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

June 2, 2009

Thomas J. Regan, Esq.
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103

RE: **EM-T-MOBILE-011-090507** - T-Mobile USA, Inc. (T-Mobile) notice of intent to modify an existing telecommunications facility located at 785 Park Avenue, Bloomfield, Connecticut.

Dear Attorney Regan:

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.

The proposed modifications are to be implemented as specified here and in your notice dated May 7, 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 Sydney Schulman, Mayor, Town of Bloomfield
Louie Chapman, Jr., Town Manager, Town of Bloomfield
Thomas B. Hooper, Director of Planning, Town of Bloomfield

STATE OF CONNECTICUT

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Daniel F. Caruso
Chairman

May 13, 2009

The Honorable Sydney Schulman
Mayor
Town of Bloomfield
Town Hall
800 Bloomfield Avenue
P. O. Box 337
Bloomfield, CT 06002-0337

RE: **EM-T-MOBILE-011-090507** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 785 Park Avenue, Bloomfield, Connecticut.

Dear Mayor Schulman:

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 May 27, 2009.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Thomas B. Hooper, Director of Planning, Town of Bloomfield
Louie Chapman, Jr., Town Manager, Town of Bloomfield

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

BROWNRUDNICK
CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

Via Hand Delivery

May 7, 2009 ORIGINAL

Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: T-Mobile USA, Inc - Exempt Modification

Dear Mr. Caruso:

On behalf of T-Mobile USA, Inc., enclosed for filing are an original and five (5) copies of a Notice to Make an Exempt Modification to an Existing Facility for each of the following:

1. Bloomfield @ 785 Park Avenue;
2. Manchester @ 93 Lake Street; and
3. Plainville @ 77 West Street.

I have also enclosed a sixth copy of each Notice which I would like to have date-stamped and returned to the courier delivering this package.

Also enclosed are three (3) checks in the amount of $500.00 each to cover the filing fees. If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

By: Thomas J. Regan bh
Thomas J. Regan

TJR/bh
Enclosures

40259623 v1 - REGANTJ - 025064/0016

BROWNRUDNICK

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

cc/encls: via 1st Class Mail:

The Honorable Sydney T. Schulman, Mayor
Town of Bloomfield
Town Hall
800 Bloomfield Avenue
Bloomfield, CT 06002

Christopher Wazorko, Chairman
Town Council
Town of Plainville
Municipal Center
1 Center Square
Plainville, CT 06062

The Honorable Louis A. Spadaccini, Mayor
Town of Manchester
Town Hall
41 Cedar Street
Manchester, CT 06045-0191

EM-T-MOBILE-011-090507

CONNECTICUT SITING COUNCIL

ORIGINAL

In re:

T-Mobile USA, Inc. Notice to Make an Exempt Modification to an Existing Facility, 785 Park Avenue, Bloomfield, Connecticut.	:	EXEMPT MODIFICATION NO. _____
	:	
	:	May 7, 2009

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), T-Mobile USA, Inc. ("T-Mobile") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Bloomfield of T-Mobile's intent to make an exempt modification to an existing monopole tower (the "Tower") located at 785 Park Avenue in Bloomfield, Connecticut. Specifically, T-Mobile plans to upgrade its wireless system in Connecticut by implementing its Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") technology that utilizes a code division multiple access ("CDMA") base to allow for fast and large data transfers. To accomplish this upgrade, T-Mobile must modify its antenna and equipment configurations at many of its existing sites.

Once the UMTS upgrade is complete, T-Mobile will operate on a more unified communication system, allowing international wireless telephones to function world-wide. Furthermore, UMTS will enhance GPS navigation capabilities and provide emergency responders with more advanced tracking capabilities. The proposed UMTS technology is compatible with the existing second-generation ("2G") Global System for Mobile Communication ("GSM") currently on the Tower and the proposed upgrade is expected to

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185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

enhance the existing 2G system. In order to accomplish the upgrade at this site, T-Mobile plans to add UMTS technology and install associated equipment at the base of the tower.

Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), T-Mobile's plans do not constitute a modification subject to the Council's review because T-Mobile will not change the height of the Tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

The Tower is a 140-foot monopole tower located at 785 Park Avenue in Bloomfield, Connecticut (41.8281, -72.7333). The Tower is owned by the Town of Bloomfield. There are multiple carriers on the Tower. Currently, T-Mobile has 3 antennas and 6 Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 135 feet. A site plan with Tower specifications is attached.

T-Mobile plans to add 3 UMTS antennas and 3 UMTS Twin TMA to the Tower. The proposed antennas and TMA will have the same centerline as the existing antennas and TMA - 135 feet. To confirm the Tower can support these changes, T-Mobile commissioned Velocitel, Inc. to perform a structural analysis of the Tower (attached). According to the structural analysis, dated April 14, 2009, "...the proposed additions and alterations can be implemented as intended" (Page 2, Structural Analysis).

In addition, T-Mobile plans to locate 6, 1-5/8 inch coax cables in the existing cable tray on the roof of T-Mobile's existing equipment shelter to run from the proposed equipment cabinet and existing equipment cabinets to the proposed and existing antennas. T-Mobile proposes to install the UMTS equipment cabinet in its existing 29-foot by 26-foot (approximately) equipment

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HARTFORD, CT 06103
(860) 509-6500

shelter. Hence, no increase in the size of the Tower site is necessary. T-Mobile also proposes to install a battery rack inside its existing equipment shelter. T-Mobile plans to install a power conduit to run from the breaker panel to the proposed UMTS equipment cabinet. T-Mobile also plans to install a wall mounted air conditioner and a condenser on T-Mobile's existing equipment shelter.

Therefore, excluding brief, minor, construction-related noise during the addition of the antennas and the installation of the equipment cabinet, T-Mobile's changes to the Tower will not increase noise levels at the site.

The proposed antennas and TMA will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that T-Mobile's antennas will emit 5.86% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 33.85% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, T-Mobile's proposed plan to add antennas and TMA at this site does not constitute a modification subject to the Council's jurisdiction because T-Mobile will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise

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(860) 509-6500

levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

T-Mobile USA, Inc.

By: _____

Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

Certificate of Service

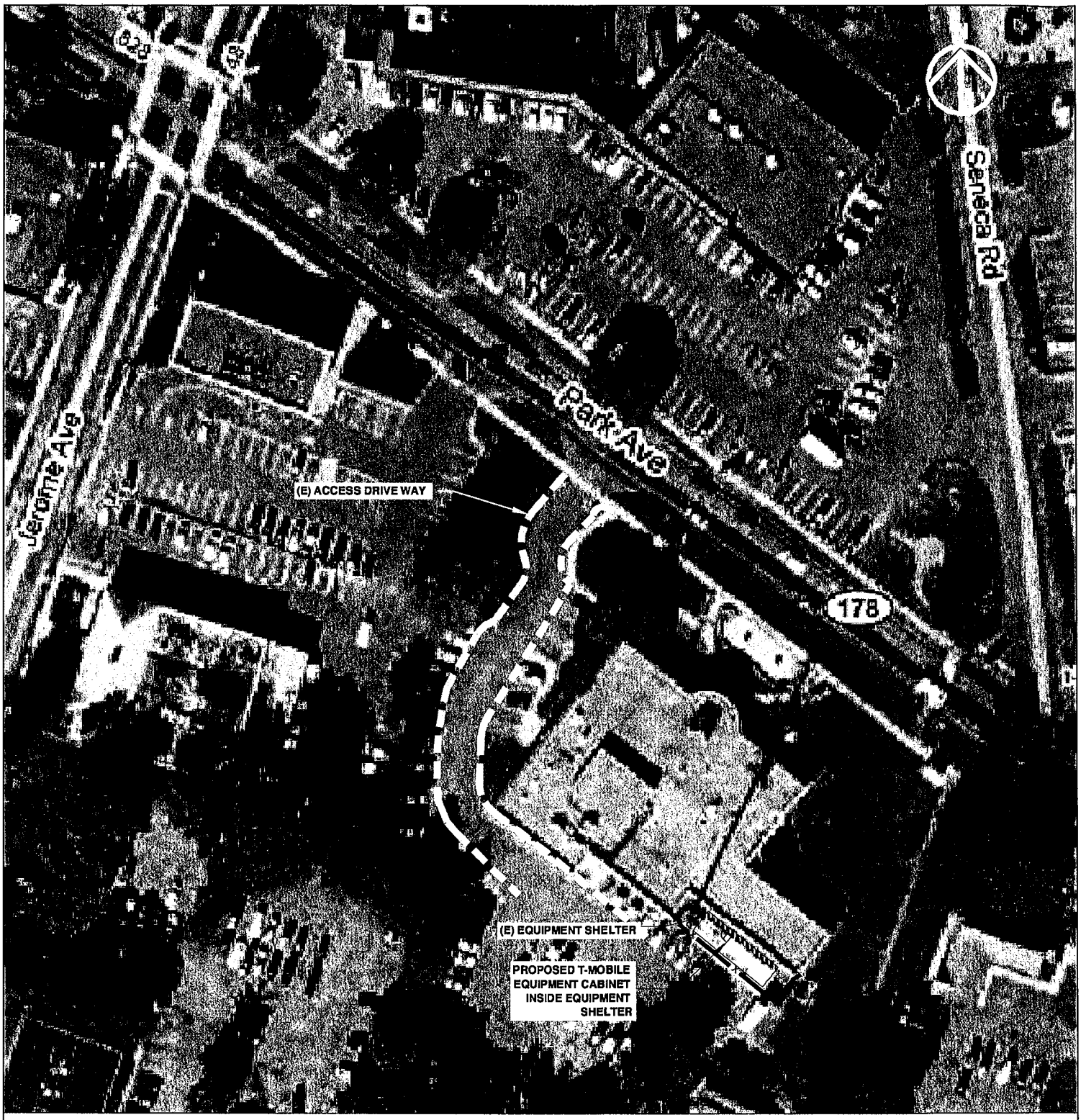
This is to certify that on this 7th day of May, 2009, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

Town of Bloomfield
Town Hall
Mayor Sydney T. Schulman
800 Bloomfield Avenue
Bloomfield, CT 06002

By: _____
Thomas J. Regan

40259178 v1 - 025064/0016

BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

OVERALL SITE PLAN

N.T.S.

TRANSCEND WIRELESS, LLC.
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430
OFFICE: 201-316-2885
FAX: 201-684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC.
DBA T-MOBILE USA, INC
35 GRIFFIN ROAD SOUTH
BLOOMFIEL, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NAME:
HA140/BLOOMFIELDPOLICE_MP

SITE NUMBER:
CTHA140A

ADDRESS:
785 PARK AVENUE
BLOOMFIELD , CT 06002

NUMBER	REVISION	DATE
0:	FINAL LE	03-13-09
A:	REVIEW	02-04-09

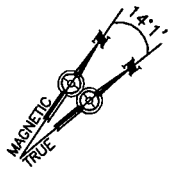
DRAWN BY: S.B.
DRAWING NO: LE-1

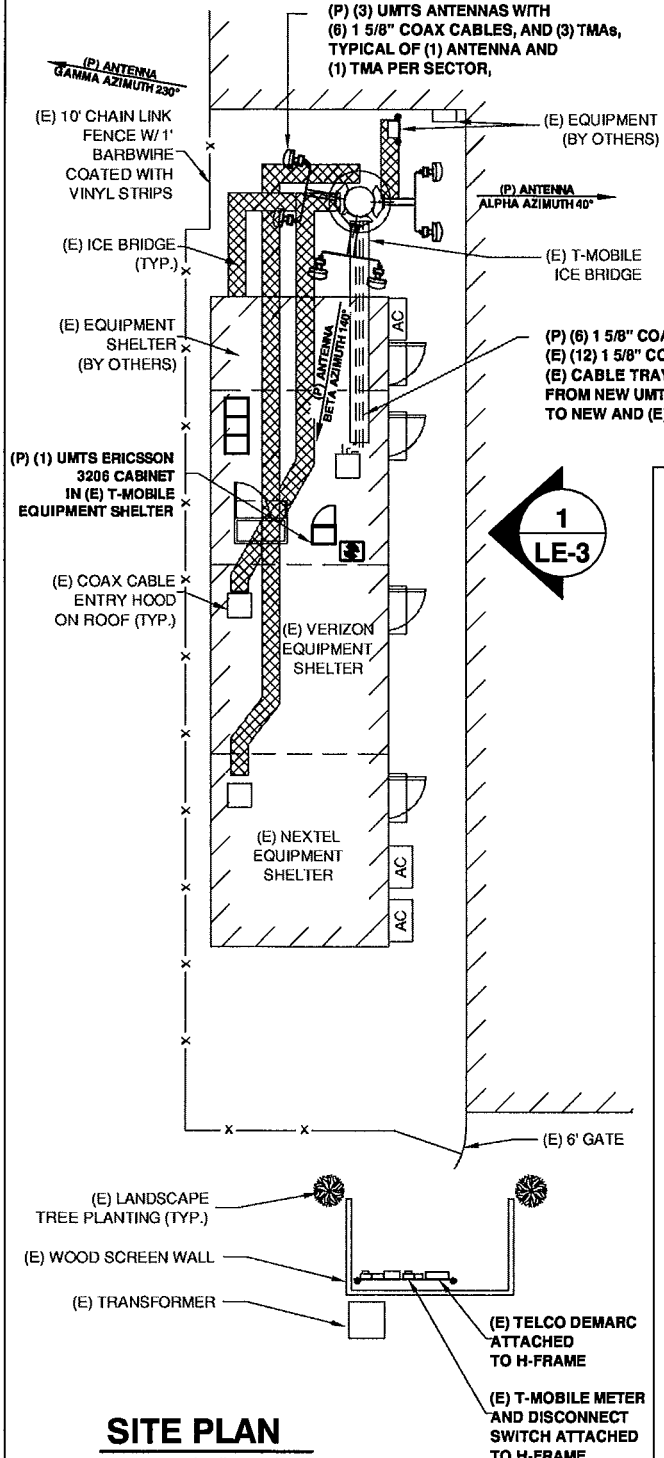
APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.

ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

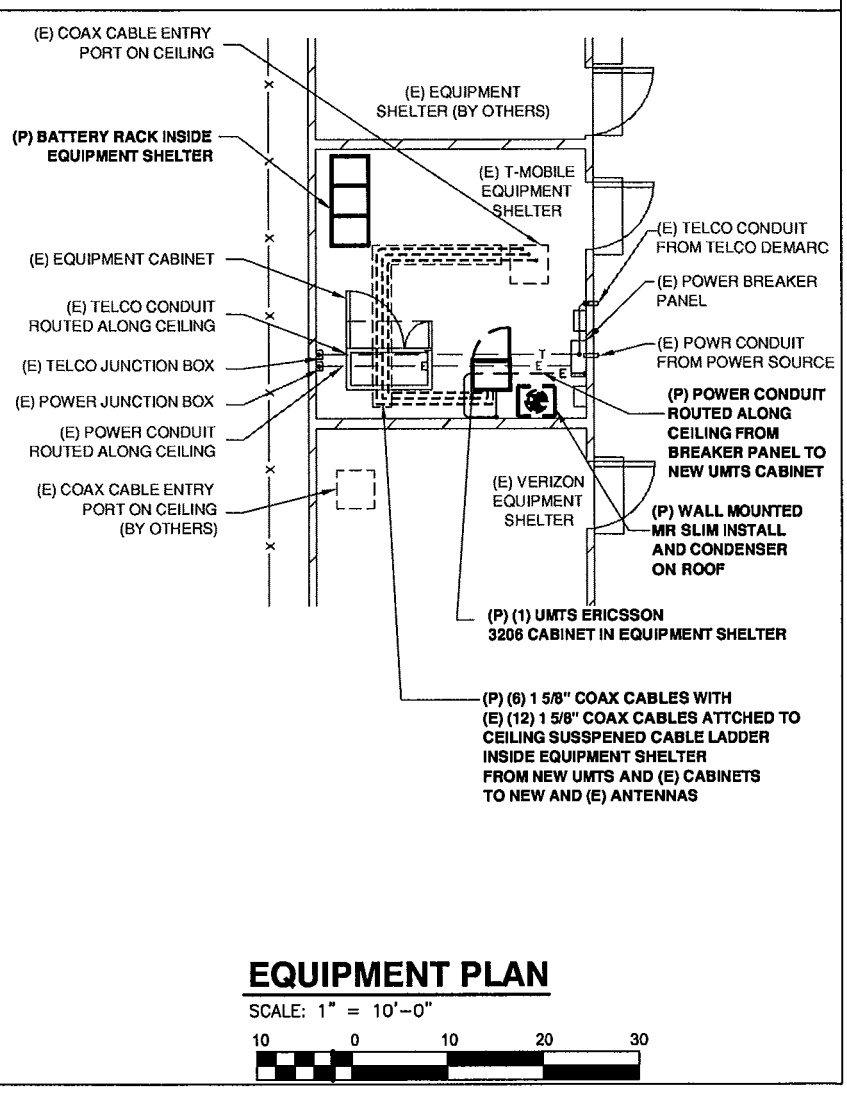




SITE PLAN

SCALE: 1/16" = 1'-0"

16 0 16 32 48



EQUIPMENT PLAN

SCALE: 1" = 10'-0"

10 0 10 20 30

TRANSCEND WIRELESS, LLC.
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430
OFFICE: 201-316-2085
FAX: 201-684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC.
DBA T-MOBILE USA, INC
35 GRIFIN ROAD SOUTH
BLOOMFIEL, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NAME:
HA140/BLOOMFIELDPOLICE_MP

SITE NUMBER:
CTHA140A

ADDRESS:
785 PARK AVENUE
BLOOMFIELD , CT 06002

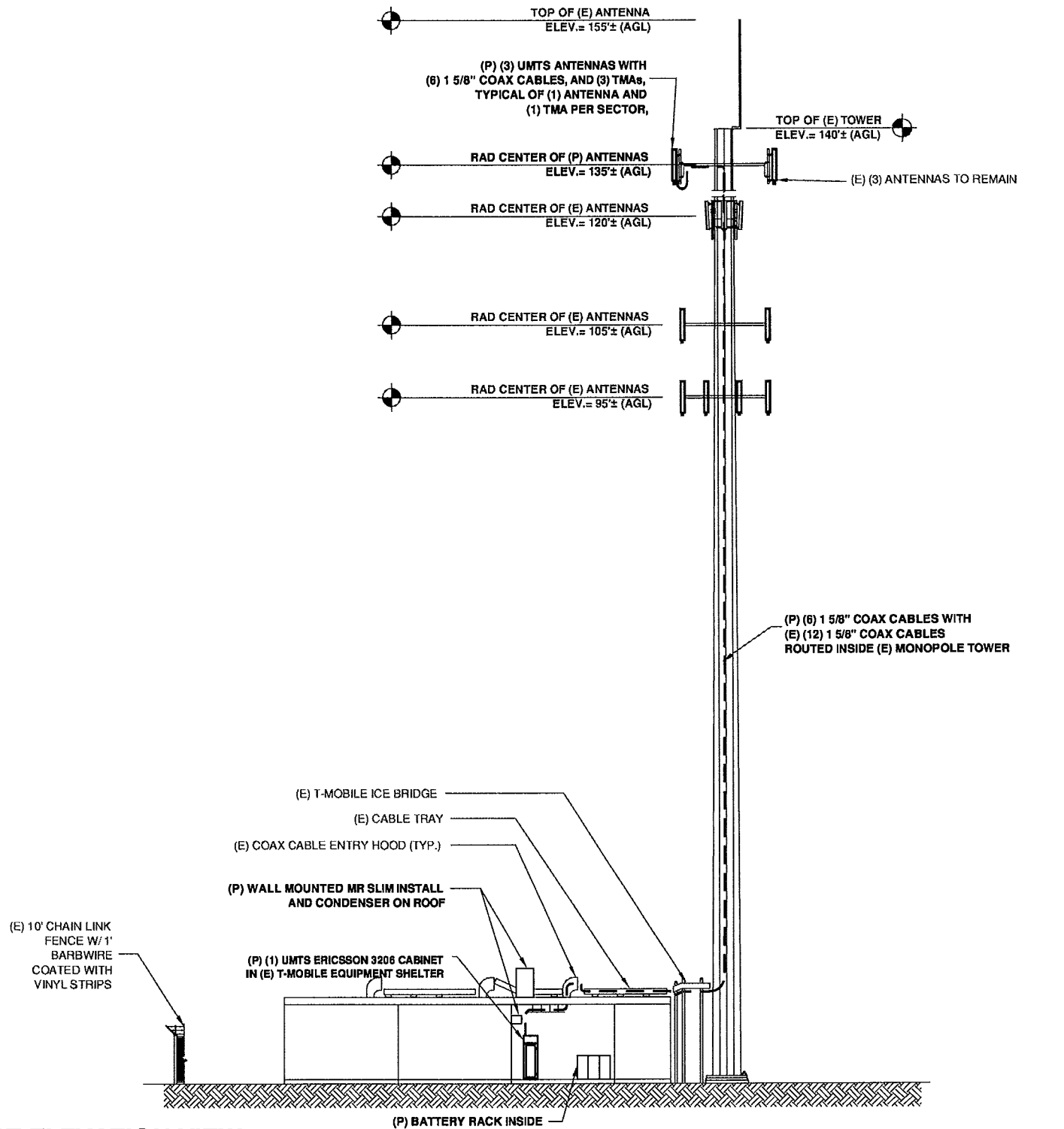
0:	FINAL LE	03-13-09
A:	REVIEW	02-04-09
NUMBER	REVISION	DATE

DRAWN BY: S.B.
DRAWING NO: LE-2

APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.



EAST ELEVATION VIEW

SCALE: 1" = 20'–0"

TRANSCEND WIRELESS, LLC.
10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430
OFFICE: 201-316-2085
FAX: 201-684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC.
DBA T-MOBILE USA, INC
35 GRIFIN ROAD SOUTH
BLOOMFIEL, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NAME: HA140/BLOOMFIELDPOLICE_MP

SITE NUMBER: CTHA140A

ADDRESS: 785 PARK AVENUE
BLOOMFIELD , CT 06002

NUMBER	REVISION	DATE
0:	FINAL LE	03-13-09
A:	REVIEW	02-04-09

DRAWN BY: S.B.

DRAWING NO: LE-3

APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modificotions they may impose.

velocitel
complete wireless solutions

April 14, 2009

Subject: Structural Assessment
Site Number: CTHA140A
Velocitel Engineering Project Number: 206AEATLCTHA140
Location: 785 Park Ave.,
Bloomfield CT 06002

In accordance with Atlantis Group's request, Velocitel evaluated the structural capacity of the existing 136 feet high monopole located at the above referenced address for the additions and alterations proposed by T-Mobile. Existing and proposed appurtenances, at a radial center 135 ft above the ground line, by T-Mobile are as following:

Existing T-Mobile Appurtenances

Antenna & TMA	Mount	Coax
(3) APX16PV-16PVL-E + (6) ddTMA 1.9GHz	(3) Flush Mounts	(12) 1 5/8" Inside Shaft

Proposed T-Mobile Appurtenances

Antenna	Mount	Coax
(3) APX16DWV-16DWVS-A20 + (3) RFS - Twin AWS	Use Existing	(6) 1 5/8" Inside Shaft

Final Configuration of T-Mobile Appurtenances

Antenna & TMA	Mount	Coax
(3) APX16DWV-16DWVS-A20 (3) APX16PV-16PVL-E + (3) RFS - Twin AWS (6) ddTMA 1.9GHz	*(3) Flush Mounts	(18) 1 5/8" Inside Shaft

* As per the original assessment letter use of (3) 10 ft T-Frames are permissible

In addition to the existing cabinet, T-mobile is proposing to install a new Ericsson 3206 cabinet inside the existing equipment shelter, which was designed for this type of occupancy.

Weight of Proposed appurtenances and cabinet:
RFS APX16DWV-16DWVS-A20: 48.2 lbs (40.7 lbs antenna and 7.5 lbs mounting hardware)
RFS - Twin AWS: 19 lbs
Ericsson 3206: 590 lbs

This review included a review of the Construction Drawings (attached CDs dated June 9, 2006) structural assessment letter prepared by Natcomm (attached letter dated April 28, 2006), and the proposed and existing antenna loading information provided by T-Mobile. Any deficiencies in

the design or in the information provided to Velocitel by others will not become evident due to the nature of this type of review. Velocitel will accept no liability due to design deficiencies and due to discrepancies between the attached original design drawing(s) and the as built configuration. Contractor should inspect the condition of the existing structure, mounts and connections and notify Velocitel for any discrepancies and deficiencies. This assessment is only valid for the appurtenances listed in the referenced letter and the proposed changes listed herein.

According to the letter by Natcomm, the monopole has adequate strength for (9) RFS APX1516PVL-16PVL-E panel antennas and (18) REMEC TMAs with a total wind area of $87.5ft^2$, which is more than the currently proposed antenna wind area of $51.ft^2$, thus the assessment by Natcomm is still valid.

Therefore, the proposed additions and alterations can be implemented as intended, with the recommendations outlined in this letter. Should you need any clarifications or have any questions, please contact me at (919) 380 0062.

Very truly yours,
Velocitel, Inc.

Prepared By:

Ahmet Colakoglu

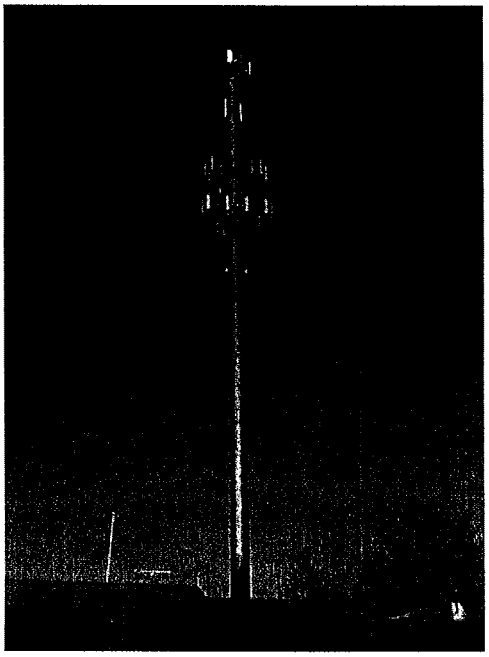
Reviewed By:

Daniel F. Southwick, P
CT Professional Engine
License No: 23294

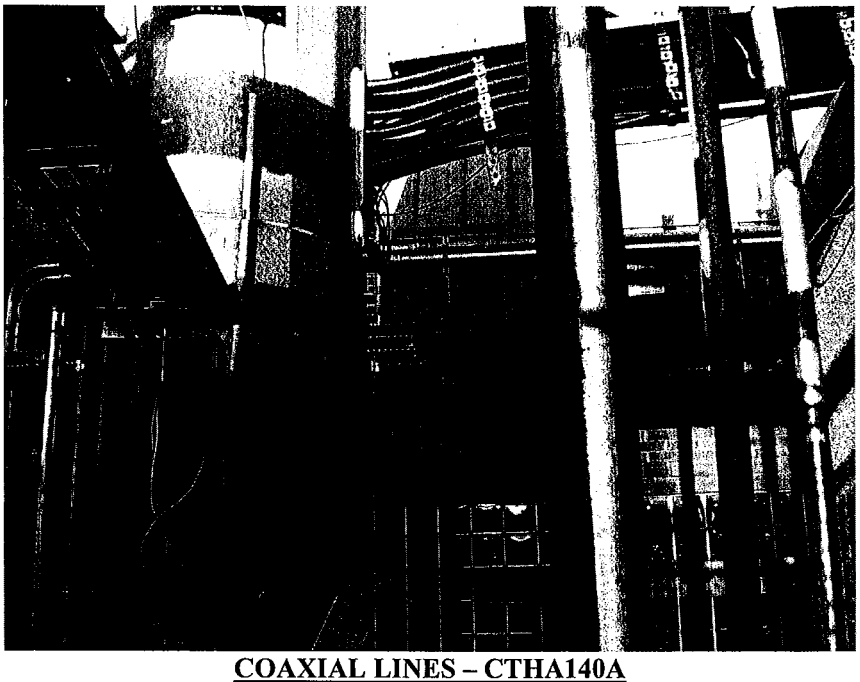
STATE OF CONNECTICUT
DANIEL F. SOUTHWICK
No. 23294
LICENSED
PROFESSIONAL ENGINEER

ATTACHMENTS:

Photos
Construction Drawings- Site CTHA140A
Referenced Structural Assessment Letter - Site CTHA140A
Radio Frequency Data Sheet - Site CTHA140A



MONOPOLE – CTHA140A



COAXIAL LINES – CTHA140A

BLOOMFIELD POLICE MP

785 PARK AVE
BLOOMFIELD, CT 06002

CTHA140A

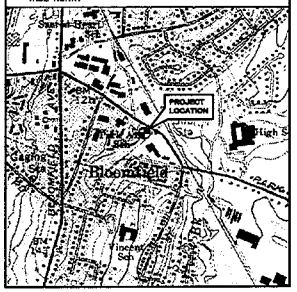
CO-LOCATE

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESSEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION, UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72 HOURS PRIOR TO ANY EXCAVATION ACTIVITY:
   DIG SAFE SYSTEM (WI, ME, NH, RI, VT): 1-888-344-7233
   CALL BEFORE YOU DIG (CT): 1-800-922-4455
18. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

VICINITY MAP

NO SCALE



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
A-1	PLANS, ELEVATION, DETAIL & NOTES	1
S-1	STRUCTURAL DETAILS AND NOTES	1
E-1	ELEC. & GROUNDING NOTES, RISERS & DETAILS	1

PROJECT SUMMARY

SITE NUMBER:	CTHA140A
SITE NAME:	BLOOMFIELD POLICE MP
SITE ADDRESS:	785 PARK AVE BLOOMFIELD, CT 06002
ASSESSOR'S PARCEL NO.:	MAP: 177-3, BLOCK: 0, LOT: 006
CONSTRUCTION TYPE:	CO-LOCATE
PROPERTY OWNER:	TOWN OF BLOOMFIELD 800 PARK AVE BLOOMFIELD, CT 06002
CONTACT NAME: CONTACT PHONE:	CHIEF BETSY HARD (860) 242-5501
APPLICANT:	OMNIPOINT COMMUNICATIONS INC. 100 FILLEY STREET BLOOMFIELD, CT 06002 OFFICE: (860) 692-7100 FAX: (860) 692-7159

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Branford, Connecticut 06405
Tel. (203) 488-0580
Fax (203) 488-8587
Consulting Engineers - Project Management
Civil - Structural - Mechanical - Electrical

APPROVALS

Omnipoint _____
LANDLORD _____
LEASING _____
R.F. _____
ZONING _____
CONSTRUCTION _____
A/E _____

PROJECT NO: 06052

DRAWN BY: DEB

CHECKED BY: CFC

SUBMITTALS

1	08/09/06	CONSTRUCTION
0	05/25/06	CONSTRUCTION

CTHA140A
BLOOMFIELD
POLICE MP

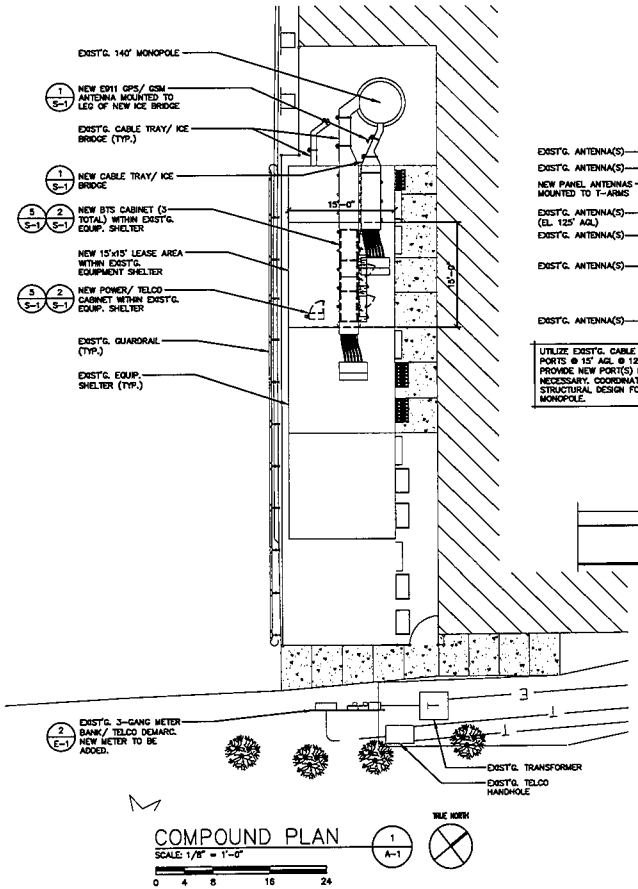
785 PARK AVE
BLOOMFIELD, CT 06002

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



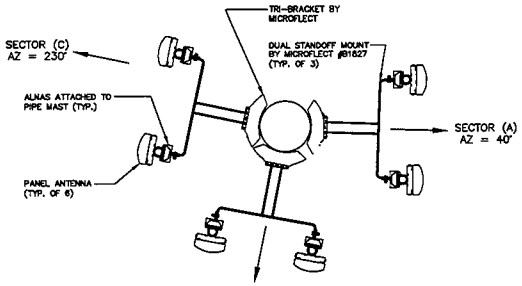
COMPOUND PLAN

1 A-1

SCALE: 1/8" = 1'-0"

TRUE NORTH

0 4 8 16 24

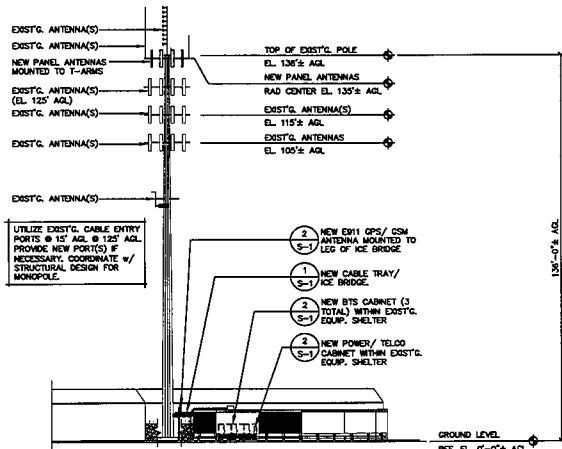


ANTENNA PLAN

2 A-1

SCALE: NTS

TRUE NORTH

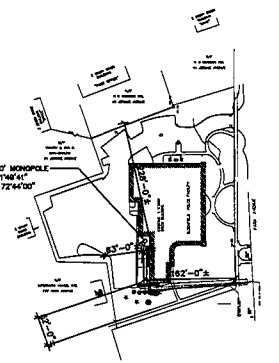


SOUTH ELEVATION

3 A-1

SCALE: 1" = 20'

0 10 20 40 50



PLOT PLAN

4 A-1

SCALE: 1" = 100'-0"

GRAPHIC SCALE

100

NOTES

1) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS SHOWN HEREIN.

2) ALL DIMENSIONS SHOWN THUS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS WHICH EFFECTS THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH LESSEE/LICENSEE PRIOR TO CONSTRUCTION.

3) NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH & INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCIES BEFORE STARTING CONSTRUCTION.

4) THE GENERAL CONTRACTOR AND/OR HIS SUB CONSULTANT SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS & INSPECTIONS WHICH MAY BE REQ'D FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTRY OR LOCAL GOVERNMENT AUTHORITY.

5) ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY & ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES & SUPPORT STRUCTURES.

6) COAXIAL CABLE CONNECTORS & TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE LESSEE/LICENSEE & IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF LESSEE/LICENSEE SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE ATTACHMENT K). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

7) ANY EQUIPMENT THAT IS TO BE PAINTED SHALL BE PAINTED TO MATCH EXISTING. PAINT SHALL BE SHERWIN WILLIAMS, COROTHANE II. SURFACE PREPARATION & APPLICATION SHALL BE IN ACCORDANCE WITH MANF'S SPECIFICATIONS & LESSEE/LICENSEE GUIDELINES.

8) COORDINATION, LAYOUT, & FURNISHING OF CONDUIT, CABLE & ALL APPURTENANCES REQ'D FOR PROPER INSTALLATION OF ELECTRICAL & TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

9) EQUIPMENT WILL BE INDEPENDENTLY POWERED WITH SEPARATE METER.

10) ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS & SPECIFICATIONS.

11) ALL ACTIVE SEWER, WATER, GAS, ELECTRIC, & OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, & WHERE REQ'D FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

12) ALL INACTIVE SEWER, WATER, GAS, ELECTRIC & OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED &/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY.

13) THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY, OR GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH.

14) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES DURING CONSTRUCTION.

15) PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE REQ'D TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT & ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO (E911) EQUIPMENT & LOCATION AS TECHNOLOGY EVOLVES TO MEET REQ'D SPECIFICATION.

ABBREVIATIONS

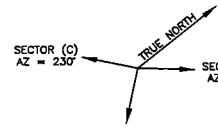
SF	SQUARE FOOT	ADJ	ADJUSTABLE
APPROX	APPROXIMATE	SHT	SHEET
CONC	CONCRETE	SIM	SIMILAR
CONT	CONTINUOUS	C	CONDUIT
CJ	CONSTRUCTION JOINT	STL	STEEL
DIA	DIAMETER	TOC	TOP OF CONCRETE
DWG	DRAWING	TOM	TOP OF MASONRY
EGB	EQUIPMENT GROUND BAR	TYP	TYPICAL
EA	EACH	VIF	VERIFY IN FIELD
ELEC	ELECTRICAL	UON	UNLESS OTHERWISE NOTED
EL	ELEVATION	WWF	WELDED WIRE FABRIC
EQ	EQUAL	BTS	BASE TRANSMISSION STATION
EQUIP	EQUIPMENT	w/	WITH
EXT	EXTERIOR	LNA	LOW NOISE AMPLIFIER
FF	FINISHED FLOOR	PCS	PERSONAL COMM. SERVICES
FG	FINISHED GRADE	A-1	ANTENNA MARK NO.
GA	GAUGE	&	AND
GALV	GALVANIZED	@	AT
GC	GENERAL CONTRACTOR	℄	PLATE BAR
LG	LONG	MIN	MINIMUM
MAX	MAXIMUM	MTL	METAL
MECH	MECHANICAL	NIC	NOT IN CONTRACT
MFR	MANUFACTURER	NTS	NOT TO SCALE
MGB	MASTER GROUND	OC	ON CENTER
AGL	ABOVE GROUND LEVEL	OPP	OPPOSITE
ARL	ABOVE ROOF LEVEL		
AFL	ABOVE FLOOR LEVEL		

SYMBOLS AND MATERIALS

NEW ANTENNA
EXISTING ANTENNA
ASPHALT
NEW ACCESS EASEMENT
CONCRETE
ELECTRIC BOX
LIGHT POLE
FND. MONUMENT
SPOT ELEVATION
SET POINT
REVISION
GRID REFERENCE
DETAIL REFERENCE
ELEVATION

GROUT or PLASTER
BRICK
MASONRY
CONCRETE
EARTH
GRAVEL
PLYWOOD
SAND
WOOD CONT.
WOOD BLOCKING
STEEL
CENTERLINE
PROPERTY LINE
STEPPED FOOTING
MATCH LINE
WORK POINT
GROUND WIRE
COAXIAL CABLE

ANTENNA ORIENTATION KEY



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SUBMITTALS

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0	05/25/06	CONSTRUCTION

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PLANS, ELEVATION, DETAIL & NOTES

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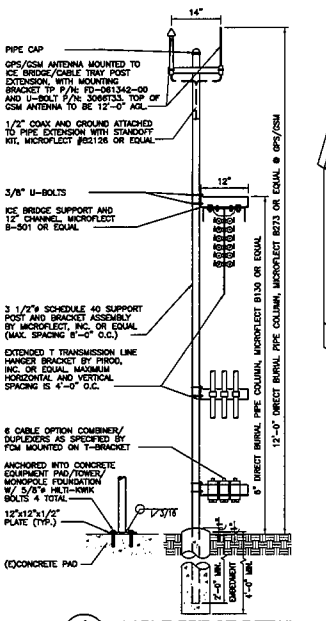
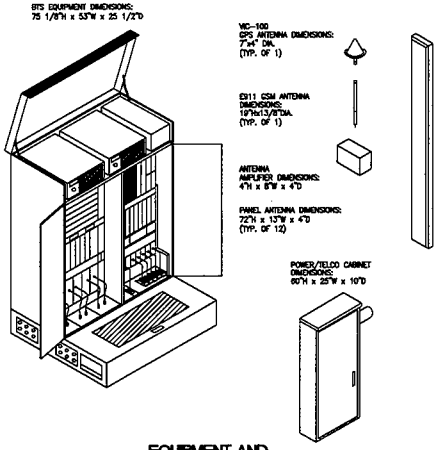
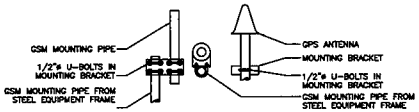


1 S-1 **CABLE BRIDGE DETAIL**
SCALE: 3/4" = 1'-0"

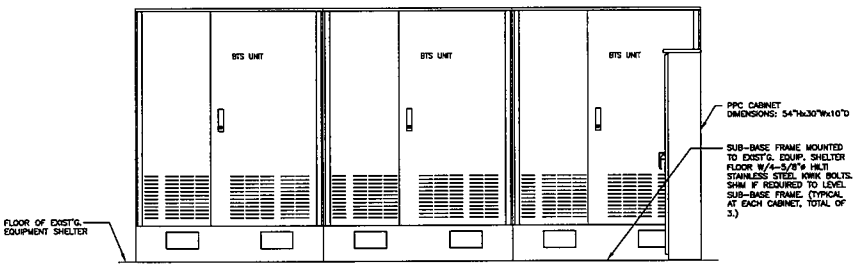
GRAPHIC SCALE



2 S-1 **EQUIPMENT AND ANTENNA DETAILS**
NOT TO SCALE



3 S-1 **GPS/GSM MOUNTING DETAIL**
SCALE: 1 1/2" = 1'-0"



5 S-1 **SECTION AT EQUIPMENT PAD**
NOT TO SCALE

STRUCTURAL NOTES:

1) DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE & APPLICABLE SUPPLEMENTS, ANSI/ASCE7, EIA/TIA-222-F STRUCTURAL STANDARDS FOR STEEL ANTENNA SUPPORTING STRUCTURES.

2) CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD PRIOR TO FABRICATION & ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER.

3) DESIGN & CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE of STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION of STRUCTURAL STEEL FOR BUILDINGS".

4) STRUCTURAL & MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 STRUCT. STEEL UNLESS OTHERWISE INDICATED.

5) STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE A, or ASTM A53 PIPE STEEL BLACK & HOT-DIPPED ZINC-COATED WELDED & SEAMLESS TYPE E or S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.

6) STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) & CONFORM TO ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS & PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE #5/8" UON.

7) ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE w/ ASTM A123 "ZINC (HOT-DIP GALVANIZED COATINGS on IRON & STEEL PRODUCTS", UNLESS OTHERWISE NOTED.

8) ALL BOLTS, ANCHORS & MISCELLANEOUS HARDWARE SHALL BE GALV. IN ACCORDANCE w/ ASTM A153 "ZINC-COATING (HOT-DIP) on IRON & STEEL HARDWARE", UNLESS OTHERWISE NOTED.

9) FIELD WELDS, DRILL HOLES, SAW CUTS & ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED w/ AN ORGANIC ZINC REPAIR PAINT COMPLYING w/ REQUIREMENTS of ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN or EQUAL. THICKNESS of APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW DRY TIME BETWEEN COATS) w/A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 or A153 as APPLICABLE.

10) CONTRACTOR SHALL COMPLY w/ AWS CODE FOR PROCEDURES, APPEARANCE & QUALITY of WELDS, & FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS & WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE w/ AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E7XXX ELECTRODES & WELDING SHALL CONFORM TO AISC & D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL of STEEL CONSTRUCTION". 9TH EDITION.11.

11) INCORRECTLY FABRICATED, DAMAGED or OTHERWISE MISFITTING or NONCONFORMING MATERIALS or CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL or CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.

12) UNISTRUTS SHALL BE FORMED STEEL CHANNEL STRUT FRAMING as MANUFACTURED BY UNISTRUT CORP, WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1-5/8"x 1-5/8"x12GA, UNLESS OTHERWISE NOTED, & SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

13) EPOXY ANCHOR ASSEMBLY SHALL CONSIST of 1/2" DIAMETER STAINLESS STEEL ANCHOR ROD w/ NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE & A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-20 and/or HY-150 SYSTEMS (as SPECIFIED AN DWG.) or ENGINEERS APPROVED EQUAL w/ 4-1/4" MIN. EMBEDMENT DEPTH.

14) EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS 1, HILTI KWIK BOLT II or APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE w/ THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE THREE & ONE HALF (3 1/2) INCHES.

15) GRAVEL SUB BASE & CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL.

16) CONCRETE FOR FENCE & ICE BRIDGE SUPPORT SHALL BE 3000 PSI AIR ENTRAINED (45%-65%) NORMAL WEIGHT CONCRETE.

17) ALL CAST IN PLACE CONCRETE SHALL BE MIXED & PLACED IN ACCORDANCE w/ THE REQUIREMENTS of ACI 318 & ACI 301.

18) THE FOLLOWING MINIMUM CONCRETE COVER OVER REINFORCING STEEL SHALL BE as FOLLOWS UNLESS NOTED OTHERWISE:
CONCRETE CAST AGAINST EARTH ... 3 INCHES.
CONCRETE EXPOSED TO EARTH or WATER
#6 & LARGER .....2 INCHES
#5 & SMALLER .....1 1/2 INCHES
ALL EXPOSED EDGES SHALL BE PROVIDED w/ A 3/4"x3/4" CHAMFER UNLESS NOTED OTHERWISE.

19) LUMBER SHALL COMPLY w/ THE REQUIREMENTS of THE AMERICAN INSTITUTE of TIMBER CONSTRUCTION & THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED & SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.

20) WHERE ROOF PENETRATIONS ARE REQ'D, THE CONTRACTOR SHALL CONTACT & COORDINATE RELATED WORK w/ THE BUILDING OWNER & THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER as TO NOT VOID THE EXISTING ROOF WARRANTY.

21) PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE REQ'D TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT of EQUIPMENT & ANTENNAS GENERALLY DEPICTED on THIS PLAN, ATTACHED TO or MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO (E911) EQUIPMENT & LOCATION as TECHNOLOGY EVOLVES TO MEET REQ'D SPECIFICATION.

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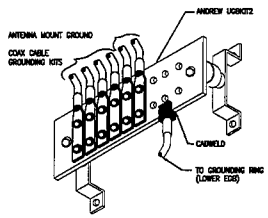
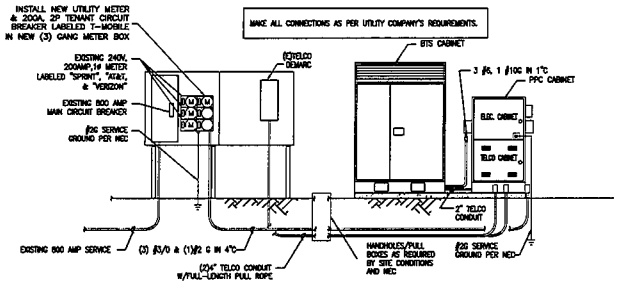
SHEET TITLE
STRUCTURAL DETAILS AND NOTES

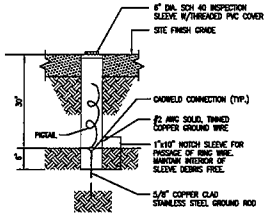
SHEET NUMBER
S-1



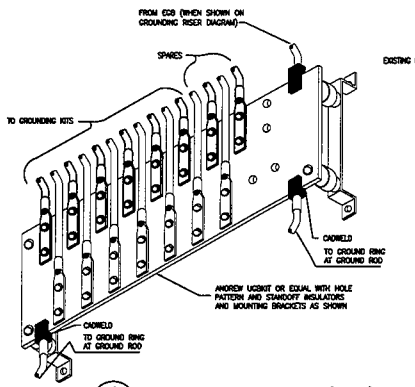
1 E-1 **EQUIPMENT GROUND BAR (EGB)**
SCALE: N.T.S.



2 E-1 **POWER RISER DIAGRAM**
SCALE: N.T.S.



3 E-1 **GROUND ROD TEST WELL DETAIL**
SCALE: N.T.S.



4 E-1 **MASTER GROUND BAR (MGB)**
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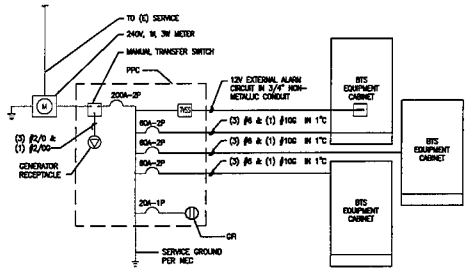
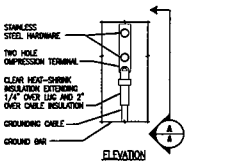
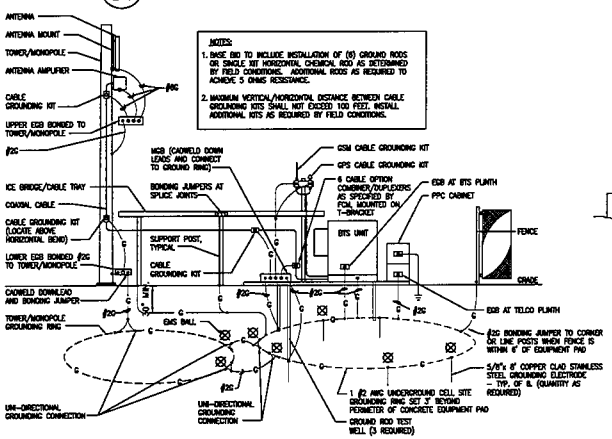


5 E-1 **ONE LINE DIAGRAM**
SCALE: N.T.S.

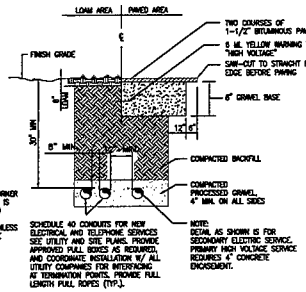


NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

6 E-1 **TYPICAL GROUND BAR CONNECTIONS DETAIL**
SCALE: N.T.S.



7 E-1 **GROUNDING RISER DIAGRAM**
SCALE: N.T.S.



8 E-1 **BURIED CONDUIT DETAIL**
SCALE: N.T.S.

ELECTRICAL LEGEND

	NEW PANEL BOARD, SURFACE MOUNTED
	EXISTING PANEL BOARD, SURFACE MOUNTED
T	DRY TYPE TRANSFORMER
M	METER
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
F	FUSIBLE DISCONNECT SWITCH, MOUNTED 54"A.F.F.
SSWB	TRANSIENT VOLTAGE SURGE SUPPRESSOR WITH BUILT-IN FUSES, SURFACE MOUNTED
	DUPLEX OUTLET, SURFACE MOUNTED, 20 AMPS, 125 VOLTS, SINGLE PHASE
J	JUNCTION BOX, SURFACE MOUNTED 15" A.F.F.
	EXPOSED WIRING
	HOME RUNS, MINIMUM 2#10 + 1#10G IN 3/4" CONDUIT U.O.N.
A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
GFI	GROUND FAULT INTERRUPTER
A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
G	GROUND
	GROUND
MGB	MASTER GROUND BAR o=MECHANICAL CONNECTION •=CADWELD CONNECTION
EGB #2 3B	EQUIPMENT GROUND BAR o=MECHANICAL CONNECTION •=CADWELD CONNECTION
C	GROUND COPPER WIRE, SIZE AS NOTED
	EXPOSED WIRING
	COAXIAL CABLE
	5/8"ø COPPER CLAD STAINLESS STEEL GROUND ROD
	EXOTHERMIC (CADWELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION
PPC	POWER PROTECTION CABINET
	OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, ORTHENE.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND T-MOBILE CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE PULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND T-MOBILE CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE PULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND T-MOBILE CELL SITE PPC AND BETWEEN BTS AND T-MOBILE CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY T-MOBILE.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250.
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY T-MOBILE.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS, AS WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF T-MOBILE EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE-TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

OMNIPOINT COMMUNICATIONS INC.
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX: (860) 692-7159

Natcomm, LLC
63-2 North Branford Road
Branford, Connecticut 06405
Tel. (203) 488-0580
Fax (203) 488-8587
Consulting Engineers • Project Management
Civil • Structural • Mechanical • Electrical

APPROVALS

Omnipoint	
LANDLORD	
LEASING	
R.F.	
ZONING	
CONSTRUCTION	
A/E	

PROJECT NO:	06052
DRAWN BY:	AAJ
CHECKED BY:	FRC

SUBMITTALS

1	06/09/06	CONSTRUCTION
0	05/25/06	CONSTRUCTION

CTHA140A
BLOOMFIELD POLICE MP
785 PARK AVE
BLOOMFIELD, CT 06002

SHEET TITLE
ELEC. & GROUNDING NOTES, RISERS, & DETAILS

SHEET NUMBER
E-1

NATCOMM, LLC

Consulting Engineers

April 28, 2006

Mr. Daniel O'Connor
Ominipoint Communications
100 Filley Street
Bloomfield, Ct 06002

Re: *T-Mobile ~ CTHA140A*
785 Park Ave.,
Bloomfield, CT 06002

Natcomm Project No. 06052

Dear Mr. O'Connor,

We have reviewed the proposed T-Mobile antenna installation at the above referenced site. The purpose of the review is to determine the adequacy of an existing 136ft monopole to support the proposed antennas. The review considered the effects of wind load, dead load, ice load and seismic forces in accordance with TIA/EIA-222-F and Connecticut State Building Code. Structural design documents prepared by Paul J. Ford and Company job #29202-0288 dated August 13, 2002 were used as reference material.

The existing antenna configuration is as follows:

- AT&T: Six (6) Allgon 7250.03 mounted on 14ft platform at an elevation of 135 ft.
- Town: One (1) DB205 (18' whip) mounted to 14ft platform at an elevation of 135 ft.
- Town: One (1) Celwave PD1610 (4' whip) mounted to 14ft platform at an elevation of 135 ft.
- Town: One (1) Telewave ANT450D6-9 & F6 (18' whip) mounted to 14ft platform at an elevation of 135ft.
- Verizon: Twelve (12) DB842H65 mounted on 14ft platform at an elevation of 105 ft.
- Town: One (1) DB205 (18' whip) mounted to stiff-arm at an elevation of 85 ft.
- Town: One (1) SRL-312 (2' whip) mounted to stiff-arm at an elevation of 87.5 ft.
- Town: One (1) SCALA MF-900B Rectangular grid at an elevation of 82.5 ft.
- Nextel: Twelve (12) DB844G65 mounted on 14ft platform at an elevation of 95 ft.

The proposed additional antenna loading is as follows:

- T-Mo: Nine (9) RFS APX1516PV-16PVL-E panel antennas w/ eighteen (18) REMEC G20057A1 TMA's mounted on 10ft T-Frames at an elevation of 125 ft.

T-Mobile's installation at the 125 ft. elevation will preclude the addition of any future carriers at the 115 ft. elevation without a detailed structural analysis of the existing pole structure.

Based on the information provided, the existing structure meets all the requirements of the TIA/EIA-222-F standards for a basic wind speed of 80mph and ½"radial ice.

In conclusion, the existing 136 ft monopole is adequate to support the proposed T-Mobile antennas and related equipment. If there are any questions regarding this matter, please feel free to call.

Submitted by:

Carlo F. Centore, PE
Project Manager

STATE OF CONNECTICUT
CARLO F. CENTORE
NO. 18684
LICENSED
PROFESSIONAL ENGINEER

UMTS RFDS v2.0

T-Mobile

Site ID	CTHA140A	Site Type	Co-Location.
Address	785 Park Ave., Bloomfield CT 06002	Latitude	0
		Longitude	0

TMO UMTS Engineer	M Lucey

GSM Impacted?	
Alpha	
Beta	
Gamma	
Delta	

History (approvals)	Date
RFDS	02/12/09
GSM RF Acceptance	

RFDS Revision	1

Site Leasing/Zoning	Preliminary Leasing	Preliminary Zoning
* # of Sectors	Information not available	---
* # of Antennas	Information not available	Information not available
Antenna Model	Information not available	---
Antenna Size	---	Information not available
* # of TMA	Information not available	---
* # of Feeders	Information not available	Information not available
Feeder Diameter	Information not available	Information not available
Leased area (sq ft)	Information not available	Information not available
* # of Cabinets	Information not available	Information not available
Cabinet Model	Information not available	---
Site Comments	UMTS overlay. Tie in and upgrade RET.	

* Legend: Config under threshold | Config meets threshold | Config above threshold | Text / Not checked

GSM Information

Existing Configuration

Alpha	Beta	Gamma	Delta
140	140	140	
YES	YES	YES	
1 5/8"	1 5/8"	1 5/8"	
180	180	180	
2	2	2	
2	2	2	

S12000 indoor
1

Proposed Configuration

	Alpha	Beta	Gamma	Delta
Ant. Height (ft)	140	140	140	
RET deployed	YES	YES	YES	
Feeder Type	1 5/8"	1 5/8"	1 5/8"	
Feeder Length (ft)	180	180	180	
# Current TRX	2	2	2	
# Forec. TRX	2	2	2	
# of Nortel HePA				
Cabinet Type	S12000 indoor			
Cabinet #	1			

UMTS Information

Existing Configuration

Alpha	Beta	Gamma	Delta
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

Proposed Configuration

	Alpha	Beta	Gamma	Delta
Ant. Height (ft)	140	140	140	
RET deployed	YES	YES	YES	
Feeder Type	1 5/8"	1 5/8"	1 5/8"	
Feeder Length (ft)	180	180	180	
Cabinet Type	RBS 3206			
Cabinet #	1			

UMTS RFDS v2.0

T-Mobile

Site ID	CTHA140A	Site Type	Co-Location.
Address	785 Park Ave., Bloomfield CT 06002	Latitude	0
		Longitude	0

TMO UMTS Engineer	M Lucey

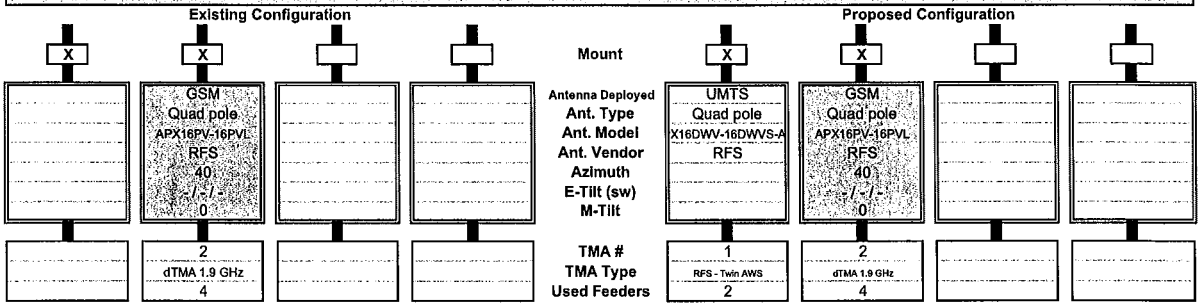
GSM Impacted?

Alpha	
Beta	
Gamma	
Delta	

History (approvals)	Date
RFDS	02/12/09
GSM RF Acceptance	

RFDS Revision	1

ALPHA

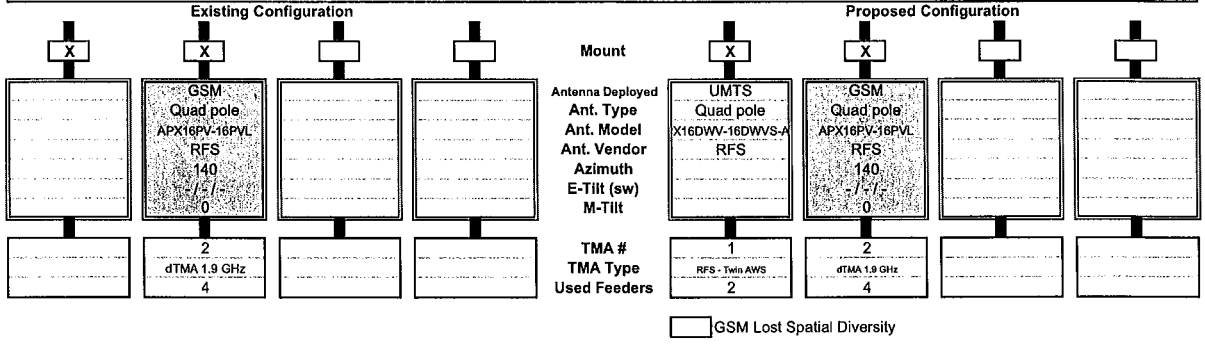


Req	OK	
		Add new Mount
		Relocate GSM antenna
		Swap GSM antenna
		Consolidate GSM feeders
X		Add Twin TMA
		Swap single TMA with twin TMA
		Add Booster
X		Add two new feeders for UMTS
		Reuse GSM feeders for UMTS

Comments

Tie in and upgrade RET.

BETA



Req	OK	
		Add new Mount
		Relocate GSM antenna
		Swap GSM antenna
		Consolidate GSM feeders
X		Add Twin TMA
		Swap single TMA with twin TMA
		Add Booster
X		Add two new feeders for UMTS
		Reuse GSM feeders for UMTS

Comments

UMTS RFDS v2.0

T-Mobile

Site ID	CTHA140A	Site Type	Co-Location.
Address	785 Park Ave., Bloomfield CT 06002	Latitude	0
		Longitude	0

TMO UMTS Engineer	M Lucey

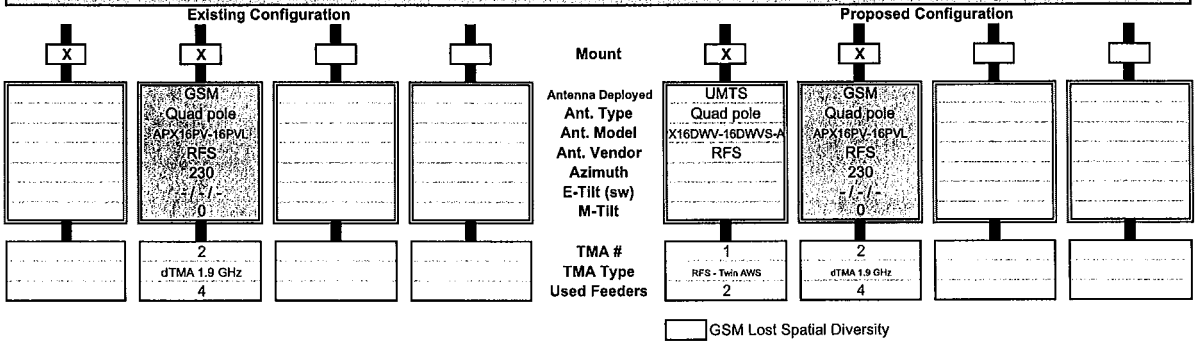
GSM Impacted?

Alpha	
Beta	
Gamma	
Delta	

History (approvals)	Date
RFDS	02/12/09
GSM RF Acceptance	

RFDS Revision	1

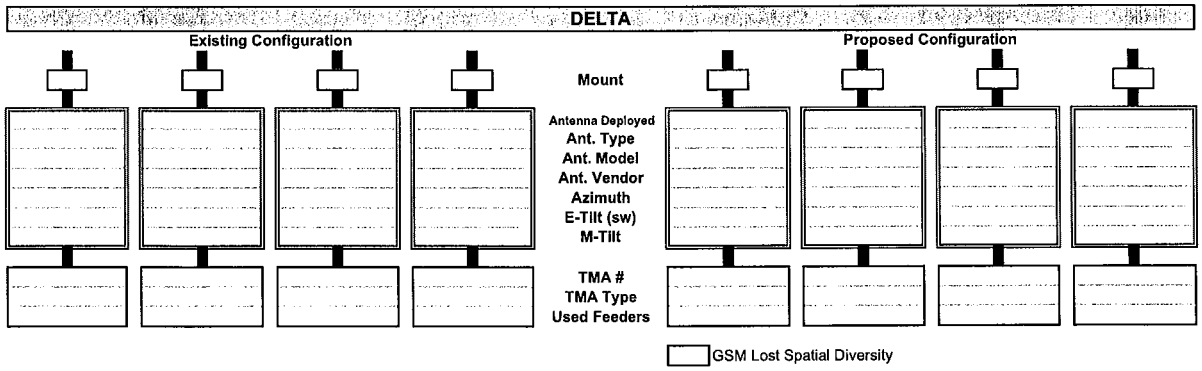
GAMMA



Req	OK	
		Add new Mount
		Relocate GSM antenna
		Swap GSM antenna
		Consolidate GSM feeders
X		Add Twin TMA
		Swap single TMA with twin TMA
		Add Booster
X		Add two new feeders for UMTS
		Reuse GSM feeders for UMTS

Comments

DELTA



Req	OK	
		Add new Mount
		Relocate GSM antenna
		Swap GSM antenna
		Consolidate GSM feeders
		Add Twin TMA
		Swap single TMA with twin TMA
		Add Booster
		Add two new feeders for UMTS
		Reuse GSM feeders for UMTS

Comments

T-Mobile

T-Mobile USA Inc.
35 Griffin Rd South, Bloomfield, CT 06002-1853
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 CTHA140A
Date: April 23, 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 Monopole at 785 Park Avenue, Bloomfield, 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 (1935-1944.8), (2140-2145), (2110-2120)MHz frequency Band.
2) The antenna array consists of three sectors, with 2 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 135 ft.
4) UMTS antenna center line height is 135 ft.
5) The maximum transmit power from any GSM sector is 2172.3 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2269.29 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 Monopole at 785 Park Avenue, Bloomfield, CT, is 0.05856 mW/cm^2. This value represents 5.856% 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 27.99%. The combined Power Density for the site is 33.846% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CTHA140A**
Site Address:	**785 Park Avenue**
Town:	**Bloomfield**
Tower Height:	**140 ft.**
Tower Style:	**Monopole**

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	170 ft.	**Cable Length**	170 ft.
Antenna Height	135.0 ft.	**Antenna Height**	135.0 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	1.9720 dB	**Total Cable Loss**	1.9720 dB
Total Attenuation	6.4720 dB	**Total Attenuation**	3.4720 dB
Total EIRP per Channel	54.34 dBm	**Total EIRP per Channel**	60.55 dBm
(In Watts)	271.54 W	**(In Watts)**	1134.64 W
Total EIRP per Sector	63.37 dBm	**Total EIRP per Sector**	63.56 dBm
(In Watts)	2172.30 W	**(In Watts)**	2269.29 W
nsg	11.3280	**nsg**	14.5280
Power Density (S) =	**0.028639 mW/cm^2**	**Power Density (S) =**	**0.029918 mW/cm^2**

T-Mobile Worst Case % MPE = 5.8557%

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	11.9600 %
Cingular	
Sprint	
AT&T Wireless	
Nextel	9.6000 %
MetroPCS	
Other Antenna Systems	6.4300 %
Total Excluding T-Mobile	**27.9900 %**
T-Mobile	5.8557
Total % MPE for Site	**33.8457%**