CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

Connecticut Siting Council

APPLICATION OF CELLCO PARTNERSHIP
D/B/A VERIZON WIRELESS

TOWN OF PUTNAM

EAST PUTNAM FACILITY

DOCKET NO. _____

MAY 15, 2008

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EXECUTIVE SUMMARY

Cellco Partnership d/b/a Verizon Wireless ("Cellco") proposes to construct a telecommunications tower and related facility on an approximately 22.10-acre parcel owned by Lois S. Pray at 165 Elmwood Hill Road in Putnam, Connecticut (the "East Putnam Facility"). The East Putnam Facility will provide coverage along Route 44, as well as local roads in the northeasterly portion of the Town of Putnam and southeasterly portion of the Town of Thompson.

Cellco proposes the construction of a 150-foot telecommunications tower. Cellco will install twelve (12) panel-type antennas, with their centerline at the 147-foot level on the tower. Cellco would also install a 12' x 30' shelter located near the base of the tower to house its radio equipment and a back-up generator within a 50' x 50' fenced compound. Vehicular and utility access to the East Putnam Facility would extend from Elmwood Hill Road.

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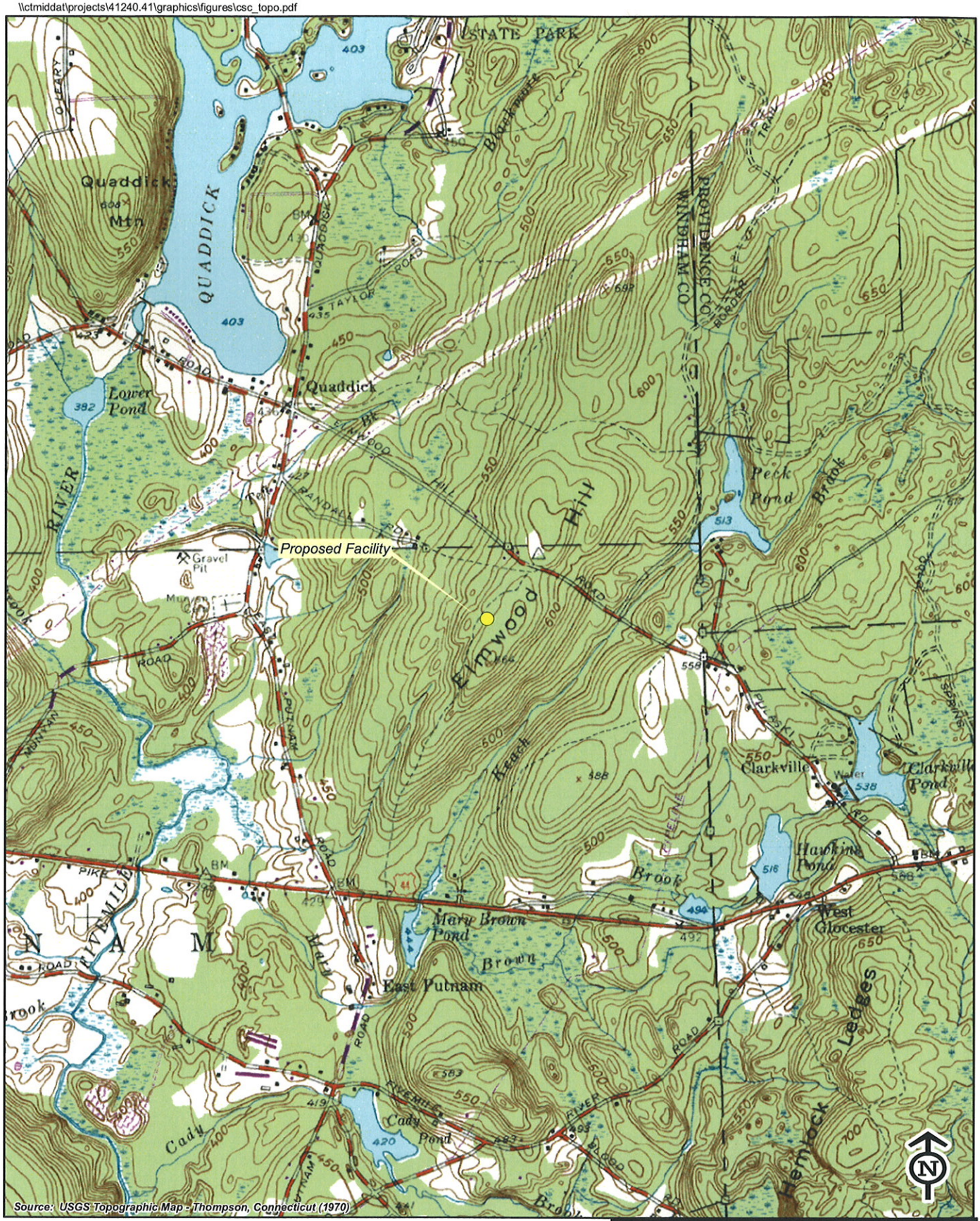

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Quadrangle Location

Vanasse Hangen Brustlin, Inc.

USGS Topographic Map
Proposed Verizon Wireless
Telecommunications Facility
East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

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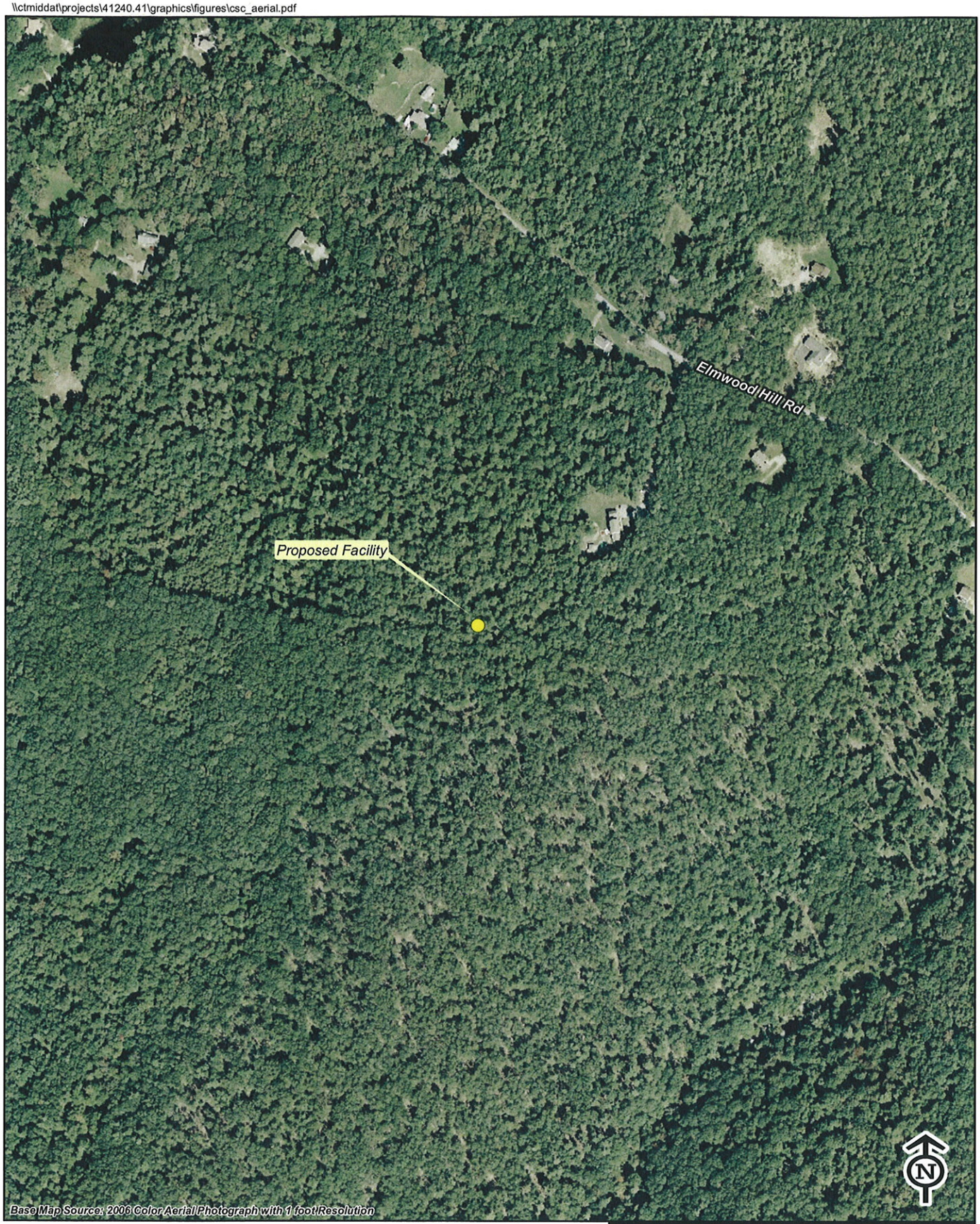

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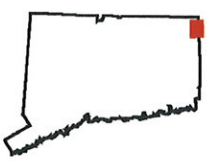


Quadrangle Location

Aerial Photograph
Proposed Verizon Wireless
Telecommunications Facility
East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

verizon wireless

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
APPLICATION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT 165 ELMWOOD HILL ROAD, PUTNAM, CONNECTICUT	:	**DOCKET NO. ____**
	:	**MAY 15, 2008**

APPLICATION FOR CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

I. INTRODUCTION

A. Authority and Purpose

This Application and the accompanying attachments (collectively, the "Application") is submitted by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"), pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes ("C.G.S."), as amended, and Sections 16-50j-1 et seq. of the Regulations of Connecticut State Agencies ("R.C.S.A."), as amended. The Application requests that the Connecticut Siting Council ("Council") issue a Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance, and operation of a wireless telecommunications facility, in the northeasterly portion of the Town of Putnam, Connecticut (the "East Putnam Facility"). The proposed East Putnam Facility would provide for much needed wireless telecommunications

coverage along Route 44, Cellco's principal coverage objective, as well as local roads in the northeasterly portion of the Town of Putnam as well as the southeasterly portion of Thompson. Cellco's existing coverage gaps along Route 44 between its existing Putnam facility to the west and the Rhode Island State line total 1.2 miles at cellular frequencies and 3.6 miles at PCS frequencies. Cellco's existing Putnam cell site consists of antennas at the 146-foot level of a 180-foot tower at 154 Sayle Avenue in Putnam. Cellco also experiences a number of coverage gaps along local roads in the area between its existing Thompson facility to the northwest; Putnam South facility to the southwest; and Killingly facility to the south. Cellco's existing Thompson cell site consists of antennas at the 227 and 237-foot levels of a 250-foot tower at 61 Lowell Davis Drive in Thompson. Cellco's existing Putnam South cell site consists of antennas at the 176-foot level of a 196-foot tower at 63 Industrial Park Road in Putnam. Cellco's existing Killingly cell site consists of antennas at the 267-foot level on the 288-foot tower in Killingly at 1375 North Road in Killingly. The proposed East Putnam Facility will provide reliable service to a 3.5 mile portion of Route 44 and an overall area of 12.1 square miles at cellular frequencies; and a 2.47 mile portion of Route 44 and an overall area of 5.8 square miles at PCS frequencies.

The East Putnam Facility would be located in the southwesterly portion of a 22.10-acre parcel at 165 Elmwood Hill Road in Putnam (the "Property"). The Property is located in the Town's AG-2 Agricultural zone district. The northern-most portion of the Property is located in the Town of Thompson.

Cellco will construct a 150-foot self-supporting monopole telecommunications tower at the Property. At the top of the tower, Cellco would install a total of twelve (12) panel-type antennas at the 147-foot level. Cellco's antennas will not extend above the top of the tower. Equipment associated with Cellco's antennas would be located in a 12' x 30' shelter installed

near the base of the tower. Vehicular and utility access to the East Putnam Facility would extend from Elmwood Hill Road over an existing logging road a distance of approximately 940 feet, then over a new gravel driveway a distance of approximately 255 feet to the cell site compound. Both the tower and leased area would be designed to accommodate additional carriers as well as municipal and emergency services antennas and equipment. As of the date of this filing neither the Town nor any other wireless carriers have committed to share the proposed tower.

Cellco's equipment shelter would house radio and related equipment, including (a) receiving, transmitting, switching, processing and performance monitoring equipment; and (b) automatic heating and cooling equipment. A diesel-fueled generator would also be installed in a segregated generator room within the shelter for use during power outages and periodically for maintenance purposes.

The tower and equipment shelter would be enclosed by an 8-foot high security fence and gate. Cellco's equipment building would be equipped with a silent intrusion and systems alarm and will be monitored on a 24-hour basis to receive and to respond to incoming alarms or other technical problems. The equipment building would remain unstaffed, except as required for maintenance. Once the cell site is operational, maintenance personnel will visit the cell site on a monthly basis. More frequent visits may be required if there are problems with the cell site equipment.

Included in this Application as Attachment 1 is a factual summary and project plans for the proposed East Putnam Facility. This summary, along with the other attachments submitted as part of this Application, contains all of the site-specific information required by statute and the regulations of the Council.

In accordance with Paragraph I(F) of the Council's "Application Guide" for Community Antenna Television and Telecommunication Towers, a copy of the Application Guide is included as Attachment 2. The Application Guide contains references to the specific pages of this Application and the attachments where the information required under Section VI of the Application Guide may be found.

B. The Applicant

Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, CT, 06108. Cellco is licensed by the Federal Communications Commission ("FCC") to operate a wireless telecommunications system in the State of Connecticut within the meaning of C.G.S. Section 16-50i(a)(6). Operation of the wireless telecommunications systems and related activities are Cellco's sole business in the State of Connecticut.

Cellco has extensive national experience in the development, construction and operation of wireless telecommunications systems and the provision of wireless telecommunications service to the public.

Correspondence and/or communications regarding this Application may be addressed to:

Sandy Carter, Regulatory Manager
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

A copy of all such correspondence or communications should also be sent to the applicant's attorneys:

Robinson & Cole LLP
280 Trumbull Street
Hartford, Connecticut 06103-3597
(860) 275-8200
Attention: Kenneth C. Baldwin, Esq.

C. Application Fee

The estimated total construction cost for the East Putnam Facility would be less than $5,000,000. Therefore, pursuant to Section 16-50v-1a(b) of the Regulations of Connecticut State Agencies, an application fee of $1,000 accompanies this Application in the form of a check payable to the Council.

II. SERVICE AND NOTICE REQUIRED BY C.G.S. SECTION 16-50*l*(b)

Copies of this Application have been sent by certified mail, return receipt requested, to municipal, regional, state and federal officials, pursuant to C.G.S. Section 16-50*l*(b). A certificate of service, along with a list of the parties served with a copy of the Application, is included as Attachment 3.

Notice of Cellco's intent to submit this Application was published on May 12 and 13, 2008, by Cellco in the *Norwich Bulletin* pursuant to C.G.S. Section 16-50*l*(b). A copy of the published legal notice is included as Attachment 4. A copy of the publisher's affidavit or certificate of publication will be submitted to the Council as soon as it is available.

Attachment 5 contains a certification that notices were sent to each person appearing of record as an owner of property that may be considered to abut the Property in accordance with C.G.S. Section 16-50*l*(b), as well as a list of the property owners to whom such notice was sent and a sample notice letter.

III. REQUIRED INFORMATION: PROPOSED WIRELESS FACILITY

The purpose of this section is to provide an overview and general description of the wireless facility proposed to be installed at the Property.

A. General Information

Prior to the 1980's, mobile telephone service was characterized by insufficient frequency availability, inefficient use of available frequencies and poor quality of service. These limitations generally resulted in problems of congestion, blocking of transmissions, interference, lack of coverage and relatively high cost. Consequently, the FCC, in its Report and Order released May 4, 1981 in FCC Docket No. 79-318, recognized the public need for technical improvement, wide-area coverage, high quality service and a degree of competition in mobile telephone service.

More recently, the federal Telecommunications Act of 1996 (the "Act") emphasized and expanded on these aspects of the FCC's 1981 decision. Among other things, the Act recognized an important nationwide public need for high-quality wireless telecommunication services of all varieties. The Act also expressly promotes competition and seeks to reduce regulation in all aspects of the telecommunications industry in order to foster lower prices for consumers and to encourage the rapid deployment of new telecommunications technologies.

Cellco's proposed East Putnam Facility would be part of the expanding wireless telecommunications network envisioned by the Act and has been developed to help meet these nationwide goals. In particular, Cellco's system has been designed, and the cell sites proposed in this Application have been selected, so as to maximize the geographical coverage and quality of service while minimizing the total number of cell sites required.

Because the FCC and the United States Congress have determined that there is a pressing public need for high-quality wireless telecommunications service nationwide, the federal government has preempted the determination of public need by states and municipalities, including the Council, with respect to public need for the service to be provided by the proposed facility. In addition, the FCC has promulgated regulations containing technical standards for wireless systems,

including design standards, in order to ensure the technical integrity of each system and nationwide compatibility among all systems. State and local regulation of these matters is likewise preempted. The FCC has also exercised its jurisdiction over and preempted state and local regulation with respect to radio frequency interference issues by establishing regulations in this area as well.

Pursuant to FCC authorizations, Cellco has constructed and currently operates a wireless system throughout Connecticut. This system, together with Cellco's system throughout its east coast and nationwide markets, has been designed and constructed to operate as one integrated, contiguous system, consistent with Cellco's business policy of developing compatibility and continuity of service on a regional and national basis.

Included as Attachment 6 is a copy of the FCC's authorization issued to Cellco for its wireless service in Windham County, Connecticut. The FCC's rules permit a licensee to modify its system, including the addition of new cell sites, without prior approval by the FCC, as long as the licensee's authorized service area is not enlarged. The East Putnam Facility would not enlarge Cellco's authorized service area.

B. Public Need and System Design

1. Public Need

As noted above, the Act has pre-empted any state or local determination of public need for wireless services. In Windham County, Cellco holds an FCC License to provide both cellular and PCS service. Pursuant to its FCC Licenses, Cellco has developed and continues to develop a network of cell sites to serve the demand for wireless service in the area. Cellco's network currently provides coverage in Putnam and the surrounding areas from its existing Thompson, Putnam and Killingly cell sites. Plots showing coverage from Cellco's existing facilities alone

and together with the coverage from the proposed East Putnam Facility are included as Attachment 7.

2. System Design and Equipment

a. System Design

Cellco's wireless system in general and the proposed East Putnam Facility, in particular, have been designed and developed to allow Cellco to achieve and to maintain high quality, reliable wireless service without interruption from dropped calls and interference.

The system design provides for frequency reuse and hand-off, is capable of orderly expansion and is compatible with other wireless systems. The resulting quality of service compares favorably with the quality of service provided by conventional wireline telephone service. The wireless system is designed to assure a true cellular configuration of base transmitters and receivers in order to cover the proposed service area effectively while providing the highest quality of service possible. Cell site transmissions are carefully tailored to the FCC's technical standards with respect to coverage and interference and to minimize the amount of power that is radiated.

Mobile telephone switching offices ("MTSOs") in Windsor and Wallingford are interconnected and operate Cellco's wireless systems in Connecticut as a single network, offering the subscriber uninterrupted use of the system while traveling throughout the State. This network is further interconnected with the local exchange company ("LEC") and inter-lata (long distance) carriers network.

Cellco has designed its wireless system in conformity with applicable standards and constraints for wireless systems. Cellco's system is also designed to minimize the need for additional cell sites in the absence of additional demand or unforeseen circumstances.

b. Cellular System Equipment

The key elements of the cellular system are the two MTSOs located in Windsor and Wallingford and the various connector cell sites around the state. Cellco's CDMA wireless networks are deployed on two platforms: the earlier AUTOPLEX system, using Series II base stations, and the newer FLEXENT CDMA system, using smaller, more compact modular base stations. Because the Series II base stations are no longer manufactured, the newer CDMA systems, using smaller, more compact modular base stations are used for all current installations.

The major electronic components of each cell site are radio frequency transmission and receiving equipment and cell site controller equipment. Cellco's cellular system uses Lucent Flexent® Modular Cell 4.0B cell site equipment to provide complete cell site control and performance monitoring. This equipment is capable of expanding in modules to meet system growth needs. The cell site equipment primarily provides for: message control on the calling channel; call setup and supervision; radio frequency equipment control; internal diagnostics; response to remote and local test commands; data from the mobile or portable unit in both directions and on all channels; scan receiver control; transmission of power control commands; rescanning of all timing; and commands and voice channel assignment. Additional information with respect to the Lucent Flexent® Modular Cell 4.0B equipment is contained in Attachment 8.

3. Technological Alternatives

Cellco submits that there are no equally effective technological alternatives to the proposal contained herein. In fact, Cellco's wireless system represents state-of-the-art technology offering high-quality service. Cellco is aware of no viable and currently available alternatives to its system design for carriers licensed by the FCC.

C. Site Selection and Tower Sharing

1. Cell Site Selection

Cellco's goal in selecting cell sites such as the one proposed here is to locate its facility in such a manner as to allow it to build and to operate a high-quality wireless system with the least environmental impact. Cellco has determined that the proposed East Putnam Facility will satisfy this goal and is necessary to resolve existing significant coverage problems and to provide high-quality reliable service along portions of Route 44, as well as local roads in the northeast Putnam and southeast Thompson.

The methodology of cell site selection for Cellco's wireless system generally limits the search for possible locations to specific locations on the overall grid for the area. A list of existing towers or other non-tower structures considered is included in Attachment 9. Cellco currently shares the existing SBA tower located at 154 Sayle Avenue in Putnam; the existing Charter Communications tower located at 61 Lowell Davis Drive in Thompson; the SBA tower at 63 Industrial Park Road in Putnam; and the American Tower Corporation tower at 1375 North Road in Killingly. (See Attachment 7). These existing sites cannot resolve the significant coverage problems in northeastern Putnam, particularly along Route 44. Cellco also regularly investigates the use of existing, non-tower structures in an area, when available, as an alternative to building a new tower. No existing non-tower structures of suitable height exist in the northeast Putnam area. The site search summary together with the site information contained in Attachment 1 support Cellco's position that the site selected represents the most feasible alternative of the sites investigated.

2. Tower Sharing

Cellco will design its East Putnam Facility tower and compound area so that it could be shared by a minimum of four wireless carriers, and the Town, if a need exists. This type of tower sharing arrangement would reduce, if not eliminate, the need for these other carriers or municipal entities to develop a separate tower in this same area in the future. As of the date of this filing, no other carrier has expressed any interest in the East Putnam Facility.

D. Cell Site Information

1. Site Facilities

At the East Putnam Facility, Cellco would construct a new 150-foot tall tower and install twelve (12) panel-type directional antennas at the 147-foot level on the tower. Cellco would install a 12' x 30' single-story shelter near the base of the tower to house Cellco's receiving, transmitting, switching, processing and performance monitoring equipment and the required heating and cooling equipment. A diesel-fueled generator would be installed within a segregated room in Cellco's equipment shelter for use during power outages and periodically for maintenance purposes. The tower and equipment shelter would be surrounded by an 8-foot high security fence and gate. (*See* Attachment 1).

The equipment shelter would be equipped with silent intrusion and systems alarms. Cellco personnel will be available on a 24-hour basis to receive and to respond to incoming alarms. The equipment building will remain unstaffed, except as required for periodic maintenance purposes.

2. Overall Costs and Benefits

Aside from the limited visual impacts discussed further below, Cellco believes that there are no significant costs attendant to the construction, maintenance, and operation of the proposed cell site. In fact, the public will benefit substantially from its increased ability to receive high-quality,

reliable wireless service in Putnam.[1] The East Putnam Facility would be a part of a communications system that addresses the public need identified by the FCC and the United States Congress for high-quality, competitive mobile and portable wireless service. Moreover, the proposed cell site would be part of a system designed to limit the need for additional cell sites in the future.

The overall costs to Cellco for development of the proposed cell site are set forth in Section III.E. of the Application.

3. Environmental Compatibility

Pursuant to Section 16-50p of the General Statutes, in its review of the Application, the Council is required to find and to determine, among other things, the nature of the probable environmental impact, including a specification of every significant adverse effect of the East Putnam Facility, whether alone or cumulatively with other effects, on, and conflicting with the policies of the state concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish and wildlife.

a. Primary Facility Impact is Visual

The wireless system of which the proposed East Putnam Facility would be a part has been designed to meet the public need for high-quality, reliable wireless service while minimizing any potential adverse environmental impact. In part because there are few, if any other adverse impacts,

[1] Businesses across the State have become more dependent on wireless telecommunication services. The public safety benefits of wireless telephone service are illustrated by the improved Connecticut State Police 911 emergency calling system. The 911 emergency calling system is available statewide to all wireless telephone users. Numerous other emergency service organizations have turned to wireless telephone service for use during natural disasters and severe storms when wireline service is interrupted or unavailable. As a deterrent to crime, the general public will further benefit from the Cellular Telecommunications Industry Association's donation of more than 50,000 cellular phones to "Neighborhood Watch" groups nationwide.

the primary impact of facilities such as this is visual. This visual impact will vary from location to location around a tower, depending upon factors such as vegetation, topography, the distance of nearby properties from the tower and the location of buildings and roadways in a "sight line" toward the tower. Similarly, visual impact of a tower facility can be further reduced through the proper use of alternative tower structures; so-called "stealth installations." Where appropriate, telecommunications towers camouflaged as trees, flagpoles, and bell towers, to name a few, can help to further reduce visual impacts associated with these structures. Attachment 10 contains a detailed Visual Resource Evaluation Report, prepared by VHB, Inc. (the "VHB Report") that assesses the visual impact of the proposed tower and includes photosimulations of the tower at this site for the Council's consideration. Overall, VHB concludes that areas where the tower would be visible above the tree canopy are limited to approximately 49 acres, or less than one percent of the 8,042-acre study area. Much of the visibility associated with the East Putnam Facility occurs over open water on the Quaddick Reservoir to the northwest of the tower site and other remote areas approximately one to two miles from the East Putnam Facility location. Cellco estimates that select portions of six residential properties would have at least partial year-round views of the tower. Areas where seasonal views are anticipated comprise approximately 4 additional acres and are mainly located in the immediate vicinity of the East Putnam Facility. At least partial year-round views may be possible from select portions of approximately three (3) additional residential properties.

There are approximately three residences within 1,000 feet of the East Putnam Facility. The closest residence is located approximately 510 feet to the northeast owned by Sara J. and Norman B. Seney, Jr.

Weather permitting, Cellco will raise a balloon with a diameter of at least three (3) feet at the proposed cell site on the day of the Council's hearing on this Application, or at a time otherwise specified by the Council.

b. Environmental Reviews and Agency Comments

Section 16-50j of the General Statutes requires the Council to consult with and to solicit comments on the Application from the Commissioners of the Departments of Environmental Protection, Public Health, Public Utility Control, Economic Development, and Transportation, the Council on Environmental Quality, and the Office of Policy and Management, Energy Division. In addition to the Council's solicitation of comments, Cellco, as a part of its National Environmental Policy Act ("NEPA") Checklist, solicits comments on the proposed facility from the U.S. Department of the Interior, Fish and Wildlife Service ("USFWS"), Environmental and Geographic Information Center of the Connecticut Department of Environmental Protection ("DEP") and the Connecticut Historical Commission, State Historic Preservation Officer ("SHPO"). USFWS and DEP comments regarding impacts on known populations of Federal or State Endangered, Threatened or Special Concern Species occurring at the proposed site are included in Attachment 11. According to the USF&W letter dated January 7, 2008, there are no federally-listed or proposed, threatened or endangered species or critical habitat known to occur in Windham County, where the Project is located, and as such the proposed development will not result in an adverse effect to any federally listed, endangered or threatened species. This January 7, 2008 correspondence was noted in the USF&W review conducted by VHB. (See Attachment 11 – VHB Memorandum dated May 2, 2008).

In its comment letter dated February 8, 2008, the DEP stated that there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species at the site.

(See Attachment 11 DEP response letter dated February 8, 2008). Also included in Attachment 11 is a letter from the SHPO confirming that the East Putnam Facility will have no effect on historic, architectural or archeological resources listed or eligible for listing on the National Register of Historic Places.

This review by state administrative agencies furnishes ample expert opinion on the potential environmental impacts from the East Putnam Facility, in the context of the criteria which the Council must consider.

c. Non-Ionizing Radio Frequency Radiation

The FCC has adopted a standard for exposure to Radio Frequency ("RF") emissions from telecommunications facilities like the one proposed in this Application. To ensure compliance with the applicable standards, Cellco has performed maximum power density calculations for the proposed cell site according to the methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) ("OET Bulletin 65"). The calculation is a conservative, worst-case approximation for RF power density levels at the closest accessible point to the antennas, in this case the base of the tower, and with all antennas transmitting simultaneously on all channels at full power. The calculations indicate that the maximum power density level for Cellco antennas would be 2.46% of the Standard at the East Putnam Facility.

d. Other Environmental Issues

No sanitary facilities are required for the East Putnam Facility. The operations at the East Putnam Facility will not cause any significant air, water, noise or other environmental impacts, or hazard to human health.

Based on agency comments received and field investigations by Cellco's project team, Cellco submits that the proposed facility will have no significant adverse effect on scenic, natural, historic or recreational features, and that none of the potential effects from the East Putnam Facility alone or cumulatively with other effects is sufficient reason to deny this Application.

4. Consistency with Local Land Use Controls

The Council Application Guide for Community Antenna Television and Telecommunication Facilities, as amended on February 16, 2007, requires the inclusion of a narrative summary of the project's consistency with the Town's Plan of Development and Zoning Regulations, as well as a description of planned and existing uses of the site location and surrounding properties.

a. Planned and Existing Land Uses

The proposed East Putnam Facility would be located on a 22.10-acre parcel owned by Lois S. Pray. The Property is zoned AG-2 Agricultural and currently used for residential purposes by the owner. The Property is surrounded by undeveloped woodlands and low-density residential uses.

b. Putnam Town Plan of Conservation and Development

The Town of Putnam 2005 Plan of Conservation and Development (the "POCD") does not specifically identify telecommunications towers as a land use consistent or inconsistent with the general planning or conservation policies of the Town of Putnam.

c. Zoning Regulations

According to the Town Zoning Map, the Property is located in the AG-2 Agricultural zone. The Town has established Wireless Communication Regulations, found in Article XIV of the Zoning Regulations. Pursuant to Article XIV, Section 5 of the Zoning Regulations, all

towers located in a residential or agricultural zone in excess of the maximum allowable building height in that requires the approval of a Special Permit. A tower in the AG-2 zone must comply with minimum setback requirements for the zone or be setback from all property lines, a distance equal to one hundred twenty percent (120%) of the height of the tower. The East Putnam Facility tower radius does not extend onto adjacent properties. The distance from the tower to the nearest (southerly) property line is approximately 161 feet. (See Attachment 1 – Plan Sheet S-1).

d. Inland Wetland and Water Course Regulations

The Town of Putnam Wetlands and Water Course ("Wetlands") Regulations define regulated activity as any operation within, or use of, a wetland or watercourse involving removal or deposition of material or any obstruction, construction, alteration or pollution, of such wetlands or watercourses. Four (4) copies of the Putnam Wetlands Regulations were filed, in bulk, with the Council.

Dean Gustafson, Professional Soil Scientist with VHB, Inc., conducted a field investigation and completed a Wetlands Delineation Report (the "Wetlands Report") for the East Putnam Facility. According to the Wetlands Report, two forested hillside seep wetlands were identified more than 100 feet west of the proposed access drive and more than 900 feet north from the proposed East Putnam Facility compound. Mr. Gustafson has concluded that the development of the proposed East Putnam Facility will not adversely effect these wetland resources. Copies of the Wetlands Compliance Memo and Wetlands Delineation Report are included in Attachment 12.

In accordance with the Connecticut Soil Erosion Control Guidelines, as established by the Council for Soil and Water Conservation, adequate and appropriate soil erosion and sedimentation control measures will be established and maintained throughout the cell site

construction period. In addition, Cellco will employ appropriate construction management practices to ensure that no pollutants would be discharged to any nearby watercourse or wetland areas or to area groundwater during the construction process.

According to the Federal Emergency Management Agency Flood Insurance Rate Map ("FIRM"), Community Panel Number 0901940010B (Effective Date October 18, 1988), the Facility would be located in Flood Zone X. A copy of the FIRM is also included in Attachment 12.

5. Local Input

Section 16-50*l*(e) of the Connecticut General Statutes, as amended, requires local input on matters before the Council. On February 21, 2008, Cellco representatives met with Putnam Mayor Robert Viens to commenced the sixty (60) day municipal consultation process. Mayor Viens received copies of technical information summarizing Cellco's plans to establish a telecommunications facility at the Property. Because the East Putnam Facility is located within 2,500 feet of the Town of Thompson, Cellco representatives also submitted copies of the technical information to Thompson First Selectman, Lawrence K. Groh, Jr.

6. Consultations With State and Federal Officials

Attachment 11 and Section III.D. of the Application describe Cellco's consultations with state and federal officials regarding Cellco's proposed East Putnam Facility.

a. Federal Communications Commission

The FCC did not review this particular proposal. As discussed above, FCC approval is not required where the authorized service area is not enlarged.

b. Federal Aviation Administration

As with all of its tower applications, Cellco has conducted the appropriate air-space analysis for the proposed East Putnam Facility to determine if the proposed tower would constitute an obstruction or hazard to air navigation. Cellco's analysis has confirmed, pursuant to FAA standards and guidelines, that the proposed site tower would not constitute an obstruction or hazard to air navigation and therefore no obstruction marking or lighting would be required. A copy of the Federal Airways & Airspace Summary Report is included in Attachment 13.

c. United States Fish and Wildlife Service

According to the USFWS, there are no federally-listed or proposed, threatened or endangered species or critical habitat known to occur in the project area. (See VHB Memo dated May 2, 2008 in Attachment 11).

d. Connecticut Department of Environmental Protection

(1) Environmental and Geographic Information Center

As discussed above based on a review of the DEP/NDDB, the project will not impact any known occurrences of State listed species or significant natural communities.

(2) Bureau of Air Management

Pursuant to R.C.S.A. § 22a-174-3, the on-site emergency back-up generator proposed as a part of this Application will require the issuance of a permit from the DEP Bureau of Air Management. As proposed, this emergency generator will be run only during the interruption of utility service to the cell site and periodically as required for maintenance purposes. Cellco will obtain the necessary permit prior to installing the generator at the East Putnam Facility.

e. Connecticut State Historic Preservation Officer

As discussed above, Attachment 11 also includes the SHPO's determination that the proposed East Putnam Facility will have no effect on historic, architectural or archeological resources eligible or listed on the National Register of Historic Places.

E. Estimated Cost and Schedule

1. Overall Estimated Costs

The total estimated cost of construction of the proposed facility is $765,000. This estimate includes:

(1)	Cell site radio equipment of approximately	$450,000
(2)	Tower, coax and antenna costs of approximately	150,000
(3)	Power systems costs of approximately	20,000
(4)	Equipment building costs of approximately	50,000
(5)	Miscellaneous costs (including site preparation and installation) of approximately	95,000

2. Overall Scheduling

Site preparation and engineering would commence following Council approval of Cellco's Development and Maintenance ("D & M") plan and are expected to be completed within two to four weeks. Due to the delivery schedules of the manufacturers, installation of the building and installation of the tower are expected to take an additional two weeks. Equipment installation is expected to take an additional two weeks after installation of the building and installation of the tower. Cell site integration and system testing is expected to require two weeks after equipment installation.

IV. CONCLUSION

Based on the facts contained in this Application, Cellco submits that the establishment of the East Putnam Facility, at the Property will not have any substantial adverse environmental effects. A public need exists for high quality reliable wireless service in the Town of Putnam and throughout Windham County, as determined by the FCC and the United States Congress, and a competitive framework for providing such service has been established by the FCC and the Telecommunications Act of 1996. Cellco submits that the public need far outweighs any possible environmental effects resulting from the construction of the proposed cell site. Moreover, the cell site proposed in this Application will help to provide a level of service in the area that is commensurate with the public demand currently and in the foreseeable future.

WHEREFORE, Cellco respectfully requests that the Council grant this Application for a Certificate of Environmental Compatibility and Public Need for the proposed East Putnam Facility.

Respectfully submitted,

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

By: _____

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, Connecticut 06103-3597
(860) 275-8200
Attorneys for the Applicant

EAST PUTNAM

165 Elmwood Hill Road
Putnam, Connecticut

Description of Proposed Cell Site

Cellco Partnership d/b/a Verizon Wireless
99 East River Drive
East Hartford, CT 06108

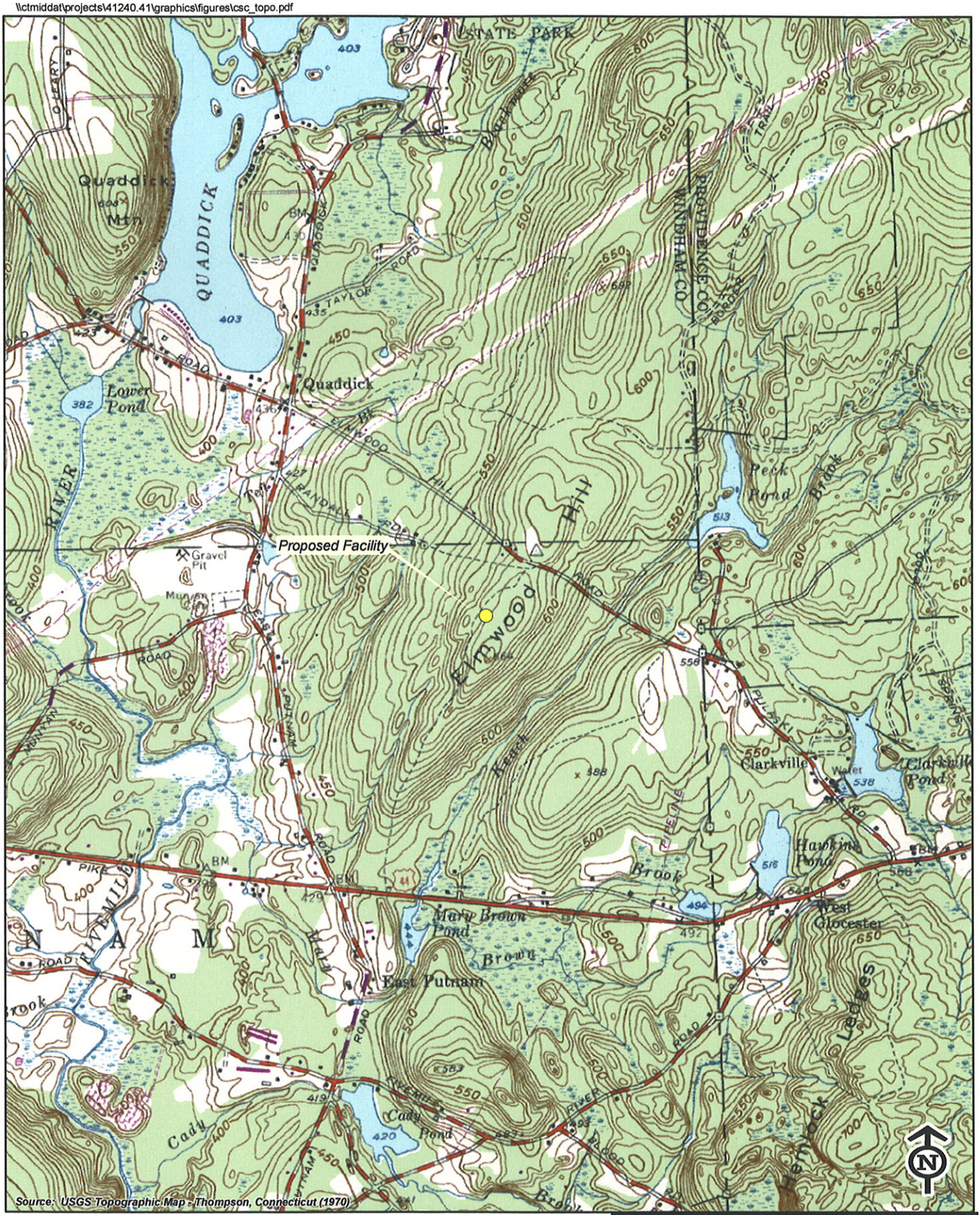
TABLE OF CONTENTS

SITE NAME: EAST PUTNAM – 165 Elmwood Hill Road, Putnam, CT

GENERAL CELL SITE DESCRIPTION

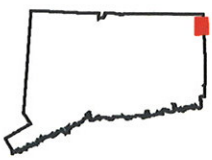
The proposed cell site would be located in the southerly portion of an approximately 22.10-acre parcel located at 165 Elmwood Hill Road in Putnam, Connecticut (the "Property"). The Property is owned by Lois S. Pray. The facility would consist of a 150-foot telecommunications tower and a 12' x 30' equipment shelter located near the base of the tower (the "East Putnam Facility"). Cellco antennas would be mounted with their centerline at the 147-foot level. Vehicular access to the site and utility service would extend from Elmwood Hill Road a distance of approximately 1,200 feet.

\\ctmiddat\projects\41240.41\graphics\figures\csc_topo.pdf



Vanasse Hangen Brustlin, Inc.

1,000 500 0 1,000 Feet

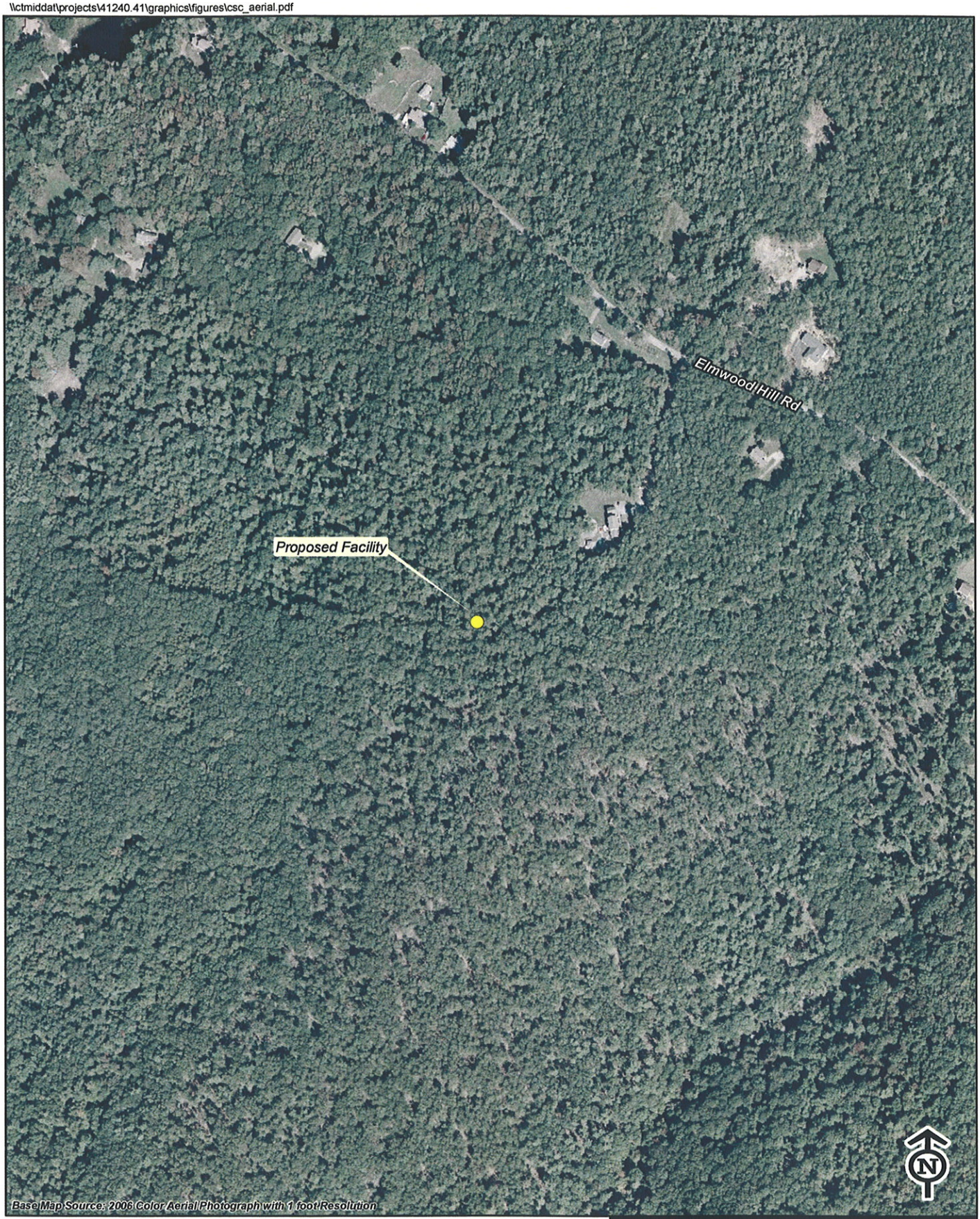


Quadrangle Location

USGS Topographic Map
Proposed Verizon Wireless
Telecommunications Facility
East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

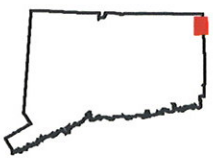
verizon wireless

\\ctmiddat\projects\41240.41\graphics\figures\csc_aerial.pdf



Vanasse Hangen Brustlin, Inc.

400 200 0 400
Feet



Quadrangle Location

Aerial Photograph
Proposed Verizon Wireless
Telecommunications Facility
East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

verizon wireless

SITE EVALUATION REPORT

SITE NAME: EAST PUTNAM – 165 Elmwood Hill Road, Putnam, CT

I. LOCATION

A. COORDINATES: 41°-55'-45.32" N 71°-48'-36.17" W

B. GROUND ELEVATION: Approximately 644± feet AMSL

C. U.S.G.S. MAP: Thompson, CT

D. SITE ADDRESS: 165 Elmwood Hill Road, Putnam, CT

E. ZONING WITHIN 1/4 MILE OF SITE: Land within 1/4 mile of the cell site is zoned AG Agricultural.

II. DESCRIPTION

A. SITE SIZE: 100' x 100' Leased Area
50' x 50' Site Compound

B. LESSOR'S PARCEL: Approximately 22.10-acres

C. TOWER TYPE/HEIGHT: 150' Monopole Tower

D. SITE TOPOGRAPHY AND SURFACE: The tower site is located near the top of an existing ridge. Site topography generally slopes down to the west and to the east. Clearing and grading of the compound area and portions of the access road will be required.

E. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The tower is located in the southerly portion of a 22.10-acre parcel. The Property is currently used for residential purposes and is heavily wooded. Two forested hillside seep wetlands were identified more than 100 feet west of the proposed access drive near Elmwood Hill Road, more than 900 feet north of the proposed East Putnam Facility compound.

F. LAND USE WITHIN 1/4 MILE OF SITE: The Property is surrounded by undeveloped woodlands and low-density residential areas to the north and northeast. (See Aerial Photograph at p. 2).

III. FACILITIES

A. POWER COMPANY: Connecticut Light and Power

B. POWER PROXIMITY TO SITE: Approximately 1,200 feet to the east along Elmwood Hill Road.

C. TELEPHONE COMPANY: AT&T

D. PHONE SERVICE PROXIMITY: Same as power

E. VEHICLE ACCESS TO SITE: Vehicle access to the site would extend directly from Elmwood Hill Road.

F. CLEARING AND FILL REQUIRED: Clearing and grading would be required for construction of the tower and site compound and portions of the proposed access drive. Detailed construction plans would be developed after approval by the Siting Council.

IV. LEGAL

A. PURCHASE [ ] LEASE [X]

B. OWNER: Lois S. Pray

C. ADDRESS: 165 Elmwood Hill Road, Thompson, CT 06277

D. DEED ON FILE AT: Town of Putnam, CT Land Records

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FACILITIES AND EQUIPMENT SPECIFICATION
(NEW TOWER & EQUIPMENT BUILDING)

SITE NAME: EAST PUTNAM – 165 Elmwood Hill Road, Putnam, CT

I. TOWER SPECIFICATIONS:

A. MANUFACTURER: To be determined

B. TYPE: Self-supporting monopole

C. TOWER HEIGHT: 150'

D. DIMENSIONS: Approx. 42" base
Approx. 30" top

II. TOWER LOADING:

A. CELLCO EQUIPMENT:

1. Antennas (12)
Model LPA-185063/12CF_2 (71.1" x 6.6" x 5.8") PCS antennas
Model LPA-4019 (94.5" x 21.3" x 12.7")Cellular antennas
Antenna Centerline 147' AGL

2. GPS Antenna: Mounted on the top of the equipment shelter

3. Transmission Lines:
a. MFG/Model: Andrews LDF5-50A
b. Size: 1 5/8"

III. ENGINEERING ANALYSIS AND CERTIFICATION:

The towers will be designed in accordance with Electronic Industries Association Standard EIA/TIA-222-E "Structural Standards for Steel Antenna Towers and Antenna Support Structures." The foundation designs would be based on soil conditions at the site. Details for the towers and foundation designs will be provided as a part of the final D&M Plan.

ENVIRONMENTAL ASSESSMENT STATEMENT

SITE NAME: EAST PUTNAM – 165 Elmwood Hill Road, Putnam, CT

I. PHYSICAL IMPACT

A. WATER FLOW AND QUALITY

No water flow and/or water quality changes are anticipated as a result of the construction or operation of the East Putnam Facility. Two forested hillside seep wetlands were identified more than 100 feet west of the proposed access drive near Elmwood Hill Road, and more than 900 feet north of the proposed East Putnam Facility compound.

B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at the site would emit no air pollutants of any kind. For limited periods during power outages and periodically for maintenance purposes, minor levels of emissions from the on-site generator would result.

Pursuant to R.C.S.A. § 22a-174-3, the on-site emergency back-up generator proposed as a part of this application would require the issuance of a Connecticut Department of Environmental Protection Air Bureau permit for potential emissions. Cellco would obtain this permit prior to installing the generator at the approved cell site.

C. LAND

Tree clearing and regrading of the tower compound and access driveway will be required. The remaining portion of the Property would remain unchanged by the construction and operation of the East Putnam Facility.

D. NOISE

The equipment to be in operation at the East Putnam Facility after construction would emit no noise of any kind, except for operation of the installed heating, air conditioning and ventilation systems and occasional operation of a back-up generator which would be run during power failures and periodically for maintenance purposes. Some noise is anticipated during cell site construction, which is expected to take approximately four to six weeks.

E. POWER DENSITY

The worst-case calculation of power density for Cellco's cellular and PCS antennas at the East Putnam Facility would be 2.46% of the Standard.

F. VISIBILITY

See Visual Resource Evaluation Report included as Attachment 10.

Cellco Partnership

d.b.a. verizon wireless

WIRELESS TELECOMMUNICATIONS FACILITY

EAST PUTNAM

PROJECT: 2007226496
PROJECT TYPE: PCSCO
LOCATION CODE: 178720
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

SITE INFORMATION:

THE SCOPE OF WORK SHALL INCLUDE:

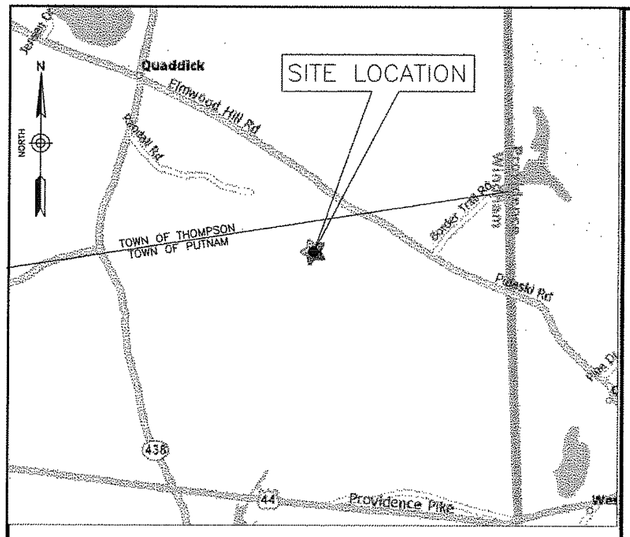
1. THE CONSTRUCTION OF A 50'X50' FENCED WIRELESS COMMUNICATIONS COMPOUND WITHIN A 100'X100' LEASE AREA.
2. SITE GRADING SHALL BE CONDUCTED, AS REQUIRED, WITHIN LEASE AREA AND ACCESS DRIVE FOR PROPER DRAINAGE.
3. A TOTAL OF TWELVE (12) DIRECTIONAL PANEL ANTENNAS ARE PROPOSED TO BE MOUNTED AT A RAD CENTER ELEVATION OF 147'± A.G.L. ON A 150' TALL PROPOSED MONOPOLE LOCATED IN THE CENTER OF THE PROPOSED COMPOUND.
4. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM PROPOSED UTILITY POLE ON ELMWOOD HILL RD TO THE PROPOSED UTILITY BACKBOARDS LOCATED WITHIN THE PROPOSED FENCED COMPOUND. UTILITIES SHALL BE ROUTED UNDERGROUND FROM THE PROPOSED UTILITY BACKBOARDS TO THE PROPOSED 12'X30' EQUIPMENT SHELTER LOCATED WITHIN THE COMPOUND. FINAL UTILITY ROUTING WILL BE VERIFIED BY LOCAL UTILITY COMPANIES.
5. FINAL DESIGN FOR TOWER, TOWER FOUNDATION, AND ANTENNA MOUNTS SHALL BE DONE BY THE TOWER MANUFACTURER.
6. THE PROPOSED WIRELESS FACILITY INSTALLATION SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT CONNECTICUT STATE BUILDING CODE.
7. THERE WILL NOT BE ANY LIGHTING UNLESS REQUIRED BY THE FCC OR THE FAA.
8. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT.

DRIVING DIRECTIONS FROM HARTFORD, CT:

TAKE I-84 E TO EXIT 69.
TURN RIGHT ONTO CT-74.
TURN LEFT ONTO CT-44.
AFTER APPROXIMATELY 20 MILES,
TURN LEFT ONTO E PUTNAM RD.
TURN RIGHT ONTO ELMWOOD HILL RD.
ACCESS IS ON RIGHT.

NOTE:

1. THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.



PUTNAM, CT
SCALE: N.T.S.

LOCATION MAP

PROJECT SUMMARY

SITE NAME:	EAST PUTNAM
SITE ADDRESS:	165 ELMWOOD HILL ROAD PUTNAM, CT 06260
PROPERTY OWNER:	LOIS PRAY 165 ELMWOOD HILL ROAD THOMPSON, CT 06277
APPLICANT:	CELLCO PARTNERSHIP d.b.a VERIZON WIRELESS 99 EAST RIVER DR. EAST HARTFORD, CT 06108
CONTACT PERSON:	SANDY CARTER CELLCO PARTNERSHIP d.b.a VERIZON WIRELESS (860) 803-8219
COORDINATES:	LATITUDE: N 41°-55'-45.32" (NAD 83) LONGITUDE: W 71°-48'-36.17" W (NAD 83) COORDINATES TAKEN FROM 2C LETTER DATED NOVEMBER 15, 2007 BY STEIN SURVEY, LLC

PROJECT DESCRIPTION:

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF 3 SECTORS OF 4 PANEL ANTENNAS PER SECTOR WHICH SHALL BE MOUNTED TO A PROPOSED ANTENNA FRAME ATTACHED TO THE PROPOSED TOWER, AND INSTALLING A 12'X30' EQUIPMENT SHELTER. THIS SYSTEM WILL BOTH TRANSMIT AND RECEIVE RADIO SIGNALS.

SHEET INDEX

Cellco Partnership
d.b.a. verizon wireless

Dewberry
Dewberry-Goodkind, Inc.
59 ELM STREET
SUITE 101
NEW HAVEN, CT 06510
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203.776.2288 FAX

STATE OF CONNECTICUT
FRANCIS D. KOBYLENSKI
No. 19171
LICENSED
PROFESSIONAL ENGINEER

No.	DATE	By	Description
O	05/08/08	JNV	FINAL CSC
B	04/23/08	SY	CSC FOR COMMENT
A	12/20/07	JRF	PRELIM. CSC

REVISIONS

EAST
PUTNAM
165 ELMWOOD
HILL ROAD
PUTNAM, CT 06260

SITE NAME / ADDRESS

DRAWN BY: JRF
APPROVED BY: CKD
CHECKED BY: CKD
DATE: 11/30/07

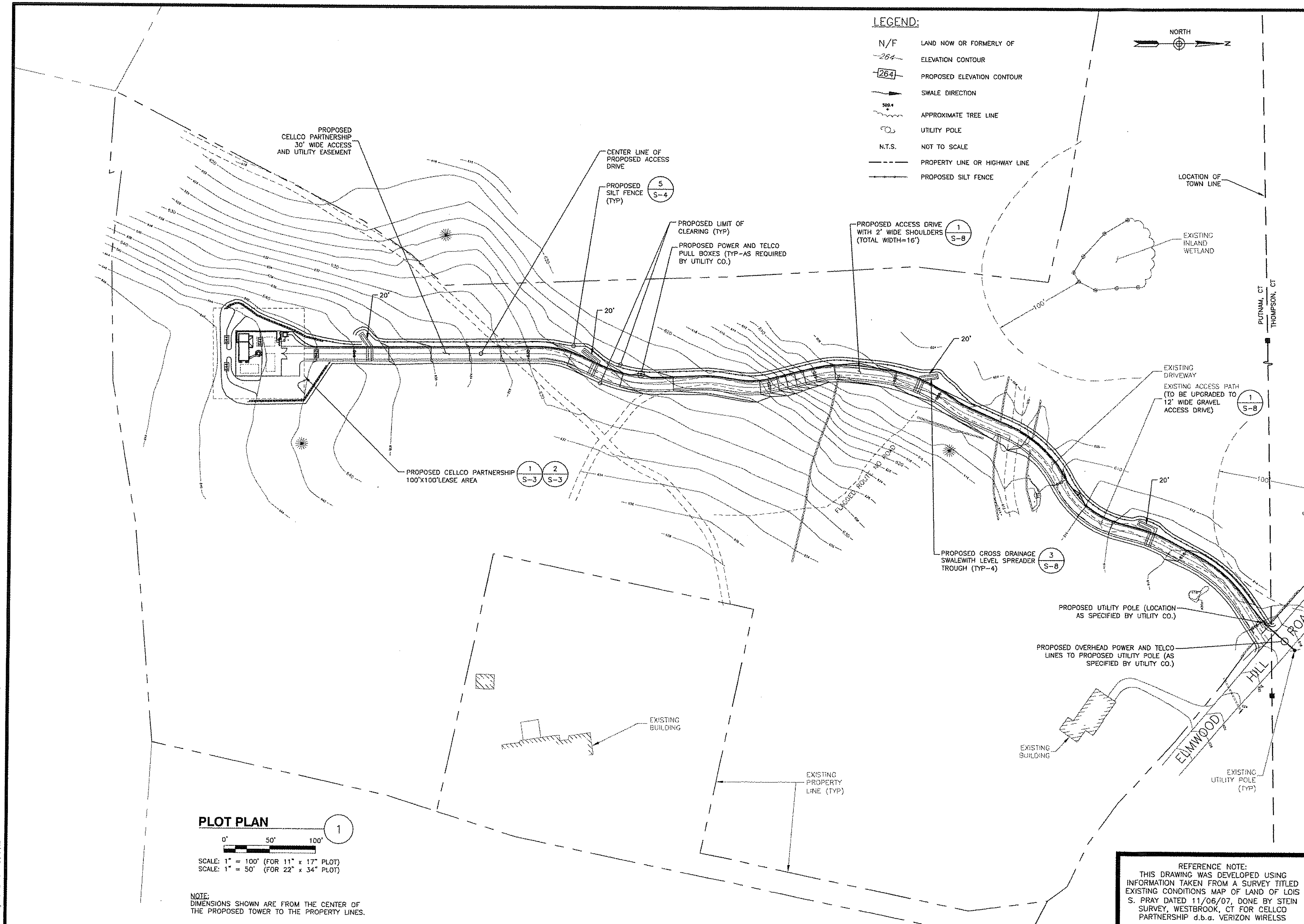
SHEET TITLE:

TITLE SHEET

DEWBERRY P.N. 50006053

T-1

SHEET NO.



LEGEND:
N/F LAND NOW OR FORMERLY OF
ELEVATION CONTOUR
PROPOSED ELEVATION CONTOUR
SWALE DIRECTION
APPROXIMATE TREE LINE
UTILITY POLE
N.T.S. NOT TO SCALE
PROPERTY LINE OR HIGHWAY LINE
PROPOSED SILT FENCE
NORTH
PROPOSED CELLCO PARTNERSHIP 30' WIDE ACCESS AND UTILITY EASEMENT
CENTER LINE OF PROPOSED ACCESS DRIVE
PROPOSED SILT FENCE (TYP) 5 S-4
PROPOSED LIMIT OF CLEARING (TYP)
PROPOSED POWER AND TELCO PULL BOXES (TYP-AS REQUIRED BY UTILITY CO.)
PROPOSED ACCESS DRIVE WITH 2' WIDE SHOULDERS (TOTAL WIDTH=16') 1 S-8
LOCATION OF TOWN LINE
EXISTING INLAND WETLAND
PUTNAM, CT
THOMPSON, CT
EXISTING DRIVEWAY
EXISTING ACCESS PATH (TO BE UPGRADED TO 12' WIDE GRAVEL ACCESS DRIVE) 1 S-8
PROPOSED CELLCO PARTNERSHIP 100'X100'LEASE AREA 1 S-3 2 S-3
FLAGGED ROUTE NO ROAD
PROPOSED CROSS DRAINAGE SWALEWITH LEVEL SPREADER TROUGH (TYP-4) 3 S-8
PROPOSED UTILITY POLE (LOCATION AS SPECIFIED BY UTILITY CO.)
PROPOSED OVERHEAD POWER AND TELCO LINES TO PROPOSED UTILITY POLE (AS SPECIFIED BY UTILITY CO.)
ELMWOOD HILL ROAD
EXISTING BUILDING
EXISTING UTILITY POLE (TYP)
EXISTING PROPERTY LINE (TYP)
20'
100'

PLOT PLAN (1)

0' 50' 100'

SCALE: 1" = 100' (FOR 11" x 17" PLOT)
SCALE: 1" = 50' (FOR 22" x 34" PLOT)

NOTE:
DIMENSIONS SHOWN ARE FROM THE CENTER OF THE PROPOSED TOWER TO THE PROPERTY LINES.

REFERENCE NOTE:
THIS DRAWING WAS DEVELOPED USING INFORMATION TAKEN FROM A SURVEY TITLED EXISTING CONDITIONS MAP OF LAND OF LOIS S. PRAY DATED 11/06/07, DONE BY STEIN SURVEY, WESTBROOK, CT FOR CELLCO PARTNERSHIP d.b.a. VERIZON WIRELSS

Cellco Partnership
d.b.a. verizon wireless

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STATE OF CONNECTICUT
FRANCIS D. KOBYLENSKI
LICENSED PROFESSIONAL ENGINEER

No.	DATE	By	Description
0	05/08/08	JNV	FINAL CSC
B	04/23/08	SY	CSC FOR COMMENT
A	12/20/07	JRF	PRELIM. CSC

REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

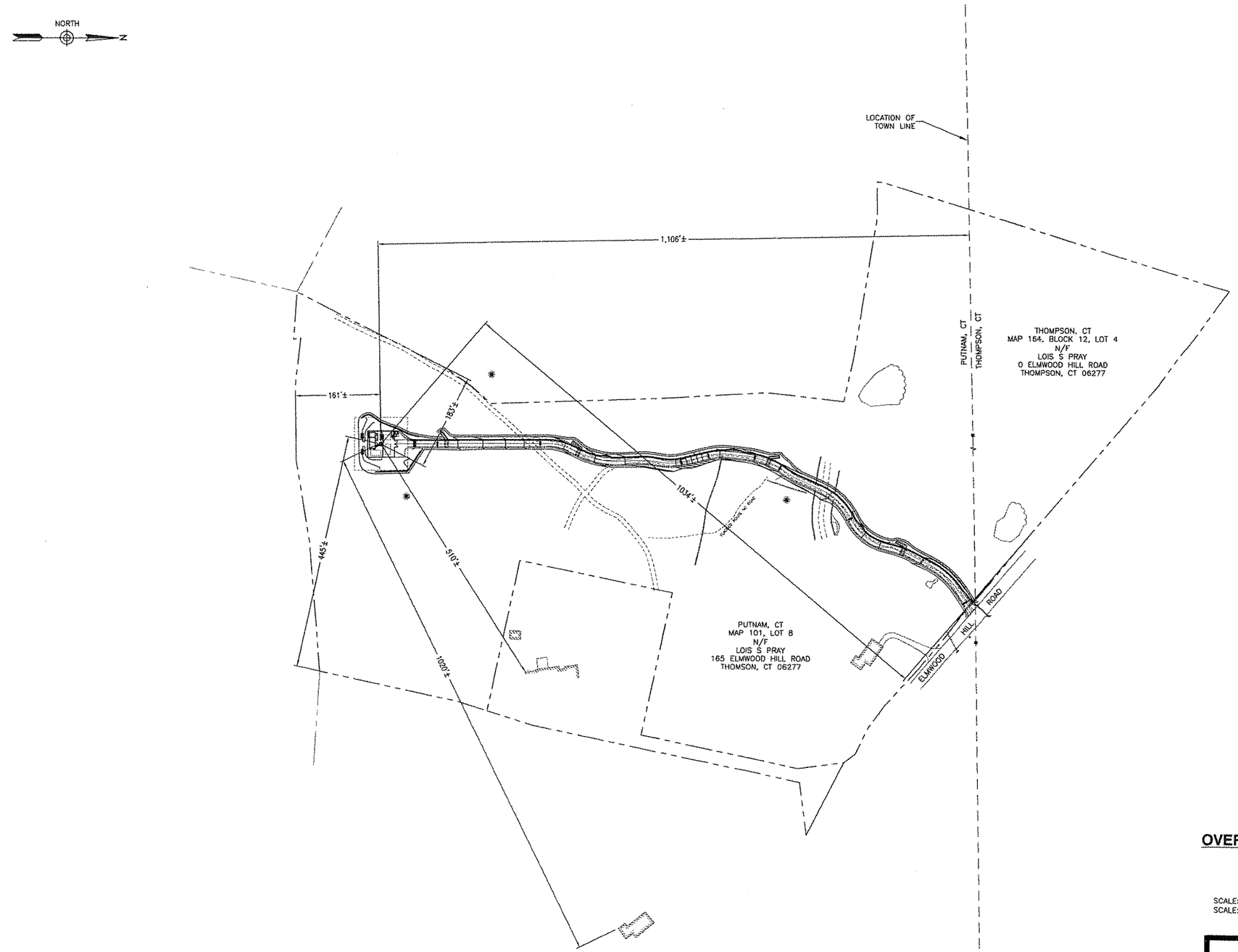
SHEET TITLE:

PLOT PLAN

DEWBERRY P.N. 50006053

S-1

SHEET NO.



NOTE:

1. DIMENSIONS ARE FROM THE CENTER OF THE PROPOSED TOWER TO THE NEAREST PROPERTY LINES AND BUILDINGS.
2. LENGTH OF PROPOSED ACCESS ROAD = 1200'±.

OVERALL PLOT PLAN (1)

0' 100' 200'

SCALE: 1" = 200' (FOR 11" x 17" PLOT)
SCALE: 1" = 100' (FOR 22" x 34" PLOT)

REFERENCE NOTE:
THIS DRAWING WAS DEVELOPED USING INFORMATION TAKEN FROM A SURVEY TITLED EXISTING CONDITIONS MAP OF LAND OF LOIS S. PRAY DATED 11/06/07, DONE BY STEIN SURVEY, WESTBROOK, CT FOR CELLCO PARTNERSHIP d.b.a. VERIZON WIRELSS

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STATE OF CONNECTICUT
FRANCIS D KOBYLENSKI
LICENSED
PROFESSIONAL ENGINEER

No.	DATE	By	Description
Q	05/08/08	JNV	FINAL CSC
B	04/23/08	SY	CSC FOR COMMENT
A	12/20/07	JRF	PRELIM. CSC

REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

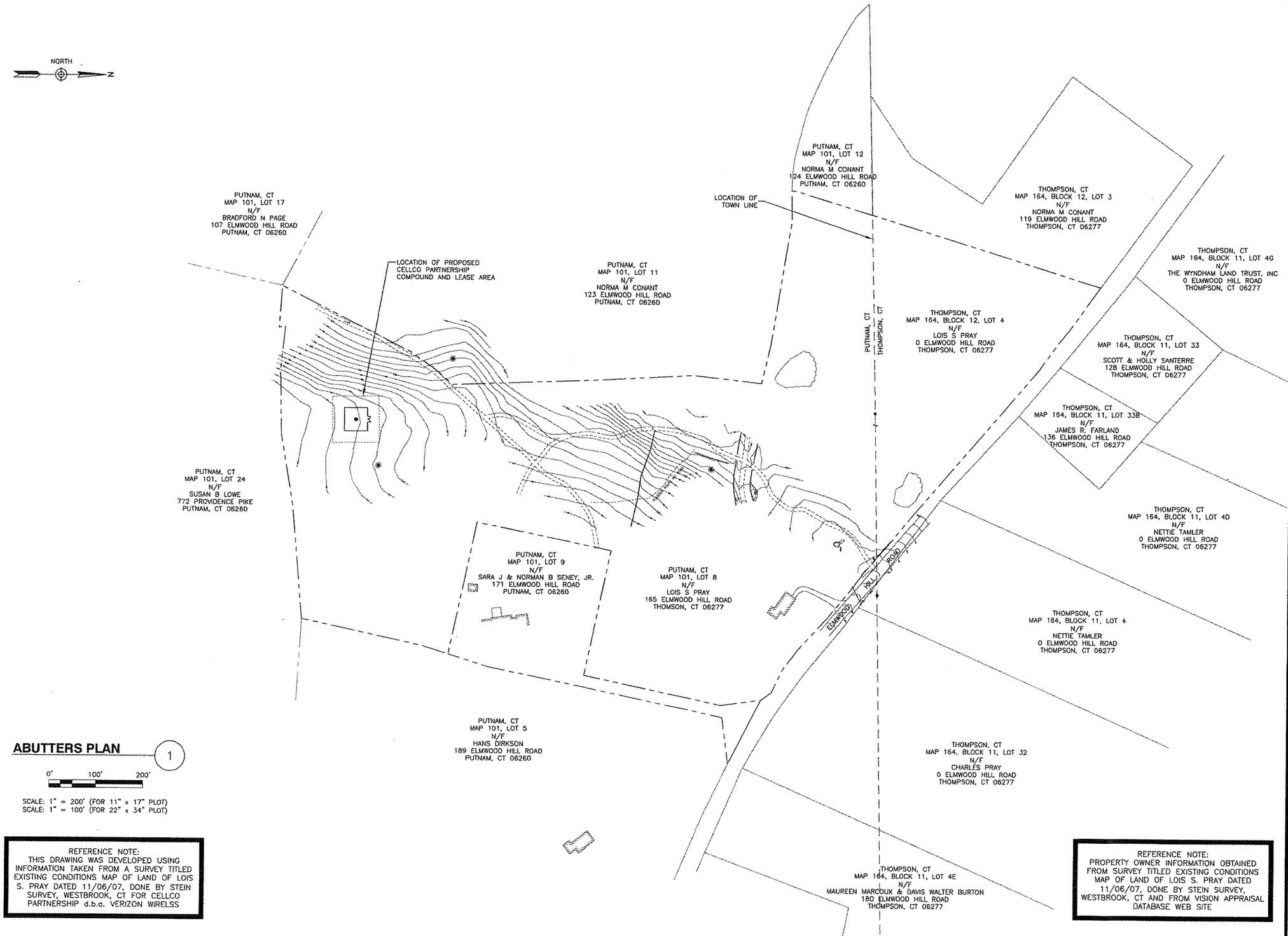
SHEET TITLE:

OVERALL PLOT PLAN

DEWBERRY P.N. 50006053

S-1A

SHEET NO.



ABUTTERS PLAN 1

0' 100' 200'

SCALE: 1" = 200' (FOR 11" x 17" PLOT)
SCALE: 1" = 100' (FOR 22" x 34" PLOT)

REFERENCE NOTE:
THIS DRAWING WAS DEVELOPED USING INFORMATION TAKEN FROM A SURVEY TITLED EXISTING CONDITIONS MAP OF LAND OF LOIS S. PRAY DATED 11/06/07, DONE BY STEIN SURVEY, WESTBROOK, CT FOR CELLCO PARTNERSHIP d.b.a. VERIZON WIRELSS

REFERENCE NOTE:
PROPERTY OWNER INFORMATION OBTAINED FROM SURVEY TITLED EXISTING CONDITIONS MAP OF LAND OF LOIS S. PRAY DATED 11/06/07, DONE BY STEIN SURVEY, WESTBROOK, CT AND FROM VISION APPRAISAL DATABASE WEB SITE

Cellco Partnership
d.b.a. verizon wireless

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STATE OF CONNECTICUT
FRANCIS D. KOBY ENGLISH
LICENSED
PROFESSIONAL ENGINEER

No.	DATE	By	Description
0	05/08/08	JNV	FINAL CSC
B	04/23/08	SY	CSC FOR COMMENT
A	12/20/07	JRF	PRELIM. CSC

REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

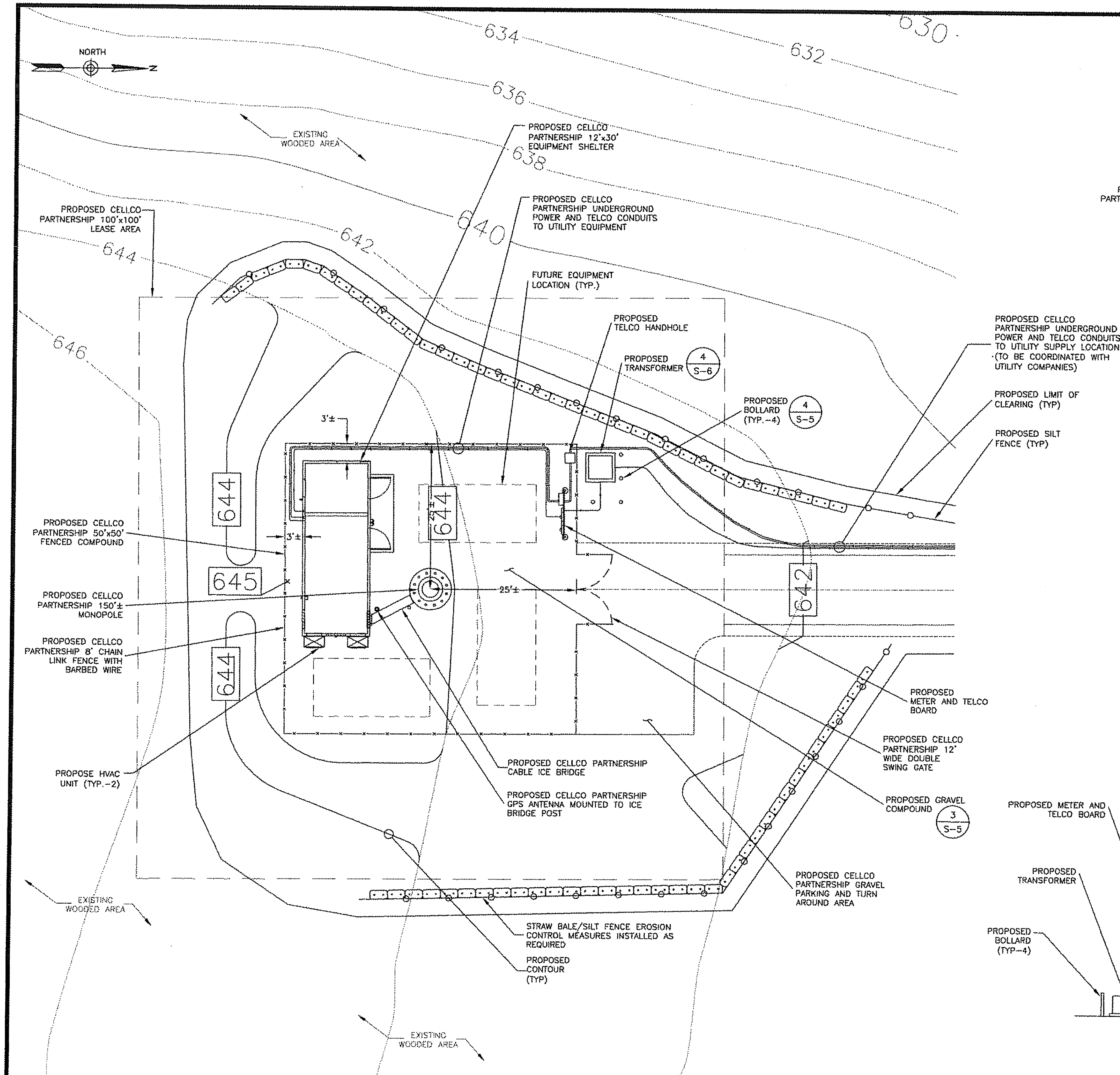
SHEET TITLE:

ABUTTERS PLAN

DEWBERRY P.N. 50006053

S-2

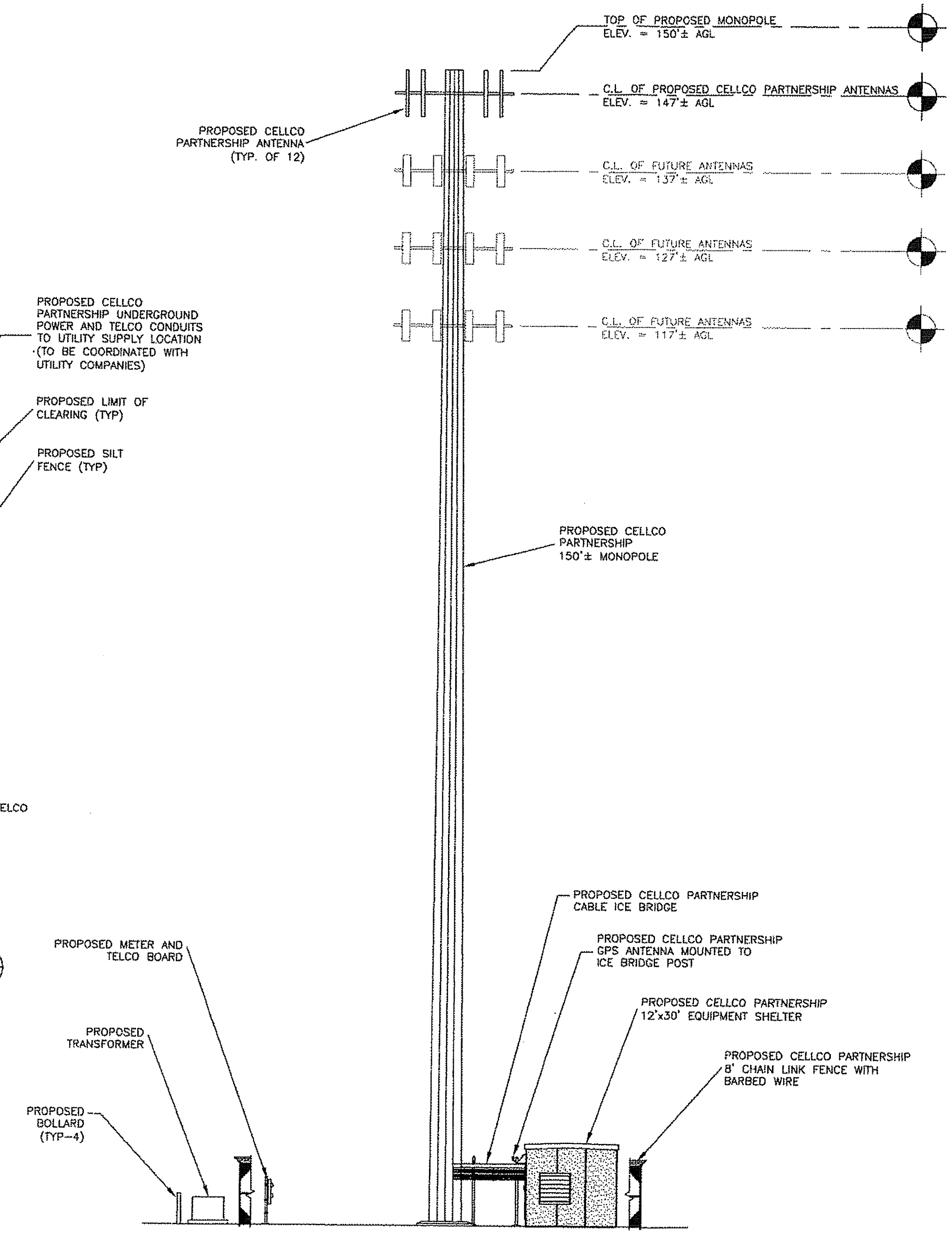
SHEET NO.



SITE PLAN 1

0' 10' 20'

SCALE: 1" = 20' (FOR 11" x 17" PLOT)
SCALE: 1" = 10' (FOR 22" x 34" PLOT)



ELEVATION 2

0' 10' 20'

SCALE: 1" = 20' (FOR 11" x 17" PLOT)
SCALE: 1" = 10' (FOR 22" x 34" PLOT)

Cellco Partnership
d.b.a. verizon wireless

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STATE OF CONNECTICUT
FRANCIS D. KOBYLENSKI
No. 11...
PROFESSIONAL ENGINEER

No.	DATE	By	Description
0	05/08/08	JNV	FINAL CSC
B	04/23/08	SY	CSC FOR COMMENT
A	12/20/07	JRF	PRELIM. CSC

REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

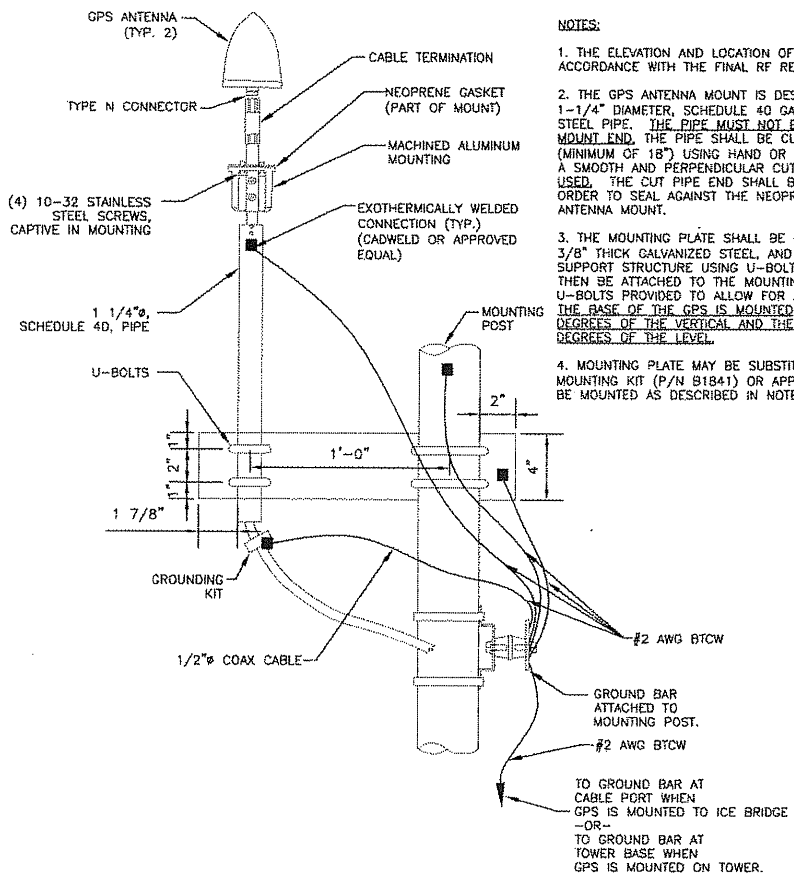
SHEET TITLE:

SITE PLAN & ELEVATION

DEWBERRY P.N. 50006053

S-3

SHEET NO.



NOTES:

1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.

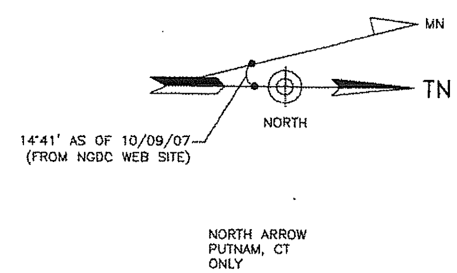
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" DIAMETER, SCHEDULE 40 GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18") USING HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.

3. THE MOUNTING PLATE SHALL BE FABRICATED AS SHOWN USING 3/8" THICK GALVANIZED STEEL, AND ATTACHED TO THE APPROPRIATE SUPPORT STRUCTURE USING U-BOLTS. THE SUPPORT PIPE SHALL THEN BE ATTACHED TO THE MOUNTING PLATE USING THE OVERSIZED U-BOLTS PROVIDED TO ALLOW FOR ADJUSTMENT. IT IS CRITICAL THAT THE BASE OF THE GPS IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF THE VERTICAL AND THE BASE OF THE GPS IS WITHIN 2 DEGREES OF THE LEVEL.

4. MOUNTING PLATE MAY BE SUBSTITUTED WITH VALMONT UNIVERSAL MOUNTING KIT (P/N 91841) OR APPROVED EQUAL. GPS BASE MUST BE MOUNTED AS DESCRIBED IN NOTE 3.

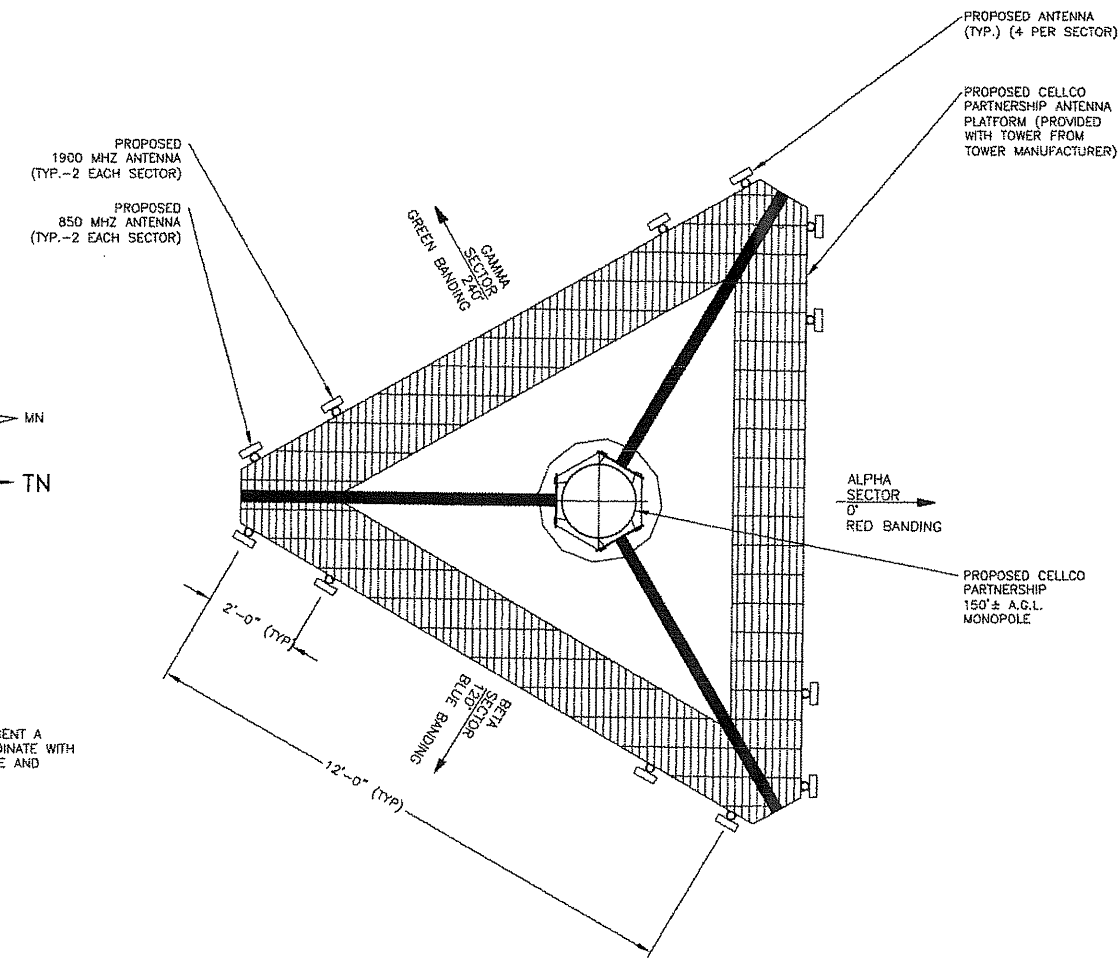
GPS ANTENNA DETAIL (1)

SCALE: N.T.S.



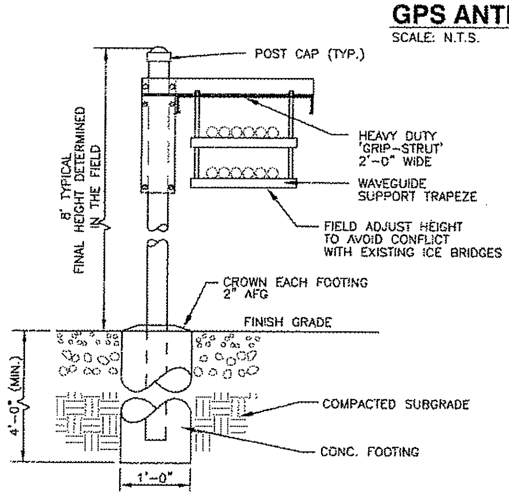
NOTE:

1. ANTENNA TYPES AND AZIMUTHS SHOWN REPRESENT A TYPICAL SITE CONFIGURATION. GC SHALL COORDINATE WITH RF ENGINEER FOR SITE SPECIFIC ANTENNA TYPE AND AZIMUTH REQUIREMENTS.



ANTENNA AZIMUTH DETAIL (2)

SCALE: N.T.S.



ICE BRIDGE DETAIL (3)

SCALE: N.T.S.

NOTES:

1. ICE BRIDGE SHALL BE VALMONT GRIP STRUT TRANSMISSION LINE BRIDGE KIT (P/N: B2959) OR APPROVED EQUAL.

2. CABLE SUPPORT SHALL BE VALMONT DOUBLE LEVEL CHANNEL (P/N: 802264) OR APPROVED EQUAL.

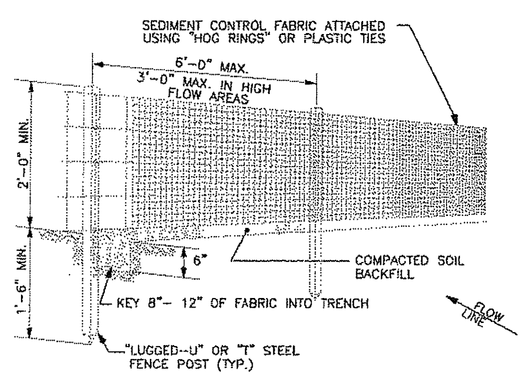
3. ALL COMPONENTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

4. CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL ICE BRIDGE COMPONENTS.

5. SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

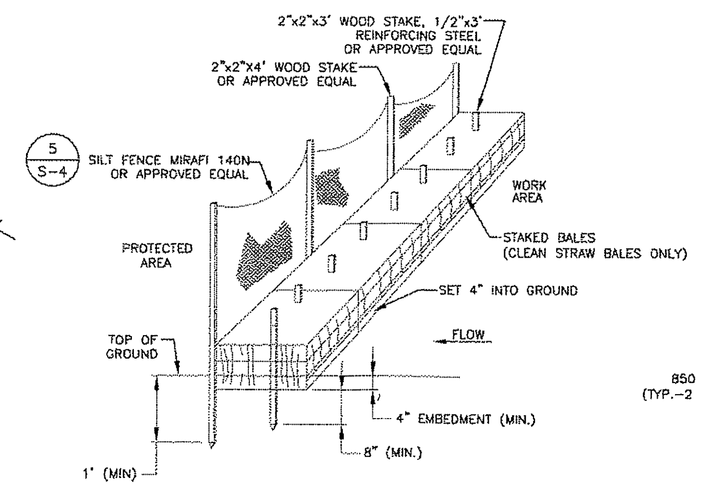
6. ICE BRIDGE SHALL BE ROUTED TO ACCOMMODATE THE MINIMUM BENDING RADIUS OF THE COAXIAL CABLE.

7. ICE BRIDGE COMPONENTS SHOWN ARE SCHEMATIC, CONSULT MANUFACTURER FOR EXACT AND CURRENT SPECIFICATIONS.



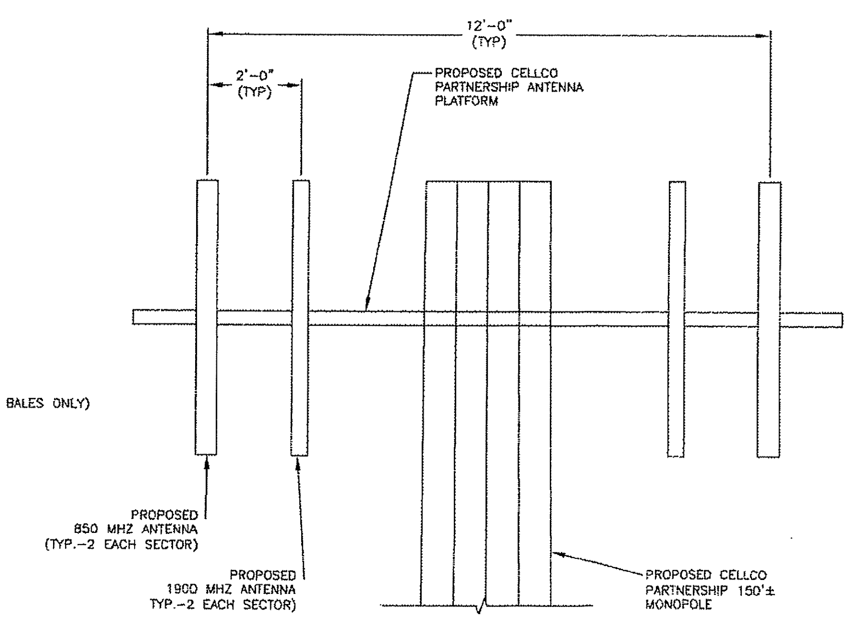
SILT FENCE DETAIL (5)

SCALE: N.T.S.



SILT FENCE/CLEAN STRAW BALE DETAIL (6)

SCALE: N.T.S.



ANTENNA CONFIGURATION DETAIL (4)

SCALE: N.T.S.

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No.	DATE	By	Description

REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
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SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

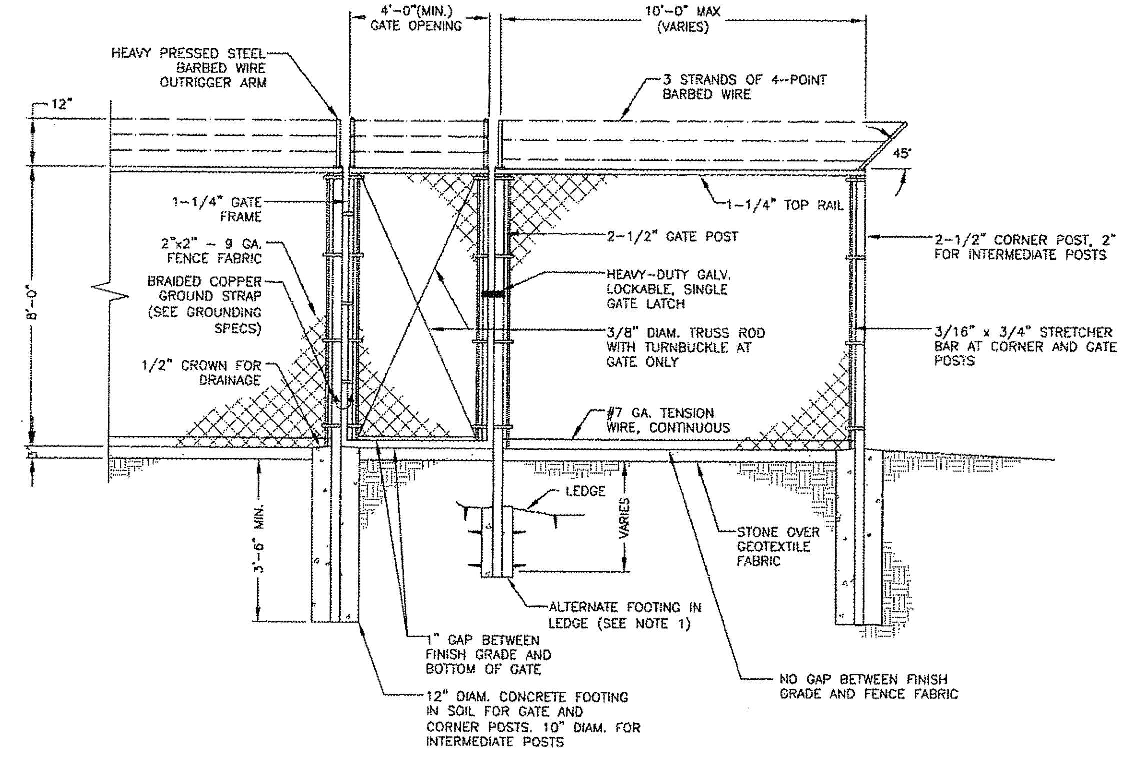
SHEET TITLE:

CONSTRUCTION DETAILS

DEWBERRY P.N. 50006053

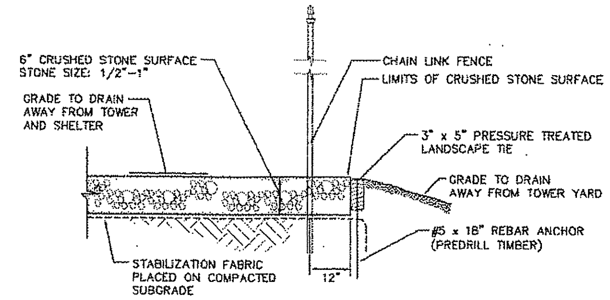
S-4

SHEET NO.



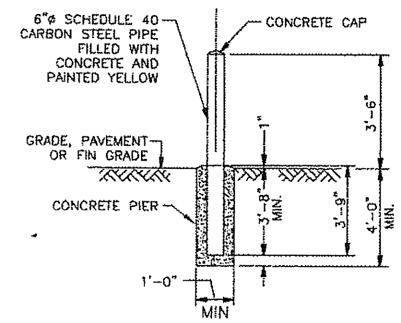
TYPICAL CHAIN LINK FENCE AND MAN GATE (1)

SCALE: N.T.S.



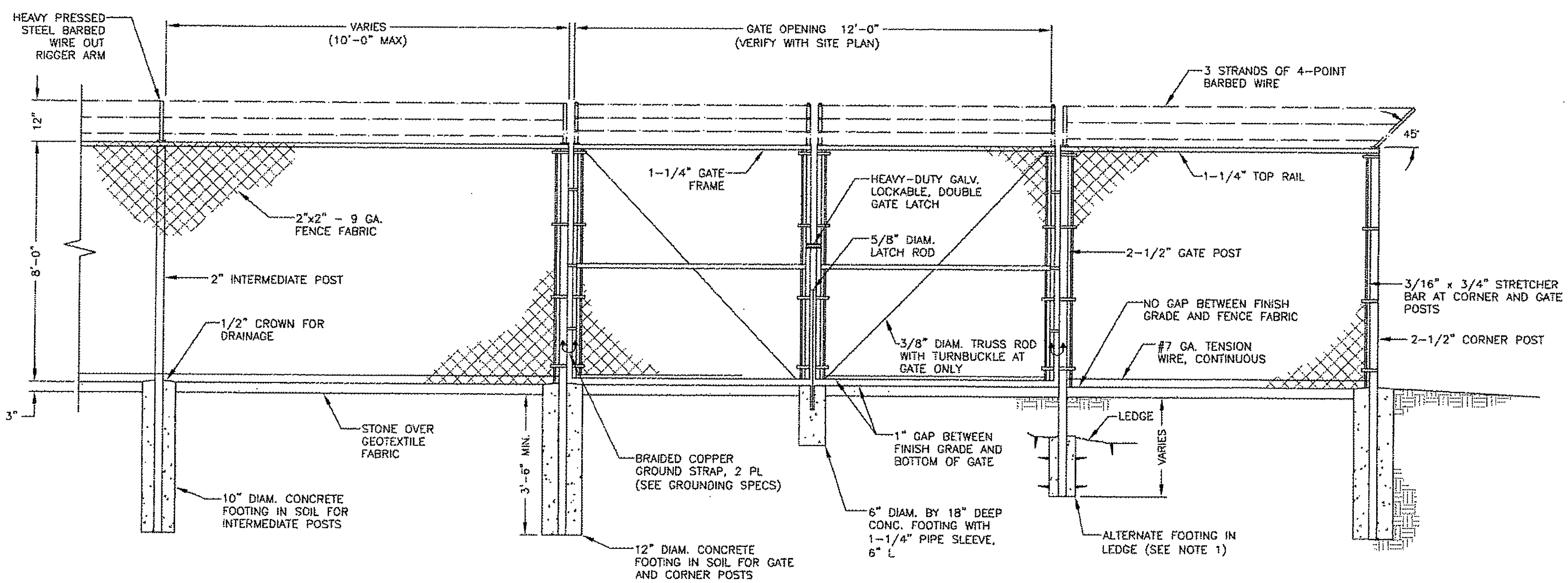
GRAVEL YARD SECTION (3)

SCALE: N.T.S.



BOLLARD DETAIL (4)

SCALE: N.T.S.



TYPICAL CHAIN LINK FENCE AND ACCESS GATE (2)

SCALE: N.T.S.

CHAIN LINK FENCE NOTES AND SPECIFICATIONS:

NOTES:

1. ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'-6", CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE. CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.

2. ATTACH GATE WITH 1-1/2 PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.

QUALITY ASSURANCE:

1. INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900

2. COMPLY WITH STANDARDS OF THE CHAIN LINK FENCE MANUFACTURER'S INSTITUTE

3. PROVIDE STEEL FENCE AND RELATED GATES AS PRODUCED BY A SINGLE MANUFACTURER, INCLUDING NECESSARY ERECTION ACCESSORIES, FITTINGS, AND FASTENINGS

4. COMPLY WITH ASTM A-120 FOR REQUIREMENTS OF SCHEDULE 40 PIPING

5. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.

6. HEIGHT = 7' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.

FINISHES:

1. STEEL FRAMEWORK:
PIPE - GALVANIZED IN ACCORDANCE WITH ASTM A-120, 2.0 OZ. ZINC PER SQ. FT. CLASS "B" STEEL TUBING - EXTERIOR: 1.0 OZ ZINC PER SQ. FT PLUS A COATING OF CHROMATE AND POLYURETHANE. INTERIOR: ZINC RICH ORGANIC COATING.

2. FABRIC: ALUMINUM FINISH - ASTM A-491 ALUMINUM COATED WITH 0.40 OZ PER SQ. FT.

3. FENCE AND GATE HARDWARE, MISCELLANEOUS MATERIALS, ACCESSORIES: WIRE TIES - GALVANIZED FINISH, ASTM A-90 2.0 OZ PER SQ. FT. HARDWARE AND OTHER MISCELLANEOUS ITEMS - GALVANIZED FINISH, ASTM A-153 (TABLE 1) ANGLE BEAMS, I BEAMS, AND STEEL SHAPES - GALVANIZED IN ACCORDANCE WITH ASTM A-123, 2.0 OZ ZINC PER SQ. FT.

4. BARBED WIRE: ALUMINUM FINISH - ASTM A-585 CLASS 2, 0.30 OZ PER SQ. FT.

PRODUCTS:

1. STEEL FRAME WORK: END POSTS, CORNER POSTS, PULL POSTS AND LINE POSTS - CLASS B STEEL TUBING: 2.875" OD, 4.64 LB PER LINEAR FT; SS-40 FENCE PIPE

2. STEEL FABRIC: ONE PIECE WIDTHS FOR FENCE HEIGHTS UP TO 12'-0"; CHAIN LINK NO. 9 GAUGE, 2 INCH MESH; SELVAGES: TOP SIDE TWISTED AND BARBED, BOTTOM SIDE KNUCKLED.

3. SWING GATE POSTS: PIPE - 4" OD, 9.11 LB PER LINEAR FT (SCHEDULE 40)

4. SWING GATE FRAMES: CLASS B STEEL TUBING - 1.90" OD, 2.28 LB PER LINEAR FT; SS-40 FENCE PIPE

5. GATE HARDWARE: HINGES - NON-LIFT-OFF TYPE, OFFSET TO PERMIT 180° DOOR SWING, AND OF SUITABLE SIZE AND WEIGHT TO SUPPORT GATE. PROVIDE 1 1/2 PAIR OF HINGES FOR EACH LEAF OVER 6' HIGH. LATCH - PROVIDE INDUSTRIAL SINGLE LEAF LATCH BY CARGO PROTECTORS, INC. (OR APPROVED EQUAL) AS SUPPLIED BY AFSCO FENCE SUPPLY CO. (OR SIMILAR VENDOR) FOR ALL DOUBLE SWING GATES OVER 10' IN TOTAL WIDTH.

6. RAILS AND POST BRACES: CLASS B STEEL TUBING - 1.660 INCHES OD, 1.84 LB PER LINEAR FT; SS-40 FENCE PIPE

7. POST TOPS: STEEL, WROUGHT IRON, OR MALLEABLE IRON.

8. STRETCHER BARS: ONE PIECE EQUAL TO FULL HEIGHT OF FABRIC, MINIMUM CROSS-SECTION 3/16" x 3/4".

9. METAL BANDS (FOR STRETCHER BARS): STEEL, WROUGHT IRON, OR MALLEABLE IRON, TO SECURE STRETCHER BARS TO END, CORNER, PULL GATE POSTS.

10. WIRE TIES: FOR TYING FABRIC TO LINE POSTS, RAILS AND BRACES - 9 GAUGE STEEL WIRE

11. TRUSS RODS: 3/8" DIA.

12. ANGLE BEAMS, I BEAMS AND STEEL SHAPES: ASTM A-36

13. BOLTS AND NUTS: ASTM A-307, GRADE A

14. CONCRETE: MINIMUM 3000 PSI AT 28 DAYS

15. BARBED WIRE: WITH 14 GAUGE 4-POINT STEEL BARBS SPACED 5" O.C. EXTENSION ARMS: PRESSED STEEL, WROUGHT IRON, OR MALLEABLE IRON, COMPLETE WITH PROVISION FOR ANCHORAGE TO POSTS AND ATTACHING 3 ROWS OF BARBED WIRE TO EACH ARM. PROVIDE THE FOLLOWING TYPE: SINGLE 45° ARM, ONE FOR EACH POST; INSTALL EXTENSION ARMS WITH OUTWARD CAMBER TOWARD OUTSIDE OF TOWER YARD.

INSTALLATION:

1. SPACE POSTS EQUIDISTANT IN THE FENCE LINE WITH A MAXIMUM OF 10' ON CENTER

2. LOCATE CORNER POSTS AT CORNERS AND AT CHANGES IN DIRECTION.

3. INSTALL BRACE AND BOTTOM RAILS IN ONE PIECE BETWEEN POSTS AND FLUSH WITH POST ON FABRIC SIDE USING SPECIAL OFFSET FITTINGS WHERE NECESSARY.

4. DIAGONALLY BRACE CORNER POSTS, PULL POSTS, AND TERMINATE POSTS TO ADJACENT LINE POSTS WITH TRUSS RODS AND TURNBUCKLES

5. ATTACH FABRIC TO SECURITY SIDE OF FENCE. MAINTAIN A 2" CLEARING ABOVE FINISHED GRADE EXCEPT WHEN INDICATED OTHERWISE. THREAD STRETCHER BARS THROUGH FABRIC USING ONE BAR FOR EACH GATE AND END POST AND TWO FOR EACH CORNER AND PULL POST. PULL FABRIC TIGHT SO THAT THE MAXIMUM DEFLECTION OF FABRIC IS 2" WHEN A PULL IS EXERTED PERPENDICULAR TO THE CENTER OF A PANEL. MAINTAIN TENSION BY SECURING STRETCHER BARS TO POSTS WITH METALS BANDS SPACED 15" O.C. FOR RAILS AND BRACES. BEND BACK WIRE ENDS TO PREVENT INJURY. TIGHTEN STRETCHER BAR BANDS, WIRE TIES, AND OTHER FASTENERS SECURELY.

6. POSITION BOLTS FOR SECURING METAL BANDS AND HARDWARE SO NUTS ARE LOCATED OPPOSITE THE FABRIC SIDE OF FENCE. TIGHTEN NUTS AND SCORE EXCESS THREADS. SECURE POST TOPS, EXTENSION ARMS, AND CAPS WITH ONE-WAY CADMIUM PLATED STEEL SCREWS.

7. INSTALL GATES PLUMB AND LEVEL AND ADJUST FOR FULL OPENING WITHOUT INTERFERENCE. INSTALL GROUND-SET ITEMS IN CONCRETE FOR ANCHORAGE, AS RECOMMENDED BY A FENCE MANUFACTURER. ADJUST HARDWARE FOR SMOOTH OPERATION AND LUBRICATE WHERE NECESSARY.

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No.	DATE	By	Description
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REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

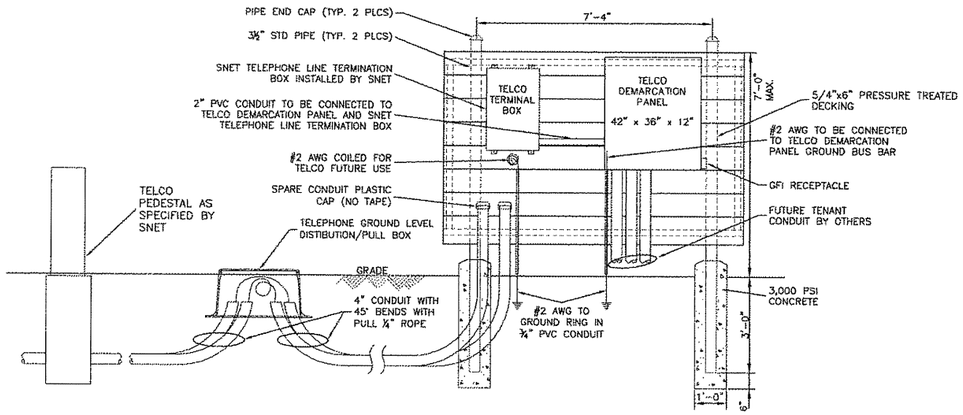
SITE NAME / ADDRESS

DRAWN BY: JRF
APPROVED BY: CKD
CHECKED BY: CKD
DATE: 11/30/07

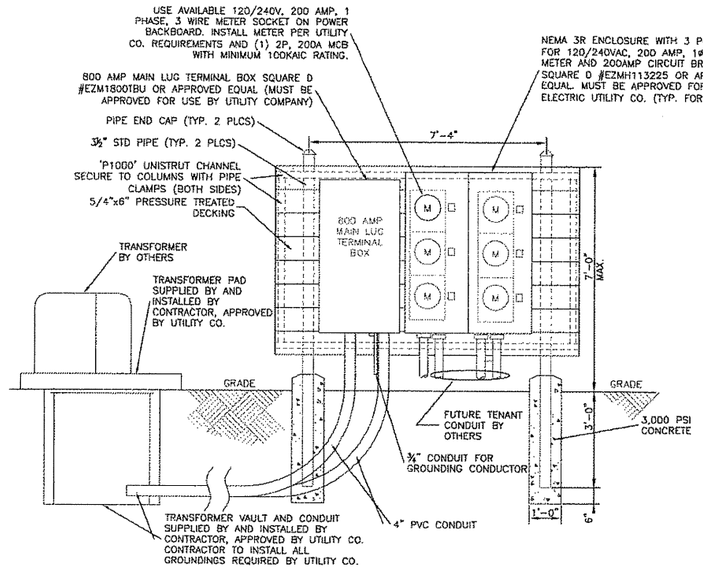
SHEET TITLE:
FENCE NOTES & DETAILS AND SITE DETAILS

DEWBERRY P.N. 50006053

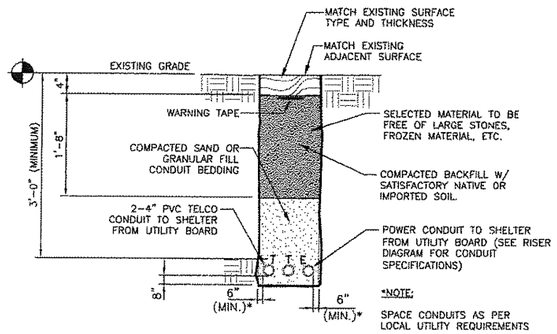
SHEET NO.
S-5



TELCO BACKBOARD DETAIL 1
SCALE: N.T.S.



UTILITY BACKBOARD DETAIL 2
SCALE: N.T.S.



UNDERGROUND UTILITY DETAIL 3
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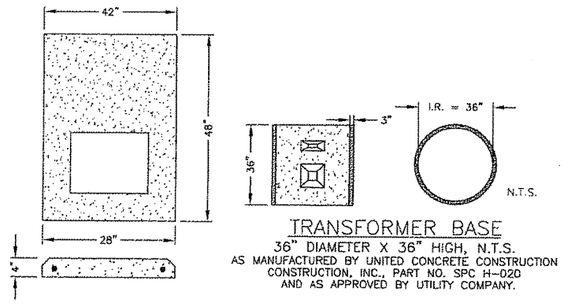

TRANSFORMER BASE
36" DIAMETER X 36" HIGH, N.T.S.
AS MANUFACTURED BY UNITED CONCRETE CONSTRUCTION CONSTRUCTION, INC., PART NO. SPC H-020 AND AS APPROVED BY UTILITY COMPANY.

167KVA MAXIMUM – 42" X 48" X 4", N.T.S.
AS MANUFACTURED BY UNITED CONCRETE CONSTRUCTION, INC., PART NO. SPC P-009
DETAIL IS TYPICAL. GENERAL CONTRACTOR SHALL INSTALL PER LOCAL UTILITY SPECIFICATIONS.

TRANSFORMER BASE DETAIL 4
SCALE: N.T.S.

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REVISIONS

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SITE NAME / ADDRESS

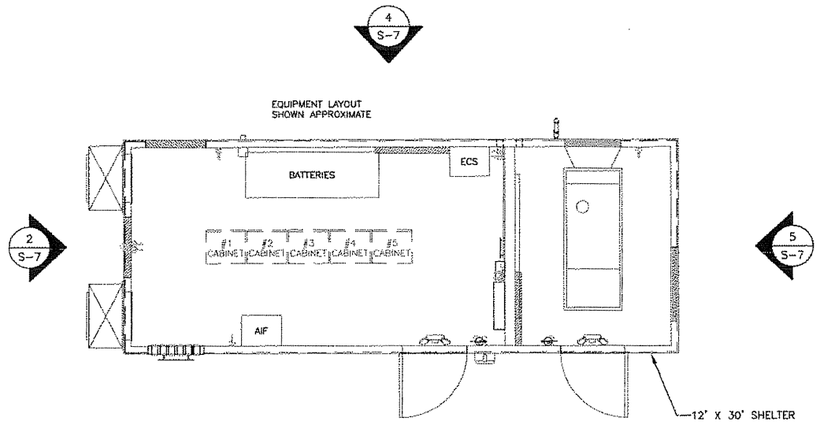
DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

SHEET TITLE:
UTILITY & EROSION CONTROL NOTES & DETAILS

DEWBERRY P.N. 50006053

S-6

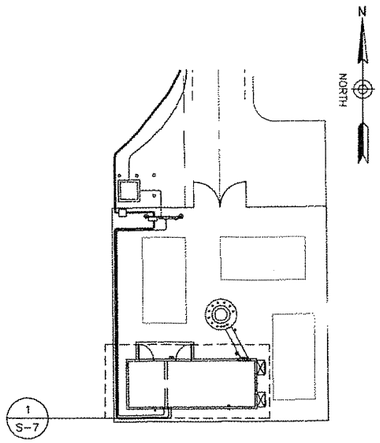
SHEET NO.



SHELTER FLOOR PLAN 1

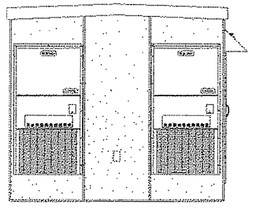
0' 2' 4' 8'

SCALE: 1/8" = 1' (FOR 11" x 17" PLOT)
SCALE: 1/4" = 1' (FOR 22" x 34" PLOT)



SHELTER LOCATION KEY PLAN

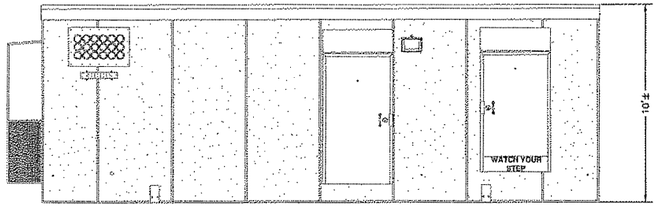
SCALE: N.T.S.



SHELTER LEFT ELEVATION 2

0' 2' 4' 8'

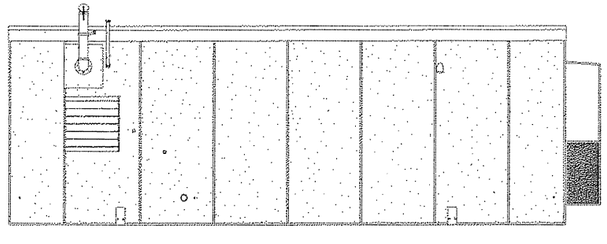
SCALE: 1/8" = 1' (FOR 11" x 17" PLOT)
SCALE: 1/4" = 1' (FOR 22" x 34" PLOT)



SHELTER FRONT ELEVATION 3

0' 2' 4' 8'

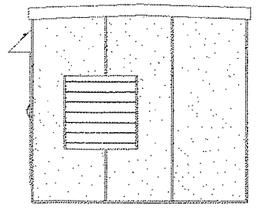
SCALE: 1/8" = 1' (FOR 11" x 17" PLOT)
SCALE: 1/4" = 1' (FOR 22" x 34" PLOT)



SHELTER REAR ELEVATION 4

0' 2' 4' 8'

SCALE: 1/8" = 1' (FOR 11" x 17" PLOT)
SCALE: 1/4" = 1' (FOR 22" x 34" PLOT)



SHELTER RIGHT ELEVATION 5

0' 2' 4' 8'

SCALE: 1/8" = 1' (FOR 11" x 17" PLOT)
SCALE: 1/4" = 1' (FOR 22" x 34" PLOT)

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REVISIONS

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APPROVED BY CKD
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DATE 11/30/07

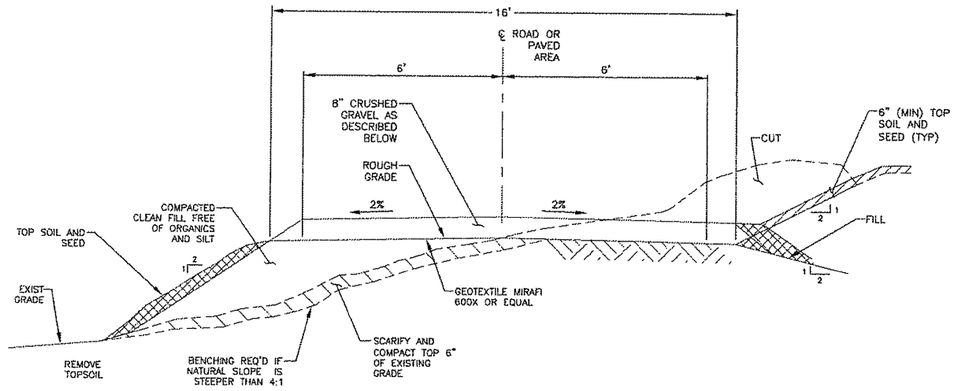
SHEET TITLE:

EQUIPMENT SHELTER PLAN & ELEVATIONS

DEWBERRY P.N. 50006053

S-7

SHEET NO.

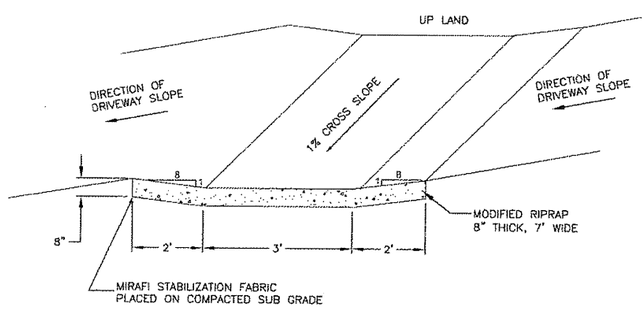


CRUSHED GRAVEL SHALL BE FREE OF ORGANICS AND CONSIST SOLELY OF CRUSHED GRAVEL WITH THE FOLLOWING GRADATION:

SIEVE: 3 1/2"	% PASSING: 100
SIEVE: 1 1/2"	% PASSING: 55–100
SIEVE: 1/4"	% PASSING: 25–60
SIEVE: NO. 10	% PASSING: 15–45
SIEVE: NO. 40	% PASSING: 5–25
SIEVE: NO. 100	% PASSING: 0–10
SIEVE: NO. 200	% PASSING: 0–5

ACCESS DRIVE DETAIL 1

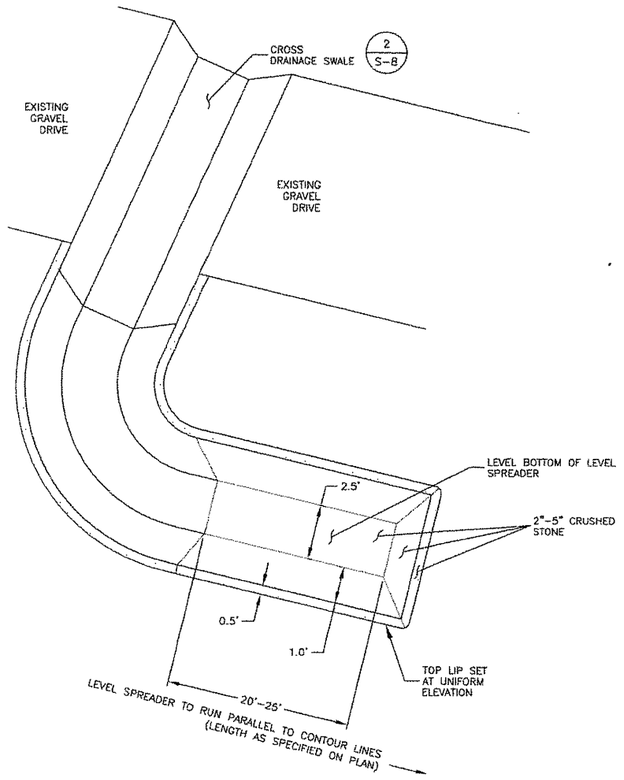
SCALE: N.T.S.



NOTE:
TO BE INSTALLED WHERE NECESSARY AND AS SPECIFIED IN THESE PLANS TO MAINTAIN NATURAL FLOW OF SURFACE RUNOFF

CROSS DRAINAGE SWALE DETAIL 2

SCALE: N.T.S.



LEVEL SPREADER 3

SCALE: N.T.S.

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REVISIONS

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SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

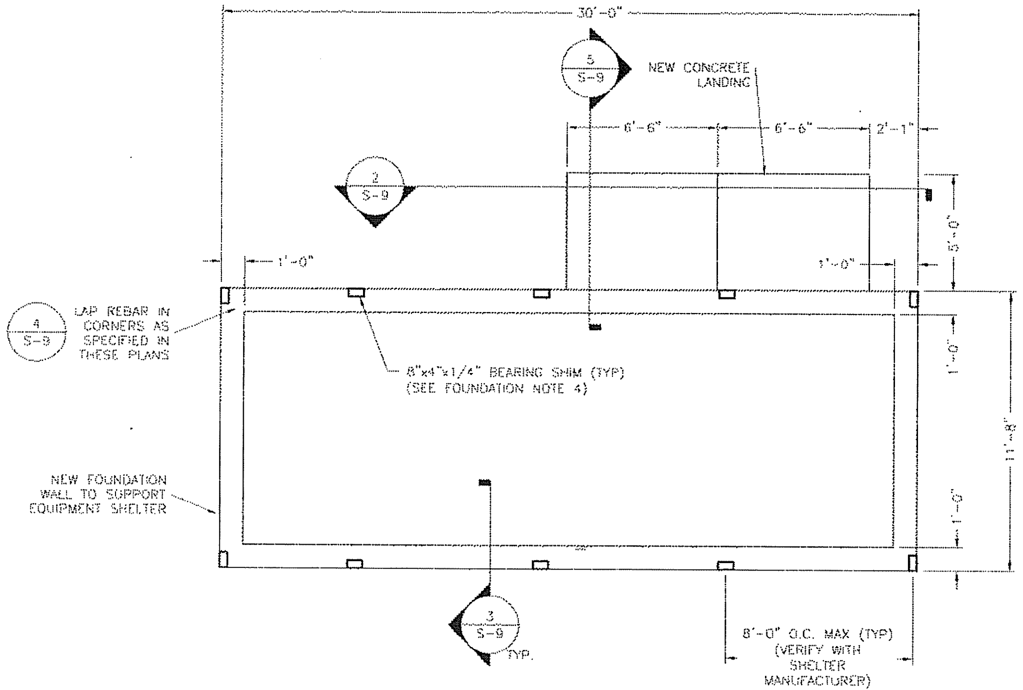
SHEET TITLE:

ACCESS DRIVE DETAILS

DEWBERRY P.N. 50006053

S-8

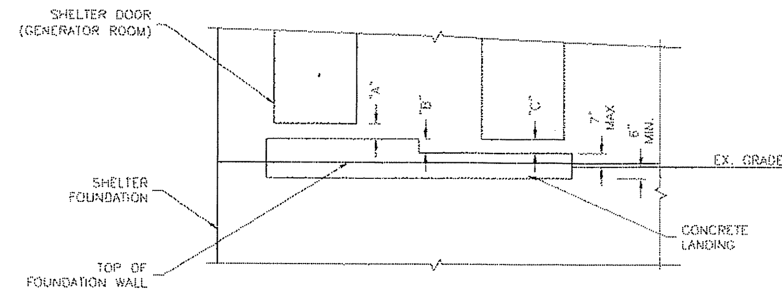
SHEET NO.



1 FOUNDATION PLAN
S-9 SCALE: 1/4" =1'-0"

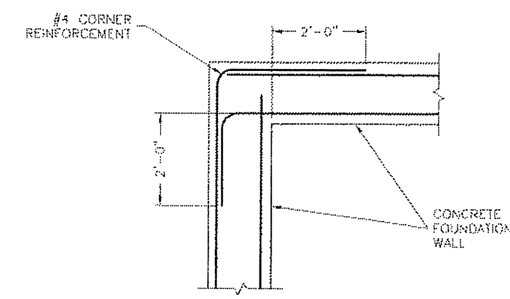
FOUNDATION NOTES:

1. PRIOR TO CONSTRUCTION, SEE PREFABRICATED SHELTER & FOUNDATION NOTES AT THE BEGINNING OF THESE PLANS.
2. TOP OF FOUNDATION SHALL BE FLAT AND LEVEL TO PROVIDE FULL BEARING OF SHELTER.
3. PRIOR TO POURING CONCRETE, REBAR MUST BE BONDED TO GROUND RING ACCORDING TO DETAILS IN ELECTRICAL NOTES ON SHEET E-1. (GENERAL CONTRACTOR SHALL COORDINATE WITH LOCAL INSPECTOR TO DETERMINE IF BONDING REQUIRES INSPECTION PRIOR TO CONCRETE POUR)
4. BEARING SHIMS PROVIDED WITH SHELTER BY SHELTER MANUFACTURER. INSTALL PER SHELTER MANUFACTURER SPECIFICATIONS.
5. OUTSIDE DIMENSIONS OF FOUNDATION ARE PER MANUFACTURER'S SPECIFICATIONS AND SHALL NOT BE CHANGED WITHOUT PRIOR APPROVAL OF ENGINEER AND MANUFACTURER.

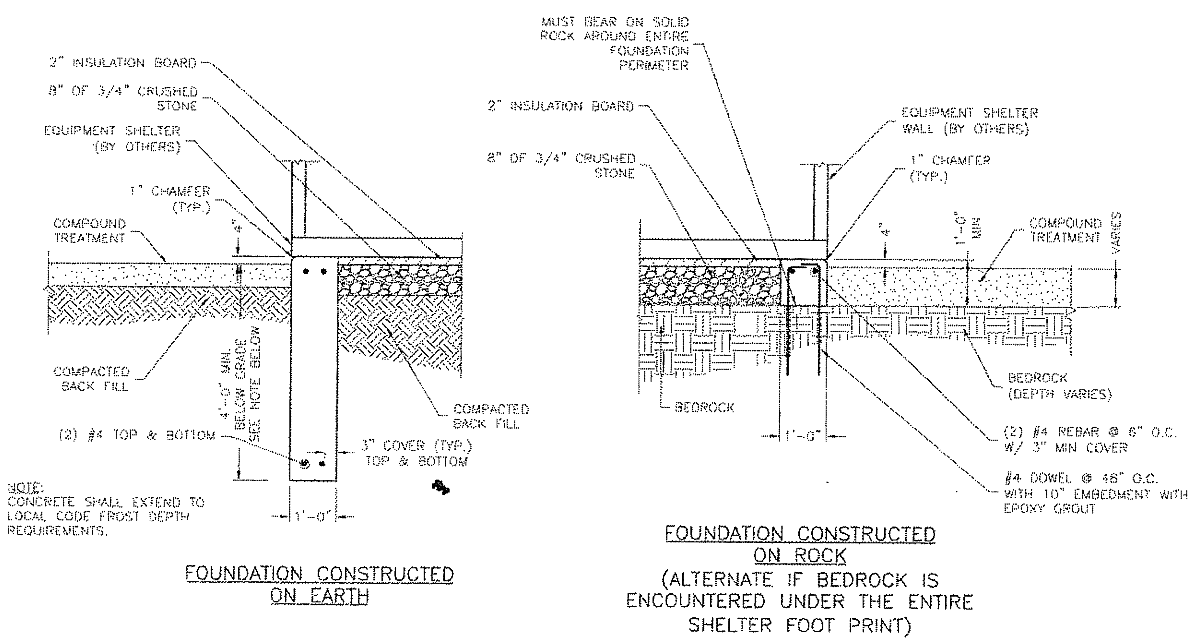


DIMENSION	FOR CONDITIONS/SHELTER SPECIFIED IN THESE PLANS	FOR CONDITIONS/SHELTER OTHER THAN SPECIFIED IN THESE PLANS
A	8"	4" MIN. – 8" MAX.
B	7"	4" MIN. – 7" MAX.
C	7"	4" MIN. – 8" MAX

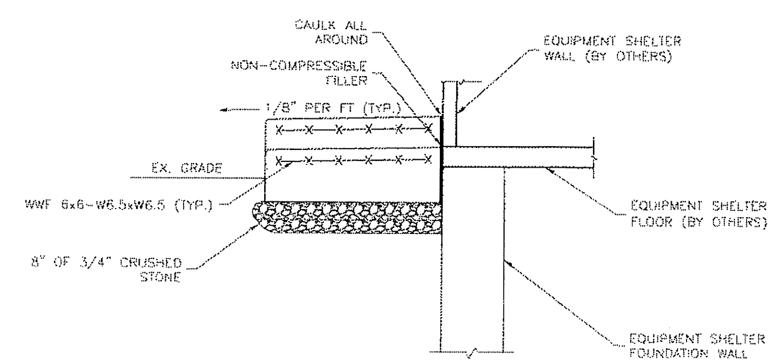
2 CONCRETE LANDING DETAIL
S-9 NOT TO SCALE



4 CORNER LAP DETAIL
S-9 NOT TO SCALE



3 SECTION
S-9 SCALE: 1/2" =1'-0"



5 CONCRETE LANDING
S-9 NOT TO SCALE

Cellco Partnership
d.b.a. verizon wireless

Dewberry
Dewberry-Goodkind, Inc.
59 ELM STREET
SUITE 101
NEW HAVEN, CT 06510
203.776.2277 PHONE
203.776.2288 FAX

STATE OF CONNECTICUT
FRANCIS D. KOBYLENSKI
LICENSED
PROFESSIONAL ENGINEER

No.	DATE	By	Description
0	05/08/08	JNV	FINAL CSC
B	04/23/08	SY	CSC FOR COMMENT
A	12/20/07	JRF	PRELIM. CSC

REVISIONS

EAST PUTNAM
165 ELMWOOD HILL ROAD
PUTNAM, CT 06260

SITE NAME / ADDRESS

DRAWN BY JRF
APPROVED BY CKD
CHECKED BY CKD
DATE 11/30/07

SHEET TITLE:
SHELTER FOUNDATION DETAILS

DEWBERRY P.N. 50006053

S-9
SHEET NO.

APPLICATION GUIDE[1]

App. p. i	(A)	An Executive Summary on the first page of the application with the address, proposed height, and type of tower being proposed. A map showing the location of the proposed site should accompany the description;
App. pp. 1-4	(B)	A brief description of the proposed facility, including the proposed locations and heights of each of the various proposed sites of the facility, including all candidates referred to in the application;
App. pp. 1-2	(C)	A statement of the purpose for which the application is made;
App. p. 1	(D)	A statement describing the statutory authority for such application;
App. p. 4	(E)	The exact legal name of each person seeking the authorization or relief and the address or principal place of business of each such person. If any applicant is a corporation, trust association, or other organized group, it shall also give the state under the laws of which it was created or organized;
App. p. 4	(F)	The name, title, address and telephone number of the attorney or other person to whom correspondence or communications in regard to the application are to be addressed. Notice, orders, and other papers may be served upon the person so named, and such service shall be deemed to be service upon the applicant;
App. pp. 7-8 Attachments 1 and 7	(G)	A statement of the need for the proposed facility with as much specific information as is practicable to demonstrate the need, including a description of the proposed system and how the proposed facility would eliminate or alleviate any existing deficiency or limitation;
App. pp. 11-12	(H)	A statement of the benefits expected from the proposed facility with as much specific information as is practicable;

[1] This Application Guide is copied directly from the "Connecticut Siting Council Application Guide," Section VI, as amended February 16, 2007. References to the Regulations of Connecticut State Agencies ("RCSA") contained in the Guide have been omitted.

App. pp. 1-4, 9-12
Attachments 1 and 7

(I) A description of the proposed facility at the named sites including:

(1) Height of the tower and its associated antennas including a maximum "not to exceed height" for the facility, which may be higher than the height proposed by the Applicant;
(2) Access roads and utility services;
(3) Special design features;
(4) Type, size, and number of transmitters and receivers, as well as the signal frequency and conservative worst-case and estimated operational level approximation of electro magnetic radio frequency power density levels (facility using FCC Office of Engineering and Technology Bulletin 65, August 1997) at the base of the tower base, site compound boundary where persons are likely to be exposed to maximum power densities from the facility;
(5) A map showing any fixed facilities with which the proposed facility would interact;
(6) The coverage signal strength, and integration of the proposed facility with any adjacent fixed facility, to be accompanied by multi-colored propagation maps of red, green and yellow (exact colors may differ depending on computer modeling used, but a legend is required to explain each color used) showing interfaces with any adjacent service areas, including a map scale and north arrows; and
(7) For cellular systems, a forecast of when maximum capacity would be reached for the proposed facility and for facilities that would be integrated with the proposed facility.

Attachment 1	(J)	A description of the named sites, including: (1) The most recent U.S.G.S. topographic quadrangle map (scale 1 inch = 2,000 feet) marked to show the site of the facility and any significant changes within a one-mile radius of the site; (2) A map (scale not less than 1 inch = 200 feet) of the lot or tract on which the facility is proposed to be located showing the acreage and dimensions of such site, the name and location of adjoining public roads or the nearest public road, and the names of abutting owners and the portions of their lands abutting the site; (3) A site plan (scale not less than 1 inch = 40 feet) showing the proposed facility, set back radius, existing and proposed contour elevations, 100-year flood zones, waterways, wetlands, and all associated equipment and structures on the site; (4) Where relevant, a terrain profile showing the proposed facility and access road with existing and proposed grades; and (5) The most recent aerial photograph (scale not less than 1 inch = 1,000 feet) showing the proposed site, access roads, and all abutting properties.
Attachment 1	(K)	A statement explaining mitigation measures for the proposed facility including: (1) Construction techniques designed specifically to minimize adverse effects on natural areas and sensitive areas; (2) Special design features made specifically to avoid or minimize adverse effects on natural areas and sensitive areas; (3) Establishment of vegetation proposed near residential, recreation, and scenic areas; and (4) Methods for preservation of vegetation for wildlife habitat and screening.
App. pp. 1-4 and 16 Attachment 10	(L)	A description of the existing and planned land uses of the named sites and surrounding areas;

App. pp. 12-15 Attachments 10 and 11	(M)	A description of the scenic, natural, historic, and recreational characteristics of the names sites and surrounding areas including officially designated nearby hiking trails and scenic roads;
Attachment 10	(N)	Sight line graphs to the named sites from visually impacted areas such as residential developments, recreational areas and historic sites;
Attachment 9	(O)	A list describing the type and height of all existing and proposed towers and facilities within a four mile radius within the site search area, or within any other area from which use of the proposed towers might be feasible from a location standpoint for purposes of the application;
App. pp. 10-11 Attachment 9	(P)	A description of efforts to share existing towers, or consolidate telecommunications antennas of public and private services onto the proposed facility including efforts to offer tower space, where feasible, at no charge for space for municipal antennas;
App. p. 9 Attachment 1	(Q)	A description of technological alternatives and a statement containing justification for the proposed facility;
Attachment 9	(R)	A description of rejected sites with a U.S.G.S. topographic quadrangle map (scale 1 inch = 2,000 feet) marked to show the location of rejected sites;
App. pp. 9-10 Attachments 1 and 9	(S)	A detailed description and justification for the site(s) selected, including a description of siting criteria and the narrowing process by which other possible sites were considered and eliminated including, but not limited to, environmental effects, cost differential, coverage lost or gained, potential interference with other facilities, and signal loss due to geographic features compared to the proposed site(s);
App. p. 15	(T)	A statement describing hazards to human health, if any, with such supporting data and references to regulatory standards;
App. p. 20	(U)	A statement of estimated costs for site acquisition, construction, and equipment for a facility at the various proposed sites of the facility, including all candidates referred to in the application;

App. p. 20	(V)	A schedule showing the proposed program of site acquisition, construction, completion, operation and relocation or removal of existing facilities for the named sites;
App. p. 14	(W)	A statement indicating that, weather permitting, the applicant will raise a balloon with a diameter of at least three feet, at the sites of the various proposed sites of the facility, including all candidates referred to in the application, on the day of the Council's first hearing session on the application or at a time otherwise specified by the Council. For the convenience of the public, this event shall be publicly noticed at least 30 days prior to the hearing on the application as scheduled by the Council;
App. pp. 18-19 Attachments 1 and 11 Bulk File Exhibits	(X)	Such information as any department or agency of the State exercising environmental controls may, by regulation, require including: (1) A listing of any federal, state, regional, district, and municipal agencies, including but not limited to the Federal Aviation Administration; Federal Communications Commission; State Historic Preservation Officer; State Department of Environmental Protection; and local conservation, inland wetland, and planning and zoning commissions with which reviews were conducted concerning the facility, including a copy of any agency position or decision with respect to the facility; and (2) The most recent conservation, inland wetland, zoning, and plan of development documents of the municipality, including a description of the zoning classification of the site and surrounding areas, and a narrative summary of the consistency of the project with the Town's regulations and plans.
Attachment 1 (Project Plans)	(Y)	Description of proposed site clearing for access road and compound including type of vegetation scheduled for removal and quantity of trees greater than six inches diameter at breast height and involvement with wetlands;
N/A	(Z)	Such information as the applicant may consider relevant.

CERTIFICATION OF SERVICE

I hereby certify that on this 15th day of May, 2008, copies of the Application and attachments were sent by certified mail, return receipt requested, to the following:

STATE OFFICIALS:

The Honorable Richard Blumenthal
Attorney General
Office of the Attorney General
55 Elm Street
Hartford, CT 06106

Gina McCarthy, Commissioner
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

J. Robert Galvin, M.D., M.P.H., M.B.A., Commissioner
Department of Public Health and Addiction Services
410 Capitol Avenue
P.O. Box 340308, MS 13COM
Hartford, CT 06134-0308

Karl J. Wagener, Executive Director
Council on Environmental Quality
79 Elm Street
P.O. Box 5066
Hartford, CT 06106

Donald W. Downes, Chairman
Department of Public Utility Control
Ten Franklin Square
New Britain, CT 06051

Robert L. Genuario, Secretary
Office of Policy and Management
450 Capitol Avenue
Hartford, CT 06134-1441

Joan McDonald, Commissioner
Department of Economic and Community Development
505 Hudson Street
Hartford, CT 06106

Emil Frankel, Acting Commissioner
Department of Transportation
P.O. Box 317546
2800 Berlin Turnpike
Newington, CT 06131-7546

Karen Senich, Executive Director
Deputy State Historic Preservation Officer
Connecticut Commission on Culture & Tourism
One Constitution Plaza, 2nd Floor
Hartford, CT 06103

PUTNAM TOWN OFFICIALS:

Robert Viens
Mayor
Town of Putnam
126 Church Street
Putnam, CT 06260

The Honorable Donald E. Williams, Jr.
Senator – 29th District
Legislative Office Building
Room 3300
Hartford, CT 06106

The Honorable Shawn Johnson
Representative – 51st District
222 Ravenelle Road
North Grosvenordale, CT 06255

Sara Seney
Town Clerk
Town of Putnam
126 Church Street
Putnam, CT 06260

Patricia Hedenberg, Chairman
Zoning Commission
Town of Putnam
126 Church Street
Putnam, CT 06260

Gerard E. Cotnoir, Chairman
Planning Commission
Town of Putnam
126 Church Street
Putnam, CT 06260

Joseph Nash, Chairman
Zoning Board of Appeals
Town of Putnam
126 Church Street
Putnam, CT 06260

Cynthia Dunne
Zoning Enforcement Officer
Town of Putnam
126 Church Street
Putnam, CT 06260

Dr. John Aghajanian, Chairman
Inland Wetlands Commission
Town of Putnam
126 Church Street
Putnam, CT 06260

THOMPSON TOWN OFFICIALS:

Lawrence K. Groh, Jr.
First Selectman
Town of Thompson
815 Riverside Drive
North Grosvenordale, CT 06255

The Honorable Donald E. Williams, Jr.
Senator – 29th District
Legislative Office Building
Room 3300
Hartford, CT 06106

The Honorable Shawn Johnson
Representative – 51st District
222 Ravenelle Road
North Grosvenordale, CT 06255

Jeffrey C. Barske
Town Clerk
Town of Thompson
815 Riverside Drive
North Grosvenordale, CT 06255

Charles Paquette, Chairman
Planning & Zoning Commission
Town of Thompson
815 Riverside Drive
North Grosvenordale, CT 06255

John Bell, Sr., Chairman
Zoning Board of Appeals
Town of Thompson
815 Riverside Drive
North Grosvenordale, CT 06255

John E. Mahon, Jr.
Zoning Enforcement Officer
Town of Thompson
815 Riverside Drive
North Grosvenordale, CT 06255

Francesca Morano, Chairman
Inland Wetlands Commission
Town of Thompson
815 Riverside Drive
North Grosvenordale, CT 06255

Northeastern Connecticut Council of Governments
125 Putnam Pike
Dayville, CT 06241

Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103
Telephone: (860) 275-8200
Attorneys for Cellco Partnership d/b/a Verizon Wireless

LEGAL NOTICE

Notice is hereby given, pursuant to Section 16-50*l*(b) of the Connecticut General Statutes and Regulations pertaining thereto, of an Application to be submitted to the Connecticut Siting Council ("Council") on or about May 15, 2008, by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"). The Application proposes the installation of a wireless telecommunications facility in the Town of Putnam, Connecticut. The facility would be located on a 22.10 acre parcel at 165 Elmwood Hill Road on land owned by Lois Pray. At this site, Cellco proposes to construct a 150-foot tower. Vehicular and utility access to site would extend directly from Elmwood Hill Road. Cellco will also install a 12' x 30' shelter near the base of the tower to house its radio equipment and a back-up generator. The location and other features of the proposed facility are subject to change under provisions of Connecticut General Statutes § 16-50g et. seq.

On the day of the Siting Council public hearing on this proposal, Cellco will fly a balloon at the height of the proposed towers described above, between the hours of 8:00 a.m. and 5:00 p.m. Interested parties and local residents are invited to review the Application during normal business hours at any of the following offices:

Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Cellco Partnership d/b/a Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Town Clerk
Town of Putnam
Town Hall
126 Church Street
Putnam, CT 06260

Town Clerk
Town of Thompson
Town Hall
815 Riverside Drive
North Grosvenordale, CT 06255

or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
(860) 275-8200
Its Attorneys

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

May 12, 2008

Via Certified Mail Return Receipt Requested

«Name_and_Address»

Re: **Cellco Partnership d/b/a Verizon Wireless**
Proposed Telecommunications Facility
Putnam, Connecticut

Dear «Salutation»:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") will be submitting an application to the Connecticut Siting Council ("Council") on or about May 15, 2008, for approval of the construction of a telecommunications facility in the Town of Putnam, Connecticut.

The facility would consist of a new 150-foot self-supporting monopole tower and a 12' x 30' equipment shelter located on a 22.10 acre parcel at 165 Elmwood Hill Road. An on-site backup generator would also be installed inside Cellco's shelter. The tower would be designed to accommodate multiple carriers. Access to this site will extend from Elmwood Hill Road.

The location and other features of the proposed facility are subject to change under the provisions of Connecticut General Statutes § 16-50g et seq.

State law provides that owners of record of property which abuts a parcel on which the proposed facility may be located must receive notice of the submission of this application. This notice is directed to you either because you may be an abutting land owner or as a courtesy notice.

If you have any questions concerning the application, please direct them to either the Connecticut Siting Council or me. My address and telephone number are listed above. The Siting Council may be reached at its New Britain, Connecticut office at (860) 827-2935.

Very truly yours,

Kenneth C. Baldwin

ADJACENT PROPERTY OWNERS

SITE NAME: EAST PUTNAM

OWNER NAME: LOIS S. PRAY

OWNER ADDRESS: 165 ELMWOOD HILL ROAD, PUTNAM, CONNECTICUT 06260

ASSESSOR'S REFERENCE: MAP: 101 LOT: 8

THE FOLLOWING INFORMATION WAS COLLECTED FROM THE TAX ASSESSOR'S RECORDS AND LAND RECORDS OF PUTNAM TOWN HALL, PUTNAM, AND THOMPSON TOWN HALL, NORTH GROSVENORDALE, CONNECTICUT. THE INFORMATION IS CURRENT AS OF APRIL 30, 2008.

THE PARCEL IS ZONED AG-2 AGRICULTURAL.

PUTNAM ABUTTERS			
	MAP/LOT	PROPERTY ADDRESS	OWNER AND MAILING ADDRESS
1.	101/7	168 Elmwood Hill Road	Estate of Walter H. Pray c/o Lois Pray 165 Elmwood Hill Road Thompson, CT 06277
2.	101/12	124 Elmwood Hill Road	Norma M. Conant 90 Randall Road Thompson, CT 06277
3.	101/11	123 Elmwood Hill Road	Norma M. Conant 90 Randall Road Thompson, CT 06277
4.	101/17	107 Elmwood Hill Road	Bradford N. Page 241 Quassett Road Pomfret Center, CT 06259
5.	101/24	772 Providence Pike	Susan B. Lowe c/o Susan Heaney 766 Providence Pike Putnam, CT 06260
6.	101/5	189 Elmwood Hill Road	Hans Dirkson 189 Elmwood Hill Road Putnam, CT 06260

7.	101/9	171 Elmwood Hill Road	Sara J. and Norman B. Seney, Jr. 171 Elmwood Hill Road Putnam, CT 06260

THOMPSON ABUTTERS			
	MAP/BLOCK/LOT	PROPERTY ADDRESS	OWNER AND MAILING ADDRESS
1.	164/11/4	0 Elmwood Hill Road	Nettie Tamler and The Tamler Family LLC 33 Parkman Road Putney, VT 05346
2.	164/11/4D	0 Elmwood Hill Road	Nettie Tamler and The Tamler Family LLC 33 Parkman Road Putney, VT 05346
3.	164/11/33B	136 Elmwood Hill Road	James R. Farland 136 Elmwood Hill Road Thompson, CT 06277
4.	164/11/33	128 Elmwood Hill Road	Holly J. and Scott A. Santerre P.O. Box 145 Thompson, CT 06277
5.	164/11/32	0 Elmwood Hill Road	Charles E. Pray c/o Lois Pray 165 Elmwood Hill Road Thompson, CT 06277
6.	164/12/3	119 Elmwood Hill Road	Norma M. Conant 90 Randall Road Thompson, CT 06277
7.	164/12/30	109 Elmwood Hill Road	Norma M. Conant 90 Randall Road Thompson, CT 06277
8.	164/11/4G	0 Elmwood Hill Road	The Wyndham Land Trust Inc. P.O. Box 33 Pomfret, CT 06249
9.	164/11/4E	180 Elmwood Hill Road	Maureen Marcoux 180 Elmwood Hill Road Thompson, CT 06277

CERTIFICATION OF SERVICE

I hereby certify that a copy of the foregoing letter was sent by certified mail, return receipt requested, to each of the parties on the attached lists of abutting landowners.

May 12, 2008
Date

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103

Attorneys for CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

ULS License

Cellular License - KNKN862 - Cellco Partnership

Call Sign	KNKN862	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA358 - Connecticut 2 - Windham	Channel Block	A
Submarket	0	Phase	2

Dates

Grant	10/10/2001	Expiration	10/01/2011
Effective	03/21/2007	Cancellation	

Five Year Buildout Date

01/08/1997

Control Points

1	180 WASHINGTON VALLEY ROAD, BEDMINSTER, NJ P: (800)852-2671
2	482 PIDGEON HILL RD., WINDSOR, CT P: (860)688-5901

Licensee

FRN	0003290673	Type	Partnership

Licensee

Cellco Partnership
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Contact

Verizon Wireless
Sonya R Dutton
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity Gender

ULS License

Cellular License - KNKN862 - Cellco Partnership - Frequencies

Call Sign KNKN862 Radio Service CL - Cellular

Return to Main

A Block

824.04 - 834.99 paired with 869.04 - 879.99

845.01 - 846.48 paired with 890.01 - 891.48

ULS License

PCS Broadband License - KNLH263 - Cellco Partnership

Call Sign	KNLH263	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA319 - New London-Norwich, CT	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000-001895.00000000 001970.00000000-001975.00000000

Dates

Grant	07/23/2007	Expiration	06/27/2017
Effective	07/23/2007	Cancellation	

Buildout Deadlines

1st	06/27/2002	2nd	

Notification Dates

1st	05/29/2002	2nd	

Licensee

FRN	0003290673	Type	Joint Venture

Licensee

Cellco Partnership
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Contact

Verizon Wireless
Sonya R Dutton
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004
ATTN Regulatory

P:(770)797-1070
F:(770)797-1036
E:Network.Regulatory@VerizonWireless.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

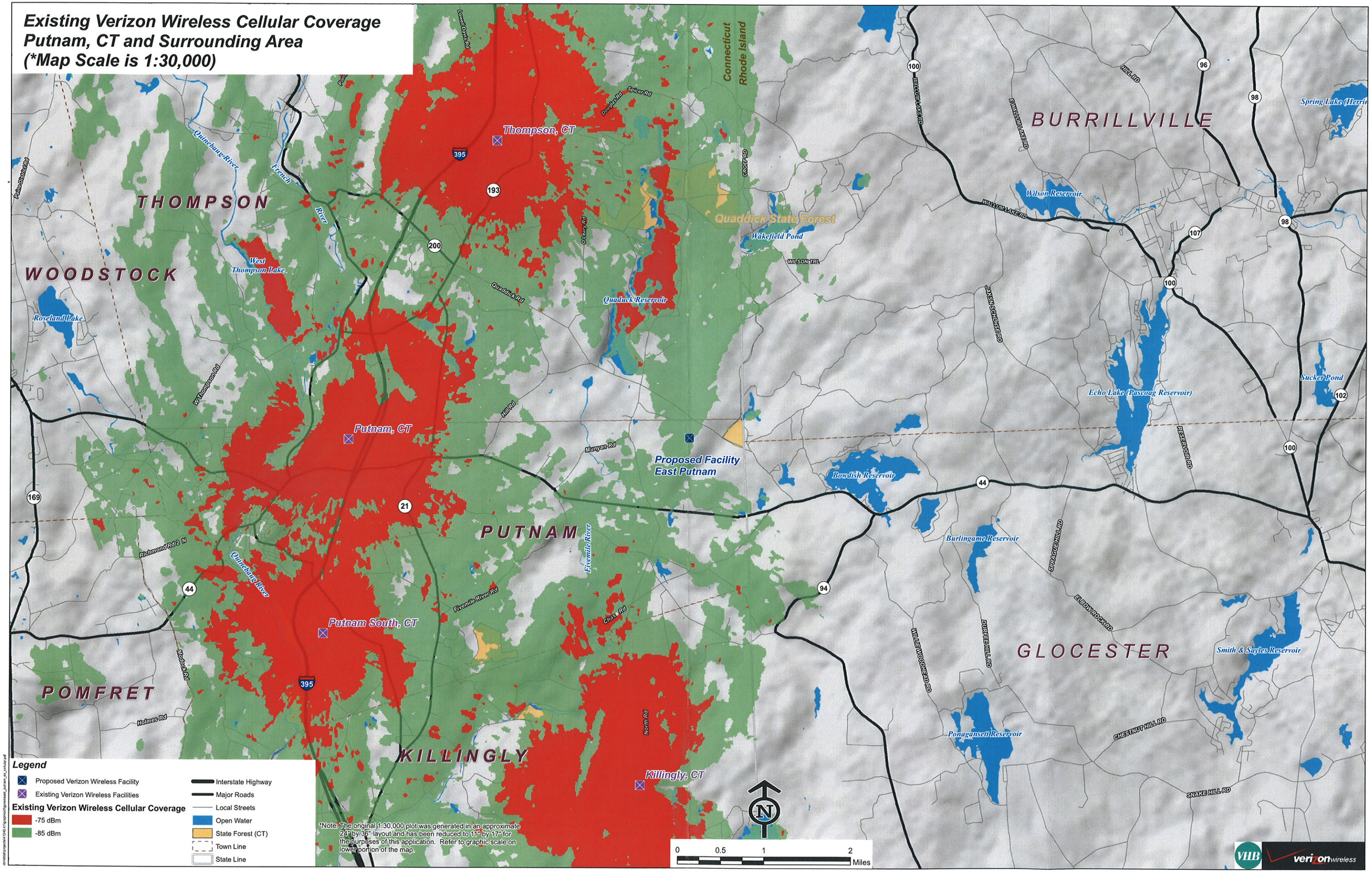
Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

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



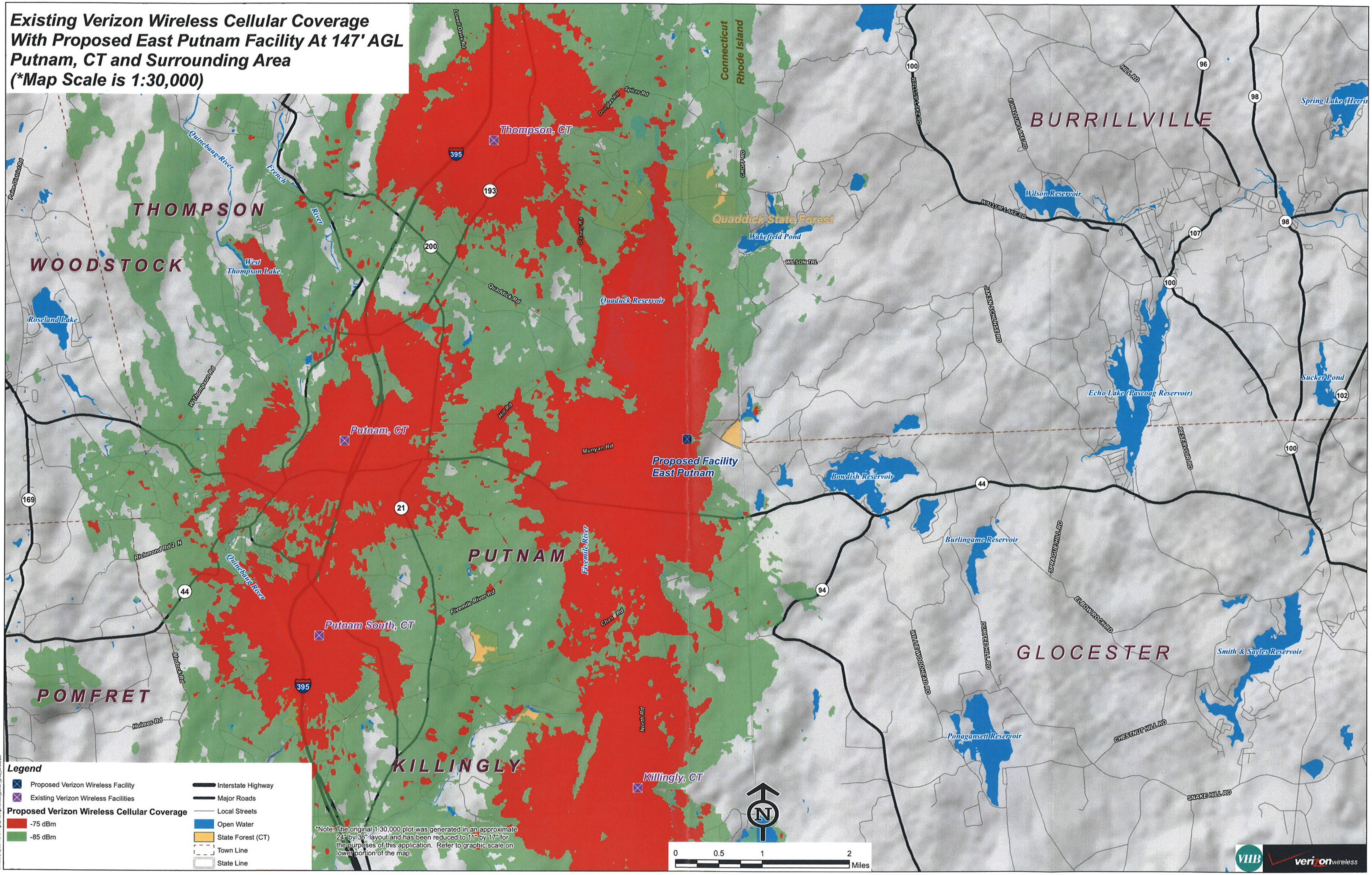
Legend

- Proposed Verizon Wireless Facility
- Existing Verizon Wireless Facilities
- **Existing Verizon Wireless Cellular Coverage**
  - -75 dBm
  - -85 dBm
- Interstate Highway
- Major Roads
- Local Streets
- Open Water
- State Forest (CT)
- Town Line
- State Line

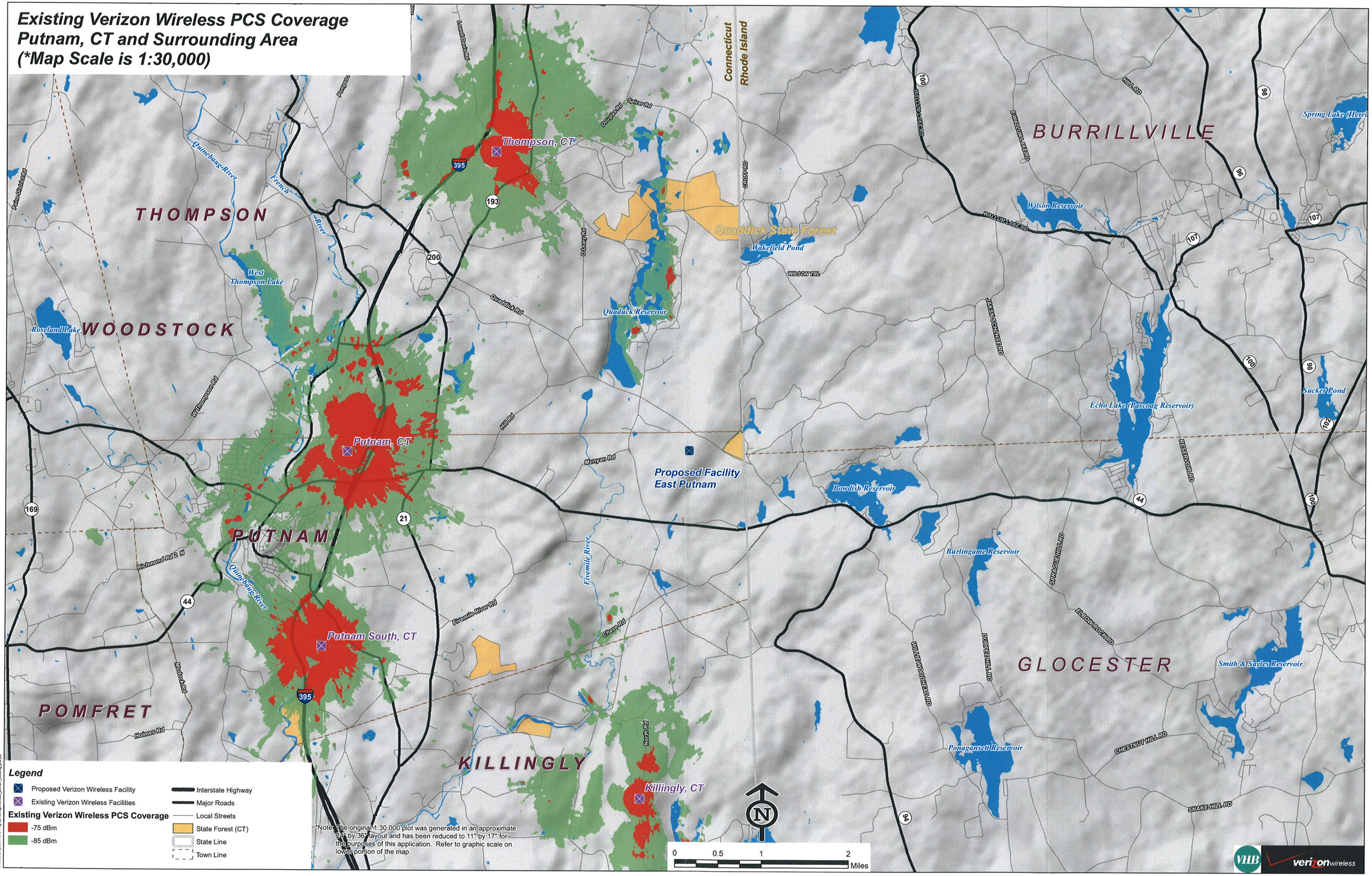
*Note: The original 1:30,000 plot was generated in an approximate 24" by 36" layout and has been reduced to 11" by 17" for the purposes of this application. Refer to graphic scale on lower portion of the map.

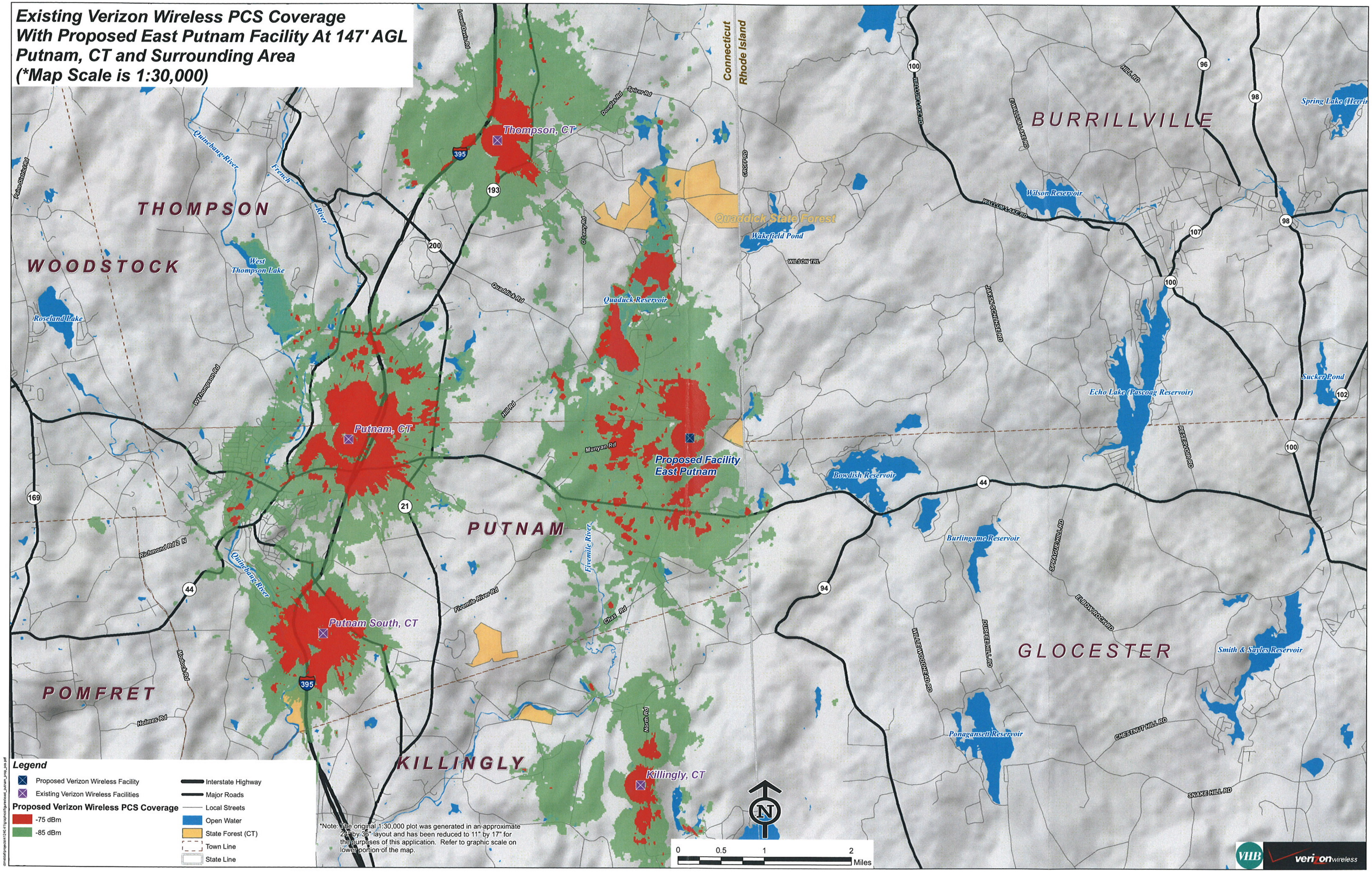
VHB

verizonwireless



Existing Verizon Wireless Cellular Coverage
With Proposed East Putnam Facility At 147' AGL
Putnam, CT and Surrounding Area
(*Map Scale is 1:30,000)
THOMPSON
WOODSTOCK
PUTNAM
POMFRET
KILLINGLY
BURRILLVILLE
GLOCESTER
Connecticut
Rhode Island
Thompson, CT
Putnam, CT
Putnam South, CT
Killingly, CT
Proposed Facility
East Putnam
Quaddick State Forest
Wakefield Pond
West Thompson Lake
Roseland Lake
Quaduck Reservoir
Wilson Reservoir
Echo Lake (Pascoag Reservoir)
Sucker Pond
Bowdish Reservoir
Burlingame Reservoir
Ponaganset Reservoir
Smith & Sayles Reservoir
Quinebaug River
French River
Fivemile 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
Open Water
State Forest (CT)
Town Line
State Line
*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
Putnam, CT and Surrounding Area
(*Map Scale is 1:30,000)
Connecticut
Rhode Island
THOMPSON
WOODSTOCK
PUTNAM
POMFRET
KILLINGLY
BURRILLVILLE
GLOCESTER
Thompson, CT
Putnam, CT
Putnam South, CT
Killingly, CT
Proposed Facility
East Putnam
Quaddick State Forest
Wakefield Pond
Quaddick Reservoir
West Thompson Lake
Roseland Lake
Wilson Reservoir
Echo Lake (Pascoag Reservoir)
Bowdish Reservoir
Burlingame Reservoir
Ponaganset Reservoir
Smith & Sayles Reservoir
Sucker Pond
Quinebaug River
French River
Fivemile 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
State Forest (CT)
State Line
Town Line
*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 East Putnam Facility At 147' AGL
Putnam, CT and Surrounding Area
(*Map Scale is 1:30,000)
THOMPSON
WOODSTOCK
PUTNAM
POMFRET
KILLINGLY
BURRILLVILLE
GLOCESTER
Connecticut
Rhode Island
Thompson, CT
Putnam, CT
Putnam South, CT
Killingly, CT
Proposed Facility
East Putnam
Quaddick State Forest
Wakefield Pond
Quaduck Reservoir
West Thompson Lake
Roseland Lake
Wilson Reservoir
Echo Lake (Pascoag Reservoir)
Bowdish Reservoir
Burlingame Reservoir
Ponaganset Reservoir
Smith & Sayles Reservoir
Sucker Pond
Quinebaug River
French River
Fivemile River
Legend
Proposed Verizon Wireless Facility
Existing Verizon Wireless Facilities
Proposed Verizon Wireless PCS Coverage
-75 dBm
-85 dBm
Interstate Highway
Major Roads
Local Streets
Open Water
State Forest (CT)
Town Line
State Line
*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

Vertically Polarized, Log Periodic 63° / 18.5 dBi

LPA-185063/12CF __ 2°

When ordering replace "___" with connector type.

Mechanical specifications

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

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

Mounting and Downtilting

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

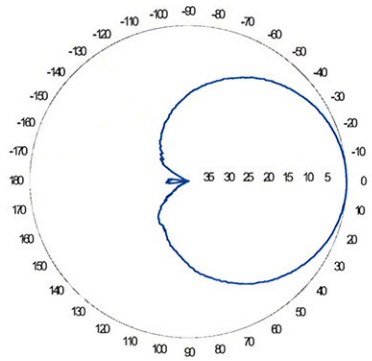
Mounting bracket kit #26799997
Downtilt bracket kit #26799999

The downtil bracket kit includes the mounting bracket kit.

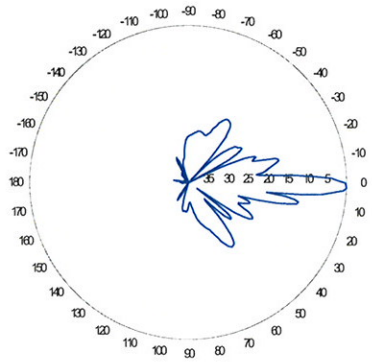
Electrical specifications

	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	18.5 dBi
2)	Power Rating	250 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	5°
1)	Electrical Downtilt	2°
1)	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1)]



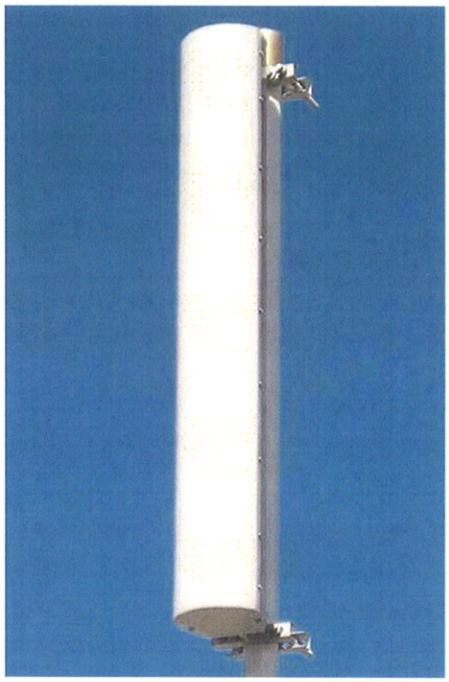
Horizontal



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: 712/07

Vertically Polarized, Log Periodic 40° / 19 dBd

LPA-4019 ___

When ordering replace "___" with connector type.

Mechanical specifications

	Length	2400	mm	94.5 in
	Width	545	mm	21.3 in
	Depth	350	mm	13.7 in
	Depth with z-bracket	390	mm	15.4 in
4)	Weight	18.6	kg	41 lbs
	Wind Area			
	Fore/Aft	0.78	m^2	8.35 ft^2
	Side	0.96	m^2	10.37 ft^2
5)	Rated Wind Velocity (Safety factor 2.0)	>192	km/hr	>119 mph
	Wind Load @ 100 mph (161 km/hr)			
	Fore/Aft	1245	N	280 lbs
	Side	1483	N	279 lbs

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

Mounting and Downtilting

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

Mounting Bracket & Downtilt Bracket Kit #21699999

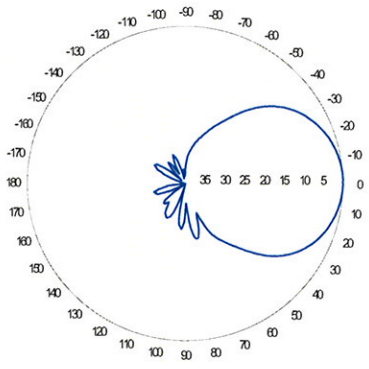
Electrical specifications

	Frequency Range	806-941 MHz
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / center
1)	VSWR	≤ 1.35:1
	Polarization	Vertical
1)	Gain	19 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	40°
	E-Plane	7°
1)	Electrical Downtilt	1.25°
1)	Null Fill	5%
	Lightning Protection	Direct Ground

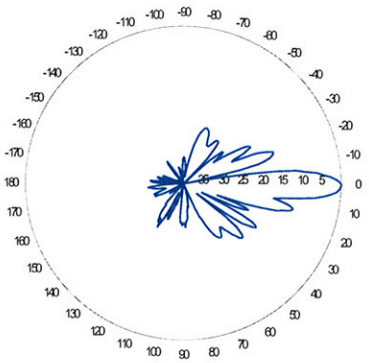
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.
5) Worst case at 15° mechanical downtilt.

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

Radiation pattern[1)]



Horizontal



Vertical

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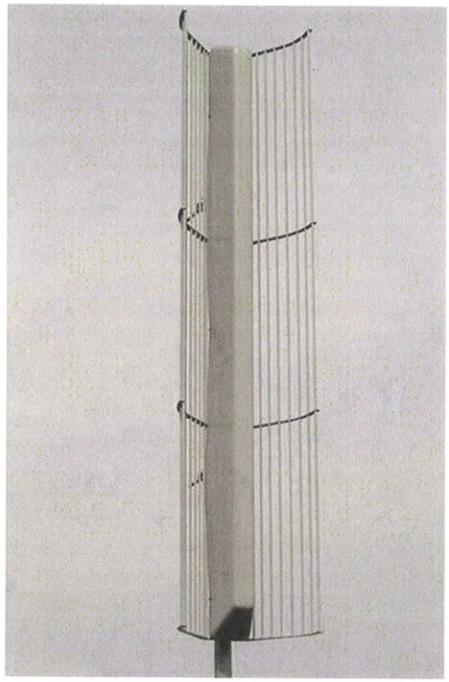

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Antenna available with center-fed connector only.

806-941 MHz

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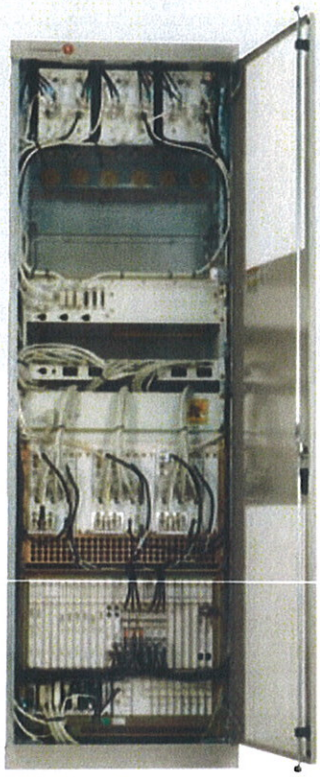
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Revision Date: 7/5/07

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.

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MOB-Mod4B-i 0106

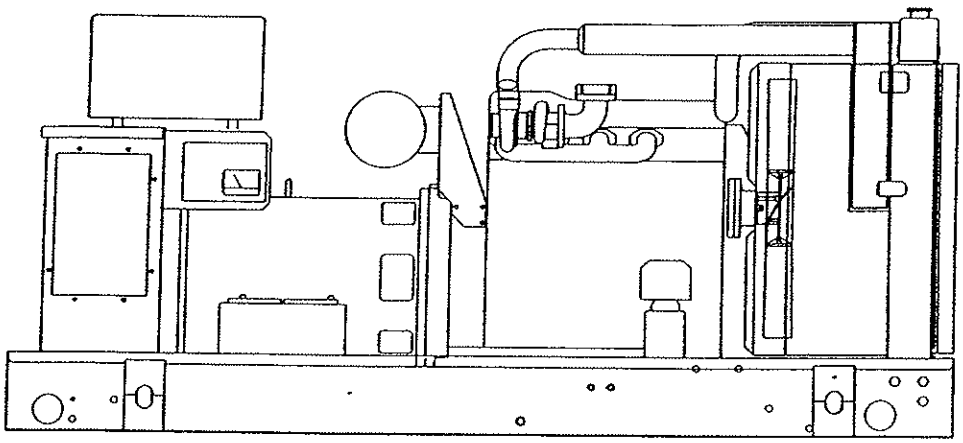
Lucent Technologies
Bell Labs Innovations

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).

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		60	250	48	200
120/208V, 3-phase, 0.8 pf	NOTE: Consult your Generac dealer for additional voltages.	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
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	NOTE: Consult your Generac dealer for additional voltage	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
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

Distributed by:

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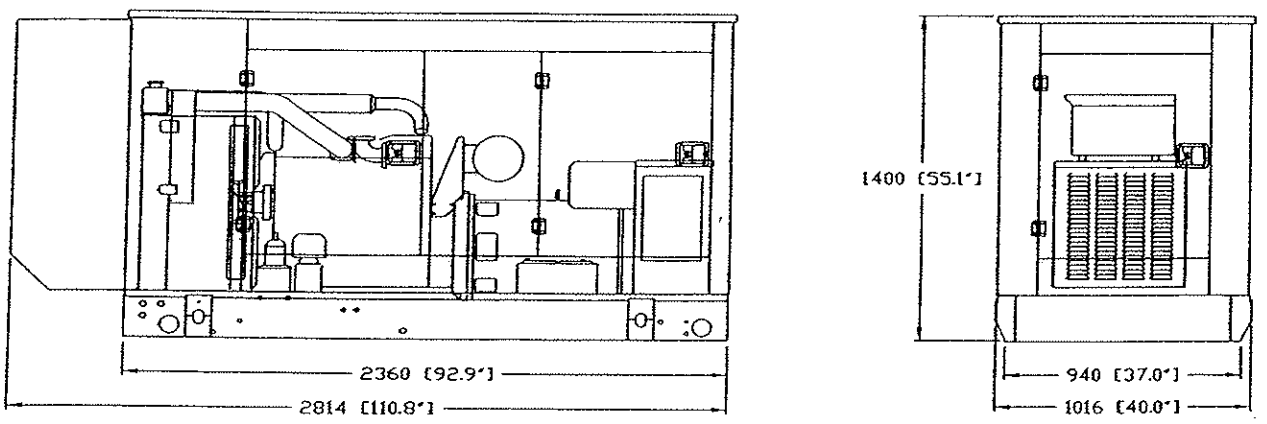

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262/544-4811 • FAX 262/544-4851

Bulletin 0166800SBY / Printed in USA 10.02

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Site Search Summary
East Putnam

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 East Putnam 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 maintains three (3) existing communications facility located within approximately four (4) miles of the proposed East Putnam Facility. These facilities, however, cannot provide the coverage or capacity relief needed in the identified problem areas, along Route 44 and local roads in the northeasterly portion of Putnam. (See Attachment 7).

	OWNER/OPERATOR	FACILITY TYPE	LOCATION	CELLCO ANTENNA HEIGHT
1.	Charter Communications	250' Guyed-Lattice Tower	61 Lowell Davis Drive, Thompson	227'/237'
2.	SBA	180' Monopole Tower	154 Sayle Avenue, Putnam	146'
3.	American Tower Corporation	280' Lattice Tower	1375 North Road, Killingly	267'

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 East Putnam Search Area

The purpose of the proposed East Putnam Facility is to provide reliable cellular and PCS coverage to a portion of the significant coverage gaps that have been identified along Route 44, as well as local roads in the northeasterly portion of Putnam. These coverage gaps were identified using best server propagation modeling tools. These tools are fine-tuned regularly through the use of base-line drive data.

Cellco issued its East Putnam search area in April of 2007. (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 Putnam Area

In addition to the existing communications facilities listed above, Cellco identified and investigated six sites in the Putnam/Thompson area.

1. 165 Elmwood Hill Road, Putnam – Cellco investigated and ultimately signed a lease with the property owner (Lois Pray) to construct a tower site in the southerly portion of this 22.10 acre parcel.

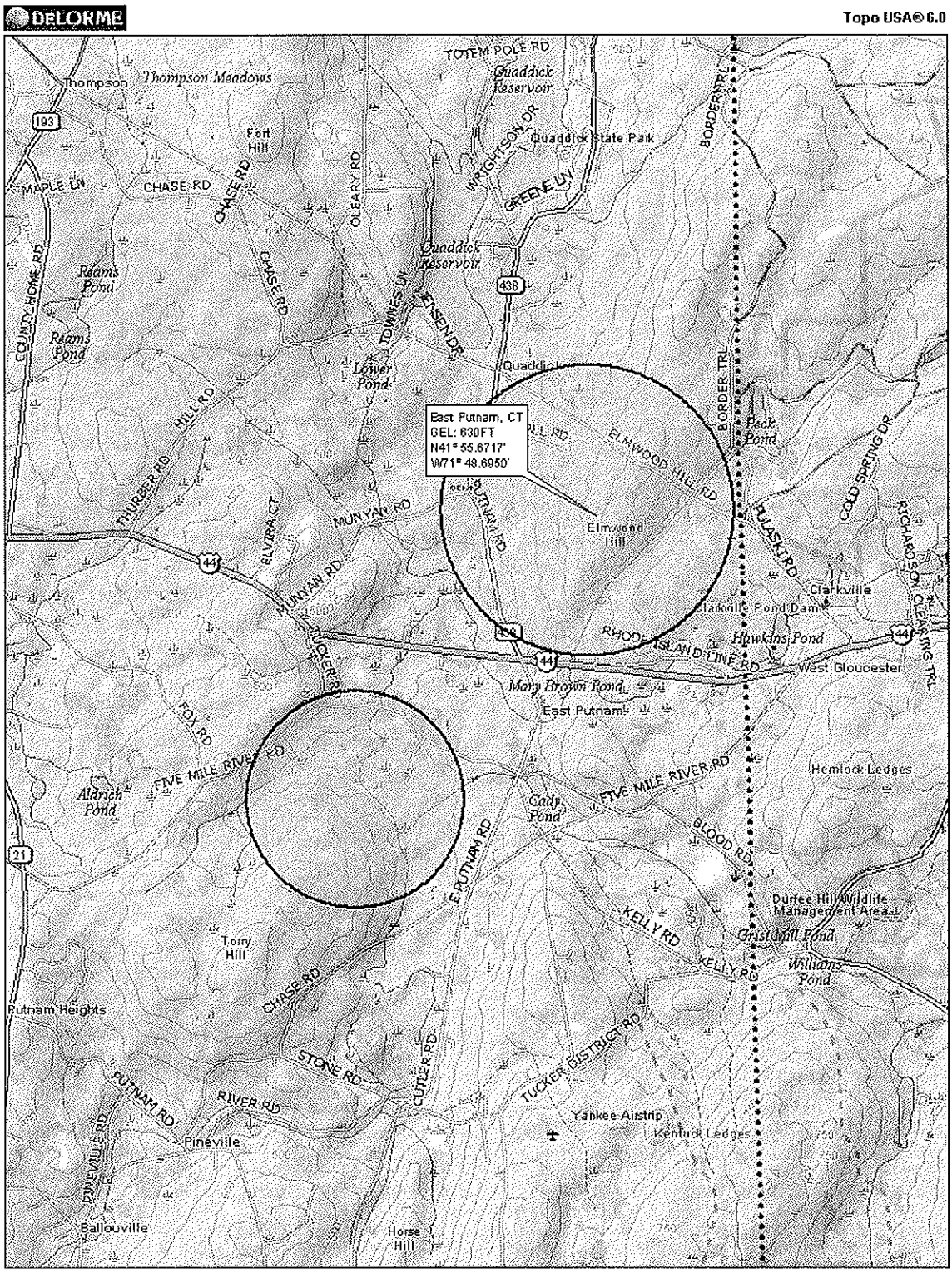
2. 214 Elmwood Hill Road, Putnam – Cellco's radio frequency (RF) engineers determined that, due to its location and the terrain in the area, a structure of 190 feet would be needed to satisfy its coverage objectives. The site was rejected.

3. 123 Elmwood Hill Road, Putnam – Cellco's radio frequency (RF) engineers determined that, due to its location and the terrain in the area, a structure of 190 feet would be needed to satisfy its coverage objectives. The site was rejected.

4. 189 Elmwood Hill Road, Putnam – The landowner did not respond to Cellco's phone calls and letters.

5. 203 Elmwood Hill Road, Putnam – The landowner did not respond to Cellco's phone calls and letters.

6. 309 East Putnam Road, Putnam – This site was rejected for several reasons including wetlands and terrain issues and the site's ground elevation approximately 100 to 150 feet lower than the proposed cell site.


DeLORME
Topo USA® 6.0
East Putnam, CT
GEL: 630FT
N41° 55.6717'
W71° 48.6950'
Thompson
Thompson Meadows
Fort Hill
Totem Pole Rd
Quaddick Reservoir
Quaddick State Park
Wrightson Dr
Greene Ln
Border Rd
Border Trl
Maple Ln
Chase Rd
O'Leary Rd
Reams Pond
Townes Ln
Eisen Dr
Lower Pond
Peck Pond
Elmwood Hill Rd
Thurber Rd
Munyan Rd
Elvira Ct
Elmwood Hill
Pulaski Rd
Cold Spring Dr
Richardson Clearing Trl
Clarkville
Clarkville Pond Dam
Rhode Island Line Rd
Hawkins Pond
West Gloucester
Mary Brown Pond
East Putnam
Fox Rd
Five Mile River Rd
Aldrich Pond
Cady Pond
Hemlock Ledges
Blood Rd
Durfee Hill Wildlife Management Area
Kelly Rd
Grist Mill Pond
Williams Pond
Torry Hill
Putnam Heights
Stone Rd
Cutler Rd
Tucker District Rd
River Rd
Putnam Rd
Pineville Rd
Pineville
Yankee Airstrip
Kentuck Ledges
Ballouville
Horse Hill
193
44
21
438
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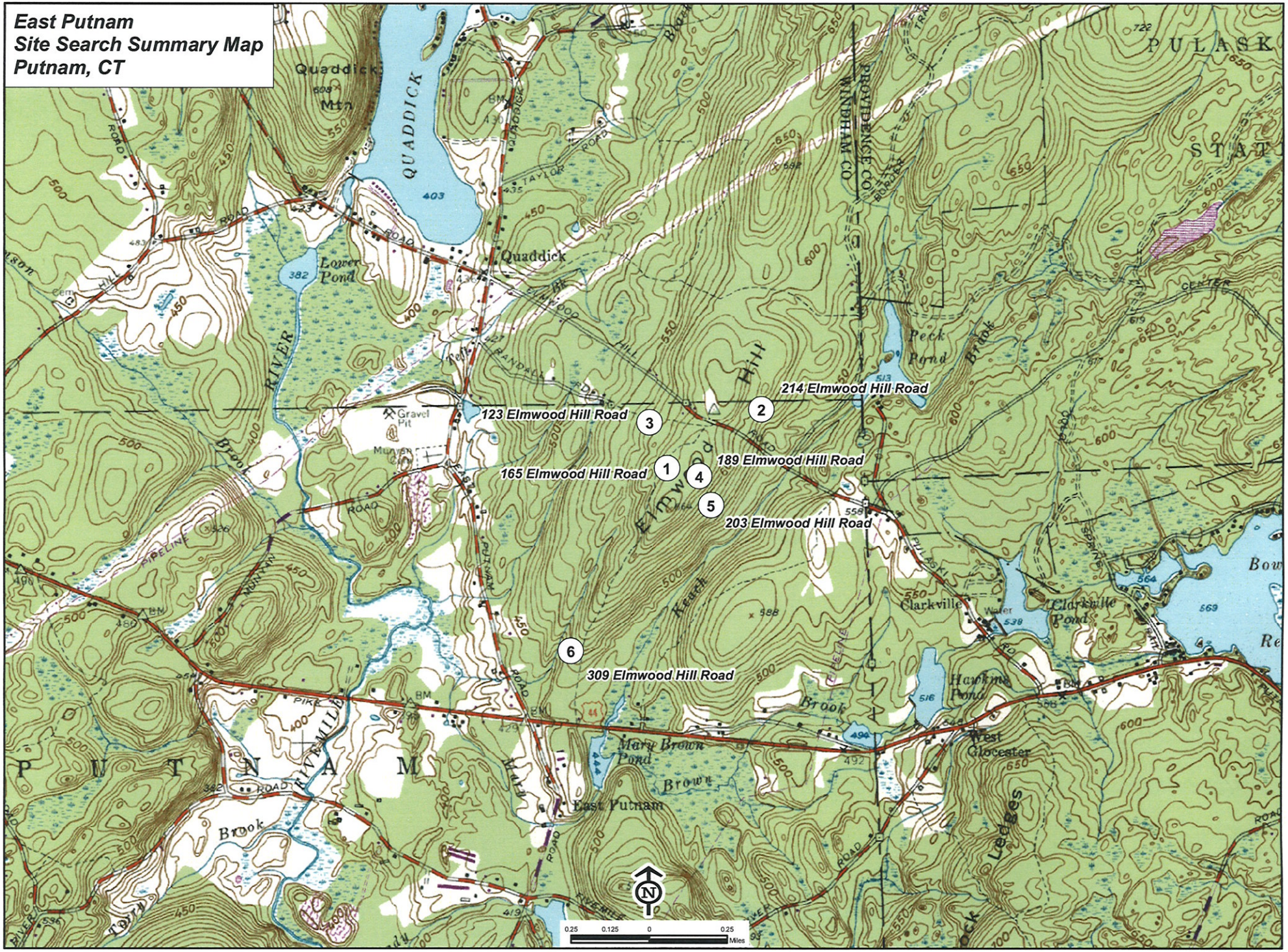
MN (14.8° W)
0 ¼ ½ ¾ 1 mi
Data Zoom 12-0

East Putnam
Site Search Summary Map
Putnam, CT



\\ctmiddat\projects\41240.41\graphics\figures\east_putnam sites_investigated.pdf

Visual Resource Evaluation Report

Proposed Wireless Telecommunications Facility

East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

Prepared for verizon wireless

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

May 2008

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 property at 165 Elmwood Hill Road in the Town of Putnam, 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"). In addition to the Town of Putnam, portions of the nearby towns of Thompson, Connecticut, Killingly, Connecticut Burrilville, Rhode Island and Glocester, Rhode Island are also contained within the Study Area.

Project Introduction

The proposed Facility includes the installation of a 150-foot tall monopole with associated ground equipment to be located at its base. Both the proposed monopole and ground equipment would be situated within a fence-enclosed compound. The proposed project area is located at approximately 644 feet Above Mean Sea Level (AMSL). Access to the Facility would follow an existing woods road located on the host property (to be improved) that extends to the proposed compound area in a southerly direction from Elmwood Hill Road.

Site Description and Setting

Identified in the Town of Putnam land records as Map 101/ Lot 8, the host property consists of approximately 22 acres of land and is currently occupied by a single family residential dwelling. The proposed Facility is located on an undeveloped, wooded portion of the host property, roughly 1,058 feet to the southwest of Elmwood Hill Road. Attachment A includes a photograph of the proposed project area. Attachment A also contains a map that depicts the location of the proposed Facility and the limits of the Study Area. Land use within the general vicinity of the proposed Facility and host property consists of low-density residential development and undeveloped woodlands. Segments of the Route 44 transportation corridor traverse the southern portion of the Study Area. In total, the Study Area features approximately 36 linear miles of roadways.

The topography within the Study Area is characterized by rolling hills with ground elevations ranging from approximately 365 feet AMSL to approximately 720 feet AMSL. The Study Area contains approximately 409 acres of surface water, dominated in large measure by the Quaddick Reservoir located roughly one mile to the northwest. 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 6,757 acres of the 8,042-acre study area (84%). During the in-field activities associated with this analysis, an infrared laser range finder was used to accurately 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 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 which 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 United States Geological Survey (USGS) National Elevation Dataset (NED), a seamless, publicly available elevation dataset with an approximate 30-meter resolution. The forest layer was derived through on-screen digitizing in ArcView® GIS from 2006 digital orthophotos with a 1-foot pixel resolution.

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. A conservative tree canopy height of 50 feet is then used to prepare a preliminary viewshed map for use during the Study Area reconnaissance. The average height of the tree canopy is determined in the field using a hand-held infrared 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 Connecticut State 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. This layer is useful in identifying potential visibility from any sensitive receptors that may be located within the Study Area. Lastly, based on both a review of published information and discussions with municipal officials in Putnam, Thompson and Killingly, it was determined that Chase Road (Thompson) is a locally-designated scenic roadway. This roadway is depicted on the viewshed map contained in Attachment B.

A preliminary viewshed map (using topography and a conservative tree canopy height of 50 feet) is generated for use during the in-field activity in order to confirm that no significant land use changes have occurred since the aerial photographs used in this analysis were produced and to verify the results of the model in comparison to the balloon float. Information obtained during the reconnaissance is then incorporated into the final visibility map.

Balloon Float and Study Area Reconnaissance

On April 16, 2008 Vanasse Hangen Brustlin Inc., (VHB) conducted a "balloon float" at the proposed Facility location to further evaluate the potential viewshed within the Study Area. The balloon float consisted of raising and maintaining an approximate four-foot diameter, helium-filled weather balloon at the proposed site location at a height of 150 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 verify where the balloon was, and was not, visible above and/or through the tree canopy. During the balloon float, the temperature was approximately 50 degrees Fahrenheit with calm wind conditions and overcast skies.

Photographic Documentation

During the balloon float, VHB personnel drove the public road system within the Study Area to inventory those areas where the balloon was visible. 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 Hill Road (adjacent to house #172) southwest of Chase Road intersection.
2. View from Hill Road (adjacent to house #181) northeast of Chase Road intersection.

3. View from East Putnam Road across from Munyan Cemetery.
4. View from Munyan Road looking across Rawson Materials, Inc.
5. View from Elmwood Hill Road (at host property).
6. View from Quaddick Reservoir public boat ramp.
7. View from eastern edge of Peck Pond, along perimeter hiking trail.

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

CONCLUSIONS

Based on this analysis, areas from where the proposed 150-foot tall Facility would be visible above the tree canopy comprise approximately 49 acres, or less than one percent of the 8,042-acre Study Area. As depicted on the viewshed map (provided in attachment B), much of the visibility associated with the proposed Facility occurs over open water on the Quaddick Reservoir. This area of potential year-round visibility begins approximately 1.25-mile away from the proposed Facility. Potential views of the proposed Facility may also be achieved from select portions of Hill Road located approximately 1.75 miles to the northwest of the project area; East Putnam Road located approximately 0.69 mile to the northwest; and Munyan Road located approximately 0.86 mile to the west. The attached viewshed map depicts other areas of potential year-round visibility that are located on private and/or otherwise inaccessible properties to the southwest of the proposed Facility. Overall, potential views of the proposed Facility would be limited to the areas indicated on the viewshed map by a combination of the topographic relief and the extent of vegetative cover contained within the Study Area. VHB estimates that select portions of approximately six residential

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

properties may have at least partial year-round views of the proposed Facility. These residences are primarily located south of Hill Road, nearly two miles to the northwest of the proposed Facility.

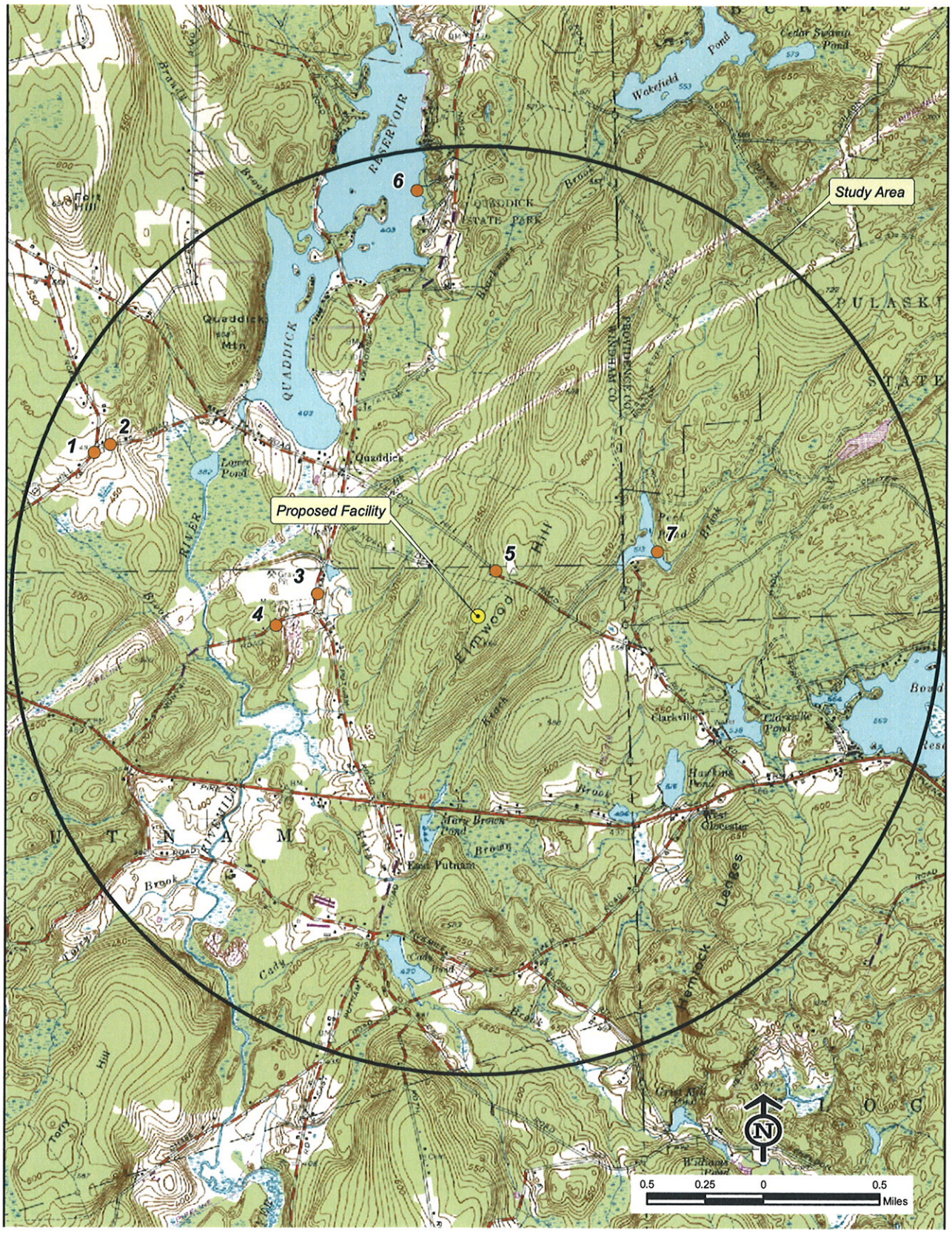
The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views are anticipated. These areas comprise approximately 4 acres and are mainly located within the immediate vicinity of the host property, extending to the north along select portions of Elmwood Hill Road. VHB estimates that seasonal views of the proposed Facility could be achieved from portions of approximately 3 additional properties within the Study Area. Such views would mostly be screened by existing vegetation on the host property which includes a significant number of mature evergreen species.

Attachment A

Project Area Photograph, Photolog Documentation Map, Balloon Float Photographs, and Photographic Simulations

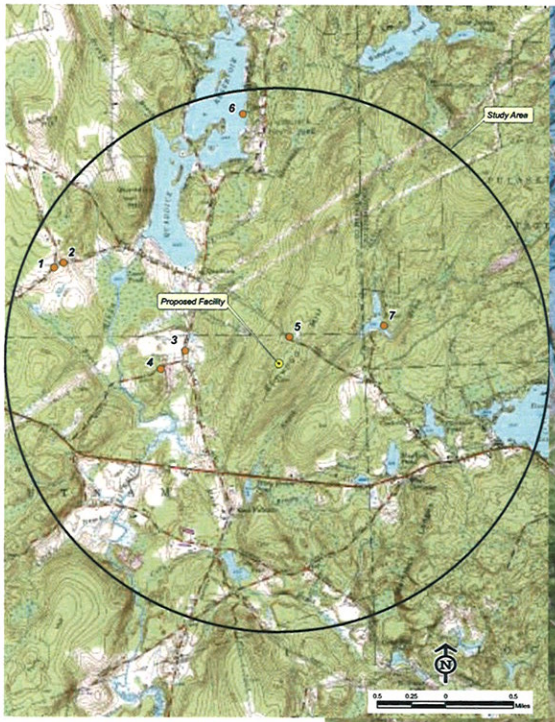
Photolog Documentation

Town of
Putnam
Connecticut



Photographic Documentation

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

PROPOSED PROJECT AREA

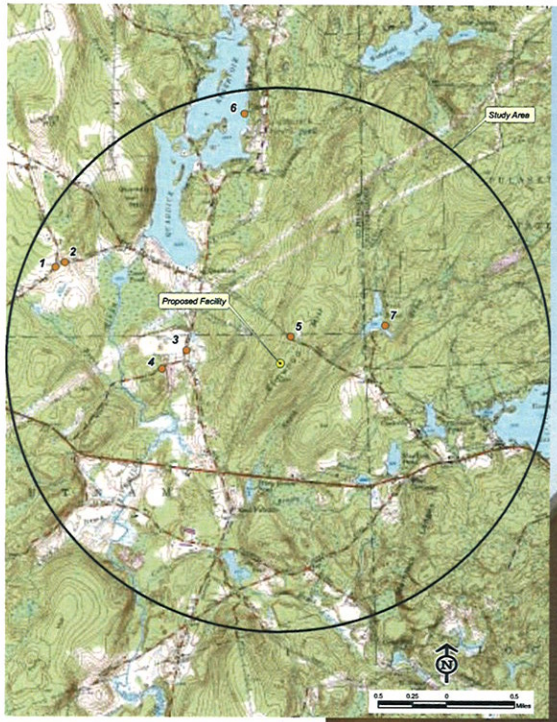
verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation

View 1

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

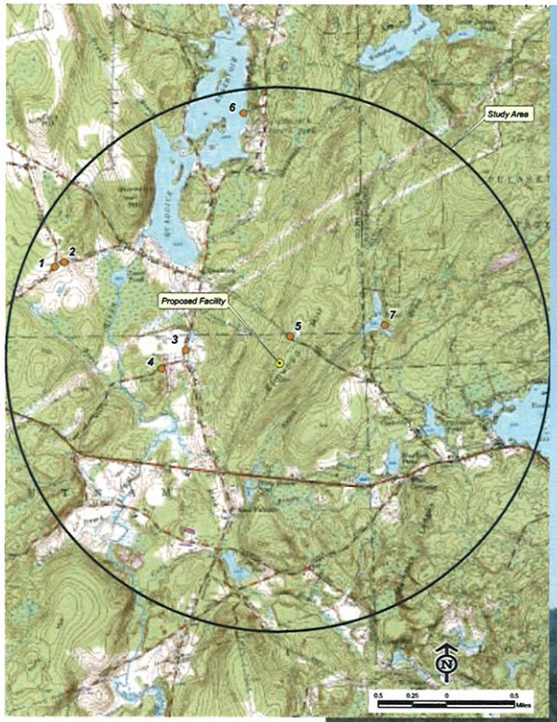
PHOTO TAKEN FROM HILL ROAD (ADJACENT TO HOUSE #172) SOUTHWEST OF CHASE ROAD INTERSECTION, LOOKING SOUTHEAST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.77 MILES +/-

Photographic Documentation and Simulation

View 2

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

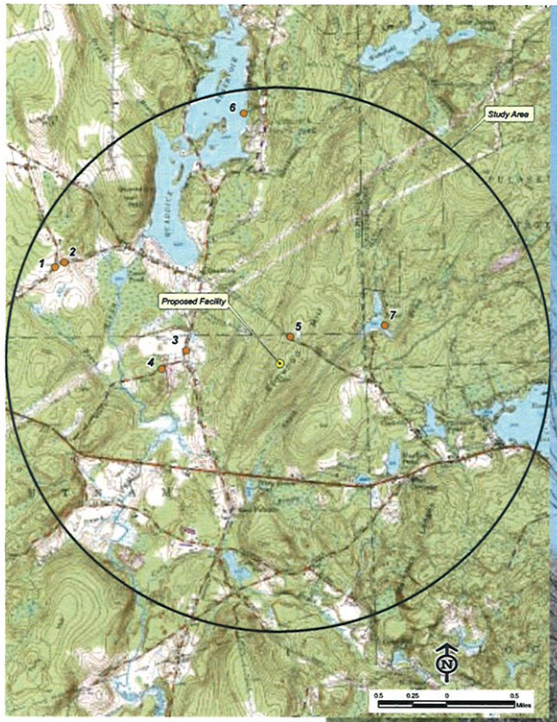
PHOTO TAKEN FROM HILL ROAD (ADJACENT TO HOUSE #181) NORTHEAST OF CHASE ROAD, LOOKING SOUTHEAST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.72 MILES +/-

Photographic Documentation and Simulation

View 3

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

PHOTO TAKEN FROM EAST PUTNAM ROAD ACROSS FROM MUNYAN CEMETERY, LOOKING SOUTHEAST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.68 MILE +/-

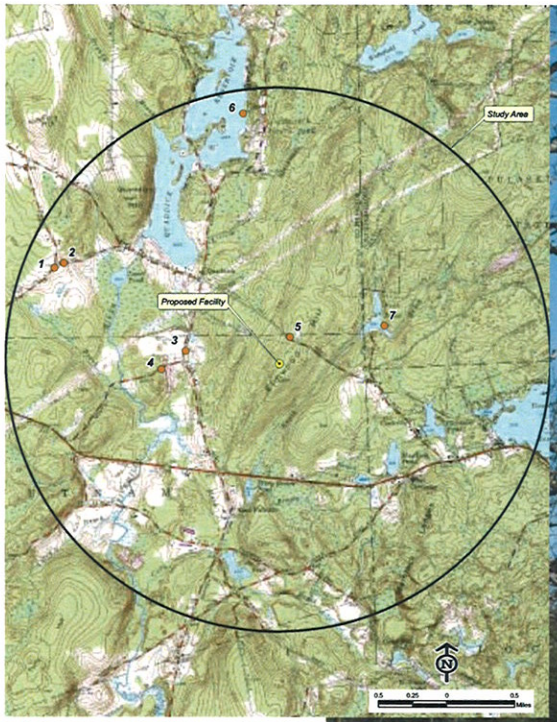
verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation and Simulation

View 4

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

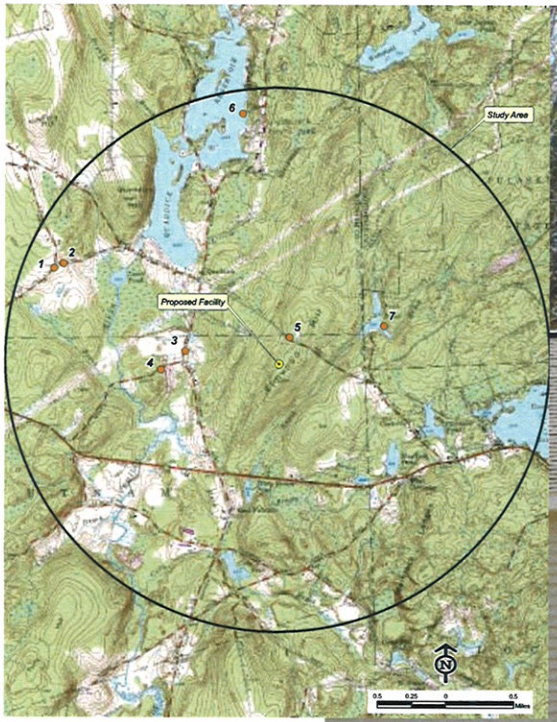
PHOTO TAKEN FROM MUNYAN ROAD LOOKING ACROSS RAWSON MATERIALS, INC., LOOKING EAST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.86 MILE +/-

Photographic Documentation and Simulation

View 5

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

PHOTO TAKEN FROM ELMWOOD HILL ROAD AT HOST PROPERTY, LOOKING SOUTHWEST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.20 MILE +/-

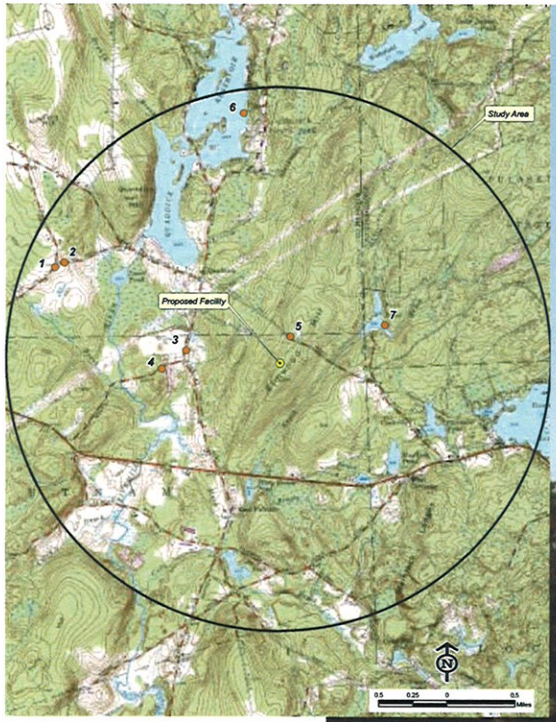
verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

Photographic Documentation

View 6

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

verizon wireless

VHB Vanasse Hangen Brustlin, Inc.

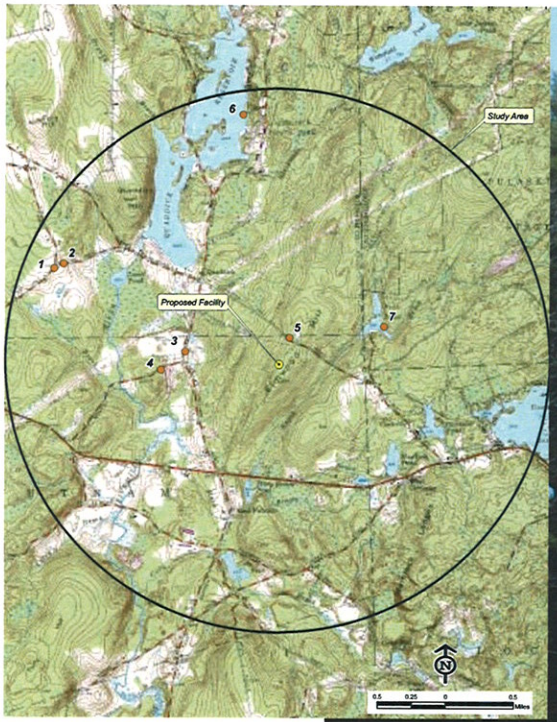
PHOTO TAKEN FROM QUADDICK RESERVOIR PUBLIC BOAT LAUNCH AREA, LOOKING SOUTH - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.83 MILES +/-

Photographic Documentation

View 7

Town of
Putnam
Connecticut



East Putnam
165 Elmwood Hill Road
Putnam, CT
06277

Proposed
3-Carrier Monopole

verizonwireless

VHB Vanasse Hangen Brustlin, Inc.

PHOTO TAKEN FROM EASTERN EDGE OF PECK POND, ALONG PERIMETER HIKING TRAIL, LOOKING SOUTHWEST - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.82 MILE +/-

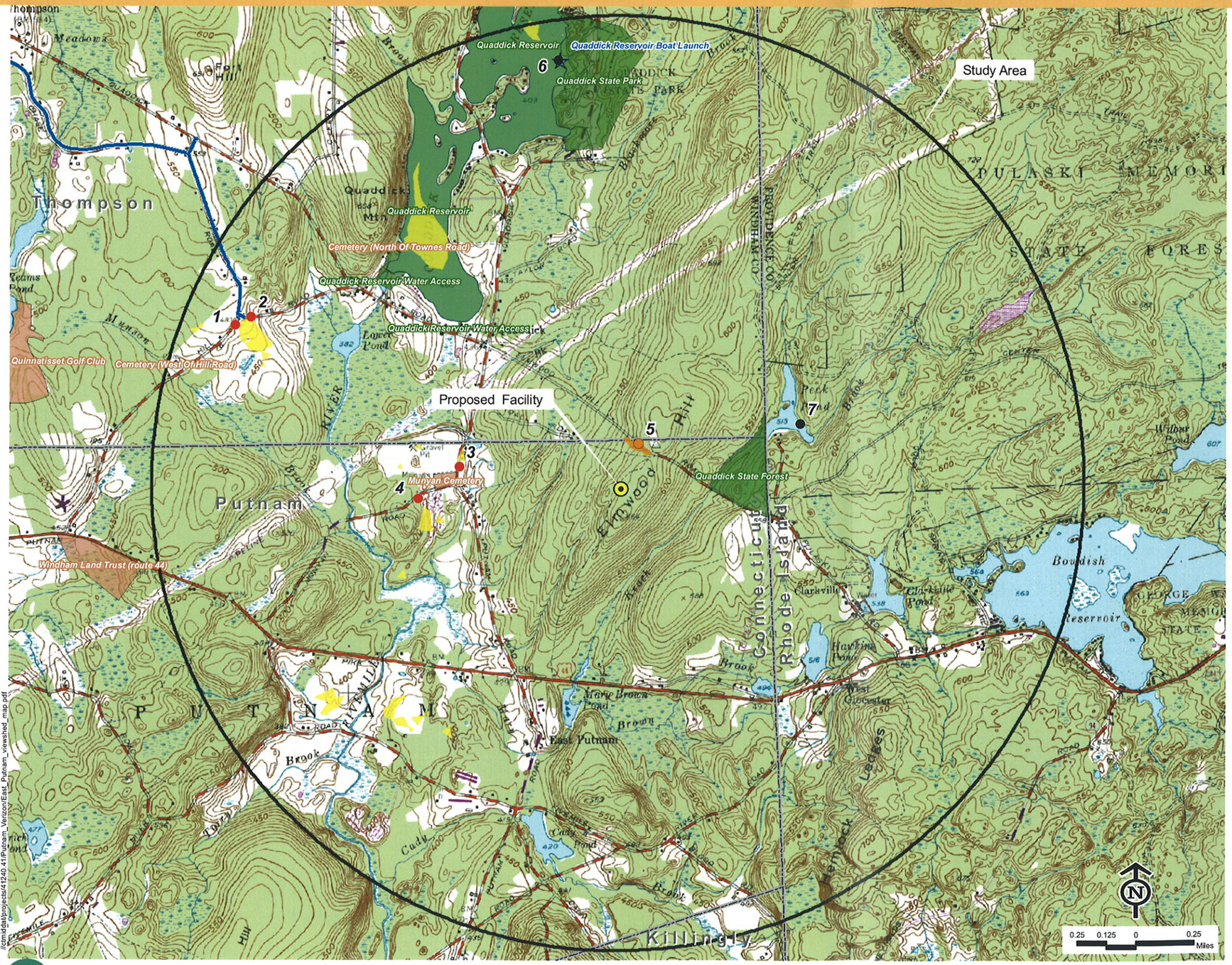
Attachment B

Viewshed Map

Viewshed Map

Topography and Forest Cover as Constraints

Town of Putnam Connecticut



Proposed Verizon Wireless Telecommunications Facility East Putnam 165 Elmwood Hill Road Putnam, Connecticut

NOTE:
- Viewshed analysis conducted using ESRI's Spatial Analyst; results to be field verified with balloon float.
- Proposed Facility height is 150 feet.
- Existing tree canopy height estimated at 65 feet.

DATA SOURCES:
- Digital elevation model (DEM) derived from USGS National Elevation Dataset (NED) with a resolution of one arc-second (approximately 30 meters) produced by the USGS, 1925 - 1999
- Forest areas derived from 2006 digital orthophotos with 1-foot pixel resolution; digitized by VHB, 2007
- Base map comprised of the Thompson (1970) USGS Quadrangle Map
- Protected municipal and private open space properties and federal protected properties and data layers provided by CT DEP, 1997
- Protected CT DEP properties data layer provided by CTDEP, May 2007
- CT DEP boat launches data layer provided by CT DEP, 1994
- Scenic Roads layer derived from available State and Local listings.

Map Compiled May, 2008

Legend

- Proposed Monopole Location (Includes select areas of visibility approximately 500 feet around facility)

Photographs - April 17, 2008
- Balloon Not Visible
- Balloon Visible Through Trees
- Balloon Visible Above Trees

- Seasonal Visibility (Approximately 4 Acres)
- Approximate Year-Round Visibility (Approximately 49 Acres)

- Protected Municipal and Private Open Space Properties (1997)
  - Cemetery
  - Preservation
  - Conservation
  - Existing Preserved Open Space
  - Recreation
  - General Recreation
  - School
  - Uncategorized

- CT DEP Protected Properties (2007)
  - State Forest
  - State Park
  - DEP Owned Waterbody
  - State Park Scenic Reserve
  - Historic Preserve
  - Natural Area Preserve
  - Fish Hatchery
  - Flood Control
  - Other
  - State Park Trail
  - Water Access
  - Wildlife Area
  - Wildlife Sanctuary
- Federal Protected Properties (1997)
- CT DEP Boat Launches (1994)
- Scenic Road (State and Local)
- Town Line

VHB Vanasse Hangen Brustlin, Inc.
Transportation | Land Development | Environmental Services

verizon wireless

//ctmdata/projects/41240.41/Putnam_Verizon/East_Putnam_viewshed_map.pdf

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

54 Tuttle Place
Middletown, Connecticut 06457
860 632-1500
FAX 860 632-7879

Memorandum

To: Ms. Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Date: May 2, 2008

Project No.: 41240.41

From: Dean Gustafson
Senior Environmental Scientist

Re: East Putnam
165 Elmwood Hill Road
Putnam, CT

Policies regarding potential conflicts between proposed telecommunications facilities and federally-listed endangered and threatened species are detailed in a January 7, 2008 policy statement of the United States Department of the Interior Fish and Wildlife Service (USFWS) New England Field Office. A copy of this policy statement is enclosed for reference. The following Site occurs in Windham County, Connecticut. No federally listed endangered or threatened species are known to occur in Windham County, Connecticut (refer to the enclosed listing) and as such the proposed development will not result in an adverse affect to any federally listed endangered or threatened species.

Project Site:

State: Connecticut
County: Windham
Address: 165 Elmwood Hill Road, Putnam, Connecticut
Latitude/Longitude Coordinates: N41°55'45.32" W71°48'36.17"
Size of Property: 25± acres
Watershed: Fivemile River (basin # 3400)

USFWS January 7, 2008 Telecommunications Policy Statement and Federally Listed Endangered and Threatened Species in Connecticut

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

January 7, 2008

To Whom It May Concern:

The U.S. Fish and Wildlife Service's (Service) New England Field Office has determined that individual project review for certain types of activities associated with communication towers **is not required.** These comments are submitted in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Due to the rapid expansion of the telecommunication industry, we are receiving a growing number of requests for review of **existing** and **new** telecommunication facilities in relation to the presence of federally-listed or proposed, threatened or endangered species, critical habitat, wilderness areas and/or wildlife preserves. We have evaluated our review process for proposed communications towers and believe that individual correspondence with this office is not required for the following types of actions relative to **existing** facilities:

1. the re-licensing of existing telecommunication facilities;
2. audits of existing facilities associated with acquisition;
3. routine maintenance of existing tower sites, such as painting, antenna or panel replacement, upgrading of existing equipment, etc.;
4. co-location of new antenna facilities on/in existing structures;
5. repair or replacement of existing towers and/or equipment, provided such activities do not significantly increase the existing tower mass and height, or require the addition of guy wires.

In order to curtail the need to contact this office in the future for individual environmental review for **existing** communication towers or antenna facilities, please note that we are not aware of any federally-listed, threatened or endangered species that are being adversely affected by any existing communication tower or antenna facility in the following states: Vermont, New Hampshire, Rhode Island, Connecticut and Massachusetts. Furthermore, we are not aware of any **existing** telecommunication towers in federally-designated critical habitats, wilderness areas or wildlife preserves. Therefore, no further consultation with this office relative to the impact of the above referenced activities on federally-listed species is required.

Future Coordination with this Office Relative to **New** Telecommunication Facilities

We have determined that proposed projects are not likely to adversely affect any federally-listed or proposed species when the following steps are taken to evaluate new telecommunication facilities:

1. If the facility will be installed within or on an existing structure, such as in a church steeple or on the roof of an existing building, no further coordination with this office is necessary. Similarly, new antennas or towers in urban and other developed areas, in which no natural vegetation will be affected, do not require further review.

2. If the above criteria cannot be met, your review of the attached lists of threatened and endangered species locations within Vermont, New Hampshire, Rhode Island, Connecticut and Massachusetts may confirm that no federally-listed endangered or threatened species are known to occur in the town or county where the project is proposed.

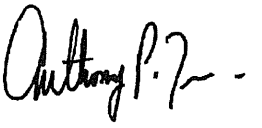
3. If a listed species is present in the town or county where the project is proposed, further review of our enclosed lists of threatened and endangered species may allow you to conclude that suitable habitat for the species will not be affected. Based on past experiences, we anticipate that there will be few, if any, projects that are likely to impact piping plovers, roseate terns, bog turtles, Jesup's milk-vetch or other such species that are found on coastal beaches, riverine habitats or in wetlands because communication towers typically are not located in these habitats.

For projects that meet the above criteria, there is no need to contact this office for further project review. A copy of this letter should be retained in your file as the Service's determination that no listed species are present, or that listed species in the general area will not be affected. Due to the high workload associated with responding to many individual requests for threatened and endangered species information, we will no longer be providing response letters for activities that meet the above criteria. This correspondence and the enclosed species lists remain valid until January 1, 2009. Updated consultation letters and species list are available on our website:

(http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm)

Thank you for your cooperation, and please contact me at 603-223-2541 for further assistance.

Sincerely yours,



Anthony P. Tur
Endangered Species Specialist
New England Field Office

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN CONNECTICUT

There is no federally-designated Critical Habitat in Connecticut. The following are federally-listed species by county:

Common Name	Species	Status	County/General Distribution
Shortnose sturgeon[1]	*Acipenser brevirostrum*	E	Atlantic coastal waters and Connecticut River
Indiana bat	*Myotis sodalis*	E	New Haven/hibernaculum
Bald eagle	*Haliaeetus leucocephalus*	D[2]	**Nesting**: Hartford, Litchfield, Middlesex, New Haven, New London, Tolland **Wintering**: entire state, major rivers
Piping plover	*Charadrius melodus*	T	**Nesting**: Fairfield, Middlesex, New Haven, New London (coastal beaches only) **Migratory:** Atlantic Coast
Roseate tern	*Sterna dougallii dougallii*	E	**Nesting**: New Haven (Faulkner Island) **Migratory:** Atlantic Coast
Bog turtle	*Clemmys muhlenbergii*	T	Fairfield, Litchfield
Dwarf wedgemussel	*Alasmidonta heterodon*	E	Hartford (Connecticut River watershed)
Puritan tiger beetle	*Cicindela puritana*	T	Hartford, Middlesex (Connecticut River floodplain)
Northeastern beach tiger beetle	*Cicindela dorsalis dorsalis*	T	Coastal beaches/extirpated
Small whorled pogonia	*Isotria medeoloides*	T	Litchfield, New Haven
Sandplain gerardia	*Agalinus acuta*	E	Hartford
Chaffseed	*Scwalbea americana*	E	New London/historic

[1] Principal responsibility for this species is vested with the National Marine Fisheries Service.
[2] Delisted. Protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

9/27/2007

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

February 8, 2008

Ms. Nicole Dentamaro
VHB, Inc.
54 Tuttle Place
Middletown, CT 06457

Re: East Putnam, 165 Elmwood Hill Road, Putnam

Dear Ms. Dentamaro:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided and listed above. According to our information, there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species at the site in question.

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the Environmental and Geographic Information Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions regarding this information (424-3585). Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Kenneth J. Metzler
Ecologist/Environmental Analyst III

KJM/blm

RECEIVED
FEB 12
VANASSE HANGEN BRUSTLIN, INC.

Connecticut Commission on Culture & Tourism

Historic Preservation and Museum Division

One Constitution Plaza
Second Floor
Hartford, Connecticut
06103

860.256.2800
860.256.2763 (f)

April 8, 2008

Ms. Nicole Dentamaro
Vanasse Hangen Brustlin Inc.
54 Tuttle Place
Middletown, CT 06457-1847

Subject: Telecommunications Facilities
165 Elmwood Hill Road
Putnam, CT

Dear Ms. Dentamaro:

The State Historic Preservation Office has reviewed the above-named project. This office expects that the proposed undertaking will have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places.

This office appreciates the opportunity to have reviewed and commented upon the proposed undertaking.

This comment is provided in accordance with the National Historic Preservation Act and the Connecticut Environmental Policy Act.

For further information, please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Karen Senich
State Historic Preservation Officer

RECEIVED
APR 14 2008
VANASSE HANGEN BRUSTLIN, INC.

Transportation
Land Development
Environmental
Services

VHB *Vanasse Hangen Brustlin, Inc.*

54 Tuttle Place
Middletown, Connecticut 06457
860 632-1500
FAX 860 632-7879

Memorandum

To: Ms. Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Date: May 2, 2008

Project No.: 41240.41

From: Dean Gustafson
Professional Soil Scientist

Re: NEPA/Wetland Compliance
East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

Vanasse Hangen Brustlin, Inc. (VHB) previously completed on-site investigations to determine if wetlands and/or watercourses are located on the above-referenced Site.

The Site was inspected on September 22, 2007. The property is improved with a residence along Elmwood Hill Road with the majority of the property consisting of upland forest. Based on a review of plans prepared by Dewberry (latest revised date 04/23/08) VHB understands that Verizon Wireless proposes to construct a wireless communications facility in the south portion of the subject property. Access to the proposed facility will generally follow an existing wooded path. Two forested hillside seep wetlands were identified more than 100 feet west of the proposed access drive; these wetland areas are located more than 900 feet north of the proposed facility. Therefore, the work proposed by Verizon Wireless will not result in a likely adverse impact to nearby wetland resource areas.

In addition, as no direct impact to federal wetlands is associated with Verizon Wireless' construction activities, **NO significant change in surface features** (e.g., wetland fill, deforestation or water diversion) will result in accordance with the National Environmental Policy Act Categorical Exclusion checklist.

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WETLANDS DELINEATION REPORT

Vanasse Hangen Brustlin, Inc.

Date: May 2, 2008

Project No.: 41240.41

Prepared For: Ms. Alexandria Carter
Verizon Wireless
99 East River Drive
East Hartford, Connecticut 06108

Site Location: East Putnam
165 Elmwood Hill Road
Putnam, Connecticut

Site Map: Wetland Sketch, 09/22/07, VHB

Inspection Date: September 22, 2007

Field Conditions: Weather: sunny, mid 80's
Snow Depth: 0 inches
General Soil Moisture: moist
Frost Depth: 0 inches

Type of Wetlands Identified and Delineated:

Connecticut Inland Wetlands and Watercourses	☒
Tidal Wetlands	☐
U.S. Army Corps of Engineers	☐

Local Regulated Upland Review Areas: Wetlands: 25 feet Watercourses: 25 feet

Field Numbering Sequence of Wetlands Boundary: Connecticut - WF 1 to 8; WF 2-02 to 2-08
[as depicted on attached wetland sketch map]

The classification systems of the National Cooperative Soil Survey, the U.S. Department of Agriculture, Natural Resources Conservation Service, County Soil Survey Identification Legend, Connecticut Department of Environmental Protection and United States Army Corps of Engineers New England District were used in this investigation.

All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

The wetlands delineation was conducted and reviewed by:

Dean Gustafson
Professional Soil Scientist

Enclosures

54 Tuttle Place
Middletown, Connecticut 06457-1847
860.632.1500 ▫ FAX 860.632.7879
email: info@vhb.com
www.vhb.com

Attachments

- Wetland Delineation Field Form
- Soil Map
- Soil Report
- Wetland Delineation Sketch Map

Wetland Delineation Field Form

Project Address:	165 Elmwood Hill Road, Putnam, Connecticut	Project Number:	41240.41
Inspection Date:	September 22, 2007	Inspector:	Dean Gustafson, PSS
Wetland I.D.:	Wetlands 1and 2		

Field Conditions:	Weather: sunny, mid 80's	Snow Depth: 0 inches
	General Soil Moisture: moist	Frost Depth: 0 inches
Type of Wetland Delineation:	Connecticut ☒	
	ACOE ☐	
	Tidal ☐	
Field Numbering Sequence: WF 1 to 8, WF 2-01 to 2-08		

WETLAND HYDROLOGY:

NONTIDAL

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: hillside seep systems		

TIDAL

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: N/A		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments:		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Comments: interior intermittent watercourses drain each wetland system to the west		

SPECIAL AQUATIC HABITAT:

Vernal Pool ☐	Other ☐	
Comments: N/A		

Wetland Delineation Field Form (Cont.)

MAPPED SOILS:

SOIL SERIES (Map Unit Symbol)	WET	UP	NRCS MAPPED	FIELD IDD/ CONFIRMED
Canton and Charlton soils (61)	☐	☒	☒	☒
Paxton and Montauk fine sandy loams (85)	☐	☒	☒	☒
Carlton-Chatfield complex (73)	☐	☒	☒	☒
Sutton fine sandy loam (52)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman soils, extremely stony (3)	☒	☐	☒	☒

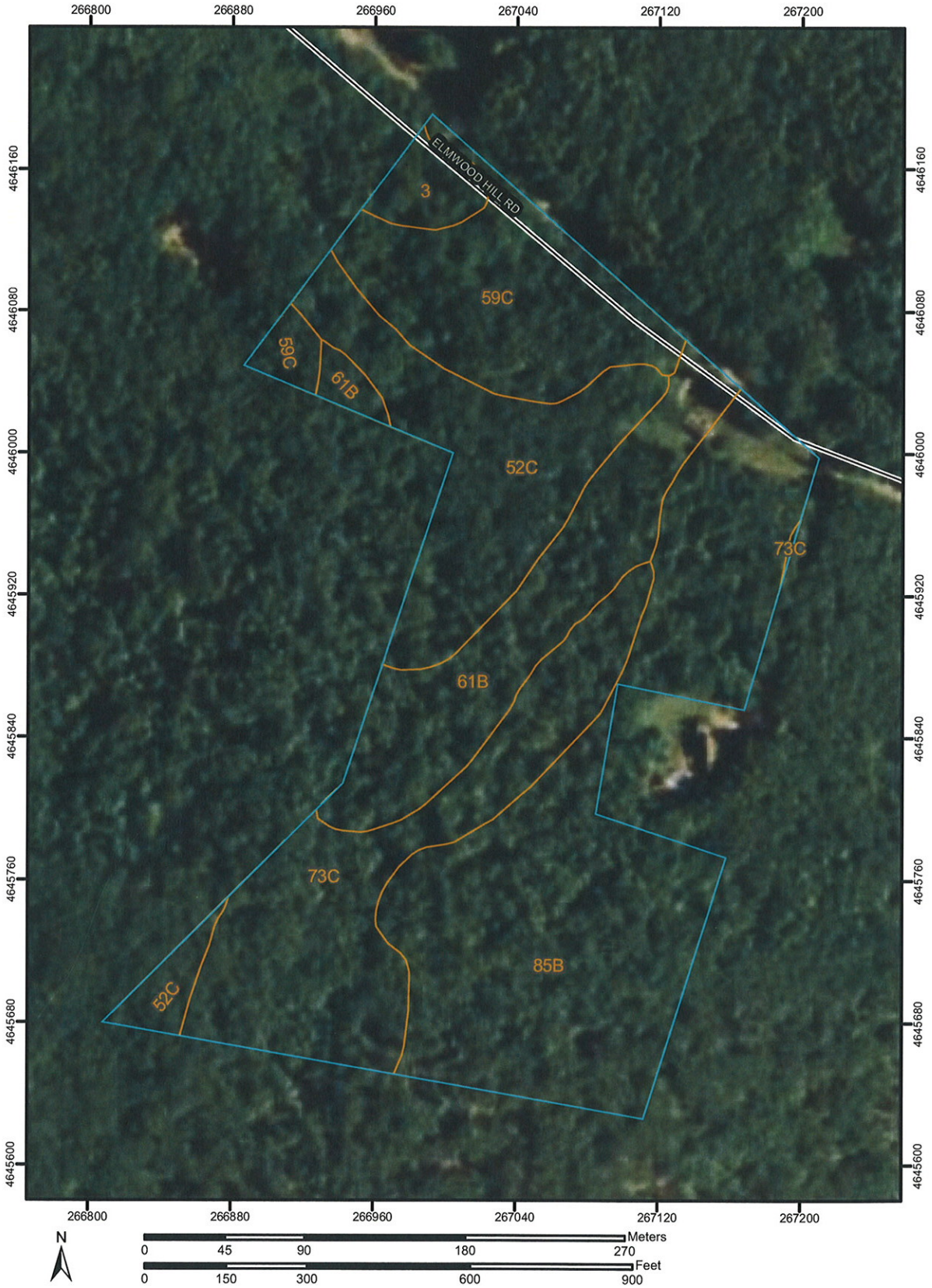
DOMINANT PLANTS:

Red maple	Green ash
Winterberry	Highbush blueberry
Spicebush	Witchhazel
Cinnamon fern	Royal fern
Soft rush	Sphagnum sp.

WETLAND NARRATIVE:

Both forested hillside seep wetlands are similar in hydraulic character and vegetative structure and consist of typical red maple swamp habitats. These wetlands drain to the west and eventually converge off the subject property as part of a more extensive wetland system that drains into the Fivemile River, located approximately one mile west of the proposed facility.

Soil Map–State of Connecticut
(East Putnam, 165 Elmwood Hill Road, Putnam, CT)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 19N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 6, Mar 22, 2007

Date(s) aerial images were photographed: 3/18/1992

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
3	Ridgebury, Leicester, and Whitman soils, extremely stony	0.6	2.2%
52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	4.4	16.1%
59C	Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony	3.8	14.2%
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	3.9	14.4%
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	4.9	18.1%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	9.4	35.0%
Totals for Area of Interest (AOI)		27.0	100.0%

Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the major soils that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief)

State of Connecticut

Description Category: SOI

Map Unit: 3—Ridgebury, Leicester, and Whitman soils, extremely stony

Ridgebury, Leicester And Whitman Soils, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 50 inches (940 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 40 percent Ridgebury soils, 35 percent Leicester soils, 15 percent Whitman soils. 10 percent minor components. Ridgebury soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is 20 to 30 inches to densic material. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 2.5 inches (low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 3 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 5 inches; fine sandy loam 5 to 14 inches; fine sandy loam 14 to 21 inches; fine sandy loam 21 to 60 inches; sandy loam Leicester soils This component occurs on upland drainageway and depression landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 9 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 7 inches; fine sandy loam 7 to 10 inches; fine sandy loam 10 to 18 inches; fine sandy loam 18 to 24 inches; fine sandy loam 24 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam Whitman soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from gneiss, schist, and granite. The slope ranges from 0 to 2 percent and the runoff class is very low. The depth to a restrictive feature is 12 to 20 inches to densic material. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 1.9 inches (very low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is occasional. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 9 inches; fine sandy loam 9 to 16 inches; fine sandy loam 16 to 22 inches; fine sandy loam 22 to 60 inches; fine sandy loam

Map Unit: 52C—Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony

Sutton Fine Sandy Loam, 2 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Sutton soils. 20 percent minor components. Sutton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, gneiss, and schist. The slope ranges from 2 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.3 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 6 inches; fine sandy loam 6 to 12 inches; fine sandy loam 12 to 24 inches; fine sandy loam 24 to 28 inches; fine sandy loam 28 to 36 inches; gravelly fine sandy loam 36 to 65 inches; gravelly sandy loam

Map Unit: 59C—Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony

Gloucester Gravelly Sandy Loam, 3 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 50 degrees F. (7 to 10 degrees C.) This map unit is 80 percent Gloucester soils. 20 percent minor components. Gloucester soils This component occurs on upland hill landforms. The parent material consists of sandy and gravelly melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is somewhat excessively drained. The slowest permeability within 60 inches is about 5.95 in/hr (rapid), with about 3.0 inches (low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; gravelly sandy loam 4 to 12 inches; gravelly sandy loam 12 to 25 inches; very gravelly loamy sand 25 to 35 inches; very gravelly loamy coarse sand 35 to 60 inches; very gravelly loamy coarse sand

Map Unit: 61B—Canton and Charlton soils, 3 to 8 percent slopes, very stony

Canton And Charlton Soils, 3 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 73C—Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky

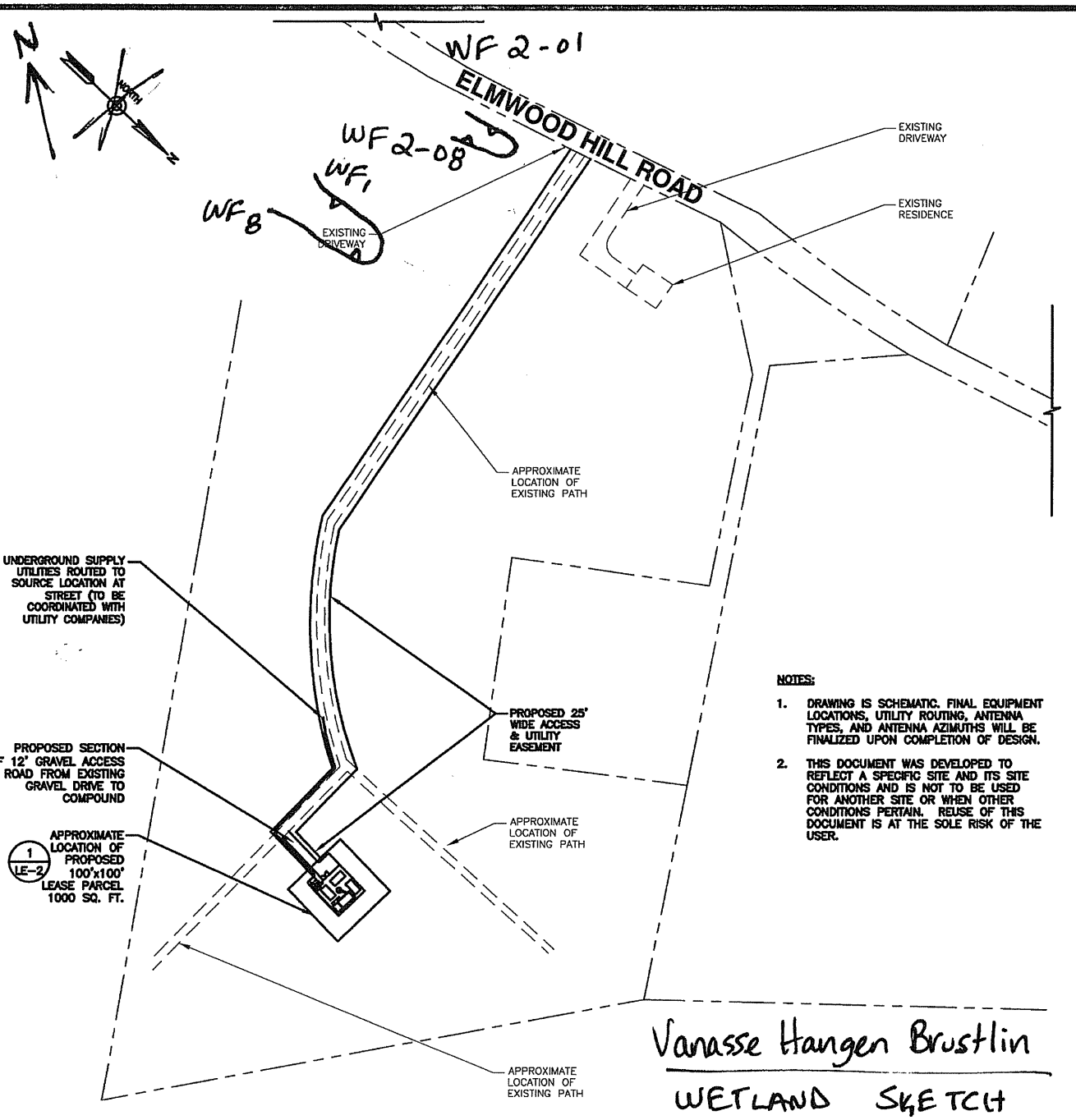
Charlton-Chatfield Complex, 3 To 15 Percent Slopes, Very Rocky This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Charlton soils, 30 percent Chatfield soils. 25 percent minor components. Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam Chatfield soils This component occurs on upland hill and ridge landforms. The parent material consists of melt-out till derived from gneiss, granite, and schist. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 40 inches to bedrock (lithic). The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; highly decomposed plant material 1 to 6 inches; gravelly fine sandy loam 6 to 15 inches; gravelly fine sandy loam 15 to 29 inches; gravelly fine sandy loam 29 to 36 inches; unweathered bedrock

Map Unit: 85B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony

Paxton And Montauk Fine Sandy Loams, 3 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 56 inches(889 to 1422 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 6, Mar 22, 2007



NOTES:

1. DRAWING IS SCHEMATIC. FINAL EQUIPMENT LOCATIONS, UTILITY ROUTING, ANTENNA TYPES, AND ANTENNA AZIMUTHS WILL BE FINALIZED UPON COMPLETION OF DESIGN.
2. THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

Vanasse Hangen Brustlin

WETLAND SKETCH

9/22/07 DEG

WETLAND FLAGS

WF 1 to 8

WF 2-01 to 2-08

SITE PLAN (1)

SCALE: 1"=200'

0' 200' 400'

COORDINATES:
41° 55' 46.7"
71° 48' 38.9"

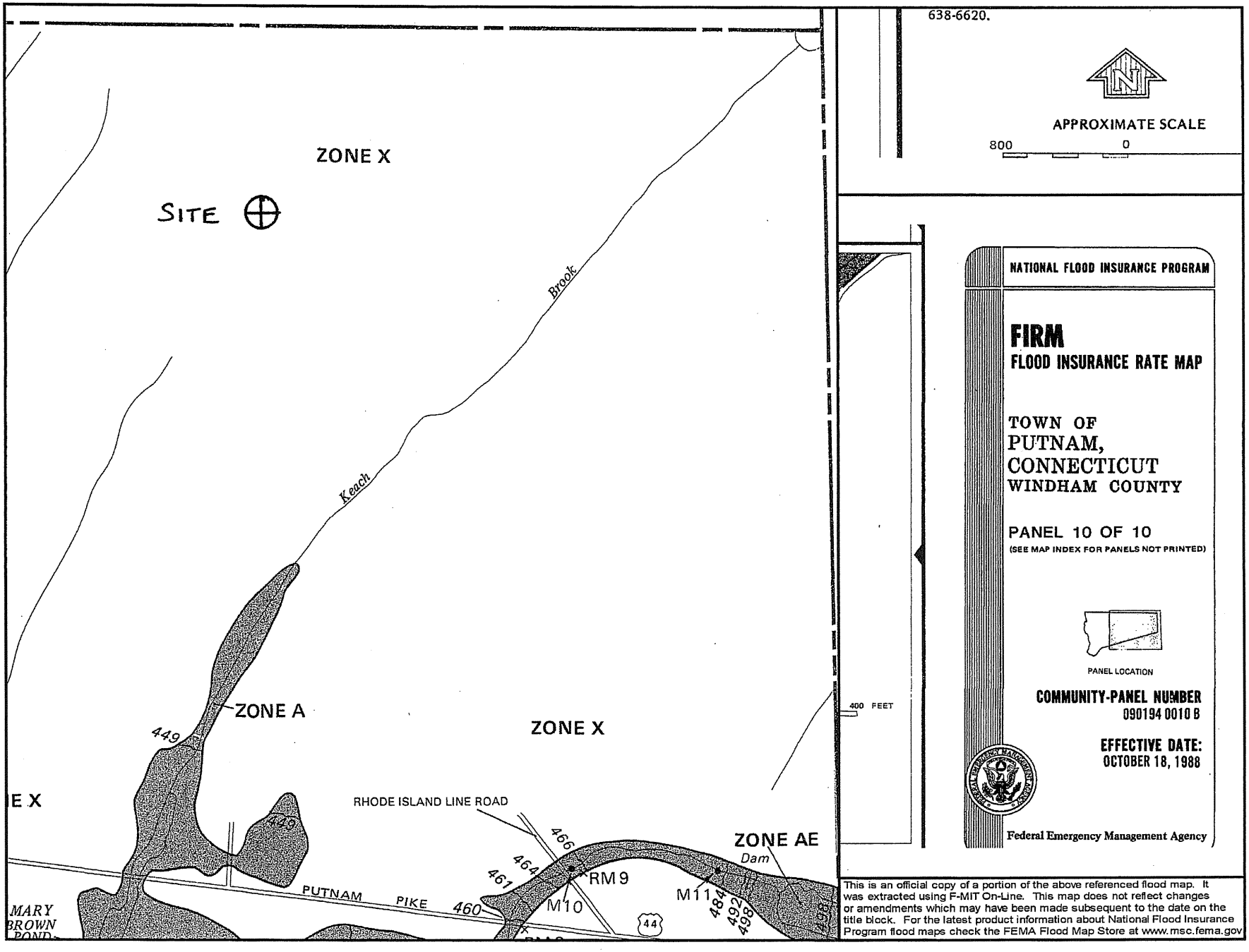
TAKEN FROM HAND HELD GPS

Dewberry

Dewberry-Goodkind, Inc.
59 ELM STREET
SUITE 101
NEW HAVEN, CT 06510
203 776 2277 PHONE
203 776 2288 FAX

Engineers
Planners
Surveyors

LEASE EXHIBIT	DGI PROJECT#: 50006053	LESSEE PROJECT#: 2007226496	Bell Atlantic Mobile of Massachusetts Corporation, Ltd.
REVISION NO.: A	LESSEE LOCATION CODE: 1787120		NOT FOR CONSTRUCTION
SITE NAME: PUTNAM	SITE ADDRESS: 165 ELMWOOD HILL ROAD PUTNAM, CT 06260		SHEET NO. LE-1
DESIGNED BY: DQ	DATE: 08/14/07		



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Zone A	The 100-year or base floodplain. There are six types of A Zones: **A** The base floodplain mapped by approximate methods, *i.e.,* BFEs are not determined. This is often called an unnumbered A Zone or an approximate A Zone. **A1-30** These are known as numbered A Zones (*e.g.,* A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format). **AE** The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones. **AO** The base floodplain with sheet flow, ponding, or shallow flooding. Base flood depths (feet above ground) are provided. **AH** Shallow flooding base floodplain. BFEs are provided. **A99** Area to be protected from base flood by levees or Federal Flood Protection Systems under construction. BFEs are not determined. **AR** The base floodplain that results from the decertification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection.
Zone V and VE	**V** The coastal area subject to a velocity hazard (wave action) where BFEs are not determined on the FIRM. **VE** The coastal area subject to a velocity hazard (wave action) where BFEs are provided on the FIRM.
Zone B and Zone X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from the 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
Zone C and Zone X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.
Zone D	Area of undetermined but possible flood hazards.

EPUTNAM.SRP

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*******************************************
*        Federal Airways & Airspace       *
*             Summary Report              *
*******************************************
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File: EPUTNAM

Location: Danielson, CT
Distance: 9.2 Statute Miles
Direction: 205° (true bearing)

Latitude: 41°-55'-45.32" Longitude: 71°-48'-36.17"

SITE ELEVATION AMSL.....644 ft.
STRUCTURE HEIGHT.....150 ft.
OVERALL HEIGHT AMSL.....794 ft.

NOTICE CRITERIA
FAR 77.13(a)(1): NNR (DNE 200 ft AGL)
FAR 77.13(a)(2): NNR (DNE Notice Slope)
FAR 77.13(a)(3): NNR (Not a Traverse Way)
FAR 77.13(a)(4): PNR (Circling Approach Area)
FAR 77.13(a)(4): PNR (Straight-In Procedure. Check FAF distance for TERPS® impact. 5B3)
FAR 77.13(a)(4): NNR (No Expected TERPS® impact C44)
FAR 77.13(a)(5): NNR (Off Airport Construction)

Notice to the FAA is not required at the analyzed location and height.

NR = Notice Required
NNR = Notice Not Required
PNR = Possible Notice Required

OBSTRUCTION STANDARDS
FAR 77.23(a)(1): DNE 500 ft AGL
FAR 77.23(a)(2): DNE - Airport Surface
FAR 77.25(a): DNE - Horizontal Surface
FAR 77.25(b): DNE - Conical Surface
FAR 77.25(c): DNE - Primary Surface
FAR 77.25(d): DNE - Approach Surface
FAR 77.25(e): DNE - Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: 5B3: DANIELSON
Type: AIR RD: 46933 RB: 211.75 RE: 234
FAR 77.23(a)(1): DNE
FAR 77.23(a)(2): Does Not Apply.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Approach Slope: DNE
VFR Transitional Slope: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: C44: TOUTANT
Type: AIR RD: 66627 RB: 278.37 RE: 756
FAR 77.23(a)(1): DNE
FAR 77.23(a)(2): Does Not Apply.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Approach Slope: DNE
VFR Transitional Slope: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)
FAR 77.23(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)
FAR 77.23(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 2000 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	DISTANCE IN N.M.	DELTA ARP ELEVATION
CT82	SEA	QUADDICK LAKE	350.29	1.775	+391

Possible Impact to Private Landing Facility.
Possible Exceeds 200 ft Near Airport Surface height limit.

CT13	AIR	YANKEE AIRSTRIP	185.71	2.762	+74

No Impact to Private Landing Facility.
DNE 200 ft AGL within 3 NM of Airport.

CT70	HEL	WILSONVILLE	328.56	5.957	+394

No Impact to Private Landing Facility
Structure is beyond notice limit by 31195 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	ANGLE
PUT	VOR/DME	ON	0117.4	315.88	13310	+144	CT	PUTNAM	.62

FCC AM PROOF-OF-PERFORMANCE
NOT REQUIRED: Structure is not near a FCC licensed AM radio station Proof-of-Performance is not required.
Please review AM Station Report for details.

Nearest AM Station: WINY @ 7615 meters.

Airspace® Summary Version 2008.3

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04-01-2008
11:57:37

SITE NAME: East Putnam, CT
SITE NUMBER: 2007226496
ATTY/DATE Govostes 7/31/07

LAND LEASE AGREEMENT

This Agreement, made this 28th day of September, 2007 between Lois S. Pray, with an address of 165 Elmwood Hill Road, Putnam, CT, Social Security # [redacted] hereinafter designated LESSOR and Cellco Partnership, a Delaware general partnership d/b/a Verizon Wireless, with its principal office located at One Verizon Way, Basking Ridge, **Mail Stop 4AW100**, New Jersey 07920, hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

1. PREMISES. LESSOR hereby leases to LESSEE a portion of that certain parcel of property (the entirety of LESSOR's property is referred to hereinafter as the Property), located at 165 Elmwood Hill Road, Putnam, Windham County, Connecticut, and being described as a 100' by 100' parcel containing 10,000 square feet (the "Land Space"), together with the non-exclusive right (the "Rights of Way") for ingress and egress, seven (7) days a week twenty-four (24) hours a day, on foot or motor vehicle, including trucks over or along a thirty (30') foot wide right-of-way extending from the nearest public right-of-way, Elmwood Hill Road, to the Land Space, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along one or more rights of way from the Land Space, said Land Space and Rights of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "A" attached hereto and made a part hereof. The Property is also shown on the Tax Map of the Town of Putnam as Map 101, Lot 008 and being further described in Deed Book 212, Page 114, as recorded in the Town of Putnam Land Records.

In the event any public utility is unable to use the Rights of Way, the LESSOR hereby agrees to grant an additional right-of-way either to the LESSEE or to the public utility at no cost to the LESSEE.

2. SURVEY. LESSOR also hereby grants to LESSEE the right to survey the Property and the Premises, and said survey shall then become Exhibit "B" which shall be attached hereto and made a part hereof, and shall control in the event of boundary and access discrepancies between it and Exhibit "A". Cost for such work shall be borne by the LESSEE.

3. TERM. This Agreement shall be effective as of the date of execution by both Parties, provided, however, the initial term shall be for five (5) years and shall commence on the Commencement Date (as hereinafter defined) at which time rental payments shall commence and be due at a total annual rental of [redacted] to be paid in equal monthly installments on the first day of the month, in advance, to Lois Pray, or to such other person, firm or place as LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date by notice given in accordance with Paragraph 23 below. Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE. The Agreement shall commence based upon the date

LESSEE commences installation of the equipment on the Premises. In the event the date LESSEE commences installation of the equipment on the Premises falls between the 1st and 15th of the month, the Agreement shall commence on the 1st of that month and if the date installation commences falls between the 16th and 31st of the month, then the Agreement shall commence on the 1st day of the following month (either the "Commencement Date").

4. EXTENSIONS. This Agreement shall automatically be extended for four (4) additional five (5) year terms unless LESSEE terminates it at the end of the then current term by giving LESSOR written notice of the intent to terminate at least six (6) months prior to the end of the then current term.

5. EXTENSION RENTALS. The annual rental for the first (1st) five (5) year extension term shall be increased to [redacted] the annual rental for the second (2nd) five (5) year extension term shall be increased to [redacted] the annual rental for the third (3rd) five (5) year extension term shall be increased to [redacted] and the annual rental for the fourth (4th) five (5) year extension term shall be increased to [redacted]

6. ADDITIONAL EXTENSIONS. If at the end of the fourth (4th) five (5) year extension term this Agreement has not been terminated by either Party by giving to the other written notice of an intention to terminate it at least three (3) months prior to the end of such term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of five (5) years and for five (5) year terms thereafter until terminated by either Party by giving to the other written notice of its intention to so terminate at least three (3) months prior to the end of such term. Annual rental for each such additional five (5) year term shall be equal to [redacted] of the annual rental payable with respect to the immediately preceding five (5) year term. The initial term and all extensions shall be collectively referred to herein as the "Term".

7. USE; GOVERNMENTAL APPROVALS. LESSEE shall use the Premises for the purpose of constructing, maintaining, repairing and operating a communications facility and uses incidental thereto. A security fence consisting of chain link construction or similar but comparable construction may be placed around the perimeter of the Premises at the discretion of LESSEE (not including the access easement). All improvements, equipment, antennas and conduits shall be at LESSEE's expense and their installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its utilities, equipment, antennas and/or conduits or any portion thereof and the frequencies over which the equipment operates, whether the equipment, antennas, conduits or frequencies are specified or not on any exhibit attached hereto, during the Term. It is understood and agreed that LESSEE's ability to use the Premises is contingent upon its obtaining after the execution date of this Agreement all of the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities as well as satisfactory soil boring tests which will permit LESSEE use of the Premises as set forth above. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Property with respect to the proposed use thereof by LESSEE. In the event that (i) any of

such applications for such Governmental Approvals should be finally rejected; (ii) any Governmental Approval issued to LESSEE is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority; (iii) LESSEE determines that such Governmental Approvals may not be obtained in a timely manner; (iv) LESSEE determines that any soil boring tests are unsatisfactory; (v) LESSEE determines that the Premises is no longer technically compatible for its use, or (vi) LESSEE, in its sole discretion, determines that it will be unable to use the Premises for its intended purposes, LESSEE shall have the right to terminate this Agreement. Notice of LESSEE's exercise of its right to terminate shall be given to LESSOR in writing by certified mail, return receipt requested, and shall be effective upon the mailing of such notice by LESSEE, or upon such later date as designated by LESSEE. All rentals paid to said termination date shall be retained by LESSOR. Upon such termination, this Agreement shall be of no further force or effect except to the extent of the representations, warranties and indemnities made by each Party to the other hereunder. Otherwise, the LESSEE shall have no further obligations for the payment of rent to LESSOR.

8. INDEMNIFICATION. Subject to Paragraph 9 below, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents.

9. INSURANCE.

a. The Parties hereby waive and release any and all rights of action for negligence against the other which may hereafter arise on account of damage to the Premises or to the Property, resulting from any fire, or other casualty of the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, or either of them. These waivers and releases shall apply between the Parties and they shall also apply to any claims under or through either Party as a result of any asserted right of subrogation. All such policies of insurance obtained by either Party concerning the Premises or the Property shall waive the insurer's right of subrogation against the other Party.

b. LESSOR and LESSEE each agree that at its own cost and expense, each will maintain commercial general liability insurance with limits not less than $1,000,000 for injury to or death of one or more persons in any one occurrence and $500,000 for damage or destruction to property in any one occurrence. LESSOR and LESSEE each agree that it will include the other Party as an additional insured.

10. LIMITATION OF LIABILITY. Except for indemnification pursuant to paragraphs 8 and 28, neither Party shall be liable to the other, or any of their respective agents, representatives, employees for any lost revenue, lost profits, loss of technology, rights or services, incidental, punitive, indirect, special or consequential damages, loss of data, or interruption or loss of use of service, even if advised of the possibility of such damages, whether under theory of contract, tort (including negligence), strict liability or otherwise.

11. ANNUAL TERMINATION. Notwithstanding anything to the contrary contained herein, provided LESSEE is not in default hereunder beyond applicable notice and cure periods, LESSEE shall have the right to terminate this Agreement upon the annual anniversary of the Commencement Date provided that [redacted] prior notice is given to LESSOR.

12. INTERFERENCE. LESSEE agrees to install equipment of the type and frequency which will not cause harmful interference which is measurable in accordance with then existing industry standards to any equipment of LESSOR or other lessees of the Property which existed on the Property prior to the date this Agreement is executed by the Parties. In the event any after-installed LESSEE's equipment causes such interference, and after LESSOR has notified LESSEE in writing of such interference, LESSEE will take all commercially reasonable steps necessary to correct and eliminate the interference, including but not limited to, at LESSEE's option, powering down such equipment and later powering up such equipment for intermittent testing. In no event will LESSOR be entitled to terminate this Agreement or relocate the equipment as long as LESSEE is making a good faith effort to remedy the interference issue. LESSOR agrees that LESSOR and/or any other tenants of the Property who currently have or in the future take possession of the Property will be permitted to install only such equipment that is of the type and frequency which will not cause harmful interference which is measurable in accordance with then existing industry standards to the then existing equipment of LESSEE. The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore, either Party shall have the right to equitable remedies, such as, without limitation, injunctive relief and specific performance.

13. REMOVAL AT END OF TERM. LESSEE shall, upon expiration of the Term, or within ninety (90) days after any earlier termination of the Agreement, remove its building(s), antenna structure(s) (except footings), equipment, conduits, fixtures and all personal property and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that all of the equipment, conduits, fixtures and personal property of LESSEE shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable Laws (as defined in Paragraph 32 below). If such time for removal causes LESSEE to remain on the Premises after termination of this Agreement, LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until such time as the removal of the building, antenna structure, fixtures and all personal property are completed.

14. HOLDOVER. LESSEE has no right to retain possession of the Premises or any part thereof beyond the expiration of that removal period set forth in Paragraph 13 herein, unless the Parties are negotiating a new lease or lease extension in good faith. In the event that the Parties are not in the process of negotiating a new lease or lease extension in good faith, LESSEE holds over in violation of Paragraph 13 and this Paragraph 14, then the rent then in effect payable from and after the time of the expiration or earlier removal period set forth in Paragraph 13 shall be increased to [redacted] of the rent applicable during the month immediately preceding such expiration or earlier termination.

15. RIGHT OF FIRST REFUSAL. If LESSOR elects, during the Term (i) to sell or otherwise transfer all or any portion of the Property, whether separately or as part of a larger parcel of which the Property is a part, or (ii) grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, with or without an assignment of this Agreement to such third party, LESSEE shall have the right of first refusal to meet any bona fide offer of sale or transfer on the same terms and conditions of such offer. If LESSEE fails to meet such bona fide offer within thirty (30) days after written notice thereof from LESSOR, LESSOR may sell or grant the easement or interest in the Property or portion thereof to such third person in accordance with the terms and conditions of such third party offer. For purposes of this Paragraph, any transfer, bequest or devise of LESSOR's interest in the Property as a result of the death of LESSOR, whether by will or intestate succession, shall not be considered a sale of the Property for which LESSEE has any right of first refusal.

16. RIGHTS UPON SALE. Should LESSOR, at any time during the Term decide (i) to sell or transfer all or any part of the Property to a purchaser other than LESSEE, or (ii) to grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, such sale or grant of an easement or interest therein shall be under and subject to this Agreement and any such purchaser or transferec shall recognize LESSEE's rights hereunder under the terms of this Agreement. To the extent that LESSOR grants to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE for the purpose of operating and maintaining communications facilities or the management thereof and in conjunction therewith, assigns this Agreement to said third party, LESSOR shall not be released from its obligations to LESSEE under this Agreement, and LESSEE shall have the right to look to LESSOR and the third party for the full performance of this Agreement.

17. QUIET ENJOYMENT. LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises.

18. TITLE. LESSOR represents and warrants to LESSEE as of the execution date of this Agreement, and covenants during the Term that LESSOR is seized of good and sufficient title and interest to the Property and has full authority to enter into and execute this Agreement. LESSOR further covenants during the Term that there are no liens, judgments or impediments of title on the Property, or affecting LESSOR's title to the same and that there are no covenants, easements or restrictions which prevent or adversely affect the use or occupancy of the Premises by LESSEE as set forth above.

19. INTEGRATION. It is agreed and understood that this Agreement contains all agreements, promises and understandings between LESSOR and LESSEE and that no verbal or oral agreements, promises or understandings shall be binding upon either LESSOR or LESSEE

in any dispute, controversy or proceeding at law, and any addition, variation or modification to this Agreement shall be void and ineffective unless made in writing signed by the Parties or in a written acknowledgment in the case provided in Paragraph 3. In the event any provision of the Agreement is found to be invalid or unenforceable, such finding shall not affect the validity and enforceability of the remaining provisions of this Agreement. The failure of either Party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights under the Agreement shall not waive such rights and such Party shall have the right to enforce such rights at any time and take such action as may be lawful and authorized under this Agreement, in law or in equity.

20. GOVERNING LAW. This Agreement and the performance thereof shall be governed, interpreted, construed and regulated by the Laws of the State in which the Property is located.

21. ASSIGNMENT. This Agreement may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal or to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of LESSEE shall constitute an assignment hereunder. LESSEE may sublet the Premises within its sole discretion, upon notice to LESSOR. Any sublease that is entered into by LESSEE shall be subject to the provisions of this Agreement and shall be binding upon the successors, assigns, heirs and legal representatives of the respective Parties hereto.

22. NOTICES. All notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

LESSOR: Lois S. Pray
165 Elmwood Hill Road
Thompson, CT 86277

LESSEE: Cellco Partnership d/b/a Verizon Wireless
180 Washington Valley Road
Bedminster, New Jersey 07921
Attention: Network Real Estate

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.

23. SUCCESSORS. This Agreement shall extend to and bind the heirs, personal representative, successors and assigns of the Parties hereto.

24. SUBORDINATION AND NON-DISTURBANCE. At LESSOR's option, this Agreement shall be subordinate to any mortgage or other security interest by LESSOR which from time to time may encumber all or part of the Property or right-of-way; provided, however, every such mortgage or other security interest shall recognize the validity of this Agreement in the event of a foreclosure of LESSOR's interest and also LESSEE's right to remain in occupancy of and have access to the Premises as long as LESSEE is not in default of this Agreement. LESSEE shall execute whatever instruments may reasonably be required to evidence this subordination clause. In the event the Property is encumbered by a mortgage or other security interest, the LESSOR immediately after this Agreement is executed, will obtain and furnish to LESSEE, a non-disturbance agreement for each such mortgage or other security interest in recordable form. In the event the LESSOR defaults in the payment and/or other performance of any mortgage or other security interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or security interest and the LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

25 RECORDING. LESSOR agrees to execute a Memorandum of this Agreement which LESSEE may record with the appropriate recording officer. The date set forth in the Memorandum of Lease is for recording purposes only and bears no reference to commencement of either the Term or rent payments.

26. DEFAULT.

b. In the event there is a breach by LESSEE with respect to any of the provisions of this Agreement or its obligations under it, including the payment of rent, LESSOR shall give LESSEE written notice of such breach. After receipt of such written notice, LESSEE shall have fifteen (15) days in which to cure any monetary breach and thirty (30) days in which to cure any non-monetary breach, provided LESSEE shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires

more than thirty (30) days and LESSEE commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSOR may not maintain any action or effect any remedies for default against LESSEE unless and until LESSEE has failed to cure the breach within the time periods provided in this Paragraph.

c. In the event there is a breach by LESSOR with respect to any of the provisions of this Agreement or its obligations under it, LESSEE shall give LESSOR written notice of such breach. After receipt of such written notice, LESSOR shall have thirty (30) days in which to cure any such breach, provided LESSOR shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSOR commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSEE may not maintain any action or effect any remedies for default against LESSOR unless and until LESSOR has failed to cure the breach within the time periods provided in this Paragraph. Notwithstanding the foregoing to the contrary, it shall be a default under this Agreement if LESSOR fails, within five (5) days after receipt of written notice of such breach, to perform an obligation required to be performed by LESSOR if the failure to perform such an obligation interferes with LESSEE's ability to conduct its business on the Property; provided, however, that if the nature of LESSOR's obligation is such that more than five (5) days after such notice is reasonably required for its performance, then it shall not be a default under this Agreement if performance is commenced within such five (5) day period and thereafter diligently pursued to completion.

27. REMEDIES. Upon a default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation on the defaulting Party's behalf, including but not limited to the obtaining of reasonably required insurance policies. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. In the event of a default by either Party with respect to a material provision of this Agreement, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate the Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the state in which the Premises are located; provided, however, LESSOR shall use reasonable efforts to mitigate its damages in connection with a default by LESSEE. If LESSEE so performs any of LESSOR's obligations hereunder, the full amount of the reasonable and actual cost and expense incurred by LESSEE shall immediately be owing by LESSOR to LESSEE, and LESSOR shall pay to LESSEE upon demand the full undisputed amount thereof with interest thereon from the date of payment at the greater of (i) ten percent (10%) per annum, or (ii) the highest rate permitted by applicable Laws. Notwithstanding the foregoing, if LESSOR does not pay LESSEE the full undisputed amount within thirty (30) days of its receipt of an invoice setting forth the amount due from LESSOR, LESSEE may offset the full undisputed amount, including all accrued interest, due against all fees due and owing to LESSOR until the full undisputed amount, including all accrued interest, is fully reimbursed to LESSEE.

28. ENVIRONMENTAL.

d. LESSOR will be responsible for all obligations of compliance with any and all environmental and industrial hygiene laws, including any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene conditions or concerns as may now or at any time hereafter be in effect, that are or were in any way related to activity now conducted in, on, or in any way related to the Property, unless such conditions or concerns are caused by the specific activities of LESSEE in the Premises.

e. LESSOR shall hold LESSEE harmless and indemnify LESSEE from and assume all duties, responsibility and liability at LESSOR's sole cost and expense, for all duties, responsibilities, and liability (for payment of penalties, sanctions, forfeitures, losses, costs, or damages) and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding which is in any way related to: a) failure to comply with any environmental or industrial hygiene law, including without limitation any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene concerns or conditions as may now or at any time hereafter be in effect, unless such non-compliance results from conditions caused by LESSEE; and b) any environmental or industrial hygiene conditions arising out of or in any way related to the condition of the Property or activities conducted thereon, unless such environmental conditions are caused by LESSEE.

29. CASUALTY. In the event of damage by fire or other casualty to the Premises that cannot reasonably be expected to be repaired within forty-five (45) days following same or, if the Property is damaged by fire or other casualty so that such damage may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, then LESSEE may, at any time following such fire or other casualty, provided LESSOR has not completed the restoration required to permit LESSEE to resume its operation at the Premises, terminate this Agreement upon fifteen (15) days prior written notice to LESSOR. Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment, as of such termination date, with respect to payments due to the other under this Agreement. Notwithstanding the foregoing, the rent shall abate during the period of repair following such fire or other casualty in proportion to the degree to which LESSEE's use of the Premises is impaired.

30. CONDEMNATION. In the event of any condemnation of all or any portion of the Property, this Agreement shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever occurs first. If as a result of a partial condemnation of the Premises or Property, LESSEE, in LESSEE's sole discretion, is unable to use the Premises for the purposes intended hereunder, or if such condemnation may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, LESSEE may, at LESSEE's option, to be exercised in writing within fifteen (15) days after LESSOR shall have given LESSEE written notice of such taking (or in the absence of such notice, within fifteen (15) days after the condemning authority shall have taken possession) terminate this Agreement as of the date the condemning authority takes such possession. LESSEE may on its own behalf make

a claim in any condemnation proceeding involving the Premises for losses related to the equipment, conduits, fixtures, its relocation costs and its damages and losses (but not for the loss of its leasehold interest). Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment as of such termination date with respect to payments due to the other under this Agreement. If LESSEE does not terminate this Agreement in accordance with the foregoing, this Agreement shall remain in full force and effect as to the portion of the Premises remaining, except that the rent shall be reduced in the same proportion as the rentable area of the Premises taken bears to the total rentable area of the Premises. In the event that this Agreement is not terminated by reason of such condemnation, LESSOR shall promptly repair any damage to the Premises caused by such condemning authority.

31. SUBMISSION OF AGREEMENT/PARTIAL INVALIDITY/AUTHORITY. The submission of this Agreement for examination does not constitute an offer to lease the Premises and this Agreement becomes effective only upon the full execution of this Agreement by the Parties. If any provision herein is invalid, it shall be considered deleted from this Agreement and shall not invalidate the remaining provisions of this Agreement. Each of the Parties hereto warrants to the other that the person or persons executing this Agreement on behalf of such Party has the full right, power and authority to enter into and execute this Agreement on such Party's behalf and that no consent from any other person or entity is necessary as a condition precedent to the legal effect of this Agreement.

32. APPLICABLE LAWS. During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, rules, regulations, ordinances, directives, covenants, easements, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Premises and at LESSEE's sole cost and expense, comply with (a) all Laws relating solely to LESSEE's specific and unique nature of use of the Premises (other than general office use); and (b) all building codes requiring modifications to the Premises due to the improvements being made by LESSEE in the Premises.

33. SURVIVAL. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement. Additionally, any provisions of this Agreement which require performance subsequent to the termination or expiration of this Agreement shall also survive such termination or expiration.

34. CAPTIONS. The captions contained in this Agreement are inserted for convenience only and are not intended to be part of the Agreement. They shall not affect or be utilized in the construction or interpretation of the Agreement.

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written.

Sara J. Savery
WITNESS Sara J. Savery

Wendy L Roberts
Wendy L Roberts

Diane Mapula
WITNESS

Karen Paul

LESSOR:

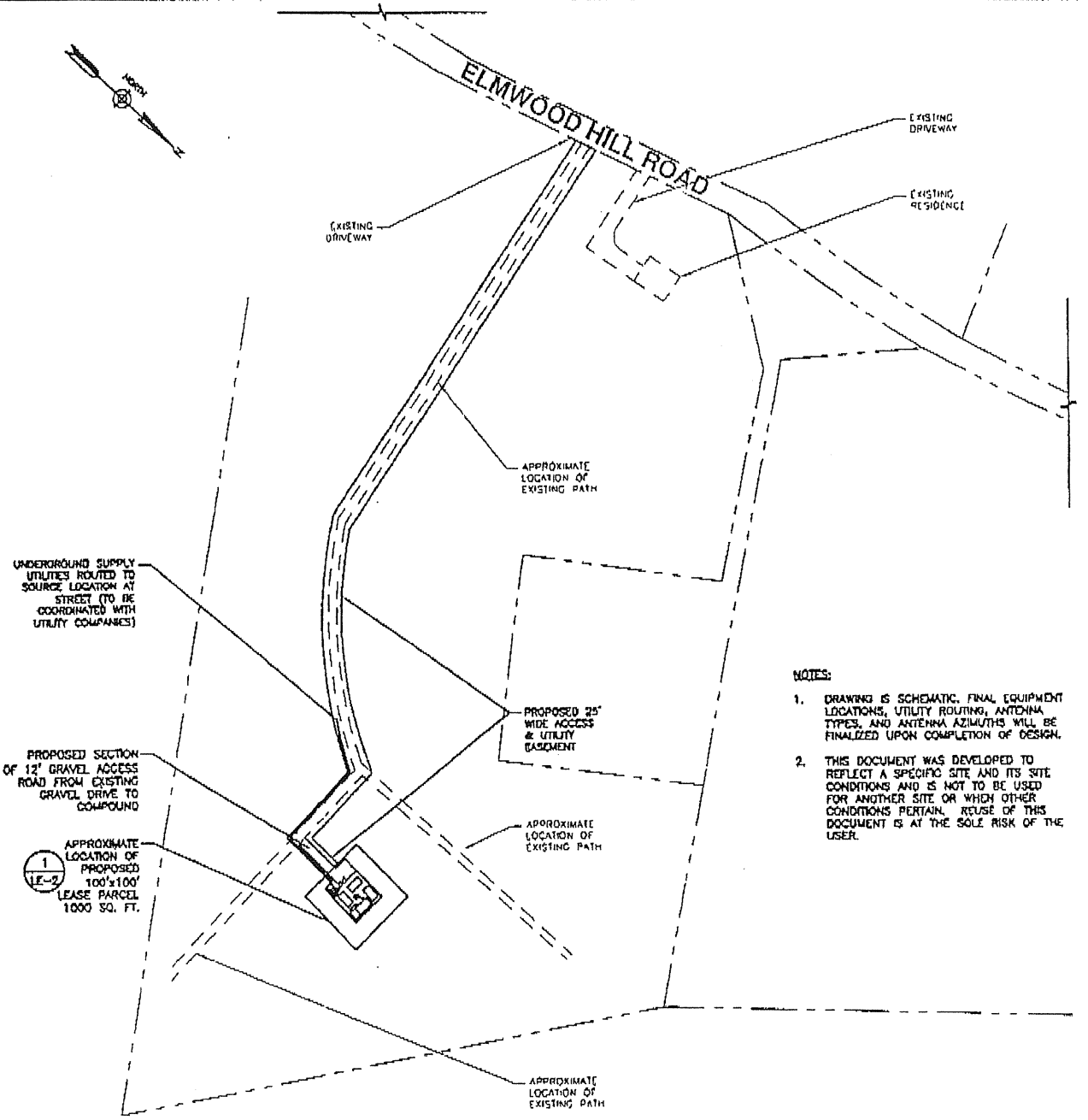
Lois S. Pray
Lois S. Pray

LESSEE: Cellco Partnership a Delaware general partnership d/b/a Verizon Wireless

By:
David R. Heverling

Its:Network Vice President – Northeast Area

9187



NOTES:

1. DRAWING IS SCHEMATIC. FINAL EQUIPMENT LOCATIONS, UTILITY ROUTING, ANTENNA TYPES, AND ANTENNA AZIMUTHS WILL BE FINALIZED UPON COMPLETION OF DESIGN.
2. THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

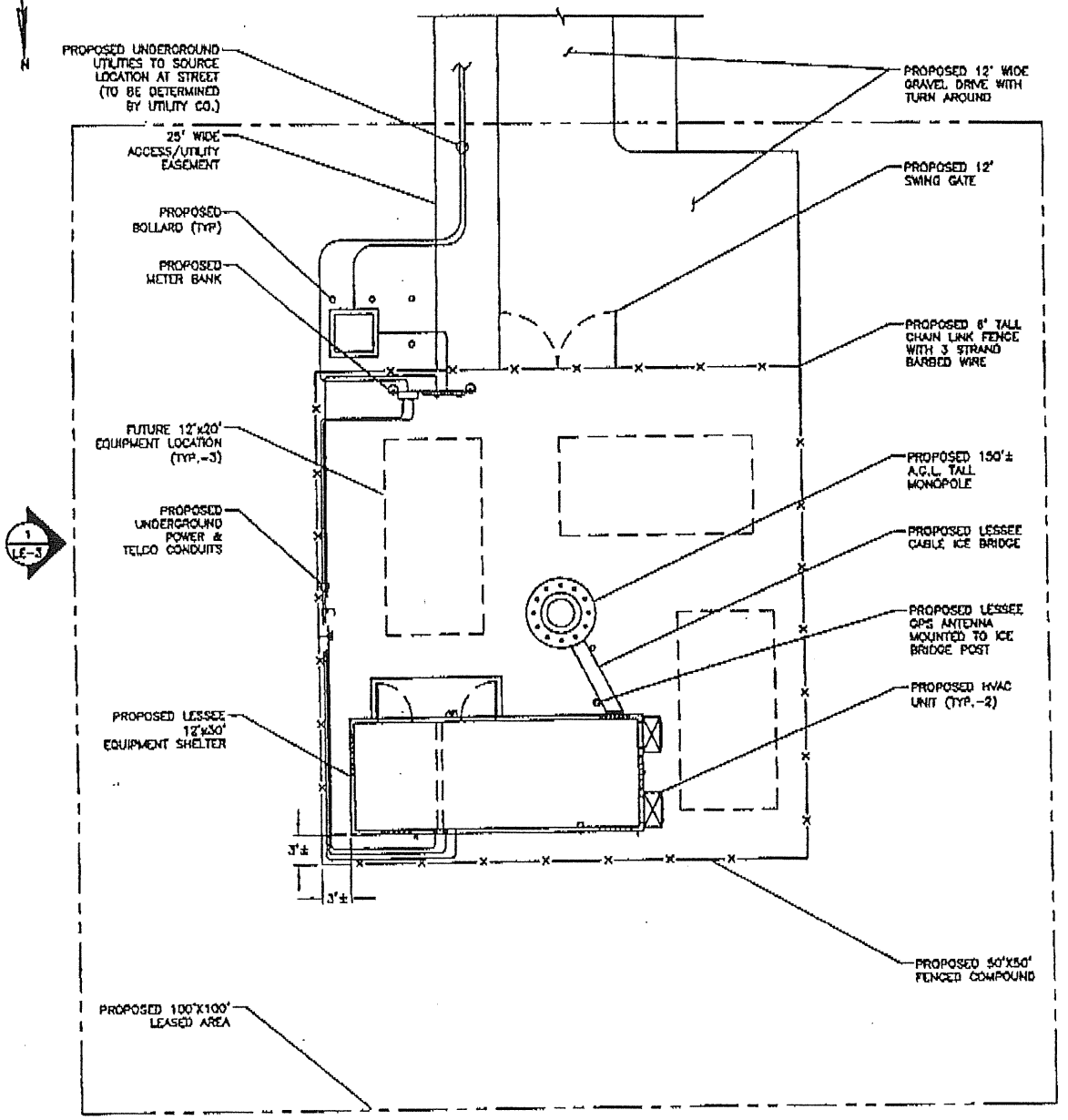
SITE PLAN (1)
SCALE: 1"=200'

0' 200' 400'

COORDINATES:
41° 55' 46.7"
71° 46' 36.9"

TAKEN FROM HAND HELD GPS

Dewberry	LEASE EXHIBIT	DGI PROJECT#: 50006053 / LESSEE PROJECT#: 2007226496	3.
Dewberry-Goodkind, Inc. 50 ELM STREET SUITE 101 NEW HAVEN, CT 06510 203.776.2871 PHONE 203.776.9280 FAX — Engineers Planners Surveyors	REVISION NO.: B	LESSEE LOCATION CODE: 1787120	NOT FOR CONSTRUCTION
DESIGNED BY: DQ / DATE: 08/14/07	SITE NAME: PRAY PROPERTY PUTNAM	SITE ADDRESS: 165 ELMWOOD HILL ROAD PUTNAM, CT 06260	SHEET NO. LE-1



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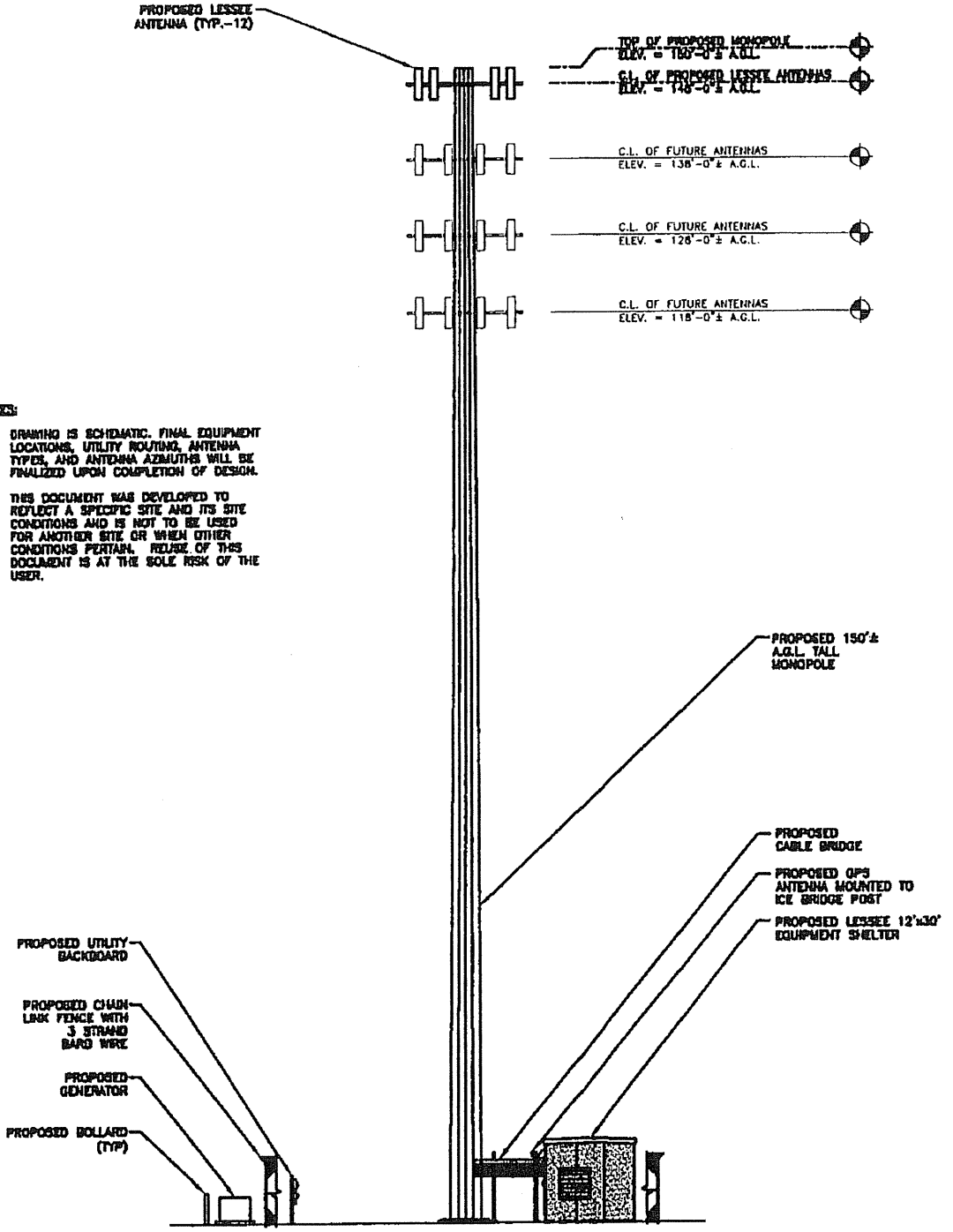
SITE PLAN (1)
SCALE: 1/16"=1'-0"

0' 8' 16' 32'

Dewberry
Dewberry-Goodkind, Inc.
Engineers
Planners
Surveyors

LEASE EXHIBIT	DCI PROJECT#: 50006053	LESSEE PROJECT#: 2007226496	
REVISION NO.: B	LESSEE LOCATION CODE: 1787120	NOT FOR CONSTRUCTION	
SITE NAME: PRAY PROPERTY PUTNAM	SITE ADDRESS: 165 ELMWOOD HILL ROAD PUTNAM, CT 06260	SHEET NO. LE-2	
DESIGNED BY: DQ	DATE: 08/14/07		



NOTES:

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ELEVATION 1
SCALE: 1"=20'-0"

0' 10' 20'

Dewberry
Dewberry-Goodkind, Inc.
Engineers
Planners
Surveyors

LEASE EXHIBIT	DGI PROJECT#: 50006053	LESSEE PROJECT#: 2007226496	
REVISION NO.: B	LESSEE LOCATION CODE: 1787120		NOT FOR CONSTRUCTION
SITE NAME: PRAY PROPERTY PUTNAM	SITE ADDRESS: 165 ELMWOOD HILL ROAD PUTNAM, CT 06260		SHEET NO. LE-3
DESIGNED BY: DQ	DATE: 08/14/07		