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@po.state.ct.us
Web Site: www.state.ct.us/csc/index.htm

June 20, 2003

Stephen J. Humes
LeBoeuf, Lamb, Greene & MacRae
Goodwin Square
225 Asylum Street
Hartford, CT 06103

RE: **TS-T-MOBILE-032-030528** - Omnipoint Communications, Inc. request for an order to approve tower sharing at an existing telecommunications facility located at 712 Bread & Milk Street, Coventry, Connecticut.

Dear Attorney Humes:

At a public meeting held June 19, 2003, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. 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. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated May 28, 2003.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz / PBK

Pamela B. Katz, P.E.
Chairman

PBK/laf

c: Honorable Joan A. Lewis, Chairman Town Council, Town of Coventry
John A. Elsesser, Town Manager, Town of Coventry
Eric M. Trott, Director of Planning & Development, Town of Coventry
Sheila R. Becker, Regional Director of Compliance, SBA, Inc.
Christopher B. Fisher, Esq., Cuddy & Feder

TS-T-MOBILE-032-030528

LeBoeuf, Lamb, Greene & L.L.P.

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WRITER'S DIRECT FACSIMILE: (860) 241-1344

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May 28, 2003

Pamela Katz, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Request by T-Mobile for an Order to Approve the Shared Use of a Tower Facility at 712 Bread & Milk Street, Coventry, Connecticut

Dear Chairman Katz and Members of the Council:

Please be advised that LeBoeuf, Lamb, Greene & MacRae, L.L.P. represents Omnipoint Communications, Inc., a subsidiary of T-Mobile USA, Inc. (hereinafter T-Mobile) in the above-referenced matter. T-Mobile is the successor to VoiceStream Wireless Corp. by virtue of a recent corporate name change and nationwide re-branding strategy. Pursuant to Connecticut General Statutes §16-50aa, T-Mobile hereby requests an order from the Connecticut Siting Council ("Council") approving T-Mobile's proposed shared use of an existing tower located at 712 Bread & Milk Street, in Coventry, Connecticut. T-Mobile proposes to install antennas on the existing tower, and the equipment associated with this facility would be located near the base of the tower within the existing compound (see drawing A-1 attached as part of Exhibit B). T-Mobile requests that the Council find that the proposed shared use of the tower satisfies the criteria stated in §16-50aa and issue an order approving the proposed use. The chief elected official and Town Manager of Coventry has been notified via First Class Mail.

Background

T-Mobile operates "Wideband PCS" licenses for the 2-Ghz PCS frequencies for the greater New York City area, including the entire State of Connecticut. Omnipoint is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in Connecticut, which includes the area to be served by the proposed installation.

The tower at 712 Bread & Milk Street, Coventry, is an existing one hundred seventy-five foot (175') monopole. The coordinates for the site are **41°-49'-05" N** and **72°-23'-35" W**. The tower is located approximately eleven hundred feet (1,100') east of Bread & Milk Street (also known as Route 31), and approximately eighteen hundred feet north of North School Road in the northwest corner of Coventry. The tower is owned by SBA, with the underlying landowner being Norman and Ronald Nadeau. T-Mobile and the owner have agreed to mutually acceptable terms and conditions for the proposed shared use of this tower, and the owner has authorized T-Mobile to act on its behalf to apply for all necessary local, state and federal permits, approvals and authorizations which may be required for the proposed shared use of this facility. The tower is designed and built to hold multiple carrier antennas at multiple elevations above ground level ("AGL"). These elevations are listed on the elevation drawing 1, A-2 attached as part of Exhibit B. Currently, there are locations for future telecommunications antennas at the one hundred fifty-two foot (152'-0") centerline AGL, one hundred forty-two foot (142'-0") centerline AGL, one hundred thirty-two foot (107'-0") centerline and the one hundred twenty-two foot centerline AGL. AT&T currently has antennas at the one hundred sixty-two foot (162'-0") centerline AGL.

T-Mobile proposes to install an antenna cluster comprised of three (3) sectors, with two (2) antennas per sector for a total of six (6) antennas. The model number for each antenna is EMS RR90-17-02 DP. The antennas would be mounted on an existing low profile triangular platform at the one hundred seventy-two foot (172'-0") centerline AGL. The antenna mounting plan is shown on drawing 2, A-2 attached as part of Exhibit B. The radio transmission equipment associated with these antennas, three (3) Nortel S8000 BTS cabinets, would be located near the base of the tower on two proposed five foot by ten foot (5'-0" x 10'-0") concrete pads within a leased ten foot by twenty foot (10' x 20') square area. The tower and all of the equipment for all existing and proposed carriers is within a large existing compound surrounded by a gated six foot (6') high chain link fence with three strands of barbed wire. (shown on drawing 2, A-1, attached as part of Exhibit B). Access to the compound is via an existing asphalt/stone access drive that winds across the owners' land from Bread & Milk Street (shown on drawing 1, A-1). Utilities will be run from existing utility sources approved by the owner via underground conduits (shown in drawing 2, A-1, attached as part of Exhibit B).

C.G.S. §16-50aa (c) (1) provides, in pertinent part, that upon written request for approval of a proposed shared use, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the council shall issue an order approving such shared use." The shared use of the tower satisfies those criteria as follows:

A. **Technical Feasibility** - The existing tower and compound were designed to accommodate multiple carriers. A structural analysis of the tower with the proposed T-Mobile

installation has been performed and is attached as Exhibit D. The proposed shared use of this tower therefore is technically feasible.

B. **Legal Feasibility** Under C.G.S. § 16-50aa, the Council has been authorized to issue orders approving the proposed shared use of an existing tower facility such as the facility at 712 Bread & Milk Street in Coventry. This authority complements the Council's prior-existing authority under C.G.S. § 16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. C.G.S. § 16-50x(a) vests exclusive jurisdiction over these facilities in the Council, which shall "give such consideration to other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under this statutory authority vested in the Council, an order by the Council approving the shared use would permit the Applicant to obtain a building permit for the proposed installations.

C. **Environmental Feasibility** The proposed shared use would have minimal environmental effects, if any, for the following reasons:

1. The proposed installations (i.e., three (3) sectors with two (2) antennas per sector) would have an insignificant incremental visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing site. In particular, the proposed installations would not increase the height of the existing tower, and would not extend the boundaries of the existing compound area. The tower is designed to accommodate multiple carriers

2. The proposed installations would not increase the noise levels at the existing facility by six decibels or more.

3. Operation of antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the American National Standards Institute ("ANSI"). The "worst-case" exposure calculated for operation of this facility (i.e., calculated at the base of the tower, which represents the closest publicly accessible point within the broadcast field of the antennas) will be 0.02482 mW/cm2, which is 2.482% of the Maximum Permissible Emission (MPE). In this case, the calculations have actually been done for nine (9) antennas for possible future use, rather than the six (6) that are actually currently proposed. The combined power density calculations from other carriers is 3.07% of the MPE. This accounts for a combined power density of 5.552% of the MPE standard. These calculations are attached as Exhibit E.

4. The proposed installations would not require any water or sanitary facilities, or generate air emissions or discharges to water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is complete (approximately two (2) weeks), the proposed installations would not generate any traffic other than periodic maintenance visits.

The proposed use of this facility would therefore have a minimal environmental effect, if any, and is environmentally feasible.

D. **Economic Feasibility** As previously mentioned, the owner and T-Mobile have entered into a mutual agreement to share the use of the existing tower on terms agreeable to the parties. The proposed tower sharing is therefore economically feasible.

E. **Public Safety Concerns** As stated above, the existing tower is structurally capable of supporting the proposed T-Mobile antennas. The tower stands on a compound accessible from Bread & Milk Street via an access road. T-Mobile is not aware of any public safety concerns relative to the proposed sharing of the existing tower. In fact, the provision of new or improved phone service through shared use of the existing tower will enhance the safety and welfare of area residents and the public.

Conclusion

For the reasons discussed above, the proposed shared use of the existing tower facility at Bread & Milk Street in Coventry, Connecticut satisfies the criteria stated in C.G.S. §16-50aa, and advances the General Assembly's and the Council's goal of preventing the unnecessary proliferation of towers in Connecticut. T-Mobile therefore respectfully requests that the Council issue an order approving the proposed shared use of this tower.

Thank you for your consideration of this matter.

Respectfully submitted,

T-MOBILE USA, INC.

By: _____

Its Counsel
Stephen J. Humes

Attachments

cc: John Elsesser, Town Manager
James E. Clark, Chairman, Town Council

Exhibit A

Site Map
Bread & Milk Street
Coventry, Connecticut

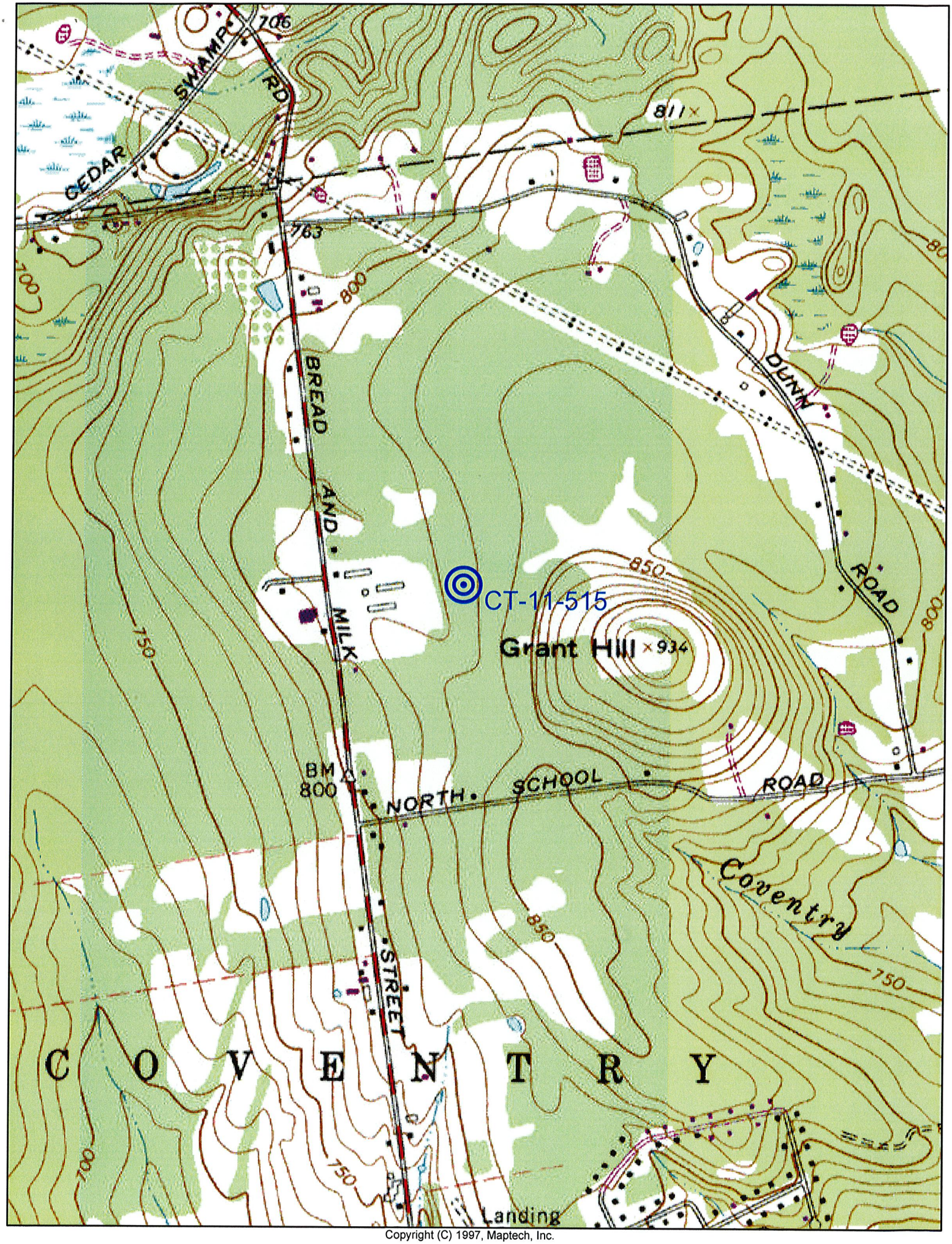
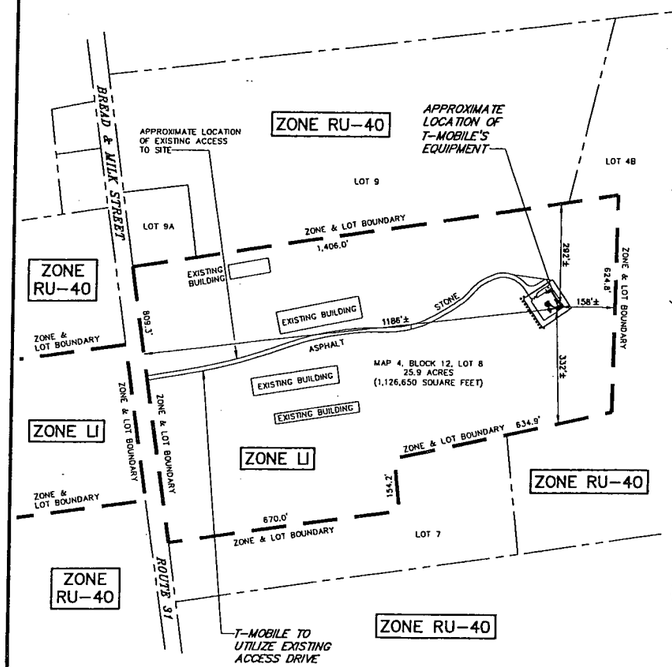


Exhibit B

Design Drawings

Bread & Milk Street
Coventry, Connecticut



NOTE

1) PLOT PLAN BASED ON TAX MAP FROM TOWN OF COVENTRY.
2) SETBACKS ARE FROM PROPERTY LINES TO T-MOBILE EQUIPMENT

GRAPHIC SCALE

200 0 100 200 400 800

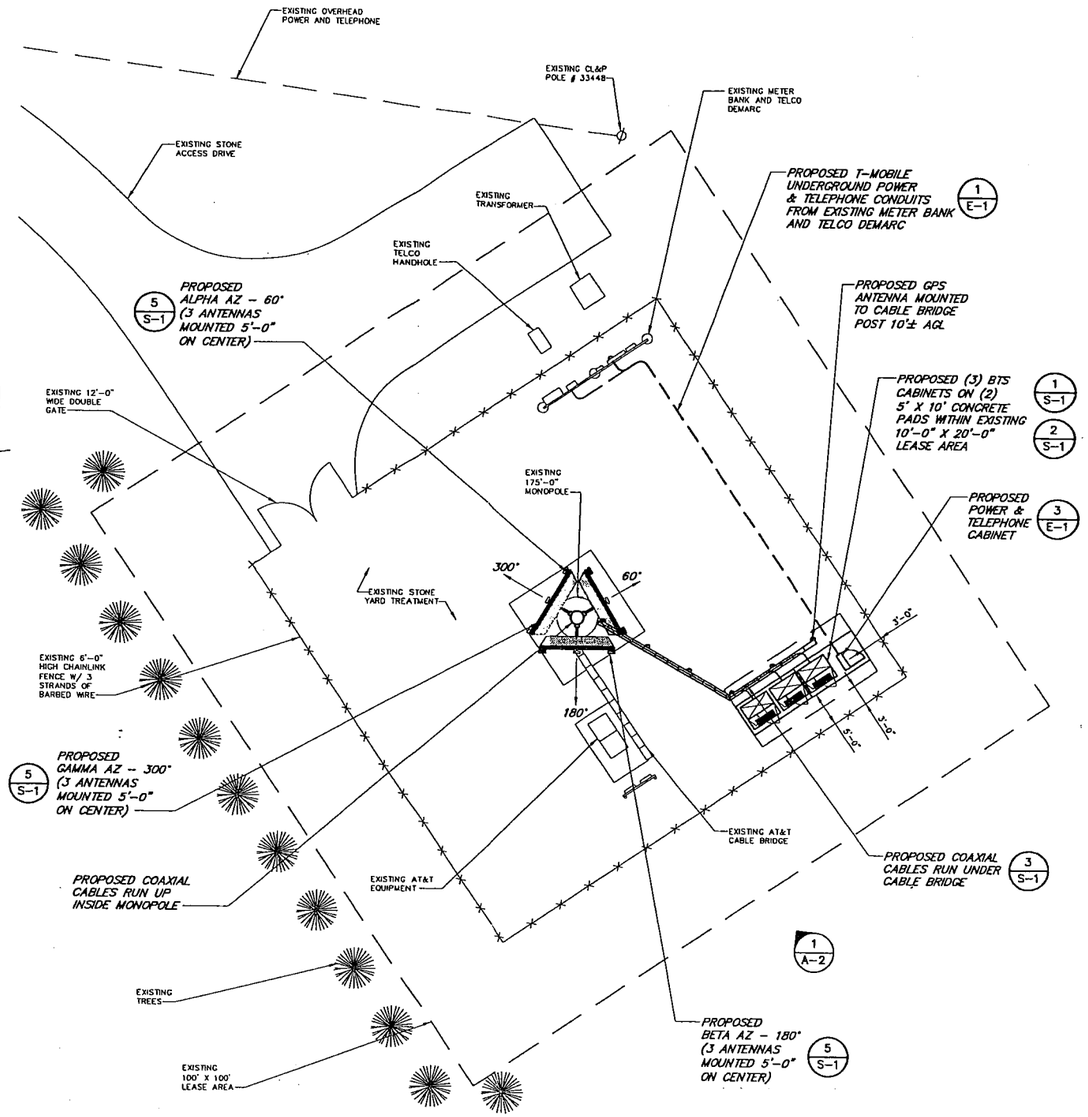
(IN FEET)

PLOT PLAN (1 / A-1)
SCALE: 1" = 200'

TRUE NORTH

GENERAL NOTES

1. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECTS THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH OWNER PRIOR TO CONSTRUCTION.
2. NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCIES BEFORE STARTING CONSTRUCTION.
3. THE GENERAL CONTRACTOR AND OR HIS SUB CONSULTANT SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTRY OR LOCAL GOVERNMENT AUTHORITY.
4. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.
5. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF OWNER 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.
6. ANY EQUIPMENT THAT IS TO BE PAINTED SHALL BE PAINTED TO MATCH EXISTING. PAINT SHALL BE SHERWIN WILLIAMS, COROTHANE II, SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND OMNIPOINT GUIDELINES.
7. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. EQUIPMENT WILL BE INDEPENDENTLY POWERED WITH SEPARATE METER.
9. PRIOR TO EXCAVATION NEAR (E)TOWER, CONTRACTOR TO CONTACT AND COORDINATE WITH PROPERTY OWNER.
10. ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED 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.
11. ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/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 ENGINEERING.
12. 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.
13. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES DURING CONSTRUCTION.
14. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.



NOTE

BASE MAPPING PREPARED BY CLOUGH, HARBOUR & ASSOCIATES L.L.P FROM A APRIL 11, 2003 SITE VISIT, FROM A TAX MAP FROM TOWN OF COVENTRY AND FROM DRAWINGS PREPARED BY DAMBERRY-GOODKIND, INC FOR SBA PROPERTIES INC.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)

PARTIAL SITE / EQUIPMENT PLAN (2 / A-1)
SCALE: 1" = 10'

TRUE NORTH

NOTE:
EXISTING PLATFORM TO BE USED FOR T-MOBILE ANTENNAS. ROTATE TO OBTAIN SPECIFIED ORIENTATIONS.

PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. T-MOBILE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. T-MOBILE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

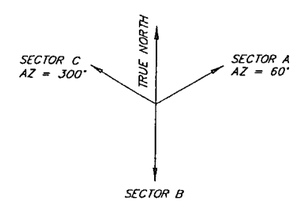
ABBREVIATIONS

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

SYMBOLS AND MATERIALS

NEW ANTENNA	GROUT / PLASTER
EXISTING ANTENNA	BRICK
ASPHALT	MASONRY
NEW ACCESS EASEMENT	CONCRETE
CONCRETE	EARTH
ELECTRIC BOX	GRAVEL
LIGHT POLE	PLYWOOD
FND. MONUMENT	SAND
SPOT ELEVATION (×100)	WOOD CONT.
SET POINT	WOOD BLOCKING
REVISION	STEEL
GRID REFERENCE	CENTER LINE
DETAIL REFERENCE (DET. # / SHT. #)	PROPERTY LINE
	STEPPED FOOTING
ELEVATION (DET. # / SHT. #)	MATCH LINE
	WORK POINT
SECTIONS & DETAILS (DET. # / SHT. #)	GROUND WIRE
	COAXIAL CABLE

ANTENNA ORIENTATION KEY



T-Mobile
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860)-692-7100
FAX: (860)-692-7159

CHA
CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
2139 SILAS DEANE HIGHWAY
ROCKY HILL, CT 06067
(860) 257-4557

AAE SEAL
STATE OF CONNECTICUT
JOHN P SOBECKI
No. 17827
LICENSED
PROFESSIONAL ENGINEER

APPROVALS

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

PROJECT NO: 10585-1011

DRAWN BY: PAL

CHECKED BY: RJT

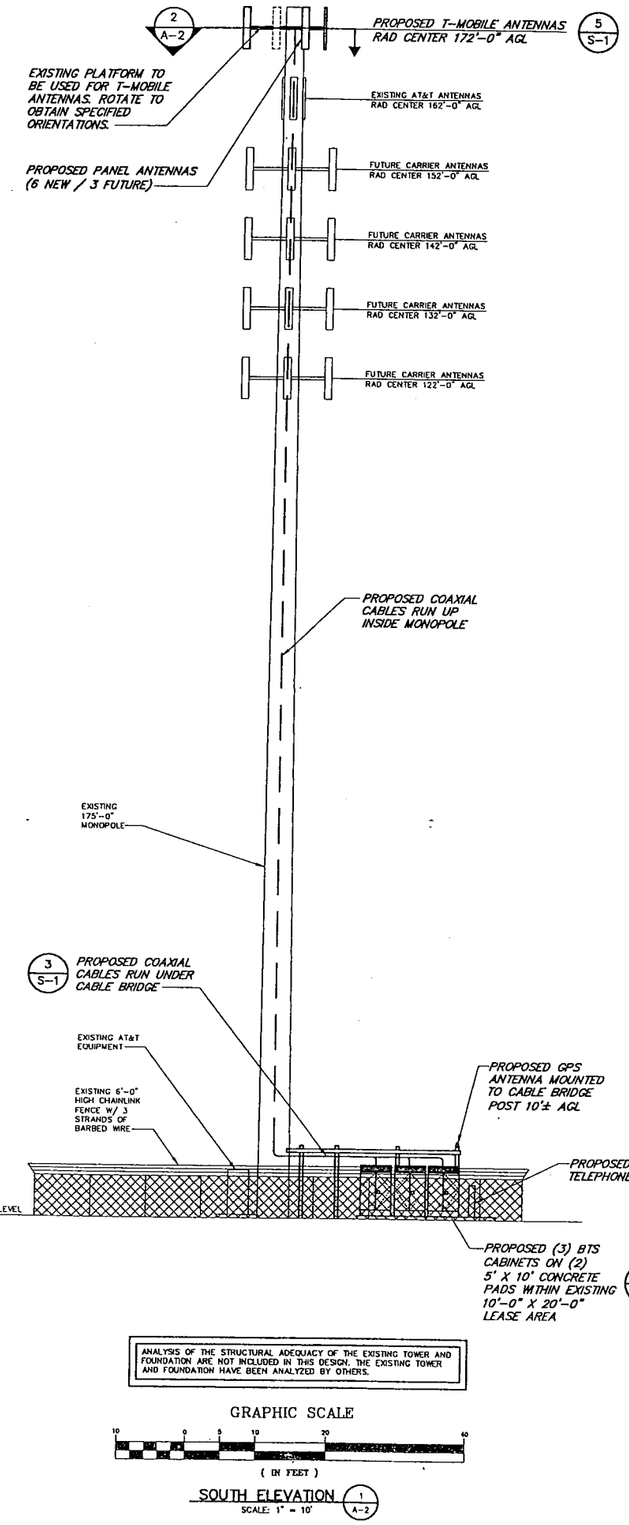
SUBMITTALS

1	05/05/03	CONSTRUCTION FINAL
0	04/16/03	CONSTRUCTION

CT-11-515A
COVENTRY-SBA
712 BREAD & MILK STREET
COVENTRY, CT 06238

SHEET TITLE
PLOT PLAN & PARTIAL SITE PLAN

SHEET NUMBER
A-1



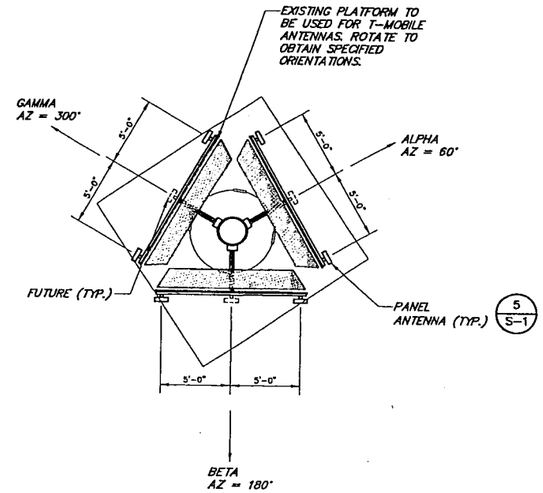
ANALYSIS OF THE STRUCTURAL ADEQUACY OF THE EXISTING TOWER AND FOUNDATION ARE NOT INCLUDED IN THIS DESIGN. THE EXISTING TOWER AND FOUNDATION HAVE BEEN ANALYZED BY OTHERS.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)

SOUTH ELEVATION (1 / A-2)
SCALE: 1" = 10'



GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)

TRUE NORTH

ANTENNA MOUNTING PLAN (2 / A-2)
SCALE: 1" = 5'

PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. T-MOBILE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. T-MOBILE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

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STATE OF CONNECTICUT
JOHN P. SORRENTI
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LICENSED
PROFESSIONAL ENGINEER

APPROVALS

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

PROJECT NO: 10585-1011

DRAWN BY: PAL

CHECKED BY: RJT

SUBMITTALS

1	05/05/03	CONSTRUCTION FINAL
0	04/16/03	CONSTRUCTION

CT-11-515A
COVENTRY-SBA
712 BREAD & MILK STREET
COVENTRY, CT 06238

SHEET TITLE
SITE ELEVATION & ANTENNA PLAN

SHEET NUMBER
A-2

Exhibit C

Equipment Specifications

Bread & Milk Street

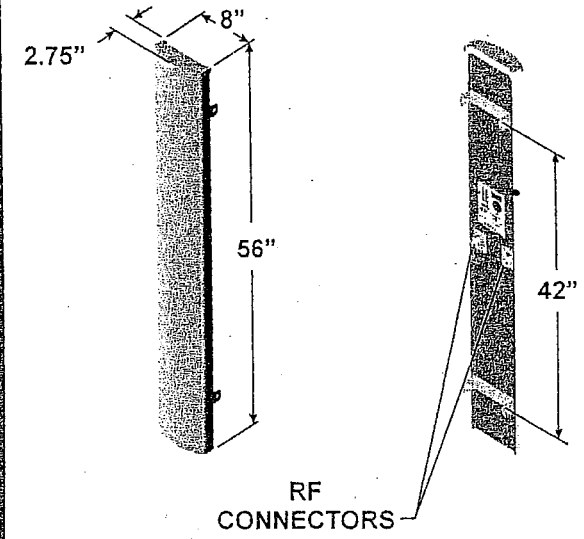
Coventry, Connecticut

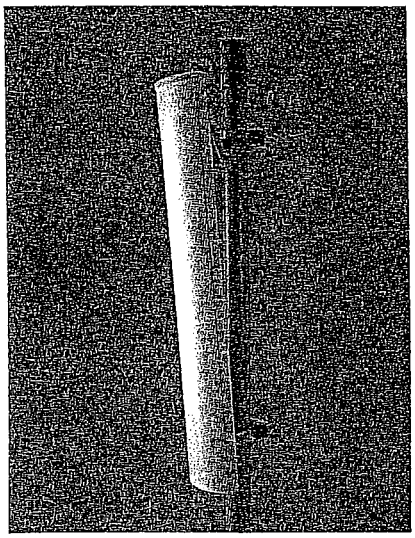
EMS WIRELESS

OptiRange™

RR90-17-XXXP

1850 MHz - 1990 MHz (P)





90° beamwidth

16.5 dBi gain

±45° DualPol™

56 inch

SPECIFICATIONS

Electrical

Azimuth Beamwidth	90°
Elevation Beamwidth	6°
Gain	16.5 dBi (14.4 dBd)
Polarization	Slant, ±45°
Port-to-Port Isolation	≥ 30 dB
Front-to-Back Ratio	≥ 25 dB (≥ 30 dB Typ.)
Electrical Downtilt Options	0°, 2°, 4°, 6°
VSWR	1.35:1 Max
Connectors	2;Type N or 7-16 DIN (female)
Power Handling	250 Watts CW
Passive Intermodulation	<-147 dBc (2 tone @ +43 dBm {20W} ea.)
Lightning Protection	Chassis Ground

Mechanical

Dimensions (L x W x D)	56in x 8in x 2.75in (142 cm x 20.3 cm x 7.0 cm)
Rated Wind Velocity	150 mph (241 km/hr)
Equivalent Flat Plate Area	3.1ft² (.29 m²)
Front Wind Load @ 100 mph (161 kph)	90 lbs (400 N)
Side Wind Load @ 100 mph (161 kph)	31 lbs (139 N)
Weight	18 lbs (8.2 kg)

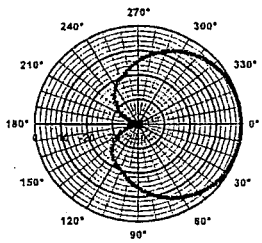
Note: Patent Pending and US Patent number 5, 757, 246.

Values and patterns are representative and variations may occur. Specifications may change without notice due to continuous product enhancements. Digitized pattern data is available from the factory or via the web site www.emswireless.com and reflect all updates.

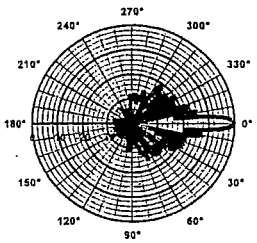
MOUNTING OPTIONS

Model Number	Description	Comments
MTG-P00-10	Standard Mount (Supplied with antenna)	Mounts to Wall or 1.5 inch to 5.0 inch O.D. Pole (3.8 cm to 12.7 cm)
MTG-S02-10	Swivel Mount	Mounting kit providing azimuth adjustment.
MTG-DXX-20*	Mechanical Downtilt Kits	0° - 10° or 0° - 15° Mechanical Downtilt
MTG-CXX-10*	Cluster Mount Kits	3 antennas 120° apart or 2 antennas 180° apart
MTG-C02-10	U-Bolt Cluster Mount Kit	3 antennas 120° apart , 4.5" O.D. pole.
MTG-TXX-10*	Steel Band Mount	Pole diameters 7.5" - 45"

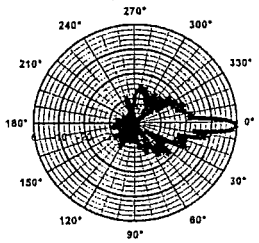
* Model number shown represents a series of products. See mounting options section for specific model number.



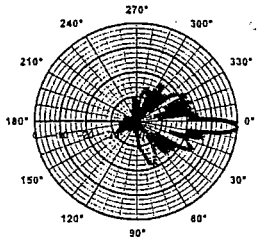
Azimuth



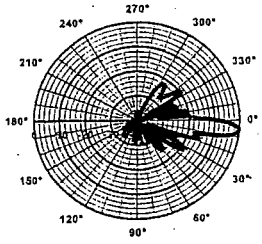
Elevation
0° Downtilt



Elevation
2° Downtilt



Elevation
4° Downtilt



Elevation
6° Downtilt

3.7.12 S8000 Outdoor BTS Specifications

Table 107. S8000 Outdoor BTS Cabinet General Specifications

	S8000 Outdoor Cabinet
Height	1.60 m (63")
Width	1.35 m (53")
Depth	0.65 m (25")
Footprint	1.80 m^2
Maximum Weight	480 kg (1058 lbs.)
Empty weight	148 kg (326.2 lbs.)
Maximum Power(240V)	6500 Watts
Voltage	240 V +/- 10%
Normal Power	3238 Watts
Main Circuit Protection	~~70~~ 50 Amps
Max. Heat Dissipation	22100 Btu/Hour
Normal Heat Dissipation	11006 Btu/Hour
Operating Temperature	-40^0C to 50^0C (-40^0F to 122^0F)
Maximum Operating Humidity	100%
Max level of acoustic noise	65 dB
Ground Cable	2/0 MCM
Antenna Connectors	DIN
Cabinet output	40.3 dBm
Receive sensitivity	-108 dBM
Output power at cabinet antenna connector (H2D)	38.0 dBm

4.1.1 Dimensions and Weight

Table 1 – Dimensions of the S12000 BTS

	Populated cabinet		Depopulated cabinet	
	(cm)	(in)	(cm)	(in)
Height	191	75.2	172	67.7
Depth	65	25.6	65	25.6
Width	135	53.2	135	53.2

Table 2 – Weight of the S12000 BTS

	Populated cabinet (full configuration)		Depopulated cabinet	
	(kg)	(lb.)	(kg)	(lb.)
S12000	570	1257	200	441

Note: The pallet weights 19kg (42 lb.) and has a height of 13cm (5.1 in)

Note: The height of S12000 Outdoor with the hood open is 256 cm (100.8 in)

The BTS floor print can be found in section 10.2 Appendix B.

4.1.2 Key Cabled Cabinet Components

A low mass, mechanically strong external cabinet housing containing:

- All mechanical sub-racks and mechanical support systems required for the installation, transport and operation of the GSM wireless equipment to be housed within.
- A forced ventilation, low acoustic Direct Ambient Cooling System (DACS)
- An AC/DC power system
- A fixed DC distribution system to power the enclosed electronic equipment
- A Power Amplifier Interconnection module (PAICO)
- DRX interconnection modules (DRX ICO) (A&B)
- Combiner interconnection modules (COMICO) (A&B)
- A batteries box

Refer to section 10.1 Appendix A for a general overview of the S12000.

4.1.3 Environmental Requirements

Table 3 – Operational Temperature and Humidity

Normal	Range
Optimized operating temperature	-20°C (-4°F) to 40°C (104°F)
Total operating temperature	-40°C (-40°F) to 50°C (122°F)
Normal Operating humidity	15% to 100% relative humidity (non-condensing)
Absolute humidity	0,26 g/m3 to 36 g/m3

- Storage requirements

The S12000 meets the requirements of reference document R10 class 1.2

- Transport requirements

The S12000 meets the requirements of reference document R11 class 2.2

- Ingress protection

The cabinet shall be weather resistant to prevent ingress of rain, snow, dust and other solid foreign objects to a minimum level of IP55 as specified by reference document R3. The maximum permitted water ingress under test conditions shall be 5ml.

- Noise

LWAd < 63 dB (A) measured in accordance with reference document R8 if $Temp_{ext}$ < 40°C (104°F)

The maximum sound power level emitted from the S12000 Outdoor cabled cabinet, when fully populated and measured in accordance with the requirements of reference document R8, shall not exceed:

- Normal speed operation: 63 dB (A) (when temperature is < 40°C)
- Maximum speed operation: 70 dB (A) (when temperature is >40°C)

Note: The noise may be higher than the one previously indicated due to the real configuration of the site (proximity of walls or any reflecting surfaces). Specific protections against noise can be added to comply with the local recommendations.

- External air flow rate

Normal speed operation: 800 m^3 / hour

Exhibit D

Structural Analysis
Bread and Milk Street
Coventry, Connecticut

Exhibit D

Structural Analysis
Bread & Milk Street
Coventry, Connecticut

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS

"Celebrating 50 Years of Engineering Excellence"

III WINNERS CIRCLE
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www.cloughharbour.com

May 22, 2003

Mr. Bryan Bakis
T-Mobile USA, Inc.
50 Vision Boulevard
East Providence, RI 02914

RE: ***Structural Review of the Coventry-SBA Tower***
Located in Coventry, Connecticut
T-Mobile Site No. CT-11-515A
CHA Project No. 10585.1011.1601

Dear Mr. Bakis:

Clough, Harbour & Associates LLP (CHA) has performed a structural review of the referenced tower superstructure. This review is based on following information:

- Proposed antenna information provided by T-Mobile
- Existing loading information provided by T-Mobile
- Original design documents by Fred A. Nudd Corporation, project 7491R Rev A, dated October 2002.
- A site visit performed by CHA on April 7, 2003.

The design documents indicate that the structure is a 175-foot tall monopole, extendable to 190-feet, designed to support the following:

- Twelve (12) Decibel DB896 panel antennas mounted at an antenna centerline elevation of 190-feet above ground level (AGL).

- Twelve (12) ALP 9212 panel antennas mounted at antenna centerline elevations of 180-feet, 170-feet, 160-feet, 150-feet, 140-feet, and 130-feet above ground level (AGL).

Current equipment includes:

- Six (6) Allgon 7250 panel antennas mounted at an antenna centerline elevation of 162-feet above ground level (AGL).

The proposed loading includes the following antennas:

- Six (6) EMS DR65-19-XXDPQ panel antennas mounted at an antenna centerline elevation of 172-feet AGL.

Based upon our review, the tower superstructure is capable of supporting the existing and proposed equipment. This conclusion is based upon the following assumptions:

- The structure was constructed in accordance with the original design documents.
- No additional equipment has been installed on the tower prior to the installation of T-Mobile's antennas.
- Antennas limited to those listed above.

Any deviations from the assumptions made above or the installation of additional antennas will require a structural analysis to determine the adequacy of the tower.

If you have any questions or if we can be of further assistance, please call.

Very Truly Yours,

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
AND LANDSCAPE ARCHITECTS

John P. Sobiech, P.E.
Partner

\jt
W:\Voice Stream\New England\10585\11\Struct\10585-1011Letter.doc

Exhibit E

Power Density Calculations

Bread & Milk Street

Coventry, Connecticut

T-Mobile

T-Mobile USA Inc.
100 Filley St, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Karina Hansen
From: Hassan Syed - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11515A
Date: May 2, 2003

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a Monopole at 712 Bread & Milk Street, Coventry,CT06238, 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 1935-1945 MHz frequency band.
2) The antenna array consists of three sectors, with 3 antennas per sector.
3) The model number for each antenna is EMS RR90-17-02DP.
4) The antenna center line height is 172 ft.
5) The maximum transmit power from any sector is 3117.18 Watts Effective Radiated Power (EiRP) assuming 8 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 PCS antenna installation on a Monopole at 712 Bread & Milk Street, Coventry,CT06238, CT, is 0.02482 mW/cm^2. This value represents 2.482% of the Maximum Permissible Emission (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 3.07%. The combined Power Density for the site is 5.552% of the M.P.E. standard.

New England Market

Connecticut

Worst Case Power Density

T-Mobile

Site:	**CT11515A**
Site Address:	**712 Bread & Milk Street**
Town:	**Coventry,CT06238**
Tower Height:	**175 ft.**
Tower Style:	**Monopole**
Base Station TX output	18 W
Number of channels	8
Antenna Model	EMS RR90-17-02DP
Cable Size	1 5/8 in.
Cable Length	185 ft.
Antenna Height	172.0 ft.
Ground Reflection	1.6
Frequency	1935.0 MHz
Jumper & Connector loss	1.00 dB
Antenna Gain	16.5 dBi
Cable Loss per foot	0.0116 dB
Total Cable Loss	2.1460 dB
Total Attenuation	3.1460 dB
Total EIRP per Channel	55.91 dBm
(In Watts)	389.65 W
Total EIRP per Sector	64.94 dBm
(In Watts)	3117.18 W
nsg	13.3540
Power Density (S) =	**0.024818 mW/cm^2**
Voicestream Worst Case % MPE =	**2.4818%**

Equation Used :

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

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

Co-Location Total

Carrier	**% of Standard**
Verizon	
Cingular	
Sprint PCS	
AT&T Wireless	3.0700 %
Nextel	
Total Excluding Voicestream	**3.0700 %**
Voicestream	2.4818
Total % MPE for Site	**5.5518%**