

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 21, 2012

Marcia M. Escobedo, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604

RE: **EM-T-MOBILE-015-120828** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 1320 Chopsey Hill Road, Bridgeport, Connecticut.

Dear Attorney Escobedo:

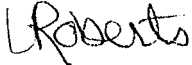
The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- The tower shall be reinforced in accordance with the recommendations made in the Structural Analysis Summary Report prepared by Tectonic Engineering & Surveying Consultants dated August 23, 2012, and stamped by Jeffrey Kirby;
- Prior to antenna installation, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the recommended modifications have been completed and the tower and foundation will not exceed 100 percent of the post-construction structural rating;
- 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 less 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 August 27, 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.

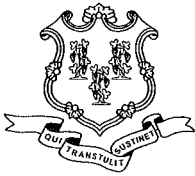
Very truly yours,



Linda Roberts
Executive Director

LR/CDM/jbw

c: The Honorable Bill Finch, Mayor, City of Bridgeport
Michael Nidoh, Planning Director, City of Bridgeport
Cell Tower Lease Acquisition/Unison



STATE OF CONNECTICUT
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September 6, 2012

The Honorable Bill Finch
Mayor
City of Bridgeport
City Hall Annex
999 Broad Street
Bridgeport, CT 06604

RE: **EM-T-MOBILE-015-120828** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 1320 Chopsey Hill Road, Bridgeport, Connecticut.

Dear Mayor Finch:

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 September 20, 2012.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Michael Nidoh, Planning Director, City of Bridgeport

MARCO A M. ESCOBEDO

PLEASE REPLY TO:

WRITER'S DIRECT DIAL: (203) 337-4166

E-Mail Address: mescobedo@cohenandwolf.com

August 27, 2012

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

RECEIVED
AUG 28 2012
CONNECTICUT
SITING COUNCIL

**Re: Notice of Exempt Modification
Cell Tower Lease Acquisition LLC/Unison - T-Mobile co-location
T-Mobile Site ID CT11680A
1320 Chopsey Hill Road, Bridgeport CT**

Dear Ms. Roberts:

This office represents T-Mobile Northeast LLC ("T-Mobile") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, Cell Tower Lease Acquisition LLC/Unison owns the existing telecommunications tower and related facility at 1320 Chopsey Hill, Bridgeport Connecticut (latitude 41.37774, longitude -72.13940). T-Mobile intends to replace six antennas and add related equipment at this existing facility in Bridgeport ("Bridgeport Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Mayor, Bill Finch.

The existing Bridgeport Facility consists of a 240 foot tower. T-Mobile plans to replace six antennas mounted on the tower at a centerline of 205 feet. T-Mobile will also install two cabinets and run fiber conduit cable along existing routing, all within the existing compound area near the base of the tower. (See the plans dated April 5, 2012 attached hereto as Exhibit A). The existing tower is structurally capable of supporting T-Mobile's proposed use, as indicated in the structural analysis report dated August 23, 2012 and attached hereto as Exhibit B.

August 27, 2012
Site ID CT11680A
Page 2

The planned modifications to the Bridgeport Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

- 1 . The proposed modification will not increase the height of the tower. T-Mobile's replacement antennas will be installed at the 205 foot level. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.
- 2 . The installation of the T-Mobile equipment in the existing compound, as reflected on the attached site plan, will not require an extension of the site boundaries. T-Mobile's proposed equipment will be located entirely within the existing compound area.
- 3 . The proposed modification to the Facility will not increase the noise levels at the existing facility by six decibels or more.
- 4 . The operation of the replacement antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI dated June 5, 2012 T-Mobile's operations would add 0.263% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 58.43% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

For the foregoing reasons, T-Mobile respectfully submits that the proposed replacement antennas and equipment at the Bridgeport Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

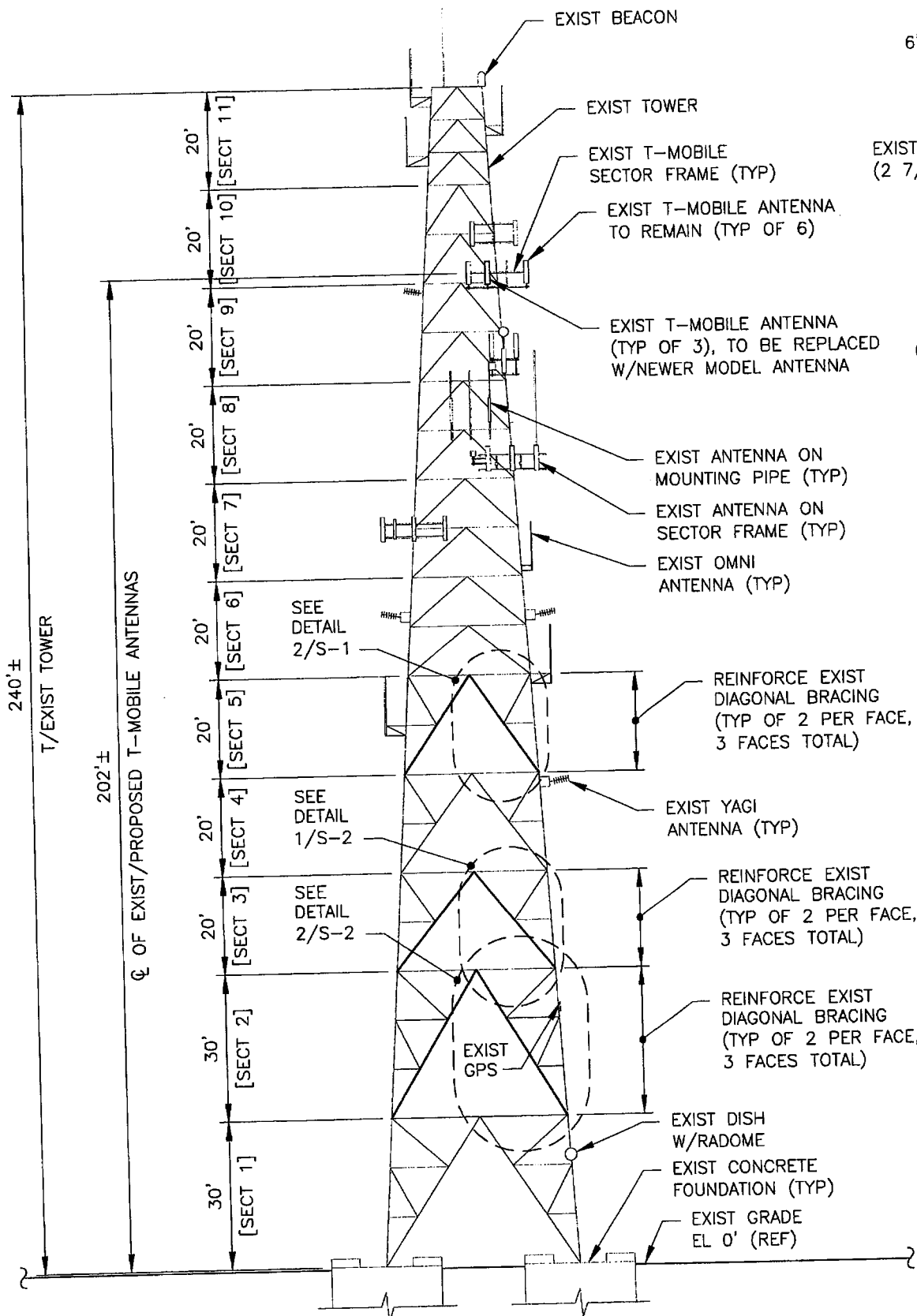
Sincerely,



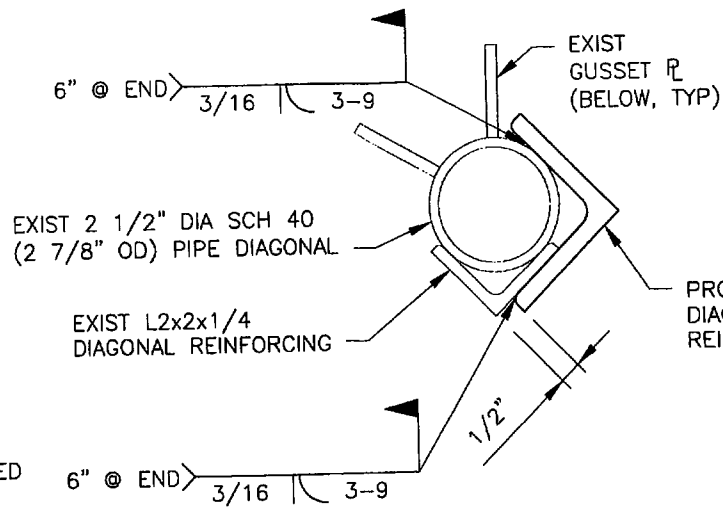
Marcia M. Escobedo, Esq.

cc: Mayor Bill Finch, City of Bridgeport
Jamie Ford, HPC Wireless (via e-mail)

EXHIBIT A

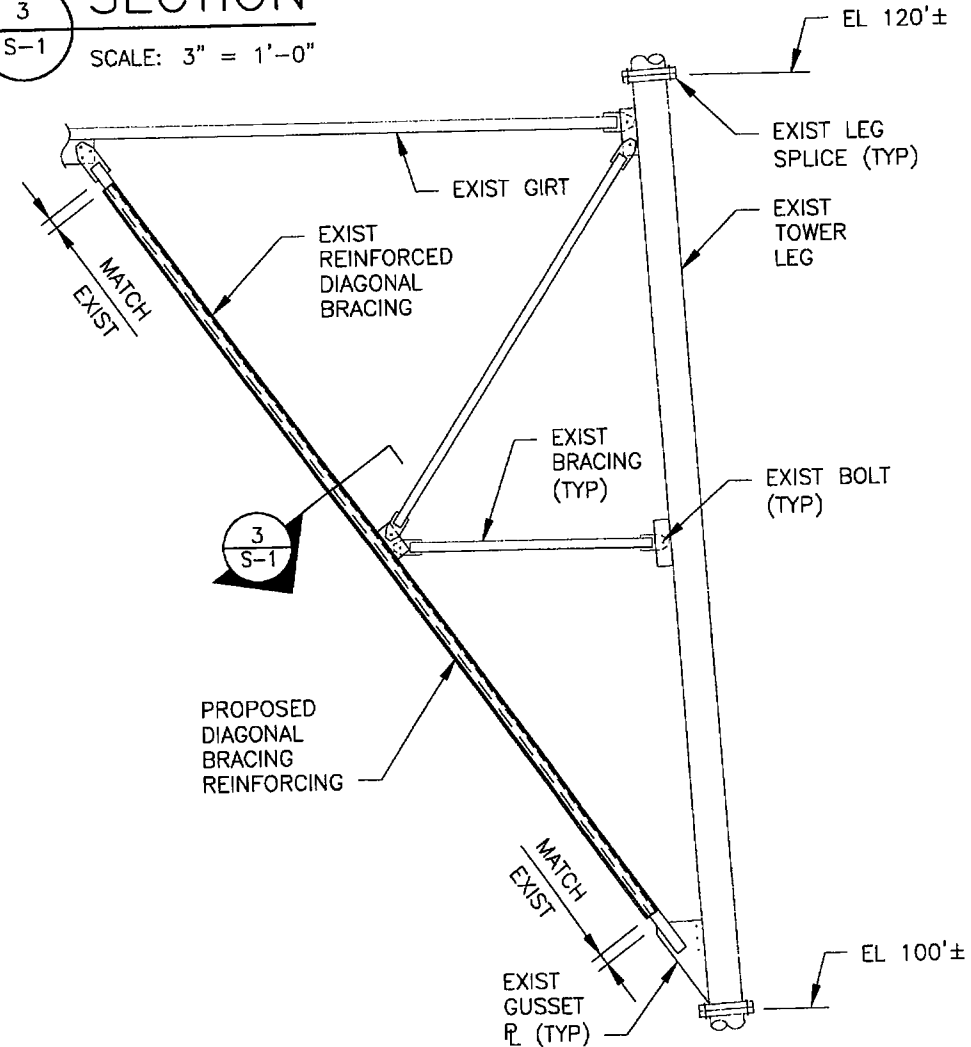


1 TOWER ELEVATION
S-1 SCALE: 1" = 30'



TOWER SECTION 5
(EL 100' TO EL 120')

3 SECTION
S-1 SCALE: 3" = 1'-0"



TOWER SECTION 5
(EL 100' TO EL 120')

2 DETAIL
S-1 SCALE: 1/4" = 1'-0"

NOTE: CONTRACTOR SHALL IDENTIFY EXISTING CABLES AND CABLE ATTACHMENTS THAT WILL NEED TO BE TEMPORARILY RELOCATED/PROTECTED DURING INSTALLATION OF THE PROPOSED REINFORCEMENT. A WRITTEN AUTHORIZATION FROM THE RESPECTIVE CARRIERS OR OWNERS SHALL BE OBTAINED BY THE CONTRACTOR/CLIENT PRIOR TO PROCEEDING WITH THE WORK.

Mobile
NORTHEAST LLC
T-MOBILE NORTHEAST, LLC.
4 SILVAN DRIVE
PARSONS, NJ 07054
PHONE: (973) 686-6500

TECTONIC
PLANNING
ENGINEERING
SURVEYING
CONSTRUCTION
MANAGEMENT
TECTONIC Engineering & Surveying Consultants P.C.
1278 ROUTE 300
NEWBURGH, NY 12550
Phone: (845) 587-6656
Fax: (845) 587-8703
www.tectonicengineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION		
RF. ENG.	DATE:	
EQPT. ENG.	DATE:	
OPERATIONS	DATE:	
CONST. MGR.	DATE:	
NETWORK ENG.	DATE:	
REAL ESTATE	DATE:	
WORK ORDER NUMBER	DRAWN BY	
6203.CT11680A	MB	
NO.	DATE	ISSUE
0	8/23/12	FOR REVIEW

RELEASED BY: DATE:

STATE OF CONNECTICUT
JEFFREY B. KIRBY
No. 21291
LICENSED PROFESSIONAL ENGINEER

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0.5 1.0 1.5
ORIGINAL SIZE IN INCHES
SITE INFORMATION

CT11680A
BRIDGEPORT NORTH
1320 CHOPSEY HILL RD
BRIDGEPORT, CT 06610

SHEET TITLE
TOWER REINFORCING
ELEVATION, DETAIL
& SECTION

SHEET NUMBER
S-1

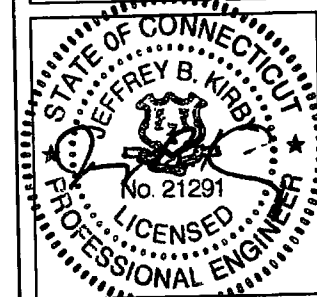
TECTONIC • PLANNING • ENGINEERING • SURVEYING • CONSTRUCTION MANAGEMENT

TECTONIC Engineering & Surveying Consultants P.C.
1278 ROUTE 300
NEWBURGH, NY 12550
Phone: (845) 567-8888
Fax: (845) 567-8733
www.tectonicengineering.com

DESIGN APPROVAL

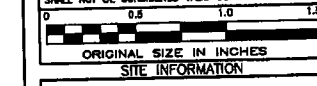
PRELIMINARY/CONSTRUCTION	
RF. ENG.	DATE: _____
EQPT. ENG.	DATE: _____
OPERATIONS	DATE: _____
CONST. MGR.	DATE: _____
NETWORK ENG.	DATE: _____
REAL ESTATE	DATE: _____
WORK ORDER NUMBER	
6203.CT11680A	DRAWN BY MB
NO. DATE ISSUE	
0	8/23/12 FOR REVIEW

RELEASED BY	DATE



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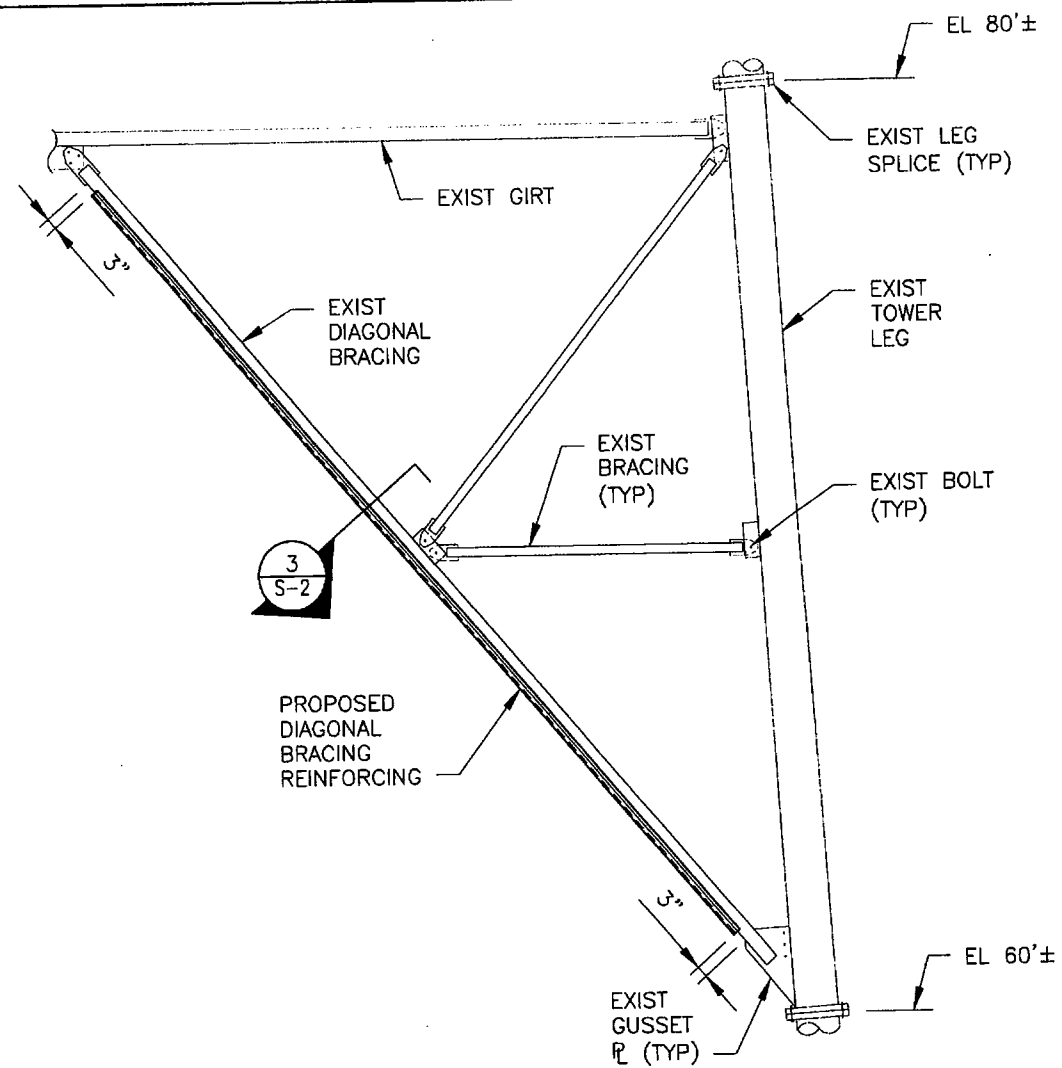
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CT11680A
BRIDGEPORT NORTH
1320 CHOPSEY HILL RD
BRIDGEPORT, CT 06610

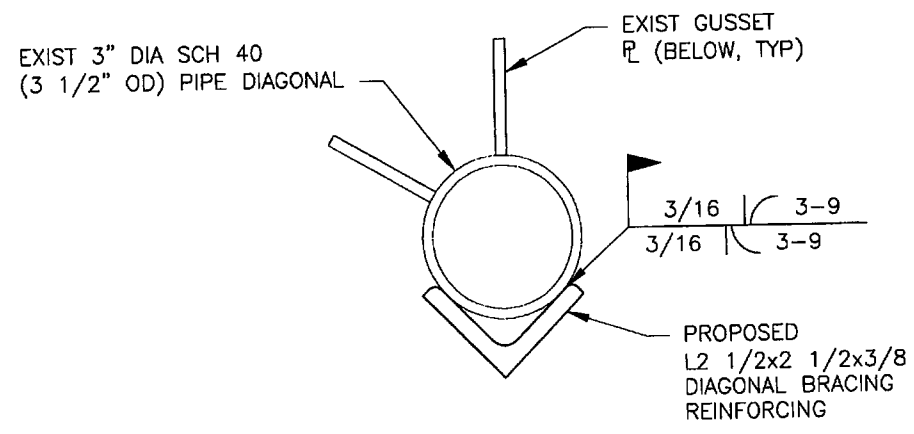
SHEET TITLE
TOWER REINFORCING DETAILS & SECTION

SHEET NUMBER
S-2



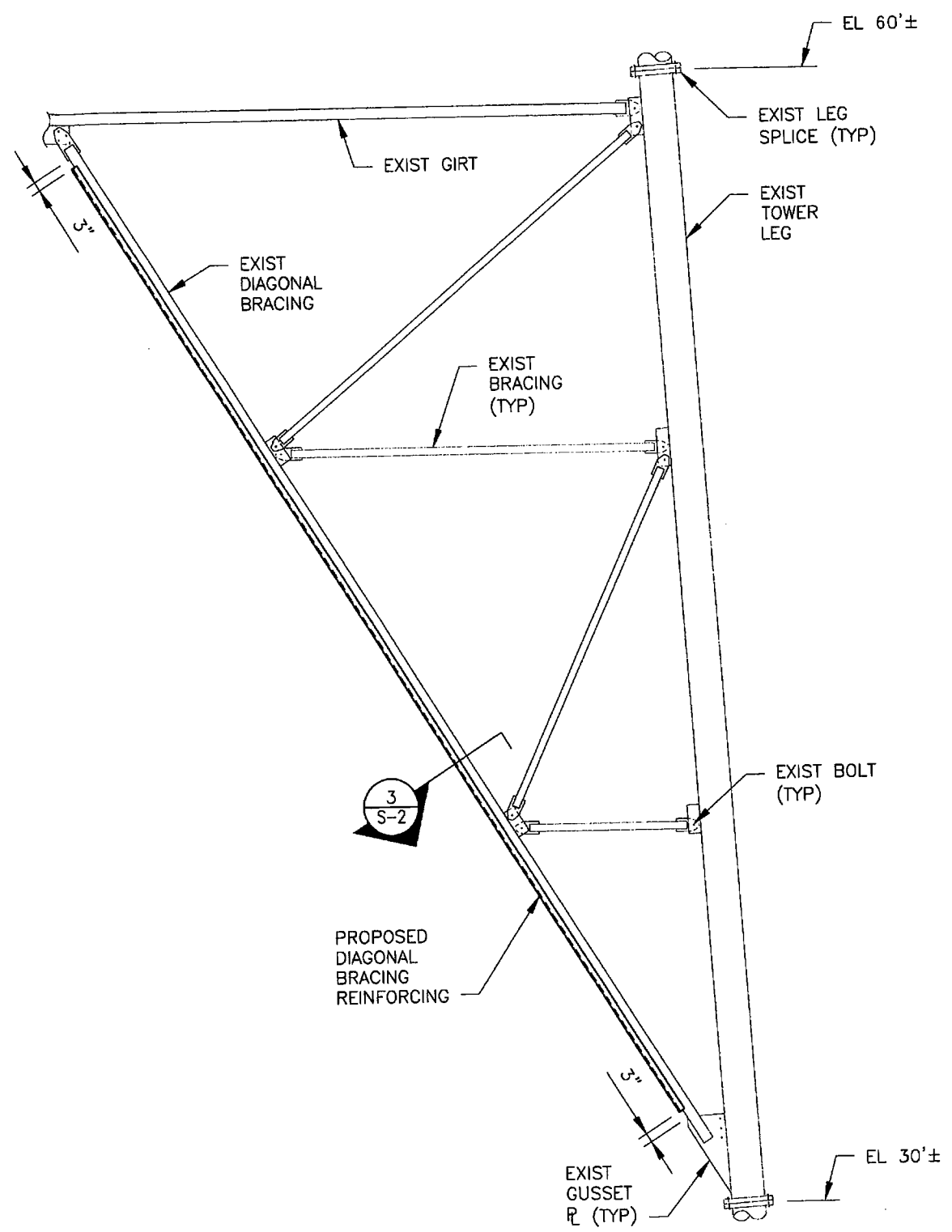
TOWER SECTION 3
(EL 60' TO EL 80')

1
S-2
SCALE: 1/4" = 1'-0"



TOWER SECTIONS 2 & 3
(EL 30' TO EL 80')

3
S-2
SCALE: 3" = 1'-0"



TOWER SECTION 2
(EL 30' TO EL 60')

2
S-2
SCALE: 1/4" = 1'-0"

NOTES

GENERAL

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CONNECTICUT STATE BUILDING CODE (INTERNATIONAL BUILDING CODE 2003 WITH 2005 CT SUPPLEMENT), AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
- REINFORCEMENT OF THE EXISTING TOWER HAS BEEN DESIGNED TO SUPPORT THE ANTENNAS AND CABLES LISTED IN THE STRUCTURAL ANALYSIS REPORT BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C., REVISION 2, DATED 8/23/12.
- TOWER REINFORCEMENT IS DESIGNED IN CONFORMANCE TO ANSI/TIA/EIA-222-F, "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- CONTRACTOR SHALL INSPECT THE EXISTING STRUCTURE PRIOR TO STARTING ANY WORK. IF CONDITIONS OR MATERIALS FOUND IN THE FIELD DIFFER FROM THOSE INDICATED, CONTACT THE ENGINEER FOR APPROVAL.
- CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
- ALL TOWER REINFORCEMENT SHALL BE COMPLETED PRIOR TO INSTALLATION OF PROPOSED ANTENNAS, MOUNTS, AND CABLES.
- ALL WORK SHALL BE PERFORMED IN CALM WEATHER, WITH WIND GUSTS LESS THAN 10 MPH.
- PROVIDE TEMPORARY BRACING, AS REQUIRED, TO MAINTAIN TOWER ALIGNMENT AND PLUMBNESS DURING REINFORCEMENT OF MEMBERS AND FOUNDATION.
- PROTECT EXISTING CABLES AND EQUIPMENT FROM DAMAGE DURING INSTALLATION OF ANTENNAS AND REINFORCING.
- GROUNDING SYSTEM SHALL BE CHECKED AND UPGRADED AS NECESSARY, AS DIRECTED BY THE CONSTRUCTION MANAGER.

STEEL

- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, 2005".
- CONNECTIONS: WELD OR BOLT CONNECTIONS, AS INDICATED:
 - CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL CONFORM TO THE REQUIREMENTS OF THE CITED AISC SPECIFICATION.
 - STRUCTURAL BOLTS SHALL CONFORM TO THE LATEST ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS".
 - MINIMUM 3/16" FILLET E70-XX WELD SHALL APPLY UNLESS NOTED.
 - MINIMUM 1/2" DIA. A325 BOLTS SHALL APPLY UNLESS NOTED.
 - MINIMUM SIZE OF CLIP ANGLES SHALL BE L3x3x1/4" UNLESS NOTED.
 - ALL GUSSET PLATES SHALL BE 3/8" THICK UNLESS NOTED.
 - ALL HOLES FOR BOLTS SHALL BE 1/16 INCH LARGER THAN THE BOLT DIAMETER WITH AN EDGE DISTANCE OF AT LEAST 1 1/2 TIMES THE BOLT DIAMETER AND A SPACING OF AT LEAST 3 TIMES THE BOLT DIAMETER. ALL BOLTS SHALL BE PROVIDED WITH PALNUTS OR LOCK NUTS.

- STEEL REINFORCING ANGLES AND PLATES SHALL CONFORM TO ASTM A36 "CARBON STRUCTURAL STEEL", UNLESS OTHERWISE INDICATED.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE HIGH STRENGTH BOLTS (HSB) CONFORMING TO ASTM A325 "STRUCTURAL BOLTS, STEEL, HEAT TREATED, 120/105 KSI MINIMUM TENSILE STRENGTH", WITH THREADS EXCLUDED FROM SHEAR PLANES (TYPE X). FULLY THREADED BOLTS (A325T) SHALL NOT BE USED.
- U-BOLTS SHALL CONFORM TO ASTM A36 OR A307 "CARBON STEEL BOLTS AND STUDS, 60,000 PSI TENSILE STRENGTH". INSTALL DOUBLE NUTS ON ALL CONNECTIONS.
- MATCHING NUTS SHALL BE HEAVY HEX TYPE, CONFORMING TO ASTM A563, "CARBON AND ALLOY STEEL NUTS".
- ALL U-BOLTS SHALL BE 1/2" DIAMETER IN 9/16" DIAMETER HOLES, UNLESS OTHERWISE NOTED.
- ALL U-BOLTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780 "REPAIR OF DAMAGED AND UNCOATED AREAS OF HOT-DIP GALVANIZED COATINGS".
- ALL BOLT HOLES SHALL BE DRILLED OR PUNCHED 1/16" LARGER IN DIAMETER THAN THE CONNECTING BOLT, UNLESS OTHERWISE NOTED. THERMAL CUTTING OF HOLES (ARC OR TORCH) IS NOT PERMITTED.
- ALL CONNECTIONS TO BE SNUG TIGHT TYPE IN ACCORDANCE WITH THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
- CONTRACTOR SHALL COMPLY WITH AWS D1.1 "STRUCTURAL WELDING CODE - STEEL" FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES".
- REMOVE ALL GALVANIZING IN AREAS TO BE WELDED BY GRINDING. AFTER WELDING, PROTECT ALL EXPOSED STEEL AND WELDS BY COLD GALVANIZING.
- SPACES BETWEEN INTERMITTENT WELDS SHALL BE FILLED USING CHEM-CALK 500 AS MANUFACTURED AND MARKETED BY BOSTIK SEALANTS, MIDDLETON, MA 01949 (800) 523-2678 OR APPROVED EQUAL.
- ALL WELDING TO THE TOWER SHALL BE PERFORMED WITH E70XX LOW HYDROGEN ELECTRODES. LOW HYDROGEN ELECTRODES SHALL BE PURCHASED IN HERMETICALLY SEALED CONTAINERS AND SHALL BE USED WITHIN 4 HOURS AFTER OPENING THE CONTAINER. ELECTRODES NOT USED WITHIN 4 HOURS SHALL BE REDRIED AT A TEMPERATURE BETWEEN 450°F AND 500°F FOR AT LEAST 2 HOURS AND THEN STORED AT 250°F. REDRIED ELECTRODES SHALL BE USED WITHIN 4 HOURS AFTER REMOVAL FROM THE STORAGE OVEN. REDRIED ELECTRODES NOT USED WITHIN 4 HOURS SHALL BE DISCARDED.
- ALL FIELD WELDING SHALL BE VISUALLY INSPECTED BY AN AWS CERTIFIED WELDING INSPECTOR PRIOR TO INSTALLATION OF THE PROPOSED ANTENNAS.
- FIELD VERIFY LENGTHS OF ALL MATERIAL PRIOR TO FABRICATION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER APPROVAL.

..T..Mobile..

NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC.
4 SYLVAN DRIVE
PARISPPANY, NJ 07054
PHONE: (973) 686-8500

TECTONIC
ENGINEERING & SURVEYING CONSULTANTS P.C.
1279 ROUTE 300
NEWBURGH, NY 12550
Phone: (845) 567-8858
Fax: (845) 567-8703
www.tectonicengineering.com

DESIGN APPROVAL

PRELIMINARY/CONSTRUCTION

RF. ENG.	DATE:
EQPT. ENG.	DATE:
OPERATIONS	DATE:
CONST. MGR.	DATE:
NETWORK ENG.	DATE:
REAL ESTATE	DATE:

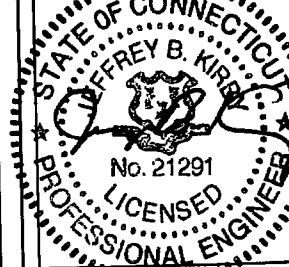
WORK ORDER NUMBER DRAWN BY
6203.CT11680A MB

NO.	DATE	ISSUE
0	8/23/12	FOR REVIEW

NO.	DATE	ISSUE
0	8/23/12	FOR REVIEW

RELEASED BY DATE

RELEASED BY DATE



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0 0.5 1.0 1.5
ORIGINAL SIZE IN INCHES

SITE INFORMATION

CT11680A
BRIDGEPORT NORTH
1320 CHOPSEY HILL RD
BRIDGEPORT, CT 06610

SHEET TITLE

TOWER REINFORCING NOTES

SHEET NUMBER

S-3

EXHIBIT B

STRUCTURAL ANALYSIS SUMMARY REPORT

Project Information

W.O.:	6203.CT11680A	Report Date:	8/23/2012
Client:	T-Mobile	Revision:	2
Site Name:	Bridgeport North		
Owner:	Unison		
Site Address:	1320 Chopsey Hill Road	FCC Reg. No. 1203184	
City, State:	Bridgeport, CT	County:	Fairfield

Structure Information

Structure Type: Self-Supporting Tower	Manufacturer: Rohn	Model: SSMW
Structure Height: 240 feet	Year Built: Unknown	
No. of Sections: 11	Diagram: See Figure 1	

Section No.	Elevation (ft)	Width (ft)	Bracing Type
11	Top	240	3K
		220	
10		200	2K
9		180	2K
8		160	2K
7		140	2K
6		120	2K
5		100	1K
4		80	1K
3		60	1K
2		30	1K
1	Base	0	1K

Leg Orientation	
A	Northeast
B	Southeast
C	West

Foundation: Three (3) 22' square x 6' deep independent reinforced concrete footings, with each footing extending approximately 6" above grade, with additional concrete reinforcement added to top of each footing.

Anchor Bolt Diameter: 1 inch

Quantity: 12 per leg

Documentation

Original Drawings Structure: No Foundation: No

Original Design Criteria: Unknown

Documents Provided:

<u>Item</u>	<u>By</u>	<u>No.</u>	<u>Date</u>
RF Data Sheet (3 Pages)	T-Mobile	Site ID CT11680A	3/29/12
Structural Analysis Report (93 Pages)	Centek Engineering	11107.CO18	12/2/11
Construction Drawings for T-Mobile Site ID CT11680A	Maxton/Bay State Design	2889.098	12/9/08

STRUCTURAL ANALYSIS SUMMARY REPORT (CONT.)

W.O.	6203.CT11680A	Report Date:	8/23/2012
Client:	T-Mobile	Revision:	2
Site Name:	Bridgeport North		

Inspection

Type:	Visual Inspection	Date:	6/14/2012	Weather:	Sunny
General Condition:					
	Tower:	Good			
	Foundation:	Good			
Observations:	No deficiencies noted				
Finish:	Painted in seven (7) alternating bands of orange & white		Condition:	Intact	

Existing Appurtenances

Height (ft)	Carrier	Qty	Manufacturer	Model	Mount	Leg(s)
248	Unknown	1	Unknown	16'x2.5" Omni	4' Sidearm	C
242	Unknown	1	Unknown	12'x2" Omni	4' Sidearm	B
240	N/A	1	Unknown	Beacon	Direct	C
240	Unknown	1	Unknown	N/A	4' Sidearm	B
235	Unknown	2	Unknown	10'x3" Omni	4' Sidearm	A,C
229	Unknown	1	Unknown	10'x3" Omni	4' Sidearm	A
229	Unknown	1	Unknown	N/A	10'x2.5" Pipe Mount	B
210	Metro PCS	6	Kathrein	800 10504	(3) 10' T-Frames	A,B,C
		6	Kathrein	860 10025		
		9	RFS	APX16PV-16PVL-X	(3) 13' T-Frames	A,B,C
202	T-Mobile	9	Unknown	Tower-Mounted Amplifiers		
198	Unknown	1	Unknown	4' Yagi	10'x4" Pipe Mount	C
		6	Andrew	RR90-11-10DBL		
		3	Argus	Argus LLPX310R	(3) 6' T-Frames & (6) 6'x4" Pipe	A,B,C
184-187	Sprint/Nextel/ Clearwire	3	Samsung	RRU	MOUNTS	
		2	Andrew	2' Paraboloid w/ Radome		
		1	Andrew	VHLP2.5-10W		
185	Unknown	1	Unknown	N/A	14' x 2-1/2" Pipe Mount	B
176	Unknown	1	Unknown	20'x3" Omni	AT&T T-Frame	B
174	Sprint/Nextel	4	Allgon	7184.05	(9) 14' x 2-1/2" Pipe Mounts	A,B,C
174	Unknown	2	Andrew	DB950G40E-M		
		1	Unknown	N/A	10'x2.5" Pipe Mount	C
		6	Powerwave	7770.00		
		3	Powerwave	P65-16-XLH-RR		
164	AT&T	12	Powerwave	LPG21401	(3) 14' T-Frames & (3) 2' Standoffs	A,B,C
		6	Ericsson	RRUS-11		
		1	Raycap	Raycap DC6-48-60-18-8F		
		3	Antel	BXA-70063-6CF		
		4	Antel	LPA-80063-6CF		
150	Verizon Wireless	2	Andrew	DB846F65ZAXY	(3) 14' T-Frames	A,B,C
		3	RYMSA	MGD3-800T0		
		6	RFS	FD9R6004/2C-3L		
141	Unknown	1	Unknown	10'x1" Omni	2' Standoff	B
140	N/A	3	Unknown	Obstruction Light	Direct	A,B,C
132	Unknown	3	Unknown	4' Yagi	2' Standoff	B
124	Unknown	1	Unknown	12'x1.5" Omni	4' Sidearm	B
114	Unknown	1	Unknown	12'x2" Omni	4' Sidearm	C
98	Unknown	1	Unknown	4' Yagi	2' Standoff	A
92	Unknown	1	Unknown	N/A	2' Standoff	A
52	Sprint/Nextel	1	Unknown	GPS Antenna	5' x 3" Pipe Mount	C
22	Unknown	1	Channelmaster	0.8m Paraboloid w/o Radome	Direct	C

STRUCTURAL ANALYSIS SUMMARY REPORT (CONT.)

W.O.	6203.CT11680A	Report Date:	8/23/2012
Client:	T-Mobile	Revision:	2
Site Name:	Bridgeport North		

Existing Appurtenances (Cont.)

Linear Appurtenances:

Height (ft)	Carrier	Qty	Nom. Size	Location	
8-240	Unknown	1	Waveguide Ladder	Face	BC
0-240	N/A	1	3/8" Safety Cable	Leg	A
8-240	N/A	1	1" Rigid Conduit	Face	AC
8-240	N/A	1	1" Rigid Conduit	Face	BC
8-240	Unknown	1	1-1/4" Coax	Face	BC
8-235	Unknown	1	7/8" Coax	Face	AC
8-235	Unknown	1	1-1/4" Coax	Face	BC
220-229	Unknown	2	1-1/4" Coax	Face	BC
8-210	Metro PCS	12	1-5/8" Coax	Face	AC Stacked in (3) rows of (12) w/ T-Mobile Coax
8-210		1	Waveguide Ladder	Face	AC
8-200		24	1-5/8" Coax	Face	AC Stacked in (3) rows of (12) w/ Metro PCS Coax
8-200	T-Mobile	1	Waveguide Ladder	Face	AC
8-200		6	1-5/8" Coax	Face	AB
8-200		1	Waveguide Ladder	Face	AB
16-198	Unknown	1	7/8" Coax	Face	AC
8-186	Sprint/Nextel	12	1-5/8" Coax	Face	BC Stacked in (1) row of (10) and (1) row of (2)
8-184	Clearwire	2	2" Innerduct	Face	AB
8-184		1	1/2" Coax	Face	AB
8-176	Unknown	1	1-1/4" Coax	Face	BC
8-174	Sprint/Nextel	6	1-5/8" Coax	Face	AB
8-174		1	Waveguide Ladder	Face	AB
8-163		12	1-5/8" Coax	Leg	A Stacked in (2) rows of (6)
8-163		1	RG-6 Fiber	Leg	A
8-163	AT&T	2	#8 AWG Copper Wire	Leg	A
8-163		1	3" Flex Conduit	Leg	A
8-163		1	Waveguide Standoffs	Leg	A
8-150	Verizon	12	1-5/8" Coax	Face	AC Stacked in (2) rows of (6)
8-150	Wireless	1	Waveguide Ladder	Face	AC
8-132	Unknown	14	1/4" Coax	Face	AB One bundle of (6) and one bundle of (8)
8-118	Unknown	1	7/8" Coax	Face	BC
8-114	Unknown	1	7/8" Coax	Face	BC
8-52	Sprint/Nextel	1	1/2" Coax	Face	BC

Lights: Yes
Lightning rod: No

Step bolts: Yes
Safety cable: On leg A
Other: None

STRUCTURAL ANALYSIS SUMMARY REPORT (CONT.)

TECTONIC

W.O.:	6203.CT11680A	Report Date:	8/23/2012
Client:	T-Mobile	Revision:	2
Site Name:	Bridgeport North		

Proposed Appurtenances

T-Mobile is proposing to remove (6) of its existing RFS APX16PV-16PVL-X panel antennas, six (6) TMAs, and eighteen (18) 1-5/8" diameter cables, and replace and supplement them with the following:

Height (ft)	Carrier	Qty	Manufacturer	Model	Mount	Leg(s)
202	T-Mobile	6	Ericsson	AIR21 B4A / B2P	Existing 13' T-Frames	A,B,C

Cables:

Height (ft)	Qty	Norm. Size	Location
8-202	1	Additional 1-5/8" Fiber	Face AB Attached to and routed along the existing T-Mobile coax

Analysis Criteria

Design Standard: ANSI/TIA/EIA-222-F-1996

Building Code: 2003 International Building Code with 2005 Connecticut Supplement

	No ice	With ice
Wind Speed (fastest mile):	90 mph	78 mph
Design Ice Thickness:	0 inch	0.5 inch

Assumptions:

1. The tower was manufactured and constructed in accordance with the approved tower design drawings.
2. The foundation was constructed in accordance with the approved foundation drawings.
3. Tower structure, foundation, and appurtenance information is based on the latest structural analysis report by Centek as referenced above.

Analysis Results

Height (ft)	Member Capacity Ratios (%)					
	Legs		Diagonals		Horizontals	
	Mem	Conn	Mem	Conn	Mem	Conn
220-240	1	1	16	7	5	8
200-220	3	2	32	21	16	20
180-200	8	6	58	35	39	36
160-180	14	12	75	49	35	54
140-160	23	20	73	43	56	72
120-140	32	30	62	45	68	81
100-120	36	34	47*	70	86	59
80-100	46	43	94	51	58	48
60-80	42	35	65*	53	71	52
30-60	49	41	72*	71	85	57
0-30	59	62	78	72	75	60

* Diagonal members are to be reinforced in conjunction with the proposed T-Mobile upgrade.

Anchor Bolts: 63 % of capacity

Foundation Reactions (Envelope):

Direction	Original Design	Current	Percent
Leg Compression	452.8 kips	397.1 kips	88
Leg Uplift	381.1 kips	324.8 kips	85
Leg Shear	Unknown	58.1 kips	-

STRUCTURAL ANALYSIS SUMMARY REPORT (CONT.)

W.O.	6203.CT11680A	Report Date:	8/23/2012
Client:	T-Mobile	Revision:	2
Site Name:	Bridgeport North		

Conclusions

Based on our revised analysis, we conclude that once the existing tower has been reinforced as shown on the Tectonic drawings, it will have sufficient capacity to support the proposed T-Mobile installation described herein in accordance with the requirements of the referenced TIA standard and the CT Building Code. The diagonal members in three (3) sections of the tower are to be reinforced.


The calculated foundation reactions were found to be within the original foundation design reactions. In addition, the foundation has been reinforced since the tower was originally constructed. Using the information provided in the recent Centek analysis, and information obtained during our site visit, the actual capacity of the as-designed foundation was verified and found to exceed both the reactions from our current analysis and those from the original design. No problems for the foundation are anticipated, and no foundation modifications are necessary.

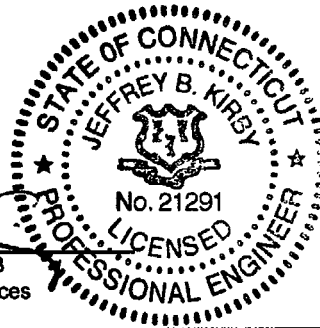
This report and the structural analysis performed are based on a limited visual inspection from the ground and the information provided by T-Mobile. If the existing conditions are not as represented in this report, the design engineer should be immediately notified prior to installation of new appurtenances.

Any further changes to the antenna configuration or other appurtenances should be reviewed with respect to their effect on structural loads prior to implementation.

Prepared by: Vinod Ramesh
Structural Engineer

Reviewed by:


Jeffrey B. Kirby, P.E., SECB
Manager of Structural Services



Date: 8/23/12

TECTONIC

Practical Solutions, Exceptional Service

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FOR REINFORCEMENT DETAILS
REFER TO DRAWINGS S-1
THRU S-3, DATED 8/23/12

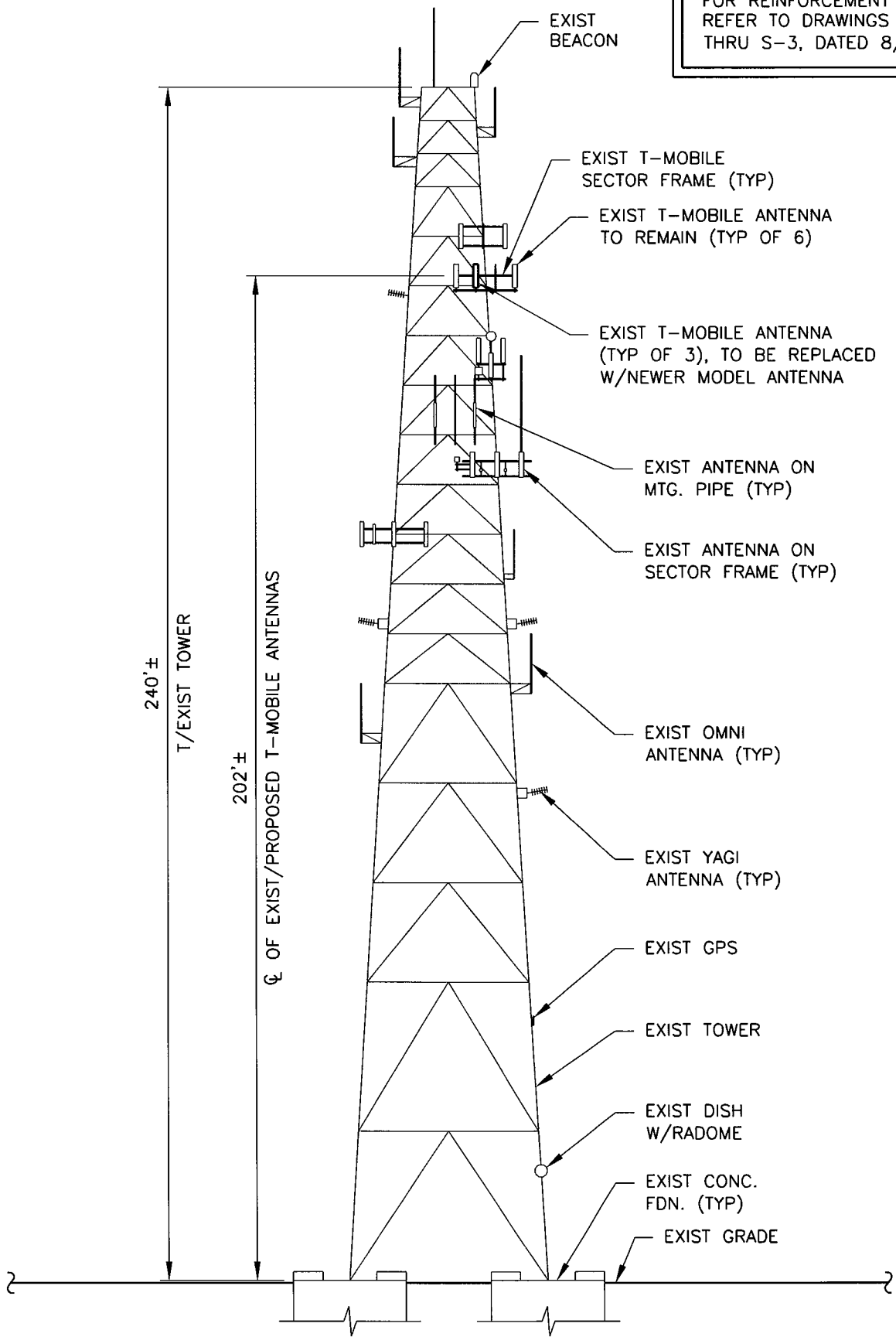


FIGURE 1

EXHIBIT C

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

T-Mobile Existing Facility

Site ID: CT11680A

Bridgeport_Chopsey Hill
1320 Chopsey Hill Road
Bridgeport, CT 06610

June 05, 2012

June 5, 2012

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

Re: Emissions Values for Site CT11680A – Bridgeport_Chopsey Hill

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 1320 Chopsey Hill Road, Bridgeport, 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 1320 Chopsey Hill Road, Bridgeport, 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

Site ID	CT11680A - Bridgeport_Chopsey Hill
Site Address	1320 Chopsey Hill Road, Bridgeport, CT 06610
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	205	199	None	0	0	48.326044	0.438714	0.04387%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	205	199	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	205	199	None	0	0	24.163022	0.219357	0.02194%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	205	199	1.5/8"	0	0	24.163022	0.219357	0.02194%
Sector total Power Density Value:													0.08774%				

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	205	199	None	0	0	48.326044	0.438714	0.04387%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	205	199	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	205	199	None	0	0	24.163022	0.219357	0.02194%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	205	199	1.5/8"	0	0	24.163022	0.219357	0.02194%
Sector total Power Density Value:													0.08774%				

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	205	199	None	0	0	48.326044	0.438714	0.04387%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	205	199	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	205	199	None	0	0	24.163022	0.219357	0.02194%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	205	199	1.5/8"	0	0	24.163022	0.219357	0.02194%
Sector total Power Density Value:													0.08774%				

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.26323%
Marcus	2.55000%
AT&T	3.70000%
Verizon Wireless	13.35000%
Clearwire	0.53000%
Sprint Nextel	19.40000%
Metro PCS	4.87000%
Red Star	0.57000%
Metrocall	0.47000%
Metrocall	3.52000%
Clinton Tower	4.08000%
AAT	3.68000%
Nextel	1.45000%
Total Site MPE %	58.433%

