7-50A(1-5/8)	134.17 126.75 -	0.6000	0.6000
T22	5	LMR-400(3/8)	134.17 126.75 -	0.6000	0.6000
T22	6	ATCB-B01-001(5/16")	134.17 126.75 -	0.6000	0.6000
T22	8	LDF5-50A(7/8)	134.17 126.75 -	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T22	9	LDF7-50A(1-5/8)	134.17 126.75 - 134.17	0.6000	0.6000
T22	10	LDF5-50A(7/8)	126.75 - 134.17	0.6000	0.6000
T22	11	LDF5-50A(7/8)	126.75 - 134.17	0.6000	0.6000
T22	14	LDF7-50A(1-5/8)	126.75 - 134.17	0.6000	0.6000
T22	15	1 1/2" Rigid Conduit	126.75 - 134.17	0.6000	0.6000
T22	17	LDF4-50A(1/2)	126.75 - 134.17	0.6000	0.6000
T22	18	LDF5-50A(7/8)	126.75 - 134.17	0.6000	0.6000
T22	20	LDF5-50A(7/8)	126.75 - 134.17	0.6000	0.6000
T22	22	LDF5-50A(7/8)	126.75 - 134.17	0.6000	0.6000
T22	23	LDF6-50A(1-1/4)	126.75 - 134.17	0.6000	0.6000
T22	25	HB158-21U6S24-xxM_TMO (1-5/8)	126.75 - 134.17	0.6000	0.6000
T22	27	Waveguide Brackets	126.75 - 134.17	0.6000	0.6000
T22	28	Waveguide Brackets	126.75 - 134.17	0.6000	0.6000
T22	29	Waveguide Brackets	126.75 - 134.17	0.6000	0.6000
T23	2	Safety Line 3/8	106.75 - 126.75	0.6000	0.6000
T23	4	LDF7-50A(1-5/8)	106.75 - 126.75	0.6000	0.6000
T23	5	LMR-400(3/8)	106.75 - 126.75	0.6000	0.6000
T23	6	ATCB-B01-001(5/16")	106.75 - 126.75	0.6000	0.6000
T23	8	LDF5-50A(7/8)	106.75 - 126.75	0.6000	0.6000
T23	9	LDF7-50A(1-5/8)	106.75 - 126.75	0.6000	0.6000
T23	10	LDF5-50A(7/8)	106.75 - 126.75	0.6000	0.6000
T23	11	LDF5-50A(7/8)	106.75 - 126.75	0.6000	0.6000
T23	14	LDF7-50A(1-5/8)	106.75 - 126.75	0.6000	0.6000
T23	15	1 1/2" Rigid Conduit	106.75 - 126.75	0.6000	0.6000
T23	17	LDF4-50A(1/2)	106.75 - 126.75	0.6000	0.6000
T23	18	LDF5-50A(7/8)	106.75 - 126.75	0.6000	0.6000
T23	20	LDF5-50A(7/8)	106.75 - 126.75	0.6000	0.6000
T23	22	LDF5-50A(7/8)	106.75 - 126.75	0.6000	0.6000
T23	23	LDF6-50A(1-1/4)	106.75 - 126.75	0.6000	0.6000
T23	25	HB158-21U6S24-xxM_TMO (1-5/8)	106.75 - 126.75	0.6000	0.6000
T23	27	Waveguide Brackets	106.75 -	0.6000	0.6000

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<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T23	28	Waveguide Brackets	126.75 106.75 - 126.75	0.6000	0.6000
T23	29	Waveguide Brackets	106.75 - 126.75	0.6000	0.6000
T24	2	Safety Line 3/8	86.75 - 106.75	0.6000	0.6000
T24	4	LDF7-50A(1-5/8)	86.75 - 106.75	0.6000	0.6000
T24	5	LMR-400(3/8)	86.75 - 106.75	0.6000	0.6000
T24	6	ATCB-B01-001(5/16")	86.75 - 106.75	0.6000	0.6000
T24	8	LDF5-50A(7/8)	86.75 - 106.75	0.6000	0.6000
T24	9	LDF7-50A(1-5/8)	86.75 - 106.75	0.6000	0.6000
T24	10	LDF5-50A(7/8)	86.75 - 106.75	0.6000	0.6000
T24	11	LDF5-50A(7/8)	86.75 - 106.75	0.6000	0.6000
T24	14	LDF7-50A(1-5/8)	86.75 - 106.75	0.6000	0.6000
T24	15	1 1/2" Rigid Conduit	86.75 - 106.75	0.6000	0.6000
T24	17	LDF4-50A(1/2)	86.75 - 106.75	0.6000	0.6000
T24	18	LDF5-50A(7/8)	86.75 - 106.75	0.6000	0.6000
T24	20	LDF5-50A(7/8)	86.75 - 106.75	0.6000	0.6000
T24	22	LDF5-50A(7/8)	86.75 - 106.75	0.6000	0.6000
T24	23	LDF6-50A(1-1/4)	86.75 - 106.75	0.6000	0.6000
T24	25	HB158-21U6S24-xxM_TMO (1-5/8)	86.75 - 106.75	0.6000	0.6000
T24	27	Waveguide Brackets	86.75 - 106.75	0.6000	0.6000
T24	28	Waveguide Brackets	86.75 - 106.75	0.6000	0.6000
T24	29	Waveguide Brackets	86.75 - 106.75	0.6000	0.6000
T25	2	Safety Line 3/8	66.75 - 86.75	0.6000	0.6000
T25	4	LDF7-50A(1-5/8)	66.75 - 86.75	0.6000	0.6000
T25	5	LMR-400(3/8)	66.75 - 86.75	0.6000	0.6000
T25	6	ATCB-B01-001(5/16")	66.75 - 86.75	0.6000	0.6000
T25	8	LDF5-50A(7/8)	66.75 - 86.75	0.6000	0.6000
T25	9	LDF7-50A(1-5/8)	66.75 - 86.75	0.6000	0.6000
T25	10	LDF5-50A(7/8)	66.75 - 86.75	0.6000	0.6000
T25	11	LDF5-50A(7/8)	66.75 - 86.75	0.6000	0.6000
T25	14	LDF7-50A(1-5/8)	66.75 - 86.75	0.6000	0.6000
T25	15	1 1/2" Rigid Conduit	66.75 - 86.75	0.6000	0.6000
T25	17	LDF4-50A(1/2)	66.75 - 86.75	0.6000	0.6000
T25	18	LDF5-50A(7/8)	66.75 - 86.75	0.6000	0.6000
T25	20	LDF5-50A(7/8)	66.75 - 86.75	0.6000	0.6000
T25	22	LDF5-50A(7/8)	66.75 - 86.75	0.6000	0.6000
T25	23	LDF6-50A(1-1/4)	66.75 - 86.75	0.6000	0.6000
T25	25	HB158-21U6S24-xxM_TMO (1-5/8)	66.75 - 86.75	0.6000	0.6000
T25	27	Waveguide Brackets	66.75 - 86.75	0.6000	0.6000
T25	28	Waveguide Brackets	66.75 - 86.75	0.6000	0.6000
T25	29	Waveguide Brackets	66.75 - 86.75	0.6000	0.6000
T26	2	Safety Line 3/8	46.75 - 66.75	0.6000	0.6000
T26	4	LDF7-50A(1-5/8)	46.75 - 66.75	0.6000	0.6000
T26	5	LMR-400(3/8)	46.75 - 66.75	0.6000	0.6000
T26	6	ATCB-B01-001(5/16")	46.75 - 66.75	0.6000	0.6000
T26	8	LDF5-50A(7/8)	46.75 - 66.75	0.6000	0.6000
T26	9	LDF7-50A(1-5/8)	46.75 - 66.75	0.6000	0.6000
T26	10	LDF5-50A(7/8)	46.75 - 66.75	0.6000	0.6000
T26	11	LDF5-50A(7/8)	46.75 - 66.75	0.6000	0.6000
T26	14	LDF7-50A(1-5/8)	46.75 - 66.75	0.6000	0.6000
T26	15	1 1/2" Rigid Conduit	46.75 - 66.75	0.6000	0.6000
T26	17	LDF4-50A(1/2)	46.75 - 66.75	0.6000	0.6000
T26	18	LDF5-50A(7/8)	46.75 - 66.75	0.6000	0.6000
T26	20	LDF5-50A(7/8)	46.75 - 66.75	0.6000	0.6000
T26	22	LDF5-50A(7/8)	46.75 - 66.75	0.6000	0.6000
T26	23	LDF6-50A(1-1/4)	46.75 - 66.75	0.6000	0.6000
T26	25	HB158-21U6S24-xxM_TMO (1-5/8)	46.75 - 66.75	0.6000	0.6000

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<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T26	27	Waveguide Brackets	46.75 - 66.75	0.6000	0.6000
T26	28	Waveguide Brackets	46.75 - 66.75	0.6000	0.6000
T26	29	Waveguide Brackets	46.75 - 66.75	0.6000	0.6000
T27	2	Safety Line 3/8	26.75 - 46.75	0.6000	0.6000
T27	4	LDF7-50A(1-5/8)	26.75 - 46.75	0.6000	0.6000
T27	5	LMR-400(3/8)	26.75 - 46.75	0.6000	0.6000
T27	6	ATCB-B01-001(5/16")	26.75 - 46.75	0.6000	0.6000
T27	8	LDF5-50A(7/8)	26.75 - 46.75	0.6000	0.6000
T27	9	LDF7-50A(1-5/8)	26.75 - 46.75	0.6000	0.6000
T27	10	LDF5-50A(7/8)	26.75 - 46.75	0.6000	0.6000
T27	11	LDF5-50A(7/8)	26.75 - 46.75	0.6000	0.6000
T27	14	LDF7-50A(1-5/8)	26.75 - 46.75	0.6000	0.6000
T27	15	1 1/2" Rigid Conduit	26.75 - 46.75	0.6000	0.6000
T27	17	LDF4-50A(1/2)	26.75 - 46.75	0.6000	0.6000
T27	18	LDF5-50A(7/8)	26.75 - 46.75	0.6000	0.6000
T27	20	LDF5-50A(7/8)	26.75 - 46.75	0.6000	0.6000
T27	22	LDF5-50A(7/8)	26.75 - 46.75	0.6000	0.6000
T27	23	LDF6-50A(1-1/4)	26.75 - 46.75	0.6000	0.6000
T27	25	HB158-21U6S24-xxM_TMO (1-5/8)	26.75 - 46.75	0.6000	0.6000
T27	27	Waveguide Brackets	26.75 - 46.75	0.6000	0.6000
T27	28	Waveguide Brackets	26.75 - 46.75	0.6000	0.6000
T27	29	Waveguide Brackets	26.75 - 46.75	0.6000	0.6000
T28	2	Safety Line 3/8	6.75 - 26.75	0.6000	0.6000
T28	4	LDF7-50A(1-5/8)	6.75 - 26.75	0.6000	0.6000
T28	5	LMR-400(3/8)	6.75 - 26.75	0.6000	0.6000
T28	6	ATCB-B01-001(5/16")	6.75 - 26.75	0.6000	0.6000
T28	8	LDF5-50A(7/8)	6.75 - 26.75	0.6000	0.6000
T28	9	LDF7-50A(1-5/8)	6.75 - 26.75	0.6000	0.6000
T28	10	LDF5-50A(7/8)	6.75 - 26.75	0.6000	0.6000
T28	11	LDF5-50A(7/8)	6.75 - 26.75	0.6000	0.6000
T28	14	LDF7-50A(1-5/8)	6.75 - 26.75	0.6000	0.6000
T28	15	1 1/2" Rigid Conduit	6.75 - 26.75	0.6000	0.6000
T28	17	LDF4-50A(1/2)	6.75 - 26.75	0.6000	0.6000
T28	18	LDF5-50A(7/8)	6.75 - 26.75	0.6000	0.6000
T28	20	LDF5-50A(7/8)	6.75 - 26.75	0.6000	0.6000
T28	22	LDF5-50A(7/8)	6.75 - 26.75	0.6000	0.6000
T28	23	LDF6-50A(1-1/4)	6.75 - 26.75	0.6000	0.6000
T28	25	HB158-21U6S24-xxM_TMO (1-5/8)	6.75 - 26.75	0.6000	0.6000
T28	27	Waveguide Brackets	6.75 - 26.75	0.6000	0.6000
T28	28	Waveguide Brackets	6.75 - 26.75	0.6000	0.6000
T28	29	Waveguide Brackets	6.75 - 26.75	0.6000	0.6000
T29	2	Safety Line 3/8	0.00 - 6.75	0.6000	0.6000
T29	4	LDF7-50A(1-5/8)	0.00 - 6.75	0.6000	0.6000
T29	5	LMR-400(3/8)	0.00 - 6.75	0.6000	0.6000
T29	6	ATCB-B01-001(5/16")	0.00 - 6.75	0.6000	0.6000
T29	8	LDF5-50A(7/8)	0.00 - 6.75	0.6000	0.6000
T29	9	LDF7-50A(1-5/8)	0.00 - 6.75	0.6000	0.6000
T29	10	LDF5-50A(7/8)	0.00 - 6.75	0.6000	0.6000
T29	11	LDF5-50A(7/8)	0.00 - 6.75	0.6000	0.6000
T29	14	LDF7-50A(1-5/8)	0.00 - 6.75	0.6000	0.6000
T29	15	1 1/2" Rigid Conduit	0.00 - 6.75	0.6000	0.6000
T29	17	LDF4-50A(1/2)	0.00 - 6.75	0.6000	0.6000
T29	18	LDF5-50A(7/8)	0.00 - 6.75	0.6000	0.6000
T29	20	LDF5-50A(7/8)	0.00 - 6.75	0.6000	0.6000
T29	22	LDF5-50A(7/8)	0.00 - 6.75	0.6000	0.6000
T29	23	LDF6-50A(1-1/4)	0.00 - 6.75	0.6000	0.6000
T29	25	HB158-21U6S24-xxM_TMO (1-5/8)	0.00 - 6.75	0.6000	0.6000
T29	27	Waveguide Brackets	0.00 - 6.75	0.6000	0.6000
T29	28	Waveguide Brackets	0.00 - 6.75	0.6000	0.6000

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	Crown Castle	Sudhanva

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T29	29	Waveguide Brackets	0.00 - 6.75	0.6000	0.6000

Discrete Tower Loads

<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_AA_A Front ft²</i>	<i>C_AA_A Side ft²</i>	<i>Weight K</i>
Flash Beacon Lighting	C	From Leg	0.000 0' 1'	0.000	500'	No Ice	2.700	2.700	0.050
Side Lighting	A	From Leg	0.500 0' 0'	0.000	370'	No Ice	0.103	0.103	0.005
Side Lighting	B	From Leg	0.500 0' 0'	0.000	370'	No Ice	0.103	0.103	0.005
Side Lighting	C	From Leg	0.500 0' 0'	0.000	370'	No Ice	0.103	0.103	0.005
Flash Beacon Lighting	A	From Leg	1.000 0' 0'	0.000	264'	No Ice	2.700	2.700	0.050
Flash Beacon Lighting	C	From Leg	1.000 0' 0'	0.000	264'	No Ice	2.700	2.700	0.050
Beacon Mount	A	From Leg	1.000 0' 0'	0.000	263'	No Ice	1.750	0.007	0.023
Beacon Mount	C	From Leg	1.000 0' 0'	0.000	263'	No Ice	1.750	0.007	0.023
Side Lighting	A	From Leg	0.500 0' 0'	0.000	128'	No Ice	0.109	0.109	0.005
Side Lighting	B	From Leg	0.500 0' 0'	0.000	128'	No Ice	0.109	0.109	0.005
Side Lighting	C	From Leg	0.500 0' 0'	0.000	128'	No Ice	0.109	0.109	0.005
* SRL-210C-4	A	From Leg	1.000 0' 10'	0.000	499'	No Ice	1.000	1.000	0.059
SRL-210C-4	B	From Leg	1.000 0' 9'	0.000	499'	No Ice	1.000	1.000	0.059
* DB314	A	From Face	4.000 0' 10'	0.000	494'	No Ice	9.040	9.040	0.037

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<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
SRL-210C-4	B	From Face	4.000 0'	0.000	494'	No Ice	1.000	1.000	0.059
SRL-210C-4	C	From Face	4.000 0'	0.000	494'	No Ice	1.000	1.000	0.059
(4) 6' x 2" Mount Pipe	A	From Face	4.000 0'	0.000	494'	No Ice	1.425	1.425	0.022
(4) 6' x 2" Mount Pipe	B	From Face	4.000 0'	0.000	494'	No Ice	1.425	1.425	0.022
(4) 6' x 2" Mount Pipe	C	From Face	4.000 0'	0.000	494'	No Ice	1.425	1.425	0.022
Sector Mount [SM 516-3] *	C	None		0.000	494'	No Ice	61.550	61.550	1.620
Side Arm Mount [SO 309-1] *	B	From Leg	2.000 0'	0.000	477'	No Ice	1.220	2.630	0.040
DB212-1	A	From Leg	1.000 0'	0.000	464'	No Ice	4.500	4.500	0.031
DB420	A	From Face	4.000 0'	0.000	446'	No Ice	3.330	3.330	0.034
DB224	B	From Face	4.000 0'	0.000	446'	No Ice	3.150	3.150	0.032
DB224	C	From Face	4.000 0'	0.000	446'	No Ice	3.150	3.150	0.032
(4) 6' x 2" Mount Pipe	A	From Leg	4.000 0'	0.000	446'	No Ice	1.425	1.425	0.022
(4) 6' x 2" Mount Pipe	B	From Leg	4.000 0'	0.000	446'	No Ice	1.425	1.425	0.022
(4) 6' x 2" Mount Pipe	C	From Leg	4.000 0'	0.000	446'	No Ice	1.425	1.425	0.022
Sector Mount [SM 516-3] *	C	None		0.000	446'	No Ice	61.550	61.550	1.620
DB212-1	C	From Leg	1.000 0'	0.000	440'	No Ice	4.500	4.500	0.031
DB212-1	B	From Leg	1.000 0'	0.000	420'	No Ice	4.500	4.500	0.031
OG-4	B	From Face	4.000 0'	0.000	396'	No Ice	3.668	3.668	0.020
(4) 6' x 2" Mount Pipe	A	From Leg	4.000 6'	0.000	396'	No Ice	1.425	1.425	0.022

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<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_AA_A Front ft²</i>	<i>C_AA_A Side ft²</i>	<i>Weight K</i>
(4) 6' x 2" Mount Pipe	B	From Leg	0' 0' 4.000	0.000	396'	No Ice	1.425	1.425	0.022
(4) 6' x 2" Mount Pipe	C	From Leg	0' 0' 4.000	0.000	396'	No Ice	1.425	1.425	0.022
Sector Mount [SM 516-3] *	C	None	0'	0.000	396'	No Ice	61.550	61.550	1.620
Pirod 6' Side Mount Standoff (1)	B	From Face	0' 0' 3.000	0.000	342'	No Ice	4.970	4.970	0.070
Pirod 6' Side Mount Standoff (1)	C	From Face	0' 0' 3.000	0.000	342'	No Ice	4.970	4.970	0.070
Side Arm Mount [SO 301-1]	B	From Leg	0' 0' 1.000	0.000	342'	No Ice	0.460	0.910	0.023
* 220-6N	A	From Face	0' 10' 6.000	0.000	314'	No Ice	5.362	5.362	0.022
SRL-210C-4	C	From Face	0' 10' 6.000	0.000	314'	No Ice	1.000	1.000	0.059
Pirod 6' Side Mount Standoff (1)	A	From Face	0' 10' 3.000	0.000	314'	No Ice	4.970	4.970	0.070
Pirod 6' Side Mount Standoff (1)	C	From Face	0' 10' 3.000	0.000	314'	No Ice	4.970	4.970	0.070
* Side Arm Mount [SO 301-1]	B	From Leg	0' 0' 1.000	0.000	303'	No Ice	0.460	0.910	0.023
* DB264-A	B	From Face	0' 10' 6.000	0.000	295'	No Ice	3.160	3.160	0.036
DB264-A	B	From Face	0' 10' 6.000	0.000	295'	No Ice	3.160	3.160	0.036
Pirod 6' Side Mount Standoff (1)	B	From Face	0' -10' 3.000	0.000	295'	No Ice	4.970	4.970	0.070
* FFVV-65C-R3-V1_TMO w/ Mount Pipe	A	From Leg	0' 0' 4.000	0.000	286'	No Ice	12.970	6.200	0.157
FFVV-65C-R3-V1_TMO w/ Mount Pipe	B	From Leg	0' 0' 4.000	0.000	286'	No Ice	12.970	6.200	0.157
FFVV-65C-R3-V1_TMO w/ Mount Pipe	C	From Leg	0' 0' 4.000	0.000	286'	No Ice	12.970	6.200	0.157
RADIO 4460 B2/B25	A	From Leg	0' 0' 4.000	0.000	286'	No Ice	2.139	1.686	0.109

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<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert ft ft ft</i>	<i>Azimuth Adjustment °</i>	<i>Placement ft</i>		<i>C_{AA} Front ft²</i>	<i>C_{AA} Side ft²</i>	<i>Weight K</i>
B66_TMO			0'						
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000 0'	0.000	286'	No Ice	2.139	1.686	0.109
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000 0'	0.000	286'	No Ice	2.139	1.686	0.109
Radio 4480_TMOV2	A	From Leg	4.000 0'	0.000	286'	No Ice	2.878	1.397	0.081
Radio 4480_TMOV2	B	From Leg	4.000 0'	0.000	286'	No Ice	2.878	1.397	0.081
Radio 4480_TMOV2	C	From Leg	4.000 0'	0.000	286'	No Ice	2.878	1.397	0.081
Sector Mount [SM 502-3] *	C	None		0.000	286'	No Ice	29.820	29.820	1.673
Pipe Mount [PM 601-3] *	C	None		0.000	259'	No Ice	3.170	3.170	0.195
CMA-BDHH/6521/E0-6 w/ Mount Pipe	A	From Leg	4.000 0'	0.000	234'	No Ice	10.320	5.430	0.101
CMA-BDHH/6521/E0-6 w/ Mount Pipe	B	From Leg	4.000 0'	0.000	234'	No Ice	10.320	5.430	0.101
CMA-BDHH/6521/E0-6 w/ Mount Pipe	C	From Leg	4.000 0'	0.000	234'	No Ice	10.320	5.430	0.101
FF-65C-R1 w/ Mount Pipe	A	From Leg	4.000 0'	0.000	234'	No Ice	12.970	6.200	0.143
FF-65C-R1 w/ Mount Pipe	B	From Leg	4.000 0'	0.000	234'	No Ice	12.970	6.200	0.143
FF-65C-R1 w/ Mount Pipe	C	From Leg	4.000 0'	0.000	234'	No Ice	12.970	6.200	0.143
FXFC	A	From Leg	4.000 0'	0.000	234'	No Ice	3.573	1.020	0.055
FXFC	C	From Leg	4.000 0'	0.000	234'	No Ice	3.573	1.020	0.055
RNSDC-7771-PF-48	A	From Leg	4.000 0'	0.000	234'	No Ice	3.203	1.027	0.019
FRBG	B	From Leg	4.000 0'	0.000	234'	No Ice	2.405	1.253	0.053
(2) FXFB	C	From Leg	4.000 0'	0.000	234'	No Ice	3.538	1.023	0.055
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0'	0.000	234'	No Ice	1.900	1.900	0.029

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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 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	Dead+Wind 0 deg - Service+Guy
15	Dead+Wind 30 deg - Service+Guy
16	Dead+Wind 60 deg - Service+Guy
17	Dead+Wind 90 deg - Service+Guy
18	Dead+Wind 120 deg - Service+Guy
19	Dead+Wind 150 deg - Service+Guy
20	Dead+Wind 180 deg - Service+Guy
21	Dead+Wind 210 deg - Service+Guy
22	Dead+Wind 240 deg - Service+Guy
23	Dead+Wind 270 deg - Service+Guy
24	Dead+Wind 300 deg - Service+Guy
25	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	500 - 492	Leg	Max Tension	4	3.532	-0.302	-0.814
			Max. Compression	10	-5.639	0.107	0.083
			Max. Mx	4	-1.044	-0.710	-1.313
			Max. My	5	0.386	-0.426	-1.341
			Max. Vy	9	1.237	-0.020	0.325
			Max. Vx	2	0.849	-0.268	-1.050
		Diagonal	Max Tension	9	2.998	0.000	0.000
			Max. Compression	3	-3.446	0.000	0.000
			Max. Mx	5	2.454	-0.010	0.000
			Max. My	5	-1.709	0.000	-0.000
			Max. Vy	5	0.009	0.000	0.000
			Max. Vx	5	0.000	0.000	0.000
		Top Girt	Max Tension	8	0.140	0.000	0.000
			Max. Compression	2	-0.116	0.000	0.000
			Max. Mx	6	0.071	-0.009	0.000
			Max. My	5	0.137	0.000	0.000
			Max. Vy	6	0.009	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
		Leg	Max Tension	4	8.109	0.904	-0.316
			Max. Compression	8	-38.711	0.075	0.035
			Max. Mx	8	7.588	-1.643	1.893
			Max. My	5	-1.062	-0.578	2.326
			Max. Vy	5	1.339	-1.614	1.681
			Max. Vx	13	-1.230	0.999	-0.849
T2	492 - 472	Diagonal	Max Tension	9	5.322	0.000	0.000

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			Max. Compression	9	-4.810	0.000	0.000
			Max. Mx	5	-1.717	-0.010	0.000
			Max. My	11	4.083	0.000	0.000
			Max. Vy	5	0.009	0.000	0.000
			Max. Vx	11	-0.000	0.000	0.000
		Guy A	Bottom Tension	8	13.156		
			Top Tension	8	13.479		
			Top Cable Vert	8	11.322		
			Top Cable Norm	8	7.313		
			Top Cable Tan	8	0.014		
			Bot Cable Vert	8	-10.444		
			Bot Cable Norm	8	7.999		
			Bot Cable Tan	8	0.016		
		Guy A	Bottom Tension	8	13.157		
			Top Tension	8	13.481		
			Top Cable Vert	8	11.324		
			Top Cable Norm	8	7.314		
			Top Cable Tan	8	0.000		
			Bot Cable Vert	8	-10.446		
			Bot Cable Norm	8	8.000		
			Bot Cable Tan	8	0.000		
		Guy A	Bottom Tension	8	13.152		
			Top Tension	8	13.475		
			Top Cable Vert	8	11.320		
			Top Cable Norm	8	7.311		
			Top Cable Tan	8	0.013		
			Bot Cable Vert	8	-10.442		
			Bot Cable Norm	8	7.997		
			Bot Cable Tan	8	0.017		
		Guy B	Bottom Tension	12	13.037		
			Top Tension	12	13.360		
			Top Cable Vert	12	11.186		
			Top Cable Norm	12	7.306		
			Top Cable Tan	12	0.013		
			Bot Cable Vert	12	-10.304		
			Bot Cable Norm	12	7.986		
			Bot Cable Tan	12	0.017		
		Guy B	Bottom Tension	12	13.042		
			Top Tension	12	13.365		
			Top Cable Vert	12	11.190		
			Top Cable Norm	12	7.308		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-10.308		
			Bot Cable Norm	12	7.989		
			Bot Cable Tan	12	0.000		
		Guy B	Bottom Tension	12	13.040		
			Top Tension	12	13.363		
			Top Cable Vert	12	11.188		
			Top Cable Norm	12	7.307		
			Top Cable Tan	12	0.014		
			Bot Cable Vert	12	-10.307		
			Bot Cable Norm	12	7.988		
			Bot Cable Tan	12	0.016		
		Guy C	Bottom Tension	4	13.039		
			Top Tension	4	13.362		
			Top Cable Vert	4	11.177		
			Top Cable Norm	4	7.322		
			Top Cable Tan	4	0.014		
			Bot Cable Vert	4	-10.295		
			Bot Cable Norm	4	8.001		
			Bot Cable Tan	4	0.017		

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T3	472 - 452	Guy C	Bottom Tension	4	13.042		
			Top Tension	4	13.366		
			Top Cable Vert	4	11.180		
			Top Cable Norm	4	7.324		
			Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-10.298		
			Bot Cable Norm	4	8.003		
			Bot Cable Tan	4	0.000		
			Bottom Tension	4	13.039		
			Top Tension	4	13.362		
			Top Cable Vert	4	11.178		
			Top Cable Norm	4	7.322		
			Top Cable Tan	4	0.014		
			Bot Cable Vert	4	-10.295		
			Bot Cable Norm	4	8.001		
			Bot Cable Tan	4	0.017		
		Top Guy Pull-Off	Max Tension	5	9.558	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	6	9.218	-0.007	0.000
			Max. My	11	7.675	0.000	0.000
			Max. Vy	6	0.007	0.000	0.000
			Max. Vx	11	-0.000	0.000	0.000
		Leg	Max Tension	10	3.704	-0.113	0.016
			Max. Compression	8	-43.281	0.094	0.046
			Max. Mx	6	-35.012	0.249	-0.673
			Max. My	11	-21.934	-0.137	0.922
			Max. Vy	10	-0.186	-0.053	0.751
			Max. Vx	5	0.135	0.153	-0.903
		Diagonal	Max Tension	2	1.933	0.000	0.000
			Max. Compression	7	-1.902	0.000	0.000
			Max. Mx	5	0.510	-0.010	0.000
			Max. My	5	-0.638	0.000	-0.000
			Max. Vy	5	0.009	0.000	0.000
			Max. Vx	5	0.000	0.000	0.000
T4	452 - 432	Leg	Max Tension	10	1.581	-0.106	0.107
			Max. Compression	4	-41.575	0.130	-0.020
			Max. Mx	11	-14.053	0.968	0.630
			Max. My	5	-23.385	-0.412	-1.682
			Max. Vy	13	1.162	-0.086	0.203
			Max. Vx	11	-0.754	0.445	1.657
		Diagonal	Max Tension	9	6.665	0.000	0.000
			Max. Compression	3	-7.160	0.000	0.000
			Max. Mx	5	5.426	-0.010	0.000
			Max. My	5	-2.267	0.000	-0.000
			Max. Vy	5	0.009	0.000	0.000
			Max. Vx	5	0.000	0.000	0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	6	-47.804	-0.037	-0.015
			Max. Mx	12	-41.056	-1.804	-2.499
			Max. My	2	-44.311	-1.333	-2.733
			Max. Vy	12	1.377	-1.803	-2.499
			Max. Vx	7	1.429	0.942	0.732
		Diagonal	Max Tension	3	7.230	0.000	0.000
			Max. Compression	10	-4.696	0.000	0.000
			Max. Mx	11	6.394	-0.010	0.000
			Max. My	5	5.127	0.000	-0.000
			Max. Vy	11	0.009	0.000	0.000
			Max. Vx	5	0.000	0.000	0.000
T5	432 - 424	Guy A	Bottom Tension	8	13.493		
			Top Tension	8	13.778		
			Top Cable Vert	8	11.050		

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			Top Cable Norm	8	8.230		
			Top Cable Tan	8	0.012		
			Bot Cable Vert	8	-10.256		
			Bot Cable Norm	8	8.768		
			Bot Cable Tan	8	0.014		
		Guy A	Bottom Tension	8	13.494		
			Top Tension	8	13.780		
			Top Cable Vert	8	11.051		
			Top Cable Norm	8	8.231		
			Top Cable Tan	8	0.000		
			Bot Cable Vert	8	-10.257		
			Bot Cable Norm	8	8.769		
			Bot Cable Tan	8	0.000		
		Guy A	Bottom Tension	8	13.488		
			Top Tension	8	13.773		
			Top Cable Vert	8	11.046		
			Top Cable Norm	8	8.227		
			Top Cable Tan	8	0.011		
			Bot Cable Vert	8	-10.252		
			Bot Cable Norm	8	8.765		
			Bot Cable Tan	8	0.015		
		Guy B	Bottom Tension	12	13.356		
			Top Tension	12	13.642		
			Top Cable Vert	12	10.897		
			Top Cable Norm	12	8.207		
			Top Cable Tan	12	0.011		
			Bot Cable Vert	12	-10.100		
			Bot Cable Norm	12	8.739		
			Bot Cable Tan	12	0.015		
		Guy B	Bottom Tension	12	13.362		
			Top Tension	12	13.647		
			Top Cable Vert	12	10.901		
			Top Cable Norm	12	8.210		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-10.104		
			Bot Cable Norm	12	8.743		
			Bot Cable Tan	12	0.000		
		Guy B	Bottom Tension	12	13.359		
			Top Tension	12	13.644		
			Top Cable Vert	12	10.899		
			Top Cable Norm	12	8.208		
			Top Cable Tan	12	0.012		
			Bot Cable Vert	12	-10.102		
			Bot Cable Norm	12	8.741		
			Bot Cable Tan	12	0.014		
		Guy C	Bottom Tension	4	13.345		
			Top Tension	4	13.630		
			Top Cable Vert	4	10.876		
			Top Cable Norm	4	8.215		
			Top Cable Tan	4	0.011		
			Bot Cable Vert	4	-10.079		
			Bot Cable Norm	4	8.746		
			Bot Cable Tan	4	0.015		
		Guy C	Bottom Tension	4	13.350		
			Top Tension	4	13.635		
			Top Cable Vert	4	10.880		
			Top Cable Norm	4	8.218		
			Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-10.083		
			Bot Cable Norm	4	8.749		
			Bot Cable Tan	4	0.000		

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			Max. Vx	11	-0.000	0.000	0.000
		Guy A	Bottom Tension	8	12.987		
			Top Tension	8	13.229		
			Top Cable Vert	8	9.886		
			Top Cable Norm	8	8.790		
			Top Cable Tan	8	0.010		
			Bot Cable Vert	8	-9.195		
			Bot Cable Norm	8	9.172		
			Bot Cable Tan	8	0.012		
		Guy A	Bottom Tension	8	12.989		
			Top Tension	8	13.231		
			Top Cable Vert	8	9.888		
			Top Cable Norm	8	8.792		
			Top Cable Tan	8	0.000		
			Bot Cable Vert	8	-9.197		
			Bot Cable Norm	8	9.173		
			Bot Cable Tan	8	0.000		
		Guy A	Bottom Tension	8	12.983		
			Top Tension	8	13.225		
			Top Cable Vert	8	9.884		
			Top Cable Norm	8	8.788		
			Top Cable Tan	8	0.009		
			Bot Cable Vert	8	-9.192		
			Bot Cable Norm	8	9.169		
			Bot Cable Tan	8	0.012		
		Guy B	Bottom Tension	12	12.838		
			Top Tension	12	13.080		
			Top Cable Vert	12	9.727		
			Top Cable Norm	12	8.744		
			Top Cable Tan	12	0.009		
			Bot Cable Vert	12	-9.034		
			Bot Cable Norm	12	9.121		
			Bot Cable Tan	12	0.012		
		Guy B	Bottom Tension	12	12.843		
			Top Tension	12	13.085		
			Top Cable Vert	12	9.731		
			Top Cable Norm	12	8.748		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-9.038		
			Bot Cable Norm	12	9.125		
			Bot Cable Tan	12	0.000		
		Guy B	Bottom Tension	12	12.841		
			Top Tension	12	13.083		
			Top Cable Vert	12	9.730		
			Top Cable Norm	12	8.746		
			Top Cable Tan	12	0.010		
			Bot Cable Vert	12	-9.036		
			Bot Cable Norm	12	9.123		
			Bot Cable Tan	12	0.012		
		Guy C	Bottom Tension	4	12.824		
			Top Tension	4	13.066		
			Top Cable Vert	4	9.705		
			Top Cable Norm	4	8.749		
			Top Cable Tan	4	0.009		
			Bot Cable Vert	4	-9.011		
			Bot Cable Norm	4	9.125		
			Bot Cable Tan	4	0.012		
		Guy C	Bottom Tension	4	12.829		
			Top Tension	4	13.071		
			Top Cable Vert	4	9.708		
			Top Cable Norm	4	8.752		

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T10	356 - 336	Guy C	Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-9.014		
			Bot Cable Norm	4	9.128		
			Bot Cable Tan	4	0.000		
			Bottom Tension	4	12.826		
			Top Tension	4	13.068		
			Top Cable Vert	4	9.706		
			Top Cable Norm	4	8.750		
			Top Cable Tan	4	0.009		
			Bot Cable Vert	4	-9.012		
			Bot Cable Norm	4	9.126		
			Bot Cable Tan	4	0.012		
		Top Guy Pull-Off	Max Tension	5	10.972	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	6	10.734	-0.007	0.000
			Max. My	11	9.217	0.000	0.000
			Max. Vy	6	0.007	0.000	0.000
			Max. Vx	11	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	6	-97.444	0.141	-0.134
		Leg	Max. Mx	6	-48.095	-0.215	0.541
			Max. My	7	-60.704	-0.005	-0.884
			Max. Vy	10	-0.251	-0.164	0.061
			Max. Vx	3	-0.217	0.167	-0.038
		Diagonal	Max Tension	5	3.774	0.000	0.000
			Max. Compression	11	-3.835	0.000	0.000
			Max. Mx	11	-3.827	-0.008	0.000
			Max. My	5	-1.372	0.000	-0.000
			Max. Vy	11	0.007	0.000	0.000
			Max. Vx	5	0.000	0.000	0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	6	-84.011	0.215	0.380
			Max. Mx	10	-56.924	-0.403	-1.012
			Max. My	2	-57.882	-0.333	-1.205
			Max. Vy	10	0.197	-0.403	-1.012
			Max. Vx	2	0.258	-0.333	-1.205
		Diagonal	Max Tension	7	1.966	0.000	0.000
			Max. Compression	7	-2.160	0.000	0.000
			Max. Mx	8	0.040	-0.008	0.000
			Max. My	5	-0.228	0.000	-0.000
			Max. Vy	8	0.007	0.000	0.000
			Max. Vx	5	0.000	0.000	0.000
T12	316 - 296	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	2	-88.222	0.112	-0.156
			Max. Mx	9	-48.442	-1.303	1.166
			Max. My	6	-70.151	-0.980	2.232
			Max. Vy	9	1.054	-1.303	1.166
			Max. Vx	9	-1.044	0.776	-0.206
		Diagonal	Max Tension	11	5.964	0.000	0.000
			Max. Compression	5	-6.203	0.000	0.000
			Max. Mx	8	2.126	0.016	0.000
			Max. My	11	-1.553	0.000	-0.000
			Max. Vy	8	-0.014	0.000	0.000
			Max. Vx	11	0.000	0.000	0.000
		Guy A	Bottom Tension	7	8.056		
			Top Tension	7	8.179		
			Top Cable Vert	7	5.670		
			Top Cable Norm	7	5.893		
			Top Cable Tan	7	0.100		
			Bot Cable Vert	7	-5.258		
			Bot Cable Norm	7	6.102		

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		Guy A	Bot Cable Tan	7	0.147		
			Bottom Tension	8	7.987		
			Top Tension	8	8.111		
			Top Cable Vert	8	5.626		
			Top Cable Norm	8	5.842		
			Top Cable Tan	8	0.000		
			Bot Cable Vert	8	-5.211		
			Bot Cable Norm	8	6.053		
			Bot Cable Tan	8	0.000		
		Guy A	Bottom Tension	9	8.071		
			Top Tension	9	8.194		
			Top Cable Vert	9	5.680		
			Top Cable Norm	9	5.905		
			Top Cable Tan	9	0.100		
			Bot Cable Vert	9	-5.268		
			Bot Cable Norm	9	6.113		
			Bot Cable Tan	9	0.147		
		Guy B	Bottom Tension	11	7.925		
			Top Tension	11	8.047		
			Top Cable Vert	11	5.548		
			Top Cable Norm	11	5.828		
			Top Cable Tan	11	0.101		
			Bot Cable Vert	11	-5.134		
			Bot Cable Norm	11	6.035		
			Bot Cable Tan	11	0.146		
		Guy B	Bottom Tension	12	7.902		
			Top Tension	12	8.025		
			Top Cable Vert	12	5.534		
			Top Cable Norm	12	5.811		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-5.119		
			Bot Cable Norm	12	6.019		
			Bot Cable Tan	12	0.000		
		Guy B	Bottom Tension	13	8.024		
			Top Tension	13	8.146		
			Top Cable Vert	13	5.614		
			Top Cable Norm	13	5.902		
			Top Cable Tan	13	0.100		
			Bot Cable Vert	13	-5.201		
			Bot Cable Norm	13	6.109		
			Bot Cable Tan	13	0.147		
		Guy C	Bottom Tension	3	8.020		
			Top Tension	3	8.142		
			Top Cable Vert	3	5.603		
			Top Cable Norm	3	5.907		
			Top Cable Tan	3	0.101		
			Bot Cable Vert	3	-5.189		
			Bot Cable Norm	3	6.113		
			Bot Cable Tan	3	0.147		
		Guy C	Bottom Tension	4	7.901		
			Top Tension	4	8.024		
			Top Cable Vert	4	5.526		
			Top Cable Norm	4	5.818		
			Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-5.110		
			Bot Cable Norm	4	6.026		
			Bot Cable Tan	4	0.000		
		Guy C	Bottom Tension	5	7.908		
			Top Tension	5	8.031		
			Top Cable Vert	5	5.529		
			Top Cable Norm	5	5.823		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T13	296 - 276	Top Guy Pull-Off	Top Cable Tan	5	0.102		
			Bot Cable Vert	5	-5.115		
			Bot Cable Norm	5	6.029		
			Bot Cable Tan	5	0.146		
			Max Tension	9	7.896	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	12	2.304	-0.007	0.000
			Max. My	5	2.976	0.000	0.000
			Max. Vy	12	0.007	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	9	-97.946	0.236	0.540
			Max. Mx	2	-95.433	0.579	1.734
			Max. My	9	-79.579	-0.289	-1.862
			Max. Vy	7	-0.799	0.119	-0.563
			Max. Vx	3	-0.533	0.363	1.862
			Max Tension	6	4.312	0.000	0.000
			Max. Compression	6	-4.189	0.000	0.000
			Max. Mx	9	0.715	-0.008	0.000
			Max. My	11	1.339	0.000	0.000
			Max. Vy	9	0.007	0.000	0.000
			Max. Vx	11	-0.000	0.000	0.000
T14	276 - 256	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	2	-96.426	-0.030	0.874
			Max. Mx	12	-78.848	1.983	-2.684
			Max. My	8	-67.184	-1.088	4.607
			Max. Vy	12	-1.786	1.983	-2.684
			Max. Vx	8	-2.078	-1.088	4.607
		Diagonal	Max Tension	7	6.355	0.000	0.000
			Max. Compression	12	-6.947	0.000	0.000
			Max. Mx	2	2.209	-0.008	0.000
			Max. My	11	-1.292	0.000	0.000
			Max. Vy	2	0.007	0.000	0.000
			Max. Vx	11	-0.000	0.000	0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	2	-121.001	0.218	-0.532
			Max. Mx	12	-80.826	1.979	-2.680
			Max. My	8	-63.378	-1.085	4.606
			Max. Vy	6	-1.430	-1.921	2.411
			Max. Vx	8	2.301	-0.023	1.126
		Diagonal	Max Tension	6	7.852	0.000	0.000
			Max. Compression	11	-7.962	0.000	0.000
			Max. Mx	2	-4.536	0.016	0.000
			Max. My	5	-1.675	0.000	0.000
			Max. Vy	2	-0.014	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
T15	256 - 241.583	Guy A	Bottom Tension	7	12.058		
			Top Tension	7	12.186		
			Top Cable Vert	7	9.501		
			Top Cable Norm	7	7.630		
			Top Cable Tan	7	0.054		
			Bot Cable Vert	7	-9.143		
			Bot Cable Norm	7	7.860		
			Bot Cable Tan	7	0.146		
		Guy A	Bottom Tension	7	11.689		
			Top Tension	7	11.817		
			Top Cable Vert	7	9.217		
			Top Cable Norm	7	7.394		
			Top Cable Tan	7	0.063		
			Bot Cable Vert	7	-8.861		
			Bot Cable Norm	7	7.621		

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		Guy A	Bot Cable Tan	7	0.157		
			Bottom Tension	9	12.060		
			Top Tension	9	12.188		
			Top Cable Vert	9	9.503		
			Top Cable Norm	9	7.631		
			Top Cable Tan	9	0.054		
			Bot Cable Vert	9	-9.145		
			Bot Cable Norm	9	7.861		
			Bot Cable Tan	9	0.146		
		Guy B	Bottom Tension	11	11.896		
			Top Tension	11	12.024		
			Top Cable Vert	11	9.395		
			Top Cable Norm	11	7.504		
			Top Cable Tan	11	0.055		
			Bot Cable Vert	11	-9.037		
			Bot Cable Norm	11	7.735		
			Bot Cable Tan	11	0.145		
		Guy B	Bottom Tension	13	11.691		
			Top Tension	13	11.819		
			Top Cable Vert	13	9.236		
			Top Cable Norm	13	7.374		
			Top Cable Tan	13	0.063		
			Bot Cable Vert	13	-8.881		
			Bot Cable Norm	13	7.602		
			Bot Cable Tan	13	0.157		
		Guy B	Bottom Tension	13	12.064		
			Top Tension	13	12.192		
			Top Cable Vert	13	9.524		
			Top Cable Norm	13	7.612		
			Top Cable Tan	13	0.054		
			Bot Cable Vert	13	-9.166		
			Bot Cable Norm	13	7.842		
			Bot Cable Tan	13	0.147		
		Guy C	Bottom Tension	3	12.065		
			Top Tension	3	12.192		
			Top Cable Vert	3	9.542		
			Top Cable Norm	3	7.589		
			Top Cable Tan	3	0.054		
			Bot Cable Vert	3	-9.185		
			Bot Cable Norm	3	7.821		
			Bot Cable Tan	3	0.146		
		Guy C	Bottom Tension	3	11.698		
			Top Tension	3	11.825		
			Top Cable Vert	3	9.258		
			Top Cable Norm	3	7.356		
			Top Cable Tan	3	0.063		
			Bot Cable Vert	3	-8.904		
			Bot Cable Norm	3	7.585		
			Bot Cable Tan	3	0.157		
		Guy C	Bottom Tension	5	11.895		
			Top Tension	5	12.023		
			Top Cable Vert	5	9.412		
			Top Cable Norm	5	7.481		
			Top Cable Tan	5	0.056		
			Bot Cable Vert	5	-9.055		
			Bot Cable Norm	5	7.713		
			Bot Cable Tan	5	0.144		
		Top Guy Pull-Off	Max Tension	2	9.475	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	10	9.284	-0.007	0.000
			Max. My	5	7.793	0.000	0.000

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T16	241.583 - 221.583	Leg	Max. Vy	10	0.007	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
		Diagonal	Max. Compression	7	-132.850	0.052	-0.525
			Max. Mx	3	-129.396	0.687	-1.430
			Max. My	13	-107.053	0.485	-2.311
			Max. Vy	3	-0.946	0.011	-0.403
			Max. Vx	4	-0.663	0.238	-1.241
			Max Tension	5	6.065	0.000	0.000
			Max. Compression	11	-5.982	0.000	0.000
			Max. Mx	2	1.301	-0.008	0.000
			Max. My	7	-0.970	0.000	0.000
			Max. Vy	2	0.007	0.000	0.000
			Max. Vx	7	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
T17	221.583 - 201.583	Leg	Max. Vy	10	0.007	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
		Diagonal	Max. Compression	7	-132.529	0.036	-0.520
			Max. Mx	6	-122.647	0.300	0.648
			Max. My	13	-105.010	0.187	-1.155
			Max. Vy	10	0.267	-0.211	0.433
			Max. Vx	2	0.137	-0.040	0.580
			Max Tension	13	5.123	0.000	0.000
			Max. Compression	6	-5.030	0.000	0.000
			Max. Mx	2	4.641	-0.008	0.000
			Max. My	7	1.208	0.000	0.000
			Max. Vy	2	0.007	0.000	0.000
			Max. Vx	7	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
T18	201.583 - 181.583	Leg	Max. Vy	10	0.007	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
		Diagonal	Max. Compression	2	-120.431	-0.116	-0.574
			Max. Mx	13	-80.915	-0.287	-0.814
			Max. My	2	-113.185	0.225	1.057
			Max. Vy	2	0.219	-0.157	0.719
			Max. Vx	6	0.392	-0.215	-0.992
			Max Tension	7	8.159	0.000	0.000
			Max. Compression	7	-8.446	0.000	0.000
			Max. Mx	2	7.666	0.016	0.000
			Max. My	13	2.665	0.000	0.000
			Max. Vy	2	-0.014	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
T19	181.583 - 174.167	Leg	Max. Vy	10	0.007	0.000	0.000
			Max. Vx	5	-0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
		Diagonal	Max. Compression	2	-128.558	-0.216	0.152
			Max. Mx	12	-76.883	-1.725	2.261
			Max. My	2	-104.579	-1.285	3.129
			Max. Vy	13	1.431	-1.693	1.592
			Max. Vx	11	-1.381	-1.609	2.721
			Max Tension	7	8.674	0.000	0.000
			Max. Compression	13	-8.908	0.000	0.000
			Max. Mx	2	6.997	0.016	0.000
			Max. My	7	4.104	0.000	-0.000
			Max. Vy	2	-0.014	0.000	0.000
			Max. Vx	7	0.000	0.000	0.000
		Guy A	Bottom Tension	7	9.041		
			Top Tension	7	9.111		
			Top Cable Vert	7	5.998		
			Top Cable Norm	7	6.858		
			Top Cable Tan	7	0.034		
			Bot Cable Vert	7	-5.773		
			Bot Cable Norm	7	6.957		

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		Guy A	Bot Cable Tan	7	0.088		
			Bottom Tension	7	8.775		
			Top Tension	7	8.844		
			Top Cable Vert	7	5.826		
			Top Cable Norm	7	6.655		
			Top Cable Tan	7	0.040		
			Bot Cable Vert	7	-5.601		
			Bot Cable Norm	7	6.754		
			Bot Cable Tan	7	0.095		
		Guy A	Bottom Tension	9	8.957		
			Top Tension	9	9.027		
			Top Cable Vert	9	5.944		
			Top Cable Norm	9	6.794		
			Top Cable Tan	9	0.034		
			Bot Cable Vert	9	-5.719		
			Bot Cable Norm	9	6.893		
			Bot Cable Tan	9	0.088		
		Guy B	Bottom Tension	11	8.951		
			Top Tension	11	9.021		
			Top Cable Vert	11	5.956		
			Top Cable Norm	11	6.775		
			Top Cable Tan	11	0.034		
			Bot Cable Vert	11	-5.731		
			Bot Cable Norm	11	6.875		
			Bot Cable Tan	11	0.088		
		Guy B	Bottom Tension	13	8.801		
			Top Tension	13	8.871		
			Top Cable Vert	13	5.858		
			Top Cable Norm	13	6.661		
			Top Cable Tan	13	0.040		
			Bot Cable Vert	13	-5.634		
			Bot Cable Norm	13	6.760		
			Bot Cable Tan	13	0.095		
		Guy B	Bottom Tension	13	9.071		
			Top Tension	13	9.141		
			Top Cable Vert	13	6.034		
			Top Cable Norm	13	6.867		
			Top Cable Tan	13	0.034		
			Bot Cable Vert	13	-5.809		
			Bot Cable Norm	13	6.967		
			Bot Cable Tan	13	0.088		
		Guy C	Bottom Tension	3	9.052		
			Top Tension	3	9.122		
			Top Cable Vert	3	6.038		
			Top Cable Norm	3	6.838		
			Top Cable Tan	3	0.034		
			Bot Cable Vert	3	-5.813		
			Bot Cable Norm	3	6.938		
			Bot Cable Tan	3	0.088		
		Guy C	Bottom Tension	3	8.786		
			Top Tension	3	8.856		
			Top Cable Vert	3	5.865		
			Top Cable Norm	3	6.635		
			Top Cable Tan	3	0.040		
			Bot Cable Vert	3	-5.640		
			Bot Cable Norm	3	6.735		
			Bot Cable Tan	3	0.095		
		Guy C	Bottom Tension	5	9.012		
			Top Tension	5	9.082		
			Top Cable Vert	5	6.012		
			Top Cable Norm	5	6.807		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft			
T20	174.167 - 154.167	Top Guy Pull-Off	Top Cable Tan	5	0.035					
			Bot Cable Vert	5	-5.787					
			Bot Cable Norm	5	6.908					
			Bot Cable Tan	5	0.087					
			Max Tension	13	8.005	0.000	0.000			
			Max. Compression	1	0.000	0.000	0.000			
			Max. Mx	10	7.870	-0.007	0.000			
			Max. My	7	6.745	0.000	0.000			
			Max. Vy	10	0.007	0.000	0.000			
			Max. Vx	7	-0.000	0.000	0.000			
		Leg	Max Tension	1	0.000	0.000	0.000			
			Diagonal	Max. Compression	2	-125.679	0.009	0.280		
				Max. Mx	8	-80.930	-0.419	-0.950		
				Max. My	6	-108.147	-0.327	-1.302		
				Max. Vy	3	-0.161	-0.187	-0.226		
				Max. Vx	6	-0.365	-0.327	-1.302		
				Max Tension	12	3.331	0.000	0.000		
				Max. Compression	12	-3.551	0.000	0.000		
				Max. Mx	2	-0.541	-0.008	0.000		
				Max. My	13	-1.328	0.000	-0.000		
Max. Vy	2	0.007		0.000	0.000					
T21	154.167 - 134.167	Leg	Max. Vx	13	0.000	0.000	0.000			
			Max Tension	1	0.000	0.000	0.000			
			Diagonal	Max. Compression	2	-143.521	0.134	0.210		
				Max. Mx	13	-103.521	-0.277	-0.616		
				Max. My	2	-100.000	-0.035	-1.426		
				Max. Vy	2	0.375	-0.177	-0.034		
				Max. Vx	6	0.401	-0.033	-1.363		
				Max Tension	6	3.689	0.000	0.000		
				Max. Compression	10	-3.667	0.000	0.000		
				Max. Mx	2	0.246	-0.008	0.000		
		Max. My		13	-0.041	0.000	-0.000			
		Max. Vy		2	0.007	0.000	0.000			
		T22	134.167 - 126.75	Leg	Max. Vx	13	0.000	0.000	0.000	
					Max Tension	1	0.000	0.000	0.000	
					Diagonal	Max. Compression	2	-150.223	-0.116	0.099
						Max. Mx	12	-84.384	-1.515	1.271
						Max. My	2	-105.898	-1.030	3.509
						Max. Vy	12	-1.068	-1.515	1.271
						Max. Vx	2	1.005	-1.030	3.509
						Max Tension	10	3.949	0.000	0.000
Max. Compression	6					-3.917	0.000	0.000		
Max. Mx	2					3.769	-0.008	0.000		
Max. My	13	1.650	0.000	-0.000						
Guy A	Max. Vy	2	0.007	0.000		0.000				
		Max. Vx	13	0.000	0.000	0.000				
		Bottom Tension	7	5.424						
		Top Tension	7	5.459						
		Top Cable Vert	7	2.955						
		Top Cable Norm	7	4.591						
		Top Cable Tan	7	0.029						
		Bot Cable Vert	7	-2.819						
		Bot Cable Norm	7	4.633						
		Bot Cable Tan	7	0.050						
Guy A	Bottom Tension	7	5.295							
		Top Tension	7	5.330						
		Top Cable Vert	7	2.886						
		Top Cable Norm	7	4.481						

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			Top Cable Tan	7	0.033		
			Bot Cable Vert	7	-2.751		
			Bot Cable Norm	7	4.524		
			Bot Cable Tan	7	0.055		
		Guy A	Bottom Tension	9	5.328		
			Top Tension	9	5.363		
			Top Cable Vert	9	2.904		
			Top Cable Norm	9	4.509		
			Top Cable Tan	9	0.029		
			Bot Cable Vert	9	-2.769		
			Bot Cable Norm	9	4.552		
			Bot Cable Tan	9	0.050		
		Guy B	Bottom Tension	12	5.387		
			Top Tension	12	5.422		
			Top Cable Vert	12	2.942		
			Top Cable Norm	12	4.555		
			Top Cable Tan	12	0.003		
			Bot Cable Vert	12	-2.813		
			Bot Cable Norm	12	4.594		
			Bot Cable Tan	12	0.003		
		Guy B	Bottom Tension	12	5.380		
			Top Tension	12	5.416		
			Top Cable Vert	12	2.938		
			Top Cable Norm	12	4.549		
			Top Cable Tan	12	0.001		
			Bot Cable Vert	12	-2.810		
			Bot Cable Norm	12	4.589		
			Bot Cable Tan	12	0.001		
		Guy B	Bottom Tension	13	5.450		
			Top Tension	13	5.486		
			Top Cable Vert	13	2.978		
			Top Cable Norm	13	4.607		
			Top Cable Tan	13	0.029		
			Bot Cable Vert	13	-2.844		
			Bot Cable Norm	13	4.650		
			Bot Cable Tan	13	0.050		
		Guy C	Bottom Tension	3	5.415		
			Top Tension	3	5.450		
			Top Cable Vert	3	2.969		
			Top Cable Norm	3	4.570		
			Top Cable Tan	3	0.029		
			Bot Cable Vert	3	-2.835		
			Bot Cable Norm	3	4.613		
			Bot Cable Tan	3	0.050		
		Guy C	Bottom Tension	4	5.346		
			Top Tension	4	5.381		
			Top Cable Vert	4	2.930		
			Top Cable Norm	4	4.514		
			Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-2.801		
			Bot Cable Norm	4	4.553		
			Bot Cable Tan	4	0.000		
		Guy C	Bottom Tension	5	5.441		
			Top Tension	5	5.476		
			Top Cable Vert	5	2.983		
			Top Cable Norm	5	4.592		
			Top Cable Tan	5	0.029		
			Bot Cable Vert	5	-2.849		
			Bot Cable Norm	5	4.635		
			Bot Cable Tan	5	0.050		
		Top Guy Pull-Off	Max Tension	6	6.154	0.000	0.000

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft				
T23	126.75 - 106.75	Leg	Max. Compression	1	0.000	0.000	0.000				
			Max. Mx	10	6.047	-0.007	0.000				
			Max. My	13	2.696	0.000	0.000				
			Max. Vy	10	0.007	0.000	0.000				
			Max. Vx	13	-0.000	0.000	0.000				
			Max Tension	1	0.000	0.000	0.000				
		T24	106.75 - 86.75	Diagonal	Max. Compression	2	-146.948	0.081	0.079		
					Max. Mx	2	-106.838	-0.180	-0.651		
					Max. My	2	-106.779	-0.015	-1.376		
					Max. Vy	6	-0.125	-0.134	-0.188		
					Max. Vx	6	-0.392	-0.017	-1.300		
					Max Tension	13	3.168	0.000	0.000		
T25	86.75 - 66.75			Leg	Max. Compression	7	-3.304	0.000	0.000		
					Max. Mx	2	-2.102	-0.008	0.000		
					Max. My	13	-1.527	0.000	-0.000		
					Max. Vy	2	0.007	0.000	0.000		
					Max. Vx	13	0.000	0.000	0.000		
					Max Tension	1	0.000	0.000	0.000		
				T26	66.75 - 46.75	Diagonal	Max. Compression	10	-145.832	0.073	0.031
							Max. Mx	7	-102.549	-0.172	0.014
							Max. My	9	-112.184	-0.046	-0.536
							Max. Vy	7	-0.122	-0.172	0.014
							Max. Vx	6	0.058	-0.128	-0.407
							Max Tension	6	2.562	0.000	0.000
T26	66.75 - 46.75	Leg	Max. Compression			6	-2.395	0.000	0.000		
			Max. Mx			6	0.586	-0.011	0.000		
			Max. My			13	0.285	0.000	-0.000		
			Max. Vy			6	0.010	0.000	0.000		
			Max. Vx			13	0.000	0.000	0.000		
			Max Tension			1	0.000	0.000	0.000		
		Guy A		Diagonal	Max. Compression	10	-172.815	0.219	0.216		
					Max. Mx	2	-172.419	0.222	0.237		
					Max. My	2	-100.596	-0.124	-1.665		
					Max. Vy	7	0.106	-0.163	-0.507		
					Max. Vx	6	0.258	-0.142	-1.605		
					Max Tension	6	4.581	0.000	0.000		
				Guy A		Max. Compression	6	-4.492	0.000	0.000	
						Max. Mx	6	3.026	-0.011	0.000	
						Max. My	7	2.006	0.000	0.000	
						Max. Vy	6	0.010	0.000	0.000	
						Max. Vx	7	-0.000	0.000	0.000	
						Max Tension	1	0.000	0.000	0.000	
Guy A		Diagonal	Max. Compression	6	-187.993	0.207	-0.045				
			Max. Mx	6	-181.768	0.972	-0.883				
			Max. My	6	-98.559	-0.550	2.867				
			Max. Vy	12	0.601	-0.894	0.869				
			Max. Vx	11	-0.554	-0.777	2.365				
			Max Tension	2	4.502	0.000	0.000				
		Guy A		Max. Compression	6	-4.895	0.000	0.000			
				Max. Mx	6	3.572	-0.011	0.000			
				Max. My	7	3.826	0.000	0.000			
				Max. Vy	6	0.010	0.000	0.000			
				Max. Vx	7	-0.000	0.000	0.000			
				Bottom Tension	8	3.260					
Guy A			Top Tension	8	3.277						
			Top Cable Vert	8	0.982						
			Top Cable Norm	8	3.126						
			Top Cable Tan	8	0.001						
			Bot Cable Vert	8	-0.906						
			Bot Cable Norm	8	3.131						

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Guy A	Bot Cable Tan	8	0.002		
			Bottom Tension	8	3.266		
			Top Tension	8	3.283		
			Top Cable Vert	8	0.983		
			Top Cable Norm	8	3.132		
			Top Cable Tan	8	0.000		
			Bot Cable Vert	8	-0.908		
			Bot Cable Norm	8	3.137		
			Bot Cable Tan	8	0.000		
		Guy A	Bottom Tension	8	3.269		
			Top Tension	8	3.286		
			Top Cable Vert	8	0.984		
			Top Cable Norm	8	3.135		
			Top Cable Tan	8	0.001		
			Bot Cable Vert	8	-0.909		
			Bot Cable Norm	8	3.140		
			Bot Cable Tan	8	0.001		
		Guy B	Bottom Tension	12	3.338		
			Top Tension	12	3.355		
			Top Cable Vert	12	1.008		
			Top Cable Norm	12	3.200		
			Top Cable Tan	12	0.001		
			Bot Cable Vert	12	-0.933		
			Bot Cable Norm	12	3.205		
			Bot Cable Tan	12	0.001		
		Guy B	Bottom Tension	12	3.335		
			Top Tension	12	3.352		
			Top Cable Vert	12	1.007		
			Top Cable Norm	12	3.197		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-0.933		
			Bot Cable Norm	12	3.201		
			Bot Cable Tan	12	0.000		
		Guy B	Bottom Tension	12	3.328		
			Top Tension	12	3.345		
			Top Cable Vert	12	1.005		
			Top Cable Norm	12	3.190		
			Top Cable Tan	12	0.001		
			Bot Cable Vert	12	-0.931		
			Bot Cable Norm	12	3.195		
			Bot Cable Tan	12	0.002		
		Guy C	Bottom Tension	4	3.287		
			Top Tension	4	3.304		
			Top Cable Vert	4	0.998		
			Top Cable Norm	4	3.150		
			Top Cable Tan	4	0.001		
			Bot Cable Vert	4	-0.923		
			Bot Cable Norm	4	3.155		
			Bot Cable Tan	4	0.001		
		Guy C	Bottom Tension	4	3.289		
			Top Tension	4	3.306		
			Top Cable Vert	4	0.998		
			Top Cable Norm	4	3.151		
			Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-0.924		
			Bot Cable Norm	4	3.156		
			Bot Cable Tan	4	0.000		
		Guy C	Bottom Tension	4	3.287		
			Top Tension	4	3.304		
			Top Cable Vert	4	0.998		
			Top Cable Norm	4	3.150		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T27	46.75 - 26.75	Top Guy Pull-Off	Top Cable Tan	4	0.001		
			Bot Cable Vert	4	-0.923		
			Bot Cable Norm	4	3.155		
			Bot Cable Tan	4	0.001		
			Max Tension	6	4.256	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	10	4.187	-0.007	0.000
			Max. My	7	3.474	0.000	0.000
			Max. Vy	10	0.007	0.000	0.000
			Max. Vx	7	-0.000	0.000	0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	6	-206.947	0.259	-0.004
			Max. Mx	2	-203.279	0.260	0.029
			Max. My	6	-89.611	-0.214	1.865
			Max. Vy	13	0.115	-0.137	1.392
			Max. Vx	12	-0.064	0.157	1.175
		Diagonal	Max Tension	12	4.229	0.000	0.000
			Max. Compression	12	-4.378	0.000	0.000
			Max. Mx	6	0.575	-0.014	0.000
			Max. My	7	-1.763	0.000	0.000
			Max. Vy	6	0.012	0.000	0.000
			Max. Vx	7	-0.000	0.000	0.000
T28	26.75 - 6.75	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	6	-237.202	0.285	0.112
			Max. Mx	6	-230.382	0.347	0.038
			Max. My	6	-76.603	-0.137	2.682
			Max. Vy	2	0.073	-0.250	2.395
			Max. Vx	6	0.092	-0.235	-2.492
		Diagonal	Max Tension	12	5.432	0.000	0.000
			Max. Compression	12	-5.575	0.000	0.000
			Max. Mx	6	1.896	-0.014	0.000
			Max. My	7	-2.607	0.000	0.000
			Max. Vy	6	0.012	0.000	0.000
			Max. Vx	7	-0.000	0.000	0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	6	-250.409	0.000	0.000
			Max. Mx	6	-73.141	-0.830	1.802
			Max. My	6	-73.825	-0.196	2.756
			Max. Vy	13	0.627	-0.686	1.743
			Max. Vx	6	1.074	-0.830	1.802
		Diagonal	Max Tension	12	6.331	0.000	0.000
			Max. Compression	12	-6.947	0.000	0.000
			Max. Mx	6	2.520	-0.011	0.000
			Max. My	7	-3.423	0.000	0.000
			Max. Vy	6	0.010	0.000	0.000
			Max. Vx	7	-0.000	0.000	0.000
T29	6.75 - 0	Leg	Max. Vert	10	245.337	4.622	-0.057
			Max. H _x	12	171.840	6.095	-0.946
			Max. H _z	7	124.202	-2.842	0.711
			Min. Vert	4	13.789	-4.526	-0.306
			Min. H _x	6	68.561	-4.780	0.564

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	10	245.337	4.622	-0.057
	Max. H _x	12	171.840	6.095	-0.946
	Max. H _z	7	124.202	-2.842	0.711
	Min. Vert	4	13.789	-4.526	-0.306
	Min. H _x	6	68.561	-4.780	0.564

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg B	Min. H _z	13	124.261	4.792	-1.143
	Max. Vert	6	252.176	-1.978	-3.419
	Max. H _x	2	72.762	1.896	2.219
	Max. H _z	12	9.832	1.559	3.326
	Min. Vert	12	9.832	1.559	3.326
Leg A	Min. H _x	8	167.934	-2.853	-3.133
	Min. H _z	6	252.176	-1.978	-3.419
	Max. Vert	2	246.450	-2.608	4.670
	Max. H _x	7	28.601	2.949	-3.629
	Max. H _z	2	246.450	-2.608	4.670
	Min. Vert	8	13.733	2.903	-4.437
	Min. H _x	2	246.450	-2.608	4.670
	Min. H _z	8	13.733	2.903	-4.437
Guy C @ 348 ft Elev 0 ft Azimuth 238 deg	Max. Vert	22	-3.475	-2.606	1.624
Guy B @ 347 ft Elev 0 ft Azimuth 118 deg	Max. H _x	10	-3.949	-1.895	1.223
	Max. H _z	3	-34.031	-26.306	17.327
	Min. Vert	4	-34.494	-27.165	16.717
	Min. H _x	4	-34.494	-27.165	16.717
	Min. H _z	10	-3.949	-1.895	1.223
Guy A @ 343 ft Elev 0 ft Azimuth -2 deg	Max. Vert	18	-3.503	2.721	1.451
Guy C @ 348 ft Elev 0 ft Azimuth 240 deg	Max. H _x	12	-34.556	28.031	15.152
	Max. H _z	13	-32.945	26.293	15.321
	Min. Vert	12	-34.556	28.031	15.152
	Min. H _x	6	-3.976	2.016	1.034
	Min. H _z	6	-3.976	2.016	1.034
Guy A @ 343 ft Elev 0 ft Azimuth 120 deg	Max. Vert	14	-3.536	-0.103	-3.062
Guy B @ 347 ft Elev 0 ft Azimuth 120 deg	Max. H _x	11	-19.591	1.619	-17.147
	Max. H _z	2	-4.050	-0.112	-2.276
	Min. Vert	8	-35.105	-0.899	-31.977
	Min. H _x	5	-20.656	-2.670	-18.060
	Min. H _z	8	-35.105	-0.899	-31.977
Guy C @ 348 ft Elev 0 ft Azimuth 240 deg	Max. Vert	22	-3.469	-2.655	1.533
Guy A @ 343 ft Elev 0 ft Azimuth 0 deg	Max. H _x	10	-3.943	-1.948	1.124
	Max. H _z	3	-33.494	-26.358	16.339
	Min. Vert	4	-34.505	-27.632	15.953
	Min. H _x	4	-34.505	-27.632	15.953
	Min. H _z	10	-3.943	-1.948	1.124
Guy B @ 347 ft Elev 0 ft Azimuth 120 deg	Max. Vert	18	-3.488	2.658	1.534
Guy A @ 343 ft Elev 0 ft Azimuth 0 deg	Max. H _x	12	-34.570	27.605	15.939
	Max. H _z	13	-33.501	26.293	16.303
	Min. Vert	12	-34.570	27.605	15.939
	Min. H _x	6	-3.968	1.956	1.129
	Min. H _z	6	-3.968	1.956	1.129
Guy A @ 343 ft Elev 0 ft Azimuth 0 deg	Max. Vert	14	-3.530	0.000	-3.059
Guy A @ 343 ft Elev 0 ft Azimuth 0 deg	Max. H _x	11	-20.133	2.132	-17.621
	Max. H _z	2	-4.044	0.000	-2.273
	Min. Vert	8	-35.111	-0.001	-31.995
	Min. H _x	5	-20.108	-2.131	-17.596
	Min. H _z	8	-35.111	-0.001	-31.995

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Guy C @ 348 ft Elev 0 ft Azimuth 242 deg	Max. Vert	22	-3.482	-2.714	1.448
	Max. H _x	10	-3.950	-2.007	1.029
	Max. H _z	3	-32.945	-26.364	15.358
	Min. Vert	4	-34.496	-28.061	15.167
	Min. H _x	4	-34.496	-28.061	15.167
	Min. H _z	10	-3.950	-2.007	1.029
Guy B @ 347 ft Elev 0 ft Azimuth 122 deg	Max. Vert	18	-3.490	2.609	1.625
	Max. H _x	12	-34.563	27.141	16.704
	Max. H _z	13	-34.045	26.247	17.292
	Min. Vert	12	-34.563	27.141	16.704
	Min. H _x	6	-3.974	1.903	1.227
	Min. H _z	6	-3.974	1.903	1.227
Guy A @ 343 ft Elev 0 ft Azimuth 2 deg	Max. Vert	14	-3.543	0.103	-3.068
	Max. H _x	11	-20.684	2.671	-18.087
	Max. H _z	2	-4.051	0.113	-2.277
	Min. Vert	8	-35.096	0.897	-31.970
	Min. H _x	5	-19.569	-1.619	-17.125
	Min. H _z	8	-35.096	0.897	-31.970
Guy C @ 208 ft Elev 0 ft Azimuth 237 deg	Max. Vert	10	-0.785	-0.628	0.424
	Max. H _x	10	-0.785	-0.628	0.424
	Max. H _z	3	-18.723	-18.735	12.348
	Min. Vert	3	-18.723	-18.735	12.348
	Min. H _x	3	-18.723	-18.735	12.348
	Min. H _z	10	-0.785	-0.628	0.424
Guy B @ 209 ft Elev 0 ft Azimuth 117 deg	Max. Vert	6	-0.772	0.668	0.326
	Max. H _x	11	-18.468	19.925	9.981
	Max. H _z	12	-18.166	19.591	10.178
	Min. Vert	11	-18.468	19.925	9.981
	Min. H _x	6	-0.772	0.668	0.326
	Min. H _z	6	-0.772	0.668	0.326
Guy A @ 210 ft Elev 0 ft Azimuth -3 deg	Max. Vert	2	-0.768	-0.053	-0.754
	Max. H _x	12	-3.733	0.310	-4.798
	Max. H _z	2	-0.768	-0.053	-0.754
	Min. Vert	7	-18.626	-1.331	-22.511
	Min. H _x	6	-16.704	-1.555	-20.119
	Min. H _z	7	-18.626	-1.331	-22.511
Guy C @ 208 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-0.778	-0.650	0.375
	Max. H _x	10	-0.778	-0.650	0.375
	Max. H _z	3	-18.189	-18.757	11.216
	Min. Vert	3	-18.189	-18.757	11.216
	Min. H _x	5	-18.066	-19.024	10.599
	Min. H _z	10	-0.778	-0.650	0.375
Guy B @ 209 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-0.766	0.638	0.368
	Max. H _x	12	-18.161	19.112	11.031
	Max. H _z	13	-18.177	18.863	11.279

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Guy A @ 210 ft Elev 0 ft Azimuth 0 deg	Min. Vert	13	-18.177	18.863	11.279
	Min. H _x	6	-0.766	0.638	0.368
	Min. H _z	6	-0.766	0.638	0.368
	Max. Vert	2	-0.762	-0.000	-0.747
	Max. H _x	11	-9.622	0.737	-11.907
	Max. H _z	2	-0.762	-0.000	-0.747
	Min. Vert	7	-18.094	-0.336	-21.964
	Min. H _x	5	-9.351	-0.735	-11.582
	Min. H _z	7	-18.094	-0.336	-21.964
	Max. Vert	10	-0.785	-0.681	0.332
Guy C @ 208 ft Elev 0 ft Azimuth 243 deg	Max. H _x	10	-0.785	-0.681	0.332
	Max. H _z	4	-18.159	-19.458	10.113
	Min. Vert	5	-18.590	-19.984	10.014
	Min. H _x	5	-18.590	-19.984	10.014
	Min. H _z	10	-0.785	-0.681	0.332
	Max. Vert	6	-0.773	0.617	0.417
	Max. H _x	13	-18.718	18.845	12.419
	Max. H _z	13	-18.718	18.845	12.419
	Min. Vert	13	-18.718	18.845	12.419
	Min. H _x	6	-0.773	0.617	0.417
Guy B @ 209 ft Elev 0 ft Azimuth 123 deg	Min. H _z	6	-0.773	0.617	0.417
	Max. Vert	2	-0.768	0.053	-0.753
	Max. H _x	10	-16.731	1.554	-20.114
	Max. H _z	2	-0.768	0.053	-0.753
	Min. Vert	9	-18.504	1.323	-22.303
	Min. H _x	4	-3.663	-0.314	-4.716
	Min. H _z	9	-18.504	1.323	-22.303
	Max. H _x	10	-16.731	1.554	-20.114
	Max. H _z	2	-0.768	0.053	-0.753
	Min. Vert	9	-18.504	1.323	-22.303
Guy A @ 210 ft Elev 0 ft Azimuth 3 deg	Min. H _x	4	-3.663	-0.314	-4.716
	Min. H _z	9	-18.504	1.323	-22.303
	Max. H _x	10	-16.731	1.554	-20.114
	Max. H _z	2	-0.768	0.053	-0.753
	Min. Vert	9	-18.504	1.323	-22.303
	Min. H _x	4	-3.663	-0.314	-4.716
	Min. H _z	9	-18.504	1.323	-22.303
	Max. H _x	10	-16.731	1.554	-20.114
	Max. H _z	2	-0.768	0.053	-0.753
	Min. Vert	9	-18.504	1.323	-22.303

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	194.750	0.022	-0.011	-0.279	-0.124	-0.019
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	390.603	-0.015	-5.771	-402.697	-2.741	-2.370
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	368.331	3.844	-4.465	-303.135	-187.221	0.239
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	351.215	5.931	-3.394	-179.722	-309.367	0.063
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	367.146	6.005	-1.032	-8.563	-365.367	-0.038
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	390.693	5.285	3.079	208.801	-367.231	3.244
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	368.962	2.226	5.900	326.964	-183.915	5.405
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	352.137	0.086	6.928	359.042	5.073	2.611
1.2 Dead+1.0 Wind 210 deg -	369.292	-1.893	5.562	311.419	173.556	-0.141

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<i>Load Combination</i>	<i>Vertical K</i>	<i>Shear_x K</i>	<i>Shear_z K</i>	<i>Overturning Moment, M_x kip-ft</i>	<i>Overturning Moment, M_z kip-ft</i>	<i>Torque kip-ft</i>
No Ice+1.0 Guy						
1.2 Dead+1.0 Wind 240 deg -	390.382	-4.874	2.811	198.896	346.005	-0.186
No Ice+1.0 Guy						
1.2 Dead+1.0 Wind 270 deg -	367.783	-5.954	-1.107	-4.398	366.433	-0.265
No Ice+1.0 Guy						
1.2 Dead+1.0 Wind 300 deg -	351.291	-6.178	-3.638	-181.943	324.016	-3.699
No Ice+1.0 Guy						
1.2 Dead+1.0 Wind 330 deg -	368.610	-3.997	-4.846	-322.657	191.849	-5.544
No Ice+1.0 Guy						
Dead+Wind 0 deg -	202.947	0.014	-2.232	-95.291	-0.879	-0.485
Service+Guy						
Dead+Wind 30 deg -	207.052	1.069	-1.709	-72.655	-47.685	0.284
Service+Guy						
Dead+Wind 60 deg -	210.121	1.739	-0.999	-44.290	-76.293	-0.032
Service+Guy						
Dead+Wind 90 deg -	206.982	2.058	-0.065	-5.332	-88.288	-0.330
Service+Guy						
Dead+Wind 120 deg -	203.001	2.004	1.142	47.965	-85.422	0.700
Service+Guy						
Dead+Wind 150 deg -	207.190	1.023	1.842	80.060	-41.419	1.496
Service+Guy						
Dead+Wind 180 deg -	210.342	0.029	2.006	88.206	0.257	0.585
Service+Guy						
Dead+Wind 210 deg -	207.163	-0.918	1.753	76.376	39.377	-0.257
Service+Guy						
Dead+Wind 240 deg -	202.961	-1.874	1.083	46.566	81.185	-0.018
Service+Guy						
Dead+Wind 270 deg -	206.959	-2.016	-0.079	-4.520	87.766	0.210
Service+Guy						
Dead+Wind 300 deg -	210.133	-1.780	-1.057	-45.627	79.308	-0.889
Service+Guy						
Dead+Wind 330 deg -	207.061	-1.084	-1.801	-76.150	48.991	-1.557
Service+Guy						

Solution Summary

<i>Load Comb.</i>	<i>Sum of Applied Forces</i>			<i>Sum of Reactions</i>			<i>% Error</i>
	<i>PX K</i>	<i>PY K</i>	<i>PZ K</i>	<i>PX K</i>	<i>PY K</i>	<i>PZ K</i>	
1	0.000	-87.264	0.000	0.001	87.264	-0.005	0.005%
2	0.831	-103.289	-148.646	-0.831	103.287	148.612	0.019%
3	70.327	-101.688	-120.958	-70.332	101.687	120.932	0.015%
4	118.412	-100.081	-68.596	-118.423	100.081	68.604	0.008%
5	139.315	-101.673	-0.623	-139.296	101.672	0.641	0.015%
6	129.368	-103.264	73.950	-129.338	103.263	-73.932	0.019%
7	70.007	-101.655	121.821	-69.980	101.654	-121.813	0.016%
8	-0.579	-100.051	137.097	0.563	100.052	-137.107	0.011%
9	-70.168	-101.652	120.769	70.142	101.651	-120.761	0.016%
10	-128.214	-103.259	74.229	128.184	103.258	-74.212	0.019%
11	-139.114	-101.667	0.542	139.094	101.666	-0.524	0.016%
12	-119.264	-100.076	-68.405	119.266	100.076	68.430	0.015%
13	-70.194	-101.685	-121.726	70.199	101.684	121.700	0.015%
14	0.226	-87.704	-40.482	-0.226	87.704	40.478	0.005%
15	19.153	-87.269	-32.942	-19.152	87.269	32.938	0.005%
16	32.249	-86.832	-18.682	-32.245	86.832	18.680	0.005%
17	37.942	-87.265	-0.170	-37.939	87.265	0.171	0.004%
18	35.234	-87.696	20.141	-35.230	87.696	-20.138	0.005%
19	19.066	-87.260	33.177	-19.062	87.260	-33.174	0.005%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
20	-0.158	-86.824	37.338	0.157	86.824	-37.334	0.005%
21	-19.110	-87.260	32.891	19.107	87.260	-32.889	0.004%
22	-34.917	-87.697	20.215	34.913	87.697	-20.212	0.005%
23	-37.887	-87.264	0.148	37.883	87.264	-0.146	0.004%
24	-32.481	-86.831	-18.630	32.477	86.830	18.629	0.005%
25	-19.117	-87.268	-33.151	19.116	87.268	33.147	0.005%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	11	0.00000001	0.00001568
2	Yes	44	0.00009457	0.00005020
3	Yes	46	0.00009585	0.00003625
4	Yes	24	0.00008048	0.00004111
5	Yes	46	0.00009681	0.00003618
6	Yes	44	0.00009725	0.00005108
7	Yes	46	0.00009840	0.00003705
8	Yes	25	0.00008888	0.00004776
9	Yes	46	0.00009832	0.00003716
10	Yes	44	0.00009811	0.00005171
11	Yes	46	0.00009692	0.00003613
12	Yes	24	0.00009489	0.00003738
13	Yes	46	0.00009500	0.00003601
14	Yes	21	0.00000001	0.00001805
15	Yes	22	0.00000001	0.00001641
16	Yes	21	0.00000001	0.00001150
17	Yes	23	0.00000001	0.00001204
18	Yes	21	0.00000001	0.00001993
19	Yes	22	0.00000001	0.00001722
20	Yes	21	0.00000001	0.00001179
21	Yes	23	0.00000001	0.00001308
22	Yes	21	0.00000001	0.00002108
23	Yes	23	0.00000001	0.00001261
24	Yes	21	0.00000001	0.00001175
25	Yes	22	0.00000001	0.00001615

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	500 - 492	5.435	20	0.133	0.508
T2	492 - 472	5.462	20	0.133	0.507
T3	472 - 452	5.540	20	0.121	0.506
T4	452 - 432	5.517	20	0.087	0.501
T5	432 - 424	5.361	20	0.071	0.489
T6	424 - 408	5.306	20	0.069	0.484
T7	408 - 388	5.174	20	0.052	0.478
T8	388 - 368	4.888	20	0.078	0.464
T9	368 - 356	4.536	20	0.067	0.443
T10	356 - 336	4.395	20	0.048	0.430

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T11	336 - 316	4.240	20	0.045	0.405
T12	316 - 296	4.092	20	0.053	0.379
T13	296 - 276	3.978	20	0.051	0.363
T14	276 - 256	3.795	20	0.054	0.319
T15	256 - 241.583	3.521	20	0.056	0.264
T16	241.583 - 221.583	3.365	20	0.054	0.242
T17	221.583 - 201.583	3.125	24	0.073	0.200
T18	201.583 - 181.583	2.778	24	0.090	0.168
T19	181.583 - 174.167	2.383	24	0.087	0.165
T20	174.167 - 154.167	2.256	24	0.080	0.170
T21	154.167 - 134.167	1.979	18	0.072	0.195
T22	134.167 - 126.75	1.708	18	0.067	0.192
T23	126.75 - 106.75	1.617	18	0.064	0.186
T24	106.75 - 86.75	1.386	18	0.065	0.166
T25	86.75 - 66.75	1.091	18	0.075	0.145
T26	66.75 - 46.75	0.748	18	0.077	0.117
T27	46.75 - 26.75	0.437	18	0.066	0.084
T28	26.75 - 6.75	0.182	18	0.047	0.053
T29	6.75 - 0	0.022	18	0.015	0.018

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
500'	Flash Beacon Lighting	20	5.435	0.133	0.508	25503
499'	SRL-210C-4	20	5.438	0.133	0.508	25503
494'	DB314	20	5.455	0.133	0.507	21960
488'	Guy	20	5.479	0.133	0.507	23030
488'	Guy	20	5.479	0.133	0.507	23030
488'	Guy	20	5.479	0.133	0.507	23030
477'	Side Arm Mount [SO 309-1]	20	5.525	0.127	0.507	57759
464'	DB212-1	20	5.550	0.108	0.505	24803
446'	DB420	20	5.477	0.079	0.496	41733
440'	DB212-1	20	5.427	0.074	0.493	457363
430'	Guy	20	5.346	0.071	0.488	59545
430'	Guy	20	5.346	0.071	0.488	59545
430'	Guy	20	5.346	0.071	0.488	59545
420'	DB212-1	20	5.279	0.066	0.483	53962
396'	OG-4	20	5.019	0.070	0.471	27982
370'	Side Lighting	20	4.566	0.070	0.445	24625
364'	Guy	20	4.481	0.061	0.439	24445
364'	Guy	20	4.481	0.061	0.439	24445
364'	Guy	20	4.481	0.061	0.439	24445
342'	Piroad 6' Side Mount Standoff (1)	20	4.283	0.044	0.413	289792
314'	220-6N	20	4.080	0.053	0.378	52594
312'	Guy	20	4.068	0.054	0.376	65816
312'	Guy	20	4.068	0.054	0.376	65816
312'	Guy	20	4.068	0.054	0.376	65816
303'	Side Arm Mount [SO 301-1]	20	4.019	0.054	0.370	171305
295'	DB264-A	20	3.972	0.050	0.362	46707
286'	FFVV-65C-R3-V1_TMO w/ Mount	20	3.902	0.046	0.345	31988
	Pipe					
264'	Flash Beacon Lighting	20	3.629	0.057	0.285	150377
263'	Beacon Mount	20	3.615	0.057	0.282	101291
259'	Pipe Mount [PM 601-3]	20	3.559	0.057	0.272	44571
251'10-9/16"	Guy	20	3.472	0.055	0.256	48970

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<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
<i>ft</i>						
251'10-9/16"	Guy	20	3.472	0.055	0.256	48970
251'10-9/16"	Guy	20	3.472	0.055	0.256	48970
234'	CMA-BDHH/6521/E0-6 w/ Mount	20	3.282	0.059	0.228	35639
	Pipe					
195'	SC-48	24	2.646	0.092	0.164	83383
177'10-1/2"	Guy	24	2.317	0.084	0.167	39149
177'10-1/2"	Guy	24	2.317	0.084	0.167	39149
177'10-1/2"	Guy	24	2.317	0.084	0.167	39149
149'	HPD6-11	18	1.911	0.071	0.197	100500
130'5-1/2"	Guy	18	1.662	0.065	0.189	62133
130'5-1/2"	Guy	18	1.662	0.065	0.189	62133
130'5-1/2"	Guy	18	1.662	0.065	0.189	62133
128'	Side Lighting	18	1.632	0.064	0.187	70878
62'9"	Guy	18	0.682	0.075	0.110	94409
62'9"	Guy	18	0.682	0.075	0.110	94409
62'9"	Guy	18	0.682	0.075	0.110	94409

Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation ft</i>	<i>Horz. Deflection in</i>	<i>Gov. Load Comb.</i>	<i>Tilt °</i>	<i>Twist °</i>
	<i>ft</i>	<i>in</i>		<i>°</i>	<i>°</i>
T1	500 - 492	43.099	10	0.152	1.035
T2	492 - 472	42.872	10	0.148	1.032
T3	472 - 452	42.339	10	0.186	1.025
T4	452 - 432	41.374	10	0.296	1.013
T5	432 - 424	39.855	10	0.351	0.991
T6	424 - 408	39.278	10	0.351	0.980
T7	408 - 388	38.050	10	0.408	0.972
T8	388 - 368	36.125	2	0.476	0.946
T9	368 - 356	34.139	2	0.400	0.897
T10	356 - 336	33.319	2	0.290	0.869
T11	336 - 316	32.441	2	0.211	0.816
T12	316 - 296	31.759	2	0.166	0.759
T13	296 - 276	31.337	2	0.164	0.721
T14	276 - 256	30.572	2	0.263	0.607
T15	256 - 241.583	29.128	2	0.368	0.474
T16	241.583 - 221.583	27.950	2	0.446	0.419
T17	221.583 - 201.583	25.846	2	0.592	0.435
T18	201.583 - 181.583	23.049	6	0.723	0.543
T19	181.583 - 174.167	19.818	6	0.779	0.597
T20	174.167 - 154.167	18.634	6	0.763	0.622
T21	154.167 - 134.167	15.584	6	0.738	0.707
T22	134.167 - 126.75	12.522	6	0.693	0.687
T23	126.75 - 106.75	11.465	6	0.664	0.664
T24	106.75 - 86.75	8.836	6	0.619	0.592
T25	86.75 - 66.75	6.292	6	0.579	0.513
T26	66.75 - 46.75	3.946	6	0.490	0.412
T27	46.75 - 26.75	2.099	6	0.372	0.293
T28	26.75 - 6.75	0.785	6	0.229	0.181
T29	6.75 - 0	0.080	6	0.067	0.056

Critical Deflections and Radius of Curvature - Design Wind

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<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
<i>ft</i>			<i>in</i>			
500'	Flash Beacon Lighting	10	43.099	0.152	1.035	30779
499'	SRL-210C-4	10	43.070	0.151	1.035	30779
494'	DB314	10	42.927	0.149	1.032	26809
488'	Guy	10	42.770	0.150	1.030	46387
488'	Guy	10	42.770	0.150	1.030	46387
488'	Guy	10	42.770	0.150	1.030	46387
477'	Side Arm Mount [SO 309-1]	10	42.490	0.168	1.027	15134
464'	DB212-1	10	42.031	0.226	1.022	7588
446'	DB420	10	40.945	0.324	1.008	11096
440'	DB212-1	10	40.478	0.342	1.002	107021
430'	Guy	10	39.707	0.350	0.988	14091
430'	Guy	10	39.707	0.350	0.988	14091
430'	Guy	10	39.707	0.350	0.988	14091
420'	DB212-1	10	38.989	0.358	0.976	20770
396'	OG-4	10	36.944	0.460	0.960	11518
370'	Side Lighting	2	34.311	0.416	0.902	4940
364'	Guy	2	33.828	0.364	0.888	4826
364'	Guy	2	33.828	0.364	0.888	4826
364'	Guy	2	33.828	0.364	0.888	4826
342'	Pirot 6' Side Mount Standoff (1)	2	32.673	0.224	0.833	21260
314'	220-6N	2	31.710	0.163	0.755	11635
312'	Guy	2	31.664	0.160	0.752	14286
312'	Guy	2	31.664	0.160	0.752	14286
312'	Guy	2	31.664	0.160	0.752	14286
303'	Side Arm Mount [SO 301-1]	2	31.485	0.154	0.739	52607
295'	DB264-A	2	31.313	0.167	0.718	11336
286'	FFVV-65C-R3-V1 TMO w/ Mount	2	31.038	0.202	0.674	7183
	Pipe					
264'	Flash Beacon Lighting	2	29.754	0.330	0.521	14303
263'	Beacon Mount	2	29.677	0.334	0.515	16788
259'	Pipe Mount [PM 601-3]	2	29.365	0.353	0.490	15960
251'10-9/16"	Guy	2	28.803	0.388	0.457	18267
251'10-9/16"	Guy	2	28.803	0.388	0.457	18267
251'10-9/16"	Guy	2	28.803	0.388	0.457	18267
234'	CMA-BDHH/6521/E0-6 w/ Mount	2	27.236	0.499	0.392	7006
	Pipe					
195'	SC-48	6	22.008	0.755	0.566	16104
177'10-1/2"	Guy	6	19.220	0.772	0.608	10748
177'10-1/2"	Guy	6	19.220	0.772	0.608	10748
177'10-1/2"	Guy	6	19.220	0.772	0.608	10748
149'	HPD6-11	6	14.786	0.731	0.713	60880
130'5-1/2"	Guy	6	11.986	0.678	0.675	9853
130'5-1/2"	Guy	6	11.986	0.678	0.675	9853
130'5-1/2"	Guy	6	11.986	0.678	0.675	9853
128'	Side Lighting	6	11.639	0.668	0.668	10359
62'9"	Guy	6	3.532	0.469	0.389	8439
62'9"	Guy	6	3.532	0.469	0.389	8439
62'9"	Guy	6	3.532	0.469	0.389	8439

Bolt Design Data

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	500	Leg	A325N	0.750	36	0.313	39.761	0.008 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	2.998	10.164	0.295 ✓	1.05	Member Block Shear
T2	492	Leg	A325N	0.750	36	2.151	39.761	0.054 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	5.322	10.164	0.524 ✓	1.05	Member Block Shear
T3	472	Leg	A325N	0.750	36	2.356	39.761	0.059 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	1.933	10.164	0.190 ✓	1.05	Member Block Shear
T4	452	Leg	A325N	0.750	36	1.797	39.761	0.045 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	6.665	10.164	0.656 ✓	1.05	Member Block Shear
T5	432	Leg	A325N	0.750	36	2.656	39.761	0.067 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	7.230	10.164	0.711 ✓	1.05	Member Block Shear
T6	424	Leg	A325N	0.750	36	3.193	39.761	0.080 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	3.152	10.164	0.310 ✓	1.05	Member Block Shear
T7	408	Leg	A325N	0.750	36	2.693	39.761	0.068 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	4.944	10.164	0.486 ✓	1.05	Member Block Shear
T8	388	Leg	A325N	0.750	36	5.191	39.761	0.131 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	7.478	10.164	0.736 ✓	1.05	Member Block Shear
T9	368	Leg	A325N	0.750	36	5.570	39.761	0.140 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	8.100	10.164	0.797 ✓	1.05	Member Block Shear
T10	356	Leg	A325N	0.750	36	4.503	39.761	0.113 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	3.774	8.125	0.465 ✓	1.05	Member Block Shear
T11	336	Leg	A325N	0.750	36	4.667	39.761	0.117 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	1.966	8.125	0.242 ✓	1.05	Member Block Shear
T12	316	Leg	A325N	0.750	36	4.901	39.761	0.123 ✓	1.05	Bolt DS
		Diagonal	A325N	0.500	1	5.964	12.398	0.481 ✓	1.05	Member Bearing
T13	296	Leg	A325N	0.750	36	5.392	39.761	0.136 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	4.312	8.125	0.531 ✓	1.05	Member Block Shear
T14	276	Leg	A325N	0.750	36	4.993	39.761	0.126 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	6.355	8.125	0.782 ✓	1.05	Member Block Shear
T15	256	Leg	A325N	0.750	36	6.722	39.761	0.169 ✓	1.05	Bolt DS
		Diagonal	A325N	0.500	1	7.852	12.398	0.633 ✓	1.05	Member Bearing
T16	241.583	Leg	A325N	0.750	36	7.369	39.761	0.185 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	6.065	8.125	0.746 ✓	1.05	Member Block Shear
T17	221.583	Leg	A325N	0.750	36	6.782	39.761	0.171 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	5.123	8.125	0.631 ✓	1.05	Member Block Shear
T18	201.583	Leg	A325N	0.750	36	6.300	39.761	0.158 ✓	1.05	Bolt DS

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T19	181.583	Diagonal	A325N	0.500	1	8.159	12.398	0.658 ✓	1.05	Member Bearing
		Leg	A325N	0.750	36	7.103	39.761	0.179 ✓	1.05	Bolt DS
T20	174.167	Diagonal	A325N	0.500	1	8.674	12.398	0.700 ✓	1.05	Member Bearing
		Leg	A325N	0.750	36	6.826	39.761	0.172 ✓	1.05	Bolt DS
T21	154.167	Diagonal	A325N	0.750	1	3.331	8.125	0.410 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	36	7.973	39.761	0.201 ✓	1.05	Bolt DS
T22	134.167	Diagonal	A325N	0.750	1	3.689	8.125	0.454 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	36	8.267	39.761	0.208 ✓	1.05	Bolt DS
T23	126.75	Diagonal	A325N	0.750	1	3.949	8.125	0.486 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	48	5.717	39.761	0.144 ✓	1.05	Bolt DS
T24	106.75	Diagonal	A325N	0.750	1	3.168	8.125	0.390 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	48	6.076	39.761	0.153 ✓	1.05	Bolt DS
T25	86.75	Diagonal	A325N	0.750	1	2.562	10.833	0.237 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	48	7.201	39.761	0.181 ✓	1.05	Bolt DS
T26	66.75	Diagonal	A325N	0.750	1	4.581	10.833	0.423 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	48	7.833	39.761	0.197 ✓	1.05	Bolt DS
T27	46.75	Diagonal	A325N	0.750	1	4.502	10.833	0.416 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	56	7.391	39.761	0.186 ✓	1.05	Bolt DS
T28	26.75	Diagonal	A325N	0.750	1	4.229	13.552	0.312 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	56	8.471	39.761	0.213 ✓	1.05	Bolt DS
T29	6.75	Diagonal	A325N	0.750	1	5.432	13.552	0.401 ✓	1.05	Member Block Shear
		Leg	A325N	0.750	56	8.943	39.761	0.225 ✓	1.05	Bolt DS
		Diagonal	A325N	0.750	1	6.331	13.552	0.467 ✓	1.05	Member Block Shear

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T2	488' (A) (849)	9/16 EHS	2.800	35.000	13.479	22.050	0.952	1.558 ✓
	488' (B) (848)	9/16 EHS	2.800	35.000	13.360	22.050	0.952	1.572 ✓
	488' (C) (844)	9/16 EHS	2.800	35.000	13.362	22.050	0.952	1.572 ✓
	488' (A) (852)	9/16 EHS	2.800	35.000	13.481	22.050	0.952	1.558 ✓
	488' (B) (851)	9/16 EHS	2.800	35.000	13.365	22.050	0.952	1.571 ✓
	488' (C) (850)	9/16 EHS	2.800	35.000	13.366	22.050	0.952	1.571 ✓

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Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.	
T5	488' (A) (855)	9/16 EHS	2.800	35.000	13.475	22.050	0.952	1.558	✓
	488' (B) (854)	9/16 EHS	2.800	35.000	13.363	22.050	0.952	1.571	✓
	488' (C) (853)	9/16 EHS	2.800	35.000	13.362	22.050	0.952	1.572	✓
	430' (A) (861)	9/16 EHS	2.800	35.000	13.778	22.050	0.952	1.524	✓
	430' (B) (860)	9/16 EHS	2.800	35.000	13.642	22.050	0.952	1.539	✓
	430' (C) (856)	9/16 EHS	2.800	35.000	13.630	22.050	0.952	1.541	✓
	430' (A) (864)	9/16 EHS	2.800	35.000	13.780	22.050	0.952	1.524	✓
	430' (B) (863)	9/16 EHS	2.800	35.000	13.647	22.050	0.952	1.539	✓
	430' (C) (862)	9/16 EHS	2.800	35.000	13.635	22.050	0.952	1.540	✓
	430' (A) (867)	9/16 EHS	2.800	35.000	13.773	22.050	0.952	1.525	✓
	430' (B) (866)	9/16 EHS	2.800	35.000	13.644	22.050	0.952	1.539	✓
	430' (C) (865)	9/16 EHS	2.800	35.000	13.631	22.050	0.952	1.541	✓
T9	364' (A) (873)	9/16 EHS	2.800	35.000	13.229	22.050	0.952	1.587	✓
	364' (B) (872)	9/16 EHS	2.800	35.000	13.080	22.050	0.952	1.606	✓
	364' (C) (868)	9/16 EHS	2.800	35.000	13.066	22.050	0.952	1.607	✓
	364' (A) (876)	9/16 EHS	2.800	35.000	13.231	22.050	0.952	1.587	✓
	364' (B) (875)	9/16 EHS	2.800	35.000	13.085	22.050	0.952	1.605	✓
	364' (C) (874)	9/16 EHS	2.800	35.000	13.071	22.050	0.952	1.607	✓
	364' (A) (879)	9/16 EHS	2.800	35.000	13.225	22.050	0.952	1.588	✓
	364' (B) (878)	9/16 EHS	2.800	35.000	13.083	22.050	0.952	1.605	✓
	364' (C) (877)	9/16 EHS	2.800	35.000	13.068	22.050	0.952	1.607	✓
	312' (A) (885)	7/16 EHS	1.664	20.800	8.179	13.104	0.952	1.526	✓
	312' (B) (884)	7/16 EHS	1.664	20.800	8.047	13.104	0.952	1.551	✓
	312' (C) (880)	7/16 EHS	1.664	20.800	8.142	13.104	0.952	1.533	✓
T12	312' (A) (888)	7/16 EHS	1.664	20.800	8.111	13.104	0.952	1.539	✓
	312' (B) (887)	7/16 EHS	1.664	20.800	8.025	13.104	0.952	1.555	✓
	312' (C) (886)	7/16 EHS	1.664	20.800	8.024	13.104	0.952	1.555	✓
	312' (A) (891)	7/16 EHS	1.664	20.800	8.194	13.104	0.952	1.523	✓
	312' (B) (890)	7/16 EHS	1.664	20.800	8.146	13.104	0.952	1.532	✓
	312' (C) (889)	7/16 EHS	1.664	20.800	8.031	13.104	0.952	1.554	✓
	251'10-9/16" (A) (897)	1/2 EHS	2.690	26.900	12.186	16.947	0.952	1.324	✓
	251'10-9/16" (B) (896)	1/2 EHS	2.690	26.900	12.024	16.947	0.952	1.342	✓
	251'10-9/16" (C) (892)	1/2 EHS	2.690	26.900	12.193	16.947	0.952	1.324	✓
	251'10-9/16" (A) (900)	1/2 EHS	2.690	26.900	11.817	16.947	0.952	1.366	✓
	251'10-9/16" (B) (899)	1/2 EHS	2.690	26.900	11.819	16.947	0.952	1.366	✓
	251'10-9/16" (C) (898)	1/2 EHS	2.690	26.900	11.825	16.947	0.952	1.365	✓
T15	251'10-9/16" (A) (903)	1/2 EHS	2.690	26.900	12.188	16.947	0.952	1.324	✓
	251'10-9/16" (B) (902)	1/2 EHS	2.690	26.900	12.192	16.947	0.952	1.324	✓

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Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T19	251'10-9/16" (C) (901)	1/2 EHS	2.690	26.900	12.023	16.947	0.952	1.342 ✓
	177'10-1/2" (A) (909)	7/16 EHS	2.080	20.800	9.111	13.104	0.952	1.370 ✓
	177'10-1/2" (B) (908)	7/16 EHS	2.080	20.800	9.021	13.104	0.952	1.383 ✓
	177'10-1/2" (C) (904)	7/16 EHS	2.080	20.800	9.122	13.104	0.952	1.368 ✓
	177'10-1/2" (A) (912)	7/16 EHS	2.080	20.800	8.844	13.104	0.952	1.411 ✓
	177'10-1/2" (B) (911)	7/16 EHS	2.080	20.800	8.871	13.104	0.952	1.407 ✓
	177'10-1/2" (C) (910)	7/16 EHS	2.080	20.800	8.856	13.104	0.952	1.409 ✓
	177'10-1/2" (A) (915)	7/16 EHS	2.080	20.800	9.027	13.104	0.952	1.383 ✓
	177'10-1/2" (B) (914)	7/16 EHS	2.080	20.800	9.141	13.104	0.952	1.365 ✓
	177'10-1/2" (C) (913)	7/16 EHS	2.080	20.800	9.082	13.104	0.952	1.374 ✓
T22	130'5-1/2" (A) (921)	3/8 EHS	1.540	15.400	5.459	9.702	0.952	1.693 ✓
	130'5-1/2" (B) (920)	3/8 EHS	1.540	15.400	5.422	9.702	0.952	1.704 ✓
	130'5-1/2" (C) (916)	3/8 EHS	1.540	15.400	5.450	9.702	0.952	1.695 ✓
	130'5-1/2" (A) (924)	3/8 EHS	1.540	15.400	5.330	9.702	0.952	1.734 ✓
	130'5-1/2" (B) (923)	3/8 EHS	1.540	15.400	5.416	9.702	0.952	1.706 ✓
	130'5-1/2" (C) (922)	3/8 EHS	1.540	15.400	5.381	9.702	0.952	1.717 ✓
	130'5-1/2" (A) (927)	3/8 EHS	1.540	15.400	5.363	9.702	0.952	1.723 ✓
	130'5-1/2" (B) (926)	3/8 EHS	1.540	15.400	5.486	9.702	0.952	1.684 ✓
	130'5-1/2" (C) (925)	3/8 EHS	1.540	15.400	5.476	9.702	0.952	1.687 ✓
	62'9" (A) (933)	3/8 EHS	1.540	15.400	3.277	9.702	0.952	2.820 ✓
T26	62'9" (B) (932)	3/8 EHS	1.540	15.400	3.355	9.702	0.952	2.754 ✓
	62'9" (C) (928)	3/8 EHS	1.540	15.400	3.304	9.702	0.952	2.797 ✓
	62'9" (A) (936)	3/8 EHS	1.540	15.400	3.283	9.702	0.952	2.815 ✓
	62'9" (B) (935)	3/8 EHS	1.540	15.400	3.352	9.702	0.952	2.757 ✓
	62'9" (C) (934)	3/8 EHS	1.540	15.400	3.306	9.702	0.952	2.795 ✓
	62'9" (A) (939)	3/8 EHS	1.540	15.400	3.286	9.702	0.952	2.812 ✓
	62'9" (B) (938)	3/8 EHS	1.540	15.400	3.345	9.702	0.952	2.762 ✓
	62'9" (C) (937)	3/8 EHS	1.540	15.400	3.304	9.702	0.952	2.797 ✓

Compression Checks

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Leg Design Data (Compression)

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L_u</i> <i>ft</i>	<i>Kl/r</i>	<i>A</i> <i>in²</i>	<i>P_u</i> <i>K</i>	ϕP_n <i>K</i>	Ratio $\frac{P_u}{\phi P_n}$
T1	500 - 492	Bent PL 14x1/4"	8'	2'	42.9 K=2.00	3.428	-5.639	117.774	0.048 ¹
T2	492 - 472	Bent PL 14x1/4"	20'	2'	42.9 K=2.00	3.428	-38.711	117.774	0.329 ¹
T3	472 - 452	Bent PL 14x1/4"	20'	2'	42.9 K=2.00	3.428	-43.281	117.774	0.367 ¹
T4	452 - 432	Bent PL 14x1/4"	20'	2'	42.9 K=2.00	3.428	-41.575	117.774	0.353 ¹
T5	432 - 424	Bent PL 14x1/4"	8'	2'	42.9 K=2.00	3.428	-47.804	117.774	0.406 ¹
T6	424 - 408	Bent PL 14x1/4"	16'	2'	42.9 K=2.00	3.428	-57.479	117.774	0.488 ¹
T7	408 - 388	Bent PL 14x1/4"	20'	2'	42.9 K=2.00	3.428	-58.376	117.774	0.496 ¹
T8	388 - 368	Bent PL 14x3/8"	20'	2'	43.5 K=2.00	5.088	-93.440	199.382	0.469 ¹
T9	368 - 356	Bent PL 14x5/16"	12'	2'	43.2 K=2.00	4.262	-109.540	167.345	0.655 ¹
T10	356 - 336	Bent PL 14x5/16"	20'	2'	43.2 K=2.00	4.262	-97.444	167.345	0.582 ¹
T11	336 - 316	Bent PL 14x5/16"	20'	2'	43.2 K=2.00	4.262	-84.011	167.345	0.502 ¹
T12	316 - 296	Bent PL 14x5/16"	20'	2'	43.2 K=2.00	4.262	-88.222	167.345	0.527 ¹
T13	296 - 276	Bent PL 14x5/16"	20'	2'	43.2 K=2.00	4.262	-97.945	167.345	0.583 ¹
T14	276 - 256	Bent PL 14x5/16"	20'	2'	43.2 K=2.00	4.262	-96.426	167.345	0.576 ¹
T15	256 - 241.583	Bent PL 14x5/16"	14'5"	2'23/32"	44.5 K=2.00	4.262	-121.001	165.972	0.729 ¹
T16	241.583 - 221.583	Bent PL 14x5/16 + C5x9	20'	2'	43.2 K=2.00	6.942	-132.850	272.568	0.487 ¹
T17	221.583 - 201.583	Bent PL 14x5/16 + C5x9	20'	2'	43.2 K=2.00	6.942	-132.529	272.568	0.486 ¹
T18	201.583 - 181.583	Bent PL 14x5/16"	20'	2'	43.2 K=2.00	4.262	-120.431	167.345	0.720 ¹
T19	181.583 - 174.167	Bent PL 14x5/16 + C5x9	7'5"	1'10-1/4'	40.0 K=2.00	6.942	-128.558	277.843	0.463 ¹
T20	174.167 - 154.167	Bent PL 14x1/2"	20'	2'	44.1 K=2.00	6.711	-125.679	261.962	0.480 ¹
T21	154.167 - 134.167	Bent PL 14x1/2"	20'	2'	44.1 K=2.00	6.711	-143.521	261.962	0.548 ¹
T22	134.167 - 126.75	Bent PL 14x1/2"	7'5"	1'10-1/4'	40.9 K=2.00	6.711	-150.223	267.251	0.562 ¹
T23	126.75 - 106.75	Bent PL 14x1/2"	20'	2'	44.1 K=2.00	6.711	-146.948	261.962	0.561 ¹
T24	106.75 - 86.75	Bent PL 14x1/2"	20'	2'	44.1 K=2.00	6.711	-145.832	261.962	0.557 ¹
T25	86.75 - 66.75	Bent PL 14x1/2"	20'	2'	44.1 K=2.00	6.711	-172.815	261.962	0.660 ¹

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Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio
	ft		ft	ft		in ²	K	K	$\frac{P_u}{\phi P_n}$
T26	66.75 - 46.75	Bent PL 14x5/8"	20'	2'	44.8 K=2.00	8.299	-187.993	322.524	0.583 ¹
T27	46.75 - 26.75	Bent PL 14x5/8"	20'	2'	44.8 K=2.00	8.299	-206.947	322.524	0.642 ¹
T28	26.75 - 6.75	Bent PL 14x0.75	20'	2'	47.2 K=2.00	9.850	-237.202	376.633	0.630 ¹
T29	6.75 - 0	Bent PL 14x0.75	6'9"	1'8-1/4"	39.8 K=2.00	9.850	-250.409	394.731	0.634 ¹

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation	Size	L	L _u	Kl/r	A	P _u	φP _n	Ratio
	ft		ft	ft		in ²	K	K	$\frac{P_u}{\phi P_n}$
T1	500 - 492	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-3.446	20.079	0.172 ¹
T2	492 - 472	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-4.810	20.079	0.240 ¹
T3	472 - 452	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-1.902	20.079	0.095 ¹
T4	452 - 432	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-7.160	20.079	0.357 ¹
T5	432 - 424	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-4.696	20.079	0.234 ¹
T6	424 - 408	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-2.899	20.079	0.144 ¹
T7	408 - 388	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-5.026	20.079	0.250 ¹
T8	388 - 368	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-7.748	20.079	0.386 ¹
T9	368 - 356	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	110.2 K=1.10	0.902	-8.429	20.079	0.420 ¹
T10	356 - 336	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-3.835	12.879	0.298 ¹
T11	336 - 316	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-2.160	12.879	0.168 ¹
T12	316 - 296	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties) 2L 'a' > 20.737 in - 334	4'5-21/3 2"	4'3-5/32' "	125.5 K=1.00	1.403	-6.203	25.376	0.244 ¹
T13	296 - 276	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-4.189	12.879	0.325 ¹
T14	276 - 256	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-6.947	12.879	0.539 ¹
T15	256 - 241.583	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties) 2L 'a' > 20.868 in - 424	4'6"	4'3-1/2"	125.5 K=1.00	1.403	-7.962	25.365	0.314 ¹
T16	241.583 - 221.583	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-5.982	12.879	0.464 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T17	221.583 - 201.583	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-5.030	12.879	0.391 ¹
T18	201.583 - 181.583	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties) 2L 'a' > 20.737 in - 506	4'5-21/3 2"	4'3-5/32' "	125.5 K=1.00	1.403	-8.446	25.376	0.333 ¹
T19	181.583 - 174.167	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties) 2L 'a' > 20.429 in - 548	4'4-29/3 2"	4'2-13/3 2"	125.5 K=1.00	1.403	-8.908	25.402	0.351 ¹
T20	174.167 - 154.167	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-3.551	12.879	0.276 ¹
T21	154.167 - 134.167	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-3.667	12.879	0.285 ¹
T22	134.167 - 126.75	L 2 x 2 x 3/16	4'4-29/3 2"	4'29/32" "	124.1 K=1.00	0.715	-3.917	13.269	0.295 ¹
T23	126.75 - 106.75	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	126.1 K=1.00	0.715	-3.304	12.879	0.257 ¹
T24	106.75 - 86.75	L 2 x 2 x 1/4	4'5-21/3 2"	4'1-21/3 2"	127.0 K=1.00	0.938	-2.395	16.640	0.144 ¹
T25	86.75 - 66.75	L 2 x 2 x 1/4	4'5-21/3 2"	4'1-21/3 2"	127.0 K=1.00	0.938	-4.492	16.640	0.270 ¹
T26	66.75 - 46.75	L 2 x 2 x 1/4	4'5-21/3 2"	4'1-21/3 2"	127.0 K=1.00	0.938	-4.895	16.640	0.294 ¹
T27	46.75 - 26.75	L2 1/2x2 1/2x1/4	4'5-21/3 2"	4'1-21/3 2"	110.6 K=1.09	1.190	-4.378	26.369	0.166 ¹
T28	26.75 - 6.75	L2 1/2x2 1/2x1/4	4'5-21/3 2"	4'1-21/3 2"	110.6 K=1.09	1.190	-5.575	26.369	0.211 ¹
T29	6.75 - 0	L2 1/2x2 1/2x1/4	4'4-3/32' "	4'3/32" "	109.0 K=1.11	1.190	-6.947	26.842	0.259 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	500 - 492	L2 1/2x2 1/2x3/16	4'	4'	108.5 K=1.12	0.902	-0.116	20.455	0.006 ¹

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	500 - 492	Bent PL 14x1/4"	8'	2'	21.5	3.428	3.565	154.252	0.023 ¹
T2	492 - 472	Bent PL 14x1/4"	20'	2'	21.5	3.428	8.109	154.252	0.053 ¹
T3	472 - 452	Bent PL 14x1/4"	20'	2'	21.5	3.428	3.704	154.252	0.024 ¹
T4	452 - 432	Bent PL 14x1/4"	20'	2'	21.5	3.428	1.581	154.252	0.010 ¹
T9	368 - 356	Bent PL 14x5/16"	12'	2'	21.6	4.262	5.675	191.801	0.030 ¹

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	500 - 492	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	2.998	24.075	0.125 ¹
T2	492 - 472	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	5.322	24.075	0.221 ¹
T3	472 - 452	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	1.933	24.075	0.080 ¹
T4	452 - 432	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	6.665	24.075	0.277 ¹
T5	432 - 424	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	7.230	24.075	0.300 ¹
T6	424 - 408	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	3.152	24.075	0.131 ¹
T7	408 - 388	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	4.944	24.075	0.205 ¹
T8	388 - 368	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	7.478	24.075	0.311 ¹
T9	368 - 356	L2 1/2x2 1/2x3/16	4'5-21/3 2"	4'1-21/3 2"	69.0	0.553	8.100	24.075	0.336 ¹
T10	356 - 336	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	87.0	0.413	3.774	17.974	0.210 ¹
T11	336 - 316	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	87.0	0.413	1.966	17.974	0.109 ¹
T12	316 - 296	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties) 2L 'a' > 20.737 in - 334	4'5-21/3 2"	4'3-5/32' "	99.3	0.876	5.964	38.110	0.157 ¹
T13	296 - 276	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	87.0	0.413	4.312	17.974	0.240 ¹
T14	276 - 256	L 2 x 2 x 3/16	4'5-21/3 2"	4'1-21/3 2"	87.0	0.413	6.355	17.974	0.354 ¹
T15	256 - 241.583	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties) 2L 'a' > 20.868 in - 424	4'6"	4'3-1/2"	99.9	0.876	7.852	38.110	0.206 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T16	241.583 - 221.583	L 2 x 2 x 3/16	4'5-21/32"	4'1-21/32"	87.0	0.413	6.065	17.974	0.337 ¹
T17	221.583 - 201.583	L 2 x 2 x 3/16	4'5-21/32"	4'1-21/32"	87.0	0.413	5.123	17.974	0.285 ¹
T18	201.583 - 181.583	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	4'5-21/32"	4'3-5/32"	99.3	0.876	8.159	38.110	0.214 ¹
T19	181.583 - 174.167	2L 'a' > 20.737 in - 509 L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	4'4-29/32"	4'2-13/32"	97.9	0.876	8.674	38.110	0.228 ¹
T20	174.167 - 154.167	2L 'a' > 20.429 in - 548 L 2 x 2 x 3/16	4'5-21/32"	4'1-21/32"	87.0	0.413	3.331	17.974	0.185 ¹
T21	154.167 - 134.167	L 2 x 2 x 3/16	4'5-21/32"	4'1-21/32"	87.0	0.413	3.689	17.974	0.205 ¹
T22	134.167 - 126.75	L 2 x 2 x 3/16	4'4-29/32"	4'29/32"	85.7	0.413	3.949	17.974	0.220 ¹
T23	126.75 - 106.75	L 2 x 2 x 3/16	4'5-21/32"	4'1-21/32"	87.0	0.413	3.168	17.974	0.176 ¹
T24	106.75 - 86.75	L 2 x 2 x 1/4	4'5-21/32"	4'1-21/32"	88.1	0.539	2.562	23.465	0.109 ¹
T25	86.75 - 66.75	L 2 x 2 x 1/4	4'5-21/32"	4'1-21/32"	88.1	0.539	4.581	23.465	0.195 ¹
T26	66.75 - 46.75	L 2 x 2 x 1/4	4'5-21/32"	4'1-21/32"	88.1	0.539	4.502	23.465	0.192 ¹
T27	46.75 - 26.75	L2 1/2x2 1/2x1/4	4'5-21/32"	4'1-21/32"	69.8	0.728	4.229	31.687	0.133 ¹
T28	26.75 - 6.75	L2 1/2x2 1/2x1/4	4'5-21/32"	4'1-21/32"	69.8	0.728	5.432	31.687	0.171 ¹
T29	6.75 - 0	L2 1/2x2 1/2x1/4	4'4-3/32"	4'3/32"	67.7	0.728	6.331	31.687	0.200 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	500 - 492	L2 1/2x2 1/2x3/16	4'	4'	61.7	0.902	0.140	29.225	0.005 ¹

¹ P_u / φP_n controls

Top Guy Pull-Off Design Data (Tension)

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	492 - 472	L 2 x 2 x 3/16	4'	4'	77.8	0.715	9.559	23.166	0.413 ¹
T5	432 - 424	L 2 x 2 x 3/16	4'	4'	77.8	0.715	10.488	23.166	0.453 ¹
T9	368 - 356	L 2 x 2 x 3/16	4'	4'	77.8	0.715	10.972	23.166	0.474 ¹
T12	316 - 296	L 2 x 2 x 3/16	4'	4'	77.8	0.715	7.896	23.166	0.341 ¹
T15	256 - 241.583	L 2 x 2 x 3/16	4'	4'	77.8	0.715	9.475	23.166	0.409 ¹
T19	181.583 - 174.167	L 2 x 2 x 3/16	4'	4'	77.8	0.715	8.005	23.166	0.346 ¹
T22	134.167 - 126.75	L 2 x 2 x 3/16	4'	4'	77.8	0.715	6.154	23.166	0.266 ¹
T26	66.75 - 46.75	L 2 x 2 x 3/16	4'	4'	77.8	0.715	4.256	23.166	0.184 ¹

¹ P_u / φP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP _{allow} K	% Capacity	Pass Fail
T1	500 - 492	Leg	Bent PL 14x1/4"	1	-5.639	123.663	4.6	Pass
T2	492 - 472	Leg	Bent PL 14x1/4"	21	-38.711	123.663	31.3	Pass
T3	472 - 452	Leg	Bent PL 14x1/4"	54	-43.281	123.663	35.0	Pass
T4	452 - 432	Leg	Bent PL 14x1/4"	85	-41.575	123.663	33.6	Pass
T5	432 - 424	Leg	Bent PL 14x1/4"	120	-47.804	123.663	38.7	Pass
T6	424 - 408	Leg	Bent PL 14x1/4"	135	-57.479	123.663	46.5	Pass
T7	408 - 388	Leg	Bent PL 14x1/4"	162	-58.376	123.663	47.2	Pass
T8	388 - 368	Leg	Bent PL 14x3/8"	193	-93.440	209.351	44.6	Pass
T9	368 - 356	Leg	Bent PL 14x5/16"	227	-109.540	175.712	62.3	Pass
T10	356 - 336	Leg	Bent PL 14x5/16"	248	-97.444	175.712	55.5	Pass
T11	336 - 316	Leg	Bent PL 14x5/16"	281	-84.011	175.712	47.8	Pass
T12	316 - 296	Leg	Bent PL 14x5/16"	313	-88.222	175.712	50.2	Pass
T13	296 - 276	Leg	Bent PL 14x5/16"	348	-97.945	175.712	55.7	Pass
T14	276 - 256	Leg	Bent PL 14x5/16"	380	-96.426	175.712	54.9	Pass
T15	256 - 241.583	Leg	Bent PL 14x5/16"	412	-121.001	174.271	69.4	Pass
T16	241.583 - 221.583	Leg	BentPL 14x5/16 +C5x9	438	-132.850	286.196	46.4	Pass
T17	221.583 - 201.583	Leg	BentPL 14x5/16 +C5x9	471	-132.529	286.196	46.3	Pass
T18	201.583 - 181.583	Leg	Bent PL 14x5/16"	502	-120.431	175.712	68.5	Pass
T19	181.583 - 174.167	Leg	BentPL 14x5/16 +C5x9	537	-128.558	291.735	44.1	Pass
T20	174.167 - 154.167	Leg	Bent PL 14x1/2"	552	-125.679	275.060	45.7	Pass
T21	154.167 - 134.167	Leg	Bent PL 14x1/2"	585	-143.521	275.060	52.2	Pass
T22	134.167 - 126.75	Leg	Bent PL 14x1/2"	618	-150.223	280.614	53.5	Pass
T23	126.75 - 106.75	Leg	Bent PL 14x1/2"	633	-146.948	275.060	53.4	Pass
T24	106.75 - 86.75	Leg	Bent PL 14x1/2"	664	-145.832	275.060	53.0	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T25	86.75 - 66.75	Leg	Bent PL 14x1/2"	697	-172.815	275.060	62.8	Pass
T26	66.75 - 46.75	Leg	Bent PL 14x5/8"	731	-187.993	338.650	55.5	Pass
T27	46.75 - 26.75	Leg	Bent PL 14x5/8"	764	-206.947	338.650	61.1	Pass
T28	26.75 - 6.75	Leg	Bent PL 14x0.75	797	-237.202	395.465	60.0	Pass
T29	6.75 - 0	Leg	Bent PL 14x0.75	830	-250.409	414.468	60.4	Pass
T1	500 - 492	Diagonal	L2 1/2x2 1/2x3/16	9	-3.446	21.083	16.3	Pass
T2	492 - 472	Diagonal	L2 1/2x2 1/2x3/16	51	-4.810	21.083	22.8	Pass
T3	472 - 452	Diagonal	L2 1/2x2 1/2x3/16	83	-1.902	21.083	9.0	Pass
T4	452 - 432	Diagonal	L2 1/2x2 1/2x3/16	90	-7.160	21.083	34.0	Pass
T5	432 - 424	Diagonal	L2 1/2x2 1/2x3/16	132	7.230	25.279	28.6	Pass
T6	424 - 408	Diagonal	L2 1/2x2 1/2x3/16	158	-2.899	21.083	13.8	Pass
T7	408 - 388	Diagonal	L2 1/2x2 1/2x3/16	164	-5.026	21.083	23.8	Pass
T8	388 - 368	Diagonal	L2 1/2x2 1/2x3/16	197	-7.748	21.083	36.7	Pass
T9	368 - 356	Diagonal	L2 1/2x2 1/2x3/16	245	-8.429	21.083	40.0	Pass
T10	356 - 336	Diagonal	L 2 x 2 x 3/16	277	-3.835	13.523	28.4	Pass
T11	336 - 316	Diagonal	L 2 x 2 x 3/16	284	-2.160	13.523	16.0	Pass
T12	316 - 296	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	334	-6.203	26.645	23.3	Pass
T13	296 - 276	Diagonal	L 2 x 2 x 3/16	373	-4.189	13.523	31.0	Pass
T14	276 - 256	Diagonal	L 2 x 2 x 3/16	386	-6.947	13.523	51.4	Pass
T15	256 - 241.583	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	424	-7.962	26.633	29.9	Pass
T16	241.583 - 221.583	Diagonal	L 2 x 2 x 3/16	466	-5.982	13.523	44.2	Pass
T17	221.583 - 201.583	Diagonal	L 2 x 2 x 3/16	473	-5.030	13.523	37.2	Pass
T18	201.583 - 181.583	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	506	-8.446	26.645	31.7	Pass
T19	181.583 - 174.167	Diagonal	L2x2x3/16+L1.5x1.5x1/4 (Additive Properties)	548	-8.908	26.672	33.4	Pass
T20	174.167 - 154.167	Diagonal	L 2 x 2 x 3/16	580	-3.551	13.523	26.3	Pass
T21	154.167 - 134.167	Diagonal	L 2 x 2 x 3/16	586	-3.667	13.523	27.1	Pass
T22	134.167 - 126.75	Diagonal	L 2 x 2 x 3/16	628	-3.917	13.933	28.1	Pass
T23	126.75 - 106.75	Diagonal	L 2 x 2 x 3/16	662	-3.304	13.523	24.4	Pass
T24	106.75 - 86.75	Diagonal	L 2 x 2 x 1/4	670	-2.395	17.472	13.7	Pass
T25	86.75 - 66.75	Diagonal	L 2 x 2 x 1/4	703	-4.492	17.472	25.7	Pass
T26	66.75 - 46.75	Diagonal	L 2 x 2 x 1/4	760	-4.895	17.472	28.0	Pass
T27	46.75 - 26.75	Diagonal	L2 1/2x2 1/2x1/4	766	-4.378	27.688	15.8	Pass
T28	26.75 - 6.75	Diagonal	L2 1/2x2 1/2x1/4	799	-5.575	27.688	20.1	Pass
T29	6.75 - 0	Diagonal	L2 1/2x2 1/2x1/4	832	-6.947	28.184	24.6	Pass
T1	500 - 492	Top Girt	L2 1/2x2 1/2x3/16	6	-0.116	21.478	0.5	Pass
T2	492 - 472	Guy A@488 (-1.7 deg)	9/16	849	13.479	22.050	61.1	Pass
		Guy A@488	9/16	852	13.481	22.050	61.1	Pass
		Guy A@488 (1.7 deg)	9/16	855	13.475	22.050	61.1	Pass
T5	432 - 424	Guy A@430 (-1.7 deg)	9/16	861	13.778	22.050	62.5	Pass
		Guy A@430	9/16	864	13.780	22.050	62.5	Pass
		Guy A@430 (1.7 deg)	9/16	867	13.773	22.050	62.5	Pass
T9	368 - 356	Guy A@364 (-1.7 deg)	9/16	873	13.229	22.050	60.0	Pass
		Guy A@364	9/16	876	13.231	22.050	60.0	Pass
		Guy A@364 (1.7 deg)	9/16	879	13.225	22.050	60.0	Pass
T12	316 - 296	Guy A@312 (-1.7 deg)	7/16	885	8.179	13.104	62.4	Pass
		Guy A@312	7/16	888	8.111	13.104	61.9	Pass

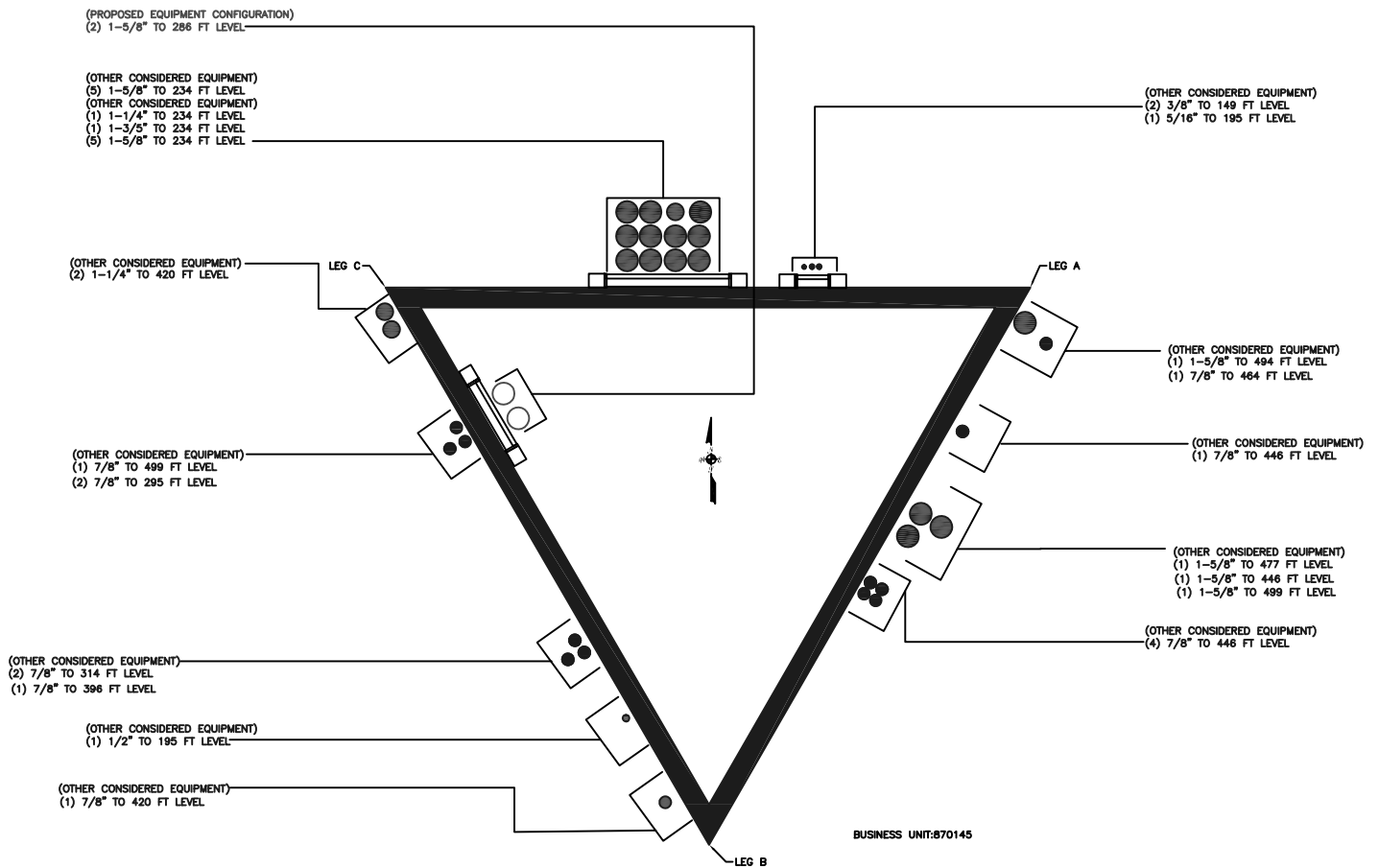
tnxTower B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	116502.002.01--Lake City (US 41 & I-10),FL(BU#870145)	82 of 84
	Project	Date
	Client	Designed by
	Crown Castle	Sudhanva

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
		Guy A@312 (1.7 deg)	7/16	891	8.194	13.104	62.5	Pass
T15	256 - 241.583	Guy A@251.881 (-2.6 deg)	1/2	897	12.186	16.947	71.9	Pass
		Guy A@251.881	1/2	900	11.817	16.947	69.7	Pass
		Guy A@251.881 (2.6 deg)	1/2	903	12.188	16.947	71.9	Pass
T19	181.583 - 174.167	Guy A@177.875 (-2.6 deg)	7/16	909	9.111	13.104	69.5	Pass
		Guy A@177.875	7/16	912	8.844	13.104	67.5	Pass
		Guy A@177.875 (2.6 deg)	7/16	915	9.027	13.104	68.9	Pass
T22	134.167 - 126.75	Guy A@130.458 (-2.6 deg)	3/8	921	5.459	9.702	56.3	Pass
		Guy A@130.458	3/8	924	5.330	9.702	54.9	Pass
		Guy A@130.458 (2.6 deg)	3/8	927	5.363	9.702	55.3	Pass
T26	66.75 - 46.75	Guy A@62.75 (-2.6 deg)	3/8	933	3.277	9.702	33.8	Pass
		Guy A@62.75	3/8	936	3.283	9.702	33.8	Pass
		Guy A@62.75 (2.6 deg)	3/8	939	3.286	9.702	33.9	Pass
T2	492 - 472	Guy B@488 (-1.7 deg)	9/16	848	13.360	22.050	60.6	Pass
		Guy B@488	9/16	851	13.365	22.050	60.6	Pass
		Guy B@488 (1.7 deg)	9/16	854	13.363	22.050	60.6	Pass
T5	432 - 424	Guy B@430 (-1.7 deg)	9/16	860	13.642	22.050	61.9	Pass
		Guy B@430	9/16	863	13.647	22.050	61.9	Pass
		Guy B@430 (1.7 deg)	9/16	866	13.644	22.050	61.9	Pass
T9	368 - 356	Guy B@364 (-1.7 deg)	9/16	872	13.080	22.050	59.3	Pass
		Guy B@364	9/16	875	13.085	22.050	59.3	Pass
		Guy B@364 (1.7 deg)	9/16	878	13.083	22.050	59.3	Pass
T12	316 - 296	Guy B@312 (-1.7 deg)	7/16	884	8.047	13.104	61.4	Pass
		Guy B@312	7/16	887	8.025	13.104	61.2	Pass
		Guy B@312 (1.7 deg)	7/16	890	8.146	13.104	62.2	Pass
T15	256 - 241.583	Guy B@251.881 (-2.6 deg)	1/2	896	12.024	16.947	71.0	Pass
		Guy B@251.881	1/2	899	11.819	16.947	69.7	Pass
		Guy B@251.881 (2.6 deg)	1/2	902	12.192	16.947	71.9	Pass
T19	181.583 - 174.167	Guy B@177.875 (-2.6 deg)	7/16	908	9.021	13.104	68.8	Pass
		Guy B@177.875	7/16	911	8.871	13.104	67.7	Pass
		Guy B@177.875 (2.6 deg)	7/16	914	9.141	13.104	69.8	Pass
T22	134.167 - 126.75	Guy B@130.458 (-2.6 deg)	3/8	920	5.422	9.702	55.9	Pass
		Guy B@130.458	3/8	923	5.416	9.702	55.8	Pass
		Guy B@130.458 (2.6 deg)	3/8	926	5.486	9.702	56.5	Pass
T26	66.75 - 46.75	Guy B@62.75 (-2.6 deg)	3/8	932	3.355	9.702	34.6	Pass
		Guy B@62.75	3/8	935	3.352	9.702	34.5	Pass
		Guy B@62.75 (2.6 deg)	3/8	938	3.345	9.702	34.5	Pass

<i>tnxTower</i> <i>B+T Group</i> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job 116502.002.01--Lake City (US 41 & I-10),FL(BU#870145)	Page 84 of 84
	Project	Date 17:19:09 08/31/21
	Client Crown Castle	Designed by Sudhanva

<i>Section No.</i>	<i>Elevation ft</i>	<i>Component Type</i>	<i>Size</i>	<i>Critical Element</i>	<i>P K</i>	<i>ϕP_{allow} K</i>	<i>% Capacity</i>	<i>Pass Fail</i>
						Top Girt (T1)	0.5	Pass
						Guy A (T15)	71.9	Pass
						Guy B (T15)	71.9	Pass
						Guy C (T15)	71.9	Pass
						Top Guy Pull-Off (T9)	45.1	Pass
						Bolt Checks	75.9	Pass
						RATING =	75.9	Pass

APPENDIX B
BASE LEVEL DRAWING



APPENDIX C
ADDITIONAL CALCULATIONS

Diagonals from 174'2"-181'7"

P= 8.908 kip

L2x2x3/16	L1.5x1.5x3/16
A ₁ = 0.715 in ²	A ₂ = 0.6875 in ²
L ₁ = 4.25 ft	L ₂ = 3.75 ft
r _{z1} = 0.389 in	r _{z2} = 0.292 in
(A ₁ /L ₁)/ΣA 0.4785	(A ₂ /L ₂)/ΣA 0.5215
P _{u1} = 4.26 kip	P _{u2} = 4.65 kip
KL ₁ /r _{z1} = 131.1054	KL ₂ /r _{z2} = 154.1096
F _e = 16.6516	F _e = 12.0514
F _{cr1} = 16.6516 ksi	F _{cr2} = 12.0514 ksi
φ _c P _{n1} = 11.91 kip	φ _c P _{n2} = 8.29 kip
P _{u1} /(φ _c P _{n1})= 34.1%	P _{u2} /(φ _c P _{n2})= 53.4%

Diagonals from 241'7"-256'

P= 7.962 kip

L2x2x3/16	L1.5x1.5x3/16
A ₁ = 0.715 in ²	A ₂ = 0.6875 in ²
L ₁ = 4.25 ft	L ₂ = 3.75 ft
r _{z1} = 0.389 in	r _{z2} = 0.292 in
(A ₁ /L ₁)/ΣA 0.4785	(A ₂ /L ₂)/ΣA 0.5215
P _{u1} = 3.81 kip	P _{u2} = 4.15 kip
KL ₁ /r _{z1} = 131.1054	KL ₂ /r _{z2} = 154.1096
F _e = 16.6516	F _e = 12.0514
F _{cr1} = 16.6516 ksi	F _{cr2} = 12.0514 ksi
φ _c P _{n1} = 11.91 kip	φ _c P _{n2} = 8.29 kip
P _{u1} /(φ _c P _{n1})= 30.5%	P _{u2} /(φ _c P _{n2})= 47.7%

Diagonals from 181'7"-201'7"

P= 8.446 kip

L2x2x3/16	L1.5x1.5x3/16
A ₁ = 0.715 in ²	A ₂ = 0.6875 in ²
L ₁ = 4.25 ft	L ₂ = 3.75 ft
r _{z1} = 0.389 in	r _{z2} = 0.292 in
(A ₁ /L ₁)/ΣA 0.4785	(A ₂ /L ₂)/ΣA 0.5215
P _{u1} = 4.04 kip	P _{u2} = 4.4 kip
KL ₁ /r _{z1} = 131.1054	KL ₂ /r _{z2} = 154.1096
F _e = 16.6516	F _e = 12.0514
F _{cr1} = 16.6516 ksi	F _{cr2} = 12.0514 ksi
φ _c P _{n1} = 11.91 kip	φ _c P _{n2} = 8.29 kip
P _{u1} /(φ _c P _{n1})= 32.3%	P _{u2} /(φ _c P _{n2})= 50.5%

Diagonals from 296'-316'

P= 6.203 kip

L2x2x3/16	L1.5x1.5x3/16
A ₁ = 0.715 in ²	A ₂ = 0.6875 in ²
L ₁ = 4.25 ft	L ₂ = 3.75 ft
r _{z1} = 0.389 in	r _{z2} = 0.292 in
(A ₁ /L ₁)/ΣA 0.4785	(A ₂ /L ₂)/ΣA 0.5215
P _{u1} = 2.97 kip	P _{u2} = 3.23 kip
KL ₁ /r _{z1} = 131.1054	KL ₂ /r _{z2} = 154.1096
F _e = 16.6516	F _e = 12.0514
F _{cr1} = 16.6516 ksi	F _{cr2} = 12.0514 ksi
φ _c P _{n1} = 11.91 kip	φ _c P _{n2} = 8.29 kip
P _{u1} /(φ _c P _{n1})= 23.8%	P _{u2} /(φ _c P _{n2})= 37.1%

PROJECT	116502.002.01 - Lake City (US 41 & I-
SUBJECT	Guy Anchor Fan Plate---Outer A and C
DATE	08-31-21



v2.0.0

General

TIA-222 Revision	H	
Apply TIA-222-H Section 15.5?	Yes	
Design/Analysis	Analysis	
Anchor Radius	343	ft
Fan Plate Hole Qty	4	
Wire Qty	4	
Uplift	35.00	kips
Shear	32.00	kips
Resultant	47.42	kips

Anchor Shaft Analysis

Type	Other
Grade	A36
Override Shaft Area	4.78 in^2
Shear lag, U	1.00
Gross Area, Ag	4.78 in^2
Net Area, An	4.78 in^2
Eff. Area, Ae	4.78 in^2
φPn	137.7 kips
Rating	32.8%

														Block Shear		Rear & Teal
Wire Properties								Fan Plate Properties						Corner	2 Hole	
Hole #	Wire #	Wire Size	Wire Grade	Wire Load (k)	2nd Wire Size	2nd Wire Grade	2nd Wire Load (k)	Side Edge Dist. 'A'	Edge Dist. 'B'	Hole Spacing 'C'	Plate Thick. 'D'	Hole Size 'E'	Plate Grade	Rating	Rating	Rating
1	1	7/16	EHS	8.2				0.88	0.88	4.50	0.75	0.75	A36	29.9%		27.0%
2	2	9/16	EHS	13.2					0.88	4.50	0.75	0.75	A36	-	13.2%	41.8%
3	3	9/16	EHS	13.8					0.88	4.50	0.75	0.75	A36	-	16.7%	43.5%
4	3	9/16	EHS	13.5				0.88	0.88	4.50	0.75	0.75	A36	49.2%	16.8%	42.5%

PROJECT	116502.002.01 - Lake City (US 41 & I-
SUBJECT	Guy Anchor Fan Plate----Outer B
DATE	08-31-21

v2.0.0

General

TIA-222 Revision	H
Apply TIA-222-H Section 15.5?	Yes
Design/Analysis	Analysis
Anchor Radius	343 ft
Fan Plate Hole Qty	5
Wire Qty	4
Uplift	35.00 kips
Shear	32.00 kips
Resultant	47.42 kips

Anchor Shaft Analysis

Type	Other
Grade	A36
Override Shaft Area	1.58 in^2
Shear lag, U	1.00
Gross Area, Ag	1.58 in^2
Net Area, An	1.58 in^2
Eff. Area, Ae	1.58 in^2
φPn	45.5 kips
Rating	99.3%

														Block Shear		Tear & Tension
Wire Properties								Fan Plate Properties						Corner	2 Hole	
Hole #	Wire #	Wire Size	Wire Grade	Wire Load (k)	2nd Wire Size	2nd Wire Grade	2nd Wire Load (k)	Side Edge Dist. 'A'	Edge Dist. 'B'	Hole Spacing 'C'	Plate Thick. 'D'	Hole Size 'E'	Plate Grade	Rating	Rating	Rating
1	1	7/16	EHS	8.1				1.00	0.75	2.75	0.50	1.00	A36	54.6%		62.7%
2	2	9/16	EHS	13.2					0.75	2.75	0.50	1.00	A36	-	36.6%	95.8%
3	None								0.75	2.75	0.50	1.00	A36	-	22.7%	-
4	3	9/16	EHS	13.8					0.75	2.75	0.50	1.00	A36	-	23.7%	99.8%
5	4	9/16	EHS	13.5				1.00	0.75	2.75	0.50	1.00	A36	90.8%	46.8%	97.6%

Pier and Pad Foundation



BU #: 870145
 Site Name: Lake City (US 41 &
 App. Number: 583050 Rev#0

TIA-222 Revision: H
 Tower Type: Guyed

Top & Bot. Pad Rein. Different?: ☐
 Block Foundation?: ☒
 Rectangular Pad?: ☐

Superstructure Analysis Reactions		
Compression, P_{comp} :	391	kips
Base Shear, V_{u_comp} :	7	kips
Moment, M_u :	422	ft-kips
Tower Height, H :	500	ft
BP Dist. Above Fdn, bp_{dist} :	0	in
Bolt Circle / Bearing Plate Width, BC :	12	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	65.70	7.00	10.1%	Pass
Bearing Pressure (ksf)	4.80	3.54	70.3%	Pass
Overturing (kip*ft)	1184.90	443.00	37.4%	Pass
Pad Flexure (kip*ft)	1453.96	872.08	57.1%	Pass
Pad Shear - 1-way (kips)	413.39	160.55	37.0%	Pass
Pad Shear - 2-way (Comp) (ksi)	0.164	0.058	33.9%	Pass
Flexural 2-way (Comp) (kip*ft)	1903.33	0.00	0.0%	Pass

*Rating per TIA-222-H Section 15.5

Structural Rating*:	57.1%
Soil Rating*:	70.3%

Pad Properties		
Depth, D :	2	ft
Pad Width, W_1 :	13.311	ft
Pad Thickness, T :	3	ft
Pad Rebar Size (Bottom dir. 2), Sp_2 :	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2 :	13	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60	ksi
Concrete Compressive Strength, F'_c :	3	ksi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	105	pcf
Ultimate Gross Bearing, Q_{ult} :	8.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	30	degrees
SPT Blow Count, N_{blows} :	5	
Base Friction, μ :	0.3	
Neglected Depth, N :	3.00	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	N/A	ft

<--Toggle between Gross and Net

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.



BU#:	870145
Site Name:	Lake City (US 41 & I-10), FL
Order Number:	583050 Rev# 0
Location:	
	Inner
TIA-222 Revision:	H

Design Reactions		
Shear, S :	67.00	kips
Uplift, Ua :	56.00	kips
Resultant Force, Rf :	87.32	kips
Tower Height, H :	500.00	ft
Guy Anchor Radius, R :	209.00	ft
Resultant Angle to Horizontal, θ :	39.9	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, Da :	6.5	ft
Anchor Width, Wa :	4	ft
Anchor Thickness, Ta :	4	ft
Anchor Length, La :	30.5	ft
Concrete Volume, Vc :	18.1	yd ³
Toe Width, toe :	0	ft
Guyed Anchor Top Rebar Size, Sat :	7	
No. of Bars in Top of Block:	5	
Guyed Anchor Front Rebar Size, Saf :	7	
No. of Bars in Front of Block:	4	
Stirrup Size:	4	
Anchor Shaft Diameter, ds :	3	in
Anchor Shaft Quantity, n :	3	
Anchor Shaft Area Overide:		in ²
Shear Lag Factor, u :	1	

Material Properties		
Rebar Grade, Fy :	60	ksi
Concrete Strength, F'c :	3	ksi
Wt. Avg. Concrete Density, δx :	0.150	kcf
Clear Cover, cc :	3	in
Anchor Shaft Grade, Fy' :	50	ksi
Anchor Shaft Ultimate Strength, Fu' :	65	ksi

Design Checks				
	Capacity	Demand	Rating*	Check
Lateral Capacity (kips):	144.09	67.00	44.3%	Pass
Uplift Capacity (kips):	127.73	56.00	41.8%	Pass
Lateral Flexural Capacity (ft*kips):	469.52	255.44	51.8%	Pass
Uplift Flexural Capacity (ft*kips):	584.92	213.50	34.8%	Pass
Anchor Shaft (kips):	848.23	87.32	9.8%	Pass

*Rating per TIA-222-H Section 15.5

Anchor Shaft Rating:	9.8%
Structural Rating:	51.8%
Soil Rating:	44.3%

Neglect Depth, Neg :	0	ft
Groundwater Level, gw :	N/A	ft

Soil Properties:		No. of Soil Layers:		1		
Layer	φ, deg	cu, ksf	δ, pcf		Ultimate fs (ksf)	N (blows/ft)
1	30	0.000	105	6.50		6

*key: φ = Internal Angle of Friction

cu = Cohesion / Undrained Shear Strength

δ = Buoyant Soil Unit Weight

d = Depth to Bottom of Layer

Ultimate fs = Geotechnical Report-provided skin friction / adhesion

N = SPT Blow Count

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.



BU#:	870145
Site Name:	Lake City (US 41 & I-10), FL
Order Number:	583050 Rev# 0
Location:	
	Outer Centre
TIA-222 Revision:	H

Design Reactions		
Shear, S :	32.00	kips
Uplift, Ua :	35.00	kips
Resultant Force, Rf :	47.42	kips
Tower Height, H :	500.00	ft
Guy Anchor Radius, R :	343.00	ft
Resultant Angle to Horizontal, θ :	47.6	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, Da :	11	ft
Anchor Width, Wa :	4	ft
Anchor Thickness, Ta :	3	ft
Anchor Length, La :	8	ft
Concrete Volume, Vc :	3.6	yd ³
Toe Width, toe :	0	ft
Guyed Anchor Top Rebar Size, Sat :	4	
No. of Bars in Top of Block:	5	
Guyed Anchor Front Rebar Size, Saf :	4	
No. of Bars in Front of Block:	4	
Stirrup Size:	4	

Anchor Shaft Area Override:	1.58	in ²
Shear Lag Factor, u :	1	
Section Type (Reference Only):	C 4"X 5.4"	

Material Properties		
Rebar Grade, Fy :	60	ksi
Concrete Strength, F'c :	3	ksi
Wt. Avg. Concrete Density, δx :	0.150	kcf
Clear Cover, cc :	3	in
Anchor Shaft Grade, Fy' :	36	ksi
Anchor Shaft Ultimate Strength, Fu' :	58	ksi

Design Checks				
	Capacity	Demand	Rating*	Check
Lateral Capacity (kips):	73.94	32.00	41.2%	Pass
Uplift Capacity (kips):	107.79	35.00	30.9%	Pass
Lateral Flexural Capacity (ft*kips):	158.36	32.00	19.2%	Pass
Uplift Flexural Capacity (ft*kips):	144.02	35.00	23.1%	Pass
Anchor Shaft (kips):	45.50	47.42	99.3%	Pass

*Rating per TIA-222-H Section 15.5

Anchor Shaft Rating:	99.3%
Structural Rating:	23.1%
Soil Rating:	41.2%

Neglect Depth, Neg :	0	ft
Groundwater Level, gw :	N/A	ft

Soil Properties:		No. of Soil Layers:		1		
Layer	φ, deg	cu, ksf	δ, pcf		Ultimate fs (ksf)	N (blows/ft)
1	30	0.000	105	11.00		12

*key: φ = Internal Angle of Friction
cu = Cohesion / Undrained Shear Strength
δ = Buoyant Soil Unit Weight
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.



BU#:	870145
Site Name:	Lake City (US 41 & I-10), FL
Order Number:	583050 Rev# 0
Location:	
	Outer Left and Right
TIA-222 Revision:	H

Design Reactions		
Shear, S :	32.00	kips
Uplift, Ua :	35.00	kips
Resultant Force, Rf :	47.42	kips
Tower Height, H :	500.00	ft
Guy Anchor Radius, R :	343.00	ft
Resultant Angle to Horizontal, θ :	47.6	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, Da :	9	ft
Anchor Width, Wa :	4	ft
Anchor Thickness, Ta :	3	ft
Anchor Length, La :	6	ft
Concrete Volume, Vc :	2.7	yd ³
Toe Width, toe :	0	ft
Guyed Anchor Top Rebar Size, Sat :	4	
No. of Bars in Top of Block:	5	
Guyed Anchor Front Rebar Size, Saf :	4	
No. of Bars in Front of Block:	4	
Stirrup Size:	4	

Anchor Shaft Area Override:	4.78	in ²
Shear Lag Factor, u :	1	
Section Type (Reference Only):	2 C6"x 8.2"	

Material Properties		
Rebar Grade, Fy :	60	ksi
Concrete Strength, F'c :	3	ksi
Wt. Avg. Concrete Density, δx :	0.150	kcf
Clear Cover, cc :	3	in
Anchor Shaft Grade, Fy' :	36	ksi
Anchor Shaft Ultimate Strength, Fu' :	58	ksi

Design Checks				
	Capacity	Demand	Rating*	Check
Lateral Capacity (kips):	43.49	32.00	70.1%	Pass
Uplift Capacity (kips):	58.12	35.00	57.4%	Pass
Lateral Flexural Capacity (ft*kips):	158.36	24.00	14.4%	Pass
Uplift Flexural Capacity (ft*kips):	144.02	26.25	17.4%	Pass
Anchor Shaft (kips):	137.66	47.42	32.8%	Pass

*Rating per TIA-222-H Section 15.5

Anchor Shaft Rating:	32.8%
Structural Rating:	17.4%
Soil Rating:	70.1%

Neglect Depth, Neg :	0	ft
Groundwater Level, gw :	N/A	ft

Soil Properties:		No. of Soil Layers:		1		
Layer	φ, deg	cu, ksf	δ, pcf		Ultimate fs (ksf)	N (blows/ft)
1	30	0.000	105	9.00		11

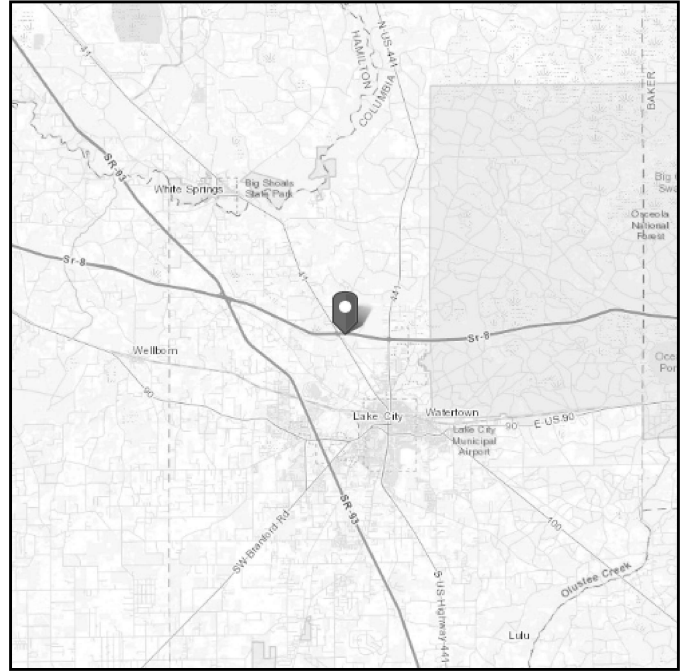
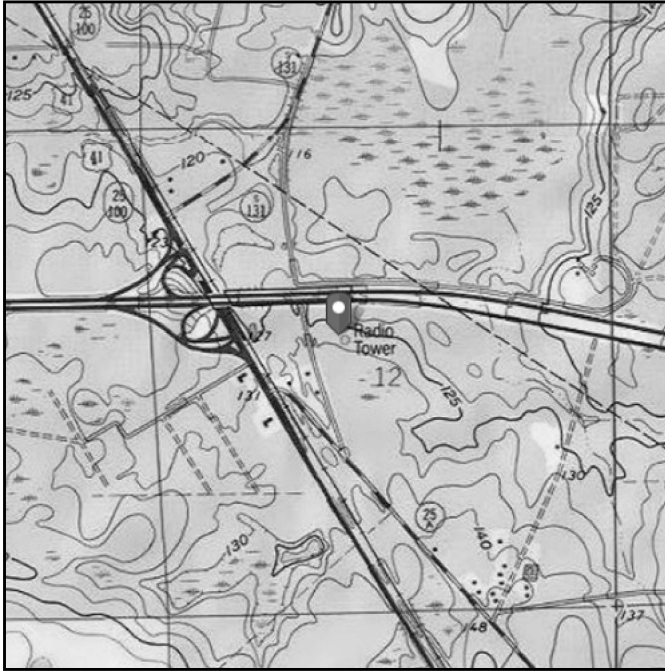
*key: φ = Internal Angle of Friction
cu = Cohesion / Undrained Shear Strength
δ = Buoyant Soil Unit Weight
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see
Section 11.4.3)

Elevation: 127.19 ft (NAVD 88)
Latitude: 30.244056
Longitude: -82.670056



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	90 Vmph
100-year MRI	97 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: Thu Aug 26 2021

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).

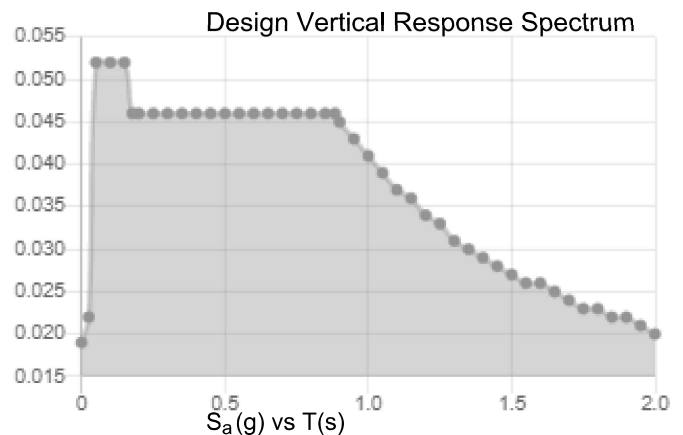
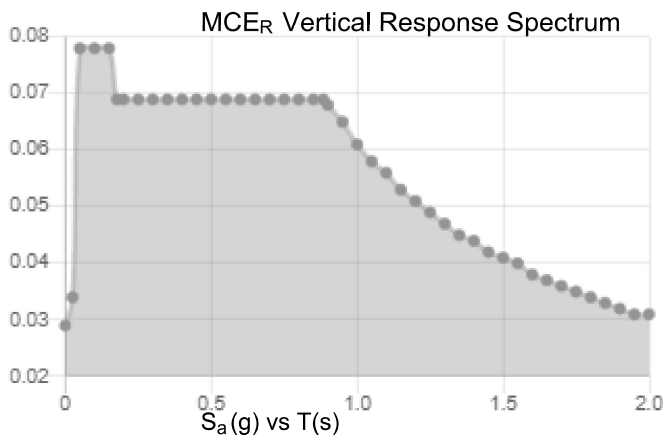
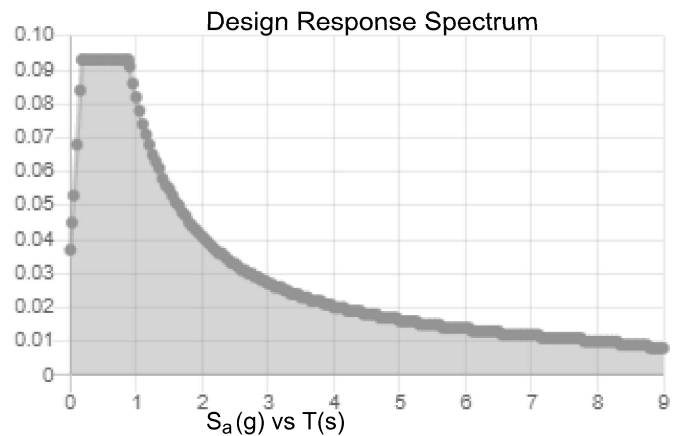
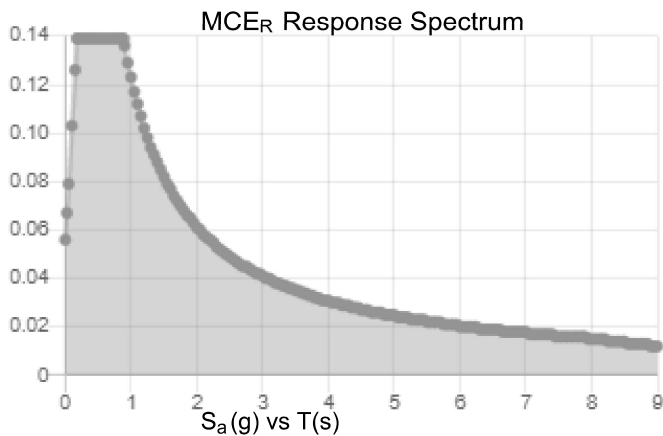
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_s :	0.087	S_{D1} :	0.082
S_1 :	0.051	T_L :	8
F_a :	1.6	PGA :	0.041
F_v :	2.4	PGA _M :	0.066
S_{MS} :	0.139	F_{PGA} :	1.6
S_{M1} :	0.123	I_e :	1
S_{DS} :	0.093	C_v :	0.7

Seismic Design Category B



Data Accessed:

Thu Aug 26 2021

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Results:

Ice Thickness: 0.25 in.
Concurrent Temperature: 25 F
Gust Speed: 30 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Thu Aug 26 2021

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.

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