

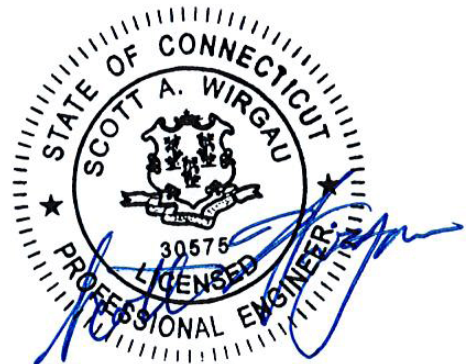


Structural Analysis Report

Structure : 300 ft Self Supported AT&T TAG Tower
ATC Site Name : Stamford (Katoona), CT
ATC Site Number : 88018
Engineering Number : 63541025
Proposed Carrier : T-Mobile
Carrier Site Name : Stamford AT&T
Carrier Site Number : CT11007A
Site Location : Catoona Lane
Stamford, CT 06902-4573
41.052825,-73.563047
County : Fairfield
Date : January 29, 2016
Max Usage : 100%
Result : Pass

Reviewed by:
Scott Wirgau, PE
Structural Team Leader

Prepared By:
Andrew D. Vargo, E.I.



Jan 29 2016 5:20 PM

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2-3
Equipment to be Removed.....	3
Proposed Equipment	3
Structure Usages	4
Foundations	4
Standard Conditions	5
Calculations	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 300 ft self supported tower to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	CSEI Analysis, ATC Eng. #73123451, dated September 28, 2005
Foundation Drawing	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Geotechnical Report	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Modifications	ATC Eng. #42439132, dated September 26, 2008 ATC Eng. #44209632, dated December 2, 2009

Analysis

The tower was analyzed using Power Lines Systems tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/EIA-222.

Basic Wind Speed:	85 mph (Fastest Mile)
Basic Wind Speed w/ Ice:	74 mph (Fastest Mile)w/ 1/2" radial ice concurrent
Code:	ANSI/TIA/EIA-222-F / 2003 IBC , Sec. 1609.1.1, Exception (5) & Sec. 3108.4 w/ 2005 CT Supplement & 2009 CT Amendment

Conclusion

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

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

Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
300.0	306.0	1	3' HP Dish	Platform w/ Handrails	(1) 1/2" Coax	--
	300.0	3	Horizon Compact		(5) 7/8" Coax	Clearwire
		3	DragonWave A-ANT-18G-2-C			
	335.0	1	TX RX Systems 101-68-10-X-03N		(2) 1 1/4" Coax	Marcus Comm.
	317.0	1	16' Omni			
	311.0	1	Radio/ODU			
		1	4' Std. Dish			
	320.0	1	16' Omni		(1) 7/8" Coax	UNITed Wireless Holdings
270.0	276.0	1	Dielectric TLP-08M-2E	Side Arm	(1) 3 1/8" HL	Qualcomm
269.0	275.0	1	ADD090	Side Arm	(2) 7/8" Coax	US Dept Of Homeland Security
265.0	272.0	2	Til-Tek TA-2350-DAB	Side Arms	(1) EW20	Sirius XM Radio
	265.0	3	RFS ATMAA1412D-1A20	Sector Frame	(12) 1 5/8" Coax	T-Mobile
		3	Ericsson AIR 21, 1.3 M, B2A B4P			
		3	Ericsson AIR 21, 1.3M, B4A B2P			
240.0	250.0	1	Sinclair SC281-L	Side Arms	(2) 7/8" Coax	US Dept Of Homeland Security
	245.0	1	Sinclair SC381-HL			
231.0	235.0	6	Powerwave TT19-08BP111-001	Sector Frames	(12) 1 5/8" Coax (2) 0.39" Fiber Trunk (4) 0.74" 8 AWG 7	AT&T Mobility
		2	Raycap DC2-48-60-0-9E			
		6	Ericsson RRUS A2			
		3	Ericsson RRUS-11 800MHz			
		6	Ericsson RRUS 12			
		3	Ericsson RRUS E2 B29			
		3	Ericsson RRUS-32			
		3	Ericsson RRUS-11			
		3	KMW AM-X-CD-14-65-00T-RET			
		3	Powerwave 7770.00			
		3	Andrew SBNHH-1D65A			
		3	CCI OPA-65R-LCUU-H4			
224.0	222.0	12	Decibel DB844H90E-XY	Sector Frames	(15) 1 5/8" Coax	Sprint Nextel
200.0	201.0	2	TX RX Systems 101-68-10-X-03N	Side Arms	(2) 1 1/4" Coax	Marcus Comm.
	210.0	1	Sinclair SC281-L		(1) 7/8" Coax	US Dept Of Homeland Security
189.0	193.0	1	30" x 30" Reflector	Leg	-	Town Of Stanford
178.0	183.0	3	Antel BCD-87010	Side Arm	(3) 7/8" Coax	Spok Holdings
171.0	175.0	1	24" x 24" Junction Box	T-Arms	(2) 2" conduit	Clearwire
167.0	171.0	3	NextNet BTS-2500		(6) 5/16" (0.31") Coax	
		3	Argus LLPX310R		(1) 2" conduit	
160.0	161.0	6	Kathrein 800 10504	Leg	(12) 1 5/8" Coax	Metro PCS
	160.0	18	RCU		(2) 3/8" Coax	

Existing and Reserved Equipment Continued

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	150.0	3	Alcatel-Lucent ALU 800MHz External Notch Filter	Sector Frames	(4) 1 ¼" Hybriflex (1) ½" Coax	Sprint Nextel
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	RFS IBC1900HB-2			
		3	Alcatel-Lucent 800MHz RRH			
		6	Alcatel-Lucent 1900MHz RRH			
		3	RFS APXVTM14-C-I20			
		3	RFS APXVSP18-C-A20			
137.0	142.0	1	Antel BCD-87010 ____ 4°	Stand-Off	(1) 7/8" Coax	Sensus USA
120.0	120.0	1	Channel Master Type 120	Leg	(1) ½" Coax	Spok Holdings
100.0	100.0	1	TX RX Systems 101-68-10-X-03N	Side Arm	(1) 1 ¼" Coax	Marcus Comm.
92.0	92.0	3	Alcatel-Lucent RRH2X60-1900A-4R	Sector Frames	(2) 1 5/8" Hybriflex	Verizon
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent RRH2X60-AWS Band 4			
		2	RFS DB-T1-6Z-8AB-0Z			
		6	Antel WWX063X19G00			
		4	CSS X7C-FRO-660			
		2	CSS X7C-FRO-640-V			
24.0	22.0	1	Til-Tek TA-2324-LHCP	Leg	(1) 7/8" Coax	Sirius XM Radio
6.0	6.0	1	Trimble Acutime 2000	Leg	(1) ½" Coax	Spok Holdings
		1	Channel Master Type 120		(1) ¼" Coax	

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
265.0	265.0	-	-	-	(1) 1 ¼" Fiber	T-Mobile

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
265.0	265.0	3	Ericsson RRUS 11 B12	Sector Frame	(3) 7/8" Fiber	T-Mobile
		3	Andrew LNX-6515DS-VTM			

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax alongside existing T-Mobile coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	91%	Pass
Diagonals	98%	Pass
Truss Diagonals	100%	Pass
Horizontals	96%	Pass
Truss Horizontals	85%	Pass
Anchor Bolts	85%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	386.8	91%
Axial (Kips)	496.5	8%

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

The foundation and anchorages for this tower have factors of safety exceeding 2.0 with respect to wind.



Standard Conditions

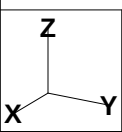
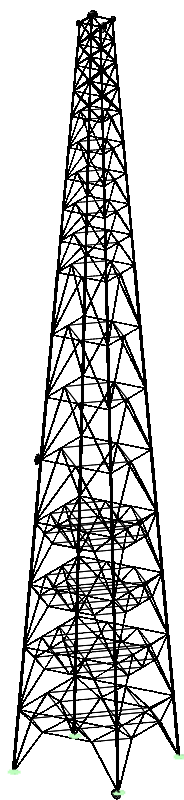
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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



Project Name : 88018 - Stamford (Katoona), CT
Project Notes: T-Mobile - 63541025
Project File : N:\L2 - ATC\88018\2016.01.29 - T-Mobile - 63541025\2016.01.29 - T-Mobile - 63541025.tow
Date run : 4:49:55 PM Friday, January 29, 2016
by : Tower Version 12.50
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

Member check option: TIA/EIA 222-F
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: n:\l2 - atc\88018\2016.01.29 - t-mobile - 63541025\2016.01.29 - t-mobile - 63541025.eia

*** Analysis Results:

Maximum element usage is 99.88% for Angle "LD 9X" in load case "W -90"

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	OP	-46.78	-21.38	-335.72	51.44	-0.92	-5.81	5.89	-2.42	0.00
W 0	OX	-44.83	22.12	-329.81	49.99	0.59	-5.48	5.52	2.43	0.00
W 0	OXY	-37.09	-16.41	226.06	40.55	0.55	-5.99	6.02	2.22	0.00
W 0	OY	-38.02	15.69	226.40	41.68	-0.32	-6.33	6.33	-2.18	0.00
W 180	OP	38.98	15.48	225.98	41.94	-0.32	6.37	6.38	2.19	0.00
W 180	OX	37.09	-16.27	223.90	40.50	0.56	6.04	6.07	-2.22	0.00
W 180	OXY	-44.83	22.12	-329.81	49.99	0.55	-5.99	6.02	2.22	0.00
W 180	OY	-38.02	15.69	226.40	41.68	-0.32	-6.33	6.33	-2.18	0.00
W 45	OP	-50.60	-50.89	-496.50	71.76	4.13	-4.05	5.78	-0.14	0.00
W 45	OX	-21.23	-15.24	-49.89	26.14	5.31	-4.29	6.82	3.60	0.00
W 45	OXY	-45.89	-37.97	384.83	63.68	5.92	-5.95	7.12	-6.01	0.00
W 45	OY	-14.95	-21.08	-49.42	25.84	4.26	-5.22	6.74	-3.61	0.00
W -45	OP	-22.54	15.88	-53.35	27.57	-5.52	-4.52	7.14	-3.45	0.00
W -45	OX	-49.27	51.22	-492.16	71.07	-4.34	-3.81	5.77	0.00	0.00
W -45	OXY	-13.80	20.68	-52.31	24.86	-4.10	-4.99	6.45	3.62	0.00
W -45	OY	-46.20	44.49	386.84	64.14	-4.86	-5.29	7.18	0.03	0.00
W 90	OP	-21.33	-48.94	-337.14	51.56	5.88	0.96	5.95	2.29	0.00
W 90	OX	15.65	-38.96	229.70	41.99	6.39	0.29	6.39	2.18	0.00
W 90	OXY	-16.57	-37.03	226.53	40.57	5.97	-0.59	6.00	-2.22	0.00
W 90	OY	22.28	-44.77	-338.08	50.01	5.46	-0.55	5.49	-2.44	0.00
W 90	OP	15.51	39.82	228.89	41.99	-6.41	0.29	6.42	-2.96	0.00
W 90	OX	-21.21	46.81	-335.52	51.40	-5.90	0.97	5.98	-2.44	0.00
W 90	OXY	22.23	44.83	-328.96	50.04	-5.51	-0.54	5.53	2.45	0.00
W 90	OY	-16.51	-37.59	225.41	40.60	-6.81	-0.59	6.84	2.23	0.00
W 0 Ice	OP	-43.82	-21.14	-328.04	48.66	-1.87	-4.23	4.62	-2.22	0.00
W 0 Ice	OX	-41.89	21.84	-321.46	47.24	1.54	-3.90	4.19	2.23	0.00
W 0 Ice	OXY	-33.54	-14.72	198.56	36.63	1.65	-6.63	6.83	2.85	0.00
W 0 Ice	OY	-34.97	14.84	192.17	37.68	-1.44	6.95	7.10	-2.82	0.00
W 180 Ice	OP	35.23	13.76	188.84	37.82	-1.43	7.01	7.16	2.83	0.00
W 180 Ice	OX	33.57	-14.53	187.03	36.58	1.65	6.70	6.90	-2.86	0.00
W 180 Ice	OXY	-33.57	-14.53	187.03	36.58	1.65	6.70	6.90	-2.86	0.00
W 180 Ice	OY	33.57	14.53	187.03	36.58	-1.65	-6.70	-6.90	2.86	0.00
W 45 Ice	OP	-48.89	-49.15	-481.79	69.33	2.90	-2.82	4.04	-0.11	0.00
W 45 Ice	OX	-20.36	-13.06	-63.96	24.19	6.82	-2.91	6.68	3.42	0.00
W 45 Ice	OXY	-41.91	-31.88	442.35	59.19	5.87	5.90	6.33	-6.01	0.00
W 45 Ice	OY	-12.81	-20.20	-63.38	23.92	2.88	-5.94	6.60	-3.43	0.00
W -45 Ice	OP	-21.69	13.64	-68.40	25.62	-6.24	-3.14	6.99	-3.39	0.00
W -45 Ice	OX	-47.56	49.49	-476.66	68.64	-3.12	2.59	6.00	0.00	0.00
W -45 Ice	OXY	-11.75	19.81	-65.14	23.03	-2.75	-5.71	6.33	3.45	0.00
W -45 Ice	OY	-42.93	41.34	343.42	59.60	-5.74	-6.13	8.40	0.03	0.00
W 90 Ice	OP	-21.08	-43.98	-329.20	48.77	4.28	1.91	4.69	2.12	0.00
W 90 Ice	OX	13.80	-20.25	193.80	37.82	7.81	1.42	7.15	2.82	0.00
W 90 Ice	OXY	-14.86	-33.49	199.87	36.64	6.61	-1.68	6.82	-2.86	0.00
W 90 Ice	OY	21.97	-41.81	-321.44	47.23	3.88	-1.59	4.16	-2.24	0.00
W -90 Ice	OP	13.78	35.27	199.54	37.87	-7.81	-1.41	-7.19	1.32	0.00
W -90 Ice	OX	-20.90	43.86	-326.74	48.58	-4.32	1.91	4.73	-2.24	0.00
W -90 Ice	OXY	21.89	41.87	-319.51	47.25	-3.94	-1.49	4.22	2.24	0.00
W -90 Ice	OY	-14.74	33.56	188.94	36.65	-6.67	-1.68	6.88	2.86	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Origin Joint	Member	Leg Dir.	Perpendicular (kips)	Leg Force In		Residual Shear		Residual Shear		Residual Shear		Total Long. Force (kips)	Total Tran. Force (kips)	Total Vert. Force (kips)
					To Leg (kips)	- Res. (kips)	To Leg (kips)	- Long. (kips)	To Leg (kips)	- Tran. (kips)	To Leg (kips)	- Res. (kips)			
W 0	OP	1P	L 1P	338.639	26.039	26.091	26.082	0.677	-46.78	-21.38	-335.72				
W 0	OX	1X	L 1X	332.674	24.502	24.555	24.490	-1.782	-44.83	22.12	-329.81				
W 0	OXY	1XY	L 1XY	-228.495	23.214	23.268	23.136	2.473	-37.09	-16.41	226.06				
W 0	OY	1Y	L 1Y	-167.442	24.538	24.582	24.538	-1.596	-38.02	15.69	226.40				
W 180	OP	1P	L 1P	-228.476	25.037	25.091	-25.043	-1.548	38.98	15.48	225.98				
W 180	OX	1X	L 1X	-226.328	23.362	23.416	-23.285	2.466	37.09	-16.27	223.90				
W 180	OXY	1XY	L 1XY	-338.639	24.052	24.706	-24.639	-1.809	-44.83	22.61	-327.64				
W 180	OY	1Y	L 1Y	336.112	25.883	25.934	-25.926	0.659	46.47	-21.21	-333.21				
W 45	OP	1P	L 1P	500.855	28.353	28.461	19.979	20.270	-50.60	-50.89	-496.50				
W 45	OX	1X	L 1X	50.070	25.790	25.790	18.158	18.315	-21.23	-15.24	-49.89				
W 45	OXY	1XY	L 1XY	-380.904	24.652	24.706	-24.639	-1.809	-44.83	22.61	-327.64				
W 45	OY	1Y	L 1Y	49.606	25.476	25.476	17.998	18.030	-14.95	-21.08	-49.42				
W -45	OP	1P	L 1P	53.561	27.163	27.163	19.246	-19.168	-22.54	15.88	-53.35				
W -45	OX	1X	L 1X	47.472	18.924	18.924	18.929	20.871	-49.27	51.22	-492.16				
W -45	OXY	1XY	L 1XY	-52.530	24.381	24.381	17.027	-17.450	-13.80	20.68	-52.31				
W -45	OY	1Y	L 1Y	-390.951	30.297	30.412	22.344	-20.630	-46.20	44.49	386.84				
W 90	OP	1P	L 1P	340.055	26.187	26.158	0.539	26.153	-21.33	-48.94	-337.14				
W 90	OX	1X	L 1X	-321.442	24.787	24.840	-24.787	24.785	15.65	-38.96	229.70				
W 90	OXY	1XY	L 1XY	-228.970	23.155	23.208	2.604	23.062	-16.57	-37.03	226.53				
W 90	OY	1Y	L 1Y	332.946	24.440	24.494	-1.924	24.418	22.28	-44.77	-338.08				
W 90	OP	1P	L 1P	-230.956	24.940	24.993	-1.449	-24.951	15.51	39.82	228.89				
W 90	OX	1X	L 1X	338.429	26.078	26.129	0.520	-26.124	-21.21	46.81	-335.52				
W 90	OXY	1XY	L 1XY	331.836	24.566	24.620	-1.949	-24.543	22.23	44.83	-328.96				
W 90	OY	1Y	L 1Y	-227.855	23.281	23.335	2.089	-23.189	-16.51	37.09	225.41				
W 0 Ice	OP	1P	L 1P	330.794	23.565	23.613	0.060	-23.562	-21.14	-328.04					
W 0 Ice	OX	1X	L 1X	324.162	22.105	22.155	22.063	-2.013	-41.89	21.84	-321.46				
W 0 Ice	OXY	1XY	L 1XY	-192.802	21.939	21.992	21.790	2.973	-33.54	-14.72	198.56				
W 0 Ice	OY	1Y	L 1Y	-194.977	23.168	23.220	23.167	-2.185	-34.97	14.84	192.17				
W 180 Ice	OP	1P	L 1P	-191.136	23.628	23.681	-23.586	-2.118	35.23	13.76	188.84				
W 180 Ice	OX	1X	L 1X	-189.876	22.149	22.202	-22.003	2.964	33.57	-14.53	187.03				
W 180 Ice	OXY	1XY	L 1XY	321.239	22.315	22.365	-22.271	-2.850	-41.93	21.69	-318.54				
W 180 Ice	OY	1Y	L 1Y	-227.442	23.508	23.559	2.539	0.883	43.86	-32.91	-324.71				
W 45 Ice	OP	1P	L 1P	485.991	27.211	27.314	19.184	19.444	-48.89	-49.15	-481.79				
W 45 Ice	OX	1X	L 1X	64.166	23.634	23.634	16.417	17.001	-29.36	-13.06	-63.96				
W 45 Ice	OXY	1XY	L 1XY	-346.939	22.223	22.334	-22.223	20.880	-41.91	-41.80	342.35				
W 45 Ice	OY	1Y	L 1Y	63.592	23.347	23.347	16.721	16.295	-12.81	-20.20	-63.38				
W -45 Ice	OP	1P	L 1P	68.631	24.080	24.080	17.469	-17.856	-21.69	13.64	-68.40				
W -45 Ice	OX	1X	L 1X	480.844	26.991	27.093	18.170	20.897	-47.56	49.49	-476.66				
W -45 Ice	OXY	1XY	L 1XY	65.385	22.318	22.318	15.769	-15.793	-11.75	19.81	-65.14				
W -45 Ice	OY	1Y	L 1Y	-347.298	29.544	29.656	21.748	-20.162	-42.93	41.34	343.42				
W 90 Ice	OP	1P	L 1P	331.953	23.642	23.689	0.777	23.677	-21.08	-43.98	-329.20				
W 90 Ice	OX	1X	L 1X	-195.291	23.388	23.440	-2.083	-23.347	13.98	35.25	193.80				
W 90 Ice	OXY	1XY	L 1XY	-193.115	21.886	21.939	3.088	21.721	-14.86	-33.49	199.87				
W 90 Ice	OY	1Y	L 1Y	324.140	22.046	22.096	-2.149	21.991	21.97	-41.81	-321.44				
W -90 Ice	OP	1P	L 1P	-192.832	23.558	23.611	-2.028	-23.523	13.78	35.27	199.54				
W -90 Ice	OX	1X	L 1X	329.487	23.675	23.727	0.758	-23.710	-20.90	43.86	-326.74				
W -90 Ice	OXY	1XY	L 1XY	322.221	22.227	22.277	-2.184	-22.271	21.89	41.37	-319.51				
W -90 Ice	OY	1Y	L 1Y	-192.885	23.586	23.638	-2.028	-23.574	13.74	35.22	199.24				

250.0-262.5	262.500	250.000	16	24	13.63	15.17	179.95	1.2010	1.2010	1.441
237.5-250.0	250.000	237.500	16	24	15.17	16.71	199.22	1.2070	1.2070	1.440
225.0-237.5	237.500	225.000	16	24	16.71	18.25	218.49	1.2130	1.2130	1.456
212.5-225.0	225.000	212.500	16	24	18.25	19.79	237.76	1.2190	1.2190	1.463
200.0-212.5	212.500	200.000	16	24	19.79	21.33	257.03	1.2250	1.2250	1.478
175.0-200.0	200.000	175.000	16	24	21.33	22.87	276.30	1.2310	1.2310	1.470
150.0-175.0	175.000	150.000	16	24	22.87	24.42	295.57	1.2370	1.2370	1.509
125.0-150.0	150.000	125.000	16	24	24.42	25.96	314.84	1.2430	1.2430	1.519
100.0-125.0	125.000	100.000	16	24	25.96	27.50	334.11	1.2490	1.2490	1.535
75.0-100.0	100.000	75.000	16	24	27.50	29.04	353.38	1.2550	1.2550	1.549
50.0-75.0	75.000	50.000	16	24	29.04	30.58	372.65	1.2610	1.2610	1.519
25.0-50.0	50.000	25.000	16	24	30.58	32.12	391.92	1.2670	1.2670	1.535
0.000-25.00	25.000	0.000	16	24	32.12	33.67	411.19	1.2730	1.2730	1.549
0.000-25.00	25.000	0.000	16	24	33.67	35.21	430.46	1.2790	1.2790	1.565
0.000-25.00	25.000	0.000	16	24	35.21	36.75	449.73	1.2850	1.2850	1.581
0.000-25.00	25.000	0.000	16	24	36.75	38.29	469.00	1.2910	1.2910	1.597
0.000-25.00	25.000	0.000	16	24	38.29	39.83	488.27	1.2970	1.2970	1.613
0.000-25.00	25.000	0.000	16	24	39.83	41.37	507.54	1.3030	1.3030	1.629
0.000-25.00	25.000	0.000	16	24	41.37	42.91	526.81	1.3090	1.3090	1.645
0.000-25.00	25.000	0.000	16	24	42.91	44.45	546.08	1.3150	1.3150	1.661
0.000-25.00	25.000	0.000	16	24	44.45	45.99	565.35	1.3210	1.3210	1.677
0.000-25.00	25.000	0.000	16	24	45.99	47.53	584.62	1.3270	1.3270	1.693
0.000-25.00	25.000	0.000	16	24	47.53	49.07	603.89	1.3330	1.3330	1.709
0.000-25.00	25.000	0.000	16	24	49.07	50.61	623.16	1.3390	1.3390	1.725
0.000-25.00	25.000	0.000	16	24	50.61	52.15	642.43	1.3450	1.3450	1.741
0.000-25.00	25.000	0.000	16	24	52.15	53.69	661.70	1.3510	1.3510	1.757
0.000-25.00	25.000	0.000	16	24	53.69	55.23	680.97	1.3570	1.3570	1.773
0.000-25.00	25.000	0.000	16	24	55.23	56.77	700.24	1.3630	1.3630	1.789
0.000-25.00	25.000	0.000	16	24	56.77	58.31	719.51	1.3690	1.3690	1.805
0.000-25.00	25.000	0.000	16	24	58.31	59.85	738.78	1.3750	1.3750	1.821
0.000-25.00	25.000	0.000	16	24	59.85	61.39	758.05	1.3810	1.3810	1.837
0.000-25.00	25.000	0.000	16	24	61.39	62.93	777.32	1.3870	1.3870	1.853
0.000-25.00	25.000	0.000	16	24	62.93	64.47	796.59	1.3930	1.3930	1.869
0.000-25.00	25.000	0.000	16	24	64.47	66.01	815.86	1.3990	1.3990	1.885
0.000-25.00	25.000	0.000	16	24	66.01	67.55	835.13	1.4050	1.4050	1.901
0.000-25.00	25.000	0.000	16	24	67.55	69.09	854.40	1.4110	1.4110	1.917
0.000-25.00	25.000	0.000	16	24	69.09	70.63	873.67	1.4170	1.4170	1.933
0.000-25.00	25.000	0.000	16	24	70.63	72.17	892.94	1.4230	1.4230	1.949
0.000-25.00	25.000	0.000	16	24	72.17	73.71	912.21	1.4290	1.4290	1.965
0.000-25.00	25.000	0.000	16	24	73.71	75.25	931.48	1.4350	1.4350	1.981
0.000-25.00	25.000	0.000	16	24	75.25	76.79	950.75	1.4410	1.4410	1.997
0.000-25.00	25.000	0.000	16	24	76.79	78.33	970.02	1.4470	1.4470	2.013
0.000-25.00	25.000	0.000	16	24	78.33	79.87	989.29	1.4530	1.4530	2.029
0.000-25.00	25.000	0.000	16	24	79.87	81.41	1008.56	1.4590	1.4590	2.045
0.000-25.00	25.000	0.000	16	24	81.41	82.95	1027.83	1.4650	1.4650	2.061
0.000-25.00	25.000	0.000	16	24	82.95	84.49	1047.10	1.4710	1.4710	2.077
0.000-25.00	25.000	0.000	16	24	84.49	86.03	1066.37	1.4770	1.4770	2.093
0.000-25.00	25.000	0.000	16	24	86.03	87.57	1085.64	1.4830	1.4830	2.109
0.000-25.00	25.000	0.000	16	24	87.57	89.11	1104.91	1.4890	1.4890	2.125
0.000-25.00	25.000	0.000	16	24	89.11	90.65	1124.18	1.4950	1.4950	2.141
0.000-25.00	25.000	0.000	16	24	90.65	92.19	1143.45	1.5010	1.5010	2.157
0.000-25.00	25.000	0.000	16	24	92.19	93.73	1162.72	1.5070	1.5070	2.173
0.000-25.00	25.000	0.000	16	24	93.73	95.27	1181.99	1.5130	1.5130	2.189
0.000-25.00	25.000	0.000	16	24	95.27	96.81	1201.26	1.5190	1.5190	2.205
0.000-25.00	25.000	0.000	16	24	96.81	98.35	1220.53	1.5250	1.5250	2.221
0.000-25.00	25.000	0.000	16	24	98.35	99.89	1239.80	1.5310	1.5310	2.237
0.000-25.00	25.000	0.000	16	24	99.89	101.43	1259.07	1.5370	1.5370	2.253
0.000-25.00	25.000	0.000	16	24	101.43	102.97	1278.34	1.5430	1.5430	2.269
0.000-25.00	25.000	0.000	16	24	102.97	104.51	1297.61	1.5490	1.5490	2.285
0.000-25.00	25.000	0.000	16	24	104.51	106.05	1316.88	1.5550	1.5550	2.301
0.000-25.00	25.000	0.000	16	24	106.05	107.59	1336.15	1.5610	1.5610	2.317
0.000-25.00	25.000	0.000	16	24	107.59	109.13	1355.42	1.5670	1.5670	2.333
0.000-25.00	25.000	0.000	16	24	109.13	110.67	1374.69	1.5730	1.5730	2.349
0.000-25.00	25.000	0.000	16	24	110.67	112.21	1393.96	1.5790	1.5790	2.365
0.000-25.00	25.000	0.000	16	24	112.21	113.75	1413.23	1.5850	1.5850	2.381
0.000-25.00	25.000	0.000	16	24	113.75	115.29	1432.50	1.5910	1.5910	2.397
0.000-25.00	25.000	0.000	16	24	115.29	116.83	1451.77	1.5970	1.5970	2.413
0.000-25.00	25.000	0.000	16	24	116.83	118.37	1471.04	1.6030	1.6030	2.429
0.000-25.00	25.000	0.000	16	24	118.37	119.91	1490.31	1.6090	1.6090	2.445
0.000-25.00	25.000	0.000	16	24	119.91	121.45	1509.58	1.6150	1.6150	2.461
0.000-25.00	25.000	0.000	16	24	121.45	122.99	1528.85	1.6210	1.6210	2.477
0.000-25.00	25.000	0.000	16	24	122.99	124.53	1548.12	1.6270	1.6270	2.493
0.000-25.00	25.000	0.000	16	24	124.53	126.07	1567.39	1.6330	1.6330	2.509
0.000-25.00	25.000	0.000	16	24	126.07	127.61	1586.66	1.6390	1.6390	2.525
0.000-25.00	25.000	0.000	16	24	127.61	129.15	1605.93	1.6450	1.6450	2.541
0.000-25.00	25.000	0.000	16	24	129.15	130.69	1625.20	1.6510	1.6510	2.557
0.000-25.00	25.000	0.000	16	24	130.69	132.23	1644.47	1.6570	1.6570	2.573
0.000-25.00	25.000	0.000	16	24	132.23	133.77	1663.74	1.6630	1.6630	2.589
0.000-25.00	25.000	0.000	16	24	133.77	135.31	1683.01	1.6690	1.6690	2.605
0.000-25.00	25.000	0.000	16	24	135.31	136.85	1702.28	1.6750	1.6750	2.621
0.000-25.00	25.000	0.000	16	24	136.85	138.39	1721.55	1.6810	1.6810	2.637
0.000-25.00	25.000	0.000	16	24	138.39	139.93	1740.82	1.6870	1.6870	2.653
0.000-25.00	25.000	0.000	16	24	139.93	141.47	1760.09	1.6930	1.6930	2.669
0.000-25.00	25.000	0.000	16	24	141.47	143.01	1779.36	1.6990	1.6990	2.685
0.000-25.00	25.000	0.000	16	24	143.01	144.55	1798.63	1.7050	1.7050	2.701
0.000-25.00	25.000	0.000	16	24	144.55	146.09	1817.90	1.7110	1.7110	2.717
0.000-25.00	25.000	0.000	16	24	146.09	147.63	1837.17	1.7170	1.7170	2.733
0.000-25.00	25.000	0.000	16	24	147.63	149.17	1856.44	1.7230	1.7230	2.749
0.000-25.00	25.000	0.000	16	24	149.17	150.71	1875.71	1.7290	1.7290	2.765
0.000-25.00	25.000	0.000	16	24	150.71	152.25	1894.98	1.7350	1.7350	2.781
0.000-25.00	25.000	0.000	16	24	152.25	153.79	1914.25	1.7410	1.7410	2.797
0.000-25.00	25.000	0.000	16	24	153.79	155.33	1933.52	1.7470	1.7470	2.813
0.000-25.00	25.000	0.000	16	24	155.33	156.87	1952.79	1.7530	1.7530	2.829
0.000-25.00	25.000	0.000	16	24	156.87	158.41	1972.06	1.7590	1.7590	2.845
0.000-25.00	25.000	0.000	16	24	158.41	159.95	1991.33	1.7650	1.7650	2.861
0.000-25.00	25.000	0.000	16	24	159.95	161.49	2010.60	1.7710	1.7710	2.877
0.000-25.00	25.000	0.000	16	24	161.49	163.03	2029.87	1.7770	1.7770	2.893
0.000-25.00	25.000	0.000	16	24	163.03	164.57	2049.14	1.7830	1.7830	2.909
0.000-25.00	25.000	0.000	16	24	164.57	166.11	2068.41	1.7890	1.7890	2.925
0.000-25.00	25.000	0.000	16	24	166.11	167.65	2087.68	1.7950	1.7950	2.941
0.000-25.00	25.000	0.000	16	24	167.65	169.19	2106.95	1.8010	1.8010	2.957
0.000-25.00	25.000	0.000	16	24	169.19	170.73	2126.22	1.8070	1.8070	2.973
0.000-25.00	25.000	0.000	1							

LD 7	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	70.67	Comp	30.68	LD 14Y	25.449	W -45	62.208	0.000	0.000	0.000	10.941	0 0.000	0
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	99.79	Comp	53.57	LD 15P	32.859	W -90	46.008	0.000	0.000	0.000	8.040	0 0.000	0
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	99.41	Comp	59.16	LD 17X	40.552	W -90	51.408	0.000	0.000	0.000	9.334	0 0.000	0
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	66.13	Comp	30.65	LD 20Y	25.426	W -45	62.208	0.000	0.000	0.000	10.386	0 0.000	0
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	98.38	Comp	53.05	LD 21P	32.541	W -90	46.008	0.000	0.000	0.000	7.905	0 0.000	0
LD 12	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	36.0	83.20	Comp	39.70	LD 23X	39.677	W -90	74.952	0.000	0.000	0.000	9.005	0 0.000	0
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	17.27	Tens	17.27	LH 2X	13.079W	90 Ice	56.808	0.000	0.000	0.000	21.458	0 0.000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	67.53	Comp	37.38	LH 4Y	28.313	W -45	56.808	0.000	0.000	0.000	10.806	0 0.000	0
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.38	36.0	95.16	Comp	24.95	LH 6Y	27.594	W -45	82.944	0.000	0.000	0.000	10.003	0 0.000	0
LH 4	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	75.72	Comp	27.23	LH 8Y	26.502	W -45	73.008	0.000	0.000	0.000	9.200	0 0.000	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 11X	1.188	W -45	0.216	0.000	0.000	0.000	19.445	0 0.000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type
W 0	98.55	LD 10P	Angle
W 180	98.93	LD 10Y	Angle
W 45	91.25	L 1P	Angle
W -45	94.55	H 2Y	Angle
W 90	99.65	LD 15P	Angle
W -90	99.80	LD 9X	Angle
W 0 Ice	92.71	LD 10P	Angle
W 180 Ice	93.27	LD 10Y	Angle
W 45 Ice	88.06	H 2X	Angle
W -45 Ice	92.62	H 2Y	Angle
W 90 Ice	93.68	LD 9P	Angle
W -90 Ice	94.01	LD 9X	Angle

*** Weight of structure (lbs):
 Weight of Angles*Section DLF: 143635.5
 Weight of Equipment: 1109.0
 Total: 144744.5

*** End of Report

Site #: 88018		Engineer: ADV		Windspeed: No Ice: 85 mph		Ice: 74 mph		Taper: -0.123333		Taper Change: 300								
Name: Stamford (Katina), CT		Date: 01/29/16		Carrier: T-Mobile				FW @ Base: 46		FW @ Top: 9								
Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)	Spreadsheet Version Last Updated: 11/12/2014						
												# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)
0	XY-Symmetry	23	23	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		7.030	25	1	1	0	46	3
1	XY-Symmetry	21.45833333	21.45833333	25	Free	Free	Free	Free	Free	Free		7.030	25	2	2	25	42.91666667	3
2	XY-Symmetry	19.91666667	19.91666667	50	Free	Free	Free	Free	Free	Free		7.030	25	2	3	50	39.83333333	3
3	XY-Symmetry	18.375	18.375	75	Free	Free	Free	Free	Free	Free		7.030	25	2	4	75	36.75	3
4	XY-Symmetry	16.83333333	16.83333333	100	Free	Free	Free	Free	Free	Free			25	A	5	100	33.66666667	2
5	XY-Symmetry	15.29166667	15.29166667	125	Free	Free	Free	Free	Free	Free			25	A	6	125	30.58333333	2
6	XY-Symmetry	13.75	13.75	150	Free	Free	Free	Free	Free	Free			25	A	7	150	27.5	2
7	XY-Symmetry	12.20833333	12.20833333	175	Free	Free	Free	Free	Free	Free			25	A	8	175	24.41666667	2
8	XY-Symmetry	10.66666667	10.66666667	200	Free	Free	Free	Free	Free	Free		12.5	A	9	200	21.33333333	1	
9	XY-Symmetry	9.895833333	9.895833333	212.5	Free	Free	Free	Free	Free	Free		12.5	A	10	212.5	19.79166667	1	
10	XY-Symmetry	9.125	9.125	225	Free	Free	Free	Free	Free	Free		12.5	A	11	225	18.25	1	
11	XY-Symmetry	8.354166667	8.354166667	237.5	Free	Free	Free	Free	Free	Free		12.5	A	12	237.5	16.70833333	1	
12	XY-Symmetry	7.583333333	7.583333333	250	Free	Free	Free	Free	Free	Free		12.5	A	13	250	15.16666667	1	
13	XY-Symmetry	6.8125	6.8125	262.5	Free	Free	Free	Free	Free	Free			10.17	X	14	262.5	13.625	1
14	XY-Symmetry	6.18535	6.18535	272.67	Free	Free	Free	Free	Free	Free			10.17	X	15	272.67	12.3707	1
15	XY-Symmetry	5.5582	5.5582	282.84	Free	Free	Free	Free	Free	Free			8.58	X	16	282.84	11.1164	1
16	XY-Symmetry	5.0291	5.0291	291.42	Free	Free	Free	Free	Free	Free			8.58	X	17	291.42	10.0582	1
17	XY-Symmetry	4.5	4.5	300	Free	Free	Free	Free	Free	Free					18	300	9	
A1	Y-Symmetry	21.45833333	0	25	Free	Free	Free	Free	Free	Free								
A2	X-Symmetry	0	21.45833333	25	Free	Free	Free	Free	Free	Free								
A3	XY-Symmetry	19.91666667	6.638888889	50	Free	Free	Free	Free	Free	Free								
A4	XY-Symmetry	6.638888889	19.91666667	50	Free	Free	Free	Free	Free	Free								
A5	XY-Symmetry	18.375	6.125	75	Free	Free	Free	Free	Free	Free								
A6	XY-Symmetry	6.125	18.375	75	Free	Free	Free	Free	Free	Free								
A7	XY-Symmetry	16.83333333	5.611111111	100	Free	Free	Free	Free	Free	Free								
A8	XY-Symmetry	5.611111111	16.83333333	100	Free	Free	Free	Free	Free	Free								
A9	Y-Symmetry	15.29166667	0	125	Free	Free	Free	Free	Free	Free								
A10	X-Symmetry	0	15.29166667	125	Free	Free	Free	Free	Free	Free								
A11	Y-Symmetry	13.75	0	150	Free	Free	Free	Free	Free	Free								
A12	X-Symmetry	0	13.75	150	Free	Free	Free	Free	Free	Free								
A13	Y-Symmetry	12.20833333	0	175	Free	Free	Free	Free	Free	Free								
A14	X-Symmetry	0	12.20833333	175	Free	Free	Free	Free	Free	Free								
A15	Y-Symmetry	10.66666667	0	200	Free	Free	Free	Free	Free	Free								
A16	X-Symmetry	0	10.66666667	200	Free	Free	Free	Free	Free	Free								
A17	Y-Symmetry	9.895833333	0	212.5	Free	Free	Free	Free	Free	Free								
A18	X-Symmetry	0	9.895833333	212.5	Free	Free	Free	Free	Free	Free								
A19	Y-Symmetry	9.125	0	225	Free	Free	Free	Free	Free	Free								
A20	X-Symmetry	0	9.125	225	Free	Free	Free	Free	Free	Free								
A21	Y-Symmetry	8.354166667	0	237.5	Free	Free	Free	Free	Free	Free								
A22	X-Symmetry	0	8.354166667	237.5	Free	Free	Free	Free	Free	Free								
A23	Y-Symmetry	7.583333333	0	250	Free	Free	Free	Free	Free	Free								
A24	X-Symmetry	0	7.583333333	250	Free	Free	Free	Free	Free	Free								
A25	Y-Symmetry	6.8125	0	262.5	Free	Free	Free	Free	Free	Free								
A26	X-Symmetry	0	6.8125	262.5	Free	Free	Free	Free	Free	Free								
H1	XY-Symmetry	21.89185	10.72916667	17.97	Free	Free	Free	Free	Free	Free								
H2	XY-Symmetry	10.72916667	21.89185	17.97	Free	Free	Free	Free	Free	Free								
H5	XY-Symmetry	20.35018333	10.80611667	42.97	Free	Free	Free	Free	Free	Free								
H6	XY-Symmetry	10.80611667	20.35018333	42.97	Free	Free	Free	Free	Free	Free								
H7	Y-Symmetry	20.35018333	0	42.97	Free	Free	Free	Free	Free	Free								
H8	X-Symmetry	0	20.35018333	42.97	Free	Free	Free	Free	Free	Free								
H9	XY-Symmetry	18.80851667	10.00321667	67.97	Free	Free	Free	Free	Free	Free								
H10	XY-Symmetry	10.00321667	18.80851667	67.97	Free	Free	Free	Free	Free	Free								
H11	Y-Symmetry	18.80851667	0	67.97	Free	Free	Free	Free	Free	Free								
H12	X-Symmetry	0	18.80851667	67.97	Free	Free	Free	Free	Free	Free								
H13	XY-Symmetry	17.26685	9.200316667	92.97	Free	Free	Free	Free	Free	Free								
H14	XY-Symmetry	9.200316667	17.26685	92.97	Free	Free	Free	Free	Free	Free								
H15	Y-Symmetry	17.26685	0	92.97	Free	Free	Free	Free	Free	Free								
H16	X-Symmetry	0	17.26685	92.97	Free	Free	Free	Free	Free	Free								

NOTES

Types:

1: Built up Horiz. w/ A

2: Built up Horiz. w/ M

A: Typical A brace

X: Typical X brace

Drop: Use only for types 1 & 2

Sections: 17

NOTES

Types:

1: Built up Horiz. w/ A

2: Built up Horiz. w/ M

A: Typical A brace

X: Typical X brace

Drop: Use only for types 1 & 2

Sections: 17

Legs

Site No.:	88018
Engineer:	ADV
Date:	01/29/2016
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-25.00	L	8	1.125	36
2	25.00-50.00	L	8	1.125	36
3	50.00-75.00	L	8	1.125	36
4	75.00-100.0	L	8	1	36
5	100.0-125.0	L	8	0.875	36
6	125.0-150.0	L	8	0.875	36
7	150.0-175.0	L	8	0.75	36
8	175.0-200.0	L	8	0.625	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.75	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.5625	36
13	250.0-262.5	L	6	0.4375	36
14	262.5-272.7	L	5	0.4375	36
15	272.7-282.8	L	5	0.4375	36
16	282.8-291.4	L	5	0.3125	36
17	291.4-300.0	L	5	0.3125	36

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88018
Engineer:	ADV
Date:	01/29/2016
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	4	0.3125	36	
2	25.00-50.00	2L		3	3.5	0.25	36	
3	50.00-75.00	2L		2.5	3.5	0.25	36	
4	75.00-100.0	2L		2.5	3.5	0.25	36	
5	100.0-125.0	2L		3	4	0.25	36	
6	125.0-150.0	2L		3	4	0.25	36	
7	150.0-175.0	2L		3	4	0.25	36	
8	175.0-200.0	2L		3.5	3.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-262.5	2L		2.5	2	0.25	36	
14	262.5-272.7	L		3.5	3.5	0.25	36	
15	272.7-282.8	L		3.5	3.5	0.25	36	
16	282.8-291.4	L		3	3	0.25	36	
17	291.4-300.0	L		3	3	0.25	36	

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88018
Engineer:	ADV
Date:	01/29/2016
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	
1	0.000-25.00	2L		3.5	2.5	0.25	36	
2	25.00-50.00	2L		3.5	2.5	0.25	36	
3	50.00-75.00	2L		3.5	2.5	0.25	36	
4	75.00-100.0	2L		3	2.5	0.25	36	
5	100.0-125.0	2L		3	2.5	0.25	36	
6	125.0-150.0	2L		3	2.5	0.25	36	
7	150.0-175.0	2L		2.5	2.5	0.25	36	
8	175.0-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2.5	0.25	36	
12	237.5-250.0	2L		2.5	2.5	0.25	36	
13	250.0-262.5	2L		2.5	2.5	0.25	36	
14	262.5-272.7	L		3	2.5	0.25	36	
15	272.7-282.8	2L		3	2.5	0.25	36	
16	282.8-291.4	L		3	2.5	0.25	36	
17	291.4-300.0	C		8	11.5		36	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88018
Engineer:	ADV
Date:	01/29/2016
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-25.00	2L		3	2	0.25	36
2	0.000-25.00	2L		4	3	0.25	36
3	25.00-50.00	2L		2.5	2	0.25	36
4	25.00-50.00	2L		2.5	2	0.25	36
5	25.00-50.00	2L		3	3	0.25	36
6	50.00-75.00	2L		3	3	0.25	36
7	50.00-75.00	2L		2.5	2	0.25	36
8	50.00-75.00	2L		3	2	0.25	36
9	75.00-100.0	2L		3	3	0.25	36
10	75.00-100.0	2L		2.5	2	0.25	36
11	75.00-100.0	2L		2.5	2.5	0.375	36

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88018
Engineer:	ADV
Date:	01/29/2016
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Horiz. Tension Only? (Y/N)
1	0.000-25.00	2L		2.5	3	0.25	36	Y
2	25.00-50.00	2L		2.5	3	0.25	36	
3	50.00-75.00	2L		2.5	3	0.375	36	
4	75.00-100.0	2L		3.5	3.5	0.25	36	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

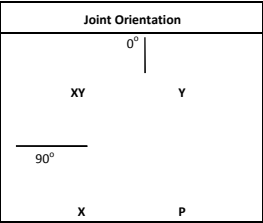
^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Site No.:	88018
Engineer:	ADV
Date:	01/29/16
Carrier:	T-Mobile

Dish Types		Joint Orientation	
S	Standard		
R	Standard w/ Radome		
H	High Performance		
G	Grid		

Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lb/ft)	Part of Face Solidity Ratio (Yes/No)	Include in Wind Load (Yes/No)
LADDER	0	300	1	Flat	1.5	6.0	6	No	Yes
Short Ladder1	8.3333	33.3333	2	Flat	1.5	6.0	6	Yes	No
Short Ladder2	8.3333	33.3333	2	Flat	1.5	6.0	6	Yes	No
WG1	5	300	1	Flat	1.5	6.0	6	Yes	No
WG2	5	160	1	Flat	1.5	6.0	6	Yes	Yes
WG3	5	272	1	Flat	1.5	6.0	6	Yes	No
Clearwire1	5	300	5	Round	1.09	3.4	0.33	Yes	Yes
MC1	5	300	2	Round	1.55	4.9	0.63	No	Yes
UWH1	5	300	1	Round	1.09	3.4	0.33	No	Yes
UNK1	5	300	1	Round	0.63	2.0	0.15	No	Yes
QualComm1	5	270	1	Round	3.13	9.8	3.04	No	Yes
USDOHS1	5	269	2	Round	1.09	3.4	0.33	Yes	Yes
Sirus1	5	265	1	Round	5.02	15.8	1.85	Yes	No
Sirus2	5	265	1	Round	1.98	6.2	0.82	Yes	No
TMO 1	5	265	3	Round	0.88	2.8	0.7	Yes	No
TMO 2	5	265	1	Flat	7.92	27.7	9.84	Yes	No
USDOHS2	5	240	2	Round	1.09	3.4	0.33	Yes	Yes
AT&T1	5	231	4	Round	0.74	2.3	0.49	Yes	No
AT&T2	5	231	2	Round	0.39	1.2	0.06	Yes	No
AT&T3	5	231	1	Flat	11.88	31.7	9.84	Yes	No
Sprint1	5	224	1	Flat	9.9	31.7	12.3	Yes	Yes
MC2	5	200	2	Round	1.55	4.9	0.63	No	Yes
USDOHS3	5	200	1	Round	1.09	3.4	0.33	Yes	Yes
Spok1	5	178	3	Round	1.09	3.4	0.33	No	Yes
Clearwire2	5	171	1	Flat	2.38	14.3	7.3	Yes	Yes
Clearwire3	5	167	6	Round	0.31	1.0	0.05	Yes	Yes
Clearwire4	5	167	1	Round	2.38	7.5	3.65	Yes	Yes
Metro1	5	160	1	Flat	11.88	31.7	9.84	Yes	No
Metro2	5	160	2	Round	0.44	1.4	0.08	Yes	No
Sprint2	5	150	4	Round	1.54	4.8	1	Yes	Yes
Sprint3	5	150	1	Round	0.63	2.0	0.15	Yes	Yes
Sensus1	5	137	1	Round	1.09	3.4	0.33	No	Yes
Spok2	5	120	1	Round	0.63	2.0	0.15	No	Yes
MC3	5	100	1	Round	1.55	4.9	0.63	No	Yes
Verizon1	5	92	2	Round	1.981	6.2	1.3	No	Yes
Spok3	5	6	1	Round	0.63	2.0	0.15	No	Yes
Spok4	5	6	1	Round	0.34	1.1	0.06	No	Yes

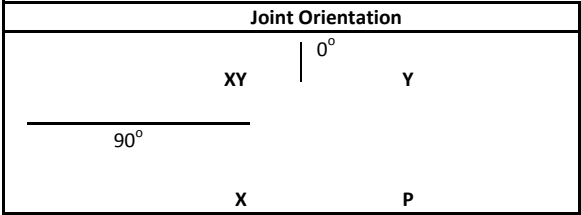
Description	From (ft)	To (ft)	Quantity	Face # (1-4, A-D)	Coax Width (in)	Considered Coax Shape (Block / Flat / Ind)	% Exposed	Spacing (in)	Shape (Round/Flat)	Block Width (# coax)	Block Depth (# coax)	Perimeter (in)	Unit Weight (lb/ft)	In Face Zone (Yes/No)	Include in Wind Load (Yes/No)
LADDER	0	300	1	B	1.5	Flat	100	0	Flat	1	1	6.0	6	No	No
Short Ladder1	8.3333	33.3333	2	1	1.5	Flat	100		Flat	2	1	6.0	6	Yes	No
Short Ladder2	8.3333	33.3333	2	3	1.5	Flat	100	0	Flat	2	1	6.0	6	Yes	No
WG1	5	300	1	1	1.5	Flat	100		Flat	1	1	6.0	6	Yes	No
WG2	5	160	1	2	1.5	Flat	100	0	Flat	1	1	6.0	6	Yes	Yes
WG3	5	272	1	1	1.5	Flat	100		Flat	1	1	6.0	6	Yes	No
Clearwire1	5	300	5	2	1.09	Ind	100	0	Round	5	1	3.4	0.33	Yes	Yes
MC1	5	300	2	B	1.55	Ind	100		Round	2	1	4.9	0.63	No	Yes
UWH1	5	300	1	B	1.09	Ind	100	0	Round	1	1	3.4	0.33	No	Yes
UNK1	5	300	1	B	0.63	Ind	100		Round	1	1	2.0	0.15	No	Yes
QualComm1	5	270	1	B	3.13	Ind	100	0	Round	1	1	9.8	3.04	No	Yes
USDOHS1	5	269	2	2	1.09	Ind	100		Round	2	1	3.4	0.33	Yes	Yes
Sirus1	5	265	1	4	5.02	Ind	100	0	Round	1	1	15.8	1.85	Yes	No
Sirus2	5	265	1	4	1.98	Ind	100		Round	1	1	6.2	0.82	Yes	No
TMO 1	5	265	3	4	0.88	Ind	100	0	Round	3	1	2.8	0.7	Yes	No
TMO 2	5	265	12	4	1.98	Block	33	0	Flat	4	3	27.7	9.84	Yes	No
USDOHS2	5	240	2	2	1.09	Ind	100	0	Round	2	1	3.4	0.33	Yes	Yes
AT&T1	5	231	4	1	0.74	Ind	100		Round	4	1	2.3	0.49	Yes	No
AT&T2	5	231	2	1	0.39	Ind	100	0	Round	2	1	1.2	0.06	Yes	No
AT&T3	5	231	12	1	1.98	Block	50	0	Flat	6	2	31.7	9.84	Yes	No
Sprint1	5	224	15	2	1.98	Block	33	0	Flat	5	3	31.7	12.3	Yes	Yes
MC2	5	200	2	B	1.55	Ind	100		Round	2	1	4.9	0.63	No	Yes
USDOHS3	5	200	1	2	1.09	Ind	100	0	Round	1	1	3.4	0.33	Yes	Yes
Spok1	5	178	3	B	1.09	Ind	100		Round	3	1	3.4	0.33	No	Yes
Clearwire2	5	171	2	2	2.38	Block	50	0	Flat	1	2	14.3	7.3	Yes	Yes
Clearwire3	5	167	6	2	0.31	Ind	100		Round	6	1	1.0	0.05	Yes	Yes
Clearwire4	5	167	1	2	2.38	Ind	100	0	Round	1	1	7.5	3.65	Yes	Yes
Metro1	5	160	12	1	1.98	Block	50	0	Flat	6	2	31.7	9.84	Yes	No
Metro2	5	160	2	1	0.44	Ind	100	0	Round	2	1	1.4	0.08	Yes	No
Sprint2	5	150	4	2	1.54	Ind	100		Round	4	1	4.8	1	Yes	Yes
Sprint3	5	150	1	2	0.63	Ind	100	0	Round	1	1	2.0	0.15	Yes	Yes
Sensus1	5	137	1	B	1.09	Ind	100		Round	1	1	3.4	0.33	No	Yes
Spok2	5	120	1	B	0.63	Ind	100	0	Round	1	1	2.0	0.15	No	Yes
MC3	5	100	1	B	1.55	Ind	100		Round	1	1	4.9	0.63	No	Yes
Verizon1	5	92	2	B	1.98	Ind	100	0	Round	2	1	6.2	1.3	No	Yes
Spok3	5	6	1	B	0.63	Ind	100		Round	1	1	2.0	0.15	No	Yes
Spok4	5	6	1	B	0.34	Ind	100	0	Round	1	1	1.1	0.06	No	Yes
							100							No	No
							100	0						No	No

Coax & Dishes

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation
300	2	0	H	Y
300	2	90	H	XY
300	2	180	H	X
300	4	270	S	P
300	3	0	H	XY
120	4	90	S	X
24	2	235	R	P
6	4	180	S	P

Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
2' HP 1 @ 300'	17Y	2 ft HP Dish	0
2' HP 2 @ 300'	17XY	2 ft HP Dish	90
2' HP 3 @ 300'	17X	2 ft HP Dish	180
4' STD 4 @ 300'	17P	4 ft STD Dish	270
3' HP 5 @ 300'	17XY	3 ft HP Dish	0
4' STD 6 @ 120'	5X	4 ft STD Dish	90
2' RAD 7 @ 24'	1P	2 ft RAD Dish	235
4' STD 8 @ 6'	0P	4 ft STD Dish	180



Site #:	88018
Name:	T-Mobile

Engineer:	ADV
Date:	01/29/16

Section Label	Section Color	Joint Defining Bottom Section	Dead Load Adj. Factor					Adj. Factor Flat	Adj. Factor Round	Area Multiplier	Weight Multiplier
0.000-25.00		0P	1.502697162					1.252247635	1.252247635	1	1.2
25.00-50.00		1P	1.48093403					1.234111691	1.234111691	1	1.2
50.00-75.00		2P	1.475299206					1.229416005	1.229416005	1	1.2
75.00-100.0		3P	1.468662391					1.223885326	1.223885326	1	1.2
100.0-125.0		4P	1.534826556					1.27902213	1.27902213	1	1.2
125.0-150.0		5P	1.518955429					1.265796191	1.265796191	1	1.2
150.0-175.0		6P	1.50866585					1.257221541	1.257221541	1	1.2
175.0-200.0		7P	1.478954774					1.232462312	1.232462312	1	1.2
200.0-212.5		8P	1.469986394					1.224988662	1.224988662	1	1.2
212.5-225.0		9P	1.462963002					1.219135835	1.219135835	1	1.2
225.0-237.5		10P	1.455806469					1.213172057	1.213172057	1	1.2
237.5-250.0		11P	1.44853386					1.20711155	1.20711155	1	1.2
250.0-262.5		12P	1.441165734					1.200971445	1.200971445	1	1.2
262.5-272.7		13P	1.443770575					1.203142146	1.203142146	1	1.2
272.7-282.8		14P	1.435797379					1.196497816	1.196497816	1	1.2
282.8-291.4		15P	1.457623525					1.214686271	1.214686271	1	1.2
291.4-300.0		16P	1.400830114					1.167358428	1.167358428	1	1.2

Site #:	88018
Name:	T-Mobile

Engineer:	ADV
Date:	01/29/16

Group Label	Group Description	Angle Type	Angle Size	Material Type	Element Type	Group Type	Optimize Group
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	A 36	Beam	Leg	None
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	A 36	Beam	Leg	None
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	A 36	Beam	Leg	None
Leg S4	L 8" x 8" x 1"	SAE	8X8X1	A 36	Beam	Leg	None
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	A 36	Beam	Leg	None
Leg S6	L 8" x 8" x 0.875"	SAE	8X8X0.88	A 36	Beam	Leg	None
Leg S7	L 8" x 8" x 0.75"	SAE	8X8X0.75	A 36	Beam	Leg	None
Leg S8	L 8" x 8" x 0.625"	SAE	8X8X0.63	A 36	Beam	Leg	None
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	A 36	Beam	Leg	None
Leg S10	L 6" x 6" x 0.75"	SAE	6X6X0.75	A 36	Beam	Leg	None
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	A 36	Beam	Leg	None
Leg S12	L 6" x 6" x 0.5625"	SAE	6X6X0.56	A 36	Beam	Leg	None
Leg S13	L 6" x 6" x 0.4375"	SAE	6X6X0.44	A 36	Beam	Leg	None
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	A 36	Beam	Leg	None
Leg S15	L 5" x 5" x 0.4375"	SAE	5X5X0.44	A 36	Beam	Leg	None
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	A 36	Beam	Leg	None
Leg S17	L 5" x 5" x 0.3125"	SAE	5X5X0.31	A 36	Beam	Leg	None
Diag S1	B/B L3"x4"x0.3125"	DAS	4X3X0.31	A 36	Beam	Other	None
Diag S2	B/B L3"x3.5"x0.25"	DAS	3.5X3X0.25	A 36	Beam	Other	None
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	A 36	Beam	Other	None
Diag S4	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	A 36	Beam	Other	None
Diag S5	B/B L3"x4"x0.25"	DAS	4X3X0.25	A 36	Beam	Other	None
Diag S6	B/B L3"x4"x0.25"	DAS	4X3X0.25	A 36	Beam	Other	None
Diag S7	B/B L3"x4"x0.25"	DAS	4X3X0.25	A 36	Beam	Other	None
Diag S8	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	A 36	Beam	Other	None
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Diag S10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	A 36	Beam	Other	None
Diag S15	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	A 36	Beam	Other	None
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	A 36	Beam	Other	None
Diag S17	L 3" x 3" x 0.25"	SAE	3X3X0.25	A 36	Beam	Other	None
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	A 36	Beam	Other	None
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	A 36	Beam	Other	None
Horiz 3	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	A 36	Beam	Other	None
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 6	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 14	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	A 36	Beam	Other	None
Horiz 15	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	A 36	Beam	Other	None
Horiz 17	C8x11.5	CHN	C8x11.5	A 36	Beam	Other	None
LD 1	B/B L3"x2"x0.25"	DAL	3X2X0.25	A 36	Beam	Other	None
LD 2	B/B L4"x3"x0.25"	DAL	4X3X0.25	A 36	Beam	Other	None
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 6	B/B L3"x3"x0.25"	DAE	3X3X0.25	A 36	Beam	Other	None
LD 7	B/B L3"x3"x0.25"	DAE	3X3X0.25	A 36	Beam	Other	None
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	A 36	Beam	Other	None
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	A 36	Beam	Other	None
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 12	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	A 36	Beam	Other	None
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	A 36	T-Only	Other	None
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	A 36	Beam	Other	None

Group Label	Group Description	Angle Type	Angle Size	Material Type	Element Type	Group Type	Optimize Group
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.38	A 36	Beam	Other	None
LH 4	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	A 36	Beam	Other	None
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	A 36	Beam	Fictitious	None

Site #:	88018
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Date:	01/29/16

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ	
L 1	Leg S1		XY-Symmetry	0P	1P		1	4	0.2812	0.2812	0.2812
L 2	Leg S2		XY-Symmetry	1P	2P		1	4	0.2812	0.2812	0.2812
L 3	Leg S3		XY-Symmetry	2P	3P		1	4	0.2812	0.2812	0.2812
L 4	Leg S4		XY-Symmetry	3P	4P		1	4	0.2812	0.2812	0.2812
L 5	Leg S5		XY-Symmetry	4P	5P		1	4	0.333333333	0.333333333	0.333333333
L 6	Leg S6		XY-Symmetry	5P	6P		1	4	0.333333333	0.333333333	0.333333333
L 7	Leg S7		XY-Symmetry	6P	7P		1	4	0.333333333	0.333333333	0.333333333
L 8	Leg S8		XY-Symmetry	7P	8P		1	4	0.333333333	0.333333333	0.333333333
L 9	Leg S9		XY-Symmetry	8P	9P		1	4	0.5	0.5	0.5
L 10	Leg S10		XY-Symmetry	9P	10P		1	4	0.5	0.5	0.5
L 11	Leg S11		XY-Symmetry	10P	11P		1	4	0.5	0.5	0.5
L 12	Leg S12		XY-Symmetry	11P	12P		1	4	0.5	0.5	0.5
L 13	Leg S13		XY-Symmetry	12P	13P		1	4	0.5	0.5	0.5
L 14	Leg S14		XY-Symmetry	13P	14P		1	4	0.5	0.5	0.5
L 15	Leg S15		XY-Symmetry	14P	15P		1	4	0.5	0.5	0.5
L 16	Leg S16		XY-Symmetry	15P	16P		1	4	0.5	0.5	0.5
L 17	Leg S17		XY-Symmetry	16P	17P		1	4	0.5	0.5	0.5
D 1	Diag S1		XY-Symmetry	0P	H2P		1	6	0.31	0.92	0.31
D 2	Diag S1		XY-Symmetry	0P	H1P		1	6	0.31	0.92	0.31
D 3	Diag S2		XY-Symmetry	1P	H6P		1	6	0.31	0.62	0.31
D 4	Diag S2		XY-Symmetry	1P	H5P		1	6	0.31	0.62	0.31
D 5	Diag S3		XY-Symmetry	2P	H10P		1	6	0.333333333	0.667	0.333333333
D 6	Diag S3		XY-Symmetry	2P	H9P		1	6	0.333333333	0.667	0.333333333
D 7	Diag S4		XY-Symmetry	3P	H14P		1	6	0.333333333	0.667	0.333333333
D 8	Diag S4		XY-Symmetry	3P	H13P		1	6	0.333333333	0.667	0.333333333
D 9	Diag S5		XY-Symmetry	4P	A9P		1	6	0.333333333	0.666666667	0.333333333
D 10	Diag S5		XY-Symmetry	4P	A10P		1	6	0.333333333	0.666666667	0.333333333
D 11	Diag S6		XY-Symmetry	5P	A11P		1	6	0.333333333	0.666666667	0.333333333
D 12	Diag S6		XY-Symmetry	5P	A12P		1	6	0.333333333	0.666666667	0.333333333
D 13	Diag S7		XY-Symmetry	6P	A13P		1	6	0.333333333	0.666666667	0.333333333
D 14	Diag S7		XY-Symmetry	6P	A14P		1	6	0.333333333	0.666666667	0.333333333
D 15	Diag S8		XY-Symmetry	7P	A15P		1	6	0.333333333	0.666666667	0.333333333
D 16	Diag S8		XY-Symmetry	7P	A16P		1	6	0.333333333	0.666666667	0.333333333
D 17	Diag S9		XY-Symmetry	8P	A17P		1	6	0.32	0.59	0.32
D 18	Diag S9		XY-Symmetry	8P	A18P		1	6	0.32	0.59	0.32
D 19	Diag S10		XY-Symmetry	9P	A19P		1	6	0.5	1	0.5
D 20	Diag S10		XY-Symmetry	9P	A20P		1	6	0.5	1	0.5
D 21	Diag S11		XY-Symmetry	10P	A21P		1	6	0.48	0.96	0.58
D 22	Diag S11		XY-Symmetry	10P	A22P		1	6	0.48	0.96	0.58
D 23	Diag S12		XY-Symmetry	11P	A23P		1	6	0.5	1	0.5
D 24	Diag S12		XY-Symmetry	11P	A24P		1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	A25P		1	6	0.5	1	0.5
D 26	Diag S13		XY-Symmetry	12P	A26P		1	6	0.5	1	0.5
D 27	Diag S14		XY-Symmetry	13P	14Y		2	5	0.52	0.75	0.52
D 28	Diag S14		XY-Symmetry	13P	14X		2	5	0.52	0.75	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y		2	5	0.52	0.75	0.52
D 30	Diag S15		XY-Symmetry	14P	15X		2	5	0.52	0.75	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y		2	5	0.52	0.75	0.52
D 32	Diag S16		XY-Symmetry	15P	16X		2	5	0.52	0.75	0.52
D 33	Diag S17		XY-Symmetry	16P	17Y		2	5	0.52	0.75	0.52
D 34	Diag S17		XY-Symmetry	16P	17X		2	5	0.52	0.75	0.52
H 1	Horiz 1		XY-Symmetry	1P	A1P		1	6	0.48	0.48	0.48
H 2	Horiz 1		XY-Symmetry	1P	A2P		1	6	0.48	0.48	0.48
H 3	Horiz 2		XY-Symmetry	2P	A3P		1	6	0.5	0.5	0.5
H 4	Horiz 2		XY-Symmetry	2P	A4P		1	6	0.5	0.5	0.5
H 5	Horiz 3		XY-Symmetry	3P	A5P		1	6	0.5	0.5	0.5
H 6	Horiz 3		XY-Symmetry	3P	A6P		1	6	0.5	0.5	0.5
H 7	Horiz 4		XY-Symmetry	4P	A7P		1	6	0.47	0.94	0.47
H 8	Horiz 4		XY-Symmetry	4P	A8P		1	6	0.47	0.94	0.47
H 9	Horiz 5		XY-Symmetry	5P	A9P		1	6	1	1	1
H 10	Horiz 5		XY-Symmetry	5P	A10P		1	6	1	1	1
H 11	Horiz 6		XY-Symmetry	6P	A11P		1	6	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ	
H 12	Horiz 6		XY-Symmetry	6P	A12P		1	6	1	1	1
H 13	Horiz 7		XY-Symmetry	7P	A13P		1	6	1	1	1
H 14	Horiz 7		XY-Symmetry	7P	A14P		1	6	1	1	1
H 15	Horiz 8		XY-Symmetry	8P	A15P		1	6	1	1	1
H 16	Horiz 8		XY-Symmetry	8P	A16P		1	6	1	1	1
H 17	Horiz 9		XY-Symmetry	9P	A17P		1	6	1	1	1
H 18	Horiz 9		XY-Symmetry	9P	A18P		1	6	1	1	1
H 19	Horiz 10		XY-Symmetry	10P	A19P		1	6	1	1	1
H 20	Horiz 10		XY-Symmetry	10P	A20P		1	6	1	1	1
H 21	Horiz 11		XY-Symmetry	11P	A21P		1	6	1	1	1
H 22	Horiz 11		XY-Symmetry	11P	A22P		1	6	1	1	1
H 23	Horiz 12		XY-Symmetry	12P	A23P		1	6	1	1	1
H 24	Horiz 12		XY-Symmetry	12P	A24P		1	6	1	1	1
H 25	Horiz 13		XY-Symmetry	13P	A25P		1	6	1	1	1
H 26	Horiz 13		XY-Symmetry	13P	A26P		1	6	1	1	1
H 27	Horiz 14		Y-Symmetry	14P	14X		3	5	0.5	1	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y		3	5	0.5	1	0.5
H 29	Horiz 15		Y-Symmetry	15P	15X		1	6	0.5	1	0.5
H 30	Horiz 15		X-Symmetry	15P	15Y		1	6	0.5	1	0.5
H 31	Horiz 16		Y-Symmetry	16P	16X		3	5	0.5	1	0.5
H 32	Horiz 16		X-Symmetry	16P	16Y		3	5	0.5	1	0.5
H 33	Horiz 17		Y-Symmetry	17P	17X		3	5	0.5	1	0.5
H 34	Horiz 17		X-Symmetry	17P	17Y		3	5	0.5	1	0.5
H 37	Horiz 2		Y-Symmetry	A3P	A3X		1	5	1	1	1
H 38	Horiz 2		X-Symmetry	A4P	A4Y		1	5	1	1	1
H 39	Horiz 3		Y-Symmetry	A5P	A5X		1	5	1	1	1
H 40	Horiz 3		X-Symmetry	A6P	A6Y		1	5	1	1	1
H 41	Horiz 4		Y-Symmetry	A7P	A7X		1	5	1	1	1
H 42	Horiz 4		X-Symmetry	A8P	A8Y		1	5	1	1	1
LH 1	LH 1		Y-Symmetry	H1P	H1X		1	6	50	100	50
LH 2	LH 1		X-Symmetry	H2P	H2Y		1	6	50	100	50
LH 3	LH 2		XY-Symmetry	H5P	H7P		1	6	1	2	1
LH 4	LH 2		XY-Symmetry	H6P	H8P		1	6	1	2	1
LH 5	LH 3		XY-Symmetry	H9P	H11P		1	6	1	2	1
LH 6	LH 3		XY-Symmetry	H10P	H12P		1	6	1	2	1
LH 7	LH 4		XY-Symmetry	H13P	H15P		1	6	0.998	1.995	0.998
LH 8	LH 4		XY-Symmetry	H14P	H16P		1	6	0.998	1.995	0.998
LD 1	LD 1		XY-Symmetry	H1P	1P		1	6	0.85	0.85	0.85
LD 2	LD 1		XY-Symmetry	H2P	1P		1	6	0.85	0.85	0.85
LD 3	LD 2		XY-Symmetry	H1P	A1P		1	6	0.82	0.82	0.82
LD 4	LD 2		XY-Symmetry	H2P	A2P		1	6	0.82	0.82	0.82
LD 7	LD 4		XY-Symmetry	H5P	2P		1	6	0.87	0.87	0.87
LD 8	LD 4		XY-Symmetry	H6P	2P		1	6	0.87	0.87	0.87
LD 9	LD 5		XY-Symmetry	H5P	A3P		1	6	0.8	0.8	0.8
LD 10	LD 5		XY-Symmetry	H6P	A4P		1	6	0.8	0.8	0.8
LD 11	LD 6		XY-Symmetry	A3P	H7P		1	6	0.84	0.84	0.84
LD 12	LD 6		XY-Symmetry	A4P	H8P		1	6	0.84	0.84	0.84
LD 13	LD 7		XY-Symmetry	H9P	3P		1	6	0.865	0.865	0.865
LD 14	LD 7		XY-Symmetry	H10P	3P		1	6	0.865	0.865	0.865
LD 15	LD 8		XY-Symmetry	H9P	A5P		1	6	0.82	0.82	0.82
LD 16	LD 8		XY-Symmetry	H10P	A6P		1	6	0.82	0.82	0.82
LD 17	LD 9		XY-Symmetry	A5P	H11P		1	6	0.82	0.82	0.82
LD 18	LD 9		XY-Symmetry	A6P	H12P		1	6	0.82	0.82	0.82
LD 19	LD 10		XY-Symmetry	H13P	4P		1	6	0.86	0.86	0.86
LD 20	LD 10		XY-Symmetry	H14P	4P		1	6	0.86	0.86	0.86
LD 21	LD 11		XY-Symmetry	H13P	A7P		1	6	0.82	0.82	0.82
LD 22	LD 11		XY-Symmetry	H14P	A8P		1	6	0.82	0.82	0.82
LD 23	LD 12		XY-Symmetry	A7P	H15P		1	6	0.85	0.85	0.85
LD 24	LD 12		XY-Symmetry	A8P	H16P		1	6	0.85	0.85	0.85
BR 1	DUM 1		XY-Symmetry	A1P	A2P		1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
BR 3	DUM 1		XY-Symmetry	A3P	A4P		1	4	1	1
BR 4	DUM 1		XY-Symmetry	A3P	A4XY		1	4	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P		1	4	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY		1	4	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P		1	4	1	1
BR 8	DUM 1		XY-Symmetry	A7P	A8XY		1	4	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P		1	4	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P		1	4	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P		1	4	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P		1	4	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P		1	4	1	1
BR 19	DUM 1		XY-Symmetry	A19P	A20P		1	4	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P		1	4	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P		1	4	1	1
BR 25	DUM 1		XY-Symmetry	A25P	A26P		1	4	1	1
BR 61	DUM 1		XY-Symmetry	H1P	H2P		1	4	1	1
BR 62	DUM 1		XY-Symmetry	H1P	H2XY		1	4	1	1
BR 64	DUM 1		XY-Symmetry	H5P	H6P		1	4	1	1
BR 65	DUM 1		XY-Symmetry	H5P	H6XY		1	4	1	1
BR 66	DUM 1		XY-Symmetry	H7P	H8P		1	4	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P		1	4	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY		1	4	1	1
BR 69	DUM 1		XY-Symmetry	H11P	H12P		1	4	1	1
BR 70	DUM 1		XY-Symmetry	H13P	H14P		1	4	1	1
BR 71	DUM 1		XY-Symmetry	H13P	H14XY		1	4	1	1
BR 72	DUM 1		XY-Symmetry	H15P	H16P		1	4	1	1

Point Loads

Tower Height:	300	ft
Gh:	1.09	
Wind Speed:	85.00	
Wind Speed (Ice):	73.95	
Radial Ice Diameter:	0.5	in

Site No.:	88018
Engineer:	ADV
Date:	01/29/2016
Carrier:	T-Mobile

KS-15676 Horn Antennas: ~128 ft²

No.	Carrier	Elevation (ft)	Quantity	Number of Azimuths	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction Factor	C _A A _c (ft²/ea)	Weight (k/ea)	H/W	C _A	q _z (psf)	q _z (Ice) (psf)
1		300	1	1	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	34.75	26.30
			1	4	Platform						1.000	55.00	4.00	-	-	-	-
2		283	1	4	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	34.18	25.87
			1	4	Catwalk						1.000	40.00	2.75	-	-	-	-
3		212.5	1	3	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	31.49	23.83
			1	3	Platform						1.000	50.00	3.00	-	-	-	-
4		100	1	3	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	25.39	19.22
			1	3	Platform						1.000	50.00	3.00	-	-	-	-
5	Clearwire Marcus Comm.	300	1	1	Horizon Compact	4.7	9.3	9.3	10.6	R	1.000			0.51	0.80	34.75	26.30
			1	1	Radio/ODU						0.500	1.87	0.03	-	-	-	-
6	United/Marcus Marcus Comm.	300	2	2	16' Omni	192	3	3	55	R	1.000			64.00	1.20	34.75	26.30
			1	1	101-68-10-X-03N						1.000	5.53	0.07	-	-	-	-
7	Qualcomm Qualcomm	270	1	1	TLP-08M-2E	146.4	10.5	10.5	130	R	1.000			13.94	0.95	33.72	25.52
			1	1	Side Arm						1.000	5.20	0.15	-	-	-	-
8	US DOHS -	269	1	1	ADD090	78.7	31.5	31.5	88.2	F	1.000			2.50	1.40	33.68	25.50
			1	1	-						1.000	0.00	0.00	-	-	-	-
9	Sirius Sirius	265	2	2	TA-2350-DAB	70	2.3	2.3	15	R	1.000			30.43	1.20	33.54	25.39
			2	2	Side Arm						0.900	5.20	0.15	-	-	-	-
10	T-Mobile T-Mobile	265	3	3	ATMAA1412D-1A20	12	10	4	13	F	0.500			1.20	1.40	33.54	25.39
			3	3	RRUS 11 B12						0.500	3.25	0.05	-	-	-	-
11	T-Mobile T-Mobile	265	3	3	AIR 21, 1.3 M, B2A B4P	56	12	8	83	F	0.690			4.67	1.40	33.54	25.39
			3	3	AIR 21, 1.3M, B4A B2P						0.690	6.58	0.08	-	-	-	-
12	T-Mobile T-Mobile	265	3	3	LNx-6515DS-VTM	96.3	11.9	7.1	51.3	F	0.700			8.09	1.44	33.54	25.39
			3	3	Sector Frame						0.670	17.90	0.40	-	-	-	-
13	US DOHS US DOHS	240	1	1	SC381-HL	148.3	4.5	4.5	47	R	1.000			32.96	1.20	32.60	24.68
			1	1	SC281-L						1.000	10.46	0.08	-	-	-	-
14	US DOHS US DOHS	240	1	1	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	32.60	24.68
			2	2	Side Arm						0.900	5.20	0.15	-	-	-	-
15	AT&T Mobility AT&T Mobility	231	3	3	7770	55	11	5	35	F	0.640			5.00	1.40	32.25	24.41
			3	3	Sector Frame						0.670	14.40	0.40	-	-	-	-
16																	
17	AT&T Mobility AT&T Mobility	231	3	3	SBNHH-1D65A	55	11.9	7.1	40.9	F	0.670			4.62	1.40	32.25	24.41
			1	3	32 BOB, TTA, RET						0.500	83.84	1.26	-	-	-	-
18	AT&T Mobility AT&T Mobility	231	3	3	AM-X-CD-14-65-00T-RET	48	11.8	5.9	36.4	F	0.650			4.07	1.40	32.25	24.41
			3	3	OPA-65R-LCUU-H4						0.640	6.91	0.06	-	-	-	-
19	Sprint Nextel Sprint Nextel	224	12	3	Decibel DB844H90E-XY	48	6.5	8	14	F	0.730			7.38	1.41	31.97	24.20
			3	3	Sector Frame						0.670	17.90	0.40	-	-	-	-
20	US DOHS US DOHS	200	1	1	Sinclair SC281-L	251	5	5	79	R	1.000			50.20	1.20	30.95	23.43
			1	1	Side Arm						1.000	5.20	0.15	-	-	-	-
21	Marcus Comm. Marcus Comm.	200	2	2	TX RX 101-68-10-X-03N	189.6	3.5	3.5	70	R	1.000			54.17	1.20	30.95	23.43
			2	2	Side Arm						0.900	5.20	0.15	-	-	-	-
22	Town of Stamford Town of Stamford	189	1	1	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	30.45	23.05
			1	1	30" x 30" Reflector						1.000	8.75	0.03	-	-	-	-
23	Spok Holdings Spok Holdings	178	3	3	BCD-87010 ____	134	2.6	2.6	26.5	R	1.000			51.54	1.20	29.94	22.66
			3	3	Side Arm						0.670	5.20	0.15	-	-	-	-
24	Clearwire Clearwire	171	3	3	24" x 24" Junction Box	24	24	8	20	F	0.670			1.00	1.40	29.59	22.40
			1	1	-						1.000	0.01	0.01	-	-	-	-
25	Clearwire Clearwire	167	3	3	BTS-2500	19.3	11.3	5.1	35	F	0.670			1.71	1.40	29.40	22.25
			3	3	LLPX310R						0.620	4.83	0.03	-	-	-	-
26	Clearwire Clearwire	167	1	1	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	29.40	22.25
			3	3	T-Arm						0.670	5.20	0.15	-	-	-	-
27	Metro PCS Metro PCS	160	18	3	RCU (Remote Control Unit)	8	2	2	1	R	0.500			4.00	0.80	29.04	21.98
			6	3	800 10504						0.670	3.35	0.02	-	-	-	-
28	Sprint Nextel Sprint Nextel	150	3	3	APXVTM14-C-I20	56.3	12.6	6.3	52.9	F	0.650			4.47	1.40	28.51	21.58
			1	3	18 RRH						0.500	50.70	0.78	-	-	-	-
29	Sprint Nextel Sprint Nextel	150	3	3	APXVSP18-C-A20	72	11.8	7	57	F	0.680			6.10	1.40	28.51	21.58
			3	3	Sector Frame						0.670	17.90	0.40	-	-	-	-
30	Senus Senus	137	1	1	BCD-87010 ____ 4"	134	2.6	2.6	26.5	R	1.000			51.54	1.20	27.78	21.03
			1	1	Side Arm						1.000	5.20	0.15	-	-	-	-

31	Marcus Comm. Marcus Comm.	100	1 1	1 1	101-68-10-X-03N Side Arm	189.6 1.000	3.5 1.000	3.5 5.20	70 0.15	R F	1.000 0.680		54.17 -	1.20 -	25.39 -	19.22 -
32	Verizon Verizon	92	6 4	3 3	WWX063X19G00 X7C-FRO-660 (35 Lbs)	75 0.670	12.1 0.670	7 10.22	32.7 0.04	F F	0.680 0.640		6.20 -	1.40 -	24.79 -	18.76 -
33	Verizon Verizon	92	2 1	3 3	X7C-FRO-640-V 9 RET, 2 BOB	72 0.500	18.8 0.500	9.1 36.58	42.4 0.56	F F	0.640 0.500		3.83 -	1.40 -	24.79 -	18.76 -
34	Verizon Verizon	92	1 1	1 3	- Sector Frame	0.01 0.670	0.01 0.670	0.01 17.90	0.01 0.40	R F	0.001 0.670		1.00 -	0.80 -	24.79 -	18.76 -
35	Spok Holdings Spok Holdings	6	1 1	1 1	Acutime 2000 -	5 1.000	6.1 1.000	6.1 0.00	1.3 0.00	F F	1.000 1.000		0.82 -	1.40 -	18.50 -	14.00 -
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No.	Elevation (ft)	C _A A _C (ft²)	C _A A _C (Ice) (ft²)	Force (k)	Force (Ice) (k)	Weight (k)	Weight (Ice) (k)	Σ Force (k)	Σ Force (Ice) (k)	Σ Weight (k)	Σ Weight (Ice) (k)
1	300	0.00 55.00	0.00 74.25	0.000 2.079	0.000 2.124	0.000 4.000	0.000 5.200	2.08	2.12	4.00	5.20
2	283	0.00 40.00	0.00 54.00	0.000 1.487	0.000 1.519	0.000 2.750	0.000 3.575	1.49	1.52	2.75	3.58
3	212.5	0.00 50.00	0.00 67.50	0.000 1.713	0.000 1.750	0.000 3.000	0.000 3.900	1.71	1.75	3.00	3.90
4	100	0.00 50.00	0.00 67.50	0.000 1.381	0.000 1.411	0.000 3.000	0.000 3.900	1.38	1.41	3.00	3.90
5	300	0.24 0.94	0.33 1.26	0.009 0.035	0.009 0.036	0.011 0.030	0.017 0.039	0.04	0.05	0.04	0.06
6	300	9.60 5.53	12.87 7.47	0.363 0.209	0.368 0.214	0.110 0.070	0.198 0.091	0.57	0.58	0.18	0.29
7	270	10.19 5.20	11.23 7.02	0.374 0.191	0.312 0.195	0.130 0.150	0.239 0.195	0.56	0.51	0.28	0.43
8	269	24.10 0.00	25.18 0.00	0.883 0.000	0.698 0.000	0.088 0.000	0.286 0.000	0.88	0.70	0.09	0.29
9	265	2.68 9.36	3.91 12.64	0.098 0.341	0.108 0.349	0.030 0.300	0.056 0.390	0.44	0.46	0.33	0.45
10	265	1.75 4.88	2.09 6.58	0.064 0.178	0.058 0.182	0.039 0.152	0.062 0.198	0.24	0.24	0.19	0.26
11	265	13.52 13.62	14.91 18.39	0.493 0.497	0.412 0.508	0.249 0.245	0.375 0.318	0.99	0.92	0.49	0.69
12	265	24.01 35.98	26.29 48.57	0.876 1.313	0.726 1.341	0.154 1.200	0.351 1.560	2.19	2.07	1.35	1.91
13	260	5.56	6.84	0.197	0.184	0.047	0.096	0.57	0.56	0.13	0.20

[illegible]

Foundation

Design Loads (Unfactored)

Compression/Leg:	496.50 k
Uplift/Leg:	386.84 k

Face Width @ Top of Pier (d_1):	4.00 ft
Face Width @ Bottom of Pier (d_2):	8.00 ft
Total Length of Pier (l):	8.00 ft
Height of Pedestal Above Ground (h):	0.50 ft
Width of Pad (W):	18.00 ft
Length of Pad (L):	18.00 ft
Thickness of Pad (t):	3.00 ft
Water Table Depth (w):	99 ft
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil (Above Water Table):	110.0 pcf
Unit Weight of Soil (Below Water Table):	55.0 pcf
Friction Angle of Uplift (A):	20 °
Allowable Compressive Bearing Pressure:	20000 psf

Volume Pier (Total):	298.67	ft ³
Volume Pad (Total):	972.00	ft ³
Volume Soil (Total):	2935.41	ft ³
Volume Pier (Buoyant):	0.00	ft ³
Volume Pad (Buoyant):	0.00	ft ³
Volume Soil (Buoyant):	0.00	ft ³
Weight Pier:	44.80	k
Weight Pad:	145.80	k
Weight Soil:	322.89	k

Uplift Check

TIA Case 1: $\frac{\text{Wt. Soil} + \text{Wt. Concrete}}{1.5}$

TIA Case 2: $\frac{\text{Wt. Soil} + \text{Wt. Concrete}}{2.0 \quad 1.25}$

	Allowable Uplift (k)	Ratio	Result
TIA Case 1:	451.68	0.86	OK
TIA Case 2:	423.28	0.91	OK

Axial Check

Allowable Axial: $\text{Allowable Bearing Pressure} * W * L$

	Allowable Axial (k)	Ratio	Result
	6480.00	0.08	OK

Anchor Bolt Check

Bolt Description	Allowable Uplift (k)	Ratio	Result
(6) 2 1/4" A36	456.61	0.85	OK

Site No.:	88018
Engineer:	ADV
Date:	01/29/16
Carrier:	T-Mobile

