

RACHEL A. SCHWARTZMAN

Please Reply To: Bridgeport
Writer's Direct Dial: (203) 337-4110
E-Mail: rschwartzman@cohenandwolf.com

August 27, 2014

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06501

ORIGINAL

RECEIVED
AUG 29 2014
CONNECTICUT
SITING COUNCIL

Re: EM-T-MOBILE-135-121221
T-Mobile Site ID CT11007A
168 Cantoona Lane, Stamford, CT
Notice of Compliance with Conditions and Construction Completion

Dear Attorney Bachman:

The Connecticut Siting Council ("Council") acknowledged the above referenced T-Mobile Northeast LLC ("T-Mobile") notice of exempt modification on January 9, 2013.

The Council imposed the following condition in its acknowledgment:

- The proposed coax shall be installed in accordance with the recommendation made in the Structural Analysis Report prepared by American Tower Corporation dated December 3, 2012;
- Not more than 45 days following completion of the antenna installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the recommendation of the structural analysis.

T-Mobile has complied with each of these conditions as evidenced by the PE Close Out Letter, dated August 27, 2014, attached hereto.

In addition, T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of December 20, 2013.

Please don't hesitate to contact me with any questions.

August 27, 2014
CT11007A
Page 2

Sincerely,



Rachel A. Schwartzman, Esq.

cc: Samuel Simons, T-Mobile
Mark Richard, T-Mobile
Alex Giannaras, HPC Wireless
Julie Kohler, Esq.

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August 27, 2014

Sam Simons
Engineering Development - Connecticut
T-Mobile
35 Griffin Road South
Bloomfield, CT 06002
sam.simons@t-mobile.com

RE: PE Close Out Letter
EMT-T-Mobile-135-121221
T-Mobile Site ID # CT11007A
AMT Site ID # 88018

Dear Mr. Simons:

Infinigy has completed its post-construction review of the above-referenced site to determine whether T-Mobile complied with conditions imposed by the Connecticut Siting Council's (the "Council") acknowledgment letter, dated January 9, 2013 ("the Acknowledgment Letter"). Our compliance review included the following: the Acknowledgment Letter, the approved tower structural analysis report by American Tower dated December 3, 2012 (the "Structural Analysis"), and the approved design plans by Infinigy dated November 12, 2012.

On behalf of Infinigy, based on my review of the information, I, John S. Stevens, licensed professional engineer number 24705, certify that to the best of my knowledge, T-Mobile work complied with the recommendations of the approved Structural Analysis.

Specifically, as required by the Acknowledgment Letter, T-Mobile's work complied with the structural conditions imposed by the Council, with the following changes:

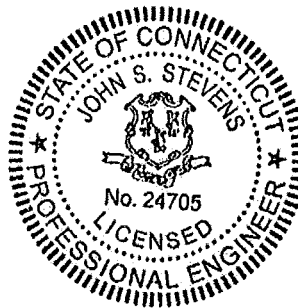
1. The final T-Mobile antenna installation is comprised of only (6) new antenna. The (1) existing antenna "to remain" was removed.
2. (2) additional, 1¼" hybrid cables were installed that were not included in the design documents (Structural Analysis and design plans).

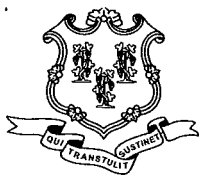
Should you have any questions regarding the foregoing review, please contact me directly at jstevens@infinigy.com (518) 690-0790.

Very truly yours,



John S. Stevens, PE





STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

January 9, 2013

Chris Bisson
Real Estate Consultant
Transcend Wireless
48 Spruce Street
Oakland, NJ 07436

RE: **EM-T-MOBILE-135-121221** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 168 Catoona Lane, Stamford, Connecticut.

Dear Mr. Bisson:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- The proposed coax shall be installed in accordance with the recommendation made in the Structural Analysis Report prepared by American Tower Corporation dated December 3, 2012 and stamped by Wm. Garrett;
- Not more than 45 days following completion of the antenna installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the recommendation of the structural analysis;
- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not more than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated December 21, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.



This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,



Linda Roberts
Executive Director

LR/CDM/jb

c: The Honorable Michael A. Pavia, Mayor, City of Stamford
Norman Cole, Planning and Zoning Dir., City of Stamford
American Tower

EM-T-MOBILE-135-121221

Transcend Wireless
48 Spruce Street
Oakland, NJ 07436
Phone: (203) 217-6200
Chris Bisson
Real Estate Consultant

Date: 12/21/12

Hand Delivered

Ms. Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

ORIGINAL

RECEIVED
DEC 21 2012
CONNECTICUT
SITING COUNCIL

RE: T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 168 Catoona Lane Stamford, CT. Known to T-Mobile Northeast LLC as site CT11007A.

Dear Ms. Roberts:

In order to accommodate technological changes, implement Global System for Mobile Communications Access ("GSM") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the state of Connecticut, T-Mobile Northeast LLC plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and its attachments is being sent to the chief elected official of the municipality in which affected cell site is located.

GSM employs Spread-Spectrum technology and special coding scheme to allow multiple users to be multiplexed over the same physical channel. LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

As part of the project the new multi-mode 800/1900 antenna will replace existing antennas. These antennas will provide more flexibility for optimization by allowing fast and easy electrical tilt adjustment from remote location and will enable the transmission of multiple technologies from a single antenna. As T-Mobile Northeast LLC network evolves to meet the demands of its customers, it is essential for T-Mobile Northeast LLC to install modern equipment and antennas in order to provide reliable wireless voice and data services. The proposed equipment will include multi-mode radios that will allow T-Mobile Northeast LLC to transmit at different frequencies using different technologies, including LTE technology. Likewise, the proposed antennas are quad-pole multi-band

high gain antennas that will allow T-Mobile Northeast LLC to operate using its multiple frequency bands and technologies, including LTE technology. The proposed equipment and antennas will improve the reliability, coverage and capacity of T-Mobile Northeast LLC voice and data networks across T-Mobile Northeast LLC various FCC licensed frequency bands and significantly increase the data speeds of T-Mobile Northeast LLC 's network by utilizing the latest LTE technology. Without the proposed modifications T-Mobile Northeast LLC will be unable to provide reliable wireless voice and data service using the latest technologies.

T-Mobile Northeast LLC will have an interim (testing) period during the modification/installation prior to the final configuration. This antenna configuration is shown on the attached drawings of the planned modifications. Also included is the power density calculation reflecting the change in T-Mobile Northeast LLC operations at the site and documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modification as defined Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for the R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will not be affected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound.
3. The proposed changes will not increase the noise level at the existing facility by 6 decibels or more.
4. Radio Frequency power density may increase due to the use of one or more GSM transmissions. Moreover, LTE will utilize additional radio frequencies newly licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons T-Mobile Northeast LLC respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (203) 217-6200 or email cbisson@transcendwireless.com with questions concerning this matter.

Thank you for your consideration.

Sincerely,

Chris Bisson
(203) 217-6200



AMERICAN TOWER®
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Structural Analysis Report

Structure : 300 ft Self Supported Tower
ATC Site Name : Stamford (Katoona), CT
ATC Site Number : 88018
Engineering Number : 51293022
Proposed Carrier : T-Mobile
Carrier Site Name : Ericsson – 2C
Carrier Site Number : CT11007A
Site Location : Intersection of Catoona Lane and Myano Lane
Stamford, CT 06902-4573
41.052825,-73.563047
County : Fairfield
Date : December 3, 2012
Max Usage : 99%
Result : Pass

Scott Wirgau
Senior Design Engineer





AMERICAN TOWER®
C O R P O R A T I O N

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Scott Wirgau
Senior Design Engineer



Eng. Number 51293022
December 3, 2012

Table of Contents

Introduction	1
Supporting Documents	1
Analysis.....	1
Conclusion	1
Existing and Reserved Equipment	2
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 29, 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 Line 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 me via email at scott.wirgau@americantower.com or call 919-466-5086.

Existing and Reserved Equipment

Mount Elev. ¹ (ft)	Qty.	Antenna	Mount Type	Coax (in)	Carrier
311.0	1	4' Dish w/ Radome	Dish	(1) 1 1/4"	Marcus Comm.
	1	ODU		-	
303.0	1	AML PGLN1PR-MFF	Platform	-	United Wireless
	1	Scala OGB9-900N/DT3		(1) 7/8"	
302.0	1	RFS 200		(1) 1 5/8"	Lojack
300.0	1	TX RX 101-68-10-X-03N		(1) 1 1/4"	Marcus Comm.
	1	15' Omni		-	-
	1	16' Omni w/ Reflectors		-	
	1	3' HP Dish		(1) 1/2"	
	3	DragonWave A-ANT-18G-2-C	Side Arm	(3) 1/2"	Clearwire
	3	DragonWave Horizon Compact		-	
289.0	1	Dielectric TLP-08M-2E	Pipe	(1) 3 1/8"	Qualcomm
283.0	-	-	Catwalk	-	-
269.0	1	Rohde & Schwarz ADD090	Side Arm	(2) 7/8"	USCG
	1	TTA		(1) 1/4"	
265.0	1	RFS APX16DWV-16DWVS-E-A20	Sector Frame	-	T-Mobile
262.5	1	Til Tek TA-2350-DAB	Side Arm	(1) EW20	XM Satellite
240.0	1	Sinclair SC381-HL	Side Arm	(1) 7/8"	USCG
	1	Sinclair SC281-L		(1) 7/8"	
235.0	1	Raycap FC12-PC6-10E	Sector Frame	(13) 1 5/8" (2) 0.74" (18.7mm) (1) 0.28" (7mm) (1) 2" Conduit	AT&T Mobility
	6	Powerwave LGP21903			
	6	Ericsson RRUS 11 (Band 12)			
	6	Powerwave 7770.00			
	3	Raycap DC2-48-60-0-9E			
	6	Powerwave LGP21401			
	3	KMW AM-X-CD-14-65-00T-RET			
224.0	12	Decibel DB844H90E-XY	Sector Frame	(15) 1 5/8"	Sprint Nextel
215.5	1	8' Omni	Side Arm	(1) 3/8"	Lojack
212.5	-	-	Platform	-	-
200.0	1	Sinclair SC281-L	Side Arm	(1) 7/8"	USCG
	2	TX RX 101-68-10-X-03N	Side Arm	(2) 1 1/4"	Marcus Comm.
189.0	1	36" x 60" Panel	Side Arm	-	Town of Stamford
178.0	3	Antel BCD-87010	Side Arm	(3) 7/8"	USA Mobility
171.0	3	Argus LLPX310R	Side Arm	(6) 5/16"	Clearwire
	3	NextNet BTS-2500		(2) 2" Conduit	
	1	24" x 24" Junction Box		-	

Existing and Reserved Equipment (continued)

Mount Elev. ¹ (ft)	Qty.	Antenna	Mount Type	Coax (in)	Carrier
160.0	6	Kathrein 800 10504	Sector Frame	(12) 1 5/8"	Metro PCS
	3	RCU		(1) 3/8"	
158.0	1	Channel Master Type 120	Dish	(1) 1/2"	USA Mobility
150.0	3	Alcatel-Lucent 800MHz RRH	Sector Frame	(6) 1 5/8" (3) 1 1/4" Hybriflex	Sprint Nextel
	3	RFS APXVSP18-C-A20			
	3	Alcatel-Lucent 800MHz 2X50 RRH			
	6	Andrew DB980H90E-M			
137.0	1	Antel BCD-87010_4	Side Arm	(1) 7/8"	Sensus Metering
100.0	1	TX RX 101-68-10-X-03N	Side Arm	(1) 1 1/4"	Marcus Comm.
	-	-	Platform	-	-
25.0	1	Til Tek TA-2324-LHCP	Dish	(1) 7/8"	XM Satellite
10.0	1	GPS Unit	Pipe	(1) 3/8"	Lojack
6.0	1	Channel Master Type 120	Dish	(1) 1/2"	USA Mobility
	1	Trimble Acutime 2000	Pipe	(1) 1/4"	

Proposed Equipment

Elevation ¹ (ft)		Qty.	Antenna	Mount Type	Coax (in)	Carrier
Mount	RAD					
265.0	265.0	3	Ericsson AIR 21, 1.3 M, B2A B4P	Sector Frame	(12) 1 5/8" (1) 1 1/4" (1.25") Fiber	T-Mobile
		3	Ericsson AIR 21, 1.3 M, B4A B2P			
		3	Andrew ETW200VS12UB			

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 in same location as existing.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	91%	Pass
Diagonals	99%	Pass
Horizontals	97%	Pass
Anchor Bolts	88%	Pass

Foundations

Reaction Component	Analysis Reactions
Uplift (Kips)	403.4
Axial (Kips)	501.6

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



Standard Conditions

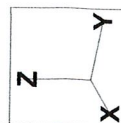
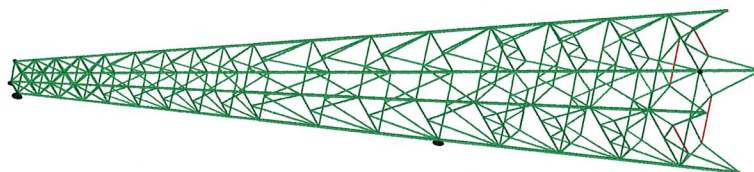
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- 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 ATC Engineering Services 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. ATC Engineering Services 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: 300' Type 'H' AT&T Tag Tower
Project File : S:\12 - ATC\88018\12-12-T-Mobile 12-03-12\88018-L2-T-Mobile-12_03_12.tow
Date run : 5:29:23 PM Monday, December 03, 2012
by : Tower Version 12.10
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

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: s:\12 - atc\88018\12-12-t-mobile 12-03-12\88018-loads-t-mobile-12_03_12.eia

*** Analysis Results:

Maximum element usage is 99.43% for Angle "D 2X" in load case "W -90"

Summary of Joint Support Reactions For All Load Cases:

Load Case		Joint Label	Long. Force (kips)	Trans. Force (kips)	Shear Force (kips)	Trans. Moment (ft-k)	Long. Moment (ft-k)	Vert. Bending Moment (ft-k)	Found. Usage %		
W 0	OP	W 0	-44.64	-23.88	328.05	50.63	-0.40	-5.45	-2.21	5.47	
		W 0	OX	-42.89	24.66	321.61	49.47	0.06	-5.14	2.22	5.14
		W 0	OXY	-36.18	17.01	231.46	39.98	0.57	-5.59	2.05	5.62
		W 180	OP	37.58	16.18	233.15	40.92	-0.33	-5.91	2.02	5.92
		W 180	OP	37.65	15.99	230.63	40.90	-0.33	5.96	2.02	5.97
		W 180	OXY	36.20	-16.86	229.32	39.94	0.57	5.64	-2.06	5.67
		W 180	OXY	42.90	24.52	319.47	49.42	0.06	5.19	-2.23	5.19
		W 45	OP	-52.86	-53.14	501.63	74.96	4.41	-4.34	-0.00	6.19
		W 45	OY	-20.12	-12.89	42.30	23.90	4.77	-4.17	3.44	6.33
		W 45	OXY	-46.29	-46.20	403.39	65.40	4.93	-4.96	-0.01	6.99
		W 45	OY	-12.44	-20.19	44.51	23.72	4.15	-4.69	-3.45	6.26
		W 45	OP	-21.46	13.34	48.33	25.27	-5.00	-4.39	-3.43	6.65
W -45	OP	W -45	-51.55	53.44	495.40	74.25	-4.64	-4.12	0.01	6.20	
		W -45	OXY	-11.58	19.57	44.64	22.74	-3.99	-4.48	3.47	5.99
		W -45	OY	-47.17	45.54	403.32	65.56	-4.77	-5.17	0.03	7.03
		W 90	OP	-23.89	-44.96	329.76	50.91	5.50	0.44	2.21	5.52
		W 90	OY	16.22	-37.93	-234.95	41.25	5.96	0.31	2.01	5.97
		W 90	OP	-17.18	-36.21	-232.45	40.07	5.58	-0.60	-2.06	5.61
		W 90	OY	24.86	-42.91	322.68	49.59	-5.12	-0.02	-2.23	5.13
		W -90	OP	16.01	37.89	-332.06	41.13	-5.99	0.44	-2.21	5.99
		W -90	OY	-23.69	44.76	326.88	50.64	-5.53	0.44	-2.22	5.55
		W -90	OP	24.69	42.89	320.33	49.49	-5.17	-0.03	2.24	5.17
		W -90	OY	-17.00	36.18	-230.10	39.98	-5.62	-0.60	2.06	5.65
		W 0 Ice	OP	-41.67	-22.79	323.45	47.50	-1.52	-3.76	-1.98	4.05
W 180 Ice	OP	W 180 Ice	OX	-39.93	23.53	316.48	46.35	1.17	-3.45	1.98	3.65
		W 180 Ice	OY	-33.52	14.20	-192.95	36.40	-1.45	-6.48	-1.81	6.64
		W 180 Ice	OP	33.58	13.93	-189.37	36.35	-1.44	6.54	1.82	6.70
		W 180 Ice	OY	32.28	-14.78	189.31	35.50	1.66	6.25	-1.86	6.46
		W 180 Ice	OXY	39.96	23.34	313.53	46.37	1.17	3.52	-1.99	3.71
		W 180 Ice	OP	41.57	-22.53	319.98	47.28	-1.53	-3.82	1.99	4.11
		W 45 Ice	OP	-49.47	-49.70	482.92	70.13	2.87	-2.81	-0.00	4.01
		W 45 Ice	OY	-19.12	-10.95	60.21	22.03	5.49	-2.66	3.17	7.99
		W 45 Ice	OP	-41.76	-41.68	350.10	59.00	5.64	-5.66	-0.01	6.04
		W 45 Ice	OY	-10.59	-19.15	61.60	21.89	2.64	-5.43	-3.17	6.59
		W -45 Ice	OP	-20.46	11.41	66.59	23.43	-5.74	-2.87	-3.16	6.41
		W -45 Ice	OY	-48.15	50.01	476.28	69.42	-3.10	-5.29	0.00	4.94
W -90 Ice	OP	W -90 Ice	OX	48.15	50.01	476.28	69.42	-3.10	-5.29	0.00	4.94
		W -90 Ice	OY	-48.32	18.55	66.19	22.81	-5.51	-5.97	0.03	8.05
		W -90 Ice	OP	-42.55	-41.07	-349.34	52.14	-5.21	5.97	0.03	8.05
		W -90 Ice	OY	24.78	-11.97	49.34	27.43	-5.21	5.97	0.03	8.05
		W 90 Ice	OP	14.21	-33.79	194.44	37.23	6.32	1.43	1.81	6.18
		W 90 Ice	OY	-13.11	-32.26	192.92	35.63	6.16	-1.68	-1.85	6.59
		W 90 Ice	OP	23.69	-39.94	317.13	46.44	3.44	-1.14	-1.39	3.63
		W 90 Ice	OY	13.96	33.77	-190.63	36.54	-5.56	1.43	-1.81	6.72
		W -90 Ice	OP	-22.53	41.75	321.23	47.44	-3.84	1.56	-1.99	4.14
		W -90 Ice	OY	23.48	39.93	314.18	46.32	-3.50	-1.14	1.99	3.69
		W -90 Ice	OP	-14.90	32.26	-189.95	35.53	-6.23	-1.68	1.86	6.45
		W -90 Ice	OY	14.90	32.26	-189.95	35.53	-6.23	-1.68	1.86	6.45

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

Group Label	Group Angle Desc. Type	Angle Size	Steel Strength	Max Usage Cont-rol	Max Tension Force Control	Net Tension Section Capacity	Tension Connect. Shear Capacity	Tension Connect. Bearing Capacity	Tension Length	No. Of Bolts	Hole Diameter								
			(ksi)		(kips)	(kips)	(kips)	(kips)	(ft)		(in)								
Horiz 14	L 3" x 2.5" x 0.25"	SAU	36.0	10.63	Comp 10.63	H 28X	-0.989	W 90	6.377	0.000	0.000	0.500	1.000	0.500	197.14	167.44	12.371	6	0
Horiz 15	B/B L3"x2.5"x0.25"	DAL	36.0	1.66	Tens 1.48	H 30X	-0.547	W 90	27.773	0.000	0.000	0.500	1.000	0.500	118.05	118.05	11.116	1	0
Horiz 16	L 3" x 2.5" x 0.25"	SAU	36.0	2.51	Tens 1.30	H 30X	-0.162	W 90	9.333	0.000	0.000	0.500	1.000	0.500	160.29	144.78	10.058	6	0
Horiz 17	C8x11.5	CHN	36.0	1.31	Comp 1.31	H 34P	-0.380	W 180	21.711	0.000	0.000	0.500	1.000	0.500	172.80	152.47	9.000	6	0
LD 1	B/B L3"x2"x0.25"	DAL	36.0	98.41	Comp 98.41	LD 1X	-23.879	W -45	15.198	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 2	B/B L4"x3"x0.25"	DAL	36.0	85.10	Comp 85.10	LD 3X	-24.434	W -90	44.434	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 4	B/B L2.5"x2"x0.25"	DAL	36.0	56.75	Comp 56.75	LD 7X	-24.336	W -45	15.111	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 5	B/B L2.5"x2"x0.25"	DAL	36.0	56.75	Comp 56.75	LD 7X	-24.336	W -45	15.111	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 6	B/B L3"x3"x0.25"	DAL	36.0	97.50	Comp 97.50	LD 9X	-38.228	W -90	25.560	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 7	B/B L3"x3"x0.25"	DAL	36.0	97.50	Comp 97.50	LD 11P	-38.228	W -90	25.560	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 8	B/B L3"x3"x0.25"	DAL	36.0	70.91	Comp 70.91	LD 13X	-37.469	W -45	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 9	B/B L2.5"x2"x0.25"	DAL	36.0	95.52	Comp 95.52	LD 15X	-37.469	W -45	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 10	B/B L3"x2"x0.25"	DAL	36.0	97.07	Comp 97.07	LD 17P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 11	B/B L2.5"x2"x0.25"	DAL	36.0	66.59	Comp 66.59	LD 19X	-28.077	W -45	51.541	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 12	B/B L2.5"x2"x0.25"	DAL	36.0	95.77	Comp 95.77	LD 21X	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 13	B/B L2.5"x2"x0.25"	DAL	36.0	79.59	Comp 79.59	LD 23P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 14	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 25P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 15	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 27P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 16	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 29P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 17	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 31P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 18	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 33P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 19	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 35P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 20	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 37P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 21	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 39P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 22	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 41P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 23	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 43P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 24	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 45P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 25	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 47P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 26	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 49P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 27	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 51P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 28	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 53P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 29	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 55P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 30	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 57P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 31	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 59P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 32	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 61P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 33	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 63P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 34	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 65P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 35	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 67P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 36	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 69P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 37	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 71P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 38	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 73P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 39	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 75P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 40	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 77P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 41	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 79P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 42	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 81P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 43	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 83P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 44	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 85P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 45	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 87P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 46	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 89P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 47	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 91P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 48	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 93P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 49	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 95P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 50	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 97P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 51	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 99P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 52	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 101P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 53	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 103P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 54	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 105P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 55	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 107P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	1	0
LD 56	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 109P	-37.469	W -90	29.575	0.000	0.000	0.800	0.800	0.800	152.11	139.75	12.834	6	0
LD 57	B/B L2.5"x2"x0.25"	DAL	36.0	53.14	Comp 53.14	LD 111P	-37.469	W -90	29.575</										

Horiz 17	C8x11.5	CHN	C8x11.5	36.0	1.31	Comp	0.55	H 34P	0.536 W	0 Ice	73.008	0.000	0.000	9.000	0.000	0
LD 1	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	98.41	Comp	34.74	LD 2Y	23.811W	-45 Ic	51.408	0.000	0.000	12.834	0.000	0
LD 2	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	85.10	Comp	48.85	LD 3P	47.555	W -90	73.008	0.000	0.000	12.834	0.000	0
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	56.75	Comp	41.25	LD 8Y	25.301	W -45	46.008	0.000	0.000	11.516	0.000	0
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	97.50	Comp	50.63	LD 9P	31.056	W -90	46.008	0.000	0.000	8.164	0.000	0
LD 6	B/B L3"x3"x0.25"	DAL	3X3X0.25	36.0	90.63	Comp	47.11	LD 11X	39.072	W -90	62.208	0.000	0.000	9.562	0.000	0
LD 7	B/B L3"x3"x0.25"	DAL	3X3X0.25	36.0	90.91	Comp	50.76	LD 11Y	35.522	W -45	52.208	0.000	0.000	10.541	0.000	0
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	95.51	Comp	51.16	LD 15P	31.365	W -90	46.008	0.000	0.000	8.040	0.000	0
LD 9	B/B L3"x3"x0.25"	DAL	3X3X0.25	36.0	97.52	Comp	56.25	LD 17X	38.468	W -90	51.408	0.000	0.000	9.334	0.000	0
LD 10	B/B L3"x3"x0.25"	DAL	3X3X0.25	36.0	96.59	Comp	50.57	LD 20Y	33.688	W -45	62.208	0.000	0.000	10.386	0.000	0
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	93.77	Comp	31.01	LD 21P	31.288	W -90	46.008	0.000	0.000	7.905	0.000	0
LD 12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	79.59	Comp	37.91	LD 23X	37.884	W -90	74.952	0.000	0.000	9.005	0.000	0
LH 1	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.375	36.0	53.14	Comp	17.37	LH 2X	13.158W	90 Ice	56.808	0.000	0.000	21.458	0.000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	63.18	Comp	17.32	LH 4Y	28.264	W -45	56.808	0.000	0.000	10.806	0.000	0
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.375	36.0	85.40	Comp	25.09	LH 6Y	27.750	W -45	82.944	0.000	0.000	10.003	0.000	0
LH 4	B/B L3.5"x3.5"x0.25"	DAL	3.5X3.5X0.25	36.0	76.22	Comp	27.58	LH 8Y	26.847	W -45	73.008	0.000	0.000	9.200	0.000	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00	Comp	0.00	BR 11X	1.111	W -45	0.216	0.000	0.000	19.445	0.000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages By Load Case:

Load Case	Maximum Element Usage %	Element Label	Type
W 0	98.34	D 1P	Angle
W 180	98.86	D 1Y	Angle
W 45	95.96	LD 1P	Angle
W -45	98.41	LD 1X	Angle
W 90	99.25	D 2P	Angle
W -90	99.43	D 2X	Angle
W 0 Ice	91.90	D 3Y	Angle
W 180 Ice	82.60	D 3Y	Angle
W 45 Ice	89.30	H 2Y	Angle
W -45 Ice	92.55	H 2Y	Angle
W 90 Ice	92.77	D 4P	Angle
W -90 Ice	93.16	D 4X	Angle

*** Weight of structure (lbs): 119944.4
 Weight of Angles*Section DLF: 570.0
 Weight of Equipment: 120514.4
 Total:

*** End of Report

Site #: 88018			Engineer: SAW			Windspeed: No Ice: 85 mph Ice: 74 mph			Taper: -0.123333 FW @ Top: 9 ft			Taper Change: FW @ Top: 9 ft							
Name: Stamford (Katoona), CT			Date: 10/01/12			Carrier: T-Mobile			Spreadsheet Version Last Updated: 7/27/2012										
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 (If or Blank)	# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	PW (ft)	# Sub-Brace
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	6.63888889	50	Free	Free	Free	Free	Free	Free									
A4	XY-Symmetry	6.63888889	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	5.61111111	100	Free	Free	Free	Free	Free	Free									
A8	XY-Symmetry	5.61111111	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	9.89583333	0	212.5	Free	Free	Free	Free	Free	Free									
A18	X-Symmetry	0	9.89583333	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	8.35416667	0	237.5	Free	Free	Free	Free	Free	Free									
A22	X-Symmetry	0	8.35416667	237.5	Free	Free	Free	Free	Free	Free									
A23	Y-Symmetry	7.58333333	0	250	Free	Free	Free	Free	Free	Free									
A24	X-Symmetry	0	7.58333333	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									

Legs

Site No.: 88018
 Engineer: SAW
 Date: 10/01/2012
 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:	SAW
Date:	10/01/2012
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:	SAW
Date:	10/01/2012
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:	SAW
Date:	10/01/2012
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:	SAW
Date:	10/01/2012
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.

Coax & Dishes

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

Joint Orientation	
XY	Y
90°	X
	P

Dish Elevation (ft)	Dish Dia (ft)	Dish Angle (deg)	Dish Type	Joint Orientation
311	4	90	R	X
25	2	180	R	P
158	4	90	S	X
300	2	90	H	XY
300	2	0	H	Y
300	2	270	H	X
300	3	180	H	P
6	4	180	S	P

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)
Marcus-311	265	300	1	Round	1.55	4.87	0.66	No	No
Bell-303	265	300	1	Round	1.11	3.49	0.33	No	No
Lojack-302	265	300	1	Round	1.98	6.22	0.82	No	No
Marcus-300	265	300	1	Round	1.55	4.87	0.66	No	No
Qualcomm-289	265	289	1	Round	4	12.57	5.39	No	No
USCG-269	265	269	2	Round	1.11	3.49	0.33	No	No
XIV-263	265	269	1	Round	5.02	15.77	5.39	No	No
Weight-265	5	265	20	Round	1.98	6.22	0.82	No	No
T-Mobile-265	5	265	12	Round	1.98	6.22	2.16	Yes	Yes
T-Mobile-265b	5	265	1	Round	1.55	4.87	1.00	No	No
USCG-240	5	240	2	Round	1.11	3.49	0.33	No	No
AT&T-235	5	235	13	Round	1.98	6.22	0.82	No	No
AT&T-235B	5	235	1	Round	0.88	0.88	0.03	No	No
AT&T-235C	5	235	2	Round	0.74	2.32	0.49	No	No
Sprint-224	5	224	15	Round	1.98	6.22	0.82	Yes	Yes
Lojack-216	5	216	1	Round	0.44	1.38	0.08	No	No
USCG-200	5	200	1	Round	1.11	3.49	0.33	No	No
Marcus-200	5	200	2	Round	1.55	4.87	0.66	No	No
USA Mob-178	5	178	3	Round	1.11	3.49	0.33	No	No
Metro-160	5	160	12	Round	1.98	6.22	0.82	No	No
MetroB-160	5	160	3	Round	0.44	1.38	0.08	No	No
Sprint-150	5	150	6	Round	1.98	6.22	0.82	No	No
Sprint-150B	5	150	3	Round	1.55	4.87	0.66	No	No
Sensus-137	5	137	1	Round	1.11	3.49	0.33	No	No
Marcus-100	5	100	1	Round	1.55	4.87	0.66	No	No
XIV-25	5	25	1	Round	1.11	3.49	0.33	No	No
Lojack-10	5	10	1	Round	0.44	1.38	0.08	No	No
Metro-160B	5	160	1	Round	0.44	1.38	0.08	No	No
Clearwire-171	5	171	2	Round	2.375	7.46	3.65	No	No
Clearwire-300	5	300	3	Round	0.63	1.98	0.14	Yes	Yes
Unik-300	5	300	1	Round	0.63	1.98	0.14	No	No
AT&T-235D	5	235	1	Round	2.38	7.48	3.65	No	No
USA Mob-6b	3	6	1	Round	0.63	1.98	0.14	No	No
USA Mob-6	3	6	1	Round	0.3	0.94	0.06	No	No

Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
4' RAD 1 @ 311'	17X	4 ft RAD Dish	90
2' RAD 2 @ 25'	1P	2 ft RAD Dish	180
4' STD 3 @ 158'	6X	4 ft STD Dish	90
2' HP 4 @ 300'	17XY	2 ft HP Dish	90
2' HP 6 @ 300'	17Y	2 ft HP Dish	0
2' HP 7 @ 300'	17X	2 ft HP Dish	270
3' HP 8 @ 300'	17P	3 ft HP Dish	180
4' STD 9 @ 6'	0P	4 ft STD Dish	180

Coax	Dia. (in)	Weight(lb/ft)
1/4"	0.3	0.064
3/8"	0.44	0.084
1/2"	0.63	0.144
7/8"	1.09	0.33
1"	1.11	0.33
EW90	1.32	0.32
1-1/4"	1.55	0.664
1-5/8"	1.98	0.82
EW63	2.01	0.51
EW52	2.25	0.59
Ladder	3	6

Site No.: 88018
 Engineer: SAW
 Date: 10/01/12
 Carrier: T-Mobile

Site #: 88018
Name: T-Mobile

Engineer: SAW
Date: 10/01/12

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		OP	1.252247635					1.252247635	1.252247635	1	1
25.00-50.00		1P	1.234111691					1.234111691	1.234111691	1	1
50.00-75.00		2P	1.229416005					1.229416005	1.229416005	1	1
75.00-100.0		3P	1.223885326					1.223885326	1.223885326	1	1
100.0-125.0		4P	1.27902213					1.27902213	1.27902213	1	1
125.0-150.0		5P	1.265796191					1.265796191	1.265796191	1	1
150.0-175.0		6P	1.257221541					1.257221541	1.257221541	1	1
175.0-200.0		7P	1.232462312					1.232462312	1.232462312	1	1
200.0-212.5		8P	1.224988662					1.224988662	1.224988662	1	1
212.5-225.0		9P	1.219135835					1.219135835	1.219135835	1	1
225.0-237.5		10P	1.213172057					1.213172057	1.213172057	1	1
237.5-250.0		11P	1.20711155					1.20711155	1.20711155	1	1
250.0-262.5		12P	1.200971445					1.200971445	1.200971445	1	1
262.5-272.7		13P	1.203142146					1.203142146	1.203142146	1	1
272.7-282.8		14P	1.196497816					1.196497816	1.196497816	1	1
282.8-291.4		15P	1.214686271					1.214686271	1.214686271	1	1
291.4-300.0		16P	1.167358428					1.167358428	1.167358428	1	1

Site #:	88018
Name:	T-Mobile

Engineer:	SAW
Date:	10/01/12

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
Name:	T-Mobile

Engineer:	SAW
Date:	10/01/12

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	0.33333333	0.33333333	0.33333333
L 6	Leg S6		XY-Symmetry	5P	6P	1	4	0.33333333	0.33333333	0.33333333
L 7	Leg S7		XY-Symmetry	6P	7P	1	4	0.33333333	0.33333333	0.33333333
L 8	Leg S8		XY-Symmetry	7P	8P	1	4	0.33333333	0.33333333	0.33333333
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	5	0.33333333	1	0.33333333
D 2	Diag S1		XY-Symmetry	0P	H1P	1	5	0.33333333	1	0.33333333
D 3	Diag S2		XY-Symmetry	1P	H6P	1	5	0.33333333	0.667	0.33333333
D 4	Diag S2		XY-Symmetry	1P	H5P	1	5	0.33333333	0.667	0.33333333
D 5	Diag S3		XY-Symmetry	2P	H10P	1	5	0.33333333	0.667	0.33333333
D 6	Diag S3		XY-Symmetry	2P	H9P	1	5	0.33333333	0.667	0.33333333
D 7	Diag S4		XY-Symmetry	3P	H14P	1	5	0.33333333	0.667	0.33333333
D 8	Diag S4		XY-Symmetry	3P	H13P	1	5	0.33333333	0.667	0.33333333
D 9	Diag S5		XY-Symmetry	4P	A9P	1	6	0.33333333	0.66666667	0.33333333
D 10	Diag S5		XY-Symmetry	4P	A10P	1	6	0.33333333	0.66666667	0.33333333
D 11	Diag S6		XY-Symmetry	5P	A11P	1	6	0.33333333	0.66666667	0.33333333
D 12	Diag S6		XY-Symmetry	5P	A12P	1	6	0.33333333	0.66666667	0.33333333
D 13	Diag S7		XY-Symmetry	6P	A13P	1	6	0.33333333	0.66666667	0.33333333
D 14	Diag S7		XY-Symmetry	6P	A14P	1	6	0.33333333	0.66666667	0.33333333
D 15	Diag S8		XY-Symmetry	7P	A15P	1	6	0.32	0.59	0.32
D 16	Diag S8		XY-Symmetry	7P	A16P	1	6	0.32	0.59	0.32
D 17	Diag S9		XY-Symmetry	8P	A17P	1	6	0.5	1	0.5
D 18	Diag S9		XY-Symmetry	8P	A18P	1	6	0.5	1	0.5
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	0.5	1	0.5
D 22	Diag S11		XY-Symmetry	10P	A22P	1	6	0.5	1	0.5
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	1	5	0.52	0.75	0.52
D 28	Diag S14		XY-Symmetry	13P	14X	1	5	0.52	0.75	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y	1	5	0.52	0.75	0.52
D 30	Diag S15		XY-Symmetry	14P	15X	1	5	0.52	0.75	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y	1	5	0.52	0.75	0.52
D 32	Diag S16		XY-Symmetry	15P	16X	1	5	0.52	0.75	0.52
D 33	Diag S17		XY-Symmetry	16P	17Y	1	5	0.52	0.75	0.52
D 34	Diag S17		XY-Symmetry	16P	17X	1	5	0.52	0.75	0.52
H 1	Horiz 1		XY-Symmetry	1P	A1P	1	6	0.49	0.49	0.49
H 2	Horiz 1		XY-Symmetry	1P	A2P	1	6	0.49	0.49	0.49
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	0.5	1	0.5
H 8	Horiz 4		XY-Symmetry	4P	A8P	1	6	0.5	1	0.5
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	1	6	0.5	1	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y	1	6	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	1	6	0.5	1	0.5
H 32	Horiz 16		X-Symmetry	16P	16Y	1	6	0.5	1	0.5
H 33	Horiz 17		Y-Symmetry	17P	17X	1	6	0.5	1	0.5
H 34	Horiz 17		X-Symmetry	17P	17Y	1	6	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	0.5	1	0.5
LH 2	LH 1		X-Symmetry	H2P	H2Y	1	6	0.5	1	0.5
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	0.88	0.88	0.88
LD 2	LD 1		XY-Symmetry	H2P	1P	1	6	0.88	0.88	0.88
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	0.83	0.83	0.83
LD 10	LD 5		XY-Symmetry	H6P	A4P	1	6	0.83	0.83	0.83
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	0.83	0.83	0.83
LD 16	LD 8		XY-Symmetry	H10P	A6P	1	6	0.83	0.83	0.83
LD 17	LD 9		XY-Symmetry	A5P	H11P	1	6	0.84	0.84	0.84
LD 18	LD 9		XY-Symmetry	A6P	H12P	1	6	0.84	0.84	0.84
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	0.84	0.84	0.84
LD 22	LD 11		XY-Symmetry	H14P	A8P	1	6	0.84	0.84	0.84
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	1
BR 4	DUM 1		XY-Symmetry	A3P	A4XY	1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P	1	4	1	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY	1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P	1	4	1	1	1
BR 8	DUM 1		XY-Symmetry	A7P	A8XY	1	4	1	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P	1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P	1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P	1	4	1	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P	1	4	1	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P	1	4	1	1	1
BR 19	DUM 1		XY-Symmetry	A19P	A20P	1	4	1	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P	1	4	1	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P	1	4	1	1	1
BR 25	DUM 1		XY-Symmetry	A25P	A26P	1	4	1	1	1
BR 61	DUM 1		XY-Symmetry	H1P	H2P	1	4	1	1	1
BR 62	DUM 1		XY-Symmetry	H1P	H2XY	1	4	1	1	1
BR 64	DUM 1		XY-Symmetry	H5P	H6P	1	4	1	1	1
BR 65	DUM 1		XY-Symmetry	H5P	H6XY	1	4	1	1	1
BR 66	DUM 1		XY-Symmetry	H7P	H8P	1	4	1	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 69	DUM 1		XY-Symmetry	H11P	H12P	1	4	1	1	1
BR 70	DUM 1		XY-Symmetry	H13P	H14P	1	4	1	1	1
BR 71	DUM 1		XY-Symmetry	H13P	H14XY	1	4	1	1	1
BR 72	DUM 1		XY-Symmetry	H15P	H16P	1	4	1	1	1

Engineer:	SAW
Date:	10/01/12

[illegible][illegible]

H_0 time	Type	τ_{Heaven}	Leg	Lower H	Top H	Day1	Day2	Day3
1	0	23	1	8	2.5	3.5	3	4
2	1	23	2	8	2.5	3.5	3	4
3	1	23	2	8	2.5	3.5	3	4
3	50	25	2	8	2.5	3.5	2.5	3
4	75	25	2	8	3.5	3	2.5	3
5	100	25	2	8	3.5	3	2.5	3
6	125	25	A	8	3.5	3	0	0
7	150	25	A	8	3.5	3	0	0
8	175	25	A	8	0	3.5	3	0
9	200	25	A	8	0	3.5	3	0
10	225	25	A	8	0	3.5	3	0
11	250	11.5	A	6	0	3.5	2.5	0
12	275	11.5	A	6	0	3.5	2.5	0
13	300	11.5	A	6	0	3.5	2.5	0
14	325	11.5	A	6	0	3.5	2.5	0
15	350	11.5	A	6	0	3.5	2.5	0
16	375	11.5	A	6	0	3.5	2.5	0
17	400	11.5	A	6	0	3.5	2.5	0
18	425	11.5	A	6	0	3.5	2.5	0
19	450	11.5	A	6	0	3.5	2.5	0
20	475	11.5	A	6	0	3.5	2.5	0
21	500	11.5	A	6	0	3.5	2.5	0
22	525	11.5	A	6	0	3.5	2.5	0
23	550	11.5	A	6	0	3.5	2.5	0
24	575	11.5	A	6	0	3.5	2.5	0
25	600	11.5	A	6	0	3.5	2.5	0
26	625	11.5	A	6	0	3.5	2.5	0
27	650	11.5	A	6	0	3.5	2.5	0
28	675	11.5	A	6	0	3.5	2.5	0
29	700	11.5	A	6	0	3.5	2.5	0
30	725	11.5	A	6	0	3.5	2.5	0
31	750	11.5	A	6	0	3.5	2.5	0
32	775	11.5	A	6	0	3.5	2.5	0
33	800	11.5	A	6	0	3.5	2.5	0
34	825	11.5	A	6	0	3.5	2.5	0
35	850	11.5	A	6	0	3.5	2.5	0
36	875	11.5	A	6	0	3.5	2.5	0
37	900	11.5	A	6	0	3.5	2.5	0
38	925	11.5	A	6	0	3.5	2.5	0
39	950	11.5	A	6	0	3.5	2.5	0
40	975	11.5	A	6	0	3.5	2.5	0
41	1000	11.5	A	6	0	3.5	2.5	0

④=1	④=2	Face Width	④=4	④=5	④=6
43.7837	44.32246667	62.20323333			
45.7837	46.32246667	64.20323333			
47.7837	48.32246667	66.20323333			
49.7837	50.32246667	68.20323333			
51.7837	52.32246667	70.20323333			
53.7837	54.32246667	72.20323333			
55.7837	56.32246667	74.20323333			
57.7837	58.32246667	76.20323333			
59.7837	60.32246667	78.20323333			
61.7837	62.32246667	80.20323333			
63.7837	64.32246667	82.20323333			
65.7837	66.32246667	84.20323333			
67.7837	68.32246667	86.20323333			
69.7837	70.32246667	88.20323333			
71.7837	72.32246667	90.20323333			
73.7837	74.32246667	92.20323333			
75.7837	76.32246667	94.20323333			
77.7837	78.32246667	96.20323333			
79.7837	80.32246667	98.20323333			
81.7837	82.32246667	100.20323333			
83.7837	84.32246667	102.20323333			
85.7837	86.32246667	104.20323333			
87.7837	88.32246667	106.20323333			
89.7837	90.32246667	108.20323333			
91.7837	92.32246667	110.20323333			
93.7837	94.32246667	112.20323333			
95.7837	96.32246667	114.20323333			
97.7837	98.32246667	116.20323333			
99.7837	100.32246667	118.20323333			
101.7837	102.32246667	120.20323333			
103.7837	104.32246667	122.20323333			
105.7837	106.32246667	124.20323333			
107.7837	108.32246667	126.20323333			
109.7837	110.32246667	128.20323333			
111.7837	112.32246667	130.20323333			
113.7837	114.32246667	132.20323333			
115.7837	116.32246667	134.20323333			
117.7837	118.32246667	136.20323333			
119.7837	120.32246667	138.20323333			
121.7837	122.32246667	140.20323333			
123.7837	124.32246667	142.20323333			
125.7837	126.32246667	144.20323333			
127.7837	128.32246667	146.20323333			
129.7837	130.32246667	148.20323333			
131.7837	132.32246667	150.20323333			
133.7837	134.32246667	152.20323333			
135.7837	136.32246667	154.20323333			
137.7837	138.32246667	156.20323333			
139.7837	140.32246667	158.20323333			
141.7837	142.32246667	160.20323333			
143.7837	144.32246667	162.20323333			
145.7837	146.32246667	164.20323333			
147.7837	148.32246667	166.20323333			
149.7837	150.32246667	168.20323333			
151.7837	152.32246667	170.20323333			
153.7837	154.32246667	172.20323333			
155.7837	156.32246667	174.20323333			
157.7837	158.32246667	176.20323333			
159.7837	160.32246667	178.20323333			
161.7837	162.32246667	180.20323333			
163.7837	164.32246667	182.20323333			
165.7837	166.32246667	184.20323333			
167.7837	168.32246667	186.20323333			
169.7837	170.32246667	188.20323333			
171.7837	172.32246667	190.20323333			
173.7837	174.32246667	192.20323333			
175.7837	176.32246667	194.20323333			
177.7837	178.32246667	196.20323333			
179.7837	180.32246667	198.20323333			
181.7837	182.32246667	200.20323333			
183.7837	184.32246667	202.20323333			
185.7837	186.32246667	204.20323333			
187.7837	188.32246667	206.20323333			
189.7837	190.32246667	208.20323333			
191.7837	192.32246667	210.20323333			
193.7837	194.32246667	212.20323333			
195.7837	196.32246667	214.20323333			
197.7837	198.32246667	216.20323333			
199.7837	200.32246667	218.20323333			
201.7837	202.32246667	220.20323333			
203.7837	204.32246667	222.20323333			
205.7837	206.32246667	224.20323333			
207.7837	208.32246667	226.20323333			
209.7837	210.32246667	228.20323333			
211.7837	212.32246667	230.20323333			
213.7837	214.32246667	232.20323333			
215.7837	216.32246667	234.20323333			
217.7837	218.32246667	236.20323333			
219.7837	220.32246667	238.20323333			
221.7837	222.32246667	240.20323333			
223.7837	224.32246667	242.20323333			
225.7837	226.32246667	244.20323333			
227.7837	228.32246667	246.20323333			
229.7837	230.32246667	248.20323333			
231.7837	232.32246667	250.20323333			
233.7837	234.32246667	252.20323333			
235.7837	236.32246667	254.20323333			
237.7837	238.32246667	256.20323333			
239.7837	240.32246667	258.20323333			
241.7837	242.32246667	260.20323333			
243.7837	244.32246667	262.20323333			
245.7837	246.32246667	264.20323333			
247.7837	248.32246667	266.20323333			
249.7837	250.32246667	268.20323333			
251.7837	252.32246667	270.20323333			
253.7837	254.32246667	272.20323333			
255.7837	256.32246667	274.20323333			
257.7837	258.32246667	276.20323333			
259.7837	260.32246667	278.20323333			
261.7837	262.32246667	280.20323333			
263.7837	264.32246667	282.20323333			
265.7837	266.32246667	284.20323333			
267.7837	268.32246667	286.20323333			
269.7837	270.32246667	288.20323333			
271.7837	272.32246667	290.20323333			
273.7837	274.32246667	292.20323333			
275.7837	276.32246667	294.20323333			
277.7837	278.32246667	296.20323333			
279.7837	280.32246667	298.20323333			
281.7837	282.32246667	300.20323333			
283.7837	284.32246667	302.20323333			
285.7837	286.32246667	304.20323333			
287.7837	288.32246667	306.20323333			
289.7837	290.32246667	308.20323333			
291.7837	292.32246667	310.20323333			
293.7837	294.32246667	312.20323333			
295.7837	296.32246667	314.20323333			
297.7837	298.32246667	316.20323333			
299.7837	300.32246667	318.20323333			
301.7837	302.32246667	320.20323333			
303.7837	304.32246667	322.20323333			
305.7837	306.32246667	324.20323333			
307.7837	308.32246667	326.20323333			
309.7837	310.32246667	328.20323333			
311.7837	312.32246667	330.20323333			
313.7837	314.32246667	332.20323333			
315.7837	316.32246667	334.20323333			
317.7837	318.32246667	336.20323333			
319.7837	320.32246667	338.20323333			
321.7837	322.32246667	340.20323333			
323.7837	324.32246667	342.20323333			
325.7837	326.32246667	344.20323333			
327.7837	328.32246667	346.20323333			
329.7837	330.32246667	348.20323333			
331.7837	332.32246667	350.20323333			
333.7837	334.32246667	352.20323333			
335.7837	336.32246667	354.20323333			
337.7837	338.32246667	356.20323333			
339.7837	340.32246667	358.20323333			
341.7837	342.32246667	360.20323333			
343.7837	344.32246667	362.20323333			
345.7837	346.32246667	364.20323333			
347.7837	348.32246667	366.20323333			
349.7837	350.32246667	368.20323333			
351.7837	352.32246667	370.20323333			
353.7837	354.32246667	372.20323333			
355.7837	356.32246667	374.20323333			
357.7837	358.32246667	376.20323333			
359.7837	360.32246667	378.20323333			
361.7837	362.32246667	380.20323333			
363.7837	364.32246667	382.20323333			
365.7837	366.32246667	384.20323333			
367.7837	368.32246667	386.20323333			
369.7837	370.32246667	388.20323333			
371.7837	372.32246667	390.20323333			
373.7837	374.32246667	392.20323333			
375.7837	376.32246667	394.20323333			
377.7837	378.32246667	396.20323333			
379.7837	380.32246667	398.20323333			
381.7837	382.32246667	400.20323333			
383.7837	384.32246667	402.20323333			
385.7837	386.32246667	404.20323333			
387.7837	388.32246667	406.20323333			
389.7837	390.32246667	408.20323333			
391.7837	392.32246667	410.20323333			
393.7837	394.32246667	412.20323333			
395.7837	396.32246667	414.20323333			
397.7837	398.32246667	416.20323333			
399.7837	400.32246667	418.20323333			
401.7837	402.32246667	420.20323333			
403.7837	404.32246667	422.20323333			
405.7837	406.32246667	424.20323333			
407.7837	408.32246667	426.20323333			
409.7837	410.32246667	428.20323333			
411.7837	412.32246667	430.20323333			
413.7837	414.32246667	432.20323333			
415.7837	416.32246667	434.20323333			
417.7837	418.32246667	436.20323333			
419.7837	420.32246667	438.20323333			
421.7837	422.32246667	440.20323333			
423.7837	424.32246667	442.20323333			
425.7837	426.32246667	444.20323333			
427.7837	428.32246667	446.20323333			
429.7837	430.32246667	448.20323333			
431.7837	432.32246667	450.20323333			
433.7837	434.32246667	452.20323333			
435.7837	436.32246667	454.20323333			

[illegible]

Point Loads

Tower Height:	300	ft
Gh:	1.09	mph
Wind Speed:	85.00	mph
Wind Speed (Ice):	73.61	mph
Radial Ice Diameter:	0.5	in

Site No.:	88018
Engineer:	SAW
Date:	10/01/2012
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 _p A _c (ft²/ea)	Weight (lb/ea)	C _d	q _z (psf)	q _z (ice) (psf)
1		300	2	2	15' Omni & 16' Grid Omni Platform	186	4	4	50	R	1.000	55.00	4.00	1.20	34.75	26.06
2		283	1	4	-	0.01	0.01	0.01	0.01	R	1.000	55.00	4.00	-	-	-
3		212.5	1	3	Catwalk	0.01	0.01	0.01	0.01	R	1.000	40.00	2.75	1.00	0.80	34.18
4		100	1	3	Platform	0.01	0.01	0.01	0.01	R	1.000	50.00	3.00	1.00	0.80	31.49
5	Bell Industries	303	1	3	Platform	0.01	0.01	0.01	0.01	R	0.001	50.00	3.00	-	-	-
6	Lojack	302	1	1	Scala OGB9-900N/DTS + TTA Side Arm	116.6	2	2	15	R	1.000	50.00	3.00	1.00	0.80	25.39
7	Marcus Comm.	300	1	1	RFS 200 Side Arm	249.6	2.4	2.4	20	R	1.000	3.00	0.20	58.30	1.20	34.85
8	Marcus Comm.	311	1	1	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	104.00	1.20	34.82
9	Qualcomm	289	1	1	ODU	16	12	8	30	F	1.000	3.00	0.20	54.17	1.20	34.75
10	USCG	269	1	1	Dielectric TLP	0.01	0.01	0.01	0.01	R	1.000	0.00	0.00	1.33	1.40	35.11
11	XM Satellite	262.5	1	1	Rohde & Schwarz ADD090	0.01	0.01	0.01	0.01	R	0.001	22.75	0.23	1.00	0.80	34.38
12	T-Mobile	265	3	3	TII Tek TA-2350-DA8 Side Arm	70	2.3	2.3	15	R	1.000	20.76	0.20	1.00	0.80	33.68
13	T-Mobile	265	3	3	Andrew ETW200VS12UB Sector Frame	7.7	6.3	3	11	F	0.670	3.00	0.20	30.43	1.20	33.45
14	USCG	240	1	1	RFS APX16DMV-16DMVVS-E-A20 Same Mounts as Above	55.9	13.3	3.1	40.7	F	1.000	15.00	0.40	1.22	1.40	33.54
15	USCG	240	1	1	Sinclair SC381-HL Side Arm	148.3	4.5	4.5	47	R	1.000	0.00	0.00	4.20	1.40	33.54
16	AT&T Mobility	235	4	3	Sinclair SC281-L Side Arm	251	5	5	79	R	1.000	3.00	0.20	32.96	1.20	32.60
17	AT&T Mobility	235	2	3	Dega 58410 Sector Frame	53.3	6.3	2.7	11	F	0.770	3.00	0.20	50.20	1.20	32.60
18	Sprint Nextel	224	12	3	EMS RR90-17-04DP Same Mounts as Above	56	8	2.8	13.5	F	0.730	15.00	0.40	8.46	1.45	32.41
19	Lojack	215.5	1	1	Decibel DB844H90E-XY Sector Frame	48	8.5	6	10	F	0.860	0.00	0.00	7.00	1.40	32.41
20	USCG	200	1	1	8' Omni Side Arm	96	3	3	30	R	1.000	15.00	0.40	5.65	1.40	31.97
21	Marcus Comm.	200	2	2	Sinclair SC281-L Side Arm	251	5	5	79	R	1.000	3.00	0.20	32.00	1.20	31.62
22	USA Mobility	178	3	3	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	50.20	1.20	30.95
23	Metro PCS	160	6	3	Antel BCD-87010 Side Arm	134	2.6	2.6	26.5	R	1.000	3.00	0.20	54.17	1.20	30.95
24	Metro PCS	150	3	3	Kathrein 800 10504 Sector Frame	54	6.1	2.7	17.6	F	0.780	15.00	0.40	51.54	1.20	29.94
25	Sensus Metering	137	1	1	Antel BCD-87010_4 Side Arm	134	2.6	2.6	26.5	R	1.000	3.00	0.20	8.85	1.46	29.04
26	Marcus Comm.	100	1	1	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	51.54	1.20	27.78
27	Lojack	10	1	1	GPS Unit Pipe	12	6	6	10	R	1.000	0.00	0.00	54.17	1.20	25.39
28	USCG	271	1	1	TTA	12	6	6	20	F	1.000	0.00	0.00	2.00	0.80	18.50
29	AT&T Mobility	235	3	3	Powerwave LGP21903 Sector Frame	4.4	6.3	3	25	F	0.670	0.00	0.00	2.00	1.40	33.76
30	AT&T Mobility	235	6	3	Ericsson RRUS 11 (Band 12) Raycap FC12-PCG-10E	17.8	17	7.2	55	F	0.750	15.00	0.40	0.70	1.40	32.41
			1	1							0.670	2.46	0.03	1.05	1.40	32.41

No.	Elevation (ft)	C _A (ft ²)	C _A (Ice) (ft ²)	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	12.40	15.58	0.469	0.442	0.100	0.210	2.55	2.55	4.10	5.41
2	283	55.00	74.25	2.079	2.105	4.000	5.200	1.49	1.51	2.75	3.58
3	212.5	0.00	0.00	0.000	0.000	0.000	0.000	1.71	1.73	3.00	3.90
4	100	50.00	67.50	1.713	1.734	3.000	3.900	1.38	1.40	3.00	3.90
5	303	2.92	4.41	0.110	0.125	3.000	3.900	0.22	0.24	0.22	0.29
6	302	3.00	4.05	0.114	0.115	0.200	0.260	0.30	0.32	0.22	0.33
7	300	5.53	7.15	0.209	0.203	0.070	0.120	0.32	0.32	0.27	0.38
8	311	0.93	1.07	0.036	0.031	0.030	0.045	0.04	0.03	0.03	0.04
9	289	0.00	0.00	0.000	0.000	0.000	0.000	0.85	0.86	0.23	0.30
10	269	0.00	0.00	0.851	0.861	0.230	0.299	0.76	0.77	0.20	0.26
11	262.5	1.34	1.95	0.049	0.053	0.015	0.028	0.16	0.16	0.22	0.29
12	265	0.95	1.24	0.035	0.034	0.011	0.020	1.27	1.28	1.23	1.60
13	265	7.23	7.91	0.264	0.216	1.200	1.560	0.26	0.22	0.04	0.07
14	240	5.56	6.84	0.197	0.182	0.047	0.096	0.30	0.29	0.25	0.36
15	240	10.46	12.60	0.371	0.335	0.079	0.170	0.48	0.44	0.28	0.43
16	235	10.40	12.28	0.367	0.325	0.044	0.117	1.56	1.53	1.24	1.68
17	235	33.75	45.56	1.190	1.205	1.200	1.560	0.22	0.19	0.03	0.07
18	224	40.94	46.71	1.423	1.218	0.120	0.435	2.60	2.41	1.32	2.00
19	215.5	2.40	3.23	0.083	0.083	0.030	0.052	0.19	0.19	0.23	0.31
20	200	10.46	12.60	0.352	0.318	0.079	0.170	0.45	0.42	0.28	0.43
21	200	11.06	14.30	0.372	0.361	0.140	0.240	0.57	0.57	0.54	0.76
22	178	8.71	12.15	0.284	0.297	0.400	0.520	0.58	0.59	0.68	0.94
23	160	15.65	18.55	0.494	0.439	0.600	0.780	1.56	1.52	1.31	1.77
24		33.75	45.56	1.066	1.079	1.200	1.560				
25	137	2.90	4.05	0.088	0.092	0.027	0.054	0.18	0.18	0.23	0.31
26	100	5.53	7.15	0.153	0.148	0.070	0.120	0.24	0.23	0.27	0.38
27	10	3.00	4.05	0.083	0.084	0.200	0.260	0.01	0.01	0.01	0.02
28	271	0.70	0.88	0.026	0.024	0.020	0.027	0.03	0.02	0.02	0.03
29	235	1.08	1.54	0.038	0.041	0.150	0.164	1.23	1.25	1.35	1.72
30	235	33.75	45.56	1.190	1.205	1.200	1.560	0.50	0.44	0.36	0.48
		11.83	13.23	0.417	0.350	0.330	0.446				
		2.46	3.32	0.087	0.088	0.025	0.033				

Site: 88018
Carrier: T-Mobile

Engineer: SAW
Date: 10/01/12

Load Case Description	Dead Load Factor	Wind Load Factor	Ice Load Factor	Strength Factor	Allowable Stress Inc. Factor	Basic Wind Speed	Wind Dir.	Ice Thick.	Ice Density	Temp.	Point Loads
W 0	1.1	1	1	1	1.333333333	85	0	0	56	50	
W 150	1.1	1	1	1	1.333333333	85	160	0	56	50	
W 45	1.1	1	1	1	1.333333333	85	45	0	56	50	
W -45	1.1	1	1	1	1.333333333	85	-45	0	56	50	
W 90	1.1	1	1	1	1.333333333	85	90	0	56	50	
W -90	1.1	1	1	1	1.333333333	85	-90	0	56	50	
W 0 Ice	1.1	1	1	1	1.333333333	73.61	0	0.5	56	10	
W 150 Ice	1.1	1	1	1	1.333333333	73.61	160	0.5	56	10	
W 45 Ice	1.1	1	1	1	1.333333333	73.61	45	0.5	56	10	
W -45 Ice	1.1	1	1	1	1.333333333	73.61	-45	0.5	56	10	
W 90 Ice	1.1	1	1	1	1.333333333	73.61	90	0.5	56	10	
W -90 Ice	1.1	1	1	1	1.333333333	73.61	-90	0.5	56	10	

Angle: 0

No Ice

Joint Label	Force X-Dir (lbs)	Force Y-Dir (lbs)	Force Vertical (lbs)	Moment X-Axis (ft-lbs)	Moment Y-Axis (ft-lbs)	Moment Z-Axis (ft-lbs)
17P	754.10	0.00	1050			
17X	754.10	0.00	1050			
17Y	519.74	1000	0			
17XY	519.74	0.00	1000			
15P	371.75	0.00	687.5025			
15X	371.75	0.00	687.5025			
15Y	371.75	0.00	687.5025			
15XY	371.75	0.00	687.5025			
9P	570.88	0.00	1000.003333			
9X	570.88	0.00	1000.003333			
9Y	570.88	0.00	1000.003333			
9XY	0.00	0.00	0			
4P	460.27	0.00	1000.003333			
4X	460.27	0.00	1000.003333			
4Y	460.27	0.00	1000.003333			
4XY	0.00	0.00	0			
17P	224.22	0.00	215			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
17P	302.67	0.00	220			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
17P	322.43	0.00	270			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
17P	35.64	0.00	30			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
16P	850.81	0.00	230.01			
16X	0.00	0.00	0			
16Y	0.00	0.00	0			
16XY	0.00	0.00	0			
14P	760.64	0.00	200.01			
14X	0.00	0.00	0			
14Y	0.00	0.00	0			
14XY	0.00	0.00	0			
13P	157.97	0.00	215			
13X	0.00	0.00	0			
13Y	0.00	0.00	0			
13XY	0.00	0.00	0			
13P	421.97	0.00	411			
13X	421.97	0.00	411			
13Y	421.97	0.00	411			
13XY	0.00	0.00	0			
13P	87.90	0.00	13.56666667			
13X	87.90	0.00	13.56666667			
13Y	87.90	0.00	13.56666667			
13XY	0.00	0.00	0			
11P	303.62	0.00	247			
11X	0.00	0.00	0			
11Y	0.00	0.00	0			
11XY	0.00	0.00	0			
11P	472.30	0.00	279			
11X	0.00	0.00	0			
11Y	0.00	0.00	0			
11XY	0.00	0.00	0			
11P	518.85	0.00	414.6666667			
11X	518.85	0.00	414.6666667			
11Y	518.85	0.00	414.6666667			
11XY	0.00	0.00	0			
11P	74.72	0.00	9			
11X	74.72	0.00	9			
11Y	74.72	0.00	9			
11XY	0.00	0.00	0			
10P	865.68	0.00	440			
10X	865.68	0.00	440			
10Y	865.68	0.00	440			
10XY	0.00	0.00	0			
9P	185.71	0.00	230			
9X	0.00	0.00	0			
9Y	0.00	0.00	0			
9XY	0.00	0.00	0			
8P	453.07	0.00	279			
8X	0.00	0.00	0			
8Y	0.00	0.00	0			
8XY	0.00	0.00	0			
8P	287.16	0.00	270			
8X	287.16	0.00	270			
8Y	0.00	0.00	0			
8XY	0.00	0.00	0			
7P	192.23	0.00	226.5			
7X	192.23	0.00	226.5			
7Y	192.23	0.00	226.5			
7XY	0.00	0.00	0			
6P	520.09	0.00	435.2			
6X	520.09	0.00	435.2			
6Y	520.09	0.00	435.2			
6XY	0.00	0.00	0			

With Ice

Joint Label	Force X-Dir (lbs)	Force Y-Dir (lbs)	Force Vertical (lbs)
17P	747.09	0.00	1405.060185
17X	747.09	0.00	1405.060185
17Y	526.21	0.00	1300
17XY	526.21	0.00	1300
15P	376.37	0.00	893.7608473
15X	376.37	0.00	893.7608473
15Y	376.37	0.00	893.7608473
15XY	376.37	0.00	893.7608473
9P	577.98	0.00	1300.014463
9X	577.98	0.00	1300.014463
9Y	577.98	0.00	1300.014463
9XY	0.00	0.00	0
4P	466.00	0.00	1300.014463
4X	466.00	0.00	1300.014463
4Y	466.00	0.00	1300.014463
4XY	0.00	0.00	0
17P	240.51	0.00	294.1851852
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
17P	316.69	0.00	327.2901852
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
17P	317.43	0.00	379.8118056
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
17P	30.77	0.00	44.68055556
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
16P	861.40	0.00	299.0433894
16X	0.00	0.00	0
16Y	0.00	0.00	0
16XY	0.00	0.00	0
14P	770.11	0.00	260.0433894
14X	0.00	0.00	0
14Y	0.00	0.00	0
14XY	0.00	0.00	0
13P	163.79	0.00	288.0566204
13X	0.00	0.00	0
13Y	0.00	0.00	0
13XY	0.00	0.00	0
13P	426.86	0.00	534.5165278
13X	426.86	0.00	534.5165278
13Y	426.86	0.00	534.5165278
13XY	0.00	0.00	0
13P	72.15	0.00	24.70714506
13X	72.15	0.00	24.70714506
13Y	72.15	0.00	24.70714506
13XY	0.00	0.00	0
11P	289.72	0.00	356.0405093
11X	0.00	0.00	0
11Y	0.00	0.00	0
11XY	0.00	0.00	0
11P	442.84	0.00	429.6435185
11X	0.00	0.00	0
11Y	0.00	0.00	0
11XY	0.00	0.00	0
11P	509.76	0.00	558.8646296
11X	509.76	0.00	558.8646296
11Y	509.76	0.00	558.8646296
11XY	0.00	0.00	0
11P	64.17	0.00	24.0154321
11X	64.17	0.00	24.0154321
11Y	64.17	0.00	24.0154321
11XY	0.00	0.00	0
10P	802.05	0.00	665.0648148
10X	802.05	0.00	665.0648148
10Y	802.05	0.00	665.0648148
10XY	0.00	0.00	0
9P	187.85	0.00	312.2962963
9X	0.00	0.00	0
9Y	0.00	0.00	0
9XY	0.00	0.00	0
8P	420.36	0.00	429.6435185
8X	0.00	0.00	0
8Y	0.00	0.00	0
8XY	0.00	0.00	0
8P	282.70	0.00	379.8118056
8X	282.70	0.00	379.8118056
8Y	0.00	0.00	0
8XY	0.00	0.00	0
7P	197.80	0.00	313.8440741
7X	197.80	0.00	313.8440741
7Y	197.80	0.00	313.8440741
7XY	0.00	0.00	0
6P	506.24	0.00	591.2026852
6X	506.24	0.00	591.2026852
6Y	506.24	0.00	591.2026852
6XY	0.00	0.00	0

6P	178.37	0.00	226.5
6X	0.00	0.00	0
6Y	0.00	0.00	0
6XY	0.00	0.00	0
4P	235.57	0.00	270
4X	0.00	0.00	0
4Y	0.00	0.00	0
4XY	0.00	0.00	0
OP	8.05	0.00	10
OX	0.00	0.00	0
OY	0.00	0.00	0
OXY	0.00	0.00	0
14P	25.70	0.00	20
14X	0.00	0.00	0
14Y	0.00	0.00	0
14XY	0.00	0.00	0
11P	409.32	0.00	450
11X	409.32	0.00	450
11Y	409.32	0.00	450
11XY	0.00	0.00	0
11P	225.69	0.00	135
11X	138.97	0.00	110
11Y	138.97	0.00	110
11XY	0.00	0.00	0

Foundation

Design Loads (Unfactored)

Compression/Leg:	501.63 k
Uplift/Leg:	403.39 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):	100.0 pcf
Unit Weight of Soil (Below Water Table):	50.0 pcf
Friction Angle of Uplift (A):	20 °
Allowable Compressive Bearing Pressure:	20000 psf
Cohesion:	3000

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:	293.54	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:	432.11	0.93	OK
TIA Case 2:	408.60	0.99	OK

Axial Check

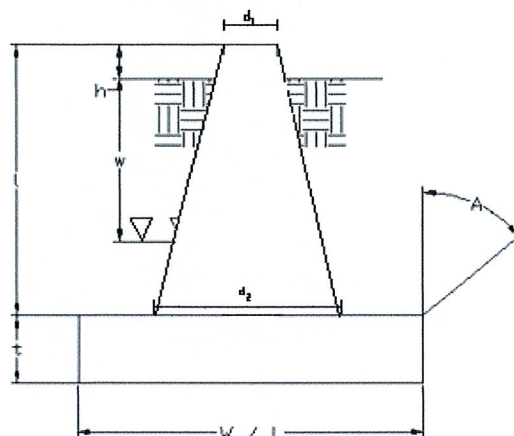
Allowable Axial: $\text{Allowable Bearing Pressure} * W * L$

	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	0.88	OK

Site No.:	88018
Engineer:	SAW
Date:	10/01/12
Carrier:	T-Mobile





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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11007A

Stamford AT&T
168 Catoona Lane
Stamford, CT 06902

December 14, 2012

December 14, 2012

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Re: Emissions Values for Site: **CT11007A - Stamford AT&T**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 168 Catoona Lane, Stamford, CT, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the cellular band is $567 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS band is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 168 Catoona Lane, Stamford, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 GSM channels (1940.000 MHz—to 1950.000 MHz) were considered for each sector of the proposed installation.
- 2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
- 3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
- 6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications



- 7) The antenna mounting height centerline of the proposed antennas is **168 feet** above ground level (AGL)
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CT11007A - Stamford AT&T
Site Address	168 Catoona Lane, Stamford, CT 06902
Site Type	Self Support Tower

Sector 1																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	168	162	None	0	0	48.326044	0.661999	0.06620%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	30	2	60	-3.95	168	162	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	168	162	1-5/8"	0	0	24.163022	0.330999	0.03310%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	168	162	1-5/8"	0	0	24.163022	0.330999	0.03310%
Sector total Power Density Value:															0.132%		
Sector 2																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	168	162	None	0	0	48.326044	0.661999	0.06620%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	30	2	60	-3.95	168	162	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	168	162	1-5/8"	0	0	24.163022	0.330999	0.03310%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	168	162	1-5/8"	0	0	24.163022	0.330999	0.03310%
Sector total Power Density Value:															0.132%		
Sector 3																	
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	168	162	None	0	0	48.326044	0.661999	0.06620%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	30	2	60	-3.95	168	162	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	168	162	1-5/8"	0	0	24.163022	0.330999	0.03310%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	168	162	1-5/8"	0	0	24.163022	0.330999	0.03310%
Sector total Power Density Value:															0.132%		

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.397%
XM	0.410%
Sensus (CL&P)	0.570%
Media FLO	4.200%
AT&T	10.700%
Nextel	1.500%
Marcus	4.420%



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Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public exposure to RF Emissions.

The anticipated Maximum Composite contributions from the T-Mobile facility are **0.397% (0.132% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously.

The anticipated composite MPE value for this site assuming all carriers present is **44.467%** of the allowable FCC established general public limit. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were within the allowable 100% threshold standard per the federal government

Scott Heffernan

RF Engineering Director

EBI Consulting

21 B Street

Burlington, MA 01803



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

December 26, 2012

The Honorable Michael A. Pavia
Mayor
Stamford Government Center
888 Washington Boulevard
P. O. Box 10152
Stamford, CT 06904-2152

RE: **EM-T-MOBILE-135-121221** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 168 Catoona Lane, Stamford, Connecticut.

Dear Mayor Pavia:

The Connecticut Siting Council (Council) received a request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72, a copy of which has already been provided to you.

If you have any questions or comments regarding the proposal, please call me or inform the Council by January 9, 2013.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts
Executive Director

LR/laf

c: Norman Cole, Planning and Zoning Dir., City of Stamford