Existing Verizon Wireless Cellular Coverage
Branford, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)

Coverage plot assumes 55% site loading on the Cellco system

NEW HAVEN
NORTH BRANFORD
KILLINGWORTH
EAST HAVEN
BRANFORD
GUILFORD
MADISON
Branford 3, CT
Guilford 2, CT
Branford West, CT
Proposed Branford South, CT Facility
Guilford South, CT
Cockaponset State Forest
Lake Saltonstall
Long Island Sound

Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Future Verizon Wireless Facility
- Existing Verizon Wireless Cellular Coverage
- Municipal and Private Open Space
- School
- State Forest/Park
- Town Line
- Open Water

*Note: The original 1:30,000 plot was generated in an approximate 24" by 16" 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

VHB verizonwireless

Existing Verizon Wireless Cellular Coverage With Proposed Facility At 90 Feet AGL Branford, Connecticut and Surrounding Area

*(*Map Scale is 1:30,000)*

Coverage plot assumes 55% site loading on the Cellco system

NEW HAVEN
NORTH BRANFORD
EAST HAVEN
BRANFORD
GUILFORD
MADISON
KILLINGWORTH

Branford West, CT
Branford 3, CT
Guilford 2, CT
Proposed Branford South, CT Facility
Guilford South, CT

Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Future Verizon Wireless Facility
- Proposed Verizon Wireless Cellular Coverage
- Municipal and Private Open Space
- School
- State Forest/Park
- Town Line
- Open Water

**Note: The original 1:30,000 plot was generated in an approximate 24" by 16" 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

VHB verizonwireless

Existing Verizon Wireless PCS Coverage
Branford, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)

Coverage plot assumes 55% site loading on the Cellco system

NORTH BRANFORD
NEW HAVEN
EAST HAVEN
BRANFORD
GUILFORD
KILLINGWORTH
MADISON

Branford 3, CT
Guilford 2, CT
Branford West, CT
Proposed Branford South, CT Facility
Guilford South, CT

Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Future Verizon Wireless Facility
- Existing Verizon Wireless PCS Coverage
- Municipal and Private Open Space
- School
- State Forest/Park
- 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

VHB verizonwireless

Existing Verizon Wireless PCS Coverage
With Proposed Facility At 90 Feet AGL
Branford, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)

Coverage plot assumes 55% site loading on the Cellco system

NORTH BRANFORD
NEW HAVEN
EAST HAVEN
BRANFORD
GUILFORD
KILLINGWORTH
MADISON

Guilford 2, CT
Branford 3, CT
Branford West, CT
Proposed Branford South, CT Facility
Guilford South, CT

Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Future Verizon Wireless Facility
- Proposed Verizon Wireless PCS Coverage
- Municipal and Private Open Space
- School
- State Forest/Park
- 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

VHB verizonwireless

Verizon Wireless LTE (700 MHz) Coverage
With Proposed Facility At 90 Feet AGL
Branford, Connecticut and Surrounding Area
(*Map Scale is 1:30,000)

Coverage plot assumes 55% site loading on the Cellco system

NEW HAVEN
NORTH BRANFORD
EAST HAVEN
BRANFORD
GUILFORD
MADISON
KILLINGWORTH
Branford West, CT
Branford 3, CT
Guilford 2, CT
Proposed Branford South, CT Facility
Guilford South, CT
Middletown Avenue Park
D.h. Ferraro School
Palmieri Parcel
Bishop Woods Bird Sanctuary (owned By New Haven)
Foxon School
Bear Run School
Girl Scout Camp
Jerome Harrison School
North Branford High/Junior High Schools
Crooked Brook
Wall Field/administration Building
North Branford Town Green
Boy Scouts Camp
Cedar Lake Improvement Association, Inc.
Twin Lakes Country Club
North Farms Park
Mauro Park (Warwick Lane)
Kennedy Memorial Field
R.O. Hayes School
Bella Vista Public Housing Playground
Eastview Public Housing Playground
Fairmont Park
Quinnipiac School
Alling Memorial Golf Course (owned By New Haven)
Russell Street Parcel
Veterans Memorial Park
Elm City Rod & Gun Club
East Haven Middle School
Overbrook School
Margaret Tucker Park
Tuttle School
Memorial Field
Gillis Playground Athletic Complex
Hill Street Playground
Short Beach Rd
Farm River State Park
D.c. Moore School
Mansfield Grove Association
Monauguin School
East Haven Town Beach
Shell Beach
Lum Wood Ave
Elizabeth St
Cockaponset State Forest
Peddlers Park
Saw Mill Road Area
Hubbard Park
Nut Plains Park
Guilford Lakes Golf Club
Guilford Lakes School
Timberlands
Baldwin Junior High School
Bittner Park
Iron Stream
Guilford Junior High School
Mill Pond Park
Guilford Community Center
Town Green
Cox School
Calvin Leete School
Leetes Island Rd
Chaffinch Island (2 Parcels)
Mulberry Point Association Beach
Indian Cove Beach
Sachems Head Association Beach
Falcon Rd
Chittenden Park
Jacob's Beach
Grass Island
Town Dock (Neck Road)
Harbor Kelsey Place Realty Association
Avenue Association
Madison Country Club (2 Parcels)
Island Avenue School
Academy Elementary School
East Wharf Beach
Deer Lake Camp (Boy Scouts)
Ryerson/brown Schools
Town Right-of-way (Winding Road)
Town Right-of-way (Bartlett Road)
Town Right-of-way (Woodsvale Road)
Daniel Hand High/Jeffrey Schools
Governor John Davis Lodge Tpke
Boston Post Rd
Neck River
East River
Sluice Creek
Hammonasset River
Chesfield Hollow Brook
Foxon Blvd
Foxon Rd
Main St
North Branford Rd
Branford River
Stony Creek Rd
Moose Hill Road
Holiday Creek
Indian Neck Rd
Short Beach Rd
Shore Dr
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Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- Future Verizon Wireless Facility
- Proposed Verizon Wireless LTE Coverage
- Municipal and Private Open Space
- School
- State Forest/Park
- Town Line
- Open Water

*Note: The original 1:30,000 plot was generated in an approximate 24"by 15" layout and has been reshaped to 17" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.

0 0.5 1 2 Miles

VHB verizon wireless

d:\data\projects\VZ\graphics\Branford_South\pdf\working_cellular.pdf

ANDREW®

Vertically Polarized Directed Dipole® Panel Antennas

806 - 960 MHz

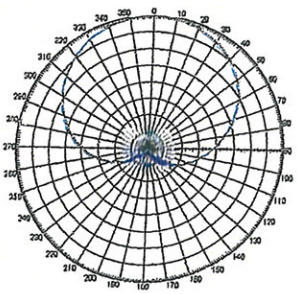
65° HORIZONTAL BEAMWIDTH

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

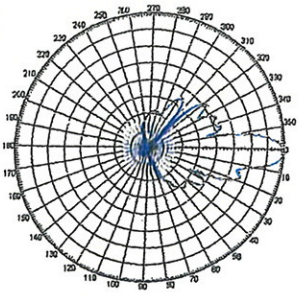
Specifications are subject to change. Please see our website for the latest information.

DB846F65ZAXY

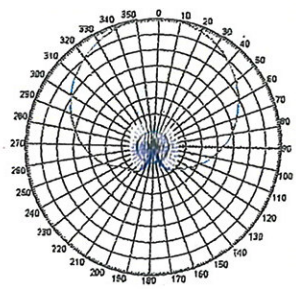
Azimuth Pattern

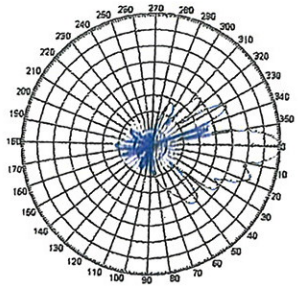


Elevation Pattern

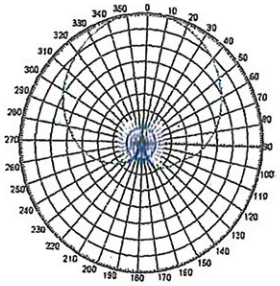


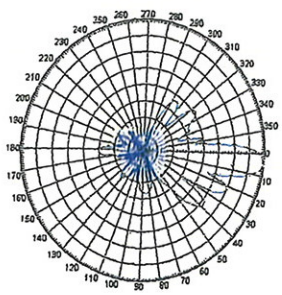
DB846H65E-SX





846H65T5E-SX





Scale: 10° radials, 5 dB per division

BXA-185063-12CF-EDIN-X

X-Pol | FET Panel | 63° | 20.5 dBi

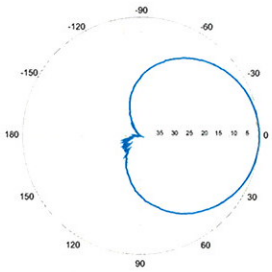
Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.

Electrical Characteristics				
Frequency bands	1850-1990 MHz			
Polarization	±45°			
Horizontal beamwidth	63°			
Vertical beamwidth	5°			
Gain	18.4 dBd (20.5 dBi)			
Electrical downtilt (X)	0, 2, 3, 4			
Impedance	50Ω			
VSWR	≤1.4:1			
Null fill	5% (-26.02 dB)			
Isolation between ports	< -30 dB			
Input power	250 W			
Lightning protection	Direct Ground			
Connector(s)	2 Ports / EDIN or NE / Female / Center (Back)			
Mechanical Characteristics				
Dimensions Length x Width x Depth	1829 x 154 x 105 mm		72.0 x 6.1 x 4.1 in	
Depth with z-brackets	133 mm		5.2 in	
Weight without mounting brackets	6.8 kg		15.0 lbs	
Survival wind speed	> 241 km/hr		> 150 mph	
Wind area	Front: 0.28 m²	Side: 0.19 m²	Front: 3.1 ft²	Side: 2.1 ft²
Wind load @ 161 km/hr (100 mph)	Front: 460 N	Side: 304 N	Front: 103 lbf	Side: 68 lbf

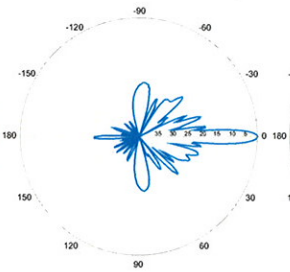
Mounting Options	Part Number	Fits Pipe Diameter	Weight
2-Point Mounting Bracket Kit	26799997	50-102 mm 2.0-4.0 in	2.3 kg 5.0 lbs
2-Point Mounting & Downtilt Kit	26799999	50-102 mm 2.0-4.0 in	3.6 kg 8.0 lbs
Concealment Configurations	For concealment configurations, order BXA-185063-12CF-EDIN-X-FP		

BXA-185063-12CF-EDIN-X



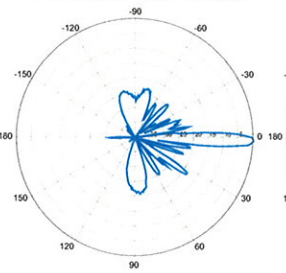
Horizontal

BXA-185063-12CF-EDIN-0



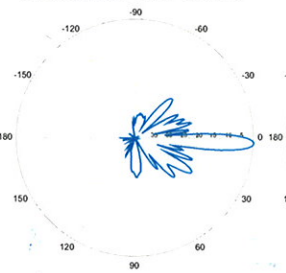
0° | Vertical

BXA-185063-12CF-EDIN-2



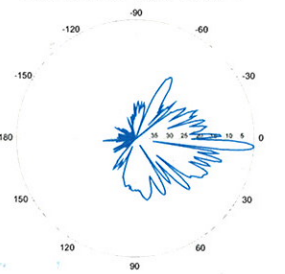
2° | Vertical

BXA-185063-12CF-EDIN-3



3° | Vertical

BXA-185063-12CF-EDIN-4



4° | Vertical

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

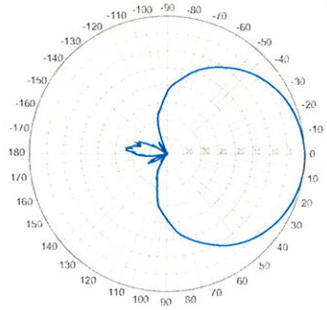
Frequency Range	696-900 MHz
Impedance	50Ω
Connector [3]	NE or E-DIN Female 2 ports / Center
VSWR [1]	≤ 1.35:1
Polarization	Slant ±45°
Isolation Between Ports [1]	< -25 dB
Gain [1]	14.5 dBd 16.5 dBi
Power Rating [2]	500 W
Half Power Angle [1]	
Horizontal Beamwidth	63°
Vertical Beamwidth	11°
Electrical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

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

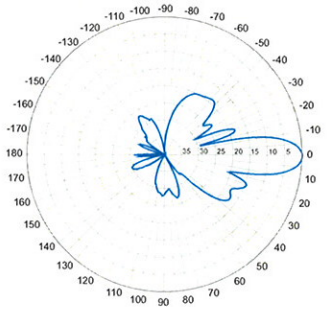
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.
4) Antenna weight does not include brackets.
5) Add'l downtilts may be available. Check website for details.

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

Radiation-pattern[1]
750 MHz

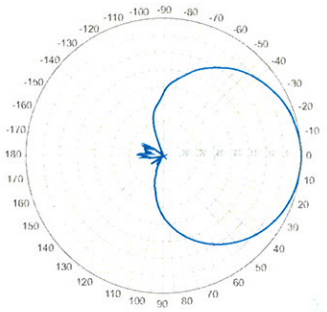


Horizontal

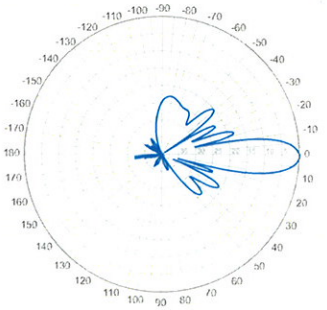


Vertical

850 MHz



Horizontal

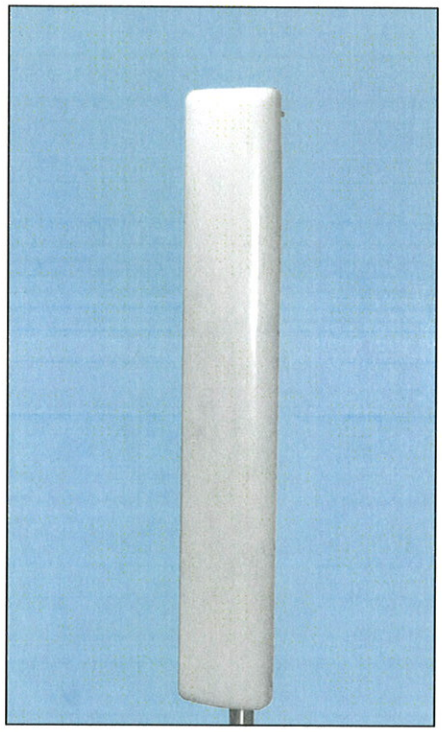


Vertical

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.

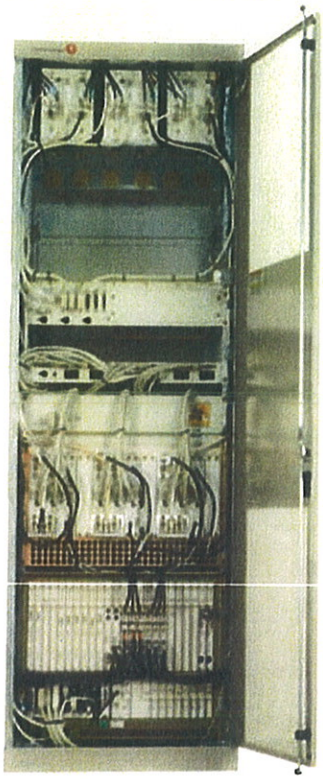
Warranty:
This antenna is under a five-year limited warranty for repair or replacement.

Revision Date: 01/08/09

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

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

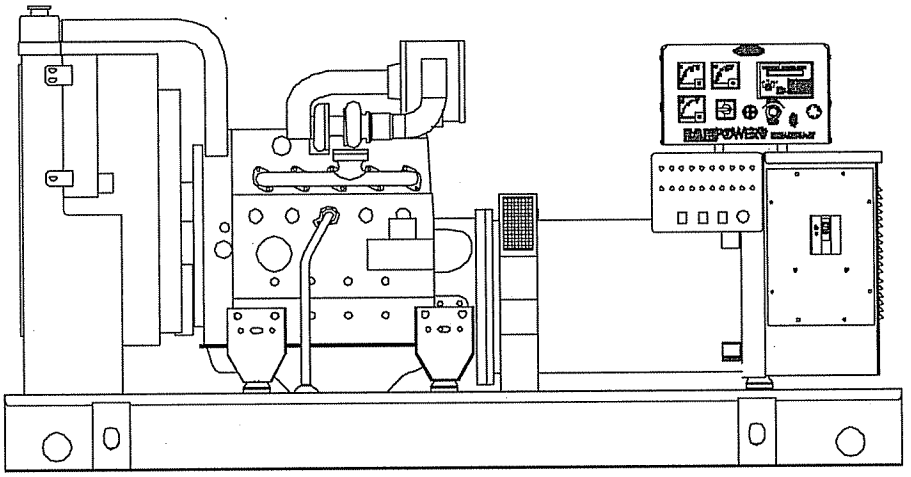
Lucent Technologies
Bell Labs Innovations

SD060

Liquid Cooled Diesel Engine Generator Sets

Standby Power Rating
60KW 60 Hz

Prime Power Rating
48KW 60 Hz



Power Matched
DEERE 3.0 DTA ENGINE
Turbocharged / Aftercooled

VERIZON WIRELESS
60 kW Diesel Models:
04812-3 120/240 1ø Open Set
04813-3 120/208 1ø Acoustic Enclosed
04864-3 120/208 3ø Open Set
04865-3 120/208 3ø Acoustic Enclosed

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

- **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, directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets the temperature rise standards for class "F" insulation as defined by NEMA MG1-32.6, while the insulation system meets the requirements for the higher class "H" rating.
- All prototype models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- All prototype models are tested for motor starting ability by measuring the instantaneous voltage dip with a waveform data acquisition system.
- 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, and T.I.F. (Telephone Influence Factor) have been evaluated to acceptable standards in accordance with NEMA MG1-32.
- 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 capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

MAKE	GENERAC/DEERE
MODEL	5030HF270
CYLINDERS	5
DISPLACEMENT	3.0 Liter (186 cu.in.)
BORE	108 mm (4.25 in.)
STROKE	130 mm (5.12 in.)
COMPRESSION RATIO	18:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	5-Drop Forged Steel
CYLINDER HEAD	Cast Iron
PISTONS	5-Aluminum Alloy
CRANKSHAFT	Die Forged, Induction Hardened Steel

VALVE TRAIN

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

ENGINE GOVERNOR

❒ ELECTRONIC	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	0.5%
STEADY STATE REGULATION	±0.33%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear
OIL FILTER	Full flow, Cartridge
CRANKCASE CAPACITY	11 Liters (11.7 qts.)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, Closed Recovery
WATER PUMP	Pre-Lubed, Self-Sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	6
DIAMETER OF FAN	560 mm (22 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	#2D Fuel (Min Cetane #40)
	(Fuel should conform to ASTM Spec.)
FUEL FILTER	5 Micron
FUEL INJECTION PUMP	Bosch, Unit type cam driven
FUEL PUMP	Mechanical
INJECTORS	Multi-Hole, Nozzle Type
ENGINE TYPE	Direct Injection
FUEL LINE (Supply)	6.35 mm (0.25 in.)
FUEL RETURN LINE	6.35 mm (0.25 in.)

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	20 Amps at 12 V
STARTER MOTOR	12 V
RECOMMENDED BATTERY	12 Volt, 90 A.H., 27F
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).

GENERAC®
POWER SYSTEMS, INC.

SD060

OPERATING DATA

	STANDBY	PRIME
	SD060	SD060
GENERATOR OUTPUT VOLTAGE/KW-60Hz	Rated AMP	Rated AMP
120/240V, 1-phase, 1.0 pf (NOTE: Consult your Generac dealer for additional voltages.)	60 250	48 200
120/208V, 3-phase, 0.8 pf	60 208	48 166
MOTOR STARTING KVA		
Maximum at 35% instantaneous voltage dip with optional alternator; 60 Hz	120/208/240V 164	120/208/240V 164
FUEL		
Fuel consumption—60 Hz Load	100% 80%	100% 80%
gal./hr.	4.8 3.8	4.1 3.3
liters/hr.	18.2 14.4	15.5 12.5
Fuel pump lift	36"	36"
COOLING		
Coolant capacity System - lit. (US gal.)	17.0 (4.5)	17.0 (4.5)
Engine - lit. (US gal.)	10.4 (2.75)	10.4 (2.75)
Coolant flow/min. 60 Hz - lit. (US gal.)	106 (28)	106 (28)
Heat rejection to coolant 60 Hz full load BTU/hr.	120,500	96,500
Inlet air to radiator 60 Hz - m^3/min. (cfm)	212 (7,500)	212 (7,500)
Max. air temperature to radiator °C (°F)	60 (140)	60 (140)
Max. ambient temperature °C (°F)	48.9 (120)	48.9 (120)
COMBUSTION AIR REQUIREMENTS		
Flow at rated power 60 Hz - cfm	209	168
EXHAUST		
Exhaust flow at rated output 60 Hz - m^3/min. (cfm)	18 (533)	15.3 (450)
Max recommended back pressure "Hg	1.5	1.5
Exhaust temperature 60 Hz (full load) °C (°F)	524 (975)	459 (858)
Exhaust outlet size	3.0" O.D.	3.0" O.D.
ENGINE		
Rated RPM 60 Hz	1800	1800
HP at rated KW 60 Hz	96	80
Piston speed 60 Hz - ft./min.	1230	1230
BMEP 60 Hz - psi	227	189
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	1067	1067
3.5% for every 1000 ft. above - ft.	3500	3500

STANDARD ENGINE & SAFETY FEATURES

SD060

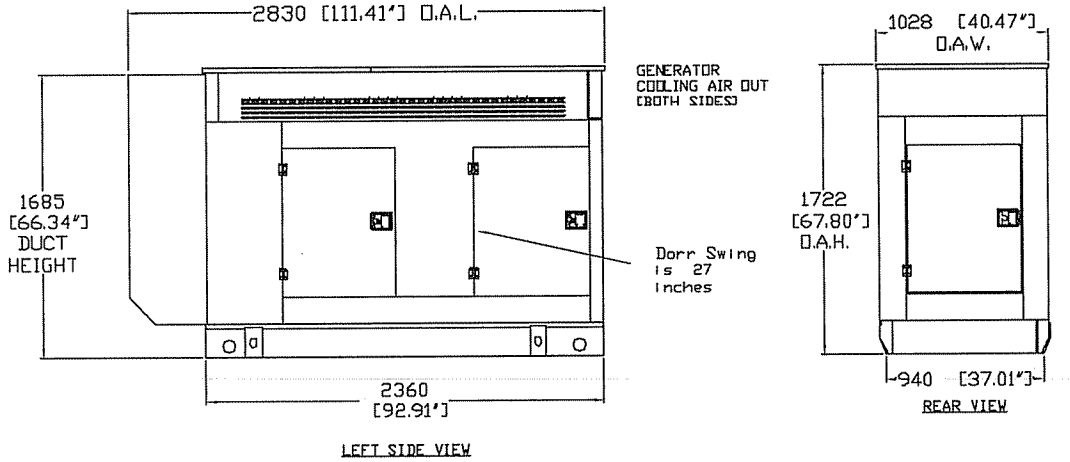
- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Secondary Fuel Filter
- Fuel Shutdown Solenoid
- Batteries 2 - 12 Volt 90 AH
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Composite Battery Box
- Vibration Isolation of Unit to Mounting Base
- 24 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Air Cleaner Service Indicator
- Fan Guard (CSA Compliant)
- CSA Guarding
- Critical Grade Muffler (Shipped Loose With Open Unit)
- High Temperature Exhaust Wrap
- Alternator Tropicalization
  - Resists Moisture, Fungus and Abrasives
  - In Addition to Standard Class H Epoxy Impregnation Coating
- Upsized Alternator For Increased Motor Starting
- Propylene Glycol 50/50 Mix Antifreeze
- Oil (19.0 Quarts)
- Coolant Expansion and Recovery Tank
- Extended Factory Test (2.5 Hr.)
  - Stepped Loads
  - Frame Temperature Test
- Specification Sheet Does Not Reflect Any Verizon Wireless Corporate Authorized Variances.
- "E" Control Console – Digital/Analog Hybrid
  - Communication Software for Remote Access
  - Analog Reading AC Volts
  - Analog Reading AC Amps
  - Analog Frequency
  - Emergency Stop Button
  - Audible Alarm
  - 11 Gauge Control Panel Enclosure
  - Programmable Engine Control (See Bulletin #0161310SBY For Details)
- 20 Light Annunciator Generator Alarms
- 8 Form C Dry Contact Output Relays
- 120 Volt Coolant Heater 1800 Watt with 3 Wire Connection Cord
- Mainline Circuit Breaker
  - 200 Amp & 100 Amp – 120/240 Single Phase
  - 200 Amp & 50 Amp – 120/208 Three Phase
- Flexible Fuel Lines
- Fuel Pressure Loss Protection System
- UL2200 Listed
- Basetank
  - 48 Hr. Runtime at 100% Load
  - Double Wall
  - 125% Engine Fluid Containment and Alarms of all Generator Liquids
  - Fuel Level Sender and Visible Level Gauge
  - Rupture Basin Alarm
  - Emergency Vents
  - Check Valve (inlet and return)
  - FM Fusible Link (165°F) Shutoff
  - UL 142 Listed
  - Southern California limitation of 52 gallons

  Consult State and Local Codes for Specific Requirements in your area.
- Five Year Extended Warranty
- Enclosure Options
  - Open Generator Set w/ Duct Adapter
  - Weather Protective Sound Attenuated Enclosure w/ Enclosed Critical Grade Muffler and Flex Exhaust
- 24V Duel-Rate 10 Amp Battery Charger With 120V 3 Wire Connection Cord

Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.

See Installation Drawing # E3700 For Details



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Site Search Summary
Branford South Facility
Branford, 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 Town of Branford are provided below.

Site Search Process

To initiate its site selection process in an area where wireless service problems have 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 maintains three (3) existing telecommunications facilities and plans to install antennas on a recently approved T-Mobile tower, all within approximately four (4) miles of the proposed Branford South Facility. None of these existing or proposed facilities, however, can provide the service needed in the identified problem areas along portions of Route 146 (Leetes Island Road) and local roads, as well as commercial and residential land uses in southeast Branford. (See Attachment 6).

Existing and Approved Telecommunication Facilities

	Owner (Cellco Site Name)	**Facility Height and Type**	**Location**	**Cellco Antenna Height**
1.	CT Water Company (Guilford South)	88' (Water Tank)	Sachems Head Road, Guilford, CT	85'
2.	Crown Castle (Guilford 2)	150' (Monopole)	1919 Boston Post Road Guilford, CT	122'
3.	Sprint (Branford 3)	150' (Monopole)	21 Acorn Road Branford, CT	116'

	Owner (Cellco Site Name)	Facility Height and Type	Location	Cellco Antenna Height
4.	T-Mobile[1] (Branford West)	125' (Monopole)	123 Pine Orchard Road Branford, CT	92'

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 satisfy Cellco's service 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 environmental impacts, or in 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 Branford South Search Area

The purpose of the proposed Branford South Facility is to provide reliable PCS, cellular and LTE service to significant gaps that have been identified along portions of Route 146 and local roads, as well as commercial and residential areas, in southeast Branford. These coverage gaps were identified using system performance data including, but not limited to, baseline drive data and Cellco's best server propagation modeling tool.

Cellco issued its Branford South search area in March of 2009. Originally, the Branford South search area was located to the west of the Branford South Facility location. This designated search area would work with Cellco's Guilford South search area, originally located west of Cellco's current Guilford South facility. In December of 2009, Cellco received local approval for its Guilford South (water tank) cell site off Sachems Head Road, in Guilford. At about the same time T-Mobile was pursuing the Council's approval for a tower site at 123 Pine Orchard Road in Branford. After examining the coverage from its existing Guilford South facility and the coverage Cellco can achieve from T-Mobile's recently approved Pine Orchard Road facility, Cellco's RF Engineers decided to shift the Branford South search ring to the east, more centrally located between the Guilford South and Branford West facilities.

Sites Investigated in Southeast Branford

In addition to the existing and proposed facilities listed above, Cellco identified and investigated six (6) additional sites in southeast Branford listed below as items 3 through 8. These sites include:

[1] Facility approved in Council Docket No. 386 on February 25, 2010. D&M Plan for this tower was approved by the Council on August 17, 2010.

1. Medlyn Farm – 723 Leetes Island Road, Branford, CT

   Cellco investigated several parcels that make up the Medlyn Farm, both north and south of Leetes Island Road. Parcels to the north of Leetes Island Road are smaller and used for residential and agricultural purposes. The use of a portion of the 19 acre Medlyn parcel south of Leetes Island Road was determined to be more appropriate for the siting of a telecommunications facility. Cellco can satisfy its coverage objectives with antennas at a centerline height of 90 feet above ground level.

2. Approved T-Mobile monopole – 123 Pine Orchard Road, Branford, CT

   This site was rejected by Cellco's RF engineers. The site is located too far to the west to satisfy Cellco's Branford South coverage objectives. This site will, however, be used to provide additional coverage west of the Branford South area. Cellco has reserved the 92-foot level for its antennas.

3. Proposed T-Mobile Monopole – Stony Creek Fire Station, Thimble Island Road, Branford, CT

   According to T-Mobile representatives, this Stony Creek Fire Station proposal has been put on hold pending the outcome of other T-Mobile tower development efforts. Regardless, Cellco could not satisfy its Branford South coverage objectives from this tower site due to its location to the west of Medlyn Farm. A facility at this location would not connect to coverage from Cellco's existing Guilford South cell site.

4. Tilcon Rail Yard Property – Proposed T-Mobile Facility – 77-145 Pleasant Point Road, Branford, CT

   Similar to the proposed T-Mobile tower at Stony Creek Fire Station, Cellco's RF engineers reviewed and rejected the Pleasant Point Road location. T-Mobile has applied to the Connecticut Siting Council for approval of a tower at this location. (Council Docket No. 407).

5. Pine Orchard Yacht and Country Club – 86 Totoket Road, Branford, CT

   This site was rejected due to its location to the west of the Medlyn Farm site. Coverage from this site would be redundant to coverage Cellco expects to receive from its future Pine Orchard Road (Branford West) cell site and would not connect the coverage from its existing Guilford South cell site.

6. Leetes Property – Moose Hill Road, Branford, CT

   This site is located east of Medlyn Farm and west of Cellco's existing Guilford South cell site and is currently being considered by T-Mobile as a future tower location. This site would provide significant redundant coverage with Cellco's

existing Guilford South cell site and would not provide adequate overlapping coverage to the west to Cellco's proposed Branford West cell site at 123 Pine Orchard Road.

7. Marshall Property – New Quarry Road, Guilford, CT

This parcel off New Quarry Road is located to the northeast of Cellco's existing Guilford South facility. The property owner decided that they were not interested in leasing space to Cellco for a new tower site.

8. Branford Land Trust Property (various parcels) – Branford, CT

Cellco real estate representatives reviewed and considered three separate parcels in southeast Branford owned by the Branford Land Trust. Cellco's real estate representatives had a number of preliminary conversations with the Branford Land Trust regarding the potential use of its property. None of these parcels were pursued due to concerns for land use restrictions, proximity to adjacent cell sites and overall distance from Route 146.

SEARCH AREA MAP

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TN

MN (13.9°W)

Scale 1 : 16,000

0 400 800 1200 1600 2000 ft

0 140 280 420 560 700 m

1" = 1,333.3 ft Data Zoom 13-6

0.5 0.25 0 0.5 Miles

Legend

- 1 Potential Sites Investigated
- Existing Tower Location
- Open Water
- Municipal and Private Open Space
- School
- State Forest/Park

Vanasse Hangen Brustlin, Inc.

Site Search Summary Map
Proposed Verizon Wireless
Telecommunications Facility
Branford South
Branford, Connecticut

verizon wireless