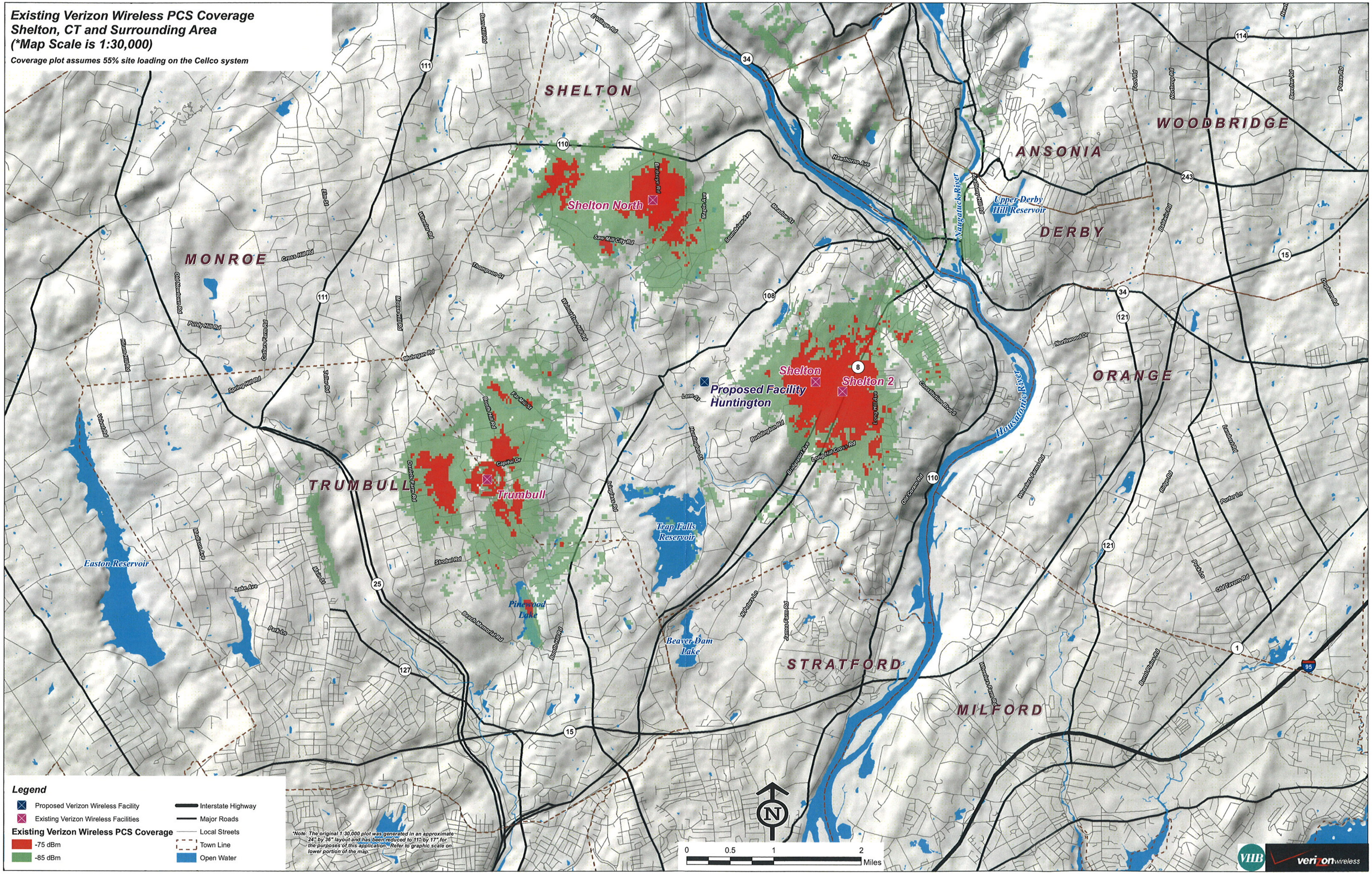
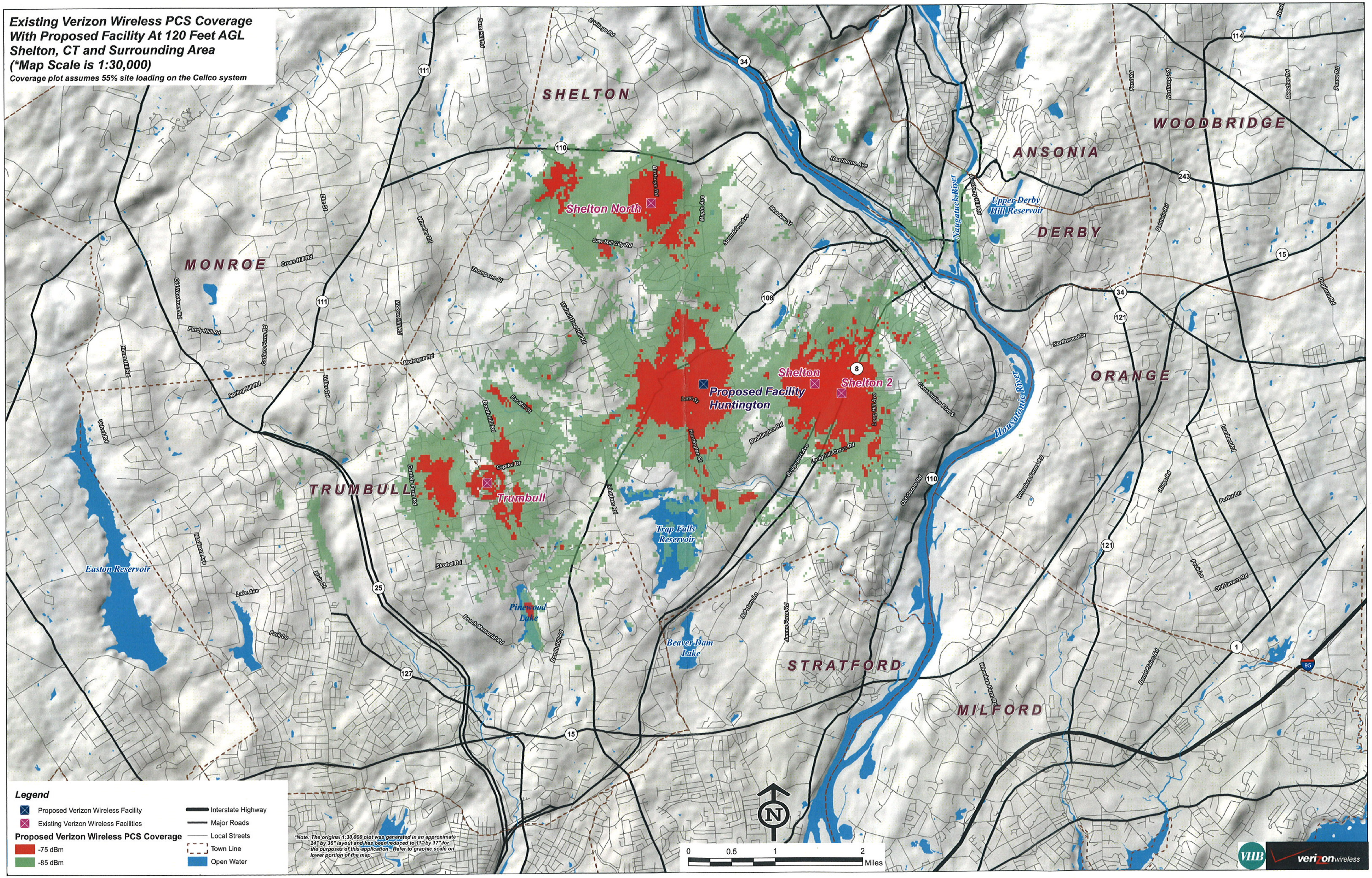
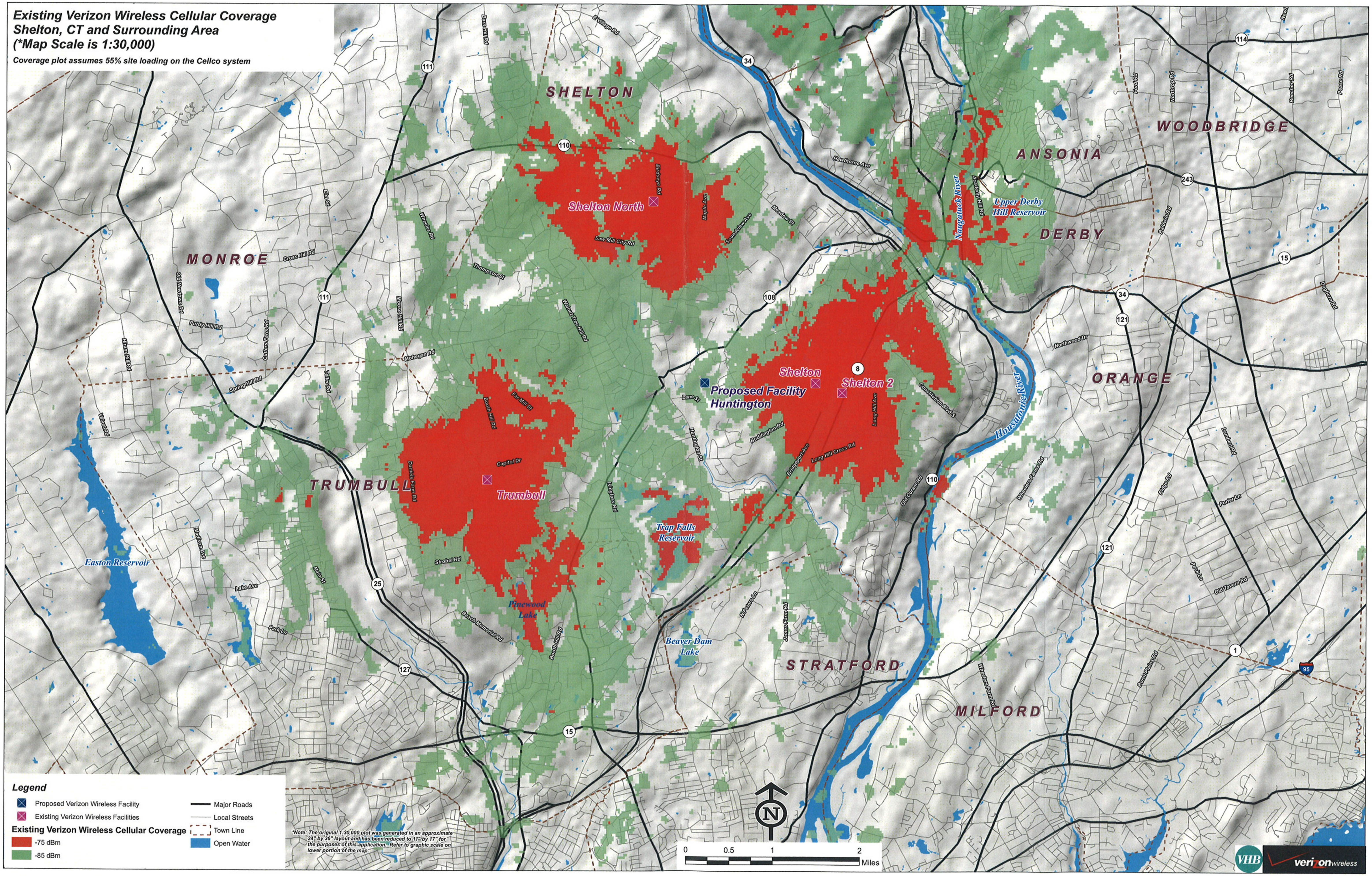
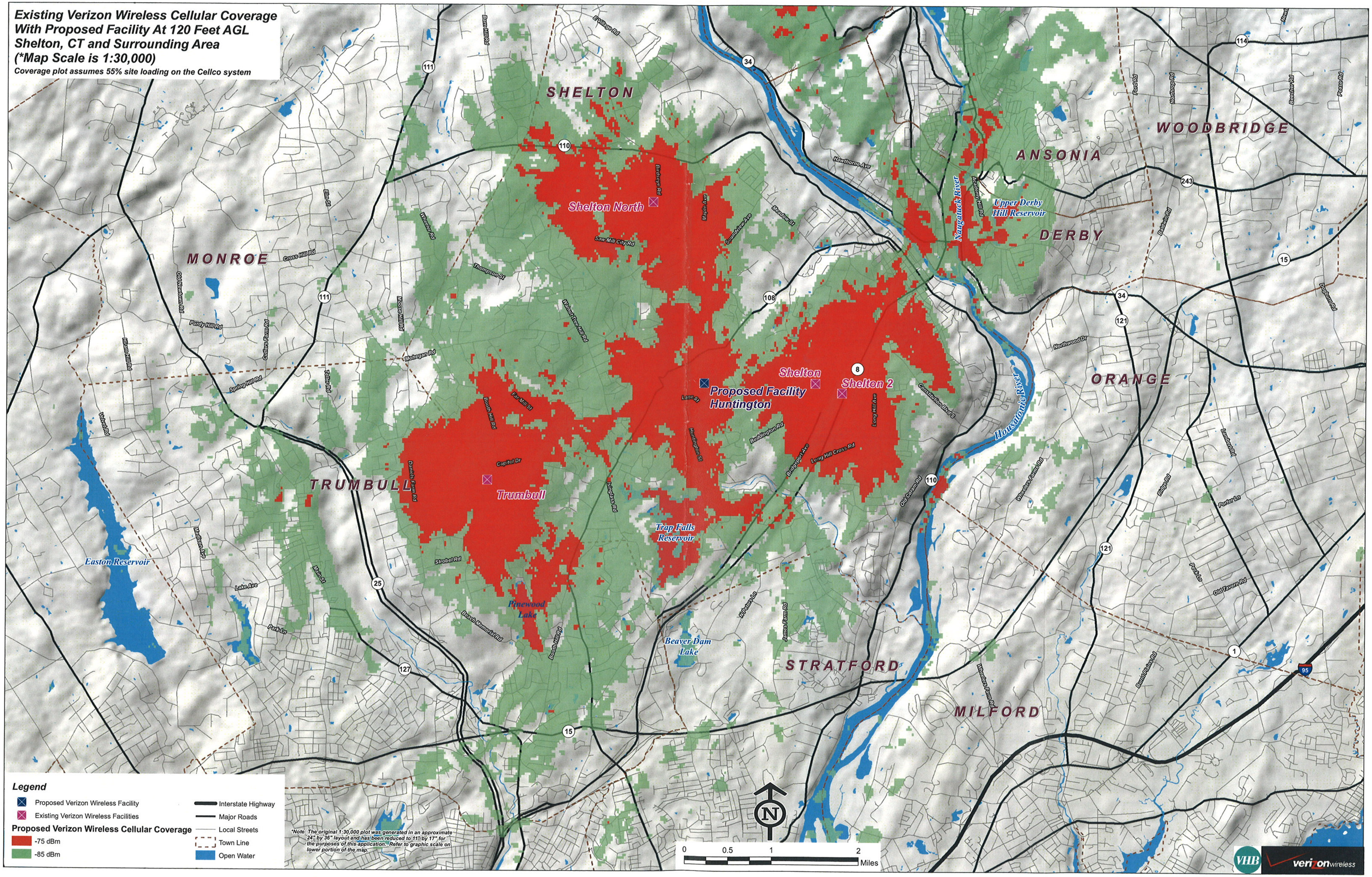

Existing Verizon Wireless PCS Coverage
Shelton, CT and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
SHELTON
MONROE
TRUMBULL
ANSONIA
WOODBRIDGE
DERBY
ORANGE
STRATFORD
MILFORD
Shelton North
Shelton
Shelton 2
Trumbull
Proposed Facility
Huntington
Easton Reservoir
Trap Falls Reservoir
Pinewood Lake
Beaver Dam Lake
Upper Derby Hill Reservoir
Naugatuck River
Housatonic River
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Existing Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Town Line
Open Water
*Note: The original 1:30,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0
0.5
1
2
Miles
N
VHB
verizon wireless



Existing Verizon Wireless PCS Coverage
With Proposed Facility At 120 Feet AGL
Shelton, CT and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
SHELTON
WOODBRIDGE
ANSONIA
DERBY
MONROE
ORANGE
TRUMBULL
STRATFORD
MILFORD
Shelton North
Proposed Facility
Huntington
Shelton
Shelton 2
Trumbull
Upper Derby
Hill Reservoir
Naugatuck River
Housatonic River
Trap Falls
Reservoir
Easton Reservoir
Pinewood
Lake
Beaver Dam
Lake
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Proposed Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Town Line
Open Water
*Note: The original 1:30,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0
0.5
1
2
Miles
N
VHB
verizon wireless


Existing Verizon Wireless Cellular Coverage
Shelton, CT and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
SHELTON
MONROE
TRUMBULL
STRATFORD
MILFORD
ORANGE
DERBY
ANSONIA
WOODBRIDGE
Shelton North
Shelton
Shelton 2
Trumbull
Proposed Facility
Huntington
Trap Falls Reservoir
Pinewood Lake
Beaver Dam Lake
Easton Reservoir
Upper Derby Hill Reservoir
Housatonic River
Naugatuck River
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Existing Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Major Roads
Local Streets
Town Line
Open Water
*Note: The original 1:30,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
N
0 0.5 1 2
Miles
VHB
verizon wireless



Existing Verizon Wireless Cellular Coverage
With Proposed Facility At 120 Feet AGL
Shelton, CT and Surrounding Area
(*Map Scale is 1:30,000)
Coverage plot assumes 55% site loading on the Cellco system
SHELTON
MONROE
TRUMBULL
WOODBRIDGE
ANSONIA
DERBY
ORANGE
STRATFORD
MILFORD
Shelton North
Proposed Facility
Huntington
Shelton
Shelton 2
Trumbull
Upper Derby Hill Reservoir
Trap Falls Reservoir
Easton Reservoir
Pinewood Lake
Beaver Dam Lake
Naugatuck River
Housatonic River
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Proposed Verizon Wireless Cellular Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Town Line
Open Water
*Note: The original 1:30,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.
0 0.5 1 2 Miles
N
VHB
verizon wireless

ANDREW®

Vertically Polarized Directed Dipole® Panel Antennas

806 - 960 MHz

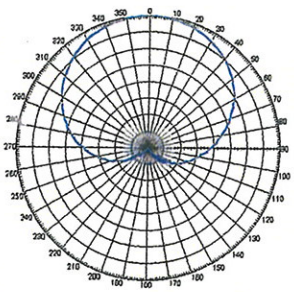
65° HORIZONTAL BEAMWIDTH

HORIZONTAL BEAMWIDTH	65°		65°	65°
FREQUENCY RANGE	806-960 MHz		806-896 MHz	806-896 MHz
	14.5 & 14.8 dBd / 0° Tilt		14.5 dBd / 0° Tilt	14.3 dBd / 5° Tilt
MODEL	DB846F65ZAXY		DB846H65E-SX	846H65T5E-SX
TYPE	Directed Dipole®, No Screen		Directed Dipole®	Directed Dipole®
ELECTRICAL SPECIFICATIONS				
Frequency Range (MHz)	806-896	870-960	806-896	806-896
Gain (dBd/dBi)	14.5 / 16.6	14.8 / 16.9	14.5 / 16.6	14.3 / 16.4
Horizontal Beamwidth (Deg.)	65	60	65	65
Elevation Beamwidth (Deg.)	11	10.5	11	10.5
USLS (dB)	>15	>15	N/A	N/A
Null Fill (dB) – Below Peak	N/A	N/A	N/A	N/A
Beam Tilt (Deg.)	0	0	0	5
VSWR	<1.33:1	<1.33:1	<1.5:1	<1.5:1
Front-To-Back Ratio (dB)	40	40	30	40
Isolation (dB)	N/A	N/A	N/A	N/A
Max. Input Power (Watts)	500	500	500	500
Polarization	Vertical	Vertical	Vertical	Vertical
Connector Location	Back	Back	Back	Back
Connector Type	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female	7-16 DIN - Female
Optional Connectors	N/A	N/A	N/A	N/A
MECHANICAL SPECIFICATIONS				
Length (inch/mm)	72 / 1,829	72 / 1,829	72 / 1,829	72 / 1,829
Width (inch/mm)	10 / 254	10 / 254	20.5 / 521	20.5 / 521
Depth (inch/mm)	8.5 / 216	8.5 / 216	9 / 229	9 / 229
Net Weight (lbs/kg)	21 / 9.5	21 / 9.5	24 / 10.9	24 / 10.9
Max. Flat Plate Area (ft^2/m^2)	1.61 / 0.15	1.61 / 0.15	4.95 / 0.46	4.95 / 0.46
Max. Wind Load at 100 mph (lbf/N)	87 / 386	87 / 386	273 / 1,214	273 / 1,214
Max. Wind Speed (mph/kmh)	125 / 201	125 / 201	125 / 201	125 / 201
Radome Material	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant
Reflector Material	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum
Radiator Material	Aluminum	Aluminum	Brass	Brass
Hardware Material	Galvanized Steel	Galvanized Steel	Galvanized Steel	Galvanized Steel
Color	Light Gray	Light Gray	Light Gray	Light Gray
Std. Mounting Hardware	DB380	DB380	DB380	DB380
Optional Downtilt Kit	DB5083	DB5083	DB5083	DB5083
Optional Special Mounting	DB5084-AZ	DB5084-AZ	DB5084-AZ	DB5084-AZ

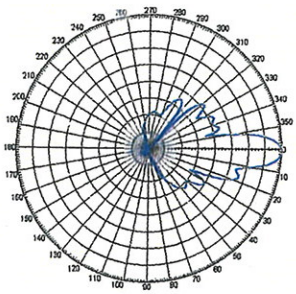
Specifications are subject to change. Please see our website for the latest information.

DB846F65ZAXY

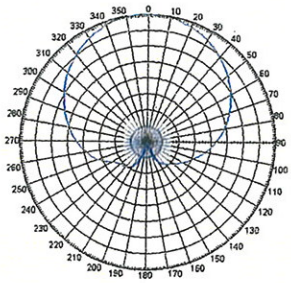
Azimuth Pattern

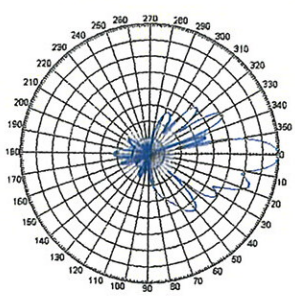


Elevation Pattern

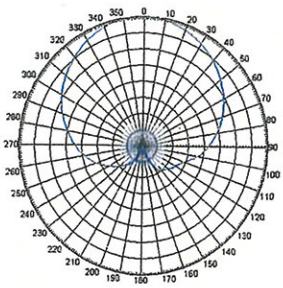


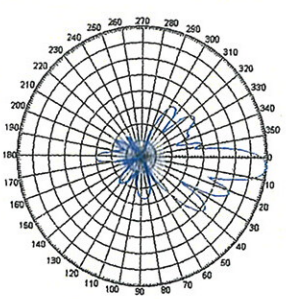
DB846H65E-SX





846H65T5E-SX





Scale: 10° radials, 5 dB per division

ANDREW CORPORATION PHONE 1-800-676-5342 • (214) 631-0310 FAX 1-800-229-4706 • (214) 631-4706 WWW.ANDREW.COM

Vertically Polarized, Log Periodic 63° / 18 dBi

LPA-185063/8CF ___

When ordering replace "___" with connector type.

Mechanical specifications

	Length	1200	mm	47.2 in
	Width	167	mm	6.6 in
	Depth	148	mm	5.8 in
	Depth with t-bracket	176	mm	6.9 in
4)	Weight	4.1	kg	9.0 lbs
	Wind Area			
	Fore/Aft	0.20	m^2	2.2 ft^2
	Side	0.18	m^2	1.9 ft^2
	Rated Wind Velocity (Safety factor 2.0)	>548	km/hr	>341 mph
	Wind Load @ 100 mph (161 km/hr)			
	Fore/Aft	299	N	67.2 lbs
	Side	267	N	60.0 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).

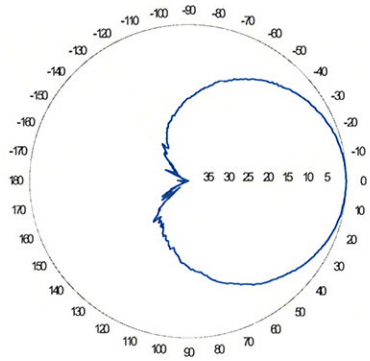
Mounting bracket kit #26799997
Downtilt bracket kit #26799999

The downtil bracket kit includes the mounting bracket kit.

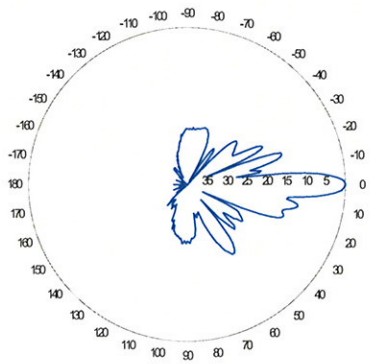
Electrical specifications

	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 dBi
2)	Power Rating	250 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	8°
1)	Electrical Downtilt	0°
1)	Null Fill	10-20%
	Lightning Protection	Direct Ground

Radiation pattern[1)]



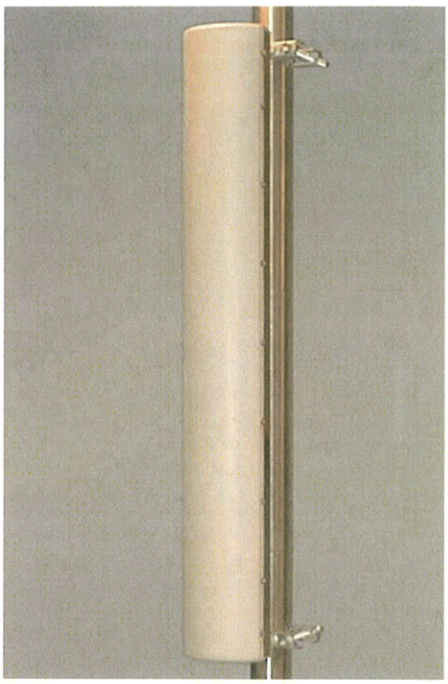
Horizontal



Vertical

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 band-width 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.

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

Revision Date: 7/12/07

Slant ±45° Dual Polarized FET Panel 63° / 14.5 dBd
696-900 MHz

Mechanical specifications

Length	1804	mm	71.0	in
Width	285	mm	11.2	in
Depth	114	mm	4.5	in
Depth with z-bracket	154	mm	6.1	in
Weight [4]	7.9	kg	17.0	lbs
Wind Area Fore/Aft	0.51	m^2	5.5	ft^2
Wind Area Side	0.21	m^2	2.2	ft^2
Max Wind Survivability	>201	km/hr	>125	mph
Wind Load @ 100 mph (161 km/hr)				
Fore/Aft	753	N	169	lbf
Side	351	N	79	lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiber-glass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-160 mm; Ø2.0-6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

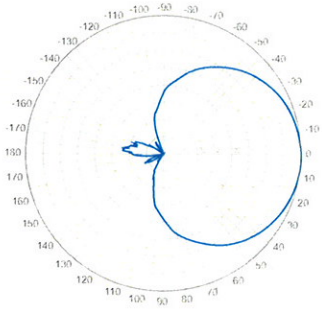
Frequency Range	696-900 MHz
Impedance	50Ω
Connector [3]	NE or E-DIN Female 2 ports / Center
VSWR [1]	≤ 1.35:1
Polarization	Slant ±45°
Isolation Between Ports [1]	< -25 dB
Gain [1]	14.5 dBd 16.5 dBi
Power Rating [2]	500 W
Half Power Angle [1]	
Horizontal Beamwidth	63°
Vertical Beamwidth	11°
Electrical downtilt [5]	0°
Null fill [1]	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

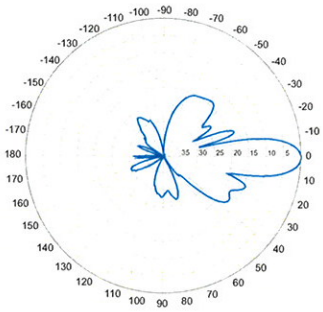
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) Antenna weight does not include brackets.
5) Add'l downtilts may be available. Check website for details.

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

Radiation-pattern[1]
750 MHz

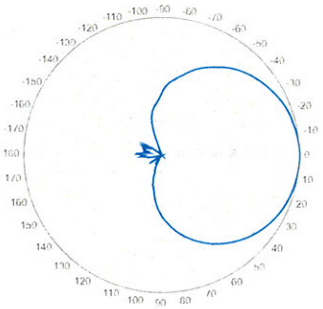


Horizontal

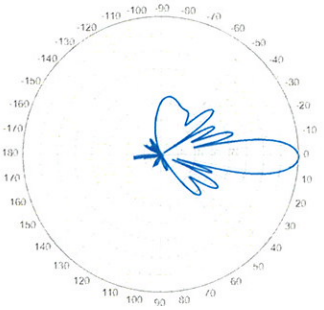


Vertical

850 MHz



Horizontal

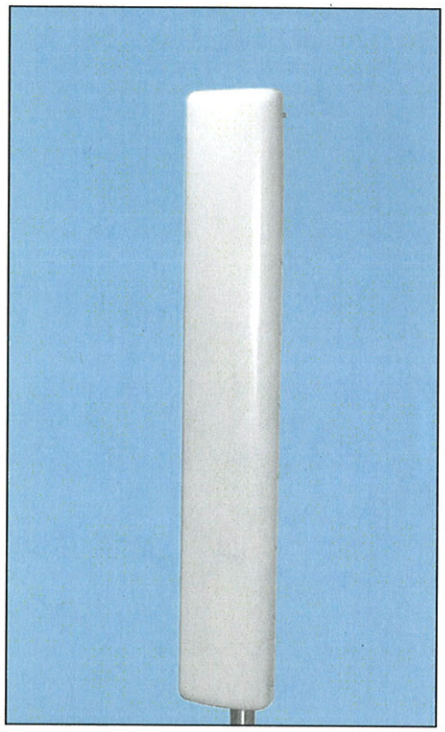


Vertical

696-900 MHz

BXA-70063/6CF __

When ordering replace "__" with connector type.



Featuring our Exclusive 3T Technology™ Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- 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 band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:
This antenna is under a five-year limited warranty for repair or replacement.

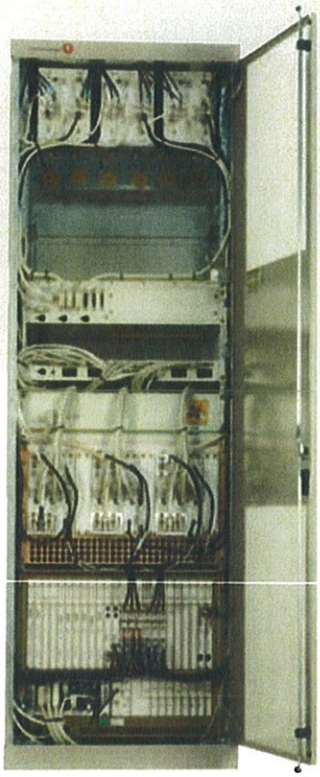
Revision Date: 01/08/09

815.399.0001 • antel@antelinc.com • www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

Lucent CDMA Modular Cell 4.0B Indoor

For CDMA Networks



Lucent CDMA Modular Cell 4.0B is a high capacity base station equipped with the state-of-the-art technologies developed by Bell Labs. The product brings you outstanding carrier density and immediate OPEX savings. This indoor product can support up to 8 carriers/3 sectors per frame. It is twice the density of Modular Cell 4.0 (indoor). Modular Cell 4.0B offers full spectrum coverage in a single frame, dramatically simplifying growth patterns. As the leader in spread spectrum technology, Lucent Technologies continues to introduce innovations to the market: Multi-Carrier Radio (15MHz), Block Filters/Wideband Filters, and 40W Power Amplifier Modules are the latest assets integrated in the base station.

Features

The Modcell 4.0B indoor version offers a small footprint with exceptional carrier density in a standard ETSI cabinet.

- Indoor Single Frame Configuration
- 1-8 carriers per frame at 3 sectors (will support up to 11 carriers with Auxiliary Amplifier Frame)
- Dual Band: one cell to the ECP & mobile
- Close Loop Gain Control
- Timing and Controller Redundancy
- Integrated Power option
- Support CDMA2000™1X, and EV-DO Rev.0, with future support to EV-DO Rev. A
- IP Backhaul and Ethernet Backhaul capable
- 6-Sector option ready
- Intelligent Antenna option ready

Benefits

- Optimized for highest carrier density, smooth growth in one frame
- Conserves indoor footprint, reducing hardware and floor space requirements
- Minimizes configuration complexity
- Software-Only Carrier Add at certain carrier counts
- Flexible channel growth planning
- Designed to use existing power supply
- Grow CDMA carriers on only 2 antennas/sector
- Multi-Carrier Radio (15MHz), Block Filters/ Wideband Filters, and 40W Power Amplifier Modules

Lucent Technologies
Bell Labs Innovations

Technical Specifications

Description	Specification
1. **Configurations**	
a. Sectors	3, 4 and 6
b. Carriers	1–8 per frame at 3 sectors (up to 11 with Auxiliary Amplifier Frame)
2. **CDMA Channel Card Capacity**	12 slots; CMU IVB capable
3. **T1, E1 Facilities**	Maximum of 20 per cabinet when equipped with URC-II's
4. **User Alarms**	7 Power Alarms, 25 User Alarms
5. **GPS Antenna**	Yes
6. **Air Interface Standards**	T1A/E1A 95-A plus TSB-74; T1A/E1A 95-B for 850 MHz; CDMA 2000
7. **Frequency Bands**	850MHz/1900 MHz; 300 to 2100 MHz capable
8. **Vocoder**	8 Kbps; 8 Kbps EVRC; 13 Kbps; SMV-ready
9. **Environmental Cabinet Housing**	Standard ETSI cabinet; UL50 compliant; zero rear clearance
10. **Cabinet Access**	Front Access
11. **Operating Temperature Range**	Range: -5 to +40°C (continuous)
12. **Dimensions**	600 mm W x 600 mm D x 1880 mm H (23.6 x 23.6 x 74) inches
13. **Estimated Installed Weight**	365 kg (785 lbs.) DC [8 carriers in one cabinet]
14. **Power Options**	Integrated Power, AC 120/240 Volt Input, -48V or +24 V DC Conversion Non-integrated Power requires either + 24 VDC Input or - 48 VDC Input
15. **Power Consumption**	
a. 3 Carrier/3 Sectors	2167 W
b. 6 Carrier/3 Sectors	5449 W
c. 11 Carrier/3 Sectors	10026 W
16. **RF Power (at J4)**	25 W per carrier (850) FCC Rated short-term average 20 W per carrier (850) FCC Rated long-term average 20 W per carrier (1900) FCC Rated short-term average 16 W per carrier (1900) FCC Rated long-term average
17. **Minimal Antenna Configuration**	2 antennas/sector
18. **Filter**	Block and Wide Band Dual Duplex
19. **Growth Frame**	PCS AUX Frame, Dual Band Growth Frame
20. **Operational Accessories**	Integrated Power
21. **Channel Elements**	Channel pooling across sectors or carriers

To learn more about our comprehensive portfolio, please contact your Lucent Technologies Sales Representative or visit our web site at http://www.lucent.com.

MOB-Mod4B-i 0106

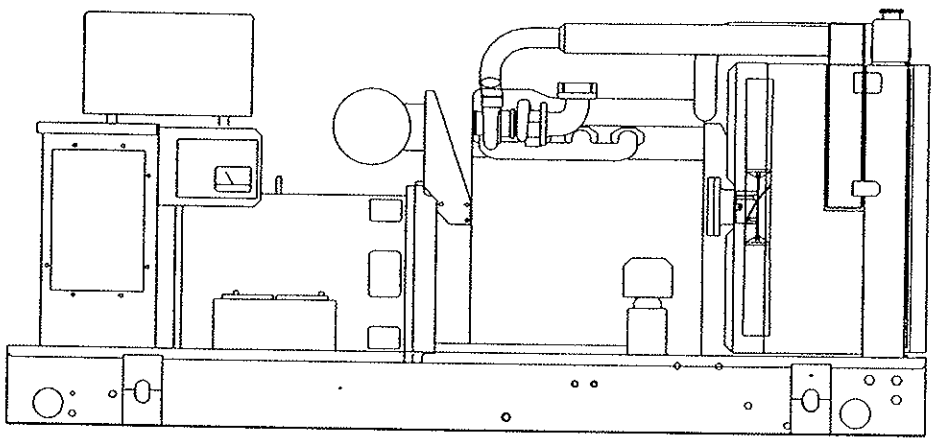
Lucent Technologies
Bell Labs Innovations

SD060

Liquid Cooled Diesel Engine Generator Sets

Continuous Standby Power Rating
60KW 60 Hz / 60KVA 50 Hz

Prime Power Rating
48KW 60 Hz /48KVA 50 Hz



Power Matched
GENERAC 3.9DTA ENGINE
Turbocharged

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.

- **TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ ELECTRO-MAGNETIC INTERFERENCE
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
  - ✓ SHORT CIRCUIT TESTING
  - ✓ UL 2200 COMPLIANCE AVAILABLE

- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own an GENERAC POWER SYSTEM.

- **ECONOMICAL DIESEL POWER.** Low cost operation due to modern diesel engine technology. Better fuel utilization plus lower cost per gallon provide real savings.

- **LONGER ENGINE LIFE.** Generac heavy-duty diesels provide long and reliable operating life.

- **GENERAC TRANSFER SWITCHES, SWITCHGEAR AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, switchgear and controls for total system compatibility.

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

SD060

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%
LOAD CAPACITY (PRIME)	110%

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

☐ BRUSHLESS	Magnetically coupled DC current ✓
	Eight-pole exciter w/ battery-driven field boost ✓
	Mounted outboard of main bearing ✓
☐ PERMANENT MAGNET EXCITER	Eighteen pole exciter ✓
	Magnetically coupled DC current ✓
	Mounted outboard of main bearing ✓
REGULATION	Solid-state ✓
	±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator is directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as define by NEMA MG1-32.6 and NEMA1-1.65, while the insulation system meets the requirements for the higher class "H" rating.
- All models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- Unit is tested with an oscillograph for motor-starting ability by measuring instantaneous voltage dip.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, T.I.F. (Telephone Influence Factor) and non-linear loading have been evaluated to acceptable standards in accordance with NEMA MG1.
- Alternator is self-ventilated and drip-proof constructed.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and optional main-line circuit breakers are capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	3.9DTA
CYLINDERS	4 in-line
DISPLACEMENT	3.9 Liter (238 cu.in.)
BORE	104 mm (4.09 in.)
STROKE	115 mm (4.52 in.)
COMPRESSION RATIO	16.5:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	4-Drop Forged Steel
CYLINDER HEAD	Cast Iron Overhead Valve
PISTONS	4- Aluminum Alloy
CRANKSHAFT	Hardened, Steel

VALVE TRAIN

LIFTER TYPE	Solid
INTAKE VALVE MATERIAL	Special Heat Resistant Steel
EXHAUST VALVE MATERIAL	Special Heat Resistant Steel
HARDENED VALVE SEATS	Replaceable

ENGINE GOVERNOR

☐ MECHANICAL (Gear Driven)	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	5.0%
STEADY STATE REGULATION	±0.33%
☐ ELECTRONIC	Optional
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	0.5%
STEADY STATE REGULATION	±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear
OIL FILTER	Full flow, Cartridge
CRANKCASE CAPACITY	18 Litres (19 qts.)
OIL COOLER	Oil to water

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, Closed Recovery
WATER PUMP	Pre-Lubed, Self-Sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	7
DIAMETER OF FAN	457 mm (18 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	#2D Fuel (Min Cetane #40) (Fuel should conform to ASTM Spec.)
FUEL FILTER	Single Cartridge
FUEL INJECTION PUMP	Stanadyne
FUEL PUMP	Mechanical
INJECTORS	Multi-Hole, Nozzle Type
ENGINE TYPE	Direct Injection
FUEL LINE (Supply)	7.94 mm (0.31 in.)
FUEL RETURN LINE	6.35 mm (0.25 in.)
STARTING AID	Glow Plugs

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	30 Amps at 24 V
STARTER MOTOR	24 V
RECOMMENDED BATTERY	(2)—12 Volt, 90 A.H., 4DLT
GROUND POLARITY	Negative

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). Prime (Unlimited Running Time): Applicable for supplying electric power in lieu of commercially purchased power. Prime power is the maximum power available at variable load. A 10% overload capacity is available for 1 hour in 12 hours. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

OPERATING DATA

	STANDBY		PRIME	
	SD060		SD060	
GENERATOR OUTPUT VOLTAGE/KW-60Hz		Rated AMP		Rated AMP
120/240V, 1-phase, 1.0 pf	60	250	48	200
120/208V, 3-phase, 0.8 pf	60	208	48	166
120/240V, 3-phase, 0.8 pf	60	180	48	144
277/480V, 3-phase, 0.8 pf	60	90	48	72
600V, 3-phase, 0.8 pf	60	72	48	58
NOTE: Consult your Generac dealer for additional voltages.				
GENERATOR OUTPUT VOLTAGE/KVA-50Hz		Rated AMP		Rated AMP
110/220V, 1-phase, 1.0 pf	48	218	38	172
115/200V, 3-phase, 0.8 pf	60	173	48	138
100/200V, 3-phase, 0.8 pf	60	173	48	138
231/400V, 3-phase, 0.8 pf	60	87	48	69
480V, 3-phase, 0.8 pf	60	72	48	58
NOTE: Consult your Generac dealer for additional voltage				
MOTOR STARTING KVA				
Maximum at 35% instantaneous voltage dip	120/208/240V	277/480V	120/208/240V	277/480V
with standard alternator; 50/60 Hz	100/120	117/141	100/120	117/141
with optional alternator; 50/60 Hz	234/281	276/331	234/281	276/331
FUEL				
Fuel consumption—60 Hz Load	100%	80%	100%	80%
gal./hr.	4.3	3.6	3.6	3.0
liters/hr.	16.3	13.5	13.6	11.3
Fuel consumption—50 Hz gal./hr.	3.6	3.0	3.0	2.5
liters/hr.	13.5	11.2	11.3	9.3
Fuel pump lift				
COOLING				
Coolant capacity System - lit. (US gal.)	15.9 (4.2)		15.9 (4.2)	
Engine - lit. (US gal.)	6.4 (1.7)		6.4 (1.7)	
Radiator - lit. (US gal.)	9.5 (2.5)		9.5 (2.5)	
Coolant flow/min. 60 Hz - lit. (US gal.)	128 (34)		128 (34)	
50 Hz - lit. (US gal.)	107 (28)		107 (28)	
Heat rejection to coolant 60 Hz full load BTU/hr.	170,900		136,700	
Heat rejection to coolant 50 Hz full load BTU/hr.	142,400		113,900	
Inlet air to radiator 60 Hz - m³/min. (cfm)	204 (7,200)		204 (7,200)	
50 Hz - m³/min. (cfm)	170 (6004)		170 (6004)	
Max. air temperature to radiator °C (°F)	54.4 (130)		54.4 (130)	
Max. ambient temperature °C (°F)	48.9 (120)		48.9 (120)	
COMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz - cfm	209		168	
50 Hz - m³/min.	4.7		3.8	
EXHAUST				
Exhaust flow at rated output 60 Hz - m³/min. (cfm)	15.5 (549)		12.4 (439)	
50 Hz - m³/min. (cfm)	12.3 (434)		10 (353)	
Max recommended back pressure "Hg	1.5		1.5	
Exhaust temperature 60 Hz (full load) °C (°F)	524 (975)		459 (858)	
Exhaust outlet size	3"		3"	
ENGINE				
Rated RPM 60 Hz	1800		1800	
50 Hz	1500		1500	
HP at rated KW 60 Hz	92		74	
50 Hz	73		59	
Piston speed 60 Hz - m/min. (ft./min.)	414 (1358)		414 (1358)	
50 Hz - m/min. (ft./min.)	345 (1132)		345 (1132)	
BMEP 60 Hz - psi	170		138	
50 Hz - psi	161		130	
DERATION FACTORS				
Temperature				
5% for every 10°C above - °C	25		25	
2.77% for every 10°F above - °F	77		77	
Altitude				
1.1% for every 100 m above - m	1829		1829	
3.5% for every 1000 ft. above - ft.	6000		6000	

STANDARD ENGINE & SAFETY FEATURES

SD060

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Secondary Fuel Filter
- Fuel Lockoff Solenoid
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Radiator Duct Adapter

OPTIONS

OPTIONAL COOLING SYSTEM ACCESSORIES
- O Coolant Heater 120V

OPTIONAL FUEL ACCESSORIES
- O Flexible Fuel Lines
- O UL Listed Fuel Tanks
- O Base Tank Low Fuel Alarm
- O Primary Fuel Filter
- O Primary Fuel Filter with Heater

OPTIONAL EXHAUST ACCESSORIES
- O Critical Exhaust Silencer

OPTIONAL ELECTRICAL ACCESSORIES
- O Battery, 12 Volt, 135 A.H., 4DLT
- O 2A Battery Charger
- O 10A Dual Rate Battery Charger
- O Battery Heater

OPTIONAL ALTERNATOR ACCESSORIES
- O Alternator Upsizing
- O Alternator Strip Heater
- O Alternator Tropicalization
- O Voltage Changeover Switch
- O Main Line Circuit Breaker

CONTROL CONSOLE OPTIONS
- O Analog Control "C" Panel (Bulletin 0151160SBY)
- O Analog/Digital Control "E" Panel (Bulletin 0161310SBY)

ADDITIONAL OPTIONAL EQUIPMENT
- O Automatic Transfer Switch
- O Isochronous Governor
- O 3 Light Remote Annunciator
- O 5 Light Remote Annunciator
- O 20 Light Remote Annunciator
- O Remote Relay Panels
- O Unit Vibration Isolators (Pad/Spring)
- O Oil Make-Up System
- O Oil Heater
- O 5 Year Warranties
- O Export Boxing
- O GenLink® Communications Software

OPTIONAL ENCLOSURE
- O Weather Protective
- O Sound Attenuated
- O Aluminum and Stainless Steel
- O Enclosed Muffler

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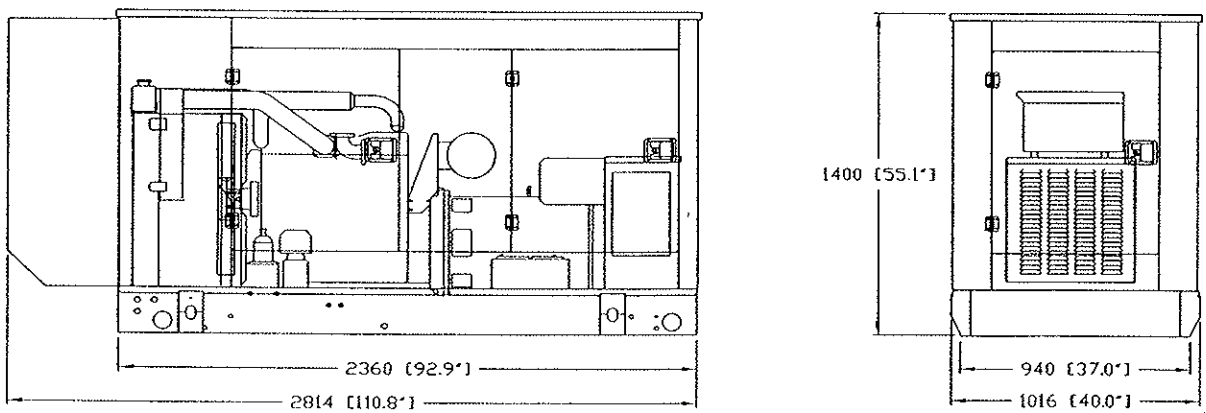

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Site Search Summary
Huntington Facility
Shelton, Connecticut

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the submission of a statement that describes "the narrowing process by which other possible sites were considered and eliminated." In accordance with this requirement, descriptions of the general site search process, the identification of the applicable search area and the alternative locations considered for development of the proposed telecommunications facility in the Huntington section of the City of Shelton provided below.

Site Search Process

To initiate its site selection process in an area where a coverage or capacity problem has been identified, Cellco first establishes a "site search ring" or "site search area." In any search ring or search area, Cellco seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of the cell site, while at the same time maximizing the quality of service provided from a particular facility. These objectives are achieved by initially locating existing towers and other sufficiently tall structures within and near the site search area. If any are found, they are evaluated to determine whether they are capable of supporting Cellco's telecommunications equipment at a location and elevation that satisfies its technical requirements.

Cellco has identified four (4) telecommunications facilities all located within approximately four (4) miles of the proposed Huntington cell site. Cellco currently shares each of these towers. None of these existing facilities, however, can provide the coverage or capacity relief needed in the identified problem areas, along portions of Route 108, as well as local roads in the Huntington area. (See Attachment 7).

Existing Telecommunication Facilities

	Owner (Cellco Site Name)	**Facility Height and Type**	**Location**	**Cellco Antenna Height**
1.	Sprint/Nextel (Shelton North)	120' Monopole	161 Birdseye Road Shelton, CT	98'
2.	Global Signal (Trumbull)	486' Guyed-Lattice	Video Lane Trumbull, CT	232' and 238'
3.	TCI (Shelton)	195' Guyed-Lattice	Old Kings Highway Shelton, CT	182'
4.	AT&T (Shelton 2)	140' Monopole	70 Platt Road Shelton, CT	140'

If existing towers or structures are not available or technically feasible, other locations are investigated where the construction of a new tower is required to provide adequate elevation to satisfy Cellco's requirements. The list of available locations may be further reduced if, after preliminary negotiations, the property owners withdraw a site from further consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have greater potential for adverse environmental effects and fewer benefits to the public (i.e., those requiring taller towers, possibly with lights; those with substantial adverse impacts on densely populated residential areas; and those with limited ability to share space with other public or private telecommunications entities). It should be noted that in any given site search, the weight afforded to factors considered in the selection process will vary depending upon the availability and nature of sites within the search area.

Identification of the Huntington Search Area

The purpose of the proposed Huntington Facility is to provide reliable PCS, cellular and eventually 700 MHz coverage to significant coverage gaps that have been identified along portions of Route 108, as well as local roads in the Huntington section of Shelton. These coverage gaps were identified using baseline drive data and Cellco's best server propagation modeling tool. This tool is fine-tuned regularly through the use of base-line drive data.

Cellco issued its Huntington search area in September of 2006. (See attached Search Area Map). As a matter of practice, Cellco's initial site search effort focuses on municipal or other quasi-public properties that might be available and appropriate locations for a telecommunications facility. If no public properties are available, Cellco investigates private land within or near the designated search area.

Sites Investigated in the Huntington Area

In addition to the existing and approved communications facilities listed above, Cellco identified and investigated seven (7) sites in the Huntington area. The sites investigated include:

1. Brownson Country Club. This site was selected as the proposed Huntington cell site. The proposed cell site is located in the southerly portion of the Country Club's property with access to Lane Street.

2. Brownson Country Club. In addition to the proposed cell site, Cellco explored an alternative location on the Brownson Country Club property near the clubhouse off Soundview Avenue. This location was rejected because of its proximity to residential areas and little natural buffer screening.

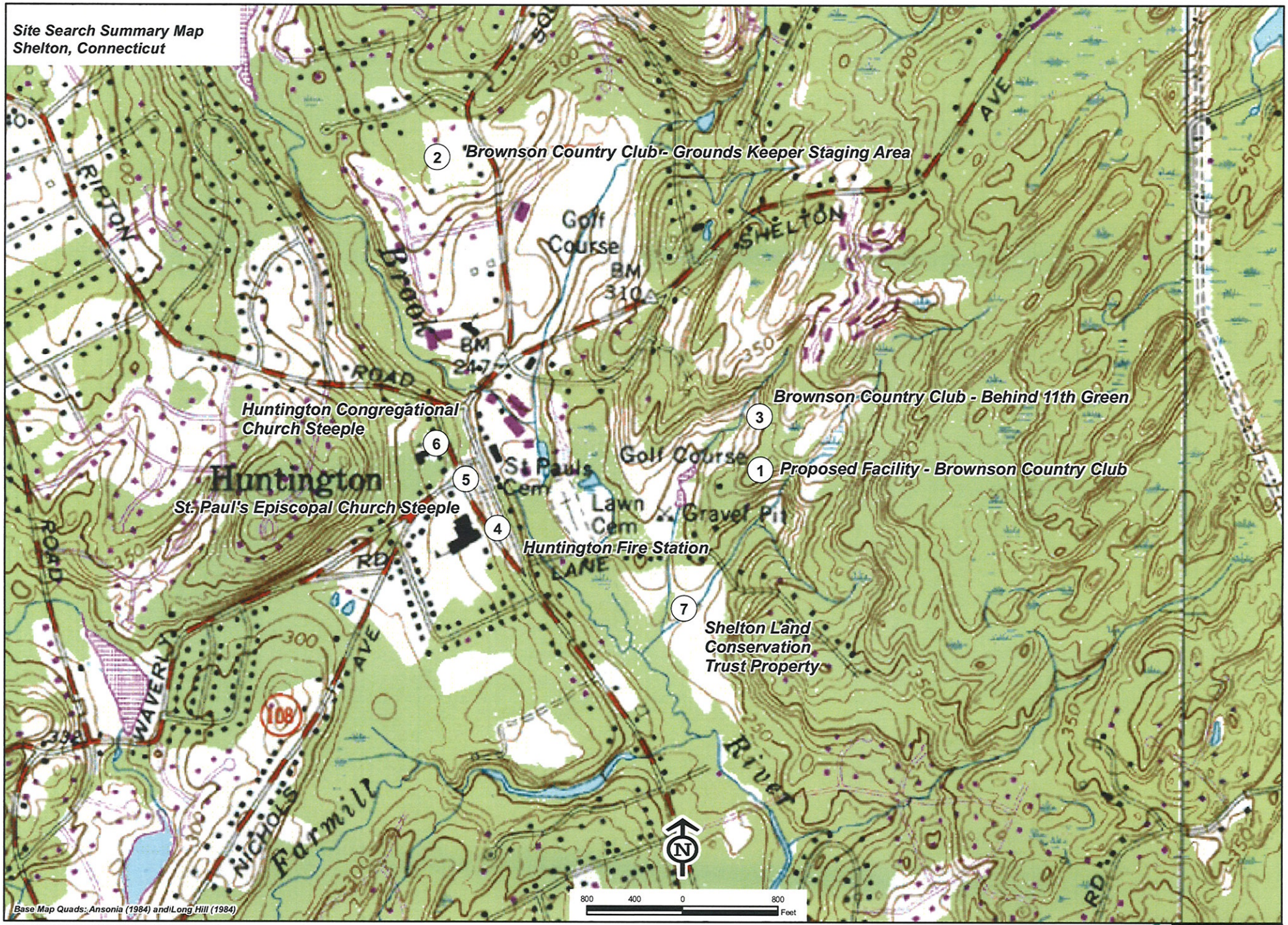
3. Brownson Country Club. In addition to the two locations described above, Cellco explored a third cell site location behind the 11th green at the Brownson Country Club. This alternative was rejected due to significant impacts to adjacent wetland areas.

4. Huntington Fire Station – 44 Church Street, Huntington, CT. Cellco explored the use of the Town of Shelton-owned property at 44 Church Street. The Town of Shelton was not interested in leasing space to Cellco for a cell site location.

5. St. Paul's Episcopal Church Steeple– 25 Church Street, Huntington, CT. Cellco explored the use of the steeple at St. Paul's Episcopal Church on Church Street. The existing steeple was rejected by Cellco's RF engineer for not meeting coverage objective (insufficient height).

6. Huntington Congregational Church Steeple – 19 Church Street, Huntington, CT. Cellco explored the use of the steeple at Huntington Congregation Church, also on Church Street. The church steeple was rejected by Cellco's RF engineer for not meeting coverage objective (insufficient height).

7. Shelton Land Conservation Trust Property – Lane Street, Huntington, CT. Cellco explored the use of undeveloped land owned by the Shelton Land Conservation Trust. This 17.15 acre parcel was rejected due to a number of use restrictions and sensitive natural areas at the property, including wetlands and watercourse areas. Cellco attempted to contact the Shelton Land Conservation Trust but phone calls were not returned.



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Visual Resource Evaluation Report

Proposed Wireless Telecommunications Facility

Huntington Facility
Brownson Country Club
Off Lane Street
Shelton, Connecticut

Prepared for 

Prepared by ***VHB*/Vanasse Hangen Brustlin, Inc.**
54 Tuttle Place
Middletown, CT 06457

June 2009

Visual Resource Evaluation

Cellco Partnership (dba Verizon Wireless) seeks approval from the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need for the construction of a wireless telecommunications facility ("Facility") to be located on a portion of the Brownson Country Club property in the City of Shelton, Connecticut (identified herein as the "host property"). This Visual Resource Evaluation was conducted to evaluate the visibility of the proposed Facility within a two-mile radius ("Study Area"). Attachment A contains a map that depicts the location of the proposed Facility and the limits of the Study Area.

Project Introduction

The proposed Facility includes the installation of a 127-foot tall monopine tower (designed to resemble an evergreen tree) with associated ground equipment to be located at its base. Both the proposed monopine and ground equipment would be situated within a fence-enclosed compound. The proposed Facility is located at a ground elevation approximately 310 feet Above Mean Sea Level (AMSL). Access to the Facility would utilize both a proposed 12-foot wide gravel driveway originating from Lane Street and portions of an existing cart path located on the host property.

Site Description and Setting

Identified in the City of Shelton land records as Map 74/Lot 15, the host property consists of approximately 55 acres of land that is currently occupied by the Brownson Country Club. In total, the Brownson Country Club is comprised 99 acres of land that includes the host property and an additional parcel located to the north of Route 108. The proposed Facility is centrally located on the host property, roughly 950 feet to north of Lane Street. Attachment A includes a photograph of the proposed project area. Land use within the general vicinity of the proposed Facility includes the Brownson Country Club golf course and residential development to the north, south, southwest and east of the host property. Segments of Route 108 and the Route 8 transportation corridor are contained within the Study Area. In total, the Study Area features approximately 101 linear miles of roadways.

The topography within the Study Area is characterized by rolling hills with ground elevations ranging from approximately 100 feet AMSL to approximately 600 feet AMSL. The Study Area contains approximately 344 acres of surface water, which mainly includes portions of the Trap Falls Reservoir located roughly 1.20 miles to the southwest of the proposed Facility. The tree cover within the Study Area consists mainly of mixed deciduous hardwood species interspersed with stands of mature evergreen species. The tree canopy occupies approximately 5,141 acres of the 8,042-acre study area (64%). During the in-field activities associated with this analysis, an infrared laser range finder was used to determine the average tree canopy height throughout the Study Area. Numerous trees were selected for measurement and the average tree canopy was determined to be 65 feet.

■

METHODOLOGY

In order to better represent the visibility associated with the Facility, VHB uses a two-fold approach incorporating both a predictive computer model and in-field analysis. The predictive model is employed to assess potential visibility throughout the entire Study Area, including private property and/or otherwise inaccessible areas for field verification. A "balloon float" and Study Area drive-through reconnaissance are also conducted to obtain locational and height representations, back-check the initial computer model results and provide photographic documentation from publicly accessible areas. Results of both activities are analyzed and incorporated into the final viewshed map. A description of the methodologies used in the analysis is provided below.

Visibility Analysis

Using ESRI's ArcView® Spatial Analyst, a computer modeling tool, the areas from where the top of the Facility is expected to be visible are calculated. This is based on information entered into the computer model, including Facility height, its ground elevation, the surrounding topography and existing vegetation. Data incorporated into the predictive model includes a digital elevation model (DEM) and a digital forest layer for the Study Area. The DEM was derived from the Connecticut LiDAR-based digital elevation data. The LiDAR data was produced by the University Of Connecticut Center for Land Use Education and Research (CLEAR) in 2007 and has a horizontal resolution of 10 feet. In order to create the forest layer, digital aerial photographs of the Study Area are incorporated into the computer model. The mature trees and woodland areas depicted on the aerial photos are manually traced in ArcView® GIS and then converted into a geographic data layer. The aerial photographs were produced in 2006 and have a pixel resolution of one foot.

Once the data are entered, a series of constraints are applied to the computer model to achieve an estimate of where the Facility will be visible. Initially, only topography was used as a visual constraint; the tree canopy is omitted to evaluate all areas of potential visibility without any vegetative screening. Although this is an overly conservative prediction, the initial omission of these layers assists in the evaluation of potential seasonal visibility of the proposed Facility. The average height of the tree canopy was determined in the field using a laser range finder. The average tree canopy height is incorporated into the final viewshed map; in this case, 65 feet was identified as the average tree canopy height. The forested areas within the Study Area were then overlaid on the DEM with a height of 65 feet added and the visibility calculated. As a final step, the forested areas are extracted from the areas of visibility, with the assumption that a person standing among the trees will not be able to view the Facility beyond a distance of approximately 500 feet. Depending on the density of the vegetation in these areas, it is assumed that some locations within this range will provide visibility of at least portions of the Facility based on where one is standing.

Also included on the map is a data layer, obtained from the State of Connecticut Department of Environmental Protection ("CTDEP"), which depicts various land and water resources such as parks and forests, recreational facilities, dedicated open space, CTDEP boat launches and other categories. Lastly, based on both a review of published information and discussions with municipal officials in Shelton it was determined that Lane Street is a locally designated scenic roadway.

A preliminary viewshed map (using using a conservative tree height of 50 feet) is used during the in-field activity to assist in determining if significant land use changes have occurred since the aerial photographs used in this analysis were produced and to compare the results of the computer model with observations of the balloon float. Information obtained during the reconnaissance was then incorporated into the final visibility map.

Balloon Float and Study Area Reconnaissance

On September 22, 2008 and March 20, 2009 Vanasse Hangen Brustlin Inc., (VHB) conducted balloon floats at the proposed Facility location to further evaluate the potential viewshed within the Study Area. The balloon floats consisted of raising and maintaining an approximate four-foot diameter, helium-filled weather balloon at the proposed site location at a height of 127 feet. Once the balloon was secured, VHB staff conducted a drive-by reconnaissance along the roads located within the Study Area with an emphasis on nearby residential areas and other potential sensitive receptors in order to evaluate the results of the preliminary viewshed map and to document where the balloon was, and was not, visible above and/or through the tree canopy. During the September 22, 2008 balloon float, the temperature was approximately 75 degrees Fahrenheit with calm wind conditions and sunny skies. The weather conditions for the March 20, 2009 included partly sunny skies, calm winds and a temperature of approximately 50 degrees Fahrenheit.

Photographic Documentation

During the balloon floats, VHB personnel drove the public road system located within the Study Area and private roads within Aspetuck Village (with permission) to inventory those areas where the balloon was visible. During the September 22, 2009 balloon float, VHB staff also conducted reconnaissance from a Shelton Land Conservation Trust parcel located off Lane Street adjacent to the host property. This parcel includes an established hiking trail that traverses both wooded and open areas (View 6). The balloon was photographed from a number of different vantage points to document the actual view towards the proposed Facility. Several photographs where the balloon was not visible are also included. The locations of the photos are described below:

1. View from Lawn Cemetery.

2. View from Church Street at Huntington Green.
3. View from Huntington Street at Lane Street.
4. View from Lane Street at Lawn Cemetery.
5. View from Huntington Street adjacent to house #155.
6. View from Land Conservation Trust parcel off Lane Street.
7. View from Ironwood Trail (Aspetuck Village) adjacent to unit #427.
8. View from Brownson Country Club just west of Wolf Run (Aspetuck Village).
9. View from existing cart path off Old Pent Road (in front of house #64).
10. View from Lane Street adjacent to house #62.
11. View from Lane Street west of Old Pent Road.
12. View from Lane Street at Old Pent Road.
13. View from Lane Street adjacent to house #60.
14. View from Old Pent Road.
15. View from Old Pent Road.
16. View from Church Street at St. Paul's Cemetery.

Photographs of the balloon from the view points listed above were taken with a Nikon D-80 digital camera body and Nikon 18 to 135 mm zoom lens. For the purposes of this report, the lens was set to 50mm. "The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm."[1]

The locations of the photographic points are recorded in the field using a hand-held GPS receiver and are subsequently plotted on the maps contained in the attachments to this document.

Photographic Simulation

Photographic simulations were generated for the ten representative locations where the balloon was visible during the in-field activities. The photographic simulations represent a scaled depiction of the proposed Facility (a monpine) from these locations. The height of the Facility is determined based on the location of the balloon in the photograph and a proportional monopine image is simulated into the photographs. A photolog map and the simulations are contained in Attachment A.

CONCLUSIONS

Based on this analysis, areas from where the proposed 127-foot tall Facility would be visible above the tree canopy comprise approximately 17 acres, or less than one percent of the 8,042-acre Study Area. As depicted on the viewshed map (provided in attachment B), areas of

[1] Warren, Bruce. *Photography*, West Publishing Company, Eagan, MN, c. 1993, (page 70).

potential year-round visibility are generally limited to locations on and/or adjacent to the host property that are open and undeveloped that afford a direct line of sight to the proposed monopine. This includes portions of the Lawn Cemetery to the west of the proposed Facility and the Shelton Land Conservation Trust open space parcel to the southwest. Other areas of potential year-round visibility are depicted along Huntington Street, Church Street and Ironwood Trail (within the Aspetuck Village condominium development) where limited, intermittent views of the upper portion of the proposed Facility may be achieved. Overall, potential year-round visibility would be limited by a combination of the topographic relief and the extent of vegetative cover contained within the Study Area. VHB estimates that portions of approximately nine residential properties/units may have at least partial year-round views of the proposed Facility. This includes one residence along Old Pent Road; four residences along Huntington Street, one residence along Lane Street and approximately three units within the Aspetuck Village residential development. However, the design of the proposed Facility (a monopine) would allow the tower structure to blend inconspicuously with the surrounding vegetation and therefore minimize any potential visual effects from these areas.

The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views are anticipated. These areas comprise approximately 29 acres and are located within the general vicinity of the proposed Facility, mainly on the host property and its immediate surroundings. VHB estimates that limited seasonal views of the proposed Facility may be achieved from portions of approximately 12 residential properties/units, including two residences along Lane Street and roughly 10 units within the Aspetuck Village residential development.