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

September 10, 2009

Jennifer Young Gaudet
HPC Development LLC
46 Mill Plain Road
Danbury, CT 06811

RE: **EM-T-MOBILE-135-090805** - T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 555 East Main Street, Stamford, Connecticut.

Dear Mrs. Gaudet:

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 six new vertical runs of T-Mobile's 1 5/8-inch diameter coaxial cable shall be stacked directly in front of the existing 12 T-Mobile vertical runs of cable;
- The new T-Mobile antennas and transmission lines shall be installed in accordance with the Communications Structures Engineering, Inc. drawing; and
- Not more than 45 days after completion of construction, the Council shall be notified in writing that the antennas and transmission lines / coax cables were installed as specified.

The proposed modifications are to be implemented as specified here and in your notice dated August 4, 2009, including the placement of all necessary equipment and shelters within the tower compound. 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. Any

deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Dannel P. Malloy, Mayor, City of Stamford
Robert Stein, Planning and Zoning Director, City of Stamford
Christopher B. Fisher, Esq., Cuddy & Feder LLP

Fontaine, Lisa

From: Cole, Norman [NCole@ci.stamford.ct.us]
Sent: Friday, August 14, 2009 2:55 PM
To: CSC-DL Siting Council
Subject: EM-T-MOBILE-135-090805
Attachments: omnipt.doc; snettower.doc; omnipt2.doc

Mr. Phelps:

On behalf of the City of Stamford Land Use Bureau, I am responding to your notification of the above proposal by T-Mobile to modify its PWS facilities on an AT&T tower located at 555 East Main Street. The City of Stamford has expressed concern regarding the visual impact of this lattice tower in the downtown. See attached correspondence from 1998.

It is my recollection that the Siting Council's approval of the 1998 Omnipoint application included a stipulation that the tower owner repaint the tower an unobtrusive color. It has been more than ten years since this approval stipulation with no compliance. Repainting the red 10-foot diameter parabolic antenna at elevation 225' would alone serve to mitigate visual impact.

The original red and white colors, apparently to comply with FAA standards, are no longer appropriate due to the height of buildings that now surround the tower. For reference, I have attached my 1998 list of building heights in the immediate vicinity of the tower, and would note that one additional building has been completed at a height of 350 feet (Trump Parc) and five other buildings have been approved at heights ranging from 350 to 400 feet.

I would appreciate your researching prior permits for this tower and supporting the request of the City of Stamford that every reasonable measure be taken to mitigate the visual impact of this facility.

Norman F. Cole, AICP
Principal Planner
City of Stamford

March 30, 1998

Joel M. Rinebold
Executive Director
Connecticut Siting Council
10 Franklin Street
New Britain, CT 06051

RE: Omnipoint, antenna installation at 555 Main Street, Stamford, CT

Dear Mr. Rinebold:

On March 27, 1998, I requested on behalf of the City of Stamford, additional detailed information regarding the above proposed Omnipoint antenna installation.

I reserve the right to comment upon receipt of this information. However, I would like to submit the following request into the record of this application.

Based on the list of existing and proposed providers using the SNET tower at 555 Main Street, it appears that the original use of the tower by SNET has been abandoned and that the tower is being recycled as a wireless communications site. The City of Stamford has adopted zoning regulations encouraging such wireless antenna installations on existing buildings, but strongly discourages the use of support towers in the downtown where there is an abundance of suitable buildings.

Accordingly, if the Siting Council considers approving expanded use of this tower for wireless antennas, the City of Stamford would recommend that SNET be required to mitigate the extreme visual impact of the current tower. The following actions are recommended:

1) Remove the unused "Horn Antenna" and any other unused antennas and equipment mounted on the tower;

2) Investigate whether FAA regulations would permit the red and white tower to be painted a neutral color. The tower is more than fifty feet lower than the nearby Landmark Tower, and presents no risk to air traffic operations. If a waiver or exception provision is available from any FAA standards, SNET should be required to seek such an exception;

3) Investigate whether the beacon on the tower is mandated by the FAA, and remove it if possible.

Thank you for the opportunity to comment.

Sincerely,

Norman F. Cole
Principal Planner
City of Stamford, CT

omnipt.doc

TO: Bob Erling, Connecticut Siting Council
FROM: Norman F. Cole, Principal Planner, City of Stamford
RE: Building Heights near SNET TOWER @ 555 Main Street
DATE: April 7, 1998

The following tabulation and attached map illustrate existing and planned building heights in the immediate vicinity of the SNET tower at 555 Main Street.

Site #	Owner/Name	Building Height (NGVD)	Distance to SNET
1	SNET	252' (without Horn)	n/a
2	Landmark	320'	700'
3	New Hope Towers	240'	450'
4	10 Stamford Forum	222'	850'
5	8 Stamford Forum	238'	700'
6	6 Stamford Forum	225'	600'
7	4 Stamford Forum	225'	700'
8	2 Stamford Forum (Marriot Hotel)	216'	900'
9	GTE	228'	1,100'
10	Champion	222'	1,300'
11	300 Atlantic	200'	1,200'
12	Gerald Hines (approved site plan)	317'	1,600'
13	Parcel 38 Site (proposed 400'+)	300'+ (no plans)	200'
14	Burdick School Site (approved site plan)	193'	1,200'

April 3, 1998

Joel M. Rinebold
Executive Director
Connecticut Siting Council
10 Franklin Street
New Britain, CT 06051

RE: Omnipoint, antenna installation at 555 Main Street, Stamford, CT

Dear Mr. Rinebold:

Thank you for providing the City of Stamford with the additional information requested regarding mounting of the antennas. The drawings reflect that the antennas will be attached to an existing platform at elevation 113 feet above the roof.

We are pleased to note that the abandoned microwave "horn" antenna will be removed. Painting the antennas to match the existing tower is logical, but misses the point. Based on existing and planned building heights surrounding the tower, there is no reason to maintain the red and white painting scheme and marker beacon. We would continue to urge that this issue be fully explored with the FAA.

The City of Stamford requests that the Siting Council condition approval of the Omnipoint application with a requirement that the tower be repainted and the beacon removed, subject to approval by the FAA. We would like to be included in any discussions with the FAA and will readily provide information in support of our position.

Thank you for the opportunity to comment.

Sincerely,

Norman F. Cole
Principal Planner
City of Stamford, CT

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

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

August 6, 2009

The Honorable Dannel P. Malloy
Mayor
City of Stamford
Stamford Government Center
888 Washington Boulevard
P. O. Box 10152
Stamford, CT 06904-2152

RE: **EM-T-MOBILE-135-090805** – T-Mobile Northeast, LLC notice of intent to modify an existing telecommunications facility located at 555 East Main Street, Stamford, Connecticut.

Dear Mayor Malloy:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by August 20, 2009.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Robert Stein, Planning and Zoning Director, City of Stamford

HPC DEVELOPMENT LLC

EM-T-MOBILE-135-090805

August 4, 2009

VIA OVERNIGHT DELIVERY

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051
Attn: Mr. S. Derek Phelps, Executive Director

Re: T-Mobile Northeast LLC – exempt modification
555 East Main Street, Stamford, Connecticut

Dear Mr. Phelps:

This letter and attachments are submitted on behalf of T-Mobile Northeast LLC ("T-Mobile"). T-Mobile is enhancing the capabilities of its wireless system in Connecticut by implementing UMTS technology. In order to do so, T-Mobile will modify antenna and equipment configurations at a number of its existing 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 attachments is being sent to the Mayor of Stamford.

T-Mobile plans to modify the existing facility at 555 East Main Street, Stamford (coordinates 41°03'14" N, -73°32'09" W). The building and rooftop tower are owned by AT&T (formerly SNET). Attached are an equipment plan and elevation depicting the planned changes, and documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration. Also included is a power density calculation reflecting the modification to T-Mobile's operations at the site.

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

1. The height of the overall structure will be unaffected. T-Mobile's existing antennas and TMAs will remain at an antenna center line of approximately 210' AGL, or 104' on the tower. Three antennas and three TMAs will be installed with an antenna

center line of approximately 205' AGL, or 99' on the tower. Six coaxial cables also will be added. The modifications will not extend the height of the tower.

2. The proposed changes will not extend the site boundaries. T-Mobile's equipment is housed in a room in the underlying building. One equipment cabinet and one power cabinet will be added, for a total of four equipment cabinets, one battery cabinet and one power cabinet.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed changes will be negligible.

4. The changes to the facility 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. As indicated on the attached power density calculation, T-Mobile's operations at the site will result in a power density of 2.2425%; the combined site operations will result in a total power density of 12.9825%.

Please feel free to call me at (860) 798-7454 with questions concerning this matter. Thank you for your consideration.

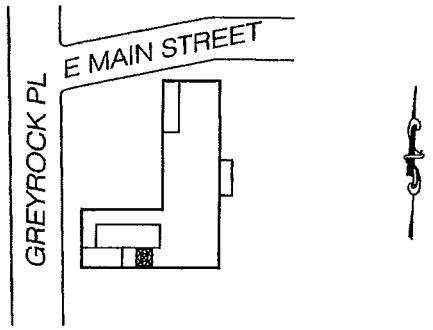
Respectfully yours,

Jennifer Young Gaudet

Jennifer Young Gaudet

cc: Honorable Dannel Malloy, Mayor, City of Stamford
AT&T (underlying property owner)

Attachments

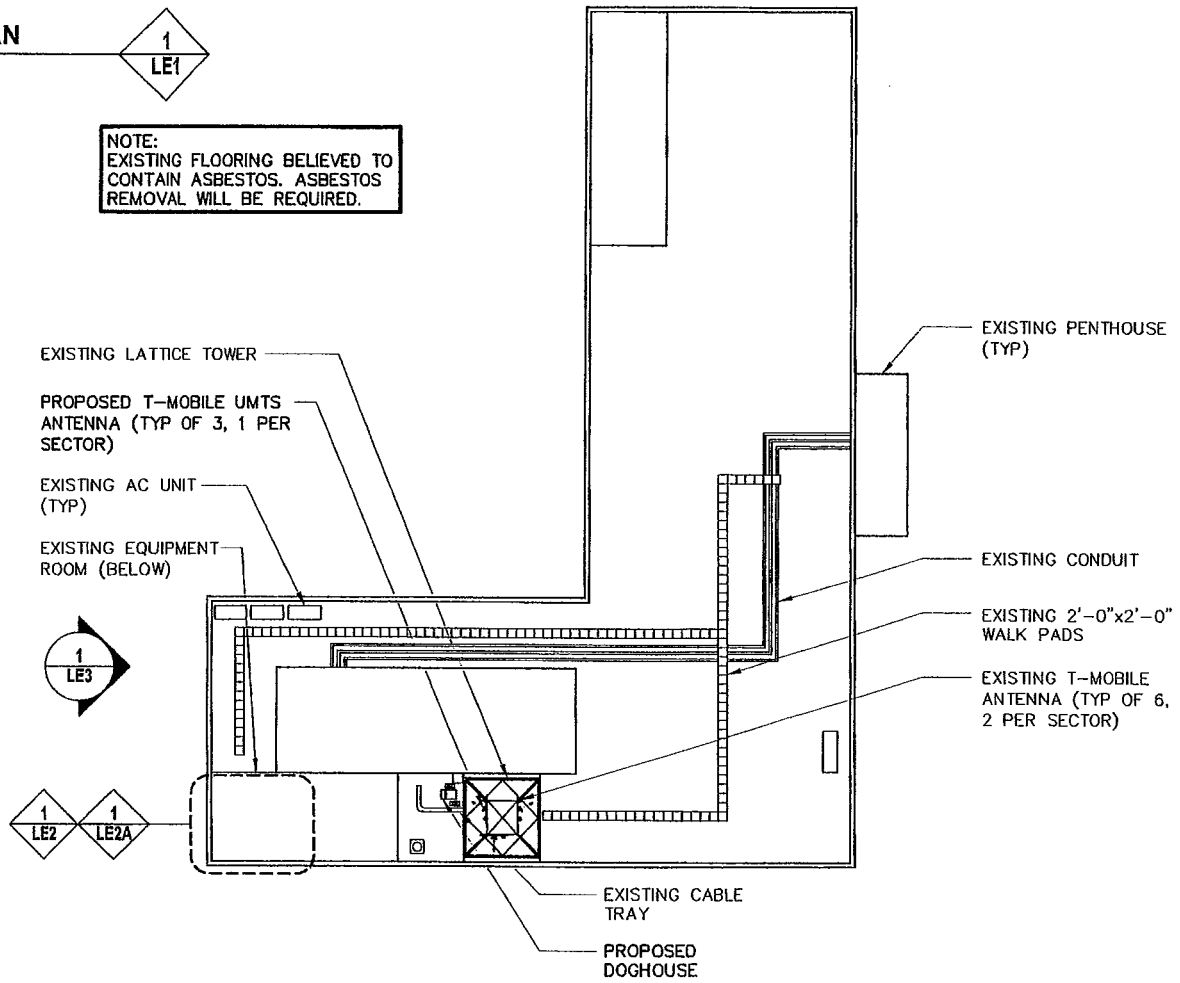


NOTE:
EXISTING ANTENNAS BY OTHERS NOT SHOWN FOR CLARITY

KEY PLAN — 1 / LE1

SCALE: NTS

NOTE:
EXISTING FLOORING BELIEVED TO CONTAIN ASBESTOS. ASBESTOS REMOVAL WILL BE REQUIRED.



ROOF PLAN — 2 / LE1

SCALE: 1" = 40'

NOTES:
1. LEASE EXHIBITS ARE A CONCEPTUAL DESIGN OF LEASE AGREEMENT ONLY. ACTUAL CONSTRUCTION DOCUMENTS MAY VARY TO COMPLY WITH BUILDING CODES.
2. THE INFORMATION SHOWN IS TAKEN FROM A SURVEY PERFORMED BY "KMB DESIGN GROUP, LLC." DURING SITE VISIT.
3. ELECTRIC/ TELCO SERVICES SHALL BE CONFIRMED PRIOR TO CONSTRUCTION DOCUMENT PHASE.
4. 24 HR. 7 DAYS PER WEEK ACCESS IS REQUIRED FOR SERVICE TECHNICIAN.

KMB DESIGN GROUP
www.kmbdg.com

TITLE: KEY PLAN & ROOF PLAN

CLIENT: Omnipoint COMMUNICATIONS, INC dba T-MOBILE/USA 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002

PROJECT: E MAIN STREET

ADDRESS: 555 E MAIN STREET STAMFORD, CT 06901 FAIRFIELD COUNTY

1	05-22-09	REG
0	12-03-08	JLS

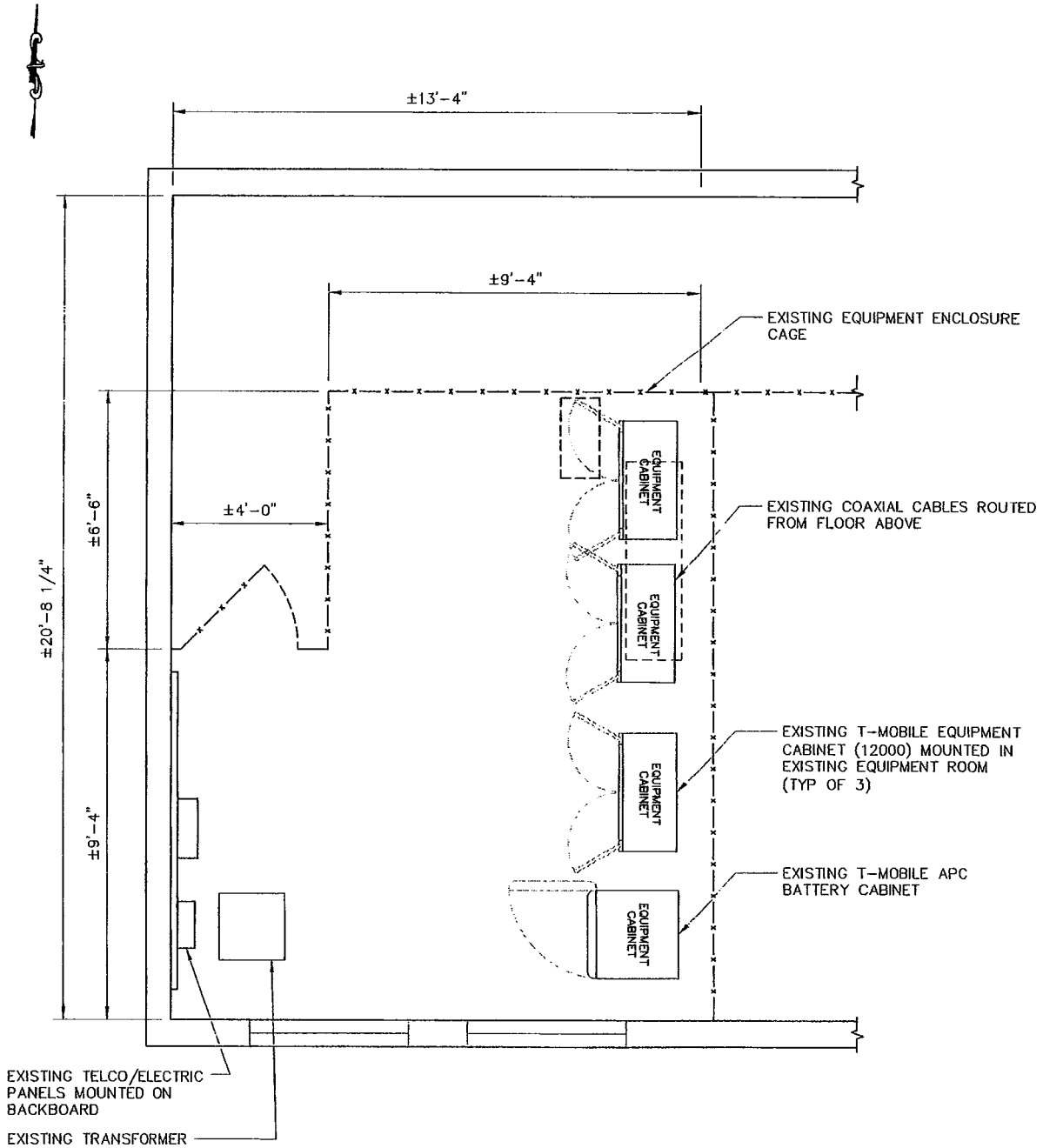
LE1

SITE NO: CT11410A

KMB NO: 350.0004.050

DRAWN BY: JLS

CHECKED BY:



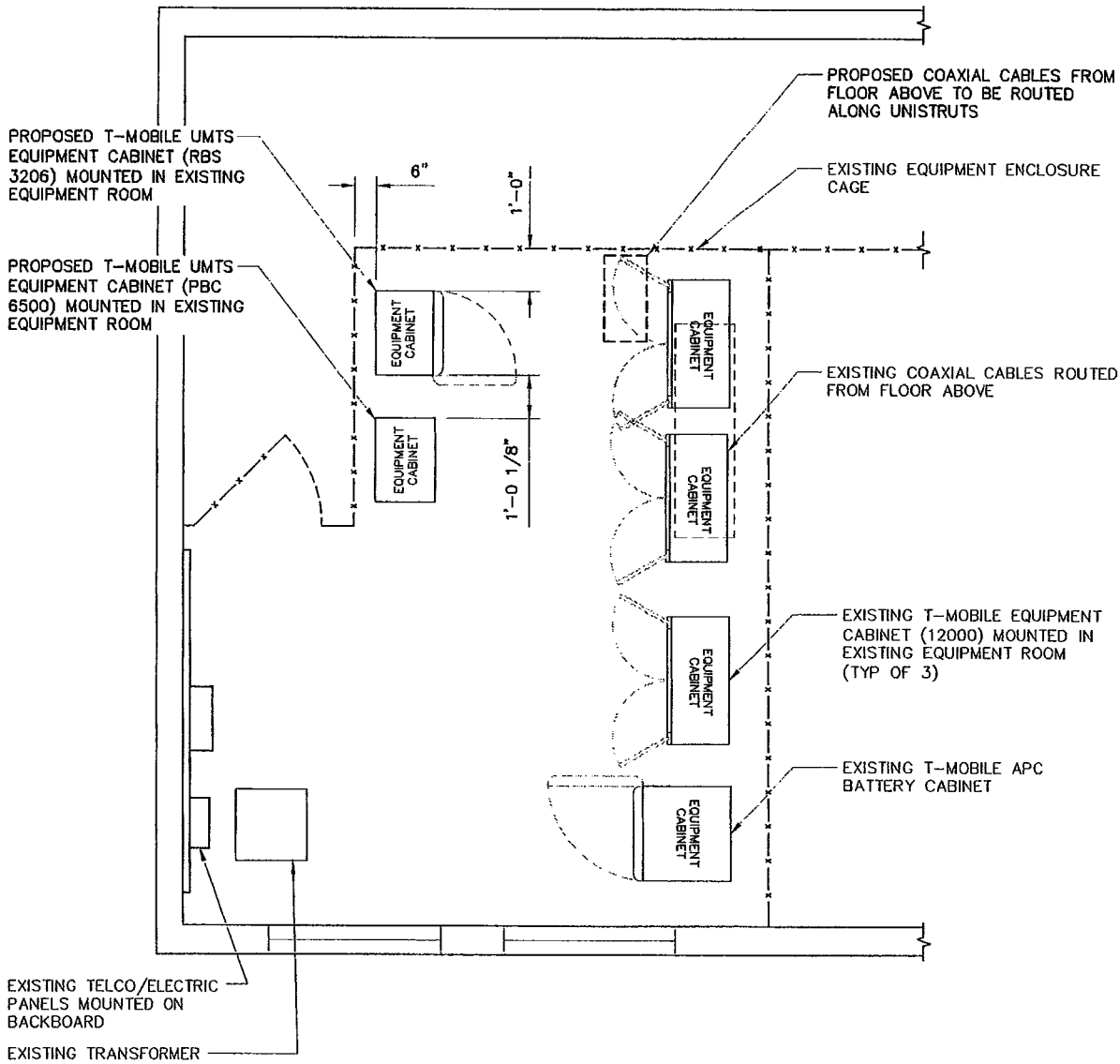
EXISTING EQUIPMENT LAYOUT

1 LE2

SCALE: 1/4" = 1'-0"

KMB DESIGN GROUP
www.kmbdg.com

TITLE: EQUIPMENT LAYOUT	PROJECT: E MAIN STREET		
CLIENT: Omnipoint COMMUNICATIONS, INC. dba T-MOBILE USA 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002	ADDRESS: 555 E MAIN STREET STAMFORD, CT 06901 FAIRFIELD COUNTY	1	05-22-09 REG
		0	12-03-08 JLS
SITE NO: CT11410A	KMB NO: 350.0004.050 DRAWN BY: JLS CHECKED BY:		LE2



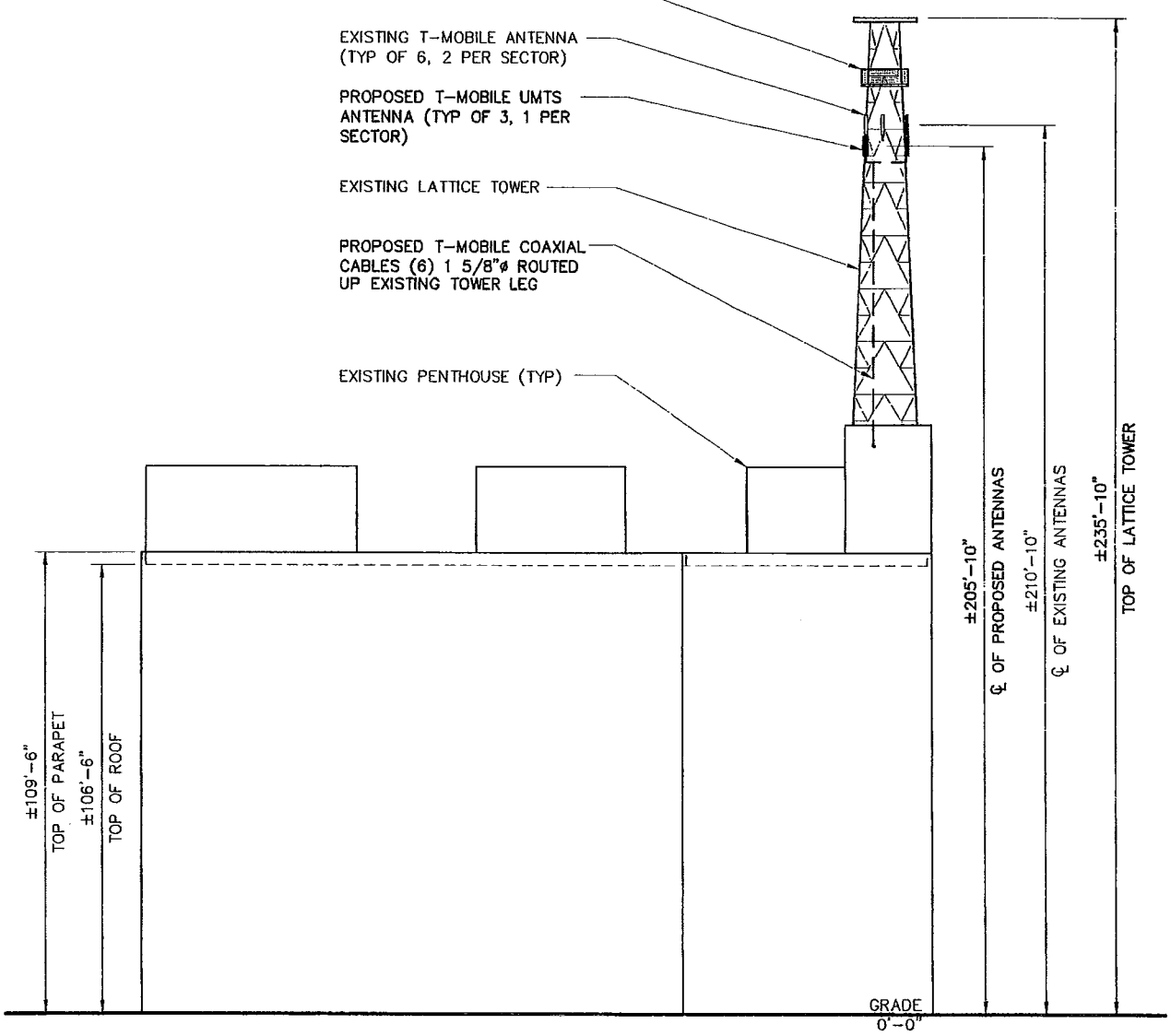
PROPOSED EQUIPMENT LAYOUT 1 / LE2A

SCALE: 1/4" = 1'-0"

KMB DESIGN GROUP
www.kmbdg.com

SITE NO: CT11410A	TITLE: EQUIPMENT LAYOUT	PROJECT: E MAIN STREET	
	CLIENT: Omnipoint COMMUNICATIONS, INC. An T-MOBILE USA 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06001	ADDRESS: 555 E MAIN STREET STAMFORD, CT 06901 FAIRFIELD COUNTY	1 05-22-09 REG 0 12-03-08 JLS
	KMB NO: 350.0004.050 DRAWN BY: JLS CHECKED BY:		LE2A

NOTE:
EXISTING ANTENNAS BY OTHERS NOT SHOWN FOR CLARITY



WEST ELEVATION

SCALE: 1" = 40'

1
LE3

KMB DESIGN GROUP www.kmbdg.com	TITLE: ELEVATION	PROJECT: E MAIN STREET	
	CLIENT: Omnipoint COMMUNICATIONS, INC. 400 FAIRFIELD AVE. 35 GRISTEN ROAD SOUTH BLOOMFIELD, CT 06001	ADDRESS: 555 E MAIN STREET STAMFORD, CT 06901 FAIRFIELD COUNTY	1 05-22-09 REG 0 12-03-08 JLS
SITE NO: CT11410A	KMB NO: 350.0004.050 / DRAWN BY: JLS / CHECKED BY:		LE3

Communication Structures Engineering, Inc.

Mr. Larry Montee
AT&T Corporation National Tower Engineering
1200 Peachtree Street; Atlanta, GA 30309

July 21, 2009
(Rev Ht. of new Antennas)

Re: Structural Review of AT&T's Existing 125-ft Lattice Steel Tower
AT&T Corporate Site: **Stamford Central SBA C.O., CT ; CLLI Code SMFRCT01**
Omnipoint Communications Site: **E. Main St ; Site No. CT11410A;**
Location: 555 Main Street, Stamford, CT 06901; in Fairfield County, CT
Latitude N 41° 03' 12", Longitude W 73° 32' 10"

Dear Mr. Montee,

Communication Structures Engineering, Inc. has completed a structural review of the existing 125-ft. Type 'K' Tower that is located on the roof of the AT&T Central Office Building located at 555 Main Street in Stamford, CT. In accordance with your request, we have performed a structural analysis of this tower to check its capability to support the existing loads as well as the new loads from the proposed **Omnipoint** Communications antennas & transmission line additions. In accordance with AT&T's Requirements the specific loading criteria that we utilized were those prescribed by "*2003 International Building Code*" and "ANSI/TIA/EIA-222-F", *"Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."* Per the above Standards the wind speed that we utilized for the analysis of this structure was the "3 second gust wind speed" of 105-mph (equivalent to a "fastest-mile wind speed" of 85-mph) as specified for Fairfield County, CT.

EXISTING TOWER INFORMATION & DATA
The 125-ft Type 'K' tower at this site was built by the Western Electric Company in 1966 for the Southern New England Telephone Co. to initially support two KS15676 Horn Antennas. The steel tower was fabricated in 1965 by Lehigh Structural Steel Company under their Project # L675. Both of the original KS15676 Horn Antennas have now been removed from this tower.

CSEI utilized the original 1966 tower design & fabrication drawings from our archives to conduct our structural review of this tower. The later tower modification drawings were also used for this analysis. The existing antenna information that was provided to us by AT&T Corporation was used to determine the current tower & antenna loads for this analysis. AT&T's Tenant Specification Document, which was submitted by Omnipoint Communications, was utilized to determine the now proposed Omnipoint antenna and cable requirements for this analysis.

DESIGN CRITERIA
See the attached page for the applicable Design Criteria and Antenna Configuration that were used for this structural analysis.

STRUCTURAL ANALYSIS PROCEDURE
The referenced design criteria combined with wind tunnel test data from tests conducted on AT&T towers, antennas and antenna platforms were utilized to determine the applicable loads for this structure. A frame analysis was performed utilizing the stated wind loads and a computer model of the tower framing modeled on Power Line Systems' "*Tower Program*". The load carrying frame members of this structure were then checked for compliance with the AISC ASD "Specification for Structural Steel Buildings", which is a reference specification accepted by *ANSI/TIA/EIA-222-F* as well as by the *2003 International Building Code*.

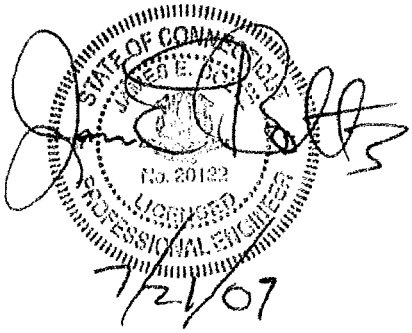
RESULTS OF STRUCTURAL ANALYSIS
CSEI's analysis found that all of the existing tower members had maximum stress levels that were less than the allowable stresses permitted by the AISC Specification. The maximum stress level was found to be 96% of the allowable member capacity. We have therefore concluded that this existing tower is capable of supporting the existing loads as well as the proposed Omnipoint Communications additions in compliance with the "*2003 International Building Code*" & "ANSI/TIA/EIA-222-F" design criteria. This 125-ft steel tower will not require any structural modifications or changes to support the listed equipment, provided that the following conditions are satisfied. However, if the conditions stated below are not upheld, the results of our structural analysis will be invalid:

1.) The six (6) new vertical runs of Omnipoint's 1.625 inch dia. coaxial cable must be stacked directly in front of the existing twelve (12) Omnipoint vertical runs of cable.
2.) The new Omnipoint Communications antennas & transmission lines shall be installed in accordance with the CSEI drawing that will be prepared for this project.

If Omnipoint Communications or any other carriers add any future additional equipment to this tower, this structure should be re-analyzed at that time.
CSEI would be happy to respond to any questions regarding this structural analysis.

Sincerely,

James E. Boltz, P.E. (CT P.E. #20122)



Attachments: 1.) Design Criteria for Existing 125-ft AT&T Tower at Stamford, CT
2.) Structural Calculations for Existing AT&T Tower at Stamford, CT

July 21, 2009
(Rev Ht. of New Antennas)

DESIGN CRITERIA

AT&T Corporation Site: Stamford Central SBA C.O., CT
Omnipoint Communications Site: CT11410A; E. Main ST

Location: 555 Main Street, Stamford, CT 06901
Latitude N 41° 03' 12", Longitude W 73° 32' 10"
Fairfield County, CT

DESIGN STANDARDS

2003 INTERNATIONAL BUILDING CODE ~ 105 MPH (3 Second Gust Wind Speed)
&
ANSI/TIA/EIA-222-F ~ 85 MPH (Fastest Mile Wind Speed)

In addition to the loads from the existing tower framing and platforms the loads from the following antennas and their associated transmission lines were considered in the analysis.

ANTENNA CONFIGURATION (Used for Structural Analysis)

Existing Antennas - To Remain on Tower

1.) (Pagenet) One 8-ft Omni Antenna at 134-ft above tower base plate* and one associated run of 1.625 inch diameter coaxial cable.
2.) (SNET (now AT&T)) Nine Panel Antennas at 130-ft above tower base plate and nine associated runs of 0.875 inch diameter coaxial cable.
3.) (Pagenet) One 6-ft Yagi Antenna at 127-ft above tower base plate* and one associated run of 0.50 inch diameter coaxial cable.
4.) (Westinghouse Broadcast Video) One 10-ft diameter Parabolic Antenna at 117-ft above tower base plate* and two associated EW90 elliptical waveguide runs.
5.) (Omnipoint) Six RFS APXV16-16PV Panel Antennas at 104-ft above tower base plate* with six TMA's (13.2"x 5.5"x 3.2) and twenty-four (24) associated runs of 1.625 inch diameter coaxial cable.
6.) (SNET) (now AT&T)) One EMRS 3-ft Yagi Antenna at 25-ft above tower base plate* and one associated run of 0.50 inch diameter coaxial cable.

New (Proposed) Antennas - To Be Added on Tower

- (Omnipoint) Three (3) RFS APX16DWV-16DWVS-A20 Panel Antennas (53"x13"x 3.15") at 99-ft above tower base plate (approx. 205-ft AGL) and six new runs of 1.625 inch diameter coaxial cable.
  The six (6) new 1.625 inch dia. coax cables shall be installed directly in front of the twelve (12) existing Omnipoint coaxial cables in accordance with CSEI drawings that will be prepared.

(*) *Elevation Note: The Tower Base Plate, which is located at 3-ft above the building roof, is located at an approximate elevation of 106-ft above grade level.*

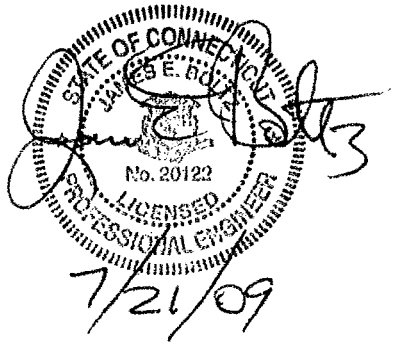
COMMUNICATION STRUCTURES ENGINEERING, INC.
5579-B Chamblee Dunwoody Rd. /Suite 517
Dunwoody, GA 30338 (770) 951-8080

STRUCTURAL CALCULATIONS
FOR
AT&T Owned 125-ft Self-Supported Tower
Stamford, CT

T-Mobile Installation

Fairfield County, CT

Issue Date: July 21, 2009



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DESIGN CRITERIA

AT&T Corporation Site: Stamford Central SBA C.O., CT
Omnipoint Communications Site: CT11410A; E. Main ST

Location: 555 Main Street, Stamford, CT 06901
Latitude N 41° 03' 12", Longitude W 73° 32' 10"
Fairfield County, CT

DESIGN STANDARDS

2003 INTERNATIONAL BUILDING CODE ~ 105 MPH (3 Second Gust Wind Speed)
&
ANSI/TIA/EIA-222-F ~ 85 MPH (Fastest Mile Wind Speed)

In addition to the loads from the existing tower framing and platforms the loads from the following antennas and their associated transmission lines were considered in the analysis.

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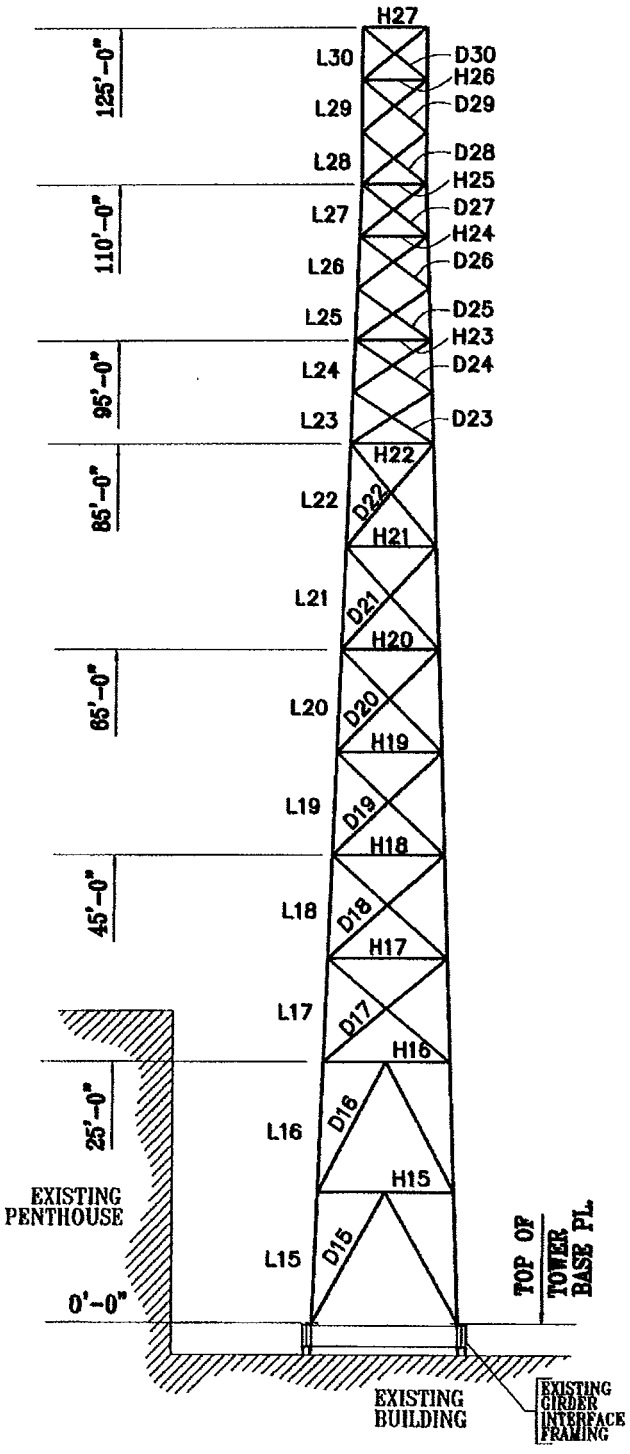
  The six (6) new 1.625 inch dia. coax cables shall be installed directly in front of the twelve (12) existing Omnipoint coaxial cables in accordance with CSEI drawings that will be prepared.

(*) *Elevation Note: The Tower Base Plate, which is located at 3-ft above the building roof, is located at an approximate elevation of 106-ft above grade level.*

125'-0" SELF SUPPORTED TOWER ANALYSIS MODEL FOR STAMFORD, CT



Communication Structures Engineering, Inc.
5572-H Chamblee Dunwoody Rd. / Suite 517
Dunwoody, Georgia 30338
(770) 951-8080

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*****************************************************************************
*                                                                           *
* TOWER - Analysis and Design -  Copyright Power Line Systems, Inc. 1986-2006 *
*                                                                           *
*****************************************************************************

Project Name : Stamford, CT
Project Notes: Existing 125 Feet Self Supported Tower
Project File : c:\analysis\2009\stamford ct 050209\stamford ct 050209.tow
Date run     : 8:09:33 PM Wednesday, May 06, 2009
by           : Tower Version 9.23
Licensed to  : Communication Structures Engineering Inc.

Successfully performed linear analysis

The model has 0 warnings.

Maximum element usage is 95.86% for Angle "g376X" in load case "WIND 45"
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EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft^2)	Face Af Adjust Factor	Face Ar Adjust Factor	Dead Load Factor
1	125.000	110.000	16	52	6.00	6.00	90.00	1.0000	1.0000	2.940
2	110.000	85.000	24	75	6.00	7.72	171.50	1.0000	1.0000	1.610
3	85.000	65.000	12	34	7.72	9.18	168.98	1.1400	1.0000	1.380
4	65.000	45.000	12	34	9.18	10.64	198.14	1.1500	1.0000	1.360
5	45.000	25.000	16	41	10.64	12.09	227.30	1.1600	1.0000	1.300
6	25.000	0.000	20	37	12.09	13.92	325.13	1.2000	1.0000	1.280

Equipment Library:

Equipment Property Label	Stock Number	Weight (lbs)	Wind Area (ft^2)	Ice Area (ft^2)	Shape or EIA Antenna Type	Drag Coef.	Diameter (ft)	Height (ft)
ANTENNA PLATFORM		990.0	22.00	0.00		1.00	0.00	0.00
ACCESS PLATFORM		533.0	13.00	0.00		1.00	0.00	0.00
SNET PLUS OTHERS		200.0	22.50	0.00		1.00	0.00	0.00
10-FT PARABOLIC		300.0	25.00	0.00		1.00	0.00	0.00
TMOBILE		400.0	27.50	0.00		1.00	0.00	0.00

Equipment Connectivity:

Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
AP-1	63P	ANTENNA PLATFORM	0.00
AP-2	63X	ANTENNA PLATFORM	0.00
AP-3	63XY	ANTENNA PLATFORM	0.00

AP-4	63Y	ANTENNA PLATFORM	0.00
ACP-1	60P	ACCESS PLATFORM	0.00
ACP-2	60X	ACCESS PLATFORM	0.00
ACP-3	60XY	ACCESS PLATFORM	0.00
ACP-4	60Y	ACCESS PLATFORM	0.00
S-1	63P	SNET PLUS OTHERS	0.00
S-2	63X	SNET PLUS OTHERS	0.00
S-3	63XY	SNET PLUS OTHERS	0.00
S-4	63Y	SNET PLUS OTHERS	0.00
P-1	62P	10-FT PARABOLIC	0.00
P-2	62X	10-FT PARABOLIC	0.00
P-3	62XY	10-FT PARABOLIC	0.00
P-4	62Y	10-FT PARABOLIC	0.00
T-1	59P	TMOBILE	0.00
T-2	59X	TMOBILE	0.00
T-3	59XY	TMOBILE	0.00
T-4	59Y	TMOBILE	0.00

Linear Appurtenances:

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lbs/ft)	In Face Zone	Include in Wind Load
CLIMBING LADDER	0	125	1	Flat	6	20	10	No	Yes
SNET AND OTTHER COAX	0	125	10	Round	2	0	1.5	No	Yes
TMOBILE COAX	0	104	1	Flat	18	0	48	No	Yes

*** Loads Data

Loads from file: c:\analysis\2009\stamford ct 050209\stamford ct.eia

Structure Height Summary (used for calculating wind/ice adjust with height):
  Structure height above ground 233.00 (ft)
  Elevation of structure bottom for wind height adjustment: 108.00 (ft)
  Structure height for structure gust response factor: 125.00 (ft)
  Structure gust response factor, Gh: 1.1460
  Guy installation temperature: 32.00 (deg F)
  Tower Type: Rectangular Latticed

EIA Rev. F Load Cases:

Load Case Description	Dead Load Factor	Wind Load Factor	Ice Load Factor	Strength Factor	Allowable Stress Increase Factor	Basic Wind Speed (mph)	Wind Dir. (Deg)	Ice Thick. (in)	Ice Density (lbs/ft^3)	Temperature (deg F)	Point Loads	Joint Displ.
WIND 0	1.0000	1.0000	1.0000	1.0000	1.3300	85.000	0	0.0000	0.0000	60.0		
WIND 45	1.0000	1.0000	1.0000	1.0000	1.3300	85.000	45	0.0000	0.0000	60.0		
WIND 0 W ICE	1.0000	1.0000	1.0000	1.0000	1.3300	74.000	0	0.5000	56.0000	30.0		
WIND 45 W ICE	1.0000	1.0000	1.0000	1.0000	1.3300	74.000	45	0.5000	56.0000	30.0		

Equipment Load Case Information for "WIND 0":

Equipment Label	Equipment Property Set	Elevation Above Ground (ft)	qzGh (psf)	Ice Thick. (in)	Total Wind Area (ft^2)	Wind Incidence Angle (deg)	222-G CA	222-G CS	222-G CM	Antenna Axial Load FAM (lbs)	Antenna Side Load FSM (lbs)	Antenna Moment MM (ft-lbs)	Long. Load (lbs)	Trans. Load (lbs)	Vert. Load (lbs)
AP-1	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	0.00							814.68	0.00	990.00
AP-2	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	0.00							814.68	0.00	990.00
AP-3	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	0.00							814.68	0.00	990.00
AP-4	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	0.00							814.68	0.00	990.00
ACP-1	ACCESS PLATFORM	218.00	36.33	0.00	13.00	0.00							472.33	0.00	533.00
ACP-2	ACCESS PLATFORM	218.00	36.33	0.00	13.00	0.00							472.33	0.00	533.00
ACP-3	ACCESS PLATFORM	218.00	36.33	0.00	13.00	0.00							472.33	0.00	533.00
ACP-4	ACCESS PLATFORM	218.00	36.33	0.00	13.00	0.00							472.33	0.00	533.00
S-1	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	0.00							833.19	0.00	200.00
S-2	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	0.00							833.19	0.00	200.00
S-3	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	0.00							833.19	0.00	200.00
S-4	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	0.00							833.19	0.00	200.00
P-1	10-FT PARABOLIC	228.00	36.80	0.00	25.00	0.00							920.05	0.00	300.00
P-2	10-FT PARABOLIC	228.00	36.80	0.00	25.00	0.00							920.05	0.00	300.00
P-3	10-FT PARABOLIC	228.00	36.80	0.00	25.00	0.00							920.05	0.00	300.00
P-4	10-FT PARABOLIC	228.00	36.80	0.00	25.00	0.00							920.05	0.00	300.00
T-1	TMOBILE	213.00	36.09	0.00	27.50	0.00							992.57	0.00	400.00
T-2	TMOBILE	213.00	36.09	0.00	27.50	0.00							992.57	0.00	400.00
T-3	TMOBILE	213.00	36.09	0.00	27.50	0.00							992.57	0.00	400.00

T-4		TMOBILE	213.00	36.09	0.00	27.50	0.00																	992.57	0.00	400.00		

EIA Section Load Case Information for "WIND 0":

Section Label	Z of Top (ft)	Z of Bottom (ft)	Ave. Elev. Above Gnd. (ft)	qzGh (psf)	Ice Thick. (in)	Face AF (ft^2)	Face AR (ft^2)	Face RR*AR (ft^2)	Face AG (ft^2)	Face e	Face DF	Face DR	Face RR	Face CF	Face AE (ft^2)	Face WF (lbs)	NotF AAF (ft^2)	NotF CAF	NotF AAR (ft^2)	NotF CAR	NotF AAR*CAR (ft^2)	NotF WA (lbs)	Total Wind (lbs)	Total Weight (lbs)
1	125.00	110.00	225.50	36.69	0.00	28.51	0.00	0.00	90.0	0.32	1.00	1.00	0.62	2.53	28.5	2649	7.50	2.00	25.00	1.20	30.00	1651	4300	6380
2	110.00	85.00	205.50	35.73	0.00	42.90	0.00	0.00	171.5	0.25	1.00	1.00	0.60	2.77	42.9	4252	41.00	2.00	41.67	1.20	50.00	4716	8968	7143
3	85.00	65.00	183.00	34.56	0.00	41.95	0.00	0.00	169.0	0.25	1.00	1.00	0.60	2.78	41.9	4033	40.00	2.00	33.33	1.20	40.00	4147	8181	5873
4	65.00	45.00	163.00	33.44	0.00	44.15	0.00	0.00	198.1	0.22	1.00	1.00	0.60	2.88	44.1	4257	40.00	2.00	33.33	1.20	40.00	4012	8270	6257
5	45.00	25.00	143.00	32.21	0.00	46.47	0.00	0.00	227.3	0.20	1.00	1.00	0.59	2.96	46.5	4432	40.00	2.00	33.33	1.20	40.00	3865	8297	7045
6	25.00	0.00	120.50	30.67	0.00	47.50	0.00	0.00	325.1	0.15	1.00	1.00	0.58	3.22	47.5	4696	50.00	2.00	41.67	1.20	50.00	4601	9297	9311

Equipment Load Case Information for "WIND 45":

Equipment Label	Equipment Property Set	Elevation Above Ground (ft)	qzGh (psf)	Ice Thick. (in)	Total Wind Area (ft^2)	Wind Incidence Angle (deg)	222-G CA	222-G CS	222-G CM	Antenna Axial Load FAM (lbs)	Antenna Side Load FSM (lbs)	Antenna Moment MM (ft-lbs)	Long. Load (lbs)	Trans. Load (lbs)	Vert. Load (lbs)
AP-1	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	315.00							576.06	576.06	990.00
AP-2	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	315.00							576.06	576.06	990.00
AP-3	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	315.00							576.06	576.06	990.00
AP-4	ANTENNA PLATFORM	233.00	37.03	0.00	22.00	315.00							576.06	576.06	990.00
ACP-1	ACCESS PLATFORM	218.00	36.33	0.00	13.00	315.00							333.99	333.99	533.00
ACP-2	ACCESS PLATFORM	218.00	36.33	0.00	13.00	315.00							333.99	333.99	533.00
ACP-3	ACCESS PLATFORM	218.00	36.33	0.00	13.00	315.00							333.99	333.99	533.00
ACP-4	ACCESS PLATFORM	218.00	36.33	0.00	13.00	315.00							333.99	333.99	533.00
S-1	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	315.00							589.16	589.16	200.00
S-2	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	315.00							589.16	589.16	200.00
S-3	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	315.00							589.16	589.16	200.00
S-4	SNET PLUS OTHERS	233.00	37.03	0.00	22.50	315.00							589.16	589.16	200.00
P-1	10-FT PARABOLIC	228.00	36.80	0.00	25.00	315.00							650.57	650.57	300.00
P-2	10-FT PARABOLIC	228.00	36.80	0.00	25.00	315.00							650.57	650.57	300.00
P-3	10-FT PARABOLIC	228.00	36.80	0.00	25.00	315.00							650.57	650.57	300.00
P-4	10-FT PARABOLIC	228.00	36.80	0.00	25.00	315.00							650.57	650.57	300.00
T-1	TMOBILE	213.00	36.09	0.00	27.50	315.00							701.85	701.85	400.00
T-2	TMOBILE	213.00	36.09	0.00	27.50	315.00							701.85	701.85	400.00
T-3	TMOBILE	213.00	36.09	0.00	27.50	315.00							701.85	701.85	400.00
T-4	TMOBILE	213.00	36.09	0.00	27.50	315.00							701.85	701.85	400.00

EIA Section Load Case Information for "WIND 45":

Section Label	Z of Top (ft)	Z of Bottom (ft)	Ave. Elev. Above Gnd. (ft)	qzGh (psf)	Ice Thick. (in)	Face AF (ft^2)	Face AR (ft^2)	Face RR*AR (ft^2)	Face AG (ft^2)	Face e	Face DF	Face DR	Face RR	Face CF	Face AE (ft^2)	Face WF (lbs)	NotF AAF (ft^2)	NotF CAF	NotF AAR (ft^2)	NotF CAR	NotF AAR*CAR (ft^2)	NotF WA (lbs)	Total Wind (lbs)	Total Weight (lbs)
1	125.00	110.00	225.50	36.69	0.00	28.51	0.00	0.00	90.0	0.32	1.20	1.20	0.62	2.53	34.2	3179	7.50	2.00	25.00	1.20	30.00	1651	4830	6380
2	110.00	85.00	205.50	35.73	0.00	42.90	0.00	0.00	171.5	0.25	1.19	1.19	0.60	2.77	51.0	5050	41.00	2.00	41.67	1.20	50.00	4716	9766	7143
3	85.00	65.00	183.00	34.56	0.00	41.95	0.00	0.00	169.0	0.25	1.19	1.19	0.60	2.78	49.8	4784	40.00	2.00	33.33	1.20	40.00	4147	8931	5873
4	65.00	45.00	163.00	33.44	0.00	44.15	0.00	0.00	198.1	0.22	1.17	1.17	0.60	2.88	51.5	4969	40.00	2.00	33.33	1.20	40.00	4012	8981	6257
5	45.00	25.00	143.00	32.21	0.00	46.47	0.00	0.00	227.3	0.20	1.15	1.15	0.59	2.96	53.6	5111	40.00	2.00	33.33	1.20	40.00	3865	8976	7045

6	25.00	0.00	120.50	30.67	0.00	47.50	0.00	0.00	325.1	0.15	1.11	1.11	0.58	3.22	52.7	5211	50.00	2.00	41.67	1.20	50.00	4601	9811	9311

Equipment Load Case Information for "WIND 0 W ICE":

Equipment Label	Equipment Property Set	Elevation Above Ground (ft)	qzGh (psf)	Ice Thick. (in)	Total Wind Area (ft^2)	Wind Incidence Angle (deg)	222-G CA	222-G CS	222-G CM	Antenna Axial Load FAM (lbs)	Antenna Side Load FSM (lbs)	Antenna Moment MM (ft-lbs)	Long. Load (lbs)	Trans. Load (lbs)	Vert. Load (lbs)
AP-1	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	0.00							617.46	0.00	990.00
AP-2	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	0.00							617.46	0.00	990.00
AP-3	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	0.00							617.46	0.00	990.00
AP-4	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	0.00							617.46	0.00	990.00
ACP-1	ACCESS PLATFORM	218.00	27.54	0.50	13.00	0.00							357.99	0.00	533.00
ACP-2	ACCESS PLATFORM	218.00	27.54	0.50	13.00	0.00							357.99	0.00	533.00
ACP-3	ACCESS PLATFORM	218.00	27.54	0.50	13.00	0.00							357.99	0.00	533.00
ACP-4	ACCESS PLATFORM	218.00	27.54	0.50	13.00	0.00							357.99	0.00	533.00
S-1	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	0.00							631.50	0.00	200.00
S-2	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	0.00							631.50	0.00	200.00
S-3	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	0.00							631.50	0.00	200.00
S-4	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	0.00							631.50	0.00	200.00
P-1	10-FT PARABOLIC	228.00	27.89	0.50	25.00	0.00							697.33	0.00	300.00
P-2	10-FT PARABOLIC	228.00	27.89	0.50	25.00	0.00							697.33	0.00	300.00
P-3	10-FT PARABOLIC	228.00	27.89	0.50	25.00	0.00							697.33	0.00	300.00
P-4	10-FT PARABOLIC	228.00	27.89	0.50	25.00	0.00							697.33	0.00	300.00
T-1	TMOBILE	213.00	27.36	0.50	27.50	0.00							752.29	0.00	400.00
T-2	TMOBILE	213.00	27.36	0.50	27.50	0.00							752.29	0.00	400.00
T-3	TMOBILE	213.00	27.36	0.50	27.50	0.00							752.29	0.00	400.00
T-4	TMOBILE	213.00	27.36	0.50	27.50	0.00							752.29	0.00	400.00

EIA Section Load Case Information for "WIND 0 W ICE":

Section Label	Z of Top (ft)	Z of Bottom (ft)	Ave. Elev. Above Gnd. (ft)	qzGh (psf)	Ice Thick. (in)	Face AF (ft^2)	Face AR (ft^2)	Face RR*AR (ft^2)	Face AG (ft^2)	Face e	Face DF	Face DR	Face RR	Face CF	Face AE (ft^2)	Face WF (lbs)	NotF AAF (ft^2)	NotF CAF	NotF AAR (ft^2)	NotF CAR	NotF AAR*CAR (ft^2)	NotF WA (lbs)	Total Wind (lbs)	Total Weight (lbs)
1	125.00	110.00	225.50	27.81	0.50	28.51	7.91	5.17	90.0	0.40	1.00	1.00	0.65	2.27	33.7	2123	7.50	2.00	38.75	1.20	46.50	1710	3833	7601
2	110.00	85.00	205.50	27.08	0.50	42.90	12.99	8.11	171.5	0.33	1.00	1.00	0.62	2.50	51.0	3456	41.00	2.00	66.17	1.20	79.40	4370	7826	9057
3	85.00	65.00	183.00	26.19	0.50	41.95	9.17	5.66	169.0	0.30	1.00	1.00	0.62	2.58	47.6	3219	40.00	2.00	53.33	1.20	64.00	3772	6991	7447
4	65.00	45.00	163.00	25.34	0.50	44.15	9.74	5.92	198.1	0.27	1.00	1.00	0.61	2.69	50.1	3415	40.00	2.00	53.33	1.20	64.00	3649	7064	7909
5	45.00	25.00	143.00	24.41	0.50	46.47	10.34	6.22	227.3	0.25	1.00	1.00	0.60	2.78	52.7	3570	40.00	2.00	53.33	1.20	64.00	3515	7085	8859
6	25.00	0.00	120.50	23.25	0.50	47.50	9.99	5.85	325.1	0.18	1.00	1.00	0.59	3.08	53.4	3822	50.00	2.00	66.67	1.20	80.00	4184	8007	11335

Equipment Load Case Information for "WIND 45 W ICE":

Equipment Label	Equipment Property Set	Elevation Above Ground (ft)	qzGh (psf)	Ice Thick. (in)	Total Wind Area (ft^2)	Wind Incidence Angle (deg)	222-G CA	222-G CS	222-G CM	Antenna Axial Load FAM (lbs)	Antenna Side Load FSM (lbs)	Antenna Moment MM (ft-lbs)	Long. Load (lbs)	Trans. Load (lbs)	Vert. Load (lbs)
AP-1	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	315.00							436.61	436.61	990.00
AP-2	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	315.00							436.61	436.61	990.00
AP-3	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	315.00							436.61	436.61	990.00
AP-4	ANTENNA PLATFORM	233.00	28.07	0.50	22.00	315.00							436.61	436.61	990.00

ACP-1	ACCESS PLATFORM	218.00	27.54	0.50	13.00	315.00	253.14	253.14	533.00
ACP-2	ACCESS PLATFORM	218.00	27.54	0.50	13.00	315.00	253.14	253.14	533.00
ACP-3	ACCESS PLATFORM	218.00	27.54	0.50	13.00	315.00	253.14	253.14	533.00
ACP-4	ACCESS PLATFORM	218.00	27.54	0.50	13.00	315.00	253.14	253.14	533.00
S-1	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	315.00	446.54	446.54	200.00
S-2	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	315.00	446.54	446.54	200.00
S-3	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	315.00	446.54	446.54	200.00
S-4	SNET PLUS OTHERS	233.00	28.07	0.50	22.50	315.00	446.54	446.54	200.00
P-1	10-FT PARABOLIC	228.00	27.89	0.50	25.00	315.00	493.09	493.09	300.00
P-2	10-FT PARABOLIC	228.00	27.89	0.50	25.00	315.00	493.09	493.09	300.00
P-3	10-FT PARABOLIC	228.00	27.89	0.50	25.00	315.00	493.09	493.09	300.00
P-4	10-FT PARABOLIC	228.00	27.89	0.50	25.00	315.00	493.09	493.09	300.00
T-1	TMOBILE	213.00	27.36	0.50	27.50	315.00	531.95	531.95	400.00
T-2	TMOBILE	213.00	27.36	0.50	27.50	315.00	531.95	531.95	400.00
T-3	TMOBILE	213.00	27.36	0.50	27.50	315.00	531.95	531.95	400.00
T-4	TMOBILE	213.00	27.36	0.50	27.50	315.00	531.95	531.95	400.00

EIA Section Load Case Information for "WIND 45 W ICE":

Section Label	Z of Top (ft)	Z of Bottom (ft)	Ave. Elev. Above Gnd. (ft)	qzGh (psf)	Ice Thick. (in)	Face AF (ft^2)	Face AR (ft^2)	Face RR*AR (ft^2)	Face AG (ft^2)	Face e	Face DF	Face DR	Face RR	Face CF	Face AE (ft^2)	Face WF (lbs)	NotF AAF (ft^2)	NotF CAF	NotF AAR (ft^2)	NotF CAR	NotF AAR*CAR (ft^2)	NotF WA (lbs)	Total Wind (lbs)	Total Weight (lbs)
1	125.00	110.00	225.50	27.81	0.50	28.51	7.91	5.17	90.0	0.40	1.20	1.20	0.65	2.27	40.4	2548	7.50	2.00	38.75	1.20	46.50	1710	4258	7601
2	110.00	85.00	205.50	27.08	0.50	42.90	12.99	8.11	171.5	0.33	1.20	1.20	0.62	2.50	61.2	4147	41.00	2.00	66.17	1.20	79.40	4370	8517	9057
3	85.00	65.00	183.00	26.19	0.50	41.95	9.17	5.66	169.0	0.30	1.20	1.20	0.62	2.58	57.1	3863	40.00	2.00	53.33	1.20	64.00	3772	7635	7447
4	65.00	45.00	163.00	25.34	0.50	44.15	9.74	5.92	198.1	0.27	1.20	1.20	0.61	2.69	60.1	4098	40.00	2.00	53.33	1.20	64.00	3649	7747	7909
5	45.00	25.00	143.00	24.41	0.50	46.47	10.34	6.22	227.3	0.25	1.19	1.19	0.60	2.78	62.6	4239	40.00	2.00	53.33	1.20	64.00	3515	7754	8859
6	25.00	0.00	120.50	23.25	0.50	47.50	9.99	5.85	325.1	0.18	1.13	1.13	0.59	3.08	60.4	4329	50.00	2.00	66.67	1.20	80.00	4184	8514	11335

*** Analysis Results:

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)	Vert. Moment (ft-k)	Bending Moment (ft-k)	Found. Usage %
WIND 0	41P	-16.44	-6.78	183.49	17.78	-0.00	-0.00	-0.00	0.00	0.00
WIND 0	41X	-16.44	6.78	183.49	17.78	-0.00	-0.00	-0.00	0.00	0.00
WIND 0	41XY	-15.29	-5.63	-157.64	16.29	-0.00	-0.00	-0.00	0.00	0.00
WIND 0	41Y	-15.29	5.63	-157.64	16.29	-0.00	-0.00	-0.00	0.00	0.00
WIND 45	41P	-17.13	-17.13	267.62	24.22	-0.00	-0.00	-0.00	0.00	0.00
WIND 45	41X	-7.86	-6.71	12.93	10.33	-0.00	-0.00	-0.00	0.00	0.00
WIND 45	41XY	-15.98	-15.98	-241.77	22.60	-0.00	-0.00	-0.00	0.00	0.00
WIND 45	41Y	-6.71	-7.86	12.93	10.33	-0.00	-0.00	-0.00	0.00	0.00
WIND 0 W ICE	41P	-13.95	-5.80	155.93	15.11	-0.00	-0.00	-0.00	0.00	0.00
WIND 0 W ICE	41X	-13.95	5.80	155.93	15.11	-0.00	-0.00	-0.00	0.00	0.00
WIND 0 W ICE	41XY	-12.57	-4.42	-124.98	13.32	-0.00	-0.00	-0.00	0.00	0.00
WIND 0 W ICE	41Y	-12.57	4.42	-124.98	13.32	-0.00	-0.00	-0.00	0.00	0.00
WIND 45 W ICE	41P	-14.53	-14.53	225.93	20.56	-0.00	-0.00	-0.00	0.00	0.00
WIND 45 W ICE	41X	-6.87	-5.49	15.47	8.80	-0.00	-0.00	-0.00	0.00	0.00
WIND 45 W ICE	41XY	-13.15	-13.15	-194.98	18.60	-0.00	-0.00	-0.00	0.00	0.00
WIND 45 W ICE	41Y	-5.49	-6.87	15.47	8.80	-0.00	-0.00	-0.00	0.00	0.00

*** Overall summary for all load cases - Usage = Maximum Stress / Allowable Stress
Printed capacities do not include EIA allowable stress increase for wind load cases.
Printed capacities do not include the strength factor entered for each loadcase.

Group Summary (Compression Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Max Use In Comp. %	Comp. Control Member	Comp. Force (kips)	Comp. Control Load Case	L/R Capacity (kips)	Comp. Conn. Shear Capacity (kips)	Comp. Conn. Bearing Capacity (kips)	RLX	RLY	RLZ	L/R	Length Comp. Member (ft)	Curve No.	No. Of Bolts Comp.
L15	LEG	SAE	6X6X0.875	36.0	93.84	93.84	g351X	-240.342	WIND 45	192.571	0.000	0.000	0.250	0.250	0.250	32.09	12.517	1	0
L16	LEG	SAE	6X6X0.875	36.0	95.86	95.86	g376X	-211.153	WIND 45	165.610	0.000	0.000	0.500	0.500	0.500	64.19	12.517	1	0
L17	LEG	SAE	6X6X0.75	36.0	94.86	94.86	g401X	-194.127	WIND 45	153.869	0.000	0.000	0.500	0.500	0.500	51.35	10.013	1	0
L18	LEG	SAE	6X6X0.75	36.0	85.17	85.17	g417X	-174.304	WIND 45	153.869	0.000	0.000	0.500	0.500	0.500	51.35	10.013	1	0
L19	LEG	SAE	6X6X0.625	36.0	87.14	87.14	g435X	-150.543	WIND 45	129.897	0.000	0.000	0.500	0.500	0.500	50.92	10.013	1	0
L20	LEG	SAE	6X6X0.625	36.0	74.57	74.57	g451X	-128.836	WIND 45	129.898	0.000	0.000	0.500	0.500	0.500	50.91	10.013	1	0
L21	LEG	SAE	6X6X0.5625	36.0	67.79	67.79	g469X	-105.911	WIND 45	117.474	0.000	0.000	0.500	0.500	0.500	50.92	10.013	1	0
L22	LEG	SAE	6X6X0.5625	36.0	53.71	53.71	g485X	-83.917	WIND 45	117.474	0.000	0.000	0.500	0.500	0.500	50.91	10.013	1	0
L23	LEG	SAE	5X5X0.5	36.0	67.42	67.42	g503X	-73.776	WIND 45	82.278	0.000	0.000	1.000	1.000	1.000	61.12	5.007	1	0
L24	LEG	SAE	5X5X0.5	36.0	57.05	57.05	g515X	-62.435	WIND 45	82.278	0.000	0.000	1.000	1.000	1.000	61.12	5.007	1	0
L25	LEG	SAE	5X5X0.5	36.0	46.87	46.87	g532X	-51.294	WIND 45	82.285	0.000	0.000	1.000	1.000	1.000	61.10	5.005	1	0
L26	LEG	SAE	5X5X0.5	36.0	36.73	36.73	g544X	-40.193	WIND 45	82.285	0.000	0.000	1.000	1.000	1.000	61.10	5.005	1	0

L27	LEG	SAE	5X5X0.5	36.0	25.10	25.10	g560X	-27.473	WIND 45	82.285	0.000	0.000	1.000	1.000	1.000	61.10	5.005	1	0
L28	LEG	SAE	4X4X0.375	36.0	30.83	30.83	g578X	-18.502	WIND 45	45.128	0.000	0.000	1.000	1.000	1.000	76.14	5.000	1	0
L29	LEG	SAE	4X4X0.375	36.0	18.27	18.27	g579X	-10.968	WIND 45	45.128	0.000	0.000	1.000	1.000	1.000	76.14	5.000	1	0
L30	LEG	SAE	4X4X0.375	36.0	5.76	5.76	g582X	-3.459	WIND 45	45.128	0.000	0.000	1.000	1.000	1.000	76.14	5.000	1	0
D15	DIA	DAE	2.5X2.5X0.25	36.0	78.95	78.95	g355P	-20.487	WIND 0	19.511	0.000	0.000	0.500	1.000	0.500	144.34	14.313	6	0
D16	DIA	DAE	2.5X2.5X0.25	36.0	80.21	80.21	g380P	-21.232	WIND 0	19.903	0.000	0.000	0.500	1.000	0.500	142.16	14.098	6	0
D17	DIA	SAE	3X3X0.25	36.0	94.62	94.62	g405P	-12.410	WIND 45	9.861	0.000	0.000	0.500	0.750	0.500	156.26	15.418	5	0
D18	DIA	SAE	3X3X0.25	36.0	81.63	81.63	g421P	-11.346	WIND 45	10.451	0.000	0.000	0.500	0.750	0.500	150.71	14.871	5	0
D19	DIA	SAE	3X3X0.25	36.0	80.44	80.44	g439P	-11.848	WIND 45	11.075	0.000	0.000	0.500	0.750	0.500	145.33	14.340	5	0
D20	DIA	SAE	3X3X0.25	36.0	74.36	74.36	g455P	-11.603	WIND 45	11.732	0.000	0.000	0.500	0.750	0.500	140.14	13.827	5	0
D21	DIA	SAE	3X3X0.25	36.0	67.51	67.51	g473P	-11.152	WIND 45	12.420	0.000	0.000	0.500	0.750	0.500	135.14	13.334	5	0
D22	DIA	SAE	3X3X0.25	36.0	64.43	64.43	g489P	-11.255	WIND 45	13.135	0.000	0.000	0.500	0.750	0.500	130.38	12.864	5	0
D23	DIA	SAU	2.5X2X0.25	36.0	53.43	53.43	g507X	-6.321	WIND 0	8.895	0.000	0.000	0.500	0.750	0.500	137.53	9.047	5	0
D24	DIA	SAU	2.5X2X0.25	36.0	50.78	50.78	g519X	-6.335	WIND 0	9.380	0.000	0.000	0.500	0.750	0.500	132.94	8.745	5	0
D25	DIA	SAU	2.5X2X0.25	36.0	49.04	49.04	g536P	-6.438	WIND 0	9.872	0.000	0.000	0.500	0.750	0.500	128.65	8.462	5	0
D26	DIA	SAU	2.5X2X0.25	36.0	46.28	46.28	g548P	-6.370	WIND 0	10.350	0.000	0.000	0.500	0.750	0.500	124.64	8.198	5	0
D27	DIA	SAU	2.5X2X0.25	36.0	36.94	36.94	g564P	-5.312	WIND 0	10.812	0.000	0.000	0.500	0.750	0.500	120.70	7.939	5	0
D28	DIA	SAU	2.5X2X0.25	36.0	30.26	30.26	g590X	-4.426	WIND 0	10.995	0.000	0.000	0.500	0.750	0.500	118.74	7.810	3	0
D29	DIA	SAU	2.5X2X0.25	36.0	27.41	27.41	g598X	-4.009	WIND 0	10.995	0.000	0.000	0.500	0.750	0.500	118.74	7.810	3	0
D30	DIA	SAU	2.5X2X0.25	36.0	18.07	18.07	g606X	-2.666	WIND 0	11.091	0.000	0.000	0.500	0.750	0.500	118.74	7.810	1	0
H15	HOR	DAE	2.5X2.5X0.25	36.0	22.63	22.63	g363Y	-9.162	WIND 0	30.440	0.000	0.000	1.000	1.000	1.000	101.48	6.503	1	0
H16	HOR	DAE	2.5X2.5X0.25	36.0	21.53	21.53	g388XY	-9.321	WIND 45	32.556	0.000	0.000	1.000	1.000	1.000	94.36	6.047	1	0
H17	HOR	SAE	2.5X2.5X0.25	36.0	68.47	68.47	g409Y	-6.714	WIND 0	7.372	0.000	0.000	0.500	1.000	0.500	177.33	11.364	6	0
H18	HOR	SAE	2.5X2.5X0.25	36.0	44.03	44.03	g425Y	-6.387	WIND 0	10.908	0.000	0.000	0.500	0.700	0.500	129.97	10.636	5	0
H19	HOR	SAE	2.5X2.5X0.25	36.0	58.36	58.36	g443Y	-6.436	WIND 0	8.292	0.000	0.000	0.500	1.000	0.500	154.58	9.906	5	0
H20	HOR	SAE	2.5X2.5X0.25	36.0	36.95	36.95	g459Y	-6.338	WIND 0	12.897	0.000	0.000	0.500	0.600	0.500	112.15	9.178	3	0
H21	HOR	SAE	2.5X2.5X0.25	36.0	41.09	41.09	g477Y	-5.831	WIND 0	10.670	0.000	0.000	0.500	1.000	0.500	131.83	8.448	5	0
H22	HOR	SAE	2.5X2.5X0.25	36.0	15.60	15.60	g493Y	-2.942	WIND 0	14.178	0.000	0.000	0.500	0.800	0.500	96.37	7.720	3	0
H23	HOR	SAE	2.5X2.5X0.25	36.0	3.09	3.09	g523Y	-0.319	WIND 0	7.767	0.000	0.000	1.000	1.000	1.000	170.84	6.990	6	0
H24	HOR	SAU	2.5X2X0.25	36.0	5.98	5.98	g552Y	-0.514	WIND 0	6.473	0.000	0.000	1.000	1.000	1.000	179.15	6.330	6	0
H25	HOR	CHN	C7 X 9.8	36.0	1.25	1.25	g568Y	-0.649	WIND 0	39.170	0.000	0.000	1.000	1.000	1.000	69.23	6.000	3	0
H26	HOR	SAE	2.5X2.5X0.25	36.0	0.54	0.00	g615X	0.000		9.554	0.000	0.000	1.000	1.000	1.000	146.64	6.000	6	0
H27	HOR	CHN	C8 x 11.5	36.0	0.36	0.15	g616Y	-0.072	WIND 0	35.909	0.000	0.000	1.000	1.000	1.000	115.20	6.000	3	0
R1	RUD	SAE	3X3X0.25	36.0	2.97	2.97	g392Y	-1.075	WIND 45	27.243	0.000	0.000	0.250	0.250	0.250	43.34	8.552	1	0

Group Summary (Tension Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Max Use In Tens. %	Tension Control Member	Tension Force (kips)	Tension Control Load Case	Net Tens. Section Capacity (kips)	Conn. Tens. Shear Capacity (kips)	Conn. Tens. Bearing Capacity (kips)	Conn. Tens. Rupture Capacity (kips)	Length Tens. Member (ft)	No. Of Bolts Tens.	No. Of Holes	Hole Diameter (in)
L15	LEG	SAE	6X6X0.875	36.0	93.84	77.39	g351Y	216.322	WIND 45	210.168	0.000	0.000	0.000	12.517	0	0.000	0
L16	LEG	SAE	6X6X0.875	36.0	95.86	67.93	g376Y	189.880	WIND 45	210.168	0.000	0.000	0.000	12.517	0	0.000	0
L17	LEG	SAE	6X6X0.75	36.0	94.86	72.48	g401Y	175.737	WIND 45	182.304	0.000	0.000	0.000	10.013	0	0.000	0
L18	LEG	SAE	6X6X0.75	36.0	85.17	64.65	g417Y	156.760	WIND 45	182.304	0.000	0.000	0.000	10.013	0	0.000	0
L19	LEG	SAE	6X6X0.625	36.0	87.14	66.18	g435Y	135.186	WIND 45	153.576	0.000	0.000	0.000	10.013	0	0.000	0
L20	LEG	SAE	6X6X0.625	36.0	74.57	56.11	g451Y	114.606	WIND 45	153.576	0.000	0.000	0.000	10.013	0	0.000	0
L21	LEG	SAE	6X6X0.5625	36.0	67.79	50.80	g469Y	93.833	WIND 45	138.888	0.000	0.000	0.000	10.013	0	0.000	0
L22	LEG	SAE	6X6X0.5625	36.0	53.71	39.54	g485Y	73.044	WIND 45	138.888	0.000	0.000	0.000	10.013	0	0.000	0
L23	LEG	SAE	5X5X0.5	36.0	67.42	45.96	g503Y	62.720	WIND 45	102.600	0.000	0.000	0.000	5.007	0	0.000	0
L24	LEG	SAE	5X5X0.5	36.0	57.05	38.16	g515Y	52.067	WIND 45	102.600	0.000	0.000	0.000	5.007	0	0.000	0
L25	LEG	SAE	5X5X0.5	36.0	46.87	30.42	g532Y	41.507	WIND 45	102.600	0.000	0.000	0.000	5.005	0	0.000	0

L26	LEG	SAE	5X5X0.5	36.0	36.73	22.67	g544Y	30.928	WIND 45	102.600	0.000	0.000	0.000	5.005	0	0.000	0
L27	LEG	SAE	5X5X0.5	36.0	25.10	14.87	g560Y	20.290	WIND 45	102.600	0.000	0.000	0.000	5.005	0	0.000	0
L28	LEG	SAE	4X4X0.375	36.0	30.83	16.09	g578Y	13.217	WIND 45	61.776	0.000	0.000	0.000	5.000	0	0.000	0
L29	LEG	SAE	4X4X0.375	36.0	18.27	7.68	g579Y	6.308	WIND 45	61.776	0.000	0.000	0.000	5.000	0	0.000	0
L30	LEG	SAE	4X4X0.375	36.0	5.76	0.88	g582Y	0.720	WIND 45	61.776	0.000	0.000	0.000	5.000	0	0.000	0
D15	DIA	DAE	2.5X2.5X0.25	36.0	78.95	29.18	g355Y	19.954	WIND 0	51.408	0.000	0.000	0.000	14.313	0	0.000	0
D16	DIA	DAE	2.5X2.5X0.25	36.0	80.21	29.56	g380Y	20.210	WIND 0	51.408	0.000	0.000	0.000	14.098	0	0.000	0
D17	DIA	SAE	3X3X0.25	36.0	94.62	28.01	g405XY	11.587	WIND 45	31.104	0.000	0.000	0.000	15.418	0	0.000	0
D18	DIA	SAE	3X3X0.25	36.0	81.63	25.57	g421XY	10.579	WIND 45	31.104	0.000	0.000	0.000	14.871	0	0.000	0
D19	DIA	SAE	3X3X0.25	36.0	80.44	26.40	g439XY	10.921	WIND 45	31.104	0.000	0.000	0.000	14.340	0	0.000	0
D20	DIA	SAE	3X3X0.25	36.0	74.36	25.75	g455XY	10.652	WIND 45	31.104	0.000	0.000	0.000	13.827	0	0.000	0
D21	DIA	SAE	3X3X0.25	36.0	67.51	24.54	g473XY	10.151	WIND 45	31.104	0.000	0.000	0.000	13.334	0	0.000	0
D22	DIA	SAE	3X3X0.25	36.0	64.43	24.52	g489XY	10.145	WIND 45	31.104	0.000	0.000	0.000	12.864	0	0.000	0
D23	DIA	SAU	2.5X2X0.25	36.0	53.43	20.84	g507XY	6.347	WIND 0	22.896	0.000	0.000	0.000	9.047	0	0.000	0
D24	DIA	SAU	2.5X2X0.25	36.0	50.78	20.61	g519XY	6.277	WIND 0	22.896	0.000	0.000	0.000	8.745	0	0.000	0
D25	DIA	SAU	2.5X2X0.25	36.0	49.04	21.00	g536Y	6.395	WIND 0	22.896	0.000	0.000	0.000	8.462	0	0.000	0
D26	DIA	SAU	2.5X2X0.25	36.0	46.28	20.99	g548Y	6.391	WIND 0	22.896	0.000	0.000	0.000	8.198	0	0.000	0
D27	DIA	SAU	2.5X2X0.25	36.0	36.94	15.73	g564Y	4.791	WIND 0	22.896	0.000	0.000	0.000	7.939	0	0.000	0
D28	DIA	SAU	2.5X2X0.25	36.0	30.26	14.31	g590XY	4.359	WIND 0	22.896	0.000	0.000	0.000	7.810	0	0.000	0
D29	DIA	SAU	2.5X2X0.25	36.0	27.41	13.38	g598XY	4.076	WIND 0	22.896	0.000	0.000	0.000	7.810	0	0.000	0
D30	DIA	SAU	2.5X2X0.25	36.0	18.07	7.63	g606XY	2.324	WIND 0	22.896	0.000	0.000	0.000	7.810	0	0.000	0
H15	HOR	DAE	2.5X2.5X0.25	36.0	22.63	13.99	g363P	9.568	WIND 0	51.408	0.000	0.000	0.000	6.503	0	0.000	0
H16	HOR	DAE	2.5X2.5X0.25	36.0	21.53	14.42	g388P	9.862	WIND 45	51.408	0.000	0.000	0.000	6.047	0	0.000	0
H17	HOR	SAE	2.5X2.5X0.25	36.0	68.47	23.03	g409P	7.874	WIND 0	25.704	0.000	0.000	0.000	11.364	0	0.000	0
H18	HOR	SAE	2.5X2.5X0.25	36.0	44.03	20.51	g425P	7.011	WIND 0	25.704	0.000	0.000	0.000	10.636	0	0.000	0
H19	HOR	SAE	2.5X2.5X0.25	36.0	58.36	22.57	g443P	7.715	WIND 0	25.704	0.000	0.000	0.000	9.906	0	0.000	0
H20	HOR	SAE	2.5X2.5X0.25	36.0	36.95	20.50	g459P	7.008	WIND 0	25.704	0.000	0.000	0.000	9.178	0	0.000	0
H21	HOR	SAE	2.5X2.5X0.25	36.0	41.09	20.91	g477P	7.149	WIND 0	25.704	0.000	0.000	0.000	8.448	0	0.000	0
H22	HOR	SAE	2.5X2.5X0.25	36.0	15.60	9.24	g493P	3.159	WIND 0	25.704	0.000	0.000	0.000	7.720	0	0.000	0
H23	HOR	SAE	2.5X2.5X0.25	36.0	3.09	1.01	g523P	0.344	WIND 0	25.704	0.000	0.000	0.000	6.990	0	0.000	0
H24	HOR	SAU	2.5X2X0.25	36.0	5.98	2.77	g552P	0.845	WIND 0	22.896	0.000	0.000	0.000	6.330	0	0.000	0
H25	HOR	CHN	C7 X 9.8	36.0	1.25	0.97	g568P	0.803	WIND 0	61.992	0.000	0.000	0.000	6.000	0	0.000	0
H26	HOR	SAE	2.5X2.5X0.25	36.0	0.54	0.54	g614Y	0.185	WIND 0	25.704	0.000	0.000	0.000	6.000	0	0.000	0
H27	HOR	CHN	C8 x 11.5	36.0	0.36	0.36	g499X	0.353	WIND 0 W I	73.008	0.000	0.000	0.000	10.918	0	0.000	0
R1	RUD	SAE	3X3X0.25	36.0	2.97	2.49	g392X	1.028	WIND 45	31.104	0.000	0.000	0.000	8.552	0	0.000	0

*** End of Report

T-Mobile

T-Mobile USA Inc.
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Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: HPC
From: Farid Marbouh - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11410A
Date: July 24, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile antenna installation on a Self Support Tower at 555 Main St., Stamford, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

1) The emissions from T-Mobile transmitters are in the (1940-1949.8), (2140-2145), (2110-2120)MHz frequency Band.
2) The antenna array consists of three sectors, with 3 antennas per sector.
3) The model number for GSM antenna is APX16PV-16PVL.
3) The model number for UMTS antenna is APX16DWV-16DWV.
4) GSM antenna center line height is 210 ft.
4) UMTS antenna center line height is 205 ft.
5) The maximum transmit power from any GSM sector is 2005.03 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2139.78 Watts Effective Radiated Power (EiRP) assuming 2 channels per sector.
6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
7) Power levels emitting from the antennas 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.
8) The average ground level of the studied area does not change significantly with respect to the transmitting location.

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile antenna installation on a Self Support Tower at 555 Main St., Stamford, CT, is 0.02242 mW/cm^2. This value represents 2.242% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.
The combined Power Density from other carriers is 10.74%. The combined Power Density for the site is 12.982% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CT11410A**
Site Address:	**555 Main St.**
Town:	**Stamford**
Tower Height:	**245 ft.**
Tower Style:	**Self Support Tower**

GSM Data		**UMTS Data**	
Base Station TX output	20 W	**Base Station TX output**	40 W
Number of channels	8	**Number of channels**	2
Antenna Model	APX16PV-16PVL	**Antenna Model**	APX16DWV-16DWV
Cable Size	1 5/8 in.	**Cable Size**	1 5/8 in.
Cable Length	200 ft.	**Cable Length**	192 ft.
Antenna Height	210.0 ft.	**Antenna Height**	205.0 ft.
Ground Reflection	1.6	**Ground Reflection**	1.6
Frequency	1945.0 MHz	**Frequency**	2.1 GHz
Jumper & Connector loss	4.50 dB	**Jumper & Connector loss**	1.50 dB
Antenna Gain	17.8 dBi	**Antenna Gain**	18.0 dBi
Cable Loss per foot	0.0116 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	2.3200 dB	**Total Cable Loss**	2.2272 dB
Total Attenuation	6.8200 dB	**Total Attenuation**	3.7272 dB
Total EIRP per Channel	53.99 dBm	**Total EIRP per Channel**	60.29 dBm
(In Watts)	250.63 W	**(In Watts)**	1069.89 W
Total EIRP per Sector	63.02 dBm	**Total EIRP per Sector**	63.30 dBm
(In Watts)	2005.03 W	**(In Watts)**	2139.78 W
nsg	10.9800	**nsg**	14.2728
Power Density (S) =	**0.010570 mW/cm^2**	**Power Density (S) =**	**0.011855 mW/cm^2**
T-Mobile Worst Case % MPE =		**2.2425%**	

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	**% of Standard**
Verizon	
Cingular	4.2900 %
Sprint/Nextel	
AT&T Wireless	
Pocket	
MetroPCS	
Other Antenna Systems	6.4500 %
Total Excluding T-Mobile	**10.7400 %**
T-Mobile	2.2425
Total % MPE for Site	**12.9825%**