

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
: :
APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 360
D/B/A VERIZON WIRELESS FOR A :
CERTIFICATE OF ENVIRONMENTAL :
COMPATIBILITY AND PUBLIC NEED FOR :
THE CONSTRUCTION, MAINTENANCE :
AND OPERATION OF A WIRELESS :
TELECOMMUNICATIONS FACILITY AT :
THE FALLS VILLAGE VOLUNTEER FIRE :
DEPARTMENT, 188 ROUTE 7 SOUTH, :
FALLS VILLAGE, CONNECTICUT : JULY 23, 2008

PRE-FILED TESTIMONY OF ALEJANDRO RESTREPO

1.Q. Please describe your position with Cellco Partnership d/b/a Verizon Wireless.

A. I have been working as a radio frequency (RF) engineer for Cellco Partnership d/b/a Verizon Wireless (“Cellco”) for four years. My principal responsibilities include radio frequency design for Cellco’s Cellular and PCS Wireless networks throughout the State of Connecticut. A copy of my professional resume is attached as Exhibit 1.

2.Q. What does your testimony address?

A. The purpose of my testimony is to continue to provide information relating to Cellco’s application for a certificate of environmental compatibility and public need for the proposed Falls Village Volunteer Fire Department (“FVFD”) facility (Siting Council Docket No. 360) and Cellco’s overall objectives in the Falls Village area.

3.Q. Is there any information in the record that you would like to amend or correct?

A. Yes. Applicant’s Exhibit 7, entitled “Supplemental Information”, includes information related to Cellco’s recent acquisition of additional radio spectrum in Litchfield County.

The cellular antenna cut-sheet included behind Tab 1 of the Supplemental Information filing, is not the cellular antenna Cellco intends to use in Falls Village. The correct cellular antenna specifications are attached as Exhibit 2 to this testimony. The specifications of the cellular antennas described in Exhibit 2 were used to produce all coverage plots and power density calculations submitted as part of the application, the Supplemental Information filing and all interrogatory responses.

In addition, I want to clarify that the updated worst-case power density calculation included in the Supplemental Information filing, listed as 18.8% is the cumulative percentage for both PCS and cellular service from the proposed Falls Village facility. Lastly, during the July 1, 2008 hearing, I mistakenly stated that the percentage of the FCC's general population maximum permissible exposure standard at Ms. Jaeger's property was 1.7%. According to the RF exposure table prepared by Anthony Wells, the correct figure at Ms. Jaeger's property is 0.25% of the FCC standard.

4.Q. Do you have any other exhibits to offer into the Council record?

- A. Yes. During the July 1, 2008 hearing, in response to questions from the Intervenor, Cellco prepared a series of coverage maps (for cellular and PCS frequencies) depicting coverage from the proposed Falls Village facility during times of minimal or zero usage of the cell site and maximum usage of the cell site, to illustrate the concept of "cell shrinkage". These coverage maps are attached as Exhibit 3.

5.Q. Does this conclude your testimony?


A. Yes.

The statements above are true and accurate to the best of my knowledge.

JULY 23rd, 2008
Date


Alejandro Restrepo

Subscribed and sworn before me this 23 day of July, 2008.

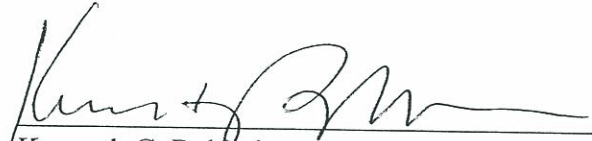

Kenneth C. Baldwin
Commissioner of the Superior Court

CERTIFICATE OF SERVICE

I hereby certify that on the 24th day of July, 2008, a copy of the foregoing was sent via
Federal Express and by electronic mail to:

Gabriel North Seymour, P.C.
200 Route 126
Falls Village, CT 06031
certiorari@earthlink.net

Whitney North Seymour, Jr.
425 Lexington Avenue
New York, NY 10017
wseymour@stblaw.com


Kenneth C. Baldwin

Alejandro Restrepo

E-mail: alejandro_restrepo@yahoo.com
 64 Livingston Road
 East Hartford, CT 06108

Education	Graduated May 2002	Boston University	Boston, MA
	B.S. / Electrical Engineering		
	Focus in communications and systems.		
Professional Experience	April 2004 - Present	Verizon Wireless	East Hartford, CT
	Radio Frequency Design Engineer		
	<ul style="list-style-type: none"> ▪ Design and optimization of an 800 and 1900 MHz CDMA voice and 1900 MHz EVDO network for Northern CT in the New England West region. ▪ Apply RF principals, antenna theory and location for new site designs and antenna optimization. ▪ Testify is local and state zoning hearings. ▪ Utilize tools such as GeoPlan, Zite, Prospect and Topo USA to fulfill design needs. ▪ Deploy and implement new cable, antenna, and hardware to improve RF coverage and performance of cell sites. ▪ Fulfill regulatory compliance issues, System Design Change Orders (SDCO), and comply with all Phase 2 E911 requirements. 		
	May 2003 – April 2004	C-Squared Systems	East Kingston/Manchester, NH
	Drive Test / RF Engineer Consultant		
	<ul style="list-style-type: none"> ▪ Performed drive tests of existing wireless systems, completed post processing of drive test data, prepared documentation of wireless systems, and mapping of drive results. ▪ Created coverage model maps using GeoPlan, and assisted in updates of GeoPlan database. 		
Related Work Experience	Summer / Winter 2001	Verizon Wireless	Wallingford/East Hartford, CT
	Radio Frequency Design CO-OP		
	Summers 1997-00	Pratt & Whitney	East Hartford, CT
	Quality Assurance & Standards Engineering Assistant		
	Environmental Health & Safety Engineering Assistant		
<hr/>			
Computer Skills	Technical Software		
	GeoPlan	ACTIX	AutoCAD
	MapInfo	Prospect	MS Office
	Windcatcher	Visio	
	Operating Systems		
	Solaris (CDE)	Unix	DOS
	Linux	Windows	
	Programming Knowledge		
	Visual Basic for Applications (Script)	C++	
Technical Training	EVDO Rev A, TCP/IP, CCNA, RF Performance, SCME, Fiber-Matic Speaking		

Vertically Polarized, Log Periodic 80° / 14 dBd

LPA-80080/6CF

When ordering replace "___" with connector type.

Mechanical specifications

Length	1800 mm	70.9 in
Width	140 mm	5.5 in
Depth	335 mm	13.2 in
Depth with z-bracket	375 mm	14.8 in
4) Weight	9.5 kg	21.0 lbs
Wind Area		
Fore/Aft	0.25 m ²	2.7 ft ²
Side	0.60 m ²	6.5 ft ²
Rated Wind Velocity (Safety factor 2.0)	>216 km/hr	>134 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	415 N	93.3 lbs
Side	870 N	195.6 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

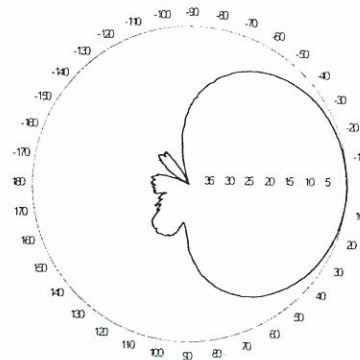
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit
#21699999

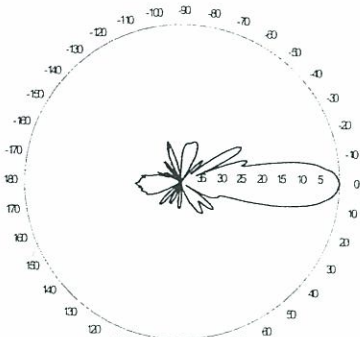
Electrical specifications

Frequency Range	806-960 MHz
Impedance	50Ω
3) Connector(s)	NE or E-DIN 1 port / center
1) VSWR	≤ 1.4:1
Polarization	Vertical
1) Gain	14 dBd
2) Power Rating	500 W
1) Half Power Angle	
H-Plane	80°
E-Plane	10°
1) Electrical Downtilt	0°
1) Null Fill	10%
Lightning Protection	Direct Ground

Radiation pattern¹⁾



Horizontal

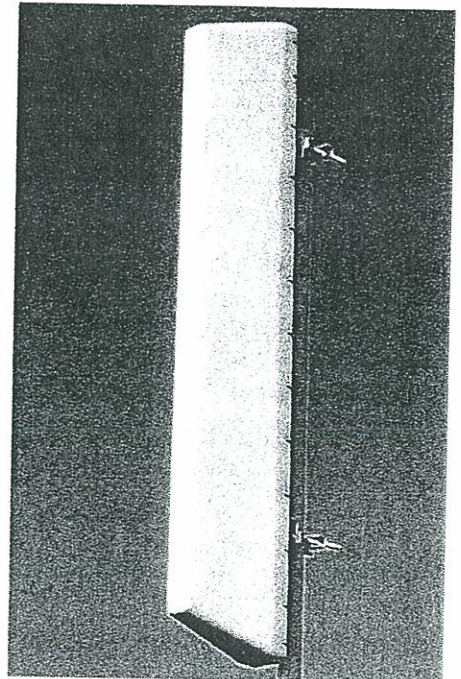


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's
Exclusive 3T (True
Transmission Line
Technology)
Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.

2) Power rating limited by connector only.

3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.

4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

806-960 MHz

Vertically Polarized, Log Periodic 63° / 18.5 dBi

LPA-185063/12CF

When ordering replace "___" with connector type.

Mechanical specifications

Length	1806 mm	71.1 in
Width	167 mm	6.6 in
Depth	148 mm	5.8 in
Depth with t-bracket	176 mm	6.9 in
4) Weight	6.1 kg	13.5 lbs
Wind Area		
Fore/Aft	0.30 m ²	3.3 ft ²
Side	0.27 m ²	2.9 ft ²
Rated Wind Velocity (Safety factor 2.0)		
	>224 km/hr	>139 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	479 N	107.6 lbs
Side	434 N	97.6 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in).

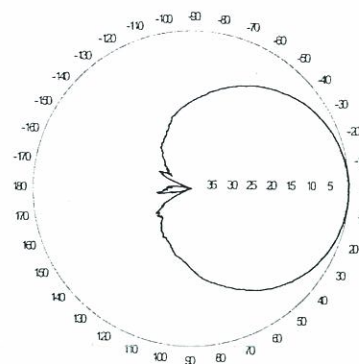
Mounting bracket kit #26799997
Downtilt bracket kit #26799999

The downtilt bracket kit includes the mounting bracket kit.

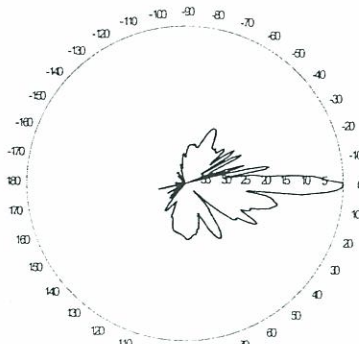
Electrical specifications

Frequency Range	1850-1990 MHz
Impedance	50Ω
3) Connector(s)	NE or E-DIN 1 port / center
1) VSWR	≤ 1.4:1
Polarization	Vertical
1) Gain	18.5 dBi
2) Power Rating	250 W
1) Half Power Angle	
H-Plane	63°
E-Plane	5°
1) Electrical Downtilt	0°
1) Null Fill	10%
Lightning Protection	Direct Ground

Radiation pattern¹⁾



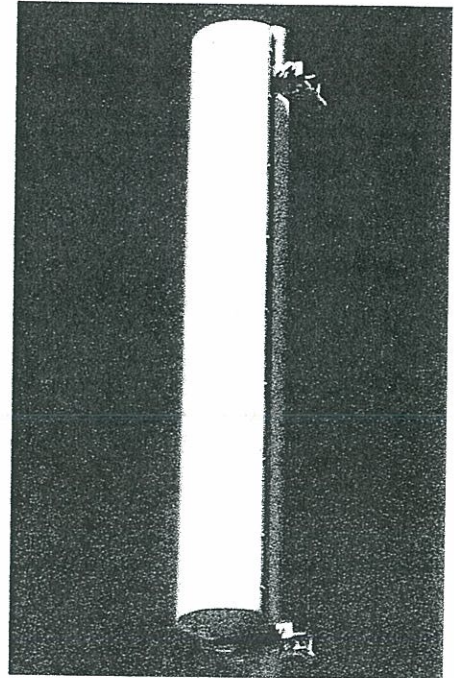
Horizontal



Vertical

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- 4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

1850-1990 MHz

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Amphenol Antel, Inc.
The Antenna Technology Company

Revision Date: 712/07

Docket No. 300
 Existing Verizon Wireless Cellular Coverage With
 Proposed Falls Village Facility At 150 Feet AGL
 During Maximum Usage
 (* Map Scale Is 1:30,000)

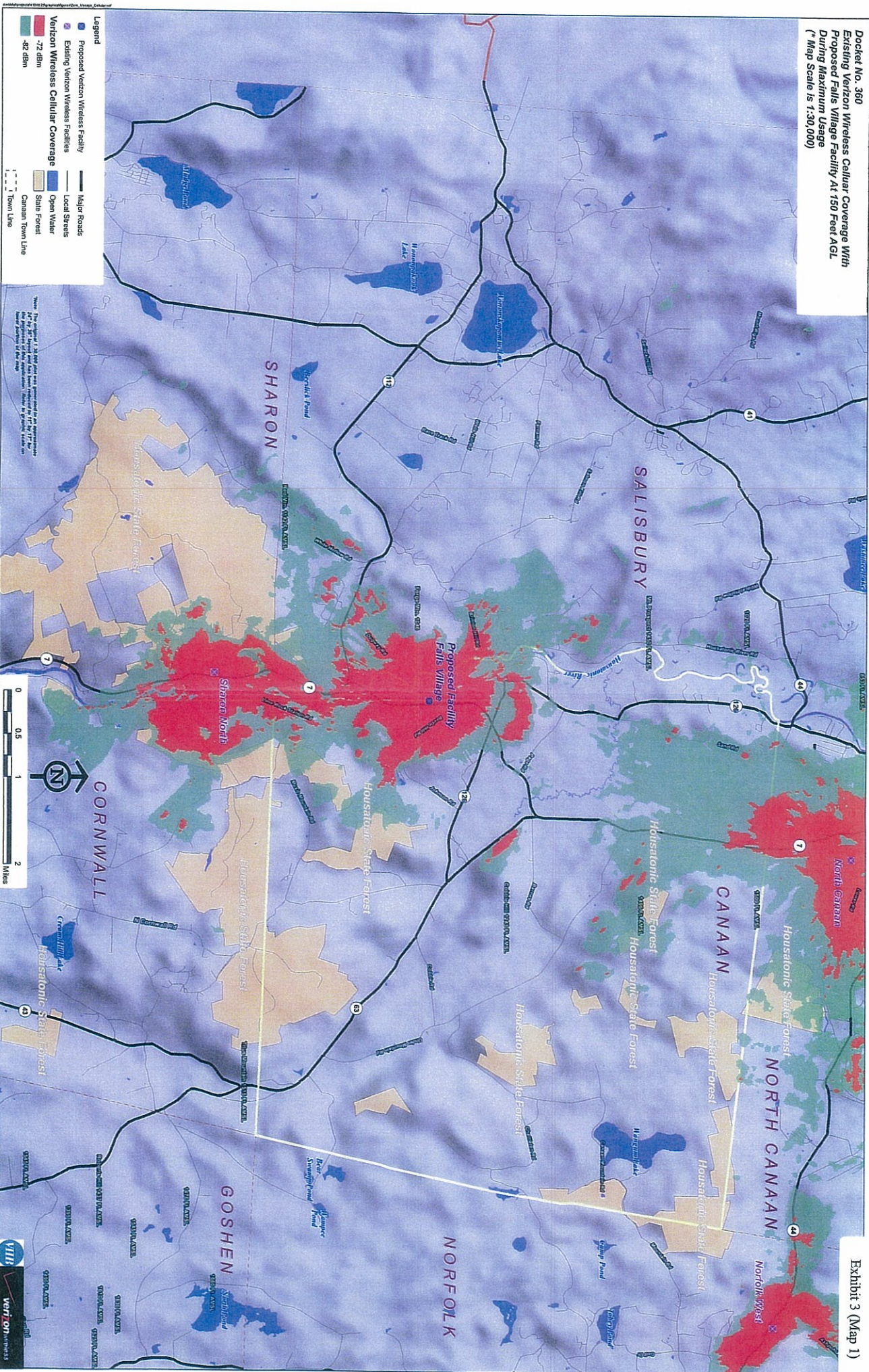


Exhibit 3 (Map 1)

Docket No. 360
 Existing Verizon Wireless Cellular Coverage With
 Proposed Falls Village Facility At 150 Feet AGL
 During Zero Usage
 (* Map Scale is 1:30,000)

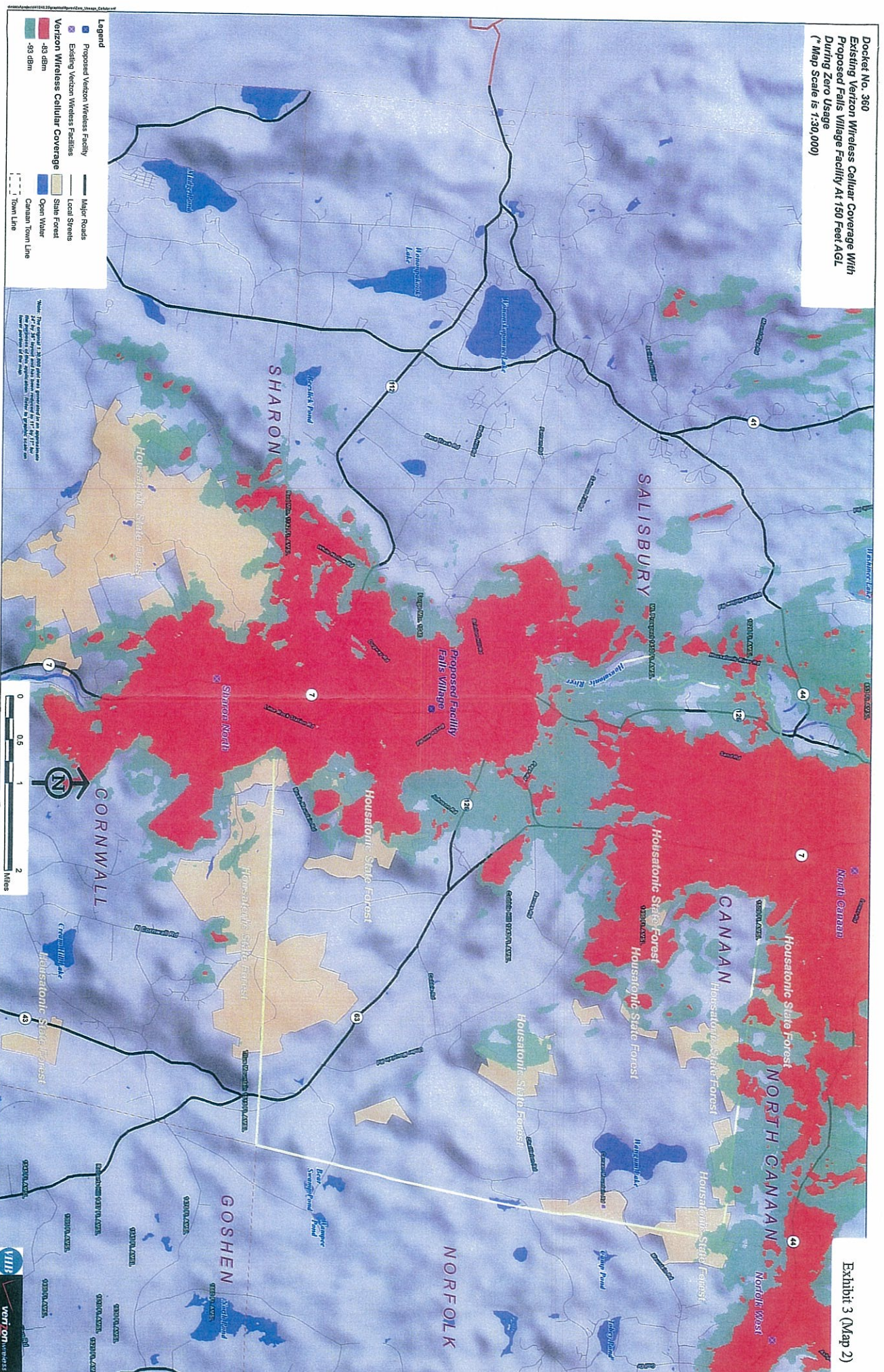
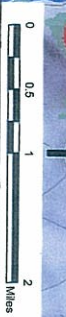


Exhibit 3 (Map 2)

Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Verizon Wireless Cellular Coverage
- 85 dbm
- 93 dbm
- Major Roads
- Local Streets
- State Forest
- Open Water
- Canaan Town Line
- Town Line

Note: This coverage is a 200-foot radius generated from an approximate location of the proposed facility. Actual coverage may vary based on the actual location of the facility.



Docket No. 360
 Existing Verizon Wireless PCS Coverage With
 Proposed Falls Village Facility At 150 Feet AGL
 During Maximum Usage
 (* Map Scale is 1:30,000)

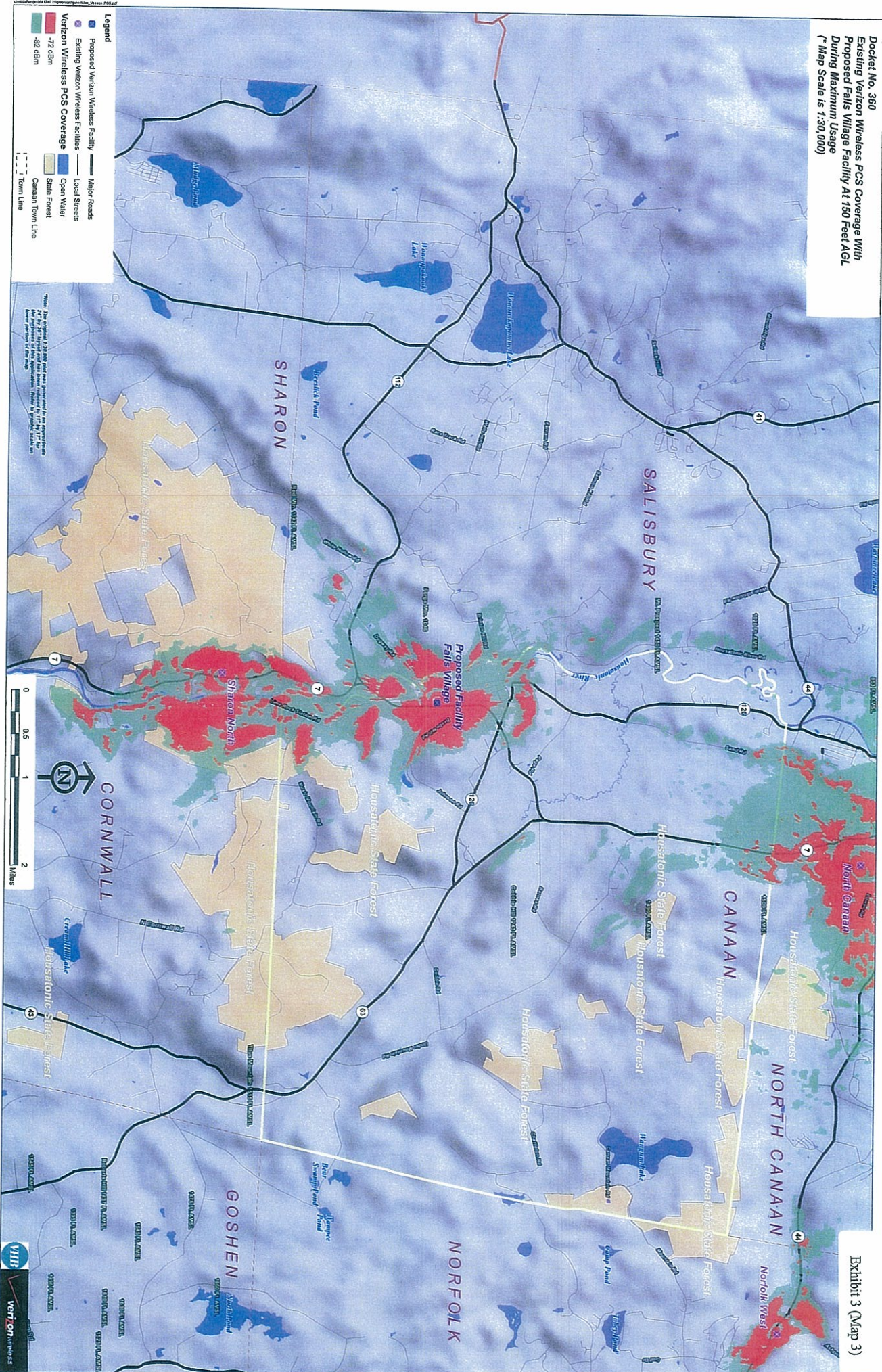


Exhibit 3 (Map 3)

