Connecticut Siting Council

APPLICATION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

MOOSUP FACILITY

TOWN OF PLAINFIELD, CONNECTICUT

DOCKET NO. ____

AUGUST 26, 2008



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- 1. Moosup Facility Factual Summary and Project Plans
- 2. Connecticut Siting Council Application Guide
- 3. Certificate of Service of Application on Government Officials and List of Officials Served
- 4. Legal Notice in the Norwich Bulletin
- 5. Notice to Landowners; List of Abutting Landowners; Certificate of Service
- 6. Federal Communications Commission Authorization
- 7. Coverage Maps Location of Proposed and Surrounding Cell Sites
- 8. Antenna and Equipment Specifications
- 9. Site Search Summary
- 10. Visual Impact Evaluation Report
- 11. Environmental Reviews/State Agency Comments
- 12. Wetland Impact Report and Soils Report
- 13. Federal Airways & Airspace Summary Report
- 14. Lease Agreement between Cellco Partnership and Reepu D. Singh

EXECUTIVE SUMMARY

Cellco Partnership d/b/a Verizon Wireless ("Cellco") proposes to construct a telecommunications tower and related facility on an approximately 32.2-acre parcel owned by Reepu D. Singh off Sterling Road (Route 14) in the Moosup section of the Town of Plainfield, Connecticut (the "Moosup Facility"). The Moosup Facility will provide coverage along Route 14, as well as local roads in the easterly portion of the Town of Plainfield and westerly portion of the Town of Sterling.

Cellco proposes the construction of a 160-foot telecommunications tower. Cellco will install twelve (12) panel-type antennas, with their centerline at the 157-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 75' fenced compound. Vehicular and utility access to the Moosup Facility would extend from Sterling Road a distance of approximately 1,100 feet.



Moosup

Sterling Road Plainfield, Connecticut

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2006 Aerial Photograph Proposed Verizon Wireless Telecommunications Facility Moosup Sterling Road Plainfield, Connecticut

STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL.

IN RE:	:	
APPLICATION OF CELLCO	:	DOCKET NO.
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	:	
OFF STERLING ROAD (ROUTE 14),	:	
PLAINFIELD, CONNECTICUT	:	AUGUST 26, 2008

APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

I. <u>INTRODUCTION</u>

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 Moosup Section of the Town of Plainfield, Connecticut (the "Moosup Facility"). The proposed Moosup Facility would provide for much needed wireless telecommunications coverage along

Route 14, as well as local roads in the easterly portion of Plainfield and the westerly portion of Sterling. In Moosup, Cellco's primary coverage objective is to provide enhanced Personal Communication System ("PCS") wireless service and fill-in cellular service between its existing Plainfield North 2 facility to the west and its recently approved Sterling facility to the east. (Council Docket No. 345). Cellco currently experiences a 1.72 mile gap in PCS coverage and a 0.18 mile gap in cellular coverage along Route 14 in the Moosup area. Cellco's existing Plainfield North 2 cell site consists of antennas at the 127-foot level of a 160-foot tower at 47-51 Unity Street in Plainfield. Cellco's recently approved Sterling cell site will consist of antennas at the top of a 140-foot tower off Exeter Drive. The proposed Moosup Facility will provide reliable service to a 3.73 mile portion of Route 14 and an overall area of 6.5 square miles at PCS frequencies; and a 4.02 mile portion of Route 14 and an overall area of 13.1 square miles at cellular frequencies.

The Moosup Facility would be located in the westerly portion of a 32.2 acre parcel off
Sterling Road (Route 14) in Plainfield, Connecticut (the "Property"). The Property is located in
the Town's RA-60 Residential zone district.

Cellco will construct a 160-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 with their center line at the 157-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 Moosup Facility would extend from Sterling Road over an existing logging road a distance of approximately 223 feet, then over a new gravel driveway a distance of approximately 862 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 facility.

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 <u>Attachment 1</u> is a factual summary and project plans for the proposed Moosup 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 Moosup 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 16-50l(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 August 22 and 23, 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 <u>Attachment 4</u>. 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 proposed Moosup Facility.

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 Moosup 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 <u>Attachment 6</u> 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 Moosup Facility would not enlarge Cellco's authorized service area.

B. <u>Public Need and System Design</u>

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 PCS and cellular 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 Plainfield and the surrounding area from its existing Plainfield North 2 cell site to the west of the Moosup Facility. Coverage to the east of the proposed Moosup Facility will be provided in the future by the recently approved Docket No. 345 Sterling cell site. Plots showing coverage from Cellco's existing facilities alone and together with the coverage from the proposed Moosup Facility are included as Attachment 7.

2. System Design and Equipment

a. <u>System Design</u>

Cellco's wireless system in general and the proposed Moosup 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. <u>Technological Alternatives</u>

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. <u>Site Selection and Tower Sharing</u>

1. <u>Cell Site Selection</u>

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 Moosup Facility will satisfy this goal and is necessary to fill significant PCS coverage and resolve cellular coverage problems and to provide high-quality reliable service along portions of Route 14, as well as local roads in eastern Plainfield and western Sterling.

The methodology of cell site selection for Cellco's wireless system generally limits the search for possible locations to specific locations within a general search area. A list of existing towers or other non-tower structures considered is included in Attachment 9. Cellco currently shares the existing Sprint tower located at 47-51 Unity Street in Plainfield (Plainfield North 2 cell site); the existing AT&T tower located at 45 Spaulding Hill Road in Plainfield (Plainfield cell site); the SBA tower at 548 Green Hollow Road in Plainfield (Plainfield North cell site); and the recently approved MCF tower off Exeter Drive in Sterling (Sterling cell site). (See Attachment 7). These existing and approved sites cannot resolve the significant coverage problems along Route 14, at both PCS and cellular frequencies. 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 eastern Plainfield 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 Moosup 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 Moosup Facility.

D. <u>Cell Site Information</u>

1. Site Facilities

At the Moosup Facility, Cellco would construct a new 160-foot tall tower and install twelve (12) panel-type directional antennas at the 157-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 Plainfield.¹ The Moosup Facility would be a part of a communications system that addresses the public need identified by the FCC and the United States Congress for

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.

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 Moosup 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 Moosup 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, 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, for example, 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 88 acres, or slightly more than one percent of the 8,042-acre study area (the "Study Area"). Areas of potential year-round visibility are spread out throughout the Study Area. Cellco estimates that select portions of 28 residential properties would have at least partial year-round views of the tower. Areas where seasonal views are anticipated comprise approximately 9 additional acres and are limited to the immediate vicinity of the Moosup Facility. These partial year-round views appear to be limited to the areas within the limits of the Property.

There are approximately six residences within 1,000 feet of the Moosup Facility, all located to the north, fronting on Sterling Road. The closest residence is located approximately 770 feet to the northeast owned by James and Alice Carroll.

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, Connecticut, 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 14, 2008).

In its comment letter dated December 31, 2007, the DEP stated that there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species at the Property.² (See Attachment 11 DEP response letter dated December 31, 2007). At the request of the SHPO, Cellco consultants conducted an archeological reconnaissance survey of the Property. After reviewing this survey, the SHPO determined that no further archeological investigations were warranted and that the project would have no effect on Connecticut's cultural heritage. A copy of the SHPO's July 15, 2008 response letter is included in Attachment 11.

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

² The December 31, 2007 DEP letter refers to a second parcel (Young) Cellco was pursuing as an alternative tower site. Efforts to lease the Young parcel failed.

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 11.02% of the Standard at the Moosup Facility.

d. Other Environmental Issues

No sanitary facilities are required for the Moosup Facility. The operations at the Moosup 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 Moosup 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 Moosup Facility would be located on a 32.2-acre parcel owned by Reepu D. Singh. The Property is zoned RA-60 Residential and is currently heavily-wooded vacant land. The Property is surrounded by undeveloped woodlands to the south, west and east and low-density residential uses to the north, fronting on Sterling Road.

b. Plainfield Town Plan of Conservation and Development

The Town of Plainfield Plan of Conservation and Development 2008-2018 (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 Plainfield. Four copies of the POCD were filed, in bulk, with the Council on August 26, 2008.

c. Zoning Regulations

According to the Town Zoning Map, the Property is located in the RA-60 Residential zone. Wireless Telecommunications Facilities are permitted by special permit pursuant to Section 12.35 of the Plainfield Zoning Regulations.

In Section 12.35.3, the Town has established location preferences for wireless facilities.

These preferences, from most to least preferred, are:

- 1. Establishment of the wireless facility on an existing tower, or other tall structure.
- 2. Towers less than 60 feet tall in commercial or industrial zones or on municipal property.
- 3. Towers greater than 60 feet tall in commercial or industrial zone or on municipal property.

- 4. New towers less than 60 feet tall in residential zones.
- 5. New towers greater than 60 feet tall in residential zones.

The proposed Moosup Facility conforms to many, if not all, of the General Requirements (§ 12.35.4) and Bulk Requirements (§ 12.35.5) of the Zoning Regulations. For example, the Moosup Facility is more than 200 feet from the nearest residence; is more than 1,000 feet from a historic district; will not require FAA lighting and will not contain advertising or signage; will be a monopole design; will comply with FCC emission standards; and will comply with appropriate noise standards. The regulations require a minimum lot area of 40,000 square feet for tower sites; set the maximum height at 180 feet and a tower setback equal to the height of the tower. The Moosup Facility is consistent with each of these bulk requirements. Four copies of the Plainfield Zoning Regulations were filed, in bulk, with the Council on August 26, 2008.

d. Inland Wetland and Watercourse Regulations

The Town of Plainfield Wetlands and Watercourse ("IWW") 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. Any clearing, paving or other construction related activity with 100 feet of a wetland is considered "Regulated Activity", subject to IWW Commission review. Four copies of the Plainfield Wetlands Regulations were filed, in bulk, with the Council on August 26, 2008.

Dean Gustafson, Professional Soil Scientist with VHB, Inc., conducted a field investigation and completed a Wetlands Delineation Report (the "Wetlands Report") for the Moosup Facility. According to the Wetlands Report, no wetlands or watercourses were identified on the Property proximate to any proposed development activities. The nearest

wetland or watercourse was located on the adjacent parcel more than 500 feet west of the proposed Moosup Facility. Mr. Gustafson has concluded that the development of the proposed Moosup Facility will not directly or indirectly affect wetlands or watercourses. Copies of the Wetlands Inspection Memo and Wetlands Delineation Report are included in <u>Attachment 12</u>.

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 July 11, 2008, Cellco representatives met with Plainfield First Selectman Paul E. Sweet to commenced the sixty (60) day municipal consultation process. First Selectman Sweet received copies of technical information summarizing Cellco's plans to establish a telecommunications facility at the Property. During the meeting, Cellco representatives offered to meet again with any other municipal board or commission seeking additional information about the proposal. To date, Cellco has not been asked to attend any further meetings or hearings. Because

the Moosup Facility is located within 2,500 feet of the Town of Sterling, Cellco representatives also submitted copies of the technical information to Sterling First Selectman, Russell M. Gray.

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 Moosup 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 Moosup 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 <u>Attachment 13</u>.

c. <u>United States Fish and Wildlife Service</u>

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 14, 2008 in <u>Attachment 11</u>).

d. Connecticut Department of Environmental Protection

(1) Environmental and Geographic Information Center

As discussed above based on a review of the DEP/NDDB, the DEP determined that there are no extant populations of Federal or State endangered, threatened or special concern species at the Property.

(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 Moosup Facility.

e. Connecticut State Historic Preservation Officer

As discussed above, <u>Attachment 11</u> also includes the SHPO's determination that the proposed Moosup Facility will have <u>no effect</u> on Connecticut's cultural heritage.

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. <u>CONCLUSION</u>

Based on the facts contained in this Application, Cellco submits that the establishment of the Moosup Facility will not have any substantial adverse environmental effects. A public need exists for high quality reliable wireless service in the Town of Plainfield 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 Moosup Facility.

Respectfully submitted,

CELLCO PARTNERSHIP D/B/A VERIZON

WIRELESS

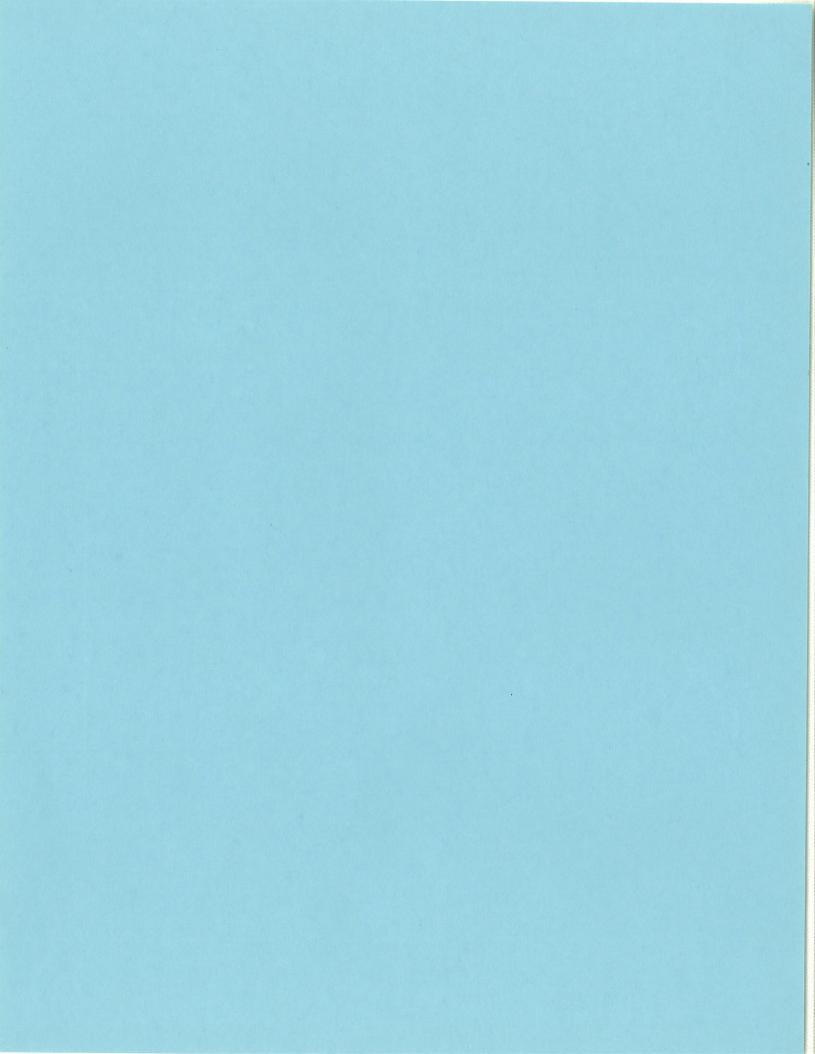
Kenneth C. Baldwin, Esq.

Robinson & Cole LLP 280 Trumbull Street

Hartford, Connecticut 06103-3597

(860) 275-8200

Attorneys for the Applicant



MOOSUP

Sterling Road Plainfield, Connecticut

Description of Proposed Cell Site

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

TABLE OF CONTENTS

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FACILITIES AND EQUIPMENT SPECIFICATION	6
ENVIRONMENTAL ASSESSMENT STATEMENT	7

SITE NAME: MOOSUP - Sterling Road, Plainfield, CT

GENERAL CELL SITE DESCRIPTION

The proposed cell site would be located in the easterly portion of an approximately 32.2 acre parcel located off Sterling Road in Plainfield, Connecticut (the "Property"). The Property is owned by Reepu D. Singh. The facility would consist of a 160-foot telecommunications tower and a 12' x 30' equipment shelter located near the base of the tower (the "Moosup Facility"). Cellco antennas would be mounted with their centerline at the 157-foot level. Vehicular access to the site and utility service would extend from Sterling Road a distance of approximately 1,100 feet.



USGS Topographic Map Proposed Verizon Wireless Telecommunications Facility Moosup Sterling Road Plainfield, Connecticut



2006 Aerial Photograph Proposed Verizon Wireless Telecommunications Facility Moosup Sterling Road Plainfield, Connecticut

SITE EVALUATION REPORT

SITE NAME: MOOSUP - Sterling Road, Plainfield, CT

I. LOCATION

- A. <u>COORDINATES</u>: 41°-42'-58.64" N 71°-51'-05.902" W
- B. GROUND ELEVATION: Approximately 454± feet AMSL
- C. <u>U.S.G.S. MAP</u>: Oneco, CT
- D. <u>SITE ADDRESS</u>: Sterling Road, Plainfield, CT
- E. <u>ZONING WITHIN 1/4 MILE OF SITE</u>: Land within 1/4 mile of the cell site is zoned RA-60 Residential.

II. DESCRIPTION

- A. <u>SITE SIZE</u>: 100' x 100' Leased Area 50' x 75' Site Compound
- B. <u>LESSOR'S PARCEL</u>: Approximately 32.2-acres
- C. TOWER TYPE/HEIGHT: 160' Monopole Tower
- D. <u>SITE TOPOGRAPHY AND SURFACE</u>: The tower site is located on the north slope of Web Hill, as labeled on the Oneco U.S.G.S. Map. Site topography generally slopes down to the north, west and east, and slopes up to the south. Clearing and grading of the compound area and portions of the access road will be required.
- E. <u>SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER</u>: The tower is located in the westerly portion of a 32.2-acre parcel. The Property is vacant and is heavily wooded. No wetland or watercourses were identified on the Property or within 500 feet of the proposed development activities.
- F. <u>LAND USE WITHIN 1/4 MILE OF SITE</u>: The Property is surrounded by undeveloped woodlands to the west, south and east, and low-density residential areas to the north. (See Aerial Photograph at p. 2).

III. <u>FACILITIES</u>

A. <u>POWER COMPANY</u>: Connecticut Light and Power

- B. <u>POWER PROXIMITY TO SITE</u>: Approximately 1,100 feet to the west along Sterling Road.
- C. <u>TELEPHONE COMPANY</u>: AT&T
- D. PHONE SERVICE PROXIMITY: Same as power
- E. <u>VEHICLE ACCESS TO SITE</u>: Vehicle access to the site would extend directly from Sterling Road.
- F. <u>CLEARING AND FILL REQUIRED</u>: 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. Cellco estimates that approximately 67 trees, six inches or greater at breast height, would be removed to construct the Moosup Facility.

IV. <u>LEGAL</u>

- A. PURCHASE [] LEASE [X]
- B. OWNER: Reepu D. Singh
- C. ADDRESS: Sterling Road, Plainfield, CT 06354
- D. DEED ON FILE AT: Town of Plainfield, CT Land Records

Vol. 243 Page 215

FACILITIES AND EQUIPMENT SPECIFICATION (NEW TOWER & EQUIPMENT BUILDING)

SITE NAME: MOOSUP - Sterling Road, Plainfield, CT

I. TOWER SPECIFICATIONS:

A. MANUFACTURER: To be determined

B. TYPE: Self-supporting monopole

C. TOWER HEIGHT: 160'

D. DIMENSIONS: Approx. 55" base

Approx. 30" top

II. TOWER LOADING:

A. CELLCO EQUIPMENT:

Antennas (12)
 Model LPA-185063/12CF_2 (71.1" x 6.6" x 5.8") PCS antennas
 Model LPA-80063/6CF (70.9" x 15.0" x 13.1") Cellular antennas
 Antenna Centerline 157' 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: MOOSUP - Sterling Road, Plainfield, 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 Moosup Facility. No wetlands were identified on the site or within 500 feet of development activity. Nearest wetland/watercourse was located approximately 500 feet away on an adjacent parcel, to the west of the site 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 Moosup Facility. Cellco estimates a total of 67 trees, six inches or greater at breast height would be removed to construct the Moosup Facility.

D. NOISE

The equipment to be in operation at the Moosup 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. <u>POWER DENSITY</u>

The worst-case calculation of power density for Cellco's cellular and PCS antennas at the Moosup Facility would be 11.02% of the Standard.

F. <u>VISIBILITY</u>

See Visual Resource Evaluation Report included as Attachment 10.

Cellco Partnership



MOOSUP FACILITY STERLING ROAD PLAINFIELD, CT 06374

SITE DIRECTIONS					
FROM: 99 EAST RIVER DRIVE TO: SITE ENTRANCE AT MOOSUP, CONNECTICUT					DAD
 SI HANTIOND, CONNECTION START OUT GOING EAST ON EAST RIVER DRIVE. MERGE ONTO 1-84 E/US-6E VA THE RAMP ON LEFT TOWARD BOSTON. MERGE ONTO CT-2 E VA EXIT 55 TOWARD NORWICH / NEW LONDON. MERGE ONTO 1-395 N VAE EXIT 59. TOWARD MOOSUP / STERLING. TAKE THE CT-14 EXIT, EXIT 89, TOWARD MOOSUP / STERLING. TURN LEFT ONTO E MAIN STREET/CT-14. CONTINUE TO FOLLOW CT-14 E. -TURN LEFT ONTO CT-14 / S MAIN STREET. CONTINUE TO FOLLOW CT-14. END AT ENTRANCE TO SITE.					MI. MI. MI. MI. MI. MI.

GENERAL NOTES

PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELLCO PARTNERSHIP

SITE INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

- . THE CONSTRUCTION OF A 50'x75' FENCED WIRELESS COMMUNICATIONS COMPOUND WITH
- 100'x100' Lease area.

 2. Site grading will be required within lease area and access drive for proper drainage, a total of fifty-four trees (estimated) will be required to be removed to accommodate the proposed compound and access drive.

 3. Site access entry will be via an existing cube cut, approximately 223 feet of the 1,085 foot access drive will utilize an existing logging path.
- 6. A TOTAL OF TWELVE (12) DIRECTIONAL PANEL ANTENNAS ARE PROPOSED TO BE MOUNTED AT A RAD CENTER ELEVATION OF 157"-0"+/- AGL ON A 160' MONOPOLE TOWER LOCATED CENTRALLY WITHIN THE PROPOSED COMPOUND.
- 5. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM EXISTING RESPECTIVE DEMARCS TO THE PROPOSED UTILITY BACKBOARD LOCATED ADJACENT TO THE PROPOSED FENCED COMPOUND. UTILITIES WILL BE ROUTED FROM UTILITY BACKBOARD TO THE PROPOSED NOMINAL 12'x30' WIRELESS EQUIPMENT SHELTER LOCATED WITHIN THE COMPOUND. FINAL UTILITY ROUTING TO PROPOSED BACKBOARD WILL BE VERIFIED/DETERMINED BY LOCAL UTILITY COMPANIES.
- FINAL DESIGN FOR TOWER AND ANTENNA MOUNTS SHALL BE INCLUDED IN THE FINAL CONSTRUCTION DOCUMENTS.
- 3. THERE WILL NOT BE ANY LIGHTING UNLESS REQUIRED BY THE FCC OR THE FAA. 9. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT O. FOR ADDITIONAL NOTES AND DETAILS REFER TO THE ACCOMPANYING DRAWINGS.

VICINITY MAP	SCALE: 1" = 1000"
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PROJECT LOCATION	
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DDO ICOT OUR MADV						
	PROJECT SUM	PROJECT SUMMARY				
SITE NAME:		MOOSUP FACILITY				
	SITE ADDRESS:	STERLING ROAD PLAINFIELD, CT 06374				
	PROPERTY OWNER:	REEPU D. SINGH 34 TRIPP HOLLOW ROAD BROOKLYN, CT 06234				
	LEASOR:	REEPU D. SINGH 34 TRIPP HOLLOW ROAD BROOKLYN, CT 06234				
	LESSEE/APPLICANT:	CELLCO PARTNERSHIP d.b.d. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 08108				
	CONTACT PERSON:	SANDY CARTER CELLCO PARTNERSHIP (860) 803-8219				
	TOWER COORDINATES:	LATITUDE: 41°42′58.640° LONGITUDE: 71°51′05.902° GND ELEVATION: 454′± A.M.S.L. COORDINATES ARE BASED ON FIELD SURVEY CONDUCTED BY MARTINEZ COUCH AND ASSOCIATES LLC, ON DECEMBER 12, 2007.				

LEGEND	LEGEND		
SYMBOL	DESCRIPTION		
	SECTION OR DETAIL NUMBER SHEET WHERE DETAIL/SECTION OCCURS		
	ELEVATION NUMBER SHEET WHERE ELEVATION OCCURS		

SHT. NO.	DESCRIPTION	RE	
T-1	TITLE SHEET	(
C-1	SITE PLAN	(
C-1A	ABUTTERS MAP	(
C-2	PARTIAL SITE PLAN AND ELEVATION	C	
C-3	EROSION CONTROL DETAILS AND NOTES	(
C-4	SITE DETAILS	(
C-5	SITE UTILITY DETAILS AND SHELTER ELEVATIONS	(
C-6	EQUIP. SHELTER FOUNDATION DETAILS AND NOTES	(

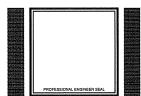
	REVISIONS			
00	01/09/08	SITING COUNCIL-REVIEW		
01	06/03/08	CT SITING COUNCIL		
02	08/20/08	REVISED SITING COUNCIL		





p: 203.488.0580 f: 203.488.8587 w: nat-eng.com e: info@nat-eng.com 63-2 N. Branford Rd. Branford, CT 06405





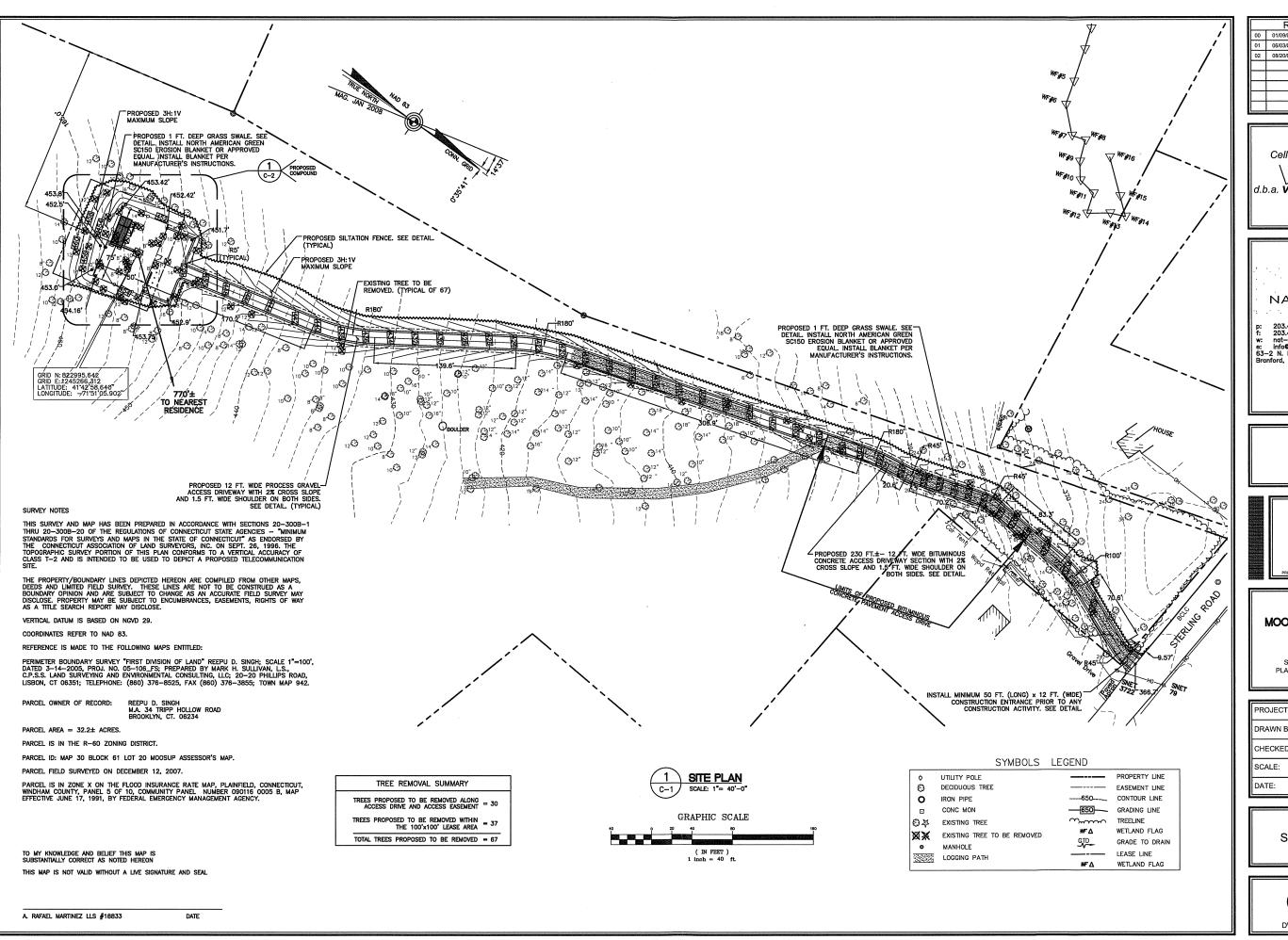
MOOSUP FACILITY

STERLING ROAD

PROJECT NO:	07113
DRAWN BY:	DMD
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	01/07/08

TITLE SHEET



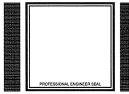






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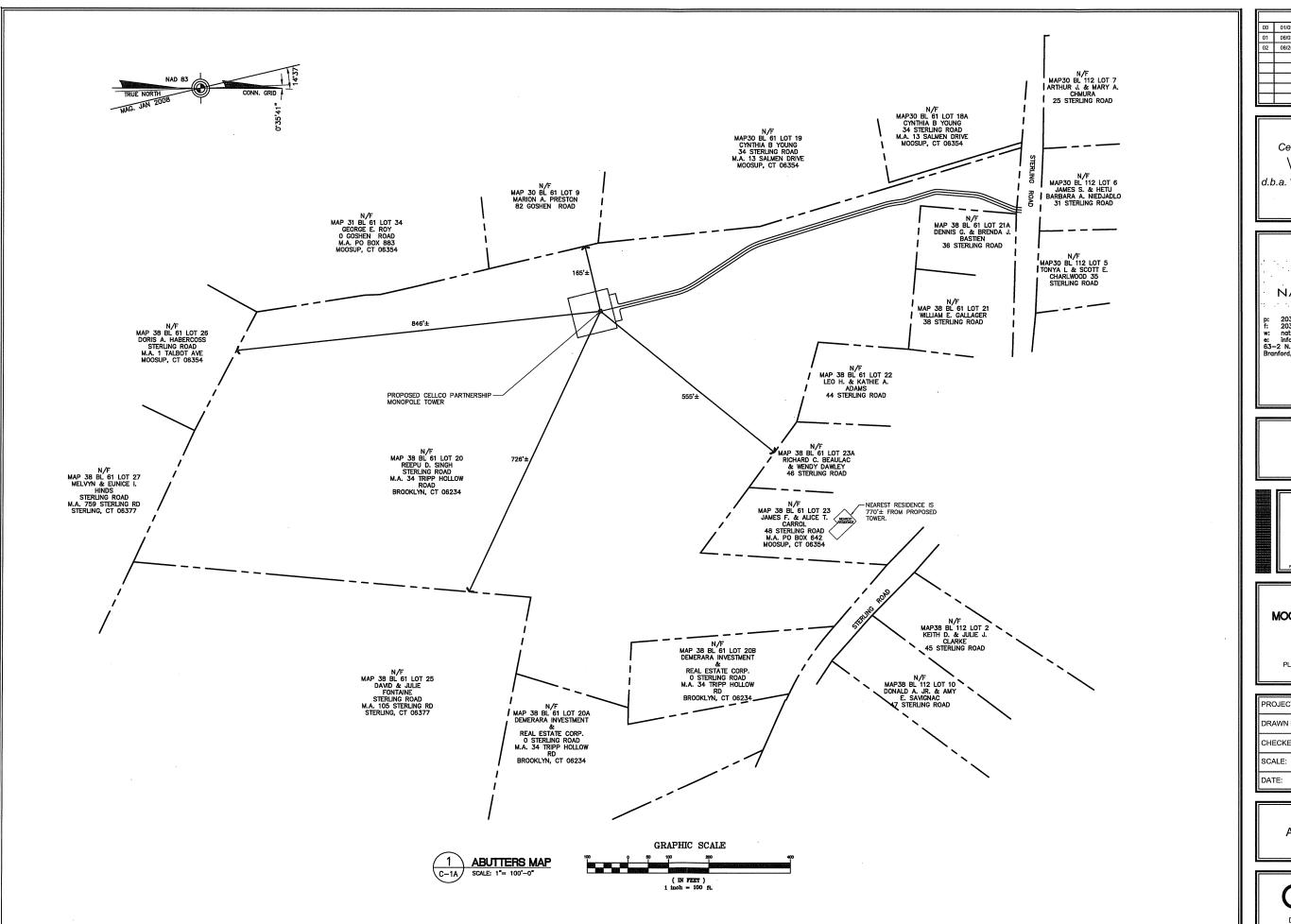
MOOSUP FACILITY

STERLING ROAD PLAINFIELD, CT 06374

PROJECT NO:	07113
DRAWN BY:	DMD
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	01/07/08

SITE PLAN

C-1
DWG. 2 OF 8



REVISIONS			
00	01/09/08	SITING COUNCIL-REVIEW	
01	06/03/08	CT SITING COUNCIL	
02	08/20/08	REVISED SITING COUNCIL	





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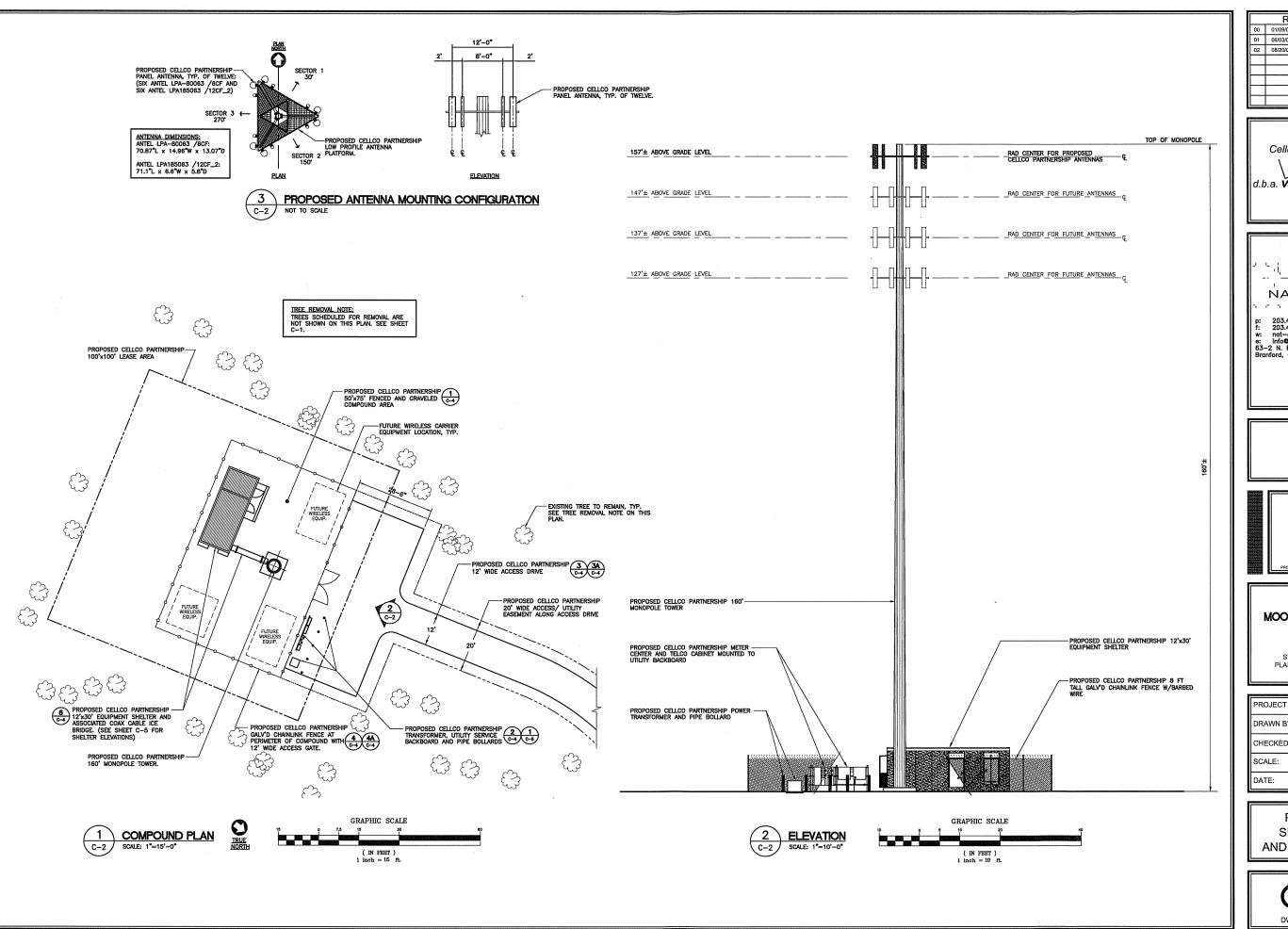
MOOSUP FACILITY

STERLING ROAD PLAINFIELD, CT 06374

DMD
CFC
AS NOTED
01/07/08

ABUTTERS MAP





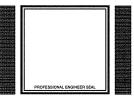
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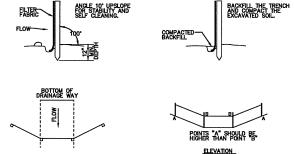
MOOSUP FACILITY

STERLING ROAD PLAINFIELD, CT 06374

I	PROJECT NO:	07113
ı	DRAWN BY:	DMD
	CHECKED BY:	CFC
ı	SCALE:	AS NOTED
	DATE:	01/07/08

PARTIAL SITE PLAN AND ELEVATION

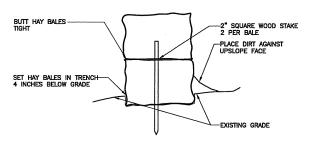
C-2



SOURCE: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

PLAN VIEW





NOTE: A SECOND HAYBALE MAY BE REQUIRED WHERE SLOPE OR HEIGHT REQUIRES IT.

2 SECTION THRU HAYBALE EROSION CONTROL BARRIOR

0-3 NOT TO SCALE

EROSION CONTROL

GENERAL CONSTRUCTION SEQUENCE

THIS IS A GENERAL CONSTRUCTION SEQUENCE OUTLINE SOME ITEMS OF WHICH MAY NOT APPLY TO PARTICULAR SITES.

- 1) CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
- INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
- REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
- CONSTRUCT CLOSED DRAINAGE SYSTEM. PRECEPT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
- 5) CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES AND SILITATION FENCES AS REQUIRED TO CONTROL SOIL EROSION.
- 6) INSTALL UNDERGROUND UTILITIES.
- 7) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING.
 ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED
 IMMEDIATELY AFTER THEIR CONSTRUCTION, NO AREA SHALL BE
 LEFT UNSTABILIZED FOR A TIME PERIOD OF MORE THAN 30
 DAYS
- 8) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING.
- BEGIN EXCAVATION FOR AND CONSTRUCTION OF TOWERS AND PLATFORMS.
- FINISH PAVING ALL ROADWAYS, DRIVES, AND PARKING AREAS.
- 11) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 12) NO FLOW SHALL BE DIVERTED TO ANY WETLANDS UNTIL A HEALTHY STAND OF GRASS HAS BEEN ESTABLISHED IN REGARDED AREAS.
- 13) AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

CONSTRUCTION SPECIFICATIONS - SILT FENCE

- 1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
- THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
- WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.
- 5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED.
- 6) FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
- 7) MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BUILD UP IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

MAINTENANCE - SILT FENCE

- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL, ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY
- IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 3) SEDIMENT SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACHED APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- 4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

TEMPORARY EROSION CONTROL MEASURES:

- 1) DISTURBED AREAS SHALL BE KEPT TO THE MINIMUM AREA NECESSARY TO CONSTRUCT THE ROADWAYS AND ASSOCIATED DRAINAGE FACILITIES.
- HAY BALE BARRIERS AND SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED, BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
- 3) BALED HAY AND MULCH SHALL BE MOWING OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.
- 4) FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
- 5) STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SILTATION FENCE AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
- 6) ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA.
- APPLICATION OF GRASS SEED, FERTILIZERS AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

LIMESTONE: 75-100 LBS./1,000 SQUARE FEET.
FERTILIZER: RATE RECOMMENDED BY MANUFACTURER.
MULCH: HAY MULCH APPROXIMATELY 3 TONS/ACRE UNLESS
EROSION CONTROL MATTING IS USED.

SEED MIX (SLOPES LESS THAN 4:1) LBS.
CREEPING RED RESCUE 20
TALL RESCUE 22
RED TOP 2

SLOPE MIX (SLOPES GREATER TAN 4:1)
CREEPING RED RESCUE
TALL RESCUE
BIRDS FOOT TREE FOIL

8) AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.

LBS./ACRE

- 9) PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- 10) ALL CATCH BASIN INLETS WILL BE PROTECTED WITH
- ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AND CLEANED AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
- ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.
- 13) NO DISCHARGE SHALL BE DIRECTED TOWARDS ANY PROPOSED DITCHES, SWALES, OR PONDS UNTIL THEY HAVE BEEN PROPERLY STABILIZED.

CONSTRUCTION SPECIFICATIONS - STRAW OR HAY BALES

- BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ADJOINING.
- 2) EACH BALL SHALL BE EMBEDDED IN THE GROUND A MINIMUM OF 4 INCHES.
- BALES SHALL BE ANCHORED IN PLACE BY AT LEAST TWO STAKES DRIVEN THROUGH THE BALE. THE STAKES SHALL BE DRIVEN AT LEAST 18 INCHES INTO THE GROUND.
- 4) BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL AND PROMPTLY REPAIRED FOR REPLACED AS NECESSARY.
- BALES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED OF PROPERLY.

MAINTENANCE - STRAW OR HAY BALES

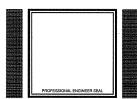
- 1) STRAW OR HAY BALES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, UNDERCUTTING BENEATH THE BALES, AND FLOW AROUND THE END OF THE BALES.
- NECESSARY REPAIRS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
- 4) SEDIMENT DEPOSITS SHOULD BE CHECKED AFTER EACH RAINFALL. THE DEPOSITS SHOULD BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE—HALF OF THE HEIGHT OF THE TABLE.
- 5) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE BARRIER HAS BEEN DISMANILED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED USING

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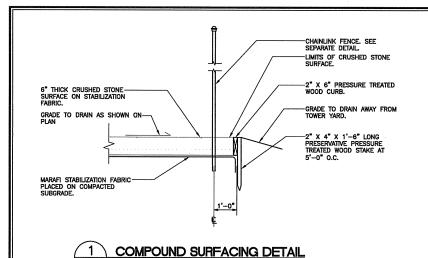
MOOSUP FACILITY

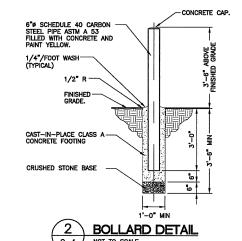
STERLING ROAD PLAINFIELD, CT 06374

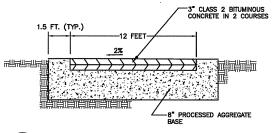
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CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	01/07/08

EROSION CONTROL
DETAILS
AND NOTES

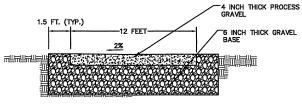
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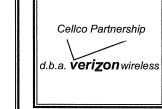






BITUMINOUS CONCRETE DRIVEWAY





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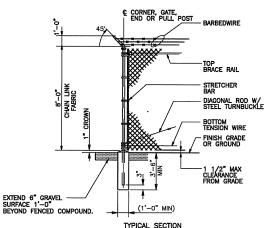
p: 203.488.0580 f: 203.488.8587 w: nat-eng.com e: info@nat-eng.com 63-2 N. Branford Rd. Branford, CT 06405

REVISIONS 01/09/08 SITING COUNCIL-REVIEW 01 06/03/08 CT SITING COUNCIL

02 08/20/08 REVISED SITING COUNC

GRAVEL DRIVEWAY SECTION

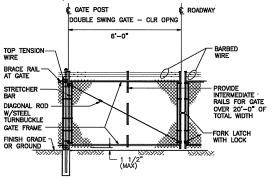
ONLY TO SCALE



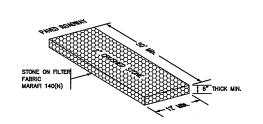
4 WOVEN WIRE FENCE DETAIL



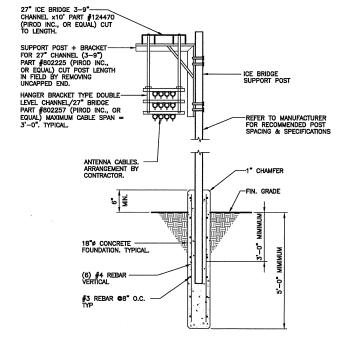
- GATE POST, CORNER, TERMINAL OR PULL POST 2 $1/2^{\circ}$ ϕ SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
- LINE POST: 2" Ø SCHEDULE 40 PIPE PER ASTM-F1083.
- GATE FRAME: 1 1/2" Ø SCHEDULE 40 PIPE PER ASTM-F1083.
- TOP RAIL & BRACE RAIL: 1 1/2" Ø SCHEDULE 40 PIPE PER ASTM-F1083.
- FABRIC: 12 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- 7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
- BARBED WIRE: DOUBLE STRAND 12-1/2° O.D. TWISTED WIRE TO MATCH W/FABRIC 14 GA., 4 PT. BARBS SPACED ON APPROXIMATELY 5° CENTERS.
- GATE LATCH: DROP DOWN LOCKABLE FORK LATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA



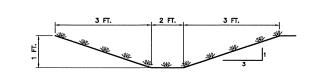




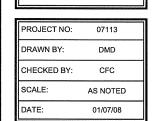
5 ANTI-TRACKING APRON C-4 NOT TO SCALE







7 GRASS SWALE SECTION

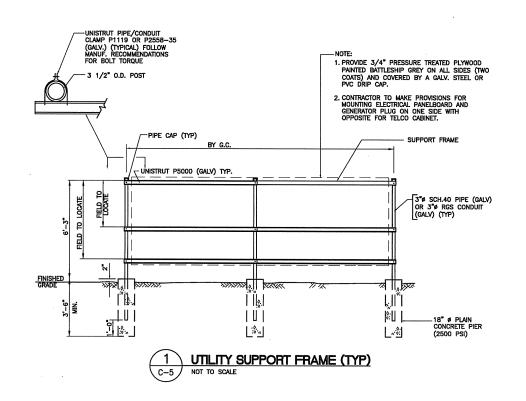


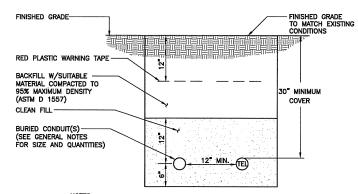
MOOSUP FACILITY

STERLING ROAD

SITE **DETAILS**

DWG. 6 OF 8



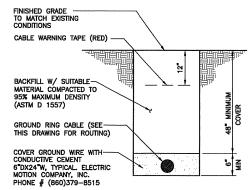


NOTES:

1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN
AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL
NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE
DEBRIS OR STONES LARGER THAN 2" IN MAXIM

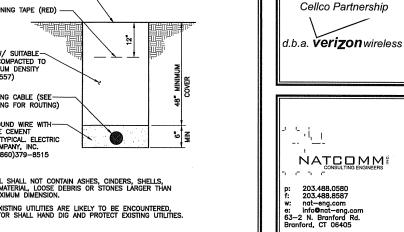
WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

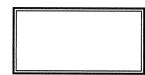




- 1. BACK FILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION.
- 2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.

3 TYPICAL BURIAL GROUND CABLE DETAIL NOT TO SCALE





REVISIONS 01/09/08 SITING COUNCIL-REVIEW 01 06/03/08 CT SITING COUNCIL 02 08/20/08 REVISED SITING COUNCIL



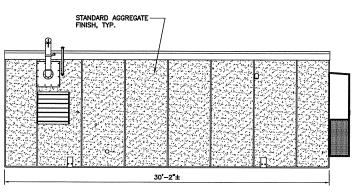


STERLING ROAD

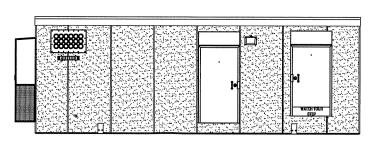
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SITE UTILITY **DETAILS AND** SHELTER ELEVATIONS





SOUTH SHELTER ELEVATION



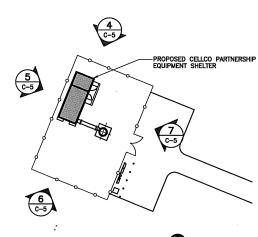
NORTH SHELTER ELEVATION



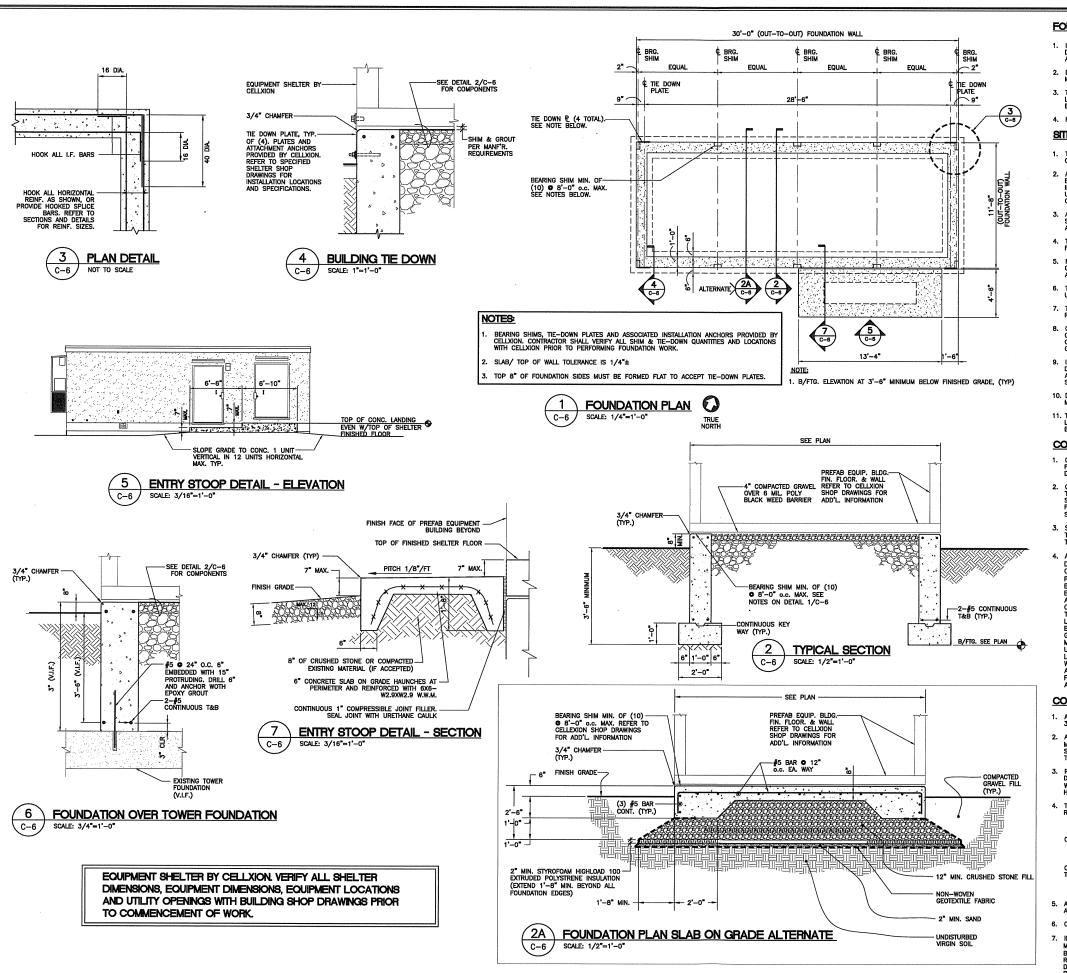




EAST SHELTER ELEVATION



SHELTER ELEVATION KEY PLAN IRUE NORTH



FOUNDATION NOTES:

- IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
- 2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
- THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
- 4. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

SITE NOTES:

- THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- ALL RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED OFF SITE AND BE LEGALLY DISPOSED, AT NO ADDITIONAL COST.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
- 6. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 7. THE AREAS OF THE COMPOUND DISTURBED BY THE WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
- 8. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.
- 10. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
- 11. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.

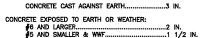
COMPACTED GRAVEL FILL:

- COMPACTED GRAVEL FILL SHALL BE FURNISHED AND PLACED AS A FOUNDATION FOR STRUCTURES, WHERE SHOWN ON THE CONTRACT DRAWINGS OR DIRECTED BY THE ENGINEER.
- GRAVEL SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE M.02.02 OF THE CONNECTICUT D.0.T. STANDARD SPECIFICATIONS. ADMIXTURES AND SURFACE PROTECTIVE MATERIALS USED TO PREVENT THE GRAVEL FROM FREEZING MUST MEET THE APPROVAL OF THE ENGINEER. THE LARGEST
- 3. SAMPLES OF THE MATERIAL TO BE USED SHALL BE DELIVERED TO THE JOB SITE 5 DAYS PRIOR TO ITS INTENDED USE SO IT MAY BE TESTED FOR APPROVAL.
- TESTED FOR APPROVAL

 4. AFTER ALL EXCAVATION HAS BEEN COMPLETED, GRAVEL SHALL BE DEPOSITED IN LAYERS NOT EXCEEDING EIGHT (8) INCHES IN DEPTH OVER THE AREAS. IN EXCEPTIONAL CASES, THE ENGINEER MAY PERMIT THE FIRST LAYER TO BE THICKER THAN EIGHT (8) INCHES EACH LAYER SHALL BE LEYELED OFF BY SUITABLE EQUIPMENT. THE ENTIRE AREA OF EACH LAYER SHALL BE COMPACTED BY USE OF APPROVED VIBRATORY, PNEUMATIC—TIRED OR TREAD—TYPE COMPACTION EQUIPMENT. COMPACTION SHALL BE CONTINUED UNTIL THE DRY DENSITY VORT THE ENTIRE AREA OF EACH LAYER IS NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY ACHIEVED BY ASHTO T—99 METHOD C. THE MOSTURE CONTENT OT THE GRAVEL SHALL NOT VARY BY MORE THAN 3 %+ FROM ITS OPTIMUM MOISTURE CONTENT IN OS UBSEQUENT LAYER SHALL BE DEPOSITED UNTIL THE SPECIFIED COMPACTION IS ACHIEVED FOR THE PREVIOUS LAYER, IF NECESSARY TO OBTAIN THE REQUIRED COMPACTION, WATER SHALL BE ADDED AND GENTLE PUDDLING PERFORMED IF AUTHORIZED, COMPACTED GRAVE FILL SHALL BE PREVENTED FROM FREEZING BY USE OF APPROVED ADMIXTURES OR BY USE OF APPROVED PROTECTIVE MATERIALS ON THE SURFACE, OR BOTH.

CONCRETE AND REINFORCING STEEL NOTES:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318.
- ALL CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED WITH A MAXIMUM SLUMP OF 4°, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS OTHERWISE NOTED ON THE DRAWINGS:



CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND: SLAB AND WALL BEAMS AND COLUMNS

- ALL EXPOSED EDGES OF CONCRETE TO RECEIVE A 3/4" CHAMFER IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- 6. CONCRETE EQUIPMENT PAD TO RECEIVE A BRUSHED FINISH
- 7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT DURING DRILLING WITHOUT PRIOR REVIEW BY THE ENGINEER.

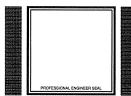
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- p: 203.488.0580 f: 203.488.8587 w: nat-eng.com e: info@nat-eng.com 63-2 N. Branford Rd. Branford, CT 06405





MOOSUP FACILITY

STERLING ROAD PLAINFIELD, CT 06374

PROJECT NO:	07113
DRAWN BY:	DMD
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	01/07/08

EQUIP. SHELTER **FOUNDATION DETAILS AND NOTES**



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APPLICATION GUIDE¹

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. p. 7 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. p. 7-12	(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. 12-14 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. p. 10 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. pp. 20-21

(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. 13

(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. 19-20 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.

		i		

CERTIFICATION OF SERVICE

I hereby certify that on this 26th day of August, 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 Joseph F. Marie, 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

PLAINFIELD TOWN OFFICIALS:

Paul E. Sweet First Selectman Town of Plainfield 8 Community Avenue Plainfield, CT 06374

The Honorable Andrew Maynard Senator – 18th District Legislative Office Building Room 3000 Hartford, CT 06106

The Honorable Michael Caron Representative – 44th District 50 Carter Street Danielson, CT 06239

Louisa Trakas Town Clerk Town of Plainfield 8 Community Avenue Plainfield, CT 06374

John Meyer, Chairman Planning and Zoning Commission Town of Plainfield 8 Community Avenue Plainfield, CT 06374 James Gallow, Chairman Zoning Board of Appeals Town of Plainfield 8 Community Avenue Plainfield, CT 06374

Ryan Brais
Zoning Enforcement Officer
Town of Plainfield
8 Community Avenue
Plainfield, CT 06374

Ronald Desjardins, Chairman Inland Wetlands Commission Town of Plainfield 8 Community Avenue Plainfield, CT 06374

STERLING TOWN OFFICIALS:

Russell M. Gray First Selectman Town of Sterling 1114 Putnam Pike Oneco, CT 06373

The Honorable Andrew Maynard Senator – 18th District Legislative Office Building Room 3000 Hartford, CT 06106

The Honorable Michael Caron Representative – 44th District 50 Carter Street Danielson, CT 06239

Catherine Nurmi Town Clerk Town of Sterling 1114 Putnam Pike Oneco, CT 06373 Ronald Marchesseault, Chairman Planning Commission Town of Sterling 1114 Putnam Pike Oneco, CT 06373

Stephen Offiler, Chairman Land Use Board of Appeals Town of Sterling 1114 Putnam Pike Oneco, CT 06373

Joseph Theroux Wetlands Agent/Land Use Enforcement Officer Town of Sterling 1114 Putnam Pike Oneco, CT 06373

Graham Everson, Chairman Inland Wetlands Commission Town of Sterling 1114 Putnam Pike Oneco, CT 06373

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

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LEGAL NOTICE

Notice is hereby given, pursuant to Section 16-50*I*(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 August 26, 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 Plainfield, Connecticut. The facility would be located on a 32.2 acre parcel off Sterling Road on land owned by Reepu D. Singh. At this site, Cellco proposes to construct a 160-foot tower. Vehicular and utility access to site would extend directly from Sterling 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

Town Clerk
Town of Plainfield
Town Hall
8 Community Avenue
Plainfield, CT 06374-1238

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

Town Clerk
Town of Sterling
Town Hall
1114 Plainfield Pike
P.O. Box 157
Oneco, CT 06373-0157

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

August 22, 2008

Via Certified Mail Return Receipt Requested

«Name and Address»

Re: Cellco Partnership d/b/a Verizon Wireless Proposed Telecommunications Facility Plainfield, 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 August 26, 2008, for approval of the construction of a telecommunications facility in the Town of Plainfield, Connecticut.

The facility would consist of a new 160-foot self-supporting monopole tower and a 12' x 30' equipment shelter located on a 32.2 acre parcel off Sterling Road in the Moosup portion of Town. 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 directly from Sterling 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.

August 22, 2008 Page 2

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: MOOSUP

OWNER NAME: REEPU D. SINGH

OWNER ADDRESS: STERLING ROAD, PLAINFIELD, CONNECTICUT 06354

ASSESSOR'S REFERENCE: MAP: 38 BLOCK: 61 LOT: 20

THE FOLLOWING INFORMATION WAS COLLECTED FROM THE TAX ASSESSOR'S

RECORDS AND LAND RECORDS OF PLAINFIELD TOWN HALL, PLAINFIELD, CONNECTICUT. THE INFORMATION IS CURRENT AS OF AUGUST 19, 2008.

THE PARCEL IS ZONED RA-60 – RESIDENTIAL

	MAP/LOT	PROPERTY ADDRESS	OWNER AND MAILING ADDRESS
1.	30/112/7	25 Sterling Road	Arthur J. and Mary A. Chmura 25 Sterling Road Moosup, CT 06354
2.	30/112/6	31 Sterling Road	James S. Niedjadlo and Barbara A. Hetu 30 Sterling Road Moosup, CT 06354
3.	30/112/5	35 Sterling Road	Tonya L. and Scott E. Charlwood 35 Sterling Road Moosup, CT 06354
4.	30/112/4	Sterling Road	Khemra J. and Seeronie Damber Taramattie and Ramesh Sirrikrisnigee 34 Tripp Hollow Road Brooklyn, CT 06234
5.	38/61/21A	36 Sterling Road	Dennis G. and Brenda J. Bastien 36 Sterling Road Moosup, CT 06354
6.	38/61/21	38 Sterling Road	William E. Gallagher 38 Sterling Road Moosup, CT 06354
7.	38/61/22	44 Sterling Road	Leo H. and Kathie A. Adams 44 Sterling Road Moosup, CT 06354

	MAP/LOT	PROPERTY ADDRESS	OWNER AND MAILING ADDRESS
8.	38/61/23A	46 Sterling Road	Richard C. Beaulac and Wendy Dawley 46 Sterling Road Moosup, CT 06354
9.	38/61/23	48 Sterling Road	James F. and Alice T. Carroll P.O. Box 642 Moosup, CT 06354
10.	38/61/20B	Sterling Road	Demerara Investments and Real Estate 34 Tripp Hollow Road Brooklyn, CT 06234
11.	38/61/20A	Sterling Road	Demerara Investments and Real Estate 34 Tripp Hollow Road Brooklyn, CT 06234
12.	38/61/25	Sterling Road	David and Julie Fontaine 105 Sterling Road Sterling, CT 06377
13.	38/61/27	Sterling Road	Melvyn and Eunice I. Hinds 759 Sterling Road Sterling, CT 06377
14.	38/61/26	Sterling Road	Doris A. Habercross 1 Talbot Avenue Moosup, CT 06354
15.	31/61/34	Goshen Road	George E. Roy P.O. Box 883 Moosup, CT 06354
16.	30/61/9	82 Goshen Road	Marion A. Preston P.O. Box 764 Moosup, CT 06354
17.	30/61/19	Sterling Road	Cynthia B. Young 13 Salmen Drive Moosup, CT 06354
18.	30/61/18A	34 Sterling Road	Cynthia B. Young 13 Salmen Drive Moosup, CT 06354

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.

August 22, 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

Α

2

Market

Market

CMA358 - Connecticut 2 -

Channel Block

Windham

Submarket

0

Phase

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

P:(770)797-1070

F:(770)797-1036

1120 Sanctuary Pkwy, #150 GASA5REG

Alpharetta, GA 30004

ATTN Regulatory

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?

Is the applicant an alien or the representative of an alien?

No

Is the applicant a corporation organized under the laws of any

No

foreign government?

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

Yes

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?

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

0

Auth Type

Regular

Market

Submarket

Market

BTA319 - New London-

Norwich, CT

Channel Block

Associated Frequencies 001890.00000000-001895.00000000

(MHz)

001970.000000000-001975.00000000

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

P:(770)797-1070

F:(770)797-1036

ATTN Regulatory

E:Network.Regulatory@VerizonWireless.com

Contact

Verizon Wireless

Sonya R Dutton

P:(770)797-1070 F:(770)797-1036

1120 Sanctuary Pkwy, #150 GASA5REG

Alpharetta, GA 30004

ATTN Regulatory

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?

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?

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

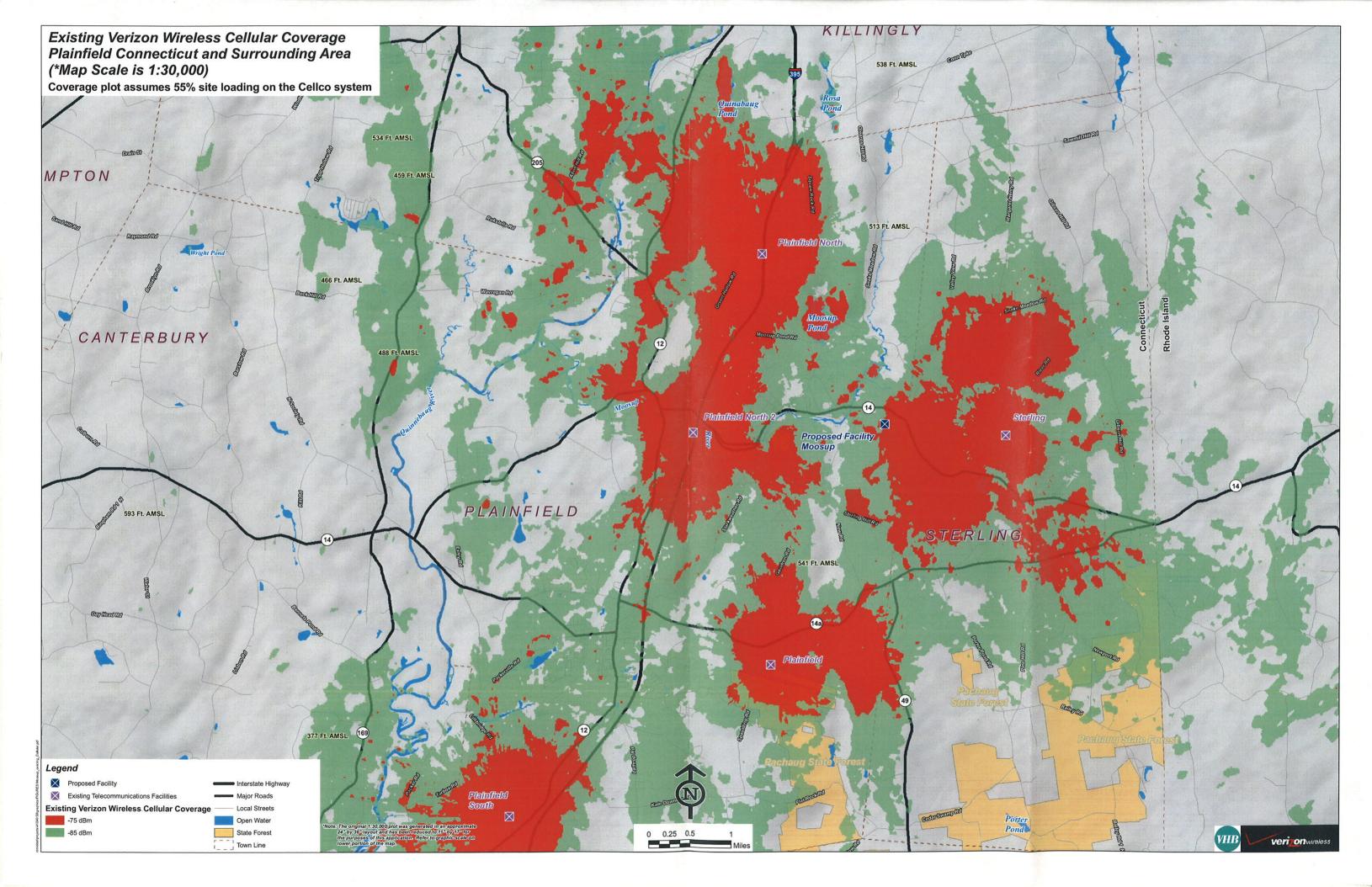
Race

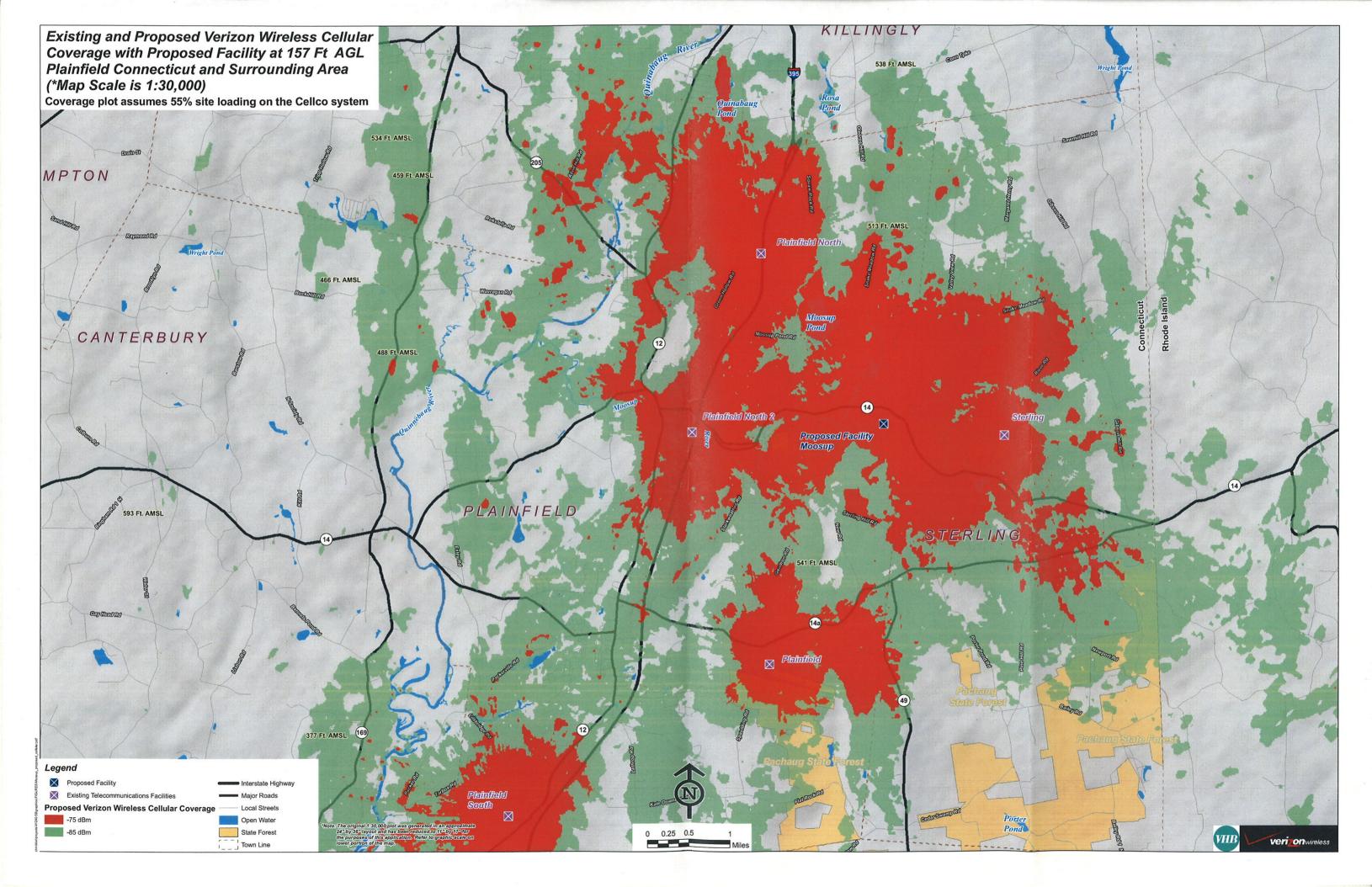
Ethnicity

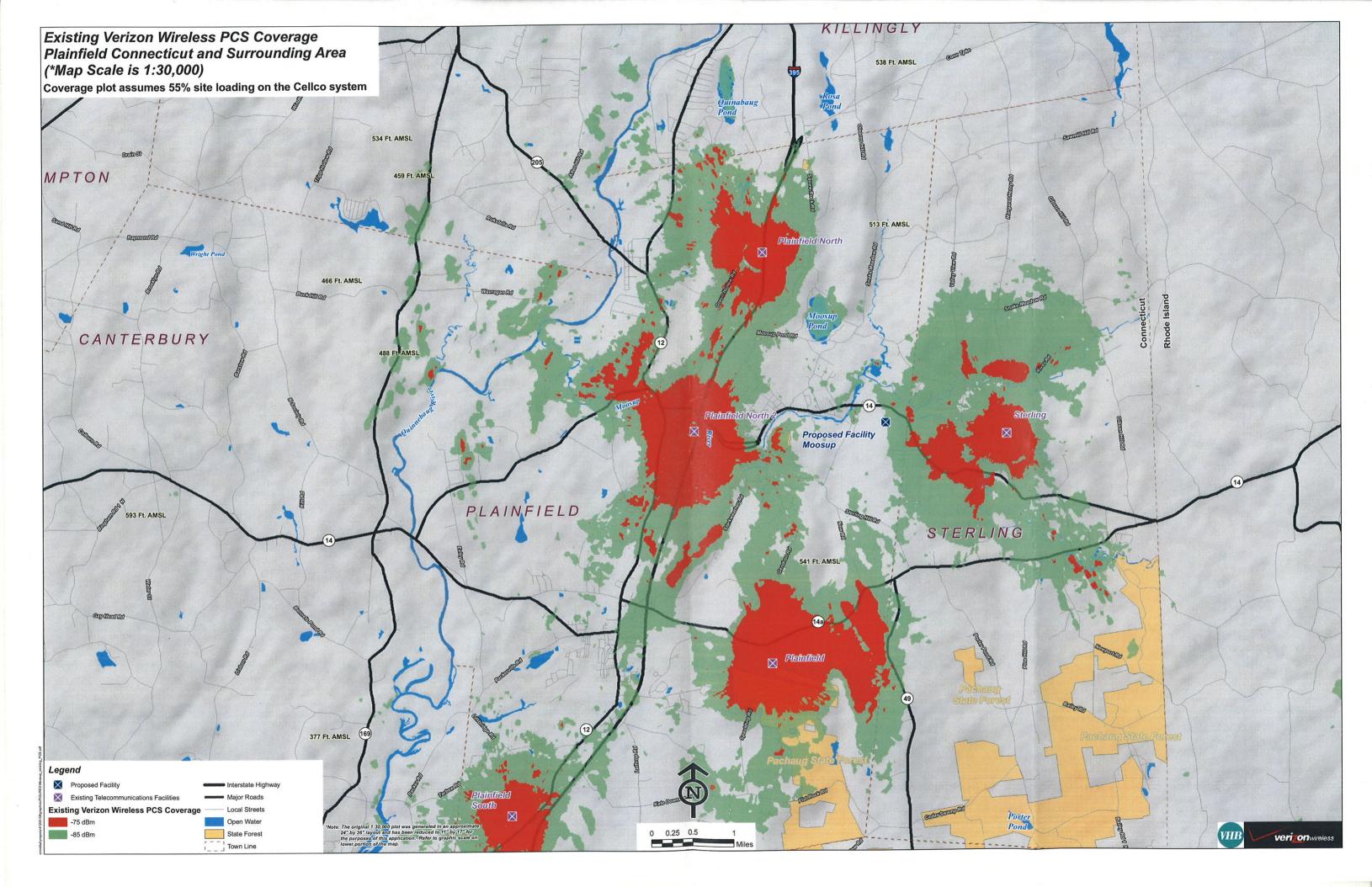
Gender

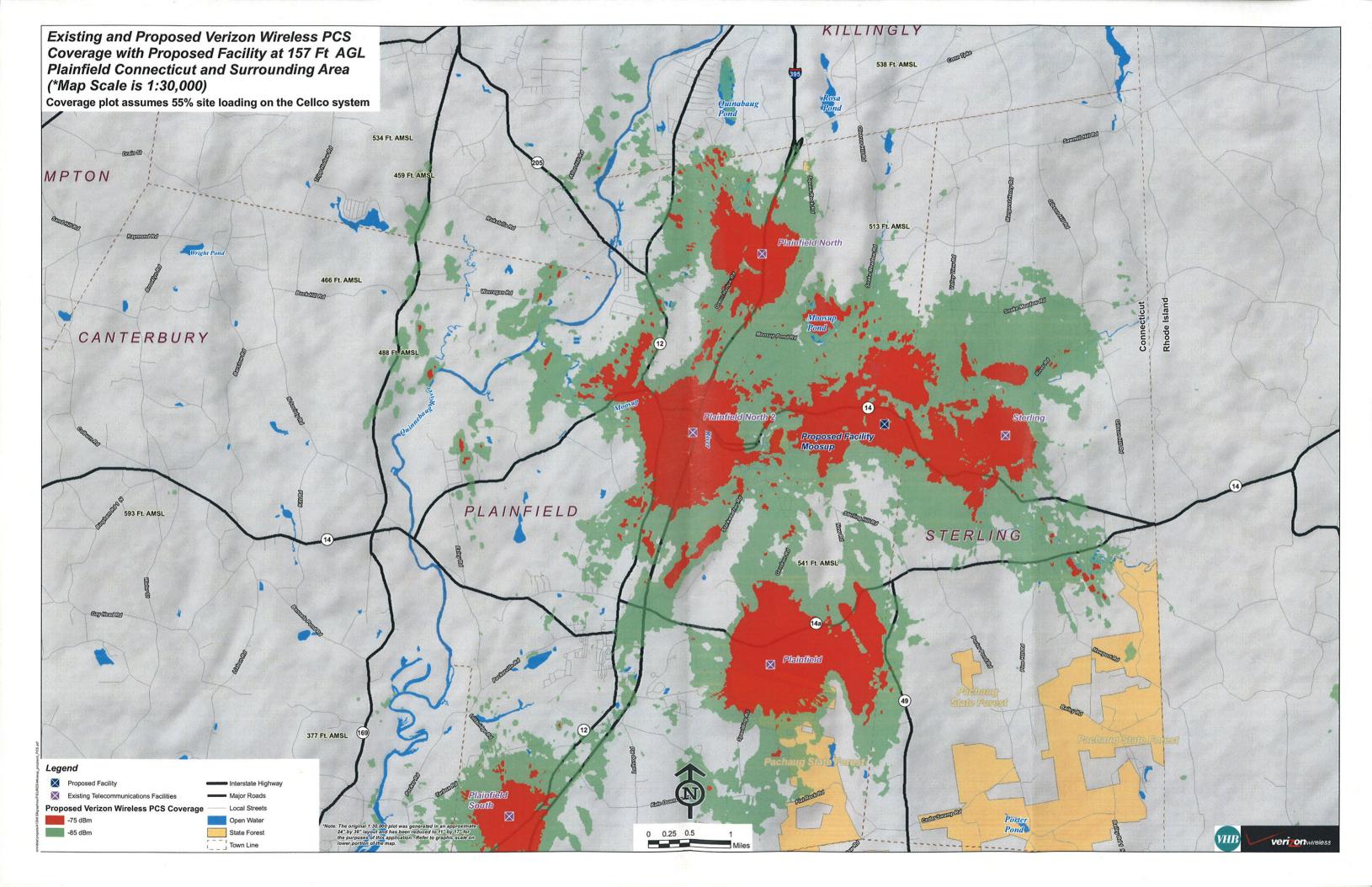
No

Yes









LPA-80063/6CF

When ordering replace "___" with connector type.

Mechanical specifications

	Length	1800	mm	70.9	in
	Width	380	mm	15.0	in
	Depth Depth with z-bracket		mm mm	13.1 14.6	
4)	Weight	12.3	kg	27.0	lbs
	Wind Area Fore/Aft	0.68	m ²	7.4	ft²
	Side	0.60	m ²	6.5	ft2

Rated Wind Velocity (Safety factor 2.0) >219 km/hr >136 mph

Wind Load @ 100 mph (161 km/hr)
Fore/Aft 993 N 223 lbs
Side 872 N 196 lbs

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

Mounting and Downtilting

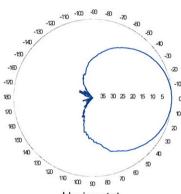
Mounting brackets attach to a pipe diameter of \varnothing 50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is \varnothing 88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

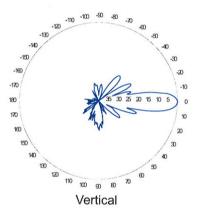
Electrical specifications

		SILLO CHELOTIC
	Frequency Range	806-960 MH
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / cente
1)	VSWR	≤ 1.4:1
	Polarization	Vertical
1)	Gain	14.5 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	10°
1)	Electrical Downtilt	0°
1)	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern1)



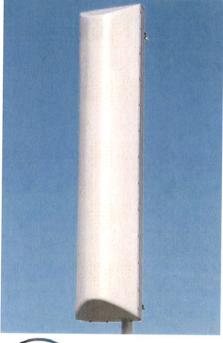
Horizontal



Featuring upper side lobe suppression.

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

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





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

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

This Amphenol Antel antenna is under a fiveyear limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.

Power rating limited by connector only.

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

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

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

CF Denotes a Center-Fed Connector.

806-960 MHz



LPA-185063/12CF 2°

When ordering replace "___" with connector type.

Mechanical specifications

Width 167 mm 6.6 Depth 148 mm 5.8	in
	in
Depth with t-bracket 176 mm 6.9	350
⁴⁾ Weight 6.1 kg 13.5	lbs
Wind Area Fore/Aft 0.30 m ² 3.3	ft²
Side 0.27 m ² 2.9	ft2

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).

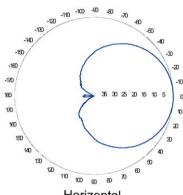
Mounting bracket kit #26799997 Downtilt bracket kit #26799999

The downtil bracket kit includes the mounting bracket kit.

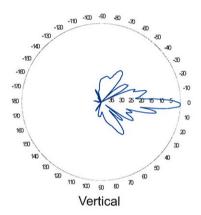
Electrical specifications

Electrical spec	cifications
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 pattern¹⁾



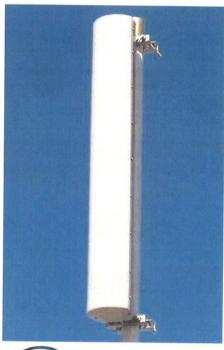
Horizontal



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.

CF Denotes a Center-Fed





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.
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- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a fiveyear limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.

2) Power rating limited by connector only.

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

 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.

1850-1990 MHz



Connector.

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

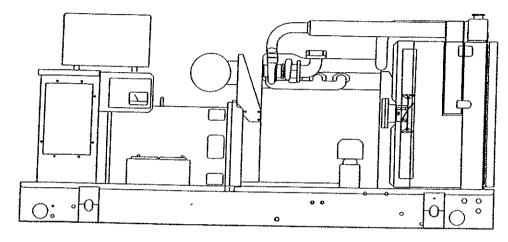


SD060

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. Betterfuel 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. Longlife 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.



APPLICATION & ENGINEERING DATA

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION.	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC D	STORTION <3%
TELEPHONE INTERFE	RENCE FACTOR (TIF)
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBE	D & SEALED)1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STA	NDBY)100%
LOAD CAPACITY (PRIA	110% (E)
110, paragraph 5-13.2.6	ding in compliance with NFPA 99, NFPA
110, paragraph 5-13.2.6	ding in compliance with NFPA 99, NFPA 6. Generator rating and performance in 28-5, BS5514, SAE J1349, ISO3046 and
accordance with ISO85	Generator rating and performance in
110, paragraph 5-13.2.6 accordance with ISO85 DIN6271 standards. EXCITATION SYSTEM	Generator rating and performance in
accordance with ISO85 DIN6271 standards. EXCITATION SYSTEM D BRUSHLESS	i. Generator rating and performance in 28-5, BS5514, SAE J1349, ISO3046 and
accordance with ISO85 DIN6271 standards. EXCITATION SYSTEM BRUSHLESS	i. Generator rating and performance in 28-5, BS5514, SAE J1349, ISO3046 and
accordance with ISO85 DIN6271 standards. EXCITATION SYSTEM BRUSHLESS	i. Generator rating and performance in 28-5, BS5514, SAE J1349, ISO3046 and
accordance with ISO85 DIN6271 standards. EXCITATION SYSTEM BRUSHLESS	i. Generator rating and performance in 28-5, BS5514, SAE J1349, ISO3046 and
accordance with ISO85 DIN6271 standards. EXCITATION SYSTEM BRUSHLESS	Generator rating and performance in 28-5, BS5514, SAE J1349, ISO3046 and Magnetically coupled DC current t-pole exciter w/ battery-driven field boost Mounted outboard of main bearing T EXCITER

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

MODEL	GENERAC
CVI MODEL	3.9DTA
DISDLASTICHE	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	
CONNECTING RODS	4-Drop Forged Steel
CYLINDER HEAD	Cast Iron Overhead Valve
PISTONS	4- Aluminum Allov
CRANKSHAFT	Hardened, Steet
VALVE TRAIN	
LIFTER TYPE	Solid
INTAKE VALVE MATERIAL	Special Heat Resistant Steel
EXHAUST VALVE MATERIAL	Special Heat Resistant Steet
HARDENED VALVE SEATS	Replaceable
ENGINE GOVERNOR	
☐ MECHANICAL (Gear Driven)	Standard
FREQUENCY REGULATION, NO	O-LOAD TO FULL LOAD 5.0%
STEADY STATE REGULATION	±0.33%
D ELECTRONIC	Ootion of
FREQUENCY REQUIATION MA	D-LOAD TO FULL LOAD 0.5%
STEADY STATE REGULATION	
UBRICATION SYSTEM	
TYPE OF OIL PUMP	Gear
DIL FILTER	Full flow, Cartridge
RANKCASE CAPACITY	
IL COOLER	Oil to water
OOLING SYSTEM	
YPE OF SYSTEM	Pressurized, Closed Recovery
/ATER PUMP	Pre-Lubed, Self-Sealing
YPE OF FAN	Pusher
UMBER OF FAN BLADES	value
AMETER OF FAN	AE7 mm (40 *)
OOLANT HEATER	4007 (18 III.)
	120V, 1800 W
<u>el system</u> Jel	#20 Fuel (Min Colone #10)
£	about conform (10711)
(Fuel	should conform to ASTM Spec.)
JEL FILTER	Single Cartridge
JEL INJECTION PUMP	Stanadyne
EL PUMP	Mechanical
JECTORS	Multi-Hole, Nozzle Type
IGINE TYPE	Direct Injection
EL LINE (Supply)	7.94 mm (0.31 in)
EL RETURN LINE	fi 35 mm (0.01 ft).)
ARTING AID	
	Glow Plugs
ECTRICAL SYSTEM	
TTERY CHARGE ALTERNATOR.	30 Amps at 24 V
ARTER MOTOR	24 V
COMMENDED BATTERY	(2)12 Volt, 90 A.H., 4DLT
ROLIND POLARITY	\$ 1 × × × × × ×

GROUND POLARITYNegative 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 tieu 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).

±1% regulation √



OPERATING DATA

		(DBY	PRI	
CENERATOR OUTRUT VOLTAGE SE	L SD	060	SD	
GENERATOR OUTPUT VOLTAGE/KW-60Hz	i	Rated AMP		Rated AMP
120/240V, 1-phase, 1.0 pf	60	250	48	200
120/208V, 3-phase, 0.8 pf NOTE: Consultyour 120/240V, 3-phase, 0.8 pf Generacdealerfor	60	208	48	166
Table 10 1, 0 pricedo, 010 pl	60	180	48	144
2777400V, 3-phase, 0.8 pt	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: Consultyour	60	173	48	138
100/200V, 3-phase, 0.8 pf General dealer for	60	173	48	138
231/400V, 3-phase, 0.8 pf additional voltage	60	87	48	69
480V, 3-phase, 0.8 pf	60	72	48	58
MOTOR STARTING KVA			10	
Maximum at 35% instantaneous voltage dip	120/208/240V	277/480V	120/208/240\/	277/4901/
with standard alternator; 50/60 Hz	100/120	117/141	120/208/240V	277/480V
with optional alternator, 50/60 Hz	234/281	276/331	100/120 234/281	117/141 276/331
FUEL		2.0.001	2011201	210001
Fuel consumption—60 Hz Load	<u>100%</u>	80%	160%	d04/
gal./hr.	4.3	80% 3.6	100%	80% 3.0
-		3.6	3.6	3.0
liters/hr. Fuel consumption—50 Hz gal /hr	16.3	13.5	13.6	11.3
,	3.6	3.0	3.0	2.5
liters/hr. Fuel pump lift	13.5	11.2	11.3	9.3
COOLING Coolant capacity System - fit. (US gal.)	400	(4.9)	1 m m	(4.0)
	15.9	• •	15.9	, ,
Engine - lit. (US gal.)	6.4		6.4 (•
Radiator - lit. (US gal.)	9.5		9.5 (
Coolant flow/min. 60 Hz - lit. (US gal.)	128	' '	128	
50 Hz - lit. (US gal.)	107	` '	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	113,9	900
Inlet air to radiator 60 Hz - m³/min. (cfm)	204 (7	;200)	204 (7	,200)
50 Hz - m³/min. (cfm)	170 ((170 (6	
Max. air temperature to radiator °C (°F)	54.4	' 1	54.4 (
Max. ambient temperature °C (°F)	48.9		48.9 (
OMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz-cfm	20	9 1	168	a
50 Hz - m³/min.	4.7		3.8	
KHAUST	****		0.0	
Exhaust flow at rated output 60 Hz - m³/min. (cfm)	15.5 (549)	12.4 (130)
50 Hz - m³/min. (cfm)	12.3 (, ,	10 (3	•
Max recommended back pressure "Hg				
Exhaust temperature 60 Hz (full load) °C (°F)	1.5	E .	1.5	
Exhaust outlet size	524 (9 3'		459 (8 3"	•
"vitanas onnet 2156	J			
· · · · · · · · · · · · · · · · · · ·		1		
IGINE	400	_	400	n
IGINE Rated RPM 60 Hz	180	- 1	180	
IGINE Rated RPM 60 Hz 50 Hz	150	o	150	0
### GO Hz	150 92	0	150 74	0
### IGINE Rated RPM	150 92 73	0	150 74 59	0
### IGINE Rated RPM	150 92 73 414 (1:	358)	150 74 59 414 (1:	358)
### IGINE Rated RPM	150 92 73	358)	150 74 59	358)
### IGINE Rated RPM	150 92 73 414 (1:	0 358) (32)	150 74 59 414 (1:	0 358) 132)
### ### ### ### ### ### ### ### ### ##	150 92 73 414 (1: 345 (1:	0 358) (32)	150 74 59 414 (1: 345 (1 ⁻	0 358) 132)
## Action Report No. 1	150 92 73 414 (1: 345 (1: 170	0 358) (32)	150 74 59 414 (13 345 (1) 138	0 358) 132)
## GINE Rated RPM	150 92 73 414 (1: 345 (1: 170 161	0 358) (32)	150 74 59 414 (1: 345 (1: 138 130	0 358) 132)
### 100 FACTORS ### 10	150 92 73 414 (1: 345 (1: 170 161	0 358) (32)	150 74 59 414 (1: 345 (1: 138 130	0 358) 132)
## GINE Rated RPM	150 92 73 414 (1: 345 (1: 170 161	0 358) (32)	150 74 59 414 (1: 345 (1: 138 130	0 358) 132)
## 100 Page	150 92 73 414 (1: 345 (1: 170 161	0 358) (32)	150 74 59 414 (1: 345 (1: 138 130	0 358) 132)

- 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 Solenold
- 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
 - Analog Control *C* Panel (Bulletin 0151160SBY)
 - O Analog/Digital Control "E" Panel (Bulletin 0161310SBY)

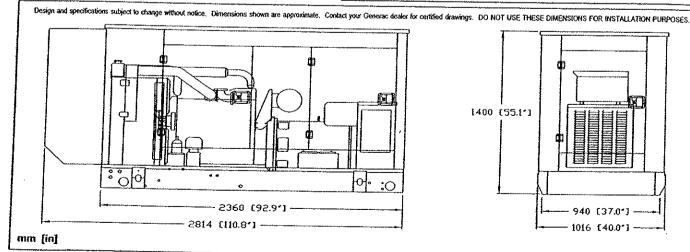
ADDITIONAL OPTIONAL EQUIPMENT

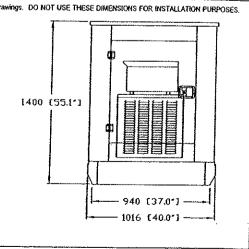
- O Automatic Transfer Switch
- O Isochronous Governor
- O 3 Light Remote Annunciator
- O 5 Light Remote Annunciator
- O 20 Light Remote Annunciator
- O Remote Relay Panels
- O Unit Vibration Isolators (Pad/Spring)
- O Oil Make-Up System
- O Oil Heater
- O 5 Year Warranties
- O Export Boxing
- O GenLink®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

OPTIONAL ENCLOSURE

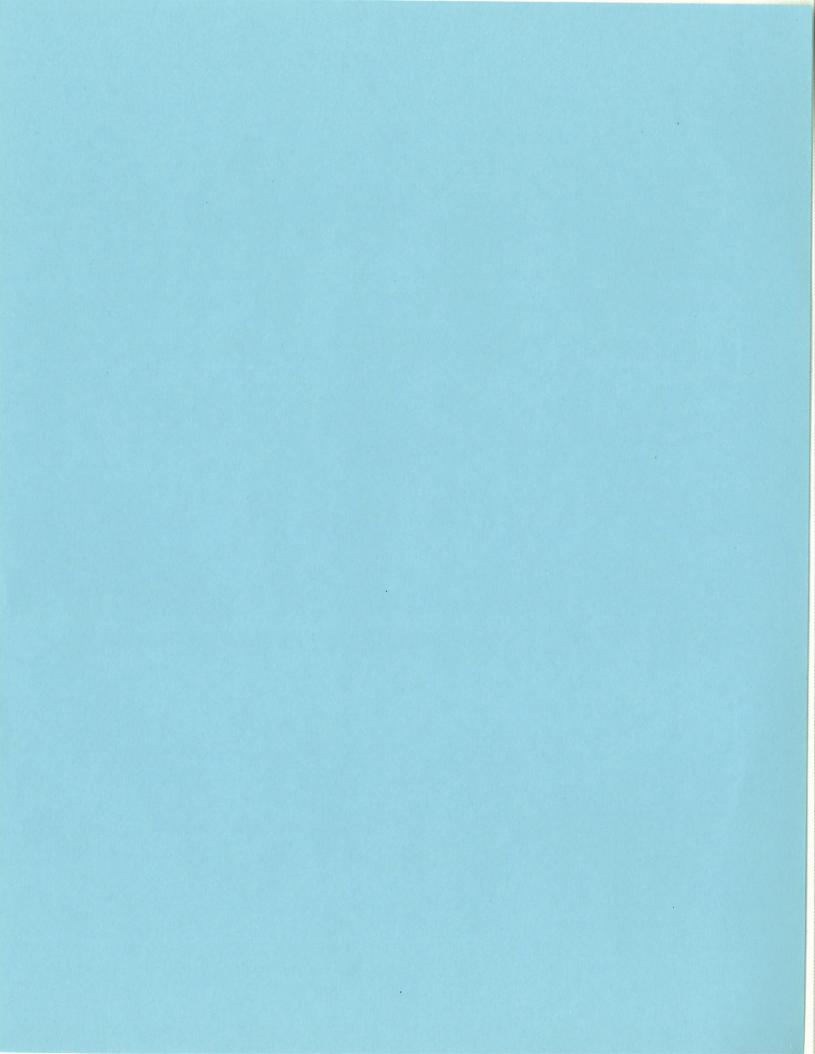
- O Weather Protective
- O Sound Attenuated
- O Aluminum and Stainless Steel
- O Enclosed Muffler

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Site Search Summary Plainfield (Moosup)

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 Plainfield 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 and recently received approval for a fourth, all located within approximately four (4) miles of the proposed Moosup Facility. These facilities, however, cannot provide the coverage or capacity relief needed in the identified problem areas, along Route 14 and local roads in the easterly portion of Plainfield. (See <u>Attachment 7</u>).

Existing and Approved Cellco Facilities

	Owner	Facility Type	Location	Cellco Antenna <u>Height</u>
1.	SBA Inc. (Plainfield North)	178' Monopole Tower	548 Green Hollow Road Plainfield, CT	125'
2.	Sprint Nextel (Plainfield North 2)	160' Monopole Tower	47-51 Unity Street Plainfield, CT	127'
3.	AT&T (Plainfield)	150' Monopole Tower	45 Spaulding Hill Road Plainfield, CT	110'
4.	MCF (Sterling)	140' Monopole Tower	Exeter Drive Sterling, CT	137'

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 Moosup Search Area

The purpose of the proposed Moosup Facility is to provide reliable PCS and cellular coverage to significant coverage gaps that have been identified along Route 14, as well as local roads in the easterly portion of Plainfield. 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 Plainfield search area in January 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.

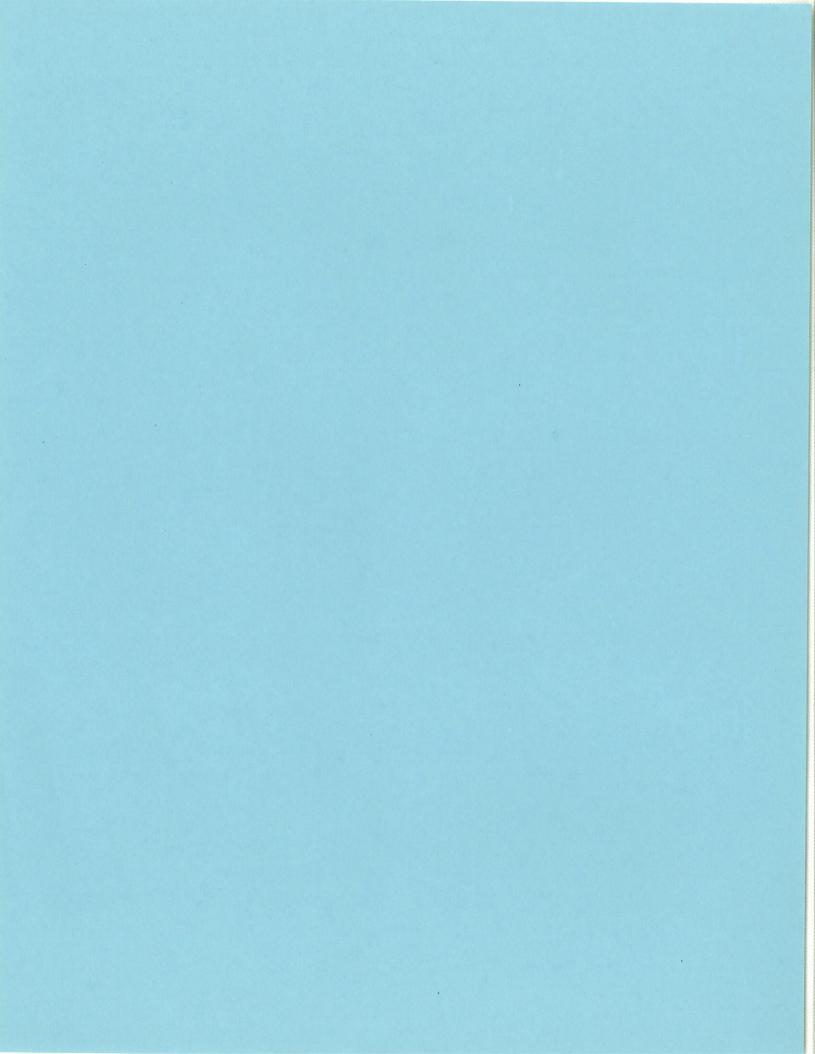
Sites Investigated in the Plainfield Area

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

- 1. Singh Property Sterling Road, Moosup, CT. This is a vacant 32.2 acre parcel, south of Sterling Road and is the location of the proposed cell site.
- 2. Cynthia Young Property Sterling Road, Moosup, CT. This is a vacant 28 acre parcel located south of Sterling Road and immediately west of the Singh Property. This parcel maintains frontage on Goshen Road. Access from Goshen Road would require a significant stream crossing and disruption of adjacent wetland areas. For these reasons the site was rejected.
- 3. George Roy Property Goshen Road, Moosup. CT. This is a vacant 41 acre parcel to the southwest of the Singh Property. This parcel was rejected because access to the parcel would be from Goshen Road and would require a significant wetland crossing.

- 4. David and Julie Fontaine Property Sterling Road, Moosup, CT. This is a vacant 15 acre parcel located southeast of the proposed Moosup Facility. Due to existing topography in the area this site was rejected by Cellco's RF Engineers.
- 5. Marion Preston Property 82 Goshen Road, Moosup, CT. This is a 31 acre parcel fronting on Goshen Road, located southwest of the Singh Property. The owner rejected Cellco's proposal to lease space at this site for a tower site.





Visual Resource Evaluation Report

Proposed Wireless Telecommunications Facility

Moosup Facility Sterling Road Plainfield, Connecticut

Prepared for



Prepared by

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

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 off Sterling Road in the Town of Plainfield, 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 Plainfield, the Study Area also contains land located within the Town of Sterling, Connecticut. Attachment A contains a map that depicts the location of the proposed Facility and the limits of the Study Area.

Project Introduction

The proposed Facility includes the installation of a 160-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 454 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 Sterling Road.

Site Description and Setting

Identified in the Town of Plainfield land records as Map 30/Block 61/ Lot 20, the host property consists of approximately 32.2 acres of undeveloped, heavily wooded land. The proposed Facility is located on the northern portion of the host property, roughly 1,100 feet to the southwest of Sterling Road. Attachment A includes a photograph of the proposed project area. Land use within the general vicinity of the proposed Facility and host property consists primarily of undeveloped woodlands and low-density residential development. Segments of Route 14, Route 14A, Route 49 and Route 664 are contained within the Study Area. In total, the Study Area features approximately 56 linear miles of roadways.

The topography within the Study Area is characterized by rolling hills with ground elevations ranging from approximately 215 feet AMSL to approximately 620 feet AMSL. The Study Area contains approximately 209 acres of surface water, including portions of the Mossup River and Mossup Pond located roughly 1.25 miles to the northwest of the proposed project area. 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 6,344 acres of the 8,042-acre study area (79%). During the in-field activities associated with this analysis, an infrared laser range finder was used to determine the average tree canopy height throughout the Study Area. Numerous trees were selected for measurement and the average tree canopy was determined to be 65 feet.

METHODOLOGY

In order to better represent the visibility associated with the Facility, VHB uses a two-fold approach incorporating both a predictive computer model and in-field analysis. The predictive model is employed to assess potential visibility throughout the entire Study Area, including private property and/or otherwise inaccessible areas for field verification. A "balloon float" and Study Area drive-through reconnaissance are also conducted to obtain locational and height representations, back-check the initial computer model results and provide 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 State of Connecticut Department of Environmental Protection ("CTDEP"), which depicts various land and water resources such as parks and forests, recreational facilities, dedicated open space, CTDEP boat launches and other categories. 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 Plainfield and Sterling, it was determined that an approximate 0.50-mile segment of Route 14A is designated as state scenic roadway. This portion of Route 14A is depicted on the viewshed map contained in Attachment B.

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

Balloon Float and Study Area Reconnaissance

On June 24, 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 160 feet. Once the balloon was secured, VHB staff conducted a drive-by reconnaissance along the roads located within the Study Area with an emphasis on nearby residential areas and other potential sensitive receptors in order to evaluate the results of the preliminary viewshed map and to document where the balloon was, and was not, visible above and/or through the tree canopy. VHB staff also conducted reconnaissance from Moosup Pond as part of our in-field evaluation. During the balloon float, the temperature was approximately 75 degrees Fahrenheit with calm wind conditions and sunny 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. Portions of Moosup Pond were also evaluated during the field reconnaissance. 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 Route 14 adjacent to house #22.

- 2. View from Lake Street at Route 14.
- 3. View from Route 14 adjacent to house 371.
- 4. View from Parent Hill Road adjacent to house #28.
- 5. View from Sterling Ridge Hills subdivision (under construction).
- 6. View from Anne Circle (within Sterling Ridge Hills subdivision).
- 7. View from Main Street adjacent to house #214.
- 8. View from Main Street adjacent to house #260.
- View from North Sterling Road adjacent to house #188.
- 10. View from Moosup Pond.
- 11. View from Moosup Pond.
- 12. View from Moosup Pond.
- 13. View from end of Barber Hill Road.
- 14. View from Glen Falls Bridge.
- 15. View from Route 14A adjacent to house #791.
- 16. View from Sterling Hill Road adjacent to house #318.

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."

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 thirteen 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 160-foot tall Facility would be visible above the tree canopy comprise approximately 88 acres, or just over one percent of the 8,042-acre Study Area. As depicted on the viewshed map (provided in attachment B), areas of potential year-round visibility are somewhat spread out throughout the Study Area. VHB

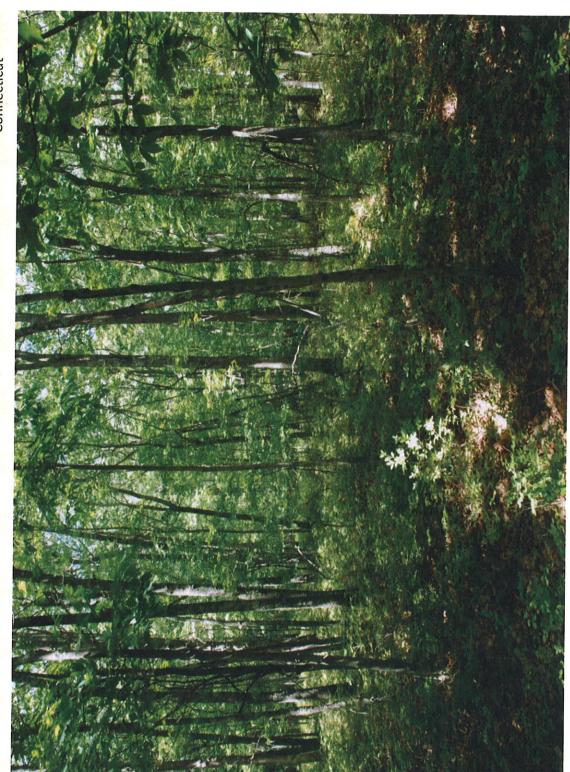
¹ Warren, Bruce. Photography, West Publishing Company, Eagan, MN, c. 1993, (page 70).

anticipates views from the north/northwest portion of Moosup Pond and limited areas of the adjacent shoreline located just over 1.50 miles from the proposed Facility as well as select portions of Route 14, Main Street, Parent Hill Road, Lake Street, North Sterling Road and several roads with the Sterling Ridge Hills subdivision (currently under construction). The attached viewshed map depicts other areas of potential year-round visibility that are located on private and/or otherwise inaccessible properties within the Study Area. Based on a review of the aerial photography utilized to develop the viewshed model, these areas generally occur over open land where there is little or no vegetative screening to obstruct potential views of the proposed Facility. Overall, potential year-round visibility would be limited to the areas identified in this analysis 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 28 residential properties may have at least partial year-round views of the proposed Facility. This includes four residences situated along the north/northwest corner of Moosup Pond; six residences located along Route 14; four properties off Main Street in Sterling; two residences located off Parent Hill Road; two residences located along North Sterling Road; and approximately ten residences located within the Sterling Ridge Hills Subdivision. The Sterling Ridge Hills Subdivision is currently under construction and as such, the number of residential properties with potential views has been estimated based on observations made during the balloon float as to the likely placement of future residential units. No views are anticipated from the Moosup Valley State Park Trail which traverses the Study Area.

The viewshed map also depicts several additional areas where seasonal (i.e. during "leaf off" conditions) views are anticipated. These areas comprise approximately 9 acres and are located on the host property within the immediate vicinity of the proposed Facility.

Attachment A

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



PROPOSED PROJECT AREA

veri onwreless

WIB Vanasse Hannen Rruetlin Inc

Proposed Monopole

Moosup Facility Sterling Road Plainfield, CT



Moosup Facility Sterling Road Plainfield, CT

Proposed Monopole



PHOTO TAKEN FROM ROUTE 14 ADJACENT TO HOUSE #22, LOOKING SOUTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.25 MILE +/-



PHOTO TAKEN FROM LAKE STREET AT ROUTE 14, LOOKING SOUTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.17 MILES +/-

Balloon Float Photo Proposed Monopole Moosup Facility Sterling Road Plainfield, CT

PHOTO TAKEN FROM ROUTE 14 ADJACENT TO HOUSE #371, LOOKING SOUTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.05 MILES +/-



PHOTO TAKEN FROM PARENT HILL ROAD ADJACENT TO HOUSE #28, LOOKING SOUTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS .85 MILE +/-



View 5



PHOTO TAKEN FROM STERLING RIDGE HILLS SUBDIVISION (UNDER CONSTRUCTION), LOOKING NORTHWEST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.25 MILES +/-

HA





Proposed Monopole

Veri Conwretess



PHOTO TAKEN FROM ANN CIRCLE (WITHIN STERLING RIDGE HILLS SUBDIVISION), LOOKING NORTHWEST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.16 MILES +/- View 7

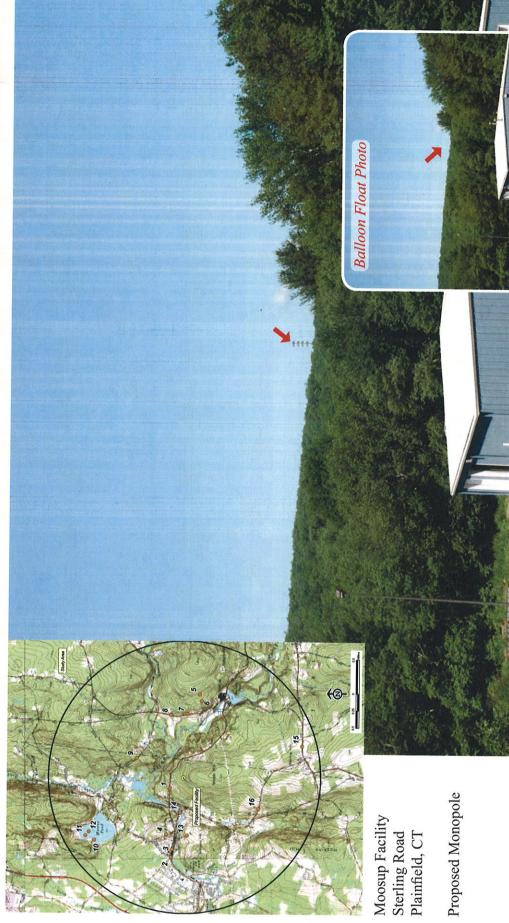


PHOTO TAKEN FROM MAIN STREET ADJACENT TO HOUSE #214, LOOKING WEST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.94 MILE +/-

Veri onwreess VIB Vanasse Hangen Brustlin, Inc.



Proposed Monopole







Moosup Facility Sterling Road Plainfield, CT

Proposed Monopole





PHOTO TAKEN FROM NORTH STERLING ROAD ADJACENT TO HOUSE #188, LOOKING SOUTHWEST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.75 MILE +/-



PHOTO TAKEN FROM MOOSUP POND, LOOKING SOUTHEAST

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.58 MILES +/-



Proposed Monopole

View II



PHOTO TAKEN FROM MOOSUP POND, LOOKING SOUTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.67 MILES +/-

Veri on wreless

Proposed Monopole

VIIB Vanasse Hangen Brustlin, Inc.

Balloon Float Photo Moosup Facility Sterling Road Plainfield, CT

PHOTO TAKEN FROM MOOSUP POND, LOOKING SOUTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.59 MILES +/-

veri onwevess

Proposed Monopole



PHOTO TAKEN FROM END OF BARBER HILL ROAD, LOOKING NORTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.84 MILE +/-



VIIB Vanasse Hangen Brustlin, Inc.

Proposed Monopole

Proposed Monopole

verizonwreless



PHOTO TAKEN FROM GLEN FALLS BRIDGE, LOOKING SOUTHEAST - BALLOON IS NOT VISIBLE DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 0.50 MILE +/-

Moosup Facility Sterling Road Plainfield, CT

PHOTO TAKEN FROM ROUTE 14A ADJACENT TO HOUSE #791, LOOKING NORTHWEST - BALLOON IS NOT VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.80 MILES +/-

VIIB Vanasse Hangen Brustlin, Inc.



Moosup Facility Sterling Road Plainfield, CT

Proposed Monopole



Vins Vanasse Hangen Brustlin, Inc.

PHOTO TAKEN FROM STERLING HILL ROAD ADJACENT TO HOUSE #318, LOOKING NORTHEAST DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.19 MILES +/-- BALLOON IS NOT VISIBLE

Attachment B

Viewshed Map

Viewshed Map



Proposed Telecommunications Facility Sterling Road Plainfield, Connecticut

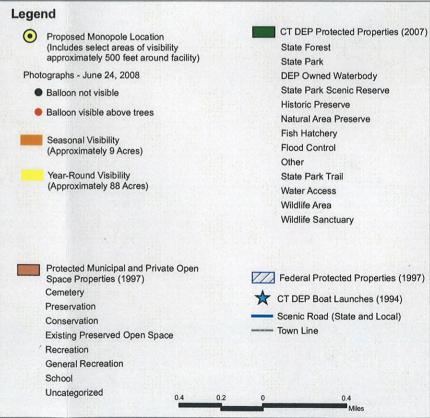
NOTE

- Viewshed analysis conducted using ESRI's Spatial Analyst;
- Proposed Facility height is 160 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, 2008
- Base map comprised of Oneco (1970) and Plainfield (1983) USGS Quadrangle Maps
- 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 August, 2008







USF&W COMMENTS

Transportation Land Development Environmental Services



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

Memorandum

To: Alexandria Carter Verizon Wireless

Verizon Wireless 99 East River Drive

East Hartford, Connecticut 06108

Date: May 14, 2008

Project No.: 41240.59

From: Matthew Davison

Registered Soil Scientist CT Certified Forester 193 Re: Moosup-Singh Property

Sterling Road

Moosup, Connecticut

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. 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. A copy of the January 2008 USFWS policy statement as well as a January 1, 2008 USFWS letter regarding federally-listed endangered and threatened species in Windham County Connecticut are enclosed for reference.

Project Site:

State: Connecticut County: Windham

Address: Sterling Road, Moosup, Connecticut

Latitude/Longitude Coordinates: N41°43′03″ W71°51′10″

Watershed: Moosup River (basin # 3500)

Date: May 14, 2008 Project No.: 41240.59

USFWS January 7, 2008
Telecommunications Policy Statement
and Federally-Listed Endangered and
Threatened Species in Connecticut
USFWS January 1, 2008
No Known Federally-Listed or
Endangered Species Letter



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,

Jultony P.7- -

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 federallylisted species by county:

Common Name	Species	Status	County/General Distribution	
Shortnose sturgeon ¹	Acipenser brevirostrum	Е	Atlantic coastal waters and Connecticut River	
Indiana bat	Myotis sodalis	Е	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	Е	Nesting: New Haven (Faulkner Island) Migratory: Atlantic Coast	
Bog turtle	Clemmys muhlenbergii	T	Fairfield, Litchfield	
Dwarf wedgemussel	Alasmidonta heterodon	Е	Hartford (Connecticut River watershed)	
Puritan tiger beetle	Cicindela puritana	Т	Hartford, Middlesex (Connecticut River floodplain)	
Northeastern beach tiger beetle	Cicindela dorsalis dorsalis	Т	Coastal beaches/extirpated	
Small whorled pogonia	Isotria medeoloides	Т	Litchfield, New Haven	
Sandplain gerardia	Agalinus acuta	Е	Hartford	
Chaffseed	Scwalbea americana	Е	New London/historic	

Principal responsibility for this species is vested with the National Marine Fisheries Service.

Delisted. Protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.



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 1, 2008

To Whom It May Concern:

This project was reviewed for federally-listed or proposed threatened or endangered species presence per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website (http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm). Based on information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with the Service under Section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this review, unless additional information on listed or proposed species becomes available.

Thank you for your coordination. Please contact us at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Anthony P. Tur

Endangered Species Specialist

New England Field Office

DEP COMMENTS



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



December 31, 2007

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

> Re: Verizon Wireless Telecommincations Facility – Two Sites, Young Property, Singh RL Property, Sterling Road, Moosup

Dear Ms. Dentamaro:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed environmental review for Verizon Wireless Telecommunications Facility, Two Sites, Young Property, Singh RL Property, Sterling Road in Moosup, Connecticut. According to our information there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur at the site in question.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Natural Resources 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 substitutes 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 at 424-3592. 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.

Dawn M. McKay

Sincerely,

Biologist/Environmental Analyst

DMM/blm

VANASSE HANGEN BRUSTLIN, INC

SHPO COMMENTS

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) July 15, 2008

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

Verizon Wireless Telecommunications Facilities

Singh Property off Sterling Road

Moosup (Plainfield), CT

TCNS #33713

Dear Ms. Dentamaro:

The State Historic Preservation Office has reviewed the archaeological reconnaissance prepared by Heritage Consultants LLC concerning the abovenamed project. In the opinion of the State Historic Preservation Office, the archival and archaeological methodologies employed by Heritage Consultants LLC are consistent with our Environmental Review Primer for Connecticut's Archaeological Resources.

The State Historic Preservation Office concurs with Heritage Consultants LLC. that no further archaeological investigations appear warranted with respect to the proposed undertaking. This office notes that the Glen Falls Bridge, which is listed on the National Register of Historic Places, is located in proximity to the proposed cellular facility. However, we believe that the proposed undertaking will have no effect upon Connecticut's cultural heritage.

This office recommends that Heritage Consultants LLC consult with the Office of State Archaeology at the University of Connecticut (Storrs) concerning the professional transferal of all field notes, photographs, and artifactual materials generated by the archaeological investigations.

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

Sincerely.

Karen Senich State Historic Preservation Officer

cc: Bellantoni, George

CONNECTICUT www cultureandtourism.org

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Transportation Land Development Environmental •

Services



imagination innovation energy Creating results for our clients and benefits for our communities

December 17, 2007

Ref: 41240.59

Vanasse Hangen Brustlin, Inc.

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

Re:

Moosup – Singh Property

Wetland Inspection Sterling Road

Moosup, Connecticut

Dear Ms. Carter:

Vanasse Hangen Brustlin, Inc. (VHB) completed an on-site investigation on December 15, 2007 to determine if wetlands and/or watercourses are located on the above-referenced Site. VHB has relied upon the accuracy of information provided by Natcomm (refer to attached Lease Exhibit) regarding the proposed lease area, access road, and utility easement locations for identifying wetlands and watercourses within and proximate to said locations.

VHB understands that Verizon Wireless proposes to construct a wireless telecommunications facility on property owned by the Singh's located on the south side of Sterling Road in Moosup, Connecticut (the "Site"). The Site consists of undeveloped forest with access to the Site via a proposed 12-foot access/utility easement from Sterling Road that generally follows and existing logging road. No wetlands or watercourses were identified (or delineated) on the Site or within 200 feet of proposed development activities. The nearest wetland/watercourse appears to be a forested wetland located on an adjoining parcel to the west more than 500 feet away. Soils classified in the vicinity of the proposed development are generally consistent with published data (refer to attached soil map and report) consisting of moderately well drained Woodbridge fine sandy loam (soil symbol – 47) as well as well drained Canton and Charlton soils (61). The "wet spot" symbol depicted on the soil map near Sterling Road was investigated and found to consist of Woodbridge soil (47) and is not classified as a wetland. Therefore, the proposed development will not directly or indirectly affect wetlands or watercourses.

If you have any questions concerning this matter do not hesitate to call me.

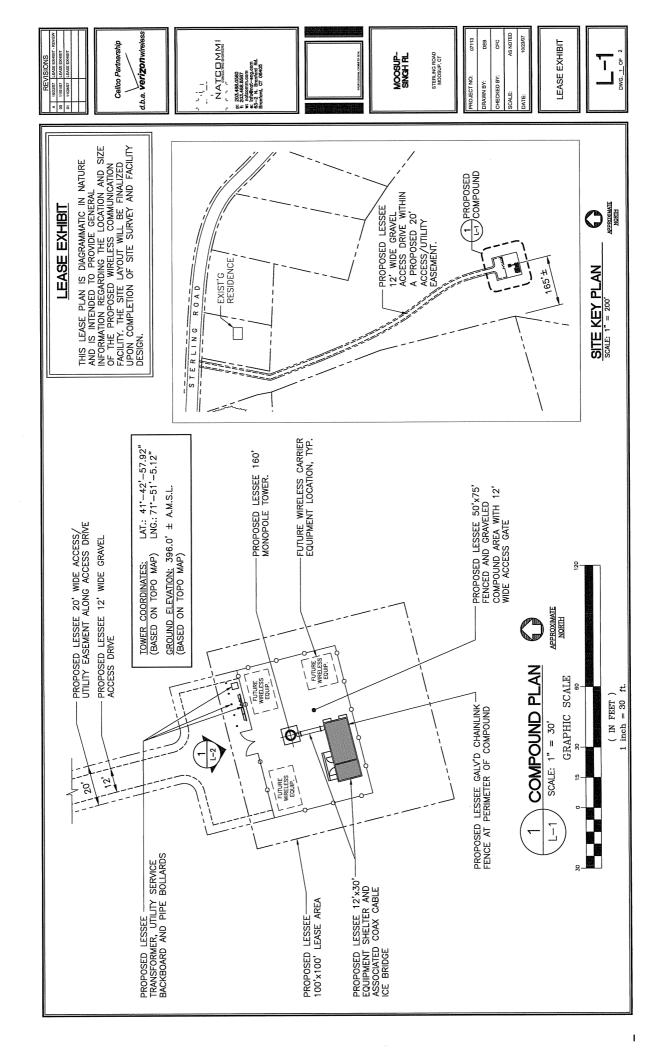
Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

Dean Gustafson

Professional Soil Scientist

Enclosure







Web Soil Survey 2.0 National Cooperative Soil Survey

MAP LEGEND

Streams and Canals Interstate Highways Short Steep Slope Very Stony Spot State Highways Special Line Features Urban Areas Local Roads US Routes Wet Spot Oceans Other Gully Other Political Features Cities Rails Municipalities Water Features Transportation Roads 8 ‡ Area of Interest (AOI) Miscellaneous Water Closed Depression Perennial Water Soil Map Units Mine or Quarry Special Point Features Rock Outcrop **Gravelly Spot** Saline Spot Sandy Spot **Borrow Pit Gravel Pit** Lava Flow Clay Spot Area of Interest (AOI) Blowout Landfill Marsh 0 × • Soils

Other Roads

Severely Eroded Spot

Slide or Slip

Sinkhole

Sodic Spot

Spoil Area

155

Stony Spot

MAP INFORMATION

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

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

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

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



Map Unit Legend

	State of Connec	ticut (CT600)		
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
46B	Woodbridge fine sandy loam, 2 to 8 percent slopes, very stony	0.0	0.1%	
47C	Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony	4.3	28.8%	
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	9.0	60.8%	
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	1.0	6.4%	
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	0.6	3.9%	
Totals for Area of Interest (A	OI)	14.8	100.0%	

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey 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, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

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, Generated)

State of Connecticut

Map Unit: 46B—Woodbridge fine sandy loam, 2 to 8 percent slopes, very stony

Component: Woodbridge (80%)

The Woodbridge component makes up 80 percent of the map unit. Slopes are 2 to 8 percent. This component is on drumlins on uplands, hills on uplands. The parent material consists of coarse-loamy lodgment till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer, densic material, is 20 to 40 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Paxton (5%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Component: Montauk (3%)

Generated brief soil descriptions are created for major components. The Montauk soil is a minor component.

Component: Ridgebury (3%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Leicester (2%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Component: Sutton (2%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Unnamed, loamy substratum (2%)

Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

Component: Georgia (1%)

Generated brief soil descriptions are created for major components. The Georgia soil is a minor component.

Component: Stockbridge (1%)

Generated brief soil descriptions are created for major components. The Stockbridge soil is a minor component.

Component: Whitman (1%)

Generated brief soil descriptions are created for major components. The Whitman soil is a minor component.

Map Unit: 47C—Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony

Component: Woodbridge (80%)

The Woodbridge component makes up 80 percent of the map unit. Slopes are 2 to 15 percent. This component is on drumlins on uplands, hills on uplands. The parent material consists of coarse-loamy lodgment till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer, densic material, is 20 to 40 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

Component: Paxton (5%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Component: Montauk (3%)

Generated brief soil descriptions are created for major components. The Montauk soil is a minor component.

Component: Ridgebury (3%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Leicester (2%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Component: Sutton (2%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Unnamed, loamy substratum (2%)

Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

Component: Georgia (1%)

Generated brief soil descriptions are created for major components. The Georgia soil is a minor component.

Component: Stockbridge (1%)

Generated brief soil descriptions are created for major components. The Stockbridge soil is a minor component.

Component: Whitman (1%)

Generated brief soil descriptions are created for major components. The Whitman soil is a minor component.

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

Component: Canton (45%)

The Canton component makes up 45 percent of the map unit. Slopes are 3 to 8 percent. This component is on hills on uplands. The parent material consists of coarse-loamy over sandy and gravelly melt-out till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 70 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Charlton (35%)

The Charlton component makes up 35 percent of the map unit. Slopes are 3 to 8 percent. This component is on hills, uplands. The parent material consists of coarse-loamy melt-out till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Chatfield (5%)

Generated brief soil descriptions are created for major components. The Chatfield soil is a minor component.

Component: Hollis (5%)

Generated brief soil descriptions are created for major components. The Hollis soil is a minor component.

Component: Leicester (5%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Component: Sutton (5%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

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

Component: Charlton (45%)

The Charlton component makes up 45 percent of the map unit. Slopes are 3 to 15 percent. This component is on hills, uplands. The parent material consists of coarse-loamy melt-out till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Chatfield (30%)

The Chatfield component makes up 30 percent of the map unit. Slopes are 3 to 15 percent. This component is on hills, ridges, uplands. The parent material consists of coarse-loamy melt-out till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer, bedrock (lithic), is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Rock outcrop (6%)

Generated brief soil descriptions are created for major components. The Rock outcrop soil is a minor component.

Component: Hollis (5%)

Generated brief soil descriptions are created for major components. The Hollis soil is a minor component.

Component: Leicester (5%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Component: Sutton (5%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Unnamed, red parent material (2%)

Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

Component: Unnamed, sandy subsoil (2%)

Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

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

Component: Paxton (55%)

The Paxton component makes up 55 percent of the map unit. Slopes are 3 to 8 percent. This component is on hills on uplands, till plains on uplands, drumlins on uplands. The parent material consists of coarse-loamy lodgment till derived from granite and/or schist and/or gneiss. Depth to a root restrictive layer, densic material, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Montauk (30%)

The Montauk component makes up 30 percent of the map unit. Slopes are 3 to 8 percent. This component is on drumlins on uplands, hills on uplands. The parent material consists of coarse-loamy lodgment till derived from granite and/or coarse-loamy lodgment till derived from gneiss and/or coarse-loamy lodgment till derived from granite. Depth to a root restrictive layer, densic material, is 20 to 38 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Charlton (3%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Component: Ridgebury (3%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Woodbridge (3%)

Generated brief soil descriptions are created for major components. The Woodbridge soil is a minor component.

Component: Canton (2%)

Generated brief soil descriptions are created for major components. The Canton soil is a minor component.

Component: Stockbridge (1%)

Generated brief soil descriptions are created for major components. The Stockbridge soil is a minor component.

Component: Unnamed, less sloping (1%)

Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

Component: Unnamed, nonstony surface (1%)

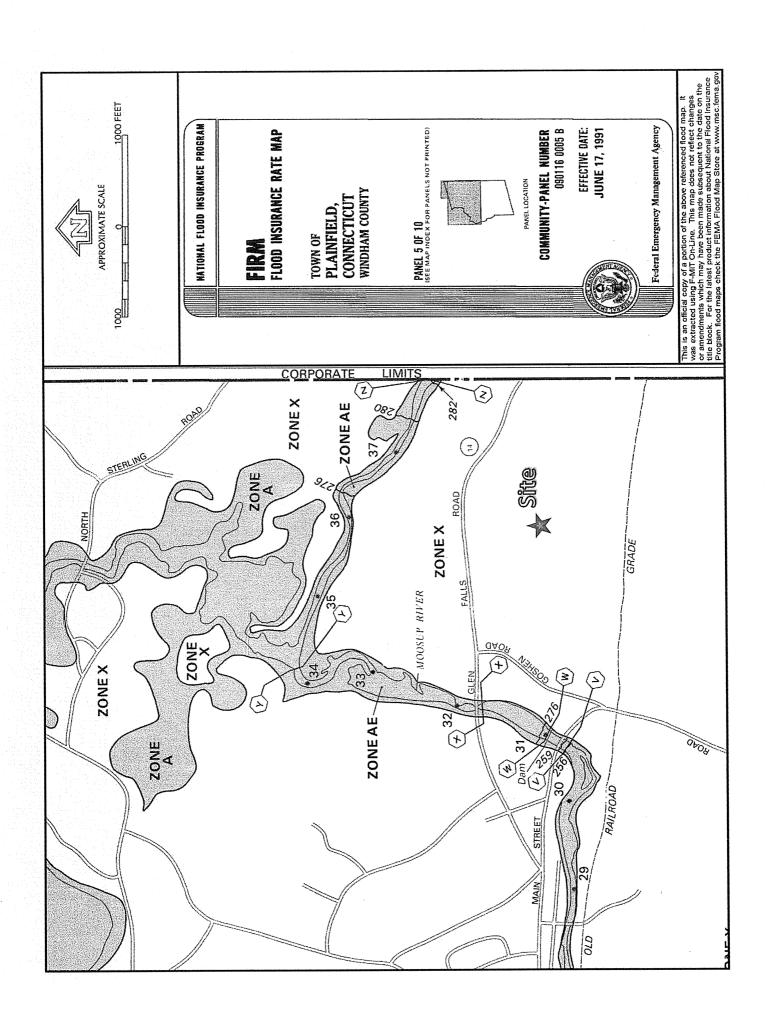
Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

Component: Unnamed, red parent material (1%)

Generated brief soil descriptions are created for major components. The Unnamed soil is a minor component.

Data Source Information

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



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MOOSUP.SRP
                             *************
                             *
                                       Federal Airways & Airspace
                             * Summary Report *
***********************
                             File: MOOSUP
                             Location: Danielson, CT
                            Distance: 6.7 Statute Miles Direction: 344° (true bearing)
                             Latitude: 41°-42'-58.64"
                                                                    Longitude: 71°-51'-05.90"
                             SITE ELEVATION AMSL.....455 ft.
                             STRUCTURE HEIGHT......160 ft.
                             OVERALL HEIGHT AMSL.....615 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 IJD) 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
                                    RB: 340.42
                   RD:
                          39013
                                                   RE:
     Type: AIR
        FAR 77.23(a)(1):
FAR 77.23(a)(2):
                                    DNE
                                    Does Not Apply.
        VFR Horizontal Surface: DNE
        VFR Conical Surface:
                                    DNE
        VFR Approach Slope:
                                    DNE
        VFR Transitional Slope: DNE
     VFR TRAFFIC PATTERN AIRSPACE FOR: IJD: WINDHAM Type: AIR RD: 87624 RB: 276.57 RE: 276.57
      Type: AIR
        FAR 77.23(a)(1):
FAR 77.23(a)(2):
                                    DNE
                                    DNE - Greater Than 6 NM.
        VFR Horizontal Surface: DNE
        VFR Conical Surface:
                                    DNF
        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
                                             Page 1
```

MOOSUP.SRP

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)
FAR 77.23(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 1500 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT TYP NAME			DELTA ARP ELEVATION
CT68 HEL WAUREGAN No Impact to Private Landing Facility Structure is beyond notice limit by 11715		2.751	+375
Structure is beyond notice limit by 11715	feet.		
RI11 AIR RICONN Possible Impact to Private Landing Facilit Exceeds 227 ft Near Airport Surface height	111 y limit.	3.271	+230

AIR NAVIGATION ELECTRONIC FACILITIES
No Electronic Facilites Are Within 25,000 ft

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.

No AM Stations were located within 3.2 km.

Airspace® Summary Version 2008.3

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SITE NAME: Moosup, CT (Singh Property)

SITE NUMBER: 2007226491

ATTY/DATE: Marino Digaletos 12/10/07

LAND LEASE AGREEMENT

This Agreement, made this 2nd day of January, 2007 between Reepu D.Singh, residing at 34 Tripp Hollow Road, Brooklyn, CT 06234 Social Security # 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 off Route 14, Plainfield, Connecticut, and being described as a 100 ' by 100' parcel containing 10000 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 twenty (20') foot wide right-of-way extending from the nearest public right-of-way, Route 14, 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 Right 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 Plainfield as Map 38, Block 61, Lot 20 and is further described in Deed Book 243 at Page 215 as recorded in the Town of Plainfield 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. <u>SURVEY</u>. 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 for the first year of the lease of to be paid in equal monthly installments on the first day of the month, in advance, to Reepu Singh 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 24 below. Rent for each year after the first year shall increase by the percent over the rent for the preceding year. 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 is granted a building permit by the governmental agency charged with issuing such permits, or the 12 months from full execution of this Agreement, whichever occurs first. In the event the date LESSEE is granted a building permit or 12 month from full execution of this Agreement, whichever occurs first 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. <u>EXTENSIONS</u>. 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. For each year of the extension terms, the rent shall increase by over the rent for each preceding year.
- 6. <u>ADDITIONAL EXTENSIONS</u>. 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 percent of the annual rental payable with respect to the immediately preceding year. The initial term and all extensions shall be collectively referred to herein as the "Term".
- 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 shall be placed around the perimeter of the Premises (not including the access easement) and a gate shall be installed at the entrance of the access road. 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. <u>INDEMNIFICATION</u>. 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. <u>INSURANCE</u>.

- 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.
- 8 and 30, 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. <u>ANNUAL TERMINATION</u>. 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 three (3) months prior notice is given to LESSOR.

- 12. <u>INTERFERENCE</u>. 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 afterinstalled 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.
- 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 34 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. <u>HOLDOVER</u>. 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 one hundred and ten percent (110%) of the rent applicable during the month immediately preceding such expiration or earlier termination.

- otherwise transfer all or any portion of the Premises, whether separately or as part of a larger parcel of which the Premises 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 Premises 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 Premises as a result of the death of LESSOR, whether by will or intestate succession, shall not be considered a sale of the Premises for which LESSEE has any right of first refusal.
- 16. <u>RIGHTS UPON SALE</u>. Should LESSOR, at any time during the Term decide (i) to sell or transfer all or any part of the Premises 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 Premises 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 transferee 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 Premises 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. <u>TITLE</u>. LESSOR represents and warrants to LESSEE as of the execution date of this Agreement, and covenants during the Term that LESSOR has 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. <u>INTEGRATION</u>. 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

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. <u>GOVERNING LAW</u>. 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. <u>ASSIGNMENT</u>. 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. SUBLEASING.

- a. LESSEE may sublease any portion of the Premises at 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. The term "Sublease", "Sublet", "Sublessee" and any other similar term shall apply to any situation by which LESSEE allows a third party use of the Premises for co-location, whether it be by formal sublease, license or other agreement. All rights and responsibilities of LESSEE set forth in this Agreement shall be enjoyed by and binding on any Sublessee.
- b. In the event LESSEE subleases any portion of the Premises, in accordance with this Agreement, LESSOR shall be entitled to receive an amount equal to of the Subsequent User's monthly rental fee as additional rent from LESSEE until the expiration or earlier termination of the sublease.
- c. If the LESSEE is unable to accommodate any or part of Sublessee's facilities within the Premises, then LESSOR may enter into an agreement with the Sublessee for a portion of the Property that Sublessee requires to locate its facilities. In this event, LESSOR

Shall receive one hundred percent (100%) of the rental fee negotiated by the LESSOR and Sublessee, for the portion of Sublessee's facilities that are located on the Property outside LESSEE's Premises. If LESSEE enters into an agreement with Sublessee for a portion of the Property as defined herein, LESSOR shall still be entitled to receive of the rental fee negotiated for the sublease of a portion of the Premises as defined in section 22(b).

23. <u>NOTICES</u>. 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:

Reepu Singh

34 Tripp Hollow Road Brooklyn, CT 06234

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.

- 24. <u>SUCCESSORS</u>. This Agreement shall extend to and bind the heirs, personal representative, successors and assigns of the Parties hereto.
- 25. 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.

26. TAXES.

- a. LESSEE shall pay as additional rent any documented increase in real estate taxes levied against the leased Property which are directly attributable to the improvements constructed by LESSEE. LESSOR shall provide to LESSEE a copy of any notice, assessment or billing relating to real estate taxes for which LESSEE is responsible under this Agreement within twenty (20) days of receipt of the same by LESSOR. LESSEE shall have no obligation to make payment of any real estate taxes until LESSEE has received the notice, assessment or billing relating to such payment as set forth in the preceding sentence. In the event LESSOR fails to proved to LESSEE a copy of any real estate tax notice, assessment or billing within the twenty (20) day period set forth herein, LESSEE shall be relieved of any obligation or responsibility to make payment of real estate taxes referred to in the notice, assessment or billing which was not timely delivered by LESSOR to LESSEE.
- b. LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any real estate tax assessment or billing for which LESSEE is wholly or partly responsible for payment under this Agreement. LESSOR shall reasonably cooperate with LESSEE in filing, prosecuting and perfecting any appeal or challenge to real estate taxes as set forth in the preceding sentence, including but not limited to, executing any consent to appeal or other similar document.
- 27. <u>RECORDING</u>. 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.

28. DEFAULT.

- a. 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.
- b. 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

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.

29. 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.

30. <u>ENVIRONMENTAL</u>.

- a. 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.
- b. 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

and for responding to any action, notice, claim, order, summons, citation, directive, measuremental or industrial hygiene law, including without limitation any regulations, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial authorities results from 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 activities conducted thereon, unless such environmental or industrial hygiene conditions are caused by LESSEE.

- 31. <u>CASUALTY</u>. 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.
- 32. 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.

- 33. <u>SUBMISSION OF AGREEMENT/PARTIAL INVALIDITY/AUTHORITY</u>. 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.
- 34. 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.
- 35. <u>SURVIVAL</u>. 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.
- 36. <u>CAPTIONS</u>. 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.

WITNESS TIMOTHY MOSS

April Dragon

WITNESS

LESSOR:

Reepu D. Singh

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

David R. Heverling

Its: Network Vice President- Northeast Area

1 2 08

(Sketch of Premises within Property)

