

25 October, 1999

Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RECEIVED

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CONNECTICUT
SITING COUNCIL

**Re: Request by Omnipoint Communications, Inc. for an
Order to Approve the Shared Use of a Tower Facility
2755 State Street, Hamden, Connecticut**

Dear Chairman Gelston and Members of the Council:

Pursuant to Connecticut General Statutes §16-50aa, Omnipoint Communications, Inc. ("Omnipoint") hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use by the Applicant of an existing tower located at 2755 State Street in Hamden, Connecticut. The tower is owned and operated by Sprint Spectrum, L.P. ("Sprint"). Omnipoint proposes to install repeater antennas on the existing tower located within Sprint's leased compound area, and the equipment associated with this facility would be located near the base of the tower within the existing compound (see "Exhibit A"). Omnipoint 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.

Background

Omnipoint Communications, Inc. is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telephone service in the State of Connecticut, which includes the area to be served by Omnipoint's proposed installation.

The Sprint tower at 2755 State Street in Hamden is a 120-foot lattice structure located on an approximately 22'x 27', or approximately 600 sq. ft. compound. The tower's coordinates are 41-21-18 N and 72-53-26 W. In addition to Sprint's antennas at the top, Springwich Cellular Limited Partnership ("SNET") has recently been approved by the Siting Council to install its antennas at the 110-foot level. Omnipoint and Sprint have agreed to the proposed shared use of this tower pursuant to mutually acceptable terms and conditions. Sprint has also authorized Omnipoint 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.

This site will act as a "repeater" location for Omnipoint's PCS network. Omnipoint proposes to install one DAPA 48212 transmitting antenna with a centerline at 100 feet Above Grade Level

("AGL"), and the receiving antenna for the repeater will be a Gabriel GHF4-18 which will be mounted at 50 feet AGL. These antennas are to support an Allen Telcom Repeater equipment box which will be mounted on a unistrut frame at the base of the tower. Exhibit B contains specifications for the proposed antennas and equipment.

C.G.S. §16-50aa (c) (1) provides 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 Pursuant to the conditions of approval imposed by the Hamden Planning and Zoning Commission, the existing tower was designed to accommodate multiple carriers. Omnipoint is only the second carrier to propose co-location, and its antennas will not be mounted on a platform. The tower is therefore structurally sound and capable of supporting the proposed Omnipoint antennas. 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 on State Street in Hamden. (Public Acts 93-268, Section 2; and 94-242, Section 6 (c)). 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 towers 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 a minimal environmental effect, for the following reasons:

1. The proposed installations 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 Sprint compound area.
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), with

the Sprint, SNET and Omnipoint antennas, would be 15.48% of the ANSI standard. These calculations are attached as Exhibit C.

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 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, and is environmentally feasible.

E. Economic Feasibility As previously mentioned, Sprint and Omnipoint 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.

F. Public Safety Concerns As stated above, the existing tower is structurally capable of supporting the proposed Omnipoint antennas. The tower stands on an existing commercial compound off State Street and is accessed from the existing driveway at the site. The size and location of the tower has also been approved by the Hamden Planning and Zoning Commission which is charged with protection of the public health and safety of Hamden residents. Omnipoint is not aware of any other 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 is expected to enhance the safety and welfare of area residents.

Conclusion

For the reasons discussed above, the proposed shared use of the existing tower facility at State Street in Hamden, Connecticut satisfies the criteria stated in C.G.S. §16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of towers in Connecticut. The Applicant therefore requests that the Siting Council issue an order approving the proposed shared use.

Thank you for your consideration of this matter.

Very truly yours,

A handwritten signature in blue ink, appearing to read "J. Brendan Sharkey".

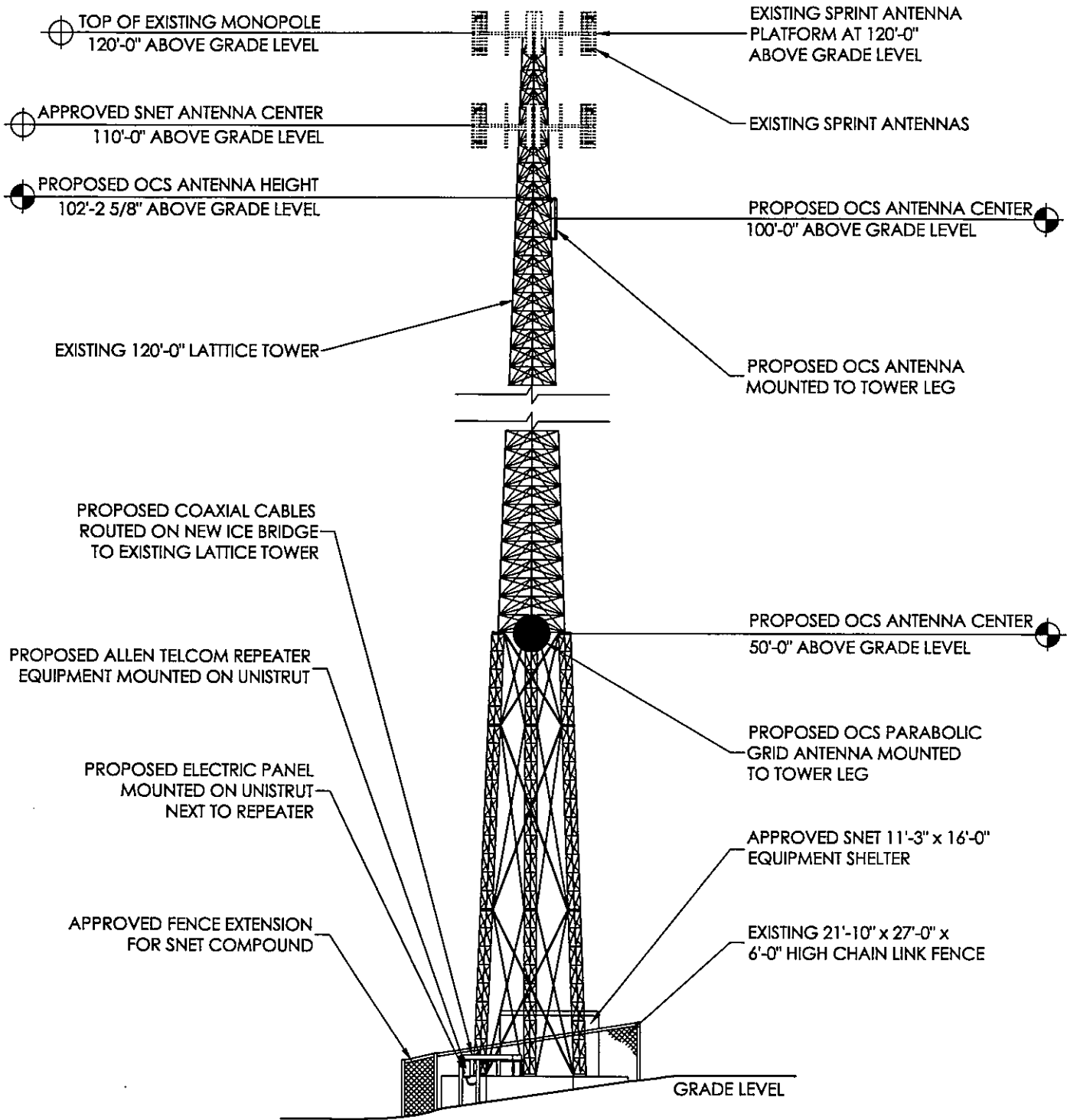
J. Brendan Sharkey
for Omnipoint Communications, Inc.

Attachments

cc: Barbara DeNicola, Mayor of Hamden

Exhibit A

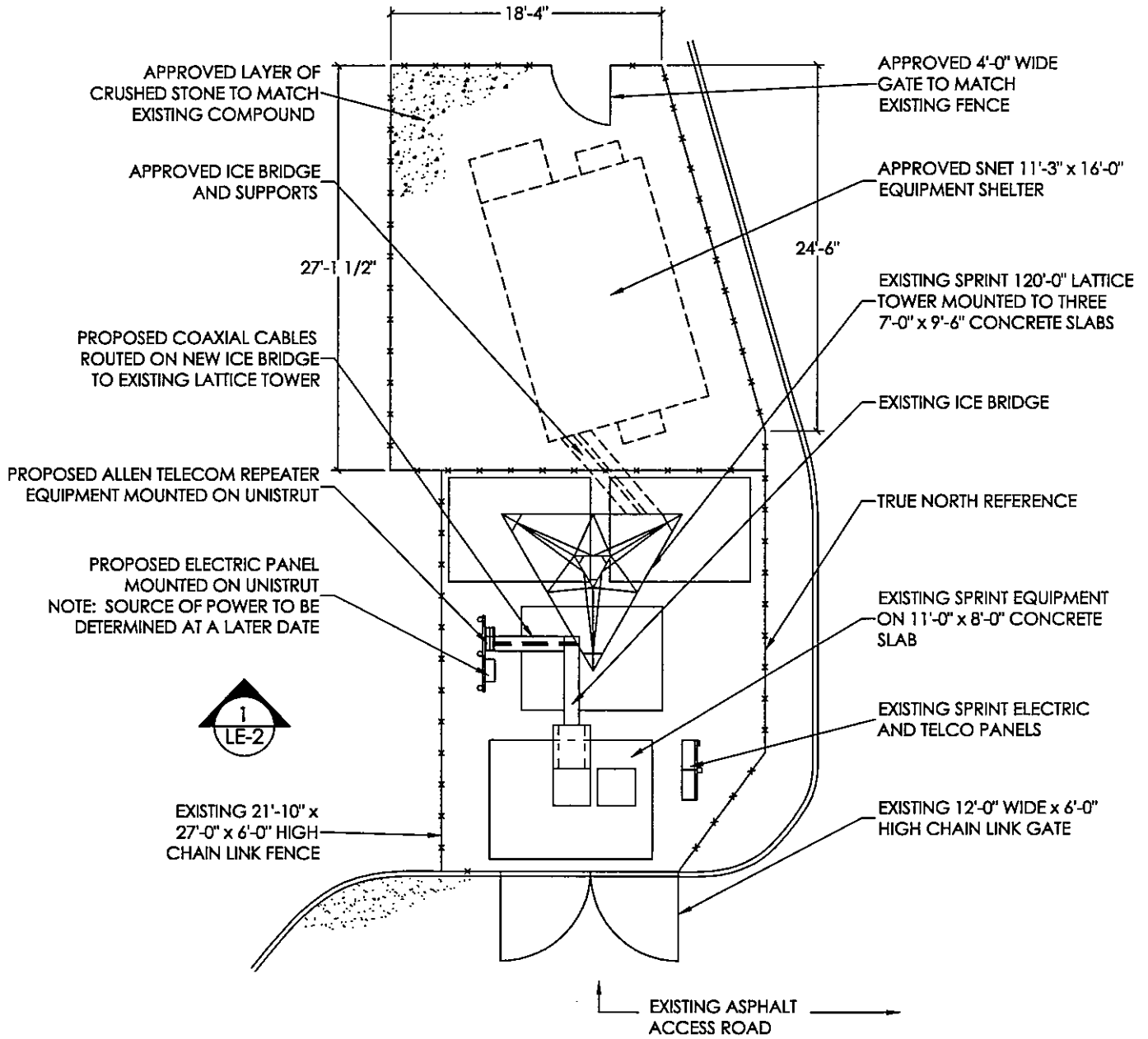
Design Drawings
2755 State Street
Hamden, CT



1 ELEVATION
 LE-2 SCALE: 1/16" = 1'-0"

NOTE:
 THIS EXHIBIT REPRESENTS A CONCEPTUAL PLAN BASED ON
 THE DEVELOPMENT/LEASE AGREEMENT REQUIREMENTS.
 ACTUAL CONSTRUCTION DOCUMENTS MAY VARY FROM
 THIS EXHIBIT TO COMPLY WITH ALL APPLICABLE CODES.

<p> 100 Filley Street, Bloomfield, CT 06002 Tel: 860-692-7100 Fax: 860-692-7159 </p>	Project: SPRINT HAMDEN Address: 2755 State Street Hamden, CT 06514		Drawing Title: ELEVATION	
	OCI Search Area: New Haven	OCI Site I.D. No.: CT - 11 - 611A	SAC: Mark Finley R.F. ENG.: Brian Liu CONSTR: Bob Gaudet	Revision: ADDED SNET CARRIER
			Drawn: DEO	Date: 08/09/99
			Drawing No.: LE - 2	



1 SITE LAYOUT
 LE-1 SCALE: 3/32" = 1'-0"

NOTE:
 THIS EXHIBIT REPRESENTS A CONCEPTUAL PLAN BASED ON
 THE DEVELOPMENT/LEASE AGREEMENT REQUIREMENTS.
 ACTUAL CONSTRUCTION DOCUMENTS MAY VARY FROM
 THIS EXHIBIT TO COMPLY WITH ALL APPLICABLE CODES.

OMNIPPOINT
 COMMUNICATIONS INC.
 100 Filley Street, Bloomfield, CT 06002
 Tel: 860-692-7100 Fax: 860-692-7159

OCI Search Area: New Haven
 OCI Site I.D. No.: CT - 11 - 611A

Project: **SPRINT HAMDEN**
 Address: 2755 State Street
 Hamden, CT 06514

SAC: Mark Finley
 R.F. ENG.: Brian Liu
 CONSTR: Bob Gaudet

Drawing Title:
SITE LAYOUT

Revision:	Date:	Drawn:	Date:
ADDED SNET CARRIER	10-25-99	DEO	08/09/99
Drawing No.:			LE - 1

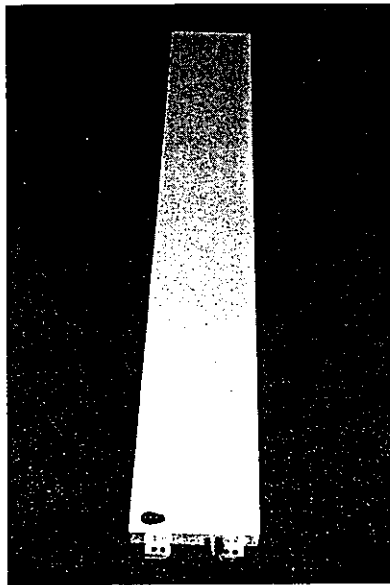
Exhibit B

Equipment Specifications

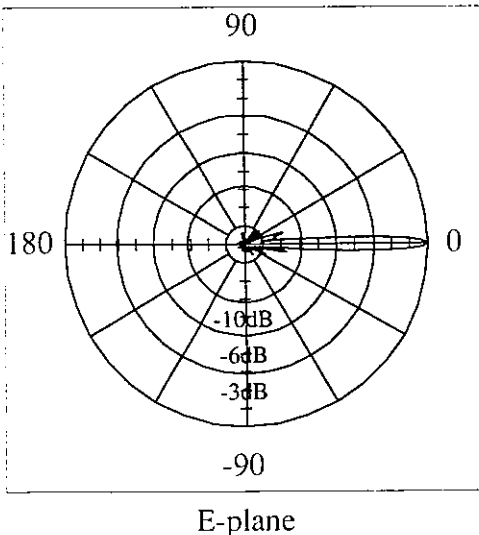
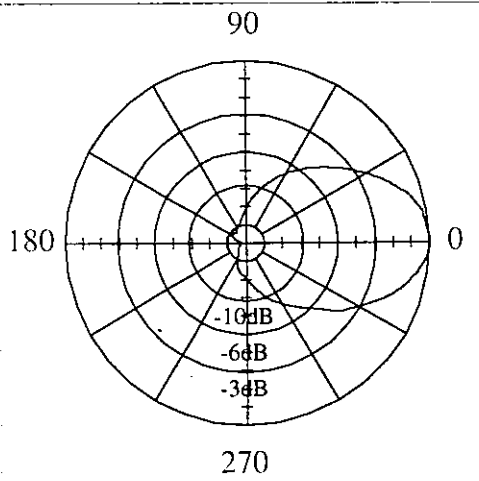
2755 State Street

Hamden, CT

Model 48000 / 48010 63°, 16.6 dBd Panel



2



GENERAL CHARACTERISTICS	
Frequency Range	1710 - 1990 MHz
Impedance	50 Ω
VSWR	< 1.4:1
Polarization	Vertical
Rated Power	500 W

ELECTRICAL CHARACTERISTICS	
Beamwidth: H-plane	63° ± 3° (at -3 dB)
E-plane	7° ± 1° (at -3 dB)
Maximum / Minimum Gain	16.6 dBd / 15.6 dBd
Electrical Downtilt	0° (available -1° to -15°)
Side Lobes	< -15 dB
Front-to-Back Ratio	< -30 dB

MECHANICAL CHARACTERISTICS	
Height x Width x Depth	53.3" x 8.7" x 2.7" (1353 x 220 x 68 mm)
Weight	18.3 lbs (8.3 kg)
Wind Survival Rating	125 mph (200 km/h)
Wind Load (at 100 mph)	485 N (frontal F1) 190 N (lateral F2)
Flat Plate Equivalent Area	3.20 ft ² (0.30 m ²)
Connector Types (Female)	Type N, or 7/16 DIN
Materials: Antenna / Radome	Aluminum / ABS

Model 48000 / 48010 63°, 16.6 dBd Panel

MOUNTING HARDWARE (INFORMATION AND DRAWINGS)

Pipe Mount Brackets

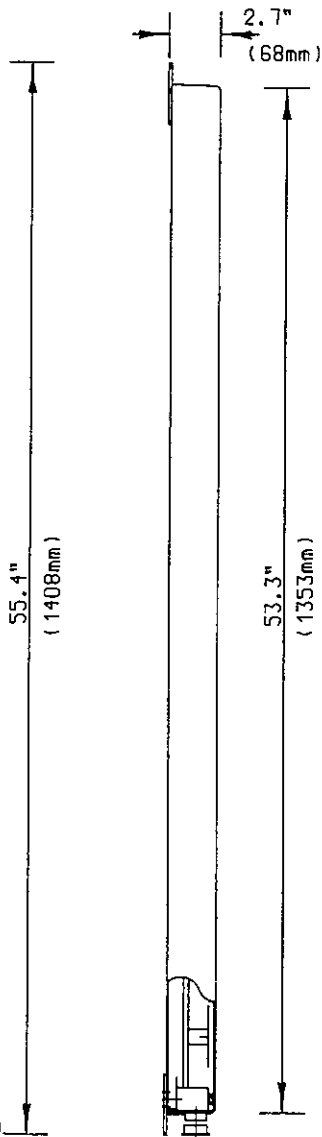
Fix 903 (1.25" - 3.5" OD pipe)

Mechanical Tilt Bracket (optional)

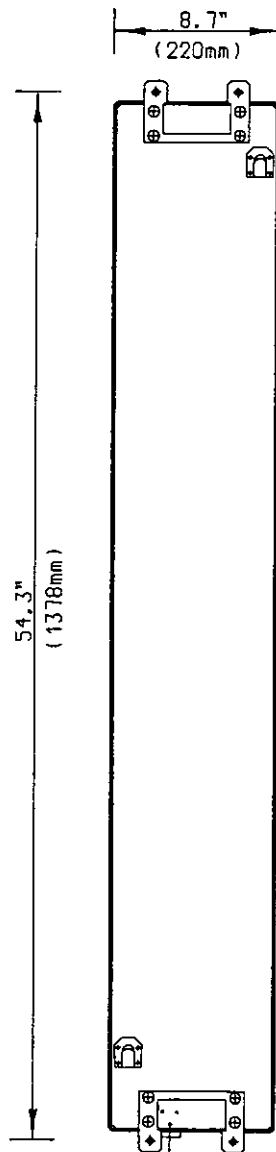
Model TB-6

NOTE: Mechanical specifications on these pages would apply to all other electrical tilt and/or connector location options.

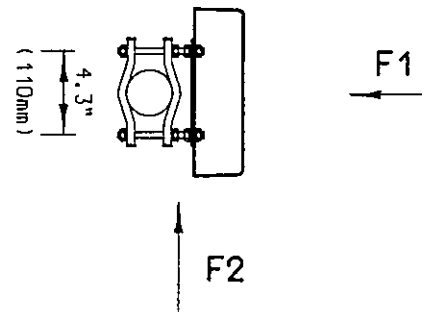
SIDE VIEW

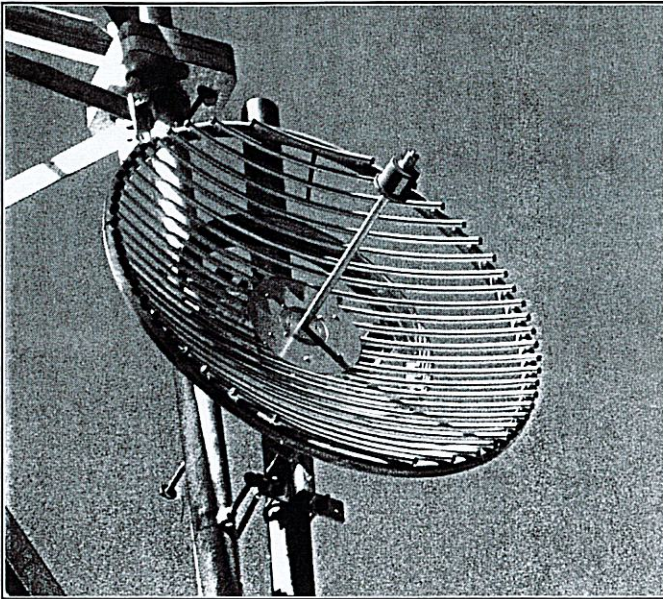


REAR VIEW



TOP VIEW





Unpressurized Foam Dielectric Feeds

Facts & Features

- Gabriel Quality and Dependability.
- Flange mates with EIA 7/8" coax, 50 ohm. (Type "N" and DIN connectors available, call for specifications.)
- Most feeds are easily installed from the front of the antenna, while allowing inspection or replacement from the rear. Smooth polarization adjustment or change is obtained from the rear of the antenna.
- Antenna features independent azimuth and elevation adjustments.
- All Gabriel antennas meet or exceed Standards EIA-195-C and EIA-222-F.
- Grid antenna designs offer lower windloading, typically reduced 40% or more from a comparable sized solid antenna without ice.
- High Performance antennas are supplied with Hypalon[®] planar radomes that shed dirt, water, ice and snow. 4 ft. (1.2) and smaller models may utilize paintable rigid radomes. (Teflon[®] planar radomes are available on request.)
- Ultra High Performance antennas are supplied with Teflon[®] planar radomes which have superior shedding characteristics with dirt, water, ice and snow.

Associated Equipment Information	Pages
Point-to-Point Antenna Specifications	14 - 111
Special Application Antennas	135 - 145
Antenna Mounts & Reference Dimensions	112 - 134
Radomes	122 - 124
Tower Accessories	146 - 154
Transmission Lines	155 - 243
Dry Air Pressurizers	244 - 253

Electrical Specifications

Frequency GHz	Model Number	Diameter ft. (m)	Standard	Gain at			Nominal Mid-Band Beamwidth degrees	XPD dB	F/B ratio dB	VSWR max.	(R.L. dB)
				Low	Mid dBi	High					

Grid - Plane Polarized - Unpressurized

1.850 - 1.990	GHF3-18	3 (0.9)	--	22.4	22.7	23.0	11.7	30	24	1.30	(17.7)
	GHF4-18	4 (1.2)	--	24.8	25.1	25.4	8.9	32	32	1.20	(20.8)
	GHF6-18A	6 (1.8)	B, 1	28.4	28.7	29.0	5.9	33	36	1.15	(23.1)
	GHF8-18A	8 (2.4)	A, 1	30.9	31.2	31.5	4.4	37	39	1.15	(23.1)
	GHF10-18A	10 (3.0)	A, 1	32.8	33.1	33.4	3.6	40	42	1.15	(23.1)
	GHF12-18A	12 (3.7)	A, 1	34.4	34.7	35.0	3.0	40	44	1.15	(23.1)

Standard - Plane Polarized - Unpressurized

1.850 - 1.990	RFF4-18ASE	4 (1.2)	--	24.9	25.2	25.5	8.9	30	32	1.20	(20.8)
	RFF6-18ASE	6 (1.8)	B	28.5	28.8	29.1	5.9	30	36	1.15	(23.1)†
	RFF8-18ASE	8 (2.4)	A, 1	31.0	31.3	31.6	4.4	30	39	1.15	(23.1)†
	RFF10-18ASE	10 (3.0)	A, 1	32.9	33.2	33.5	3.6	30	42	1.15	(23.1)†
	RFF12-18SE	12 (3.7)	A, 1	34.5	34.8	35.1	3.0	30	45	1.15	(23.1)†
	RFF15-18	15 (4.6)	A, 1	36.2	36.5	36.8	2.4	30	46	1.15	(23.1)†

High Performance - Plane Polarized - Unpressurized

1.850 - 1.990	HPF6-18ASE	6 (1.8)	B	28.1	28.4	28.7	5.9	30	45	1.15	(23.1)†
	HPF8-18ASE	8 (2.4)	A	30.7	31.0	31.3	4.4	30	50	1.15	(23.1)†
	HPF10-18ASE	10 (3.0)	A, 1	32.6	32.9	33.2	3.6	30	52	1.15	(23.1)†
	HPF12-18ASE	12 (3.7)	A, 1	34.2	34.5	34.8	3.0	30	56	1.15	(23.1)†
	HPF15-18	15 (4.6)	A, 1	36.2	36.5	36.8	2.4	30	58	1.15	(23.1)†

Ultra High Performance - Plane Polarized - Unpressurized

1.850 - 1.990	USF8-18SE	8 (2.4)	A	30.6	30.9	31.2	4.4	32	58	1.10	(26.4)†
	USF10-18ASE	10 (3.0)	A, 1	32.5	32.8	33.1	3.6	32	61	1.10	(26.4)†
	USF12-18ASE	12 (3.7)	A, 1	34.1	34.4	34.7	3.0	32	63	1.10	(26.4)†

NOTE: A, B Meets U.S.F.C.C Rules and Regulations for Part 101.115 concerning antenna limitations.

1. Meets Canada Industry Radio Regulatory Standard, SRSP-301.71
 † Improved VSWR version available on special order.
 Hypalon[®] and Teflon[®] are registered trademarks of DuPont de Nemours, Co.
 Product information subject to change without notice.

**PCS1900
BAND OR CHANNEL SELECTIVE REPEATER**
for GSM, CDMA and TDMA Networks

**MR701B
POWER**

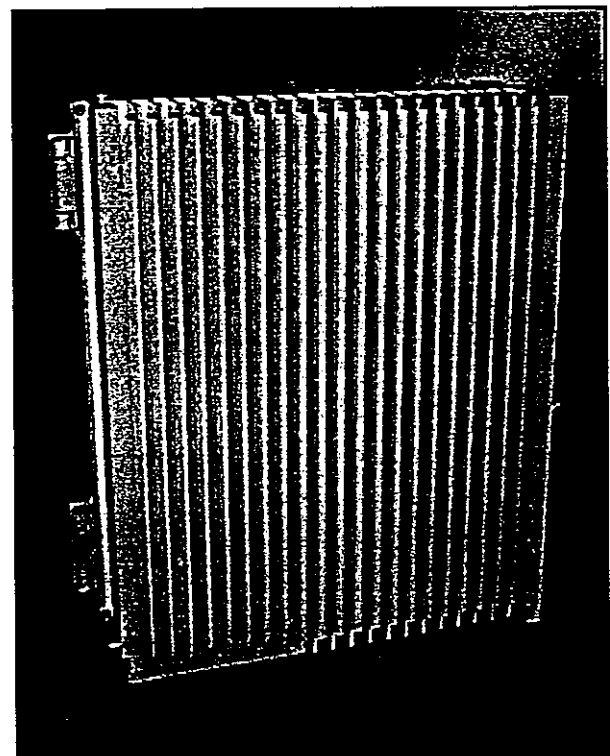
MIKOM's **MR701B POWER** is available as a band selective repeater for GSM, CDMA, and TDMA, and as a channel selective repeater for CDMA and TDMA. A GSM channel selective version is available (MR741).

This repeater bi-directionally amplifies signals between multiple mobiles and a single base station in the PCS1900 frequency band. It is employed where poor topological conditions cause weak field strengths. It can provide highly selective amplification of band segments or channels in the PCS1900 band.

MR701B POWER modules can be combined with other repeater modules in order to create a multi-band repeater system. Modules operating in GSM1800, GSM900, AMPS800, or iDEN bands are available. When different modules are combined a common antenna and control interface are available.

MR701B POWER can be set-up locally or remotely. A PCMCIA slot for modem operation is an available option. The repeater has a large number of functions that can be monitored and changed by the operators via a terminal emulation program or the MIKOM OMC software platform. An easy to understand and simple to learn communication language is available to help the operator query status reports from the repeater or to change settings.

- Efficient ultra high power amplifiers
- Interference cancellation equipment for antenna isolation improvement
- Remote control and operation & maintenance center
- Built in test equipment
- Easy and fast to install and upgrade
- RS232, PCMCIA or PSTN data interface
- Combination of PCS1900, GSM900, GSM1800, TACS and ETACS possible
- Band or channel selective



PCS1900 BAND OR CHANNEL SELECTIVE REPEATER

for GSM, CDMA and TDMA Networks

MR701B POWER

ELECTRICAL SPECIFICATIONS

Frequency	Uplink 1850-1910 MHz; Downlink 1930-1990 MHz
Useable bandwidth	35 MHz in the upper or lower PCS band
Gain	90 dB
Gain variation over frequency and temperature*	±2.5 dB (±3.5 dB at extreme temperatures)
Gain adjust range	30 dB in 2 dB steps
Gain adjust range tolerance	±0.5 dB
Return loss	15 dB @ 25°C ambient temperature
Spurious/intermodulation	-13 dBm max
Spectral re-growth (CDMA only)	-45 dBc (J-STD-008)
Power supply	100-130 VAC / 40-60 Hz Option: 15-24 VDC or 36-72 VDC Option: 220-250 VAC / 40-60 Hz
RF connector	7/16 female; Option: N female
Environmental and safety	See separate leaflet

*Normal temperature range +5° to +40°C; Extreme temperature range -33° to +50°C

BAND AND CHANNEL SPECIFICATIONS

	Option I (fixed BW)	Option II (fixed BW)	Option III (variable BW)	Channel	
				CDMA	TDMA
Bandwidth	5 MHz	15 MHz	0.2* to 15 MHz	1.23 MHz	30 kHz
Slope 3 dB to 30 dB	1 MHz	2 MHz	2 MHz	-	-
30 dB bandwidth	-	-	-	$f_c \pm 900$ kHz	$f_c \pm 60$ kHz
50 dB bandwidth	-	-	-	$f_c \pm 1.5$ MHz	$f_c \pm 120$ kHz
Delay	6 μ s	3 μ s	6 μ s	<8 μ s	20 μ s typ.
Delay variation (typical)	±150 ns	±150 ns	±150 ns	±500 ns	±500 ns typ.
Far off selectivity	40 dB	40 dB	40 dB	60 dB	50 dB
NF at Gmax	6 dB	6 dB	8 dB	6 dB	6 dB
NF at Gmax -30 dB	12 dB	12 dB	13 dB	12 dB	12 dB
OICP-3 at Gmax	62.0 dBm	62.0 dBm	62.0 dBm	62.0 dBm	62.0 dBm
OICP-3 at Gmax -10 dB	60.0 dBm	60.0 dBm	60.0 dBm	60.0 dBm	60.0 dBm
OICP-3 at Gmax -20 dB	57.0 dBm	57.0 dBm	57.0 dBm	57.0 dBm	57.0 dBm
OICP-3 at Gmax -30 dB	52.0 dBm	52.0 dBm	52.0 dBm	52.0 dBm	52.0 dBm
Output noise in band at Gmax	-78 dBm/Hz	-78 dBm/Hz	-76 dBm/Hz	-	-
Output noise out of band at Gmax	-98 dBm/Hz	-98 dBm/Hz	-96 dBm/Hz	-	-
Pwr consumption stdby/max pwr: 1 module 4 modules	150/215 W typ. 180/245 W typ.	150/215 W typ. 180/245 W typ.	155/220 W typ. 200/265 W typ.	150/210 W typ. 175/240 W typ.	150/210 W typ. 175/240 W typ.

* 1.5 dB gain degradation at 200 kHz

PCS1900
BAND OR CHANNEL SELECTIVE REPEATER
for GSM, CDMA and TDMA Networks

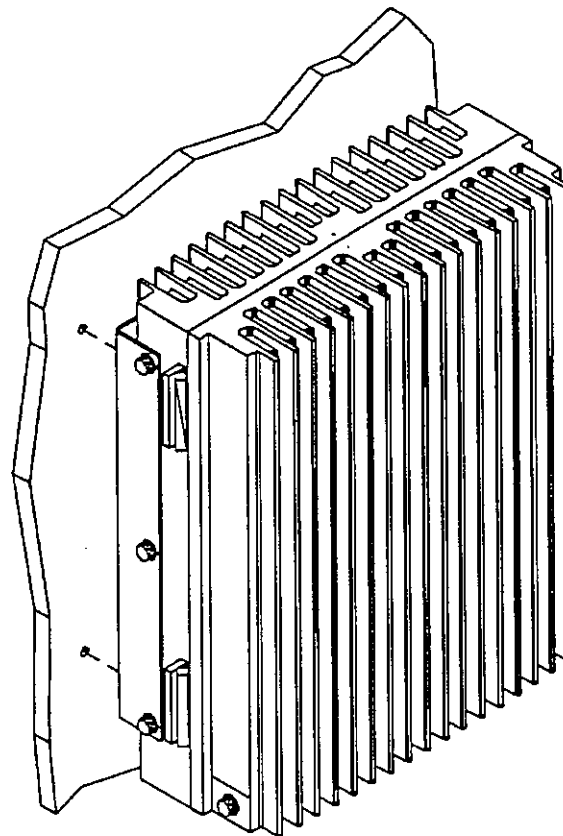
MR701B
POWER

AVAILABLE POWER PER TECHNOLOGY

	GSM	CDMA	TDMA
Pout at 1 channel	40 dBm	37 dBm	40 dBm
Pout/channel at 2 channels	37 dBm	31 dBm	34 dBm
Pout/channel at 4 channels	33 dBm	28 dBm	29 dBm
Pout/channel at 8 channels	29 dBm	25 dBm	26 dBm
ALC threshold	Adjustable		

MECHANICAL SPECIFICATIONS

Height, width, depth	21.1 x 18.2 x 7.9 inches 535 x 462.5 x 200 mm
Volume	<46 liters
Weight (approx.)	103 lbs (47 kg)

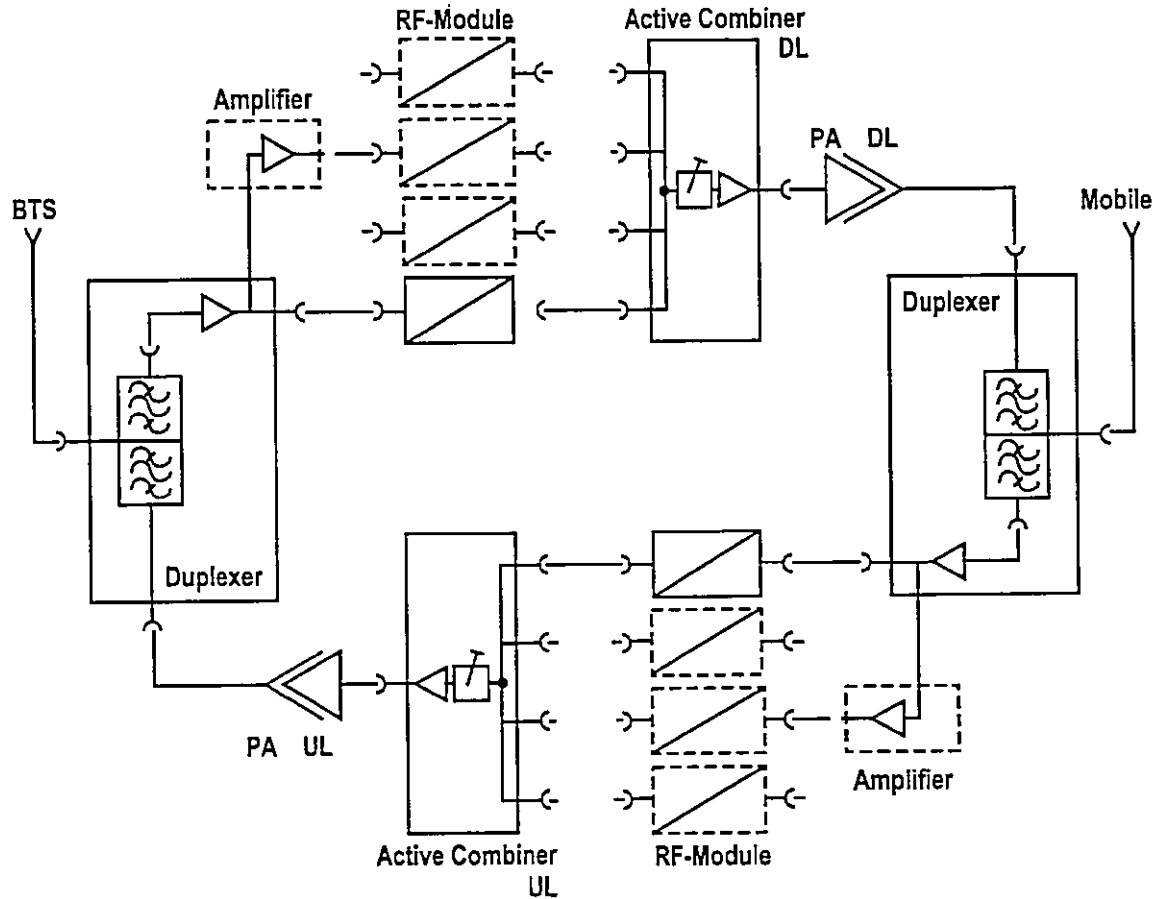


All data is subject to change without notice!

**PCS1900
BAND OR CHANNEL SELECTIVE REPEATER**
for GSM, CDMA and TDMA Networks

**MR701B
POWER**

DESIGN PRINCIPLE



OPTIONS

VSWR module	Measurement of VSWR of downlink output antenna port. Alarm threshold at 10 dB return loss.
Interference Cancellation Equipment (I.C.E.)	Electronic improvement of antenna isolation. Available for CDMA channel options.
Diversity	Available for CDMA channel options.
Battery backup, UPS	Backup time 20 min to 2 hours.
RF power booster	Downlink power capability of 50 watts or 100 watts peak. Low noise uplink preamplifier.
Mounting	Pole mounting kit and free standing option.

This preliminary data is for information purposes only and should not be construed as an offer for sale of the equipment described pending F.C.C. type acceptance.

Exhibit C

Power Density Calculations

2755 State Street

Hamden, CT

Exhibit C

Power Density Calculations

2755 State Street

Hamden, CT

**Worst Case Power Density at the Base of the Sprint tower
2755 State Street, Hamden, CT.**

Region 11 - Connecticut Power Density Calculation - Worst Case			
Base Station TX output	9.55 W	39.80	
Number of channels	1		
Antenna Model	DAPA: 48212		
Antenna Gain	18.7 dBi		
Cable Size	1 1/4"		
Cable Length	110 ft		
Jumper & Connector loss	1 dB		
Cable Loss per foot	0.0154		
Total Cable Loss	1.694 dB		
Total Attenuation	2.694 dB		
Total EIRP per channel	55.81 dB	380.7	W
Total EIRP per sector	55.81 dB	380.7	W
Ground Reflection	1.6		
Frequency	1930 MHz		
Antenna Height	100 ft	3048	cm
nsg	16.006		
Power Density (S) =	0.008353 mW / cm²		
% MPE =	0.8353%		

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

Summary of the "Worst Case" exposure calculation			
	Applicable ANSI Standard	Calculated "Worst Case"	Percentage of Standard
Omnipoint @ 100'	1.0000	0.008353	0.84%
SCLP 110'	0.5867	0.0639	10.89%
Sprint	1.0000	0.0375	3.75%
		Total	15.48%