TS-T-MOBILE-002-030523

LEBOEUF, LAMB, GREENE

L.L.P.

A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSI

GOODWIN SQUARE

225 ASYLUM STREET, 13TH FLOOR

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E-MAIL ADDRESS: STEPHEN.HUMES@LLGM.COM WRITER'S DIRECT DIAL: (860) 293-3744 WRITER'S DIRECT FACSIMILE: (860) 241-1344 LONDON (A LONDON-BASE D MULTINATIONAL PARTNERSHIP)

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May 23, 2003

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SITING COUNCIL

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

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WASHINGTON, D.C.

Re: Request by T-Mobile for an Order to Approve the Shared Use of a Tower Facility at 401 Wakelee Avenue, Ansonia, 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 401 Wakelee Avenue in Ansonia, 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 an approximately twelve foot extension of 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 of Ansonia 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 401 Wakelee Avenue, Ansonia is an existing two hundred foot (200') self-supporting lattice tower. The coordinates for the site are 41°-21'-22" N and 73°-05'-29" W. The tower is located approximately four hundred feet (400') east of Route 8, between Wakelee Avenue and the Naugatuck River in Ansonia. The tower is owned by Spectrasite and the underlying landowner is the City of Ansonia. 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 telecommunications antennas at the one hundred ninety-six foot (196'-0") centerline AGL, one hundred eighty-seven foot six inch (187'-6") centerline AGL, the one hundred seventy-eight foot (178'-0") centerline AGL, the one hundred sixty-eight foot (168'-0") centerline AGL and the one hundred fifty-eight foot (158'-0") centerline AGL (Nextel, Sprint, Cellco, SNET and AT&T, collectively).

T-Mobile proposes to install an antenna cluster comprised of three (3) sectors, with three (3) antennas per sector for a total of nine (9) antennas. The model number for each antenna is EMS RR65-19-02 DP. The antennas would be mounted on standoff bracket frames at the one hundred forty-eight foot (148'-0") centerline AGL. The antenna mounting plan is shown on drawing 4, S-1 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 fifteen foot by fifteen foot (15' x 15') 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. (shown on drawing 1, A-1, attached as part of Exhibit B). There are three existing equipment shelters within the compound. The T-Mobile equipment does not require a shelter. The compound would be extended twelve feet eight inches (12'-8") to the south to accommodate the T-Mobile concrete pads. Access to the compound is via an existing access drive off of Wakelee Avenue. Utilities will be run from existing utility sources approved by the owner via underground conduits.

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. <u>Technical Feasibility</u> - 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 401 Wakelee Avenue in Ansonia. This authority complements the Council's priorexisting 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. <u>Environmental Feasibility</u> 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 three (3) 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 only slightly 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 0.03512 mW/cm2, which is 3.512% of the Maximum Permissible Emission (MPE). The combined power density calculations from other carriers is 12.31% of the MPE. This accounts for a combined power density of 15.822% 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. <u>Public Safety Concerns</u> As stated above, the existing tower is structurally capable of supporting the proposed T-Mobile antennas. The tower stands on a compound accessible from Wakelee Avenue. 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 Wakelee Avenue in Ansonia, 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

Its Counsel

Stephen J. Humes

Attachments

cc: James T. Della Volpe, Mayor, City of Ansonia

Exhibit A Site Map 401 Wakelee Avenue Ansonia, Connecticut

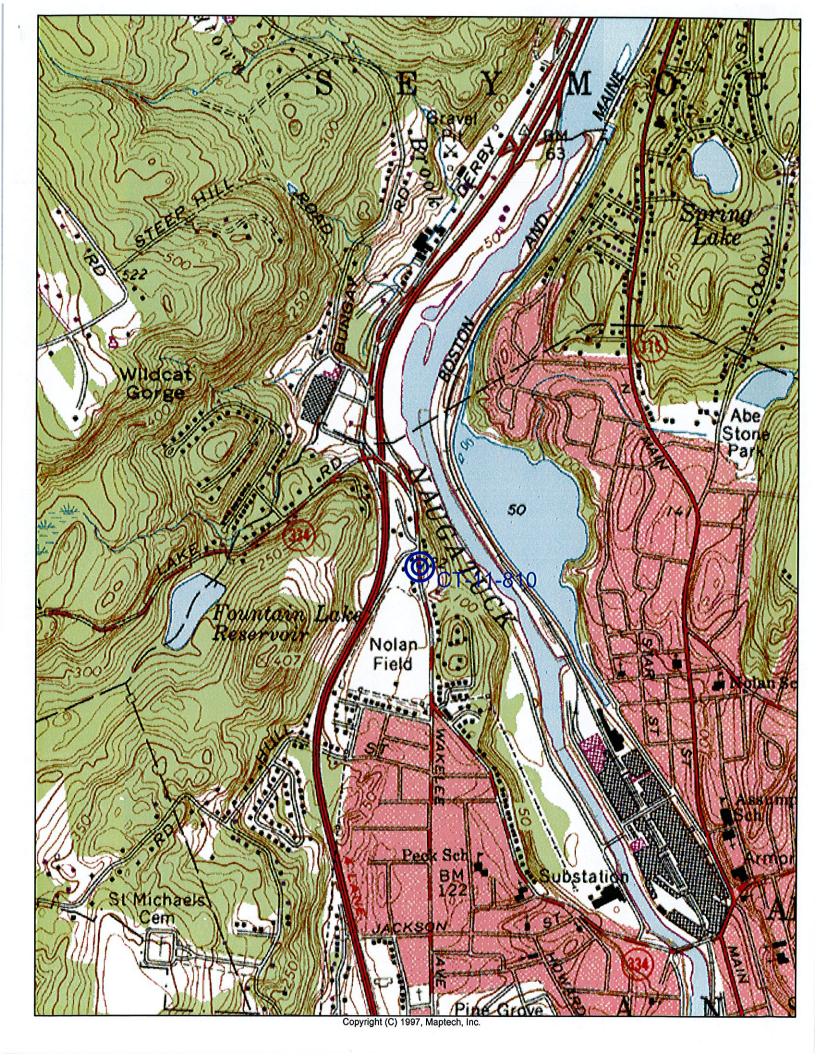
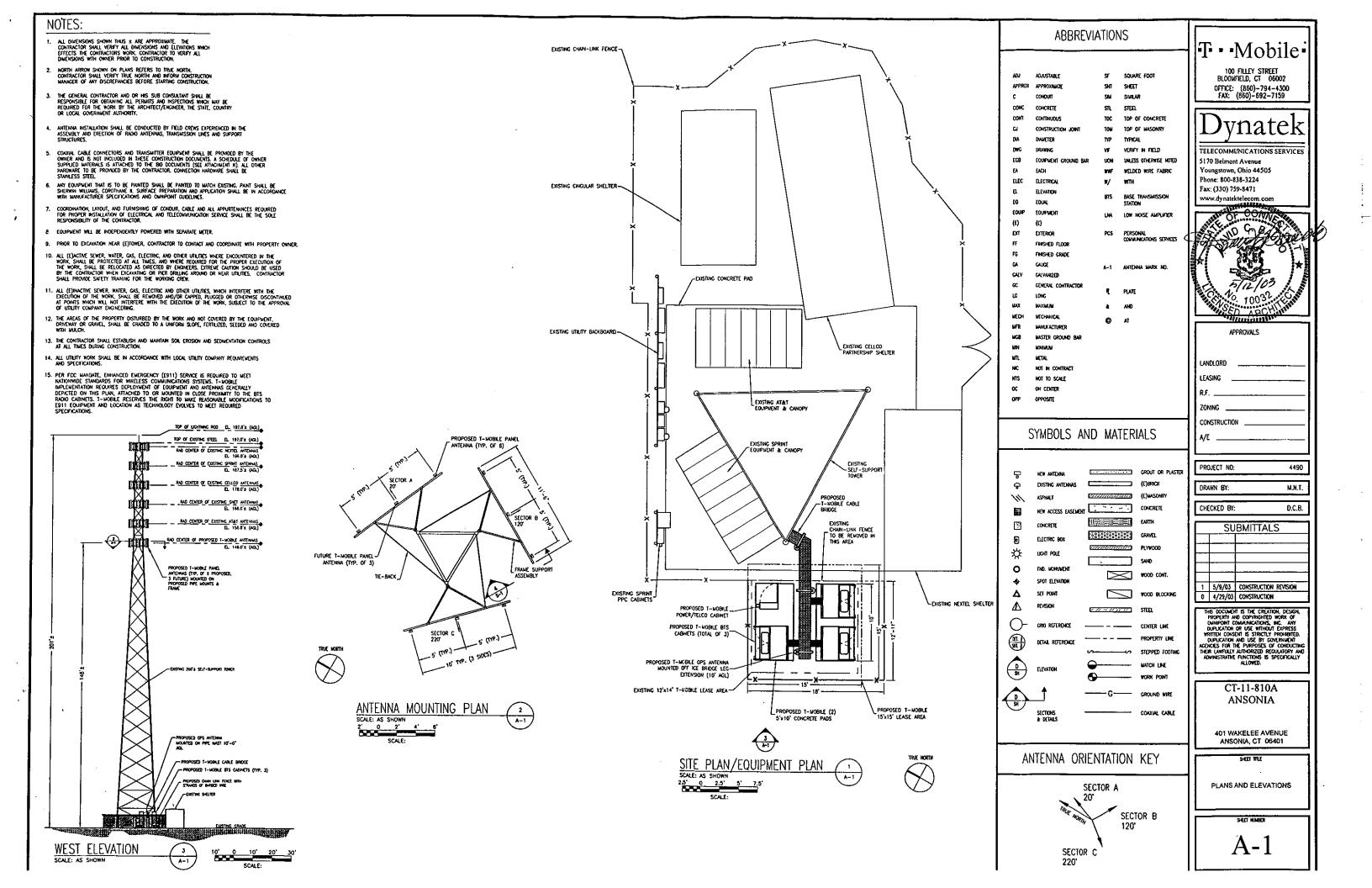
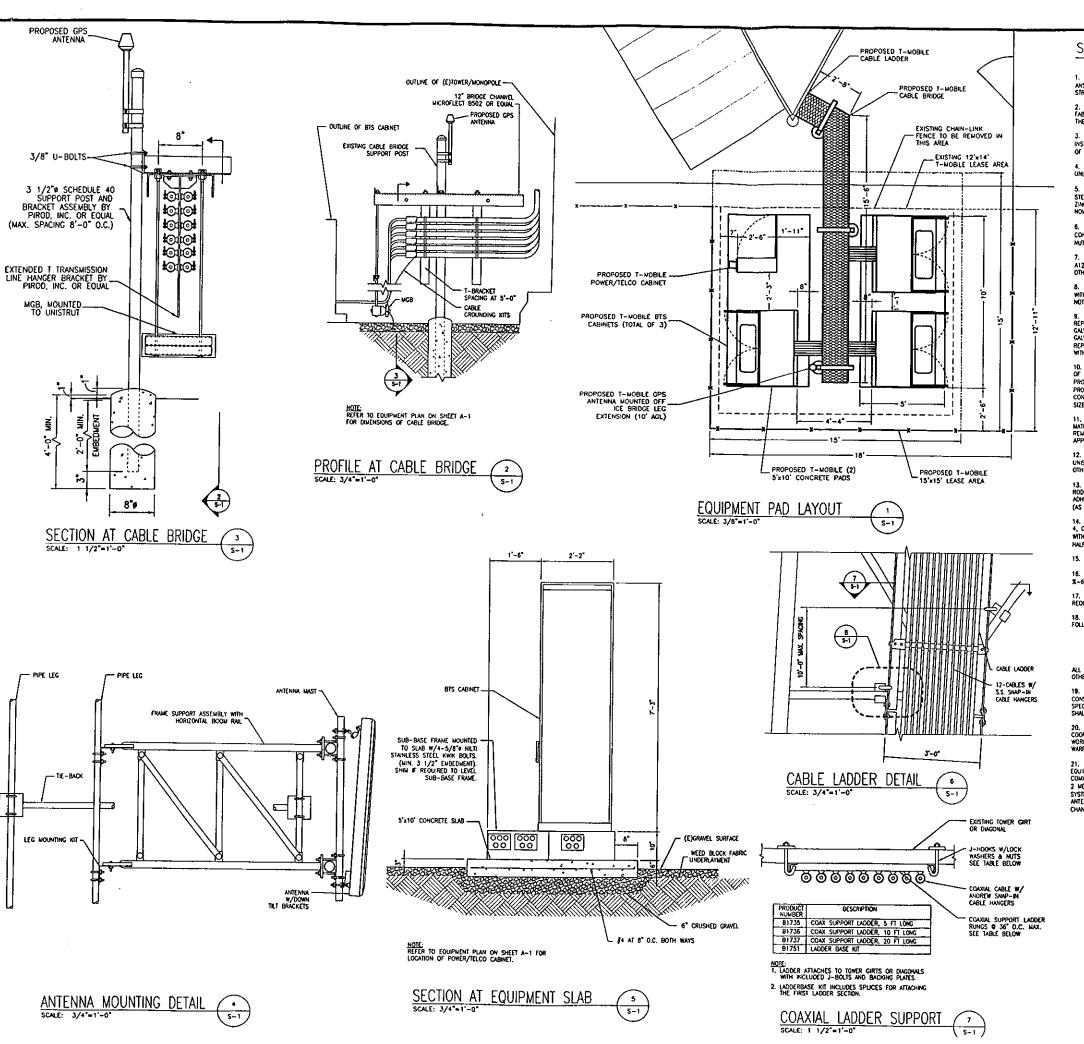


Exhibit B <u>Design Drawings</u> 401 Wakelee Avenue Ansonia, Connecticut



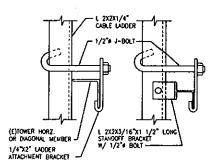


STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, ANS/ASCEP, EM/TIA-222-F STRUCTURAL STANDARDS FOR STEEL ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERFY ALL DIMENSIONS AND CONDITIONS IN THE RELO PRIOR TO FARRICATION AND ERECTION OF ANY MATERIAL ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER.
- 3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- 4. STRUCTURAL AND MISCELLAMEOUS STEEL SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERMISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM ASOO "COLD-FORMED WELDED & SEANLESS CARBON STEEL STRUCTURAL TUBING", CRADE A, OR ASTM ASS PIPE STEEL BLACK AND HOT-DIPPED 21MC-COATED WELDED AND SEANLESS TYPE E OR S, GRADE B, PIPE SIZES INDICATED ARE NOMINAL ACTUAL OUTSIDE DANACTER IS LARGER.
- Structural connection bolts shall be high strength bolts (bearing type)and conform to asim a325 "high strength bolts for structural joints, including suitable mats and plain hardened washers", all bolts shall be 5/8" dia uon.
- 7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZMC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- 8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERMISE NOTED.
- 9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GAVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLINES WITH REQUIREMENTS OF ASTM A780. GALVANZING REPAIR PAINT SHALL HAVE SES PERCENT ZINC BY WEIGHT, ZRP BY DUNCAN GALVANZING, GALVA BRICHT PREVIOUS BY CROWN OR EQUAL THICKNESS OF APPLIED CALVANZING REPAIR PAINT SHALL BE NOT NOT LESS TRAN 4 COATS (ALLOW TIME TO DAY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- 10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND CUMUITY OF WELDS, AND FOR WITHOOS USED IN CORRECTING WELDING, ALL WELDERS AND WELDING PROCESSES SHALL BE COULFED IN ACCORDANCE WITH AMS "STANDARD COLLIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING ETOXX ELECTROOFS AND WELDING SHALL BE DONE USING ETOXX ELECTROOFS AND WELDING SHALL CONFORM TO AISC AND DIJ. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE VZ.4 IN THE AISC "MANUAL OF STELL CONSTRUCTION". 9TH EDITION.
- 11. INCORRECTLY FABRICATED, DAVAGED OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR COMDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO RELIEDIAL 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, in or equal strut members shall be 1.5/8 $^{\circ}$ x1.5/8 $^{\circ}$ x12Ga, unless otherwise noted, and shall be not-dip galvanized after fabrication.
- 13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF 1/2" DIAMETER STAIKLESS STEEL ANCHOR ROD WITH HUTS & WASHERS, AN HITERHALLY THREADED RISERT, A SCREECEN TUBE AND A EPOXY ADMESSME. THE ANCHORING SYSTEM SHALL BE THE HUTH-HIT HY-20 AND OR KY-1-50 SYSTEMS (AS SPECIFIED AN DWG.) OR ENGINEERS APPROVED EQUAL WITH 4-1/4" MIN. EMBEDMENT DEPTH.
- 14. EXPANSION BOLTS SMALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP N. TYPE 4, CLASS I, HILTI KRIMK BOLT IN OR APPROVED EQUAL, INSTALLATION SMALL BE IN ACCORDANCE WITH THE MAINTEACTURER'S RECOMMEMOATIONS, MINIMUM EMBEDMENT SMALL BE THREE AND ONE MALE (3 1/2) INCNES.
- 15. GRAVEL SUB BASE AND CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL
- 16. CONCRETE FOR FEMCE AND ICE BRIDGE SUPPORT SHALL BE 3000 PSI AIR ENTRAINED (4 x-6x) normal weight concrete.
- 17. ALL CAST IN PLACE CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318 AND ACI 301.
- 18. THE FOLLOWING MINIMUM CONCRETE COVER OVER REINFORCING STEEL SHALL BE AS FOLLOWS UNLESS NOTEO OTHERWISE: CONCRETE CAST AGAINST EARTH ... 3 INCHES. CONCRETE EXPOSED TO EARTH OR WATER

ALL EXPOSED EDGES SHALL BE PROVIDED WITH A 3/4"x3/4" CHAMFER UNLESS NOTED OTHERWISE.

- 19. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GROVE NO. 2 OR BETTER.
- 20. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND 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) POSITION LOCATION EQUIPMENT IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WRELESS COMMUNICATIONS SYSTEMS. IMPLICEMENTATION REQUIRES DEPLOYMENT OF APPROXIMATELY 2 MEASUREMENT FUNCTION RECEIVER (MFR) ANTENNAS AND 1 GLOBAL POSITIONING SYSTEM (OPS) ANTENNA. THIS PLAN DEPICTS A SCHEMATIC DESIGN AND LOCATION OF ANTENNAS AND MAY BE SUBJECT TO CHANGE. T-MOBILE RESERVES THE RIGHT TO CHANGE THE LOCATION AND CONFIGURATION OF THE E911 EQUIPMENT AS REQUIRED."



NOTE:

1. FIELD ORILL 9/16"# HOLE IN ANGLE AS REQUIRED.

DETAIL 8
SCALE: 3"-1'-0" S-1

T · Mobile

100 FILLEY STREET BLOOMFIELD, CT 06002 OFFICE: (860)-794-4300 FAX: (860)-692-7159

Dynatek

TELECOMMUNICATIONS SERVICES

5170 Belmont Avenue Youngstown, Ohio 44505 Phone: 800-838-3224 Fax: (330) 759-8471 www.dynatektelecom.com



APPROVALS	
LANDLORD LEASING R.F ZONING	
CONSTRUCTION	
PROJECT NO:	4490

DRAWN BY:	M.N.T.
CHECKED BY:	D.C.B.

	SU	BMITTALS
1	5/9/03	CONSTRUCTION REVISION
0	4/29/03	CONSTRUCTION

THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPPRIGHTED WORK OF OMNIPOINT COMMUNICATIONS, INC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALL OWFO.

CT-11-810A ANSONIA

401 WAKELEE AVENUE ANSONIA, CT 06401

CWEST TO

STRUCTURAL NOTES, SECTIONS, AND DETAILS

SHEET HUMBI

S-2

Exhibit C Equipment Specifications 401 Wakelee Avenue Ansonia, Connecticut

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	20 Amps 50
Max. Heat Dissipation	22100 Btu/Hour
Normal Heat Dissipation	11006 Btu/Hour
Operating Temperature	-40 ⁰ C to 50 ⁰ C (-40 ⁰ F to 122 ⁰ F)
Maximum Operating Humidity	100%
Max level of acoustic noise	65 dB
Ground Cable	2/0 MCM
Antenna Connectors	1212
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 Depopulate		ed 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

		cabinet (full uration)	Depopulate	ed 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.

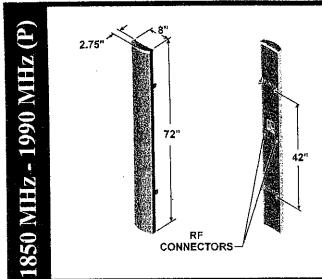
· External air flow rate

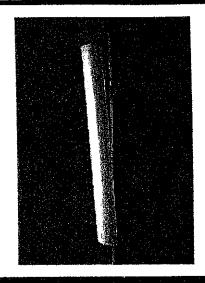
Normal speed operation: 800 m³ / hour



Lightning Protection

RR65-19-XX





65° beamwidth

18.5 dBi gain

±45° **DualPol**

72 inch

SPECIFICATIONS

	trical	Mechai	nical
Azimuth Beamwidth Elevation Beamwidth Gain Polarization Port-to-Port Isolation Front-to-Back Ratio Electrical Downtilt Options VSWR	65° 4.5° 18.5 dBi (16.4 dBd) Slant, ± 45° ≥ 30 dB ≥ 25 dB (≥ 30 dB Typ.) 0°, 2°, 4°, 6° 1.35:1 Max	Dimensions (L x W x D) Rated Wind Velocity Equivalent Flat Plate Area Front Wind Load @ 100 mph (161 kph) Side Wind Load @ 100 mph (161 kph) Weight	72in x 8in x 2.75in (183 cm x 20.3 cm x 7.0 cm) 150 mph (241 km/hr) 4ft² (0.37 m²) 115 ibs (512 N) 40 ibs (176 N) 23 ibs (10.4 kg)
Connectors	2; 7-16 DIN (female)	Note: Datast Panding and LIC Patents	umber 5, 757, 246

Note:

250 Watts CW Power Handling Values and patterns are representative and variations may occur. Specifications may Passive Intermodulation ≤ -147 dBc

[2x20W (+43 dBm)]

Chassis Ground

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.

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

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

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

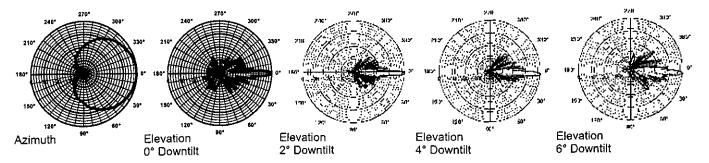


Exhibit D Structural Analysis 401 Wakelee Avenue Ansonia, Connecticut



Engineers & Associates

ENGINEERING REPORT

TO:

Dynatek Telecommunications Services

DATE:

May 9, 2003

5170 Belmont Avenue

Youngstown, OH 44505

CBC NO: 4681-2-0503-05

ATTN:

Mr. Mark Thompson

Re:

Evaluation of 196' Self Support Tower with Six (6) Proposed T-Mobile Antennas; Site CT-11-810A, Ansonia, New Haven Co., Connecticut; CBC Report No. 4681-2-0503-05

The purpose of this report is to evaluate the above referenced tower for the addition of six (6) - 72" x 12" x 4" antennas with two (2) standoff frames at the 148 foot level. A previous structural evaluation report for this tower prepared by Morrison Hershfield (MHC Project 1996035:SP0-896, dated March 30, 2001) was reviewed in conjunction with this evaluation. The existing tower is a generic 196 ft Rohn Self-Supporting Tower. The existing antennas currently on the tower include 9 at 196 feet, 6 at 187.5 feet, 12 at 178 feet, 12 at 168 feet and 12 at 158 feet. The evaluation of the tower with the proposed antennas was based upon an 85MPH design wind speed per the TIA/EIA-222-F Standard and the New Haven county minimum. calculations are attached in Appendix A. Our review and evaluation indicate the tower and foundation in its current configuration with the proposed antennas meet the requirements of TIA/EIA-222, revision F; the BOCA National Building Code (including section 3108), and the 1999 Connecticut State Building Code Supplement (including section 1609.1).

If you have any questions, please contact me.

Respectfully submitted,

CBC Engineers

David C. Cowherd, iv CEO and Chief

DCC/tw 4-Client

1-File

Cowherd, Banner & Carlson Engineers & Associates, Ltd. 125 Westpark Road Centerville, Ohio 45459

Phone: 937-428-6150 FAX: 937-428-6154 Email: cbceng@erinet.com

APPENDIX A CALCULATIONS



PROPOSED ANTENNAS

- · GANTENNAS W/ 2 STANCOFF FRAMES @ 576.4 lbs. each
 · TOTAL VERTICAL LOAD = 1300 \$ (±)
- · ANTENNA SURFACE AREA = 6 s.F. (1) (72"x12") 3 PER SIDE
- ANTENMAS to BE PLACED AT A HEIGHT OF 148'.

MIND LOADING

*WIND SPEED = 85 MPH $Q_z = 0.00256 \, k_2 \, k_2 t \, k_4 \, V^2 I$ $= 0.00256 \, (1.26) \, (1.0) \, (0.95) \, (85)^2 \, (1.0)$ $= 22.1 \, \text{psf}$ $F = q_z \, G_h \, C_f \, A_f$ $= 22.1 \, (1.14) \, (1.2) \, (6 \times 3)$ $= 544.2 \, 165.$

M= 544.2 ×148' = 80542.1=

FACE WIDTH OF TOWER @ BASE = 23'

FORCE COUPLE ENW. TO MOMENT = 305-12 = 3502#= 5.52 12-1

RESULTS_

· FROM MARCH 30,2001 MORRISON HERSHFIELD REPORT (MHC
PROJECT 1996035: SPO-896) FOR THIS TOWER SITE WITH
THE FIVE(S) EXISTING SETS OF ANTENNAS, THE RESULTANT
LOADS WERE:

FOUNDATION WADS

COMPRESSION (KIP)	0R161HAL 343	570	PROPOSED 374.2	PROP/ORIS. RATIO
UPLIFT (Kip)	301.	312.3	315.2	1.05
SHEAR (kip)	36.3	35.8	363	1.00

PRO POSED LOADS

$$C = 370 + \frac{1.3}{2} + 3.5 = 374.2^{k}$$

 $U = 312.3 - \frac{1.3}{2} + 3.5 = 316.2^{k}$
 $S = 35.8 + 0.5442 = 36.3^{k}$

. MAXIMUM INCREASE IN LOAD FOR PROPOSED DESIGN FROM ORIGINAL DESIGN IS 9% (IN COMPRESSION) . THIS IS SATISFACTORY.

MEMBER LOACS

LEGS: ACTUAL =
$$263.9 + \frac{1.3}{4} + \frac{3.5}{2} = 266.0^{k}$$

CAPACITY = 263.6

SRMAX = $\frac{266.0}{263.6} = 1.01$ $\angle 1.05.0 \text{K}$

DIAGONAL: ACTUAL = $7.4 + \frac{1.3}{8} + \frac{3.5}{4} = 8.4^{k}$

CAPACITY = 8.3

SRMAX = $\frac{8.4}{8.3} = 1.01$ $\angle 1.05.0 \text{K}$

TOWER IS ABEQUATE
TO HAMDLE ADDITIONAL
LADING FROM
PROGRED AMTERIAS.

HERIZONIAL: ACTUAL =
$$1.2 + \frac{0.5442}{2} = 1.47$$

$$CAPACITY = 2.6$$

$$SR_{MAY} = \frac{1.47}{2} = 0.57 - 1.05 \text{ CK}$$
Cowherd, Banner & Carlson Engineers & Associates, Ltd.

Cowherd, Banner & Carlson Engineers & Associates, Ltd.
125 Westpark Road, Centerville, Ohio 45459 Phone: 937-428-6150 Fax: 937-428-6154

Exhibit E Power Density Calculations 401 Wakelee Avenue Ansonia, Connecticut

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: Jeetendra Ghare - Radio Frequency Engineer

cc: Jason Overbey

Subject: Power Density Report for CT11810A

Date: May 6, 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 Existing Lattice Tower at 401 Wakelee Avenue, Ansonia, 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 RR65-19-02DP.
- 4) The antenna center line height is 148 ft.
- 5) The maximum transmit power from any sector is 3227.62 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 Existing Lattice Tower at 401 Wakelee Avenue, Ansonia, CT, is 0.03512 mW/cm^2. This value represents 3.512% 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 12.31%. The combined Power Density for the site is 15.822% of the M.P.E. standard.

New England Market	
Connecticut	T - Mobile
	T IMONTIG.
Worst Case Power Density	
Site	
Site Address	401 Wakelee Avenue
Town	: Ansonia
Tower Height	: 196 ft.
Tower Style	Existing Lattice Tower
Base Station TX outpu	ALCOMODO DE LA COMPANSION DEL COMPANSION DE LA COMPANSION DE LA COMPANSION DE LA COMPANSION
Number of channels	s 8
Antenna Mode	EMS RR65-19-02DP
Cable Size	e 1 5/8 in.
Cable Length	n 160 ft.
Antenna Heigh	
Ground Reflection	1.6
Frequency	
Jumper & Connector loss	
Antenna Gair	
Cable Loss per foo	
Total Cable Loss	
Total Attenuation	
Total EIRP per Channe	
(In Watts	
Total EIRP per Sector	
(In Watts	
nsg	
Power Density (S) = Voicestream Worst Case % MPE =	
A CONTROL OF THE PROPERTY OF T	= 3.5118%
$S = \frac{(1000)(grf)^2(Power)^*10^{(18g10)}}{10^{100}}$	
$4\pi(R)^2$	
Office of Engineering and Technology (O	DET) Bulletin 65, Edition 97-01, August 1997

Co-Locatio	n Total
Carrier	% of Standard
Verizon	3.8000 %
Cingular	4.2700 %
Sprint PCS	1.4200 %
AT&T Wireless	1.3000 %
Nextel	1.5200 %
Total Excluding T-Mobile	12.3100 %
T-Mobile	3.5118
Total % MPE for Site	15.8218%



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

May 27, 2003

Honorable James T. DellaVolpe Mayor City of Ansonia City Hall 253 Main Street Ansonia, CT 06401-1866

RE:

TS-T-MOBILE-002-030523 - Omnipoint Communications, Inc. request for an order to approve tower sharing at a telecommunications facility located at 401 Wakelee Avenue, Ansonia, Connecticut.

Dear Mr. DellaVolpe:

The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for June 3, 2003, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly your

Executive Director

SDP/laf

Enclosure: Notice of Tower Sharing

c: Peter Crabtree, Zoning Enforcement Officer, City of Ansonia

June 4, 2003

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

Stephen J. Humes

LeBoeuf, Lamb, Greene & MacRae
Goodwin Square
225 Asylum Street
Hartford, CT 06103

RE:

TS-T-MOBILE-002-030523 - Omnipoint Communications, Inc. request for an order to approve tower sharing at a telecommunications facility located at 401 Wakelee Avenue, Ansonia, Connecticut.

Dear Attorney Humes:

At a public meeting held June 3, 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 § 16-50a 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 23, 2003.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.

Chairman

PBK/laf

c: Honorable James T. DellaVolpe, Mayor, City of Ansonia Peter Crabtree, Zoning Enforcement Officer, City of Ansonia Eric Rabon, Spectrasite Communications Thomas F. Flynn III, Nextel Communications Thomas J. Regan, Esq., Brown Rudnick Berlack Israels, LLP Sandy M. Carter, Verizon Wireless Michele G. Briggs, Southwestern Bell Mobile Systems Christopher B. Fisher, Esq., Cuddy & Feder LLP