CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

Connecticut Siting Council

APPLICATION OF CELLCO PARTNERSHIP
D/B/A VERIZON WIRELESS

TRUMBULL SE 4 FACILITY

DOCKET NO. _____

FEBRUARY 26, 2014

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EXECUTIVE SUMMARY

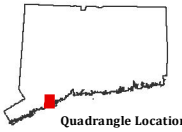
Cellco Partnership d/b/a Verizon Wireless ("Cellco") ("Applicant"), proposes to construct a telecommunications tower and related facility (the "Trumbull SE 4 Facility") on an approximately 14 acre parcel at 60 Commerce Drive in Trumbull, Connecticut (the "Property"). The Property is owned by Pilot Corporation of America. The Trumbull SE 4 Facility would provide enhanced wireless services and increase network capacity in southeast Trumbull particularly along portions of Route 8, areas within the Trumbull Corporate Park and to the surrounding residential neighborhoods.

At this site, Cellco proposes the construction of an 80-foot monopole tower. Cellco would install up to fifteen (15) panel-type antennas at a centerline height of 80 feet above ground level ("AGL"). The top of Cellco's antennas will extend above the top of the tower to an overall height of approximately 83 feet AGL. Cellco would also install a 12' x 30' shelter on the ground near the base of the tower to house its radio equipment and a diesel-fueled back-up generator. The tower and equipment shelter will be located within a 24' x 77' fenced compound. Vehicular access to the tower site would extend from Commerce Drive over an existing paved driveway and parking areas, a distance of approximately 1,365 feet, then over a short (100 feet) gravel driveway extension to the facility compound. Utilities would extend from existing service along Commerce Drive.

Site Location Map

Source: U.S.G.S. 7.5 Minute Topographic Quadrangle Maps (Long Hill, Bridgeport)

Proposed Verizon Telecommunications Tower
60 Commerce Drive
Trumbull, Connecticut



verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION

Friday, February 14, 2014

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Site Aerial Map

Legend

Proposed Tower Location

Proposed 24' x 77' +/- Gravel/Fenced Compound Area

Proposed Verizon Telecommunications Tower
60 Commerce Drive
Trumbull, Connecticut

verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION

Tuesday, January 2014

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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
APPLICATION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT 60 COMMERCE DRIVE, TRUMBULL, CONNECTICUT	:	**DOCKET NO. ____**
	:	**FEBRUARY 26, 2014**

APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

I. INTRODUCTION

A. Authority and Purpose

This Application and the accompanying attachments (collectively, the "Application") is submitted by Cellco Partnership d/b/a Verizon Wireless ("Cellco") or the ("Applicant"), pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes ("C.G.S."), as amended, and Sections 16-50j-1 et seq. of the Regulations of Connecticut State Agencies ("R.C.S.A."), as amended. The Application requests that the Connecticut Siting Council ("Council") issue a Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance, and operation of a wireless telecommunications facility on an approximately 14 acre parcel at 60 Commerce Drive in Trumbull, Connecticut (the "Property"). This site is known as Cellco's "Trumbull SE 4 Facility".

The proposed cell site would be located in the northerly portion of the Property immediately adjacent to an existing office building. At this location, Cellco would construction an 80-foot self-supporting monopole telecommunications tower. Cellco would install up to fifteen (15) panel-type antennas with their centerline at the 80-foot level. The top of Cellco's antennas would extend above the top of the tower to an overall height of approximately 83 feet above ground level ("AGL"). Equipment associated with Cellco's antennas and a diesel-fueled back-up generator would be located in a 12' x 30' shelter near the base of the tower within a 24' x 77' fenced compound. A small retaining wall will be installed along the north side of the compound to maintain a level gravel compound surface. Vehicular access to the site would extend from Commerce Drive over an existing paved driveway and parking area a distance of approximately 1,365 feet, then over a short gravel driveway extension an additional distance of 100 feet to the cell site. Utilities will extend underground from existing service along Commerce Drive.

The proposed Trumbull SE 4 Facility will provide reliable wireless service to a 2.30 mile portion of Route 8, and an overall area of 4.93 square miles at 850 MHz frequencies; a 2.1 mile portion of Route 8, and an overall area of 4.09 square miles at 1900 MHz frequencies; a 2.60 mile portion of Route 8, and an overall area of 5.75 square miles at 700 MHz frequencies; and a 2.20 mile portion of Route 8, and an overall area of 3.85 square miles at 2100 MHz frequencies.

The tower and facility compound area would be designed to accommodate additional carriers as well as state or local emergency services antennas and equipment if a need exists. 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. Cellco's back-up 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 shelter would be equipped with a silent intrusion and system alarms 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 generally visit the cell site on a monthly basis. More frequent visits may be required if there are problems with the cell site equipment.

The primary purpose for the Trumbull SE 4 Facility is to provide enhanced wireless telecommunications services and increased network capacity in southeast Trumbull, particularly along portions of Route 8, in the Trumbull Corporate Park and in the surrounding residential areas. Cellco's existing Trumbull 2, Stratford North and, to a lesser extent, Trumbull East cell sites are currently operating at or near their respective capacity limits.

Cellco's existing Trumbull 2 cell site consists of antennas on the roof of the Trumbull Marriott Hotel at 180 Hawley Lane in Trumbull and is located approximately 0.75 miles south of the proposed Trumbull SE 4 Facility. Cellco's existing Stratford North cell site consists of antennas at the 98-foot level on an existing 110-foot tower at 630 James Farm Road in Stratford and is located approximately 1.25 miles east of the proposed Trumbull SE 4 Facility. Cellco's existing Trumbull East cell site consists of antennas at the 84-foot level on a water tank at 605 Huntington Street in Shelton and is located approximately 1.0 miles north of the proposed

Trumbull SE 4 Facility.

Included in this Application, as Attachment 1, is a factual summary and project plans for the Trumbull SE 4 Facility. This summary, along with the other attachments submitted as part of this Application, contain all of the site-specific information required by statute and the regulations of the Council.

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). 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. Operation of the wireless telecommunications systems and related activities are Cellco's sole business in the State of Connecticut.

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:

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 Trumbull SE 4 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 $1,250 accompanies this Application in the form of a check payable to the Council.

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

Copies of this Application have been sent 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 officials served with a copy of the Application, is included as Attachment 2.

Notice of Cellco's intent to submit this Application was published on February 21 and 22, 2014, by Cellco in the *Connecticut Post* pursuant to C.G.S. Section 16-50*l*(b). A copy of the published legal notice is included as Attachment 3. An Affidavit of Publication will be forwarded to the Council as soon as it is available.

Attachment 4 contains a certification that notice of Cellco's intent to file this application were sent to each person appearing of record as an owner of land 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 landowners 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 Trumbull SE 4 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.

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 advanced wireless technologies.

The proposed Trumbull SE 4 Facility would be part of Cellco's 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 site proposed in this Application has been selected, so as to maximize the geographical coverage and quality of service and improve network capacity to allow for the efficient and reliable use of Cellco's advanced wireless services.

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 Trumbull SE 4 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 the State of Connecticut. This system, together with Cellco's system throughout its New England 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.

Recognizing the public safety benefits that enhanced wireless telecommunications networks can provide, the United States, Congress also enacted the Wireless Communications and Public Safety Act of 1999 to promote and enhance public safety by making 911 the universal emergency assistance number, furthering the deployment of wireless 911 capabilities and further encouraging the construction and operation of seamless, ubiquitous and reliable wireless networks. The Enhanced 911 Act was enacted for the specific purpose of enhancing and promoting Homeland Security, public safety and citizen activated emergency response capabilities. These goals and other related responsibilities imposed on wireless service providers can only be satisfied if Cellco maintains a reliable wireless network.

Included as Attachment 5 is a copy of the FCC's authorization issued to Cellco for its wireless service in Fairfield 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 proposed Trumbull SE 4 Facility would not enlarge Cellco's authorized service area.

B. Public Need and System Design

1. Public Need

As noted above, the Act has pre-empted any state or local determination of public need for wireless services. In Fairfield County, Cellco holds an FCC License to provide wireless services in the 700 MHz, 850 MHz, 1900 MHz and 2100 MHz frequency ranges. Pursuant to its FCC Licenses, Cellco has developed and continues to develop a network of cell sites to serve the demand for enhanced wireless services in the area. Cellco's network currently provides coverage in Trumbull and the surrounding towns from its existing cell sites in the area. Cellco's existing Trumbull 2, Stratford North and Trumbull East facilities will directly interact with the proposed Trumbull SE 4 Facility. Plots showing coverage from Cellco's existing facilities in the area, alone and together with coverage from the proposed Trumbull SE 4 Facility, are included as Attachment 6.

2. System Design and Equipment

a. System Design

Cellco's wireless system in general and the proposed Trumbull SE 4 Facility, in particular, have been designed and developed to allow Cellco to achieve and to maintain high quality, reliable wireless service without disruption.

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 transmitted.

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) carrier networks.

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 Cellco's 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 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. Additional information with respect to the Lucent Flexent® Modular Cell 4.0B equipment is contained in Attachment 7.

3. Technological Alternatives

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

C. Site Selection and Tower Sharing

1. Cell Site Selection

Cellco's goal in selecting cell sites, like the one described above, is to locate a 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 Trumbull SE 4 Facility satisfies this goal and would help resolve existing capacity and to a lesser extent coverage problems and provide high-quality reliable wireless service in southeast Trumbull, primarily along portions of Route 8, within the Trumbull Corporate Park and in the residential neighborhoods in the area.

The methodology of cell site selection for a wireless system generally limits the search for possible locations to a specific site search area or ring established by Cellco's Radio Frequency Engineers and network designers. In any search area, Cellco first examines the use of existing towers or other sufficiently tall structures that might help satisfy its wireless service objectives. A list of existing towers or other non-tower structures considered is included in Attachment 8. Cellco currently shares three (3) existing towers within approximately 2.0 miles of the Trumbull SE 4

Facility location. These sites will directly interact with the proposed Trumbull SE 4 Facility and are identified on the coverage maps included in Attachment 6. These adjacent tower sites cannot, however, satisfy Cellco's need for additional coverage and capacity in and near the designated Trumbull SE 4 search area. 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 southeast Trumbull. Cellco initiated a site search process for the Trumbull SE 4 cell site and identified the property at 60 Commerce Drive as a viable candidate for a cell site. Cellco determined that an antenna centerline height of 80 feet at the 60 Commerce Drive location would satisfy its coverage objectives in the area. The Site Search Summary (Attachment 8) 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

If approved, the Applicant will design the facility tower and compound to be shared by other wireless carriers, and the Town, or local emergency service providers, 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 nor the Towns of Trumbull or Stratford have expressed any interest in the Trumbull SE 4 Facility.

D. Cell Site Information

1. Site Facilities

Cellco proposes to construct a new 80-foot tall monopole tower and install up to fifteen (15)

panel-type directional antennas at the top of the tower. The top of Cellco's antennas would extend to an overall height of approximately 83 feet AGL. Cellco would install a 12' x 30' single-story shelter near the base of the tower to house its receiving, transmitting, switching, processing and performance monitoring equipment and the required heating and cooling equipment. A diesel-fueled back-up generator would also be installed in a segregated room inside the 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 – Project Plans).

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, the Applicant 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 services in southeast Trumbull.[1] The Trumbull SE 4 Facility would be a part of a communications system that addresses the public need identified by the FCC and the United States Congress for high-quality, competitive 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.

[1] Businesses across the State have become more dependent on wireless services. The public safety benefits of wireless telephone service are illustrated by the Connecticut State Police Enhanced 911 emergency calling system. The E-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.

The overall costs to the Applicant 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, 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 Trumbull SE 4 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 affect. 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 proposed 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 9 contains Visibility Analysis and Photographic Simulations prepared by All-Points Technology Corporation for the Trumbull SE 4 Facility. The Visibility Analysis assesses the visual impact of the proposed 80-foot tower on the

surrounding areas and includes photographic simulations for the Council's review and consideration.

According to the Visibility Analysis, areas where the top portion of the tower would be visible above the tree canopy comprise approximately 61 acres or 0.75 percent of the 8,042 acre study area. Year-round visibility of the Trumbull SE 4 tower is generally limited to select areas within ½ mile of the Property. Areas where seasonal views are anticipated comprise approximately 144 additional acres, generally occurring in the Trumbull Corporate Park and some residential areas to the east.

There are forty (40) single family residences within 1,000 feet of the Trumbull SE 4 Facility. The closest residence is located approximately 390 feet to the east at 2945 Huntington Road.

Weather permitting, the Applicant will raise balloons with a diameter of at least three (3) feet at the Trumbull SE 4 Facility location 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 Energy and Environmental Protection, Public Health, Public Utility Regulatory Authority, 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 the National Environmental Policy Act ("NEPA") Checklist, solicits comments on the proposed cell site from the U.S. Department of the Interior, Fish and Wildlife Service ("USFWS"),

Environmental and Geographic Information Center of the Connecticut Department of Energy Environmental Protection ("DEEP") and the Connecticut Historical Commission, State Historic Preservation Officer ("SHPO"). Information on the USFWS and DEEP reviews regarding impacts on known populations of Federal or State Endangered, Threatened or Special Concern Species occurring at the proposed site are included in Attachments 10 and 11.

(1) USFWS Compliance Determination

According to the USFWS Compliance Determination dated January 16, 2014 for the proposed cell site, no federally listed endangered or threatened species are known to occur in Trumbull, Connecticut. The proposed development of the Trumbull SE 4 Facility will not, therefore, result in any effect on federally-listed, endangered or threatened species. (*See* USFWS Compliance Determination – Attachment 10).

(2) DEEP Natural Diversity Database Review

According to DEEP records, a State special concern species, the *Eastern Box Turtle*, may occur in the vicinity of the Trumbull SE 4 Facility. DEEP recommends that certain guidelines be followed to protect the *Eastern Box Turtles*. Consistent with its practice, Cellco, through Dean Gustafson at All-Points Technology Corporation ("APT") has established an *Eastern Box Turtle* protective measures program to avoid unintentional mortality of this turtle species during construction. These measures are outlined in a letter to Elaine Hinsch dated February 18, 2014. A copy of the DEEP Determination and Mr. Gustafson's February 18, 2014 letter are included in Attachment 11.

(3) Wetlands Investigation

As discussed in Section III.D.4.d. below, the development of the Trumbull SE 4 Facility

will not impact the nearest wetland areas approximately 230 feet to the west of the proposed tower and 180 feet west of the west end of the proposed retaining wall. The proposed utility easement is approximately 30 feet from the edge of this same wetland area. A Wetland Investigation report is included in Attachment 12.

(4) State Historic Preservation Officer

There are no historic resources within one-half mile of the Trumbull SE 4 Facility location. Regardless, on January 7, 2014, Cellco filed a request for State Historic Preservation Office ("SHPO") review of this tower proposal. On January 30, 2014, SHPO determined that "no historic properties will be affected by this project". A copy of Cellco's submission to SHPO and SHPO's final determination are included in Attachment 13.

c. Non-Ionizing Radio Frequency Radiation

The FCC has adopted a standard for exposure to Radio Frequency ("RF") emissions from telecommunications facilities like those 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. 65, Edition 97-01 (August 1997) ("OET Bulletin 65"). The calculation is a conservative, worst-case approximation for RF emissions at the closest accessible point to the antennas, in this case the base of the tower, and assumes that all antennas are transmitting simultaneously, on all channels, at full power. Even under these absolute worst-case conditions, the calculations indicate that the maximum permissible exposure level for Cellco's 700, 850, 1900 and 2100 MHz antennas would still be below (98.35%) the FCC's Standard. Actual RF emissions levels from the proposed facility would be far below these "worst-case" calculations.

d. Other Environmental Issues

No sanitary facilities are required for the Trumbull SE 4 Facility. The operations at the approved Trumbull SE 4 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 the Cellco project team, the Applicant submits that the Trumbull SE 4 Facility will have no significant adverse effect on scenic, natural, historic or recreational features, and that none of the potential effects 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 in July 2012, requires the inclusion of a narrative summary of the project's consistency with the Town's Plan of Conservation and Development (the "Plan") 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 Trumbull SE 4 Facility is located on an approximately 14 acre parcel owned by Pilot Corporation of America. The Property is located in an Industrial (I-L3) zone and is located in the Trumbull Corporate Park.

b. Plan of Conservation and Development

The Town of Trumbull Plan of Conservation & Development (dated October 10, 2006) (the "Plan"), does not identify telecommunications facilities as a land use consistent or inconsistent with the general planning and conservation principles or policies of the Town. Four

(4) copies of the Plan were filed, in bulk, with the Council.

c. Zoning Regulations

According to the Town's Zoning Map, the Property is located in Trumbull's Industrial (I-L3) zone. Pursuant to Article XII of the Trumbull Zoning Regulations, Wireless Telecommunications Facilities and Towers are permitted in all zones subject to the approval of a Special Permit from the Planning and Zoning Commission. Towers must be located on lots containing a minimum of 10 acres; must be setback at least 200 feet from a property line, 500 feet from an archeological site, 2,000 feet from a historic district and 750 feet from a residence, school, church or other public building.

d. Inland Wetland and Watercourse Regulations

The Trumbull Inland Wetlands and Watercourses Commission Regulations (the "IWWC 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 the land of such wetlands or watercourses or within 100 feet of the wetland or watercourse. Four (4) copies of the Trumbull IWWC Regulations were filed, in bulk, with the Council.

Dean Gustafson, Professional Soil Scientist with APT, conducted a field investigation and completed a Wetlands Investigation report for the proposed Trumbull SE 4 Facility. The closest wetland area to the tower is located approximately 230 feet west. This same wetland area is 180 feet from the west end of the proposed retaining wall and 30 feet from the edge of the proposed utility easement. In his Wetlands Investigation Memorandum, Mr. Gustafson concludes that the Trumbull SE 4 Facility will have no temporary or permanent direct impact to

wetlands or watercourses. Cellco's Wetlands Investigation report is included in Attachment 12.

In accordance with the Connecticut Soil Erosion Control Guidelines, as established by the Council for Soil and Water Conservation, adequate and appropriate soil erosion and sedimentation control measures will be established and maintained throughout the cell site construction period. In addition, the Applicant 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. Four (4) copies of the Trumbull IWWC Regulations were filed, in bulk, with the Council.

According to the Federal Emergency Management Agency Flood Insurance Rate Map ("FIRM"), Map Numbers 09001C0432F, Panel 432 of 626 (Effective June 18, 2010) the proposed facility would be located in Flood Zone X, an area outside the 500 year flood zone. A copy of the FIRM is also included in Attachment 14.

5. Local Input

Section 16-50*l*(e) of the Connecticut General Statutes, as amended, requires local input on matters before the Council. On November 7, 2013, Cellco representatives met with Trumbull's First Selectman, Timothy Herbst, to commence the ninety (90) day municipal consultation process. Mr. Herbst received copies of technical information summarizing Cellco's plans to establish a telecommunications facility as described above. At this meeting, Cellco discussed, in detail, the aspects of the proposed Trumbull SE 4 Facility, the site location being considered, the need for wireless service improvements in southeast Trumbull and the Connecticut Siting Council application process. That same day, Cellco delivered copies of this technical information to John A. Harkins, Mayor of the Town of Stratford. The Trumbull-Stratford town line is within 2,500 feet

(to the east) of the proposed Trumbull SE 4 Facility.

6. Consultations With State and Federal Officials

Attachments 10, 11 and 12 and Section III.D. of the Application describes consultations with state and federal officials regarding the proposed Trumbull SE 4 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 it does with all of its tower applications, Cellco conducted on air-space analyses for the proposed Trumbull SE 4 Facility to determine if the proposed tower would constitute an obstruction or hazard to air navigation. These analyses have confirmed, pursuant to FAA standards and guidelines, that the proposed tower would not constitute an obstruction or hazard to air navigation. Therefore, no obstruction marking or lighting would be required. A copy of the TOWAIR Determination Results is included in Attachment 15.

c. United States Fish and Wildlife Service

See Section III.D.3.b.(1) above.

d. Connecticut Department of Energy and Environmental Protection

(1) Environmental and Geographic Information Center

See Section III.D.3.b.(2) above.

(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 DEEP 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 Trumbull SE 4 Facility.

e. Connecticut State Historic Preservation Officer

See Section III.D.3.b.(4) above.

E. Estimated Cost and Schedule

1. Overall Estimated Costs

The total estimated cost of construction for the Trumbull SE 4 Facility is $700,000. This estimate includes:

(1)	Cell site radio equipment of approximately	$450,000
(2)	Tower, coax and antenna costs of approximately	130,000
(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	50,000

2. Overall Scheduling

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

installation.

IV. CONCLUSION

Based on the facts contained in this Application, Cellco submits that the establishment of the Trumbull SE 4 Facility will not have any substantial adverse environmental effects. A public need exists for high quality reliable wireless service in the Town of Trumbull and throughout Fairfield 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.

WHEREFORE, Cellco respectfully requests that the Council grant this Application for a Certificate of Environmental Compatibility and Public Need for the proposed Trumbull SE 4 Facility.

Respectfully submitted,

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

By: _____

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

TRUMBULL SE 4

60 Commerce Drive
Trumbull, Connecticut

Description of Proposed Cell Site

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

TABLE OF CONTENTS

Page

SITE NAME: 60 COMMERCE DRIVE, TRUMBULL, CT

GENERAL CELL SITE DESCRIPTION

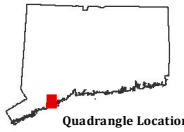
The proposed Trumbull SE 4 cell site would be located in the northerly portion of an approximately 14 acre parcel owned by Pilot Corporation of America. The facility would consist of an 80-foot telecommunications tower and a 12' x 30' equipment shelter located near the base of the tower. The shelter would house Cellco's radio equipment and a diesel-fueled back-up generator. The tower and equipment shelter will be maintained within a 24' x 77' fenced compound, adjacent to the north side of the existing office building.

Cellco's antennas would be mounted with their centerline at the 80-foot level. The top of Cellco's antennas would extend above the top of the tower to an overall height of approximately 83 feet. Vehicular access to the site would extend from Commerce Drive over an existing paved driveway a distance of approximately 1,365 feet then over a short (100') gravel driveway extension to the site compound. Utility service would extend from existing service along Commerce Drive to the cell site.

Site Location Map

Source: U.S.G.S. 7.5 Minute Topographic Quadrangle Maps (Long Hill, Bridgeport)

Proposed Verizon Telecommunications Tower
60 Commerce Drive
Trumbull, Connecticut



verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION

Friday, February 14, 2014

Path: C:\All_Points_Tech\Projects\Client\Verizon\TrumbullSE4\GIS\Maps\CT_Figure1.mxd

Site Aerial Map

Legend

- Proposed Tower Location
- Proposed 24' x 77' +/- Gravel/Fenced Compound Area

Proposed Verizon Telecommunications Tower
60 Commerce Drive
Trumbull, Connecticut

verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION

Tuesday, January 2014

Path: C:\All_Points_Tech\Projects\Client\Verizon\TrumbullSE4\GIS\Maps\CT_Figure2.mxd

SITE EVALUATION REPORT

SITE NAME: 60 COMMERCE DRIVE, TRUMBULL, CT

I. TOWER LOCATION

A. COORDINATES: 41°-14'-44.160" N 73°-08'-44.014" W

B. GROUND ELEVATION: Approximately 170± feet AMSL

C. USGS MAP: Long Hill, Bridgeport, CT

D. SITE ADDRESS: 60 Commerce Drive, Trumbull, CT

E. ZONING WITHIN 1/4 MILE OF SITE: Land within 1/4 mile of the cell site is in the Industrial (I-L3) zone district and Residence A zone to the east.

II. DESCRIPTION

A. SITE SIZE: 24' x 82' Leased Area
24' x 77' Compound Area

B. LESSOR'S PARCEL: Approximately 14 acres

C. TOWER TYPE/HEIGHT: 80' Monopole Tower
83' Top of Antennas

D. SITE TOPOGRAPHY AND SURFACE: Topography in the area of the site is generally flat. No tree clearing and minimal grading for construction of the site compound and northerly portion of the access drive will be required. No trees, 6" or greater diameter at breast height ("dbh") will need to be removed to construct the facility compound.

E. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The tower would be located in the northerly portion of an approximately 14 acre parcel used for light industrial/office purposes. The closest wetland area is located approximately 230 feet to the west of the facility compound.

F. LAND USE WITHIN 1/4 MILE OF SITE: The 14 acre subject parcel is surrounded by light industrial uses in the Trumbull Corporate Park to the north, west and south and residential uses to the east. (*See* Aerial Photograph at p. 3).

III. FACILITIES

A. POWER COMPANY: United Illuminating

B. POWER PROXIMITY TO SITE: Approximately 500 feet at Commerce Drive to the southwest of the facility compound.

C. TELEPHONE COMPANY: AT&T

D. PHONE SERVICE PROXIMITY: Same as power

E. VEHICLE ACCESS TO SITE: Vehicle access to the site would extend from Commerce Drive over an existing paved driveway a distance of 1365 feet then over a short driveway extension an additional distance of 100 feet.

F. CLEARING AND FILL REQUIRED: No tree clearing and minimal grading would be required for construction of the tower, site compound and gravel access drive. Detailed construction plans would be developed if this location is approved by the Siting Council.

IV. LEGAL

A. PURCHASE [ ] LEASE [X]

B. OWNER: Pilot Corporation of America

C. ADDRESS: 60 Commerce Drive, Trumbull, CT

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

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FACILITIES AND EQUIPMENT SPECIFICATION
(NEW TOWER & EQUIPMENT BUILDING)

SITE NAME: 60 COMMERCE DRIVE, TRUMBULL, CT

I. TOWER SPECIFICATIONS:

A. MANUFACTURER: To be determined

B. TYPE: Self-supporting monopole

C. TOWER HEIGHT: 80' DIMENSIONS: Approx. 46" base

Approx. 24" top

II. TOWER LOADING:

A. CELLCO EQUIPMENT:

1. Antennas (12)
Six (6) Model BXA-70063/6CF – 700 and 850 MHz
Six (6) Model BXA-171063/12CF – 1900 and 2100 MHz

2. Remote Radio Heads (RRH) (6)
Three (3) ALURRH_2x40 – 700 MHz
Three (3) ALURRH_2x40 – 2100 MHz

3. GPS Antenna: Mounted on the top of the equipment shelter or tower

4. Transmission Lines:
a. Two (2) Model: HB158-1-08U8-S8J18 HYBRIFLEX™ cable

III. ENGINEERING ANALYSIS AND CERTIFICATION:

The towers will be designed in accordance with Electronic Industries Association Standard EIA/TIA-222-F "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: 60 COMMERCE DRIVE, TRUMBULL, 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 facility. There are no lakes, ponds, rivers, streams, wetlands or other regulated bodies of water located in the area to be used for the access drive, tower or equipment shelter. The equipment used will not discharge any pollutants to area surface or groundwater systems. The closest wetland area is located approximately 230 feet to the west of the facility compound.

B. AIR QUALITY

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

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

C. LAND

No tree clearing and minimal grading of the tower compound and gravel access drive extension will be required. The remaining land of the Lessor would remain unchanged by the construction and operation of the cell site.

D. NOISE

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

E. POWER DENSITY

The worst-case calculation of power density for Cellco's cellular, PCS, LTE and AWS antennas at the Trumbull SE 4 Facility would be 98.35% of the FCC Safety Standard.

F. VISIBILITY

See Visibility Report included as Attachment 9.

Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

SITE DIRECTIONS

FROM: 99 EAST RIVER DRIVE, EAST HARTFORD, CONNECTICUT **TO:** 60 COMMERCE DRIVE, TRUMBULL, CONNECTICUT

1.	Start out going SOUTHWEST on E RIVER DRIVE toward PITKIN ST.	1.3 mi.
2.	Merge onto US-5 S/CT-15 S toward I-91 S / NEW HAVEN.	1.1 mi.
3.	Merge onto I-91 A via EXIT 86 toward NEW HAVEN / NEW YORK CITY.	17.1 mi.
4.	Merge onto CT-15 S via EXIT 17.	30.2 mi.
5.	Merge onto CT-8 N via EXIT 52 toward WATERBURY	1.4 mi.
6.	Take the HUNTINGTON ROAD exit, EXIT 11	0.1 mi.
7.	Take the ramp toward STRATFORD / TRUMBULL.	0.04 mi.
8.	Turn SLIGHT RIGHT onto HUNTINGTON ROAD.	0.03 mi.
9.	Take the 1st RIGHT onto MERRITT BLVD.	0.8 mi.
10.	Take the 1st LEFT onto COMMERCE DRIVE	0.07 mi.

GENERAL NOTES

1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELLCO PARTNERSHIP.

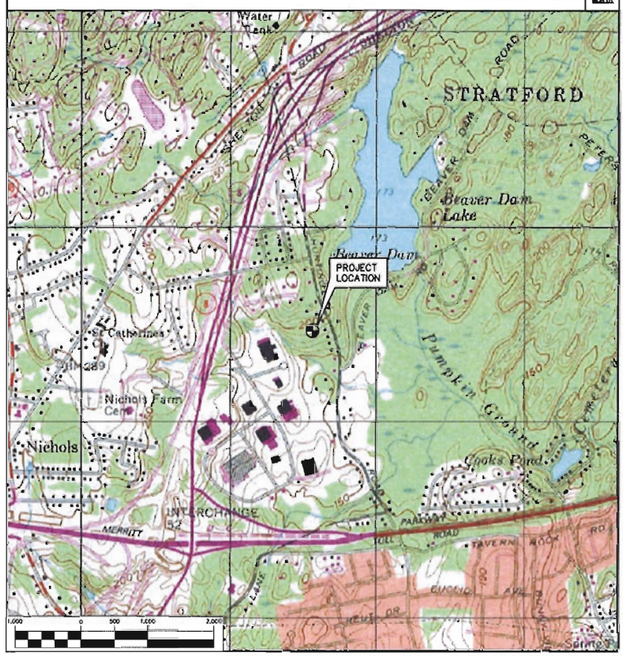
SITE INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

1. THE CONSTRUCTION OF A 24'x77' FENCED WIRELESS COMMUNICATIONS COMPOUND WITHIN A 24'x82' LEASE AREA.
2. A TOTAL OF (12) DIRECTIONAL PANEL ANTENNAS ARE PROPOSED TO BE MOUNTED AT A CENTERLINE ELEVATION OF 80'-0"± AGL ON A 80'-0"± PROPOSED STEEL MONOPOLE TOWER.
3. TOTAL ACCESS DRIVE LENGTH IS 1,465'± OFF OF COMMERCE DRIVE VIA AN EXISTING ACCESS DRIVE.
4. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM EXISTING RESPECTIVE DEMARCS TO THE PROPOSED UTILITY BACKBOARD LOCATED ADJACENT TO THE PROPOSED FENCED COMPOUND. FINAL DEMARC LOCATION AND UTILITY ROUTING TO PROPOSED BACKBOARD WILL BE VERIFIED/DETERMINED BY LOCAL UTILITY COMPANIES. UTILITIES WILL BE ROUTED UNDERGROUND FROM UTILITY BACKBOARD TO THE PROPOSED NOMINAL 12'x30' WIRELESS EQUIPMENT SHELTER LOCATED WITHIN FENCED COMPOUND AREA.
5. FINAL DESIGN FOR TOWER AND ANTENNA MOUNTS SHALL BE INCLUDED IN THE D&M PLANS.
6. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.
7. THERE WILL NOT BE ANY LIGHTING UNLESS REQUIRED BY THE FCC OR THE FAA.
8. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT.

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

SITE NAME:	TRUMBULL SE 4
SITE ADDRESS:	60 COMMERCE DRIVE TRUMBULL, CT 06611
PROPERTY OWNER:	PILOT CORPORATION OF AMERICA 3855 REGENT BLVD JACKSONVILLE, FL 32224
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
CONTACT PERSON:	SANDY CARTER CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
TOWER COORDINATES:	LATITUDE 41°-14'-44.160" LONGITUDE 73°-08'-44.014" PROPOSED GROUND ELEVATION: 170.0'± A.M.S.L. COORDINATES AND GROUND ELEVATION BASED ON FAA 2-C SURVEY CERTIFICATION AS PREPARED FOR VERIZON WIRELESS, BY MARTINEZ COUCH AND ASSOCIATES DATED NOVEMBER 14, 2013

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	3
C-1	ABUTTERS MAP	3
C-1A	PARTIAL SITE/SURVEY PLAN	2
C-2	COMPOUND PLAN, ELEVATION AND ANTENNA MOUNTING CONFIGURATION	2
C-3	SITE CONSTRUCTION, S&E CONTROL NOTES & DETAILS	2
C-4	SITE DETAILS AND NOTES	2
C-5	SITE DETAILS AND SHELTER ELEVATIONS	2
C-6	SHELTER FOUND. PLAN, DETAILS AND NOTES	2

REV.	DATE	DRAWN BY	CH'KD BY	DESCRIPTION
3	02/12/14	HMR	DMD	REVISED CSC
2	02/11/14	HMR	DMD	REVISED CSC
1	02/04/14	HMR	DMD	CSC
0	01/31/14	HMR	DMD	CSC - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE:	01/28/14
SCALE:	AS NOTED
JOB NO.	13209.000

TITLE SHEET

T-1

Sheet No. 1 of 8

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

K08-68
N/F THOMAS & CAROL DONEGAN
2945 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 429 P. 492

HOUSE

K08-69
N/F PAUL & RYAN & KELLIE A OUIMETTE
2955 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 1544 P. 297

K08-70
N/F MARSHALL B BOWEN
2975 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 1580 P. 646

K09-38
N/F RICHARD DION & LUCILLE S SUTTON
2935 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 285 P. 51

K09-35
N/F MARGARET CAPOZZIELLO
2925 HUNTINGTON ROAD
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VOL. 871 P. 298

K09-34
N/F GNANDT MICHELE JENCO
2891 HUNTINGTON ROAD
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VOL. 1478 P. 401

K09-33
N/F LESS S & SCOTT J EVERETTS & JANET M HINE
2861 HUNTINGTON ROAD
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VOL. 904 P. 36

K09-32
N/F MARK A & KRISTEN A RUBUSH
2821 HUNTINGTON ROAD
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VOL. 1409 P. 49

K09-31
N/F JAMES A JR & MARIANNE CHEDISTER
2791 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 859 P. 220

K09-30
N/F ANIS ZAMAN
2771 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 1494 P. 584

K09-29
N/F WILSON J & MARION J BERNHARDT
2741 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 476 P. 120

K09-424
N/F MARION P KULIKOWSKI
2735 HUNTINGTON ROAD
TRUMBULL, CT 06611
VOL. 1620 P. 121

K09-37
N/F BELMAR CORPORATION & CHEESBROUGH POND'S USA
55 MERRITT BOULEVARD
TRUMBULL, CT 06611
M/A: 75 MERRITT BOULEVARD-TRACY ALIBRAND
TRUMBULL, CT 06611
VOL. 255 P. 69

K09-19
N/F CONSUMER PRODUCTS I LLC
45 COMMERCE DRIVE
TRUMBULL, CT 06611
M/A: 30 JELLIFF LANE
SOUTHPORT, CT 06890
VOL. 1282 P. 898

K09-21
N/F CONSUMER PRODUCTS II LLC
50 COMMERCE DRIVE
TRUMBULL, CT 06611
M/A: 30 JELLIFF LANE
SOUTHPORT, CT 06890
VOL. 1263 P. 866

COMMERCE DRIVE

DISTANCE TO NEAREST OFFSITE RESIDENCE
390'±

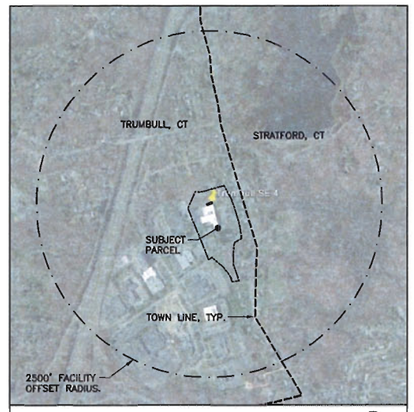
PROPOSED CELLCO PARTNERSHIP TOWER LOCATION.

EXISTING BUILDING.

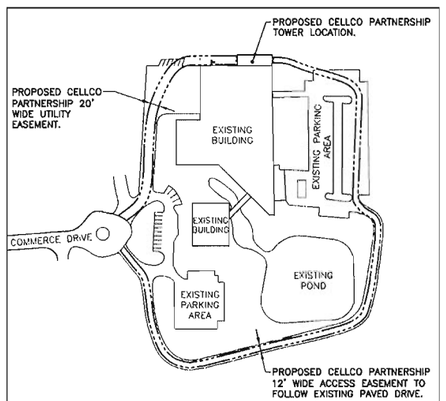
EXISTING PROPERTY LINE, TYP.

SUBJECT PROPERTY:
K09-20
N/F PILOT CORPORATION OF AMERICA
60 COMMERCE DRIVE
TRUMBULL, CT 06611
M/A: 3855 REGENT BLVD.
JACKSONVILLE, FK 32224
VOL. 470 P. 50

13°33'
0°15'44"
TRUE NORTH
MAG. DEC. 2013
NAD 83
CONN. GRID



MUNICIPALITY NOTIFICATION LIMIT MAP
APPROXIMATE NORTH



SITE LOCATION PLAN
APPROXIMATE NORTH

1 / C-1 ABUTTERS MAP
SCALE: 1"=50'

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
3	02/12/14	HMR	DMD	REVISED CSC
2	02/07/14	HMR	DMD	REVISED CSC
1	02/04/14	HMR	DMD	CSC
0	01/31/14	HMR	DMD	CSC - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership
d.b.a. Verizon wireless

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(203) 488-8587 Fax
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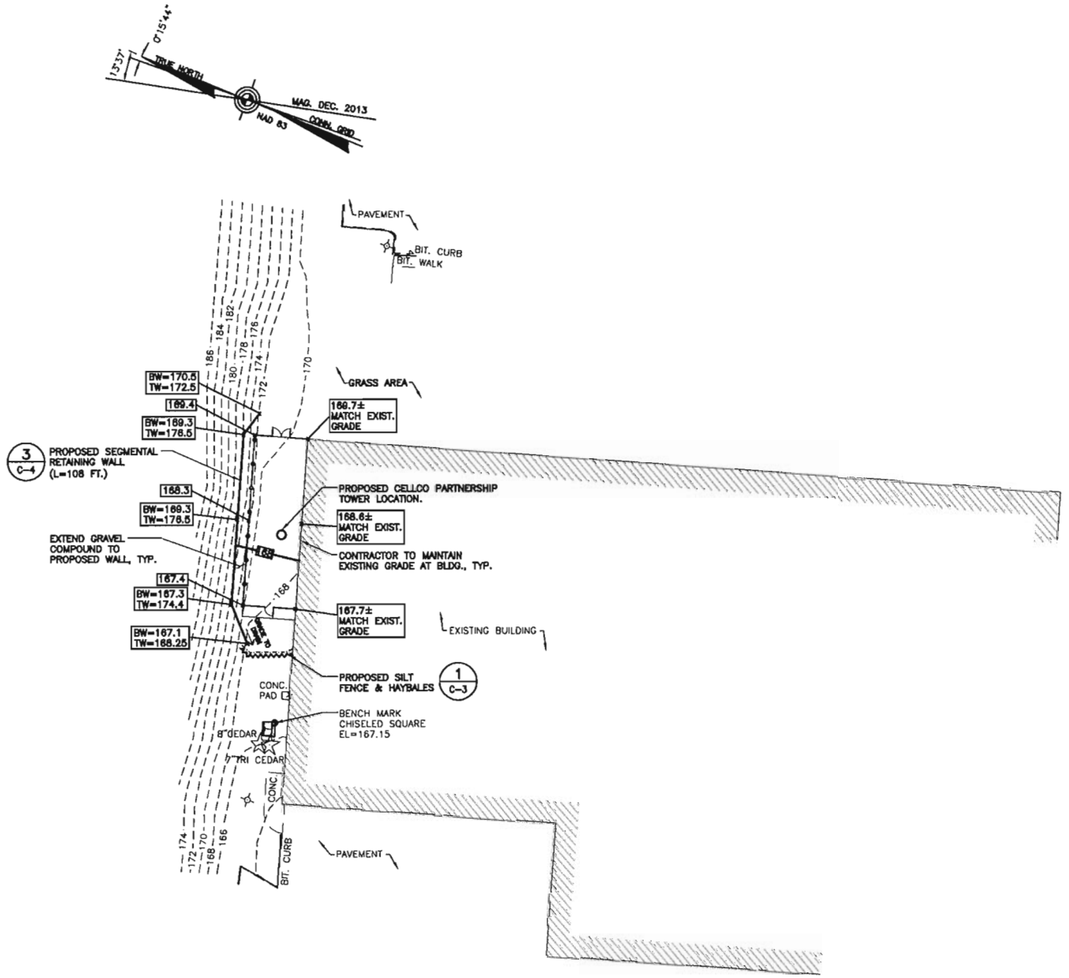
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 01/28/14
SCALE: AS NOTED
JOB NO. 13209.000

ABUTTERS MAP

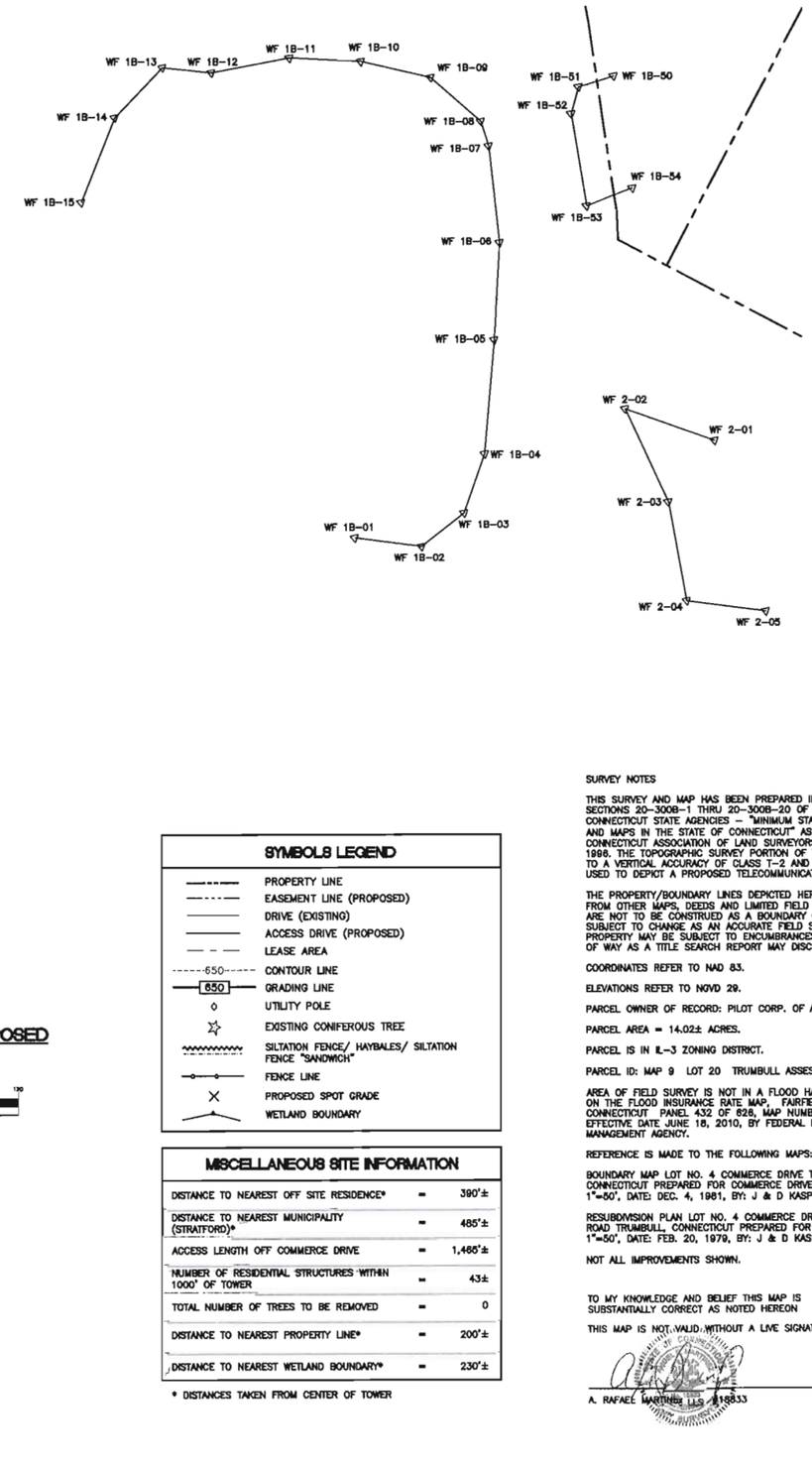
C-1

Sheet No. 2 of 5



1 C-1A **PARTIAL SITE/SURVEY PLAN - PROPOSED**
SCALE: 1"=30'

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.



SYMBOLS LEGEND

- PROPERTY LINE
- EASEMENT LINE (PROPOSED)
- DRIVE (EXISTING)
- ACCESS DRIVE (PROPOSED)
- LEASE AREA
- 650 CONTOUR LINE
- 650 GRADING LINE
- UTILITY POLE
- EXISTING CONIFEROUS TREE
- SILTATION FENCE/ HAYBALES/ SILTATION FENCE "SANDWICH"
- FENCE LINE
- PROPOSED SPOT GRADE
- WETLAND BOUNDARY

MISCELLANEOUS SITE INFORMATION

DISTANCE TO NEAREST OFF SITE RESIDENCE*	=	390'±
DISTANCE TO NEAREST MUNICIPALITY (STRATFORD)*	=	485'±
ACCESS LENGTH OFF COMMERCE DRIVE	=	1,466'±
NUMBER OF RESIDENTIAL STRUCTURES WITHIN 1000' OF TOWER	=	43±
TOTAL NUMBER OF TREES TO BE REMOVED	=	0
DISTANCE TO NEAREST PROPERTY LINE*	=	200'±
DISTANCE TO NEAREST WETLAND BOUNDARY*	=	230'±

* DISTANCES TAKEN FROM CENTER OF TOWER

SURVEY NOTES

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996. THE TOPOGRAPHIC SURVEY PORTION OF THIS PLAN CONFORMS TO A VERTICAL ACCURACY OF CLASS T-2 AND IS INTENDED TO BE USED TO DEPICT A PROPOSED TELECOMMUNICATION SITE.

THE PROPERTY/BOUNDARY LINES DEPICTED HEREON ARE COMPILED FROM OTHER MAPS, DEEDS AND LIMITED FIELD SURVEY. THESE LINES ARE NOT TO BE CONSTRUED AS A BOUNDARY OPINION AND ARE SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. PROPERTY MAY BE SUBJECT TO ENCUMBRANCES, EASEMENTS, RIGHTS OF WAY AS A TITLE SEARCH REPORT MAY DISCLOSE.

COORDINATES REFER TO NAD 83.

ELEVATIONS REFER TO NGVD 29.

PARCEL OWNER OF RECORD: PILOT CORP. OF AMERICA

PARCEL AREA = 14.02± ACRES.

PARCEL IS IN IL-3 ZONING DISTRICT.

PARCEL ID: MAP 9 LOT 20 TRUMBULL ASSESSOR'S OFFICE.

AREA OF FIELD SURVEY IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT PANEL 432 OF 626, MAP NUMBER 09001C0432F, EFFECTIVE DATE JUNE 18, 2010, BY FEDERAL EMERGENCY MANAGEMENT AGENCY.

REFERENCE IS MADE TO THE FOLLOWING MAPS:

BOUNDARY MAP LOT NO. 4 COMMERCE DRIVE TRUMBULL, CONNECTICUT PREPARED FOR COMMERCE DRIVE ASSOCIATES, SCALE: 1"=50', DATE: DEC. 4, 1981, BY: J & D KASPER & ASSOCIATES.

RESUBDIVISION PLAN LOT NO. 4 COMMERCE DRIVE & HUNTINGTON ROAD TRUMBULL, CONNECTICUT PREPARED FOR DAVID MACK, SCALE: 1"=50', DATE: FEB. 20, 1979, BY: J & D KASPER & ASSOCIATES.

NOT ALL IMPROVEMENTS SHOWN.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL

A. RAFAEL MARTINEZ LLS #18833 — 2/11/14 DATE

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	02/11/14	MJR	DMD	REVISED CSC
1	02/04/14	MJR	DMD	CSC
0	01/31/14	MJR	DMD	CSC - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d/b/a Verizon Wireless

CENTEK engineering — Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d.b.a. verizonwireless

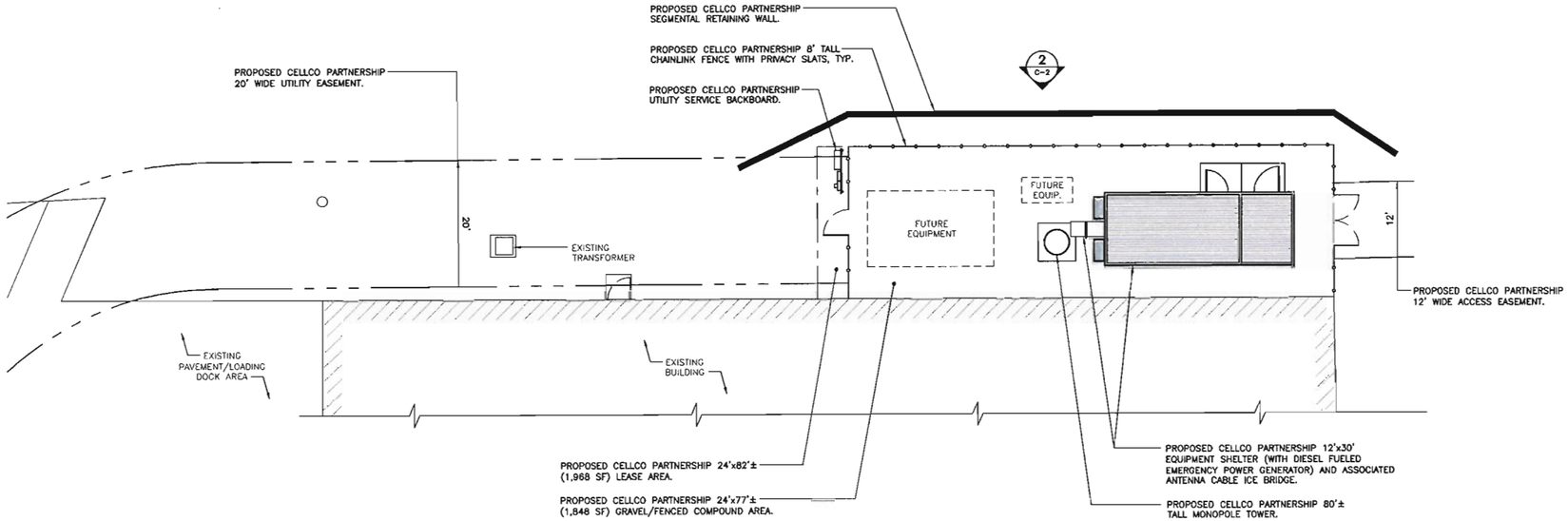
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 01/28/14
SCALE: AS NOTED
JOB NO. 13209.000

PARTIAL SITE/SURVEY PLAN

C-1A

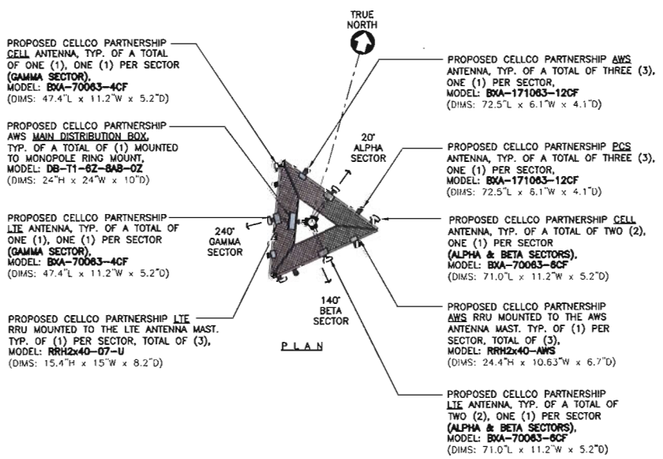
Sheet No. 3 of 8



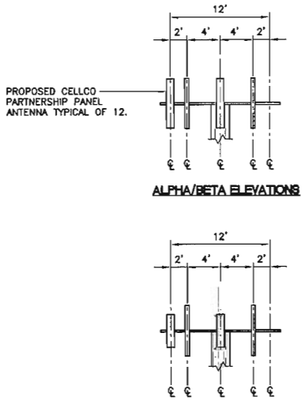
1 C-2 **COMPOUND PLAN**
SCALE: 1" = 10'

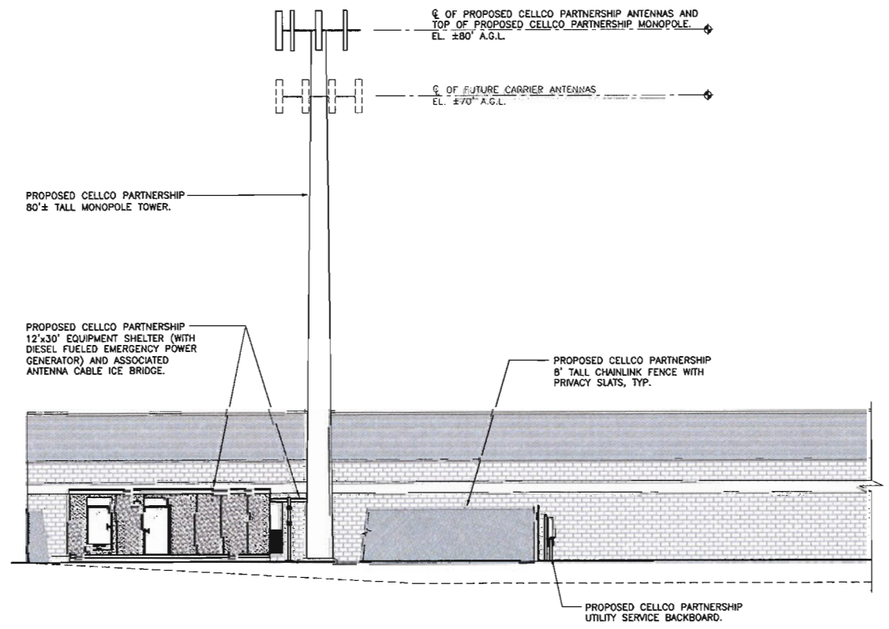
APPROXIMATE NORTH

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.



3 C-2 **ANTENNA MOUNTING CONFIGURATION**
NOT TO SCALE





2 C-2 **NORTH ELEVATION**
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

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COMPOUND PLAN, ELEVATION AND ANTENNA MOUNTING CONFIG.

C-2
Sheet No. 4 of 8

GENERAL CONSTRUCTION / PRE-CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, A MANDITORY ON-SITE PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED WITH THE VERIZON WIRELESS CONSTRUCTION MANAGER, CONTRACTOR'S CONSTRUCTION MANAGER, THE PROJECT EROSION AND SEDIMENTATION CONTROL/ENVIRONMENTAL MONITOR AND THE ENGINEER OF RECORD.
2. THE SOUTHERN PROPERTY LINE ADJACENT TO THE PROPOSED ACCESS DRIVE IS STAKED IN FIELD. THE CONTRACTOR SHALL MAINTAIN THE PROPERTY LINE STAKE LOCATIONS DURING THE ENTIRE PERIOD OF CONSTRUCTION. ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED ON THE SUBJECT PROPERTY.

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.
2. INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
3. REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
4. 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.
9. BEGIN EXCAVATION FOR AND CONSTRUCTION OF TOWERS AND PLATFORMS.
10. 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.

SOIL EROSION AND SEDIMENT CONTROL SEQUENCE

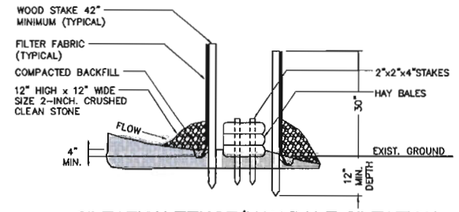
1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS CONSTRUCTION ENTRANCE / ANTI TRACKING PAD, SILTATION FENCE, AND SILTATION FENCE / HAY BALE SHALL BE IN PLACE PRIOR TO ANY GRADING ACTIVITY, INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. MEASURES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND/OR AREA IS STABILIZED.
2. THE ENTRANCE TO THE PROJECT SITE IS TO BE PROTECTED BY STONE ANTI TRACKING PAD OF ASTM C-33, SIZE NO. 2 OR 3, OR D.O.T. 2" CRUSHED GRAVEL. THE STONE ANTI TRACKING PAD IS TO BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
3. THE ENTRANCE TO THE PROJECT SITE IS TO BE PROTECTED BY STONE ANTI TRACKING PAD OF ASTM C-33, SIZE NO. 2 OR 3, OR D.O.T. 2" CRUSHED GRAVEL. THE STONE ANTI TRACKING PAD IS TO BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
4. LAND DISTURBANCE WILL BE KEPT TO A MINIMUM AND RESTABILIZATIONS WILL BE SCHEDULED AS SOON AS PRACTICAL.
5. ALL SOIL EROSION AND SEDIMENT CONTROL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL INCLUDING THE LATEST DATE FROM THE COUNCIL ON SOIL AND WATER CONSERVATION.
6. ANY ADDITIONAL EROSION/SEDIMENTATION CONTROL DEEMED NECESSARY BY TOWN STAFF DURING CONSTRUCTION, SHALL BE INSTALLED BY THE DEVELOPER. IN ADDITION, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE TOWN STAFF.
7. IN ALL AREAS, REMOVAL OF TREES, BUSHES AND OTHER VEGETATION AS WELL AS DISTURBANCE OF THE SOIL IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE. DURING CONSTRUCTION, EXPOSE AS SMALL AN AREA OF SOIL AS POSSIBLE FOR AS SHORT A TIME AS POSSIBLE.
8. SILTATION FENCE SHALL BE PLACED AS INDICATED BEFORE A CUT SLOPE HAS BEEN CREATED. SEDIMENT DEPOSITS SHOULD BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDES OF SILTATION FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR TO BE USED IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. SILTATION FENCE IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE FENCE IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.
9. SWALE DISCHARGE AREA WILL BE PROTECTED WITH RIP RAP SPLASH PAD/ ENERGY DISSIPATER.
10. ALL FILL AREAS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION.
11. THE SOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SODDING OR SEEDING.
12. AFTER CONSTRUCTION IS COMPLETE AND GROUND IS STABLE, REMOVE SILTS IN THE RIP RAP ENERGY DISSIPATERS. REMOVE OTHER EROSION AND SEDIMENT DEVICES.

CONSTRUCTION SPECIFICATIONS - SILT FENCE

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. 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

1. 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.
2. 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.



1 / C-3 SILTATION FENCE/HAY BALE SILTATION FENCE "SANDWICH" EROSION CONTROL

NOT TO SCALE

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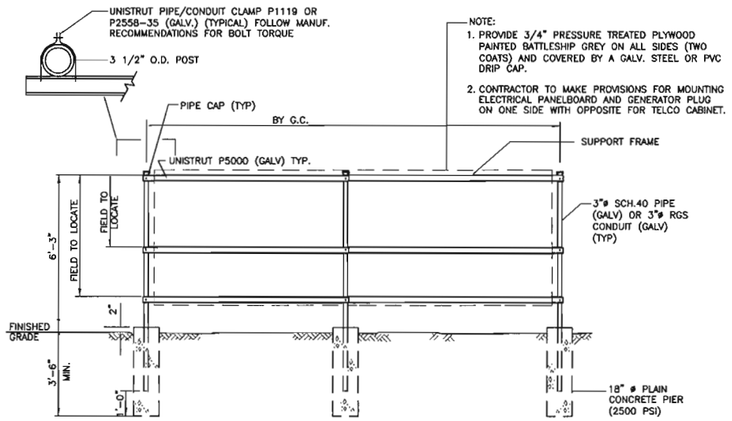
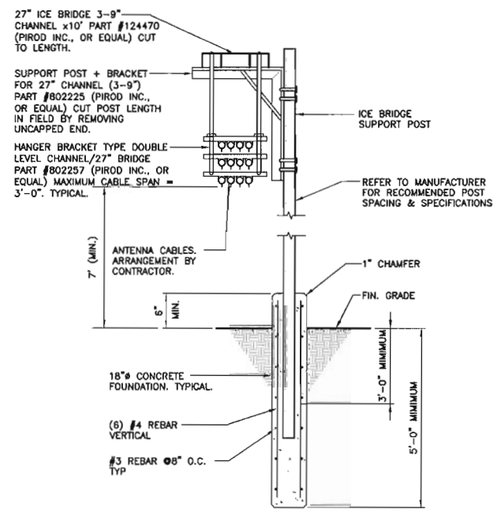
SITE CONSTRUCTION S&E CONTROL NOTES & DETAILS

C-3

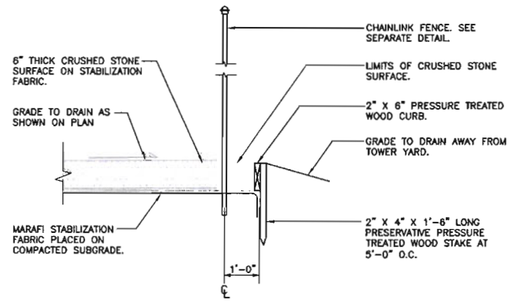
Sheet No. 5 of 8



5 C-4 **UTILITY SUPPORT FRAME (TYP)**
NOT TO SCALE



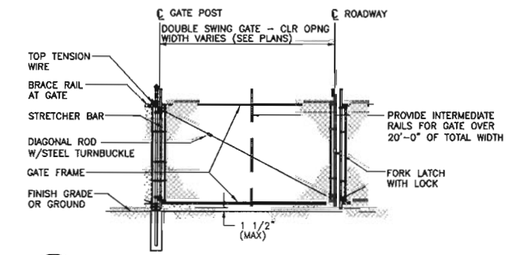
4 C-4 **ICE BRIDGE DETAIL**
NOT TO SCALE



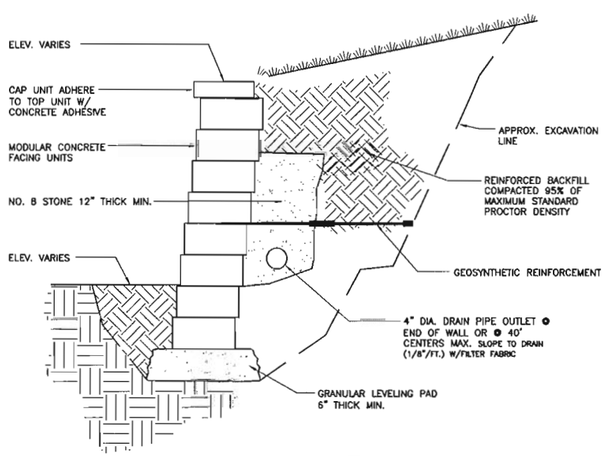
2 C-4 **COMPOUND SURFACING DETAIL**
NOT TO SCALE

WOVEN WIRE FENCE NOTES

1. GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 12 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. GATE LATCH: DROP DOWN LOCKABLE FORK LATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
9. COMPOUND FENCE HEIGHT = 8' VERTICAL.
10. VINYL PRIVACY SLATS TO BE INSTALLED ON ALL FENCE AND GATE SECTIONS. COLOR: GREEN



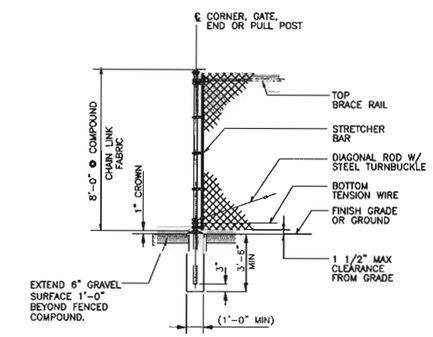
1A C-4 **WOVEN WIRE SWING GATE-DOUBLE**
NOT TO SCALE



MODULAR RETAINING WALL NOTES:

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE SOIL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. BASE SHALL CONSIST OF COMPACTED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 4" THICK.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 2 COURSES OF BLOCK".
8. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
9. NO. 8 CRUSHED STONE SHALL BE INSTALLED BEHIND THE WALL UP TO 18" FROM THE TOP OF THE WALL. CRUSHED STONE SHALL NOT EXTEND BELOW FINISHED GRADE IN FRONT OF WALL.
10. WHERE DRAIN PIPE IS USED, PROVIDE OUTLETS ✪ MAX. 40 FT C-C.
11. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME BACKFILL BEHIND UNITS IS COMPACTED.
12. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE ENGINEER.
13. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY. (ASTM D-698)
14. SEE SHOP DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION REQUIRED.
15. GEOSYNTHETIC SHALL BE THE TYPE AND LENGTH AS SHOWN ON SHOP DRAWINGS. PULL GEOSYNTHETIC TIGHT PRIOR TO BACKFILLING.
16. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING SHOWING THE COMPLETE WALL SYSTEM AND ALL DETAILS BASED ON THE ACTUAL SOILS IN THE FIELD THESE SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT
18. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
19. IF WALL LEVELING PAD REQUIRES FILL IT SHALL BE COMPACTED GRAVEL FROM BOTTOM OF EXCAVATION TO SUITABLE SOIL TO BOTTOM OF WALL.

3 C-4 **SEGMENTAL RETAINING WALL DETAIL**
NOT TO SCALE



TYPICAL SECTION

1 C-4 **WOVEN WIRE FENCE DETAIL**
NOT TO SCALE

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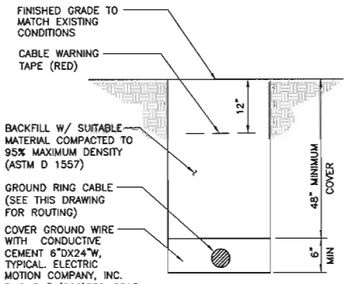
SITE DETAILS AND NOTES

C-4

Sheet No. 6 of 8

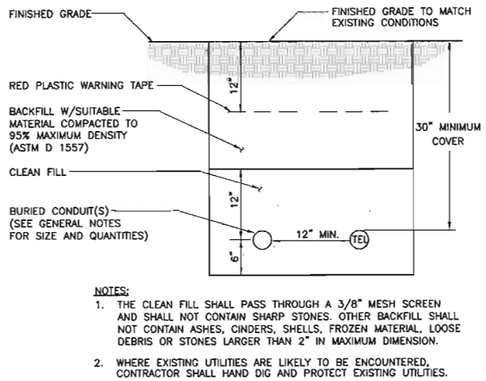


NOTES:

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.

6 / C-5 TYPICAL BURIAL GROUND CABLE DETAIL

NOT TO SCALE

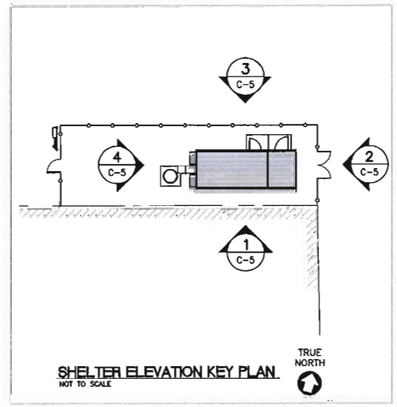


NOTES:

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

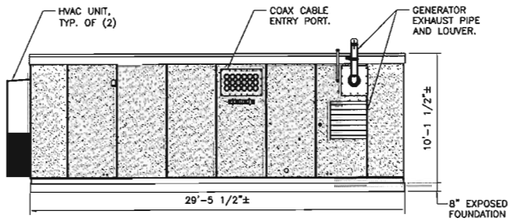
5 / C-5 TYPICAL ELECTRICAL/TEL TRENCH DETAIL

NOT TO SCALE



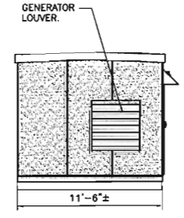
SHELTER ELEVATION KEY PLAN

NOT TO SCALE



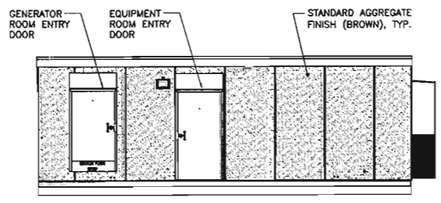
1 / C-5 SOUTHERN SHELTER ELEVATION

SCALE: 3/16" = 1'-0"



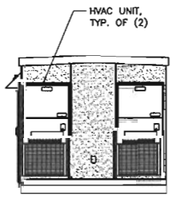
2 / C-5 EASTERN SHELTER ELEVATION

SCALE: 3/16" = 1'-0"



3 / C-5 NORTHERN SHELTER ELEVATION

SCALE: 3/16" = 1'-0"



4 / C-5 WESTERN SHELTER ELEVATION

SCALE: 3/16" = 1'-0"

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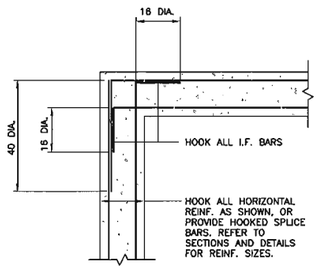
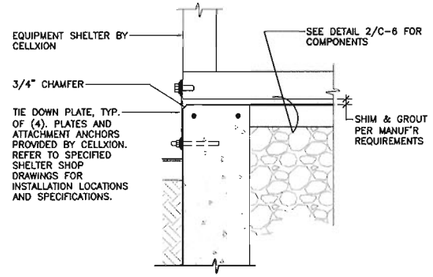
SITE DETAILS AND SHELTER ELEVATIONS

C-5

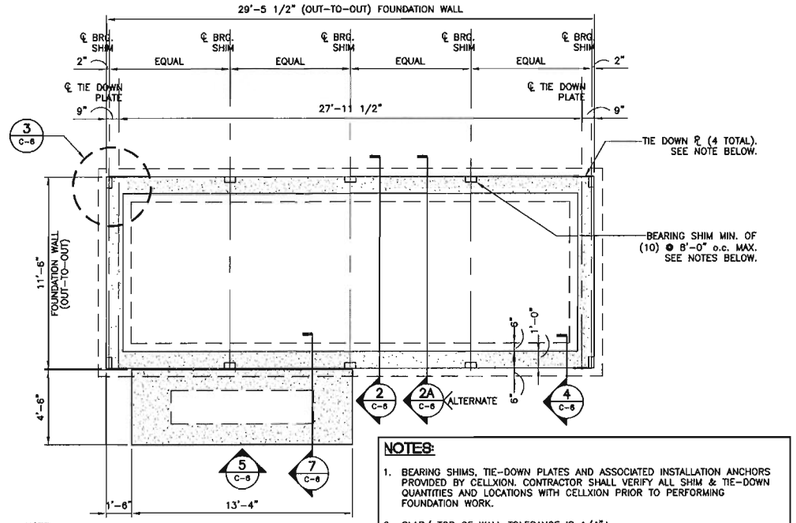
Sheet No. 7 of 8



3/C-6 **PLAN DETAIL**
NOT TO SCALE



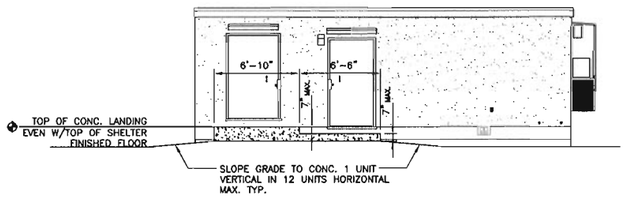
4/C-6 **BUILDING TIE DOWN**
SCALE: 1"=1'-0"



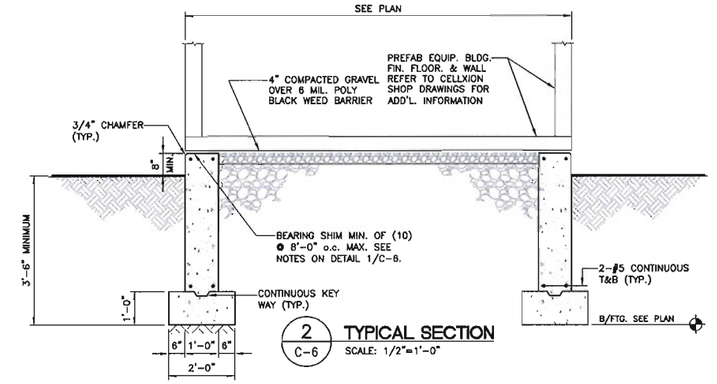
NOTE:
1. B/FTG. ELEVATION AT 3'-6" MINIMUM BELOW FINISHED GRADE, TYP.

NOTES:
1. BEARING SHIMS, TIE-DOWN PLATES AND ASSOCIATED INSTALLATION ANCHORS PROVIDED BY CELLXION. CONTRACTOR SHALL VERIFY ALL SHIM & TIE-DOWN QUANTITIES AND LOCATIONS WITH CELLXION PRIOR TO PERFORMING FOUNDATION WORK.
2. SLAB/ TOP OF WALL TOLERANCE IS 1/4"±
3. TOP 8" OF FOUNDATION SIDES MUST BE FORMED FLAT TO ACCEPT TIE-DOWN PLATES.

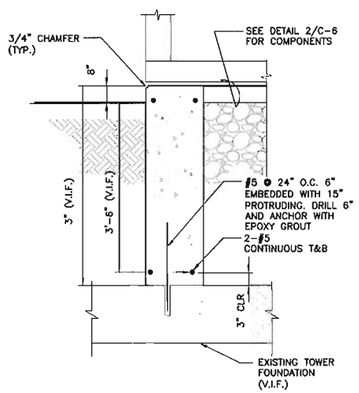
1/C-6 **FOUNDATION PLAN**
SCALE: 1/4"=1'-0"
APPROX. NORTH



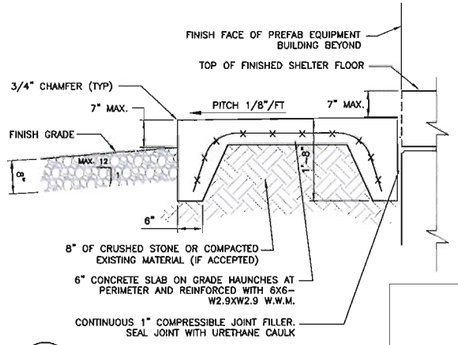
5/C-6 **ENTRY STOOP DETAIL - ELEVATION**
SCALE: 3/16"=1'-0"



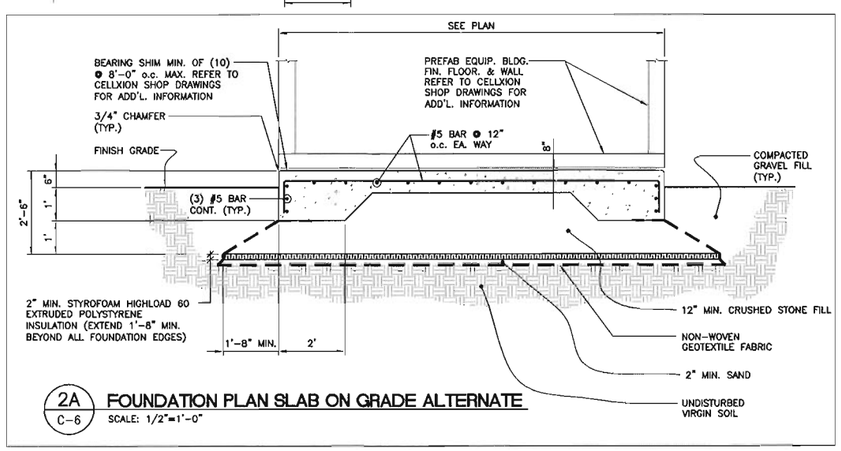
2/C-6 **TYPICAL SECTION**
SCALE: 1/2"=1'-0"



6/C-6 **FOUNDATION OVER TOWER FOUNDATION**
SCALE: 3/4"=1'-0"



7/C-6 **ENTRY STOOP DETAIL - SECTION**
SCALE: 3/16"=1'-0"



2A/C-6 **FOUNDATION PLAN SLAB ON GRADE ALTERNATE**
SCALE: 1/2"=1'-0"

EQUIPMENT SHELTER BY CELLXION. VERIFY ALL SHELTER DIMENSIONS, EQUIPMENT DIMENSIONS, EQUIPMENT LOCATIONS AND UTILITY OPENINGS WITH BUILDING SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.

FOUNDATION NOTES:

1. 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.
3. 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:

1. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. ACTIVE EXISTING UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, PRIOR TO PROCEEDING, SHOULD ANY UNCOVERED EXISTING UTILITY PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. ALL RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED OFF SITE AND BE LEGALLY DISPOSED, AT NO ADDITIONAL COST.
4. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
5. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
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.
9. 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:

1. COMPACTED GRAVEL FILL SHALL BE FURNISHED AND PLACED AS A FOUNDATION FOR STRUCTURES, WHERE SHOWN ON THE CONTRACT DRAWINGS OR DIRECTED BY THE ENGINEER.
2. GRAVEL SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE M.02.02 OF THE CONNECTICUT D.O.T. STANDARD SPECIFICATIONS. ADMIXTURES AND SURFACE PROTECTIVE MATERIALS USED TO PREVENT THE GRAVEL FROM FREEZING MUST MEET THE APPROVAL OF THE ENGINEER. THE LARGEST STONE SIZE SHALL BE 3-1/2 INCHES.
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.
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 LEVELED 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 OVER THE ENTIRE AREA OF EACH LAYER IS NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY ACHIEVED BY AASHTO T-99 METHOD C. THE MOISTURE CONTENT OF THE GRAVEL SHALL NOT VARY BY MORE THAN 3 %+ FROM ITS OPTIMUM MOISTURE CONTENT. NO SUBSEQUENT 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 GRAVEL 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.
2. 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.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS OTHERWISE INDICATED.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS OTHERWISE NOTED ON THE DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL.....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.
5. 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.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	02/11/14	HMR	DMD	REVISED CSC
1	02/04/14	HMR	DMD	CSC - ISSUED FOR CLIENT REVIEW
0	01/31/14	HMR	DMD	CSC - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d/b/a Verizon Wireless

CENTEK engineering
Centered on Solutions℠
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 01/28/14
SCALE: AS NOTED
JOB NO. 13209.000

SHELTER FOUND. PLAN, DETAILS AND NOTES

C-6

Sheet No. 8 of 8

CERTIFICATION OF SERVICE

I hereby certify that on this 26th day of February, 2014, copies of the Application and attachments were sent first class mail, postage prepaid, to the following:

STATE OFFICIALS:

The Honorable George Jepsen
Attorney General
Office of the Attorney General
55 Elm Street
Hartford, CT 06106

Dora B. Schriro, Commissioner
Department of Emergency Services and Public Protection
Emergency Management and Homeland Security Division
25 Sigourney Street, 6th Floor
Hartford, CT 06106-5042

Rob Klee, Commissioner
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

Jewel Mullen, M.D., M.P.H., M.P.A., Commissioner
Department of Public Health
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

Arthur House, Chairman
Public Utilities Regulatory Authority
Ten Franklin Square
New Britain, CT 06051

Benjamin Barnes, Secretary
Office of Policy and Management
450 Capitol Avenue
Hartford, CT 06106

Catherine Smith, Commissioner
Department of Economic and Community Development
505 Hudson Street
Hartford, CT 06106

James P. Redeker, Commissioner
Department of Transportation
P.O. Box 317546
2800 Berlin Turnpike
Newington, CT 06131-7546

Daniel T. Forrest
Deputy State Historic Preservation Officer
Connecticut Commission on Culture & Tourism
Historic Preservation and Museum Division
One Constitution Plaza, 2nd Floor
Hartford, CT 06103

Steven K. Reviczky, Commissioner
Department of Agriculture
165 Capital Avenue
Hartford, CT 06106

TRUMBULL TOWN OFFICIALS:

Timothy M. Herbst, First Selectman
Town of Trumbull
Town Hall
5866 Main Street
Trumbull, CT 06611

The Honorable Lawrence Miller
Representative – 122nd District
Legislative Office Building, Room 4200
Hartford, CT 06106

The Honorable Dave Rutigliano
Representative – 123rd District
Legislative Office Building
Room 4200
Hartford, CT 06106

Tony Hwang
Representative – 134th District
Legislative Office Building
Room 4200
Hartford, CT 06106

The Honorable Anthony Musto
Senator – 22nd District
15 Maymont Lane
Trumbull, CT 06611-2111

Suzanne Burr Monaco, Town Clerk
Town of Trumbull
Town Hall
5866 Main Street
Trumbull, CT 06611

Anthony G. Chory, Chairman
Planning and Zoning Commission
Town Hall
5866 Main Street
Trumbull, CT 06611

Richard Girouard, Chairman
Inland Wetlands Commission
Town Hall
5866 Main Street
Trumbull, CT 06611

Mary Ellen Lemay, Chairman
Conservation Commission
Town Hall
5866 Main Street
Trumbull, CT 06611

STRATFORD TOWN OFFICIALS:

John A. Harkins
Mayor
Town Hall
2725 Main Street
Stratford, CT 06615

The Honorable Kevin Kelly
Senator – 21st District
Legislative Office Building
Room 3400
Hartford, CT 06106

The Honorable Andres Ayala, Jr.
Senator – 23rd District
Legislative Office Building
Room 3600
Hartford, CT 06106

The Honorable Laura Hoydick
Representative – 120th District
Legislative Office Building
Room 4200
Hartford, CT 06106

The Honorable Terry Backer
Representative – 121st District
Legislative Office Building
Room 2102
Hartford, CT 06106

The Honorable Lawrence Miller
Representative – 122nd District
Legislative Office Building
Room 4200
Hartford, CT 06106

Susan M. Pawluk
Town Clerk
Town Hall
2725 Main Street
Stratford, CT 06615

John G. Zbell, Chairman
Planning Commission
Town Hall
2725 Main Street
Stratford, CT 06615

Christopher Silhavey, Chairman
Zoning Commission
Town Hall
2725 Main Street
Stratford, CT 06615

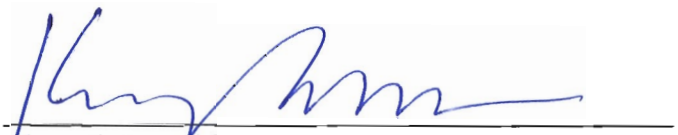
Ronald Hojdich, Chairman
Inland Wetlands Commission
Town Hall
2725 Main Street
Stratford, CT 06615

Gregg Dancho, Chairman
Conservation Commission
Town Hall
2725 Main Street
Stratford, CT 06615

Greater Bridgeport Regional Council
525 Water Street
Bridgeport, CT 06604

FEDERAL AGENCY:

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



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

LEGAL NOTICE

Notice is hereby given, pursuant to Section 16-50*l*(b) of the Connecticut General Statutes and Regulations pertaining thereto, of an Application to be submitted to the Connecticut Siting Council ("Council") on or about February 26, 2014 by Cellco Partnership d/b/a Verizon Wireless ("Cellco" or the "Applicant"). The Application proposes the installation of a wireless telecommunications tower and related facility on an approximately 14 acre parcel at 60 Commerce Drive in Trumbull, Connecticut. Cellco proposes to construct a 80-foot monopole tower in the northerly portion of this parcel adjacent to the existing office building. Access to the facility compound will extend from Commerce Drive. Cellco will also install a new 12' x 30' shelter located 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 tower described above. Interested parties and residents of the Towns of Trumbull and Stratford are invited to review the Application during normal business hours after February 26, 2014, at any of the following offices:

Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

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

Town Clerk
Town of Trumbull
5866 Main Street
Trumbull, CT 06611

Town Clerk
Town of Stratford
2725 Main Street
Stratford, CT 06615

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

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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

1959853

KENNETH C. BALDWIN

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

Also admitted in Massachusetts

February 20, 2014

Via Certified Mail Return Receipt Requested

«Name_and_Address»

Re: **Cellco Partnership d/b/a Verizon Wireless**
Proposed Telecommunications Facility
60 Commerce Drive, Trumbull, 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 February 26, 2014, for approval of the construction of a telecommunications tower and related facility at 60 Commerce Drive in the Town of Trumbull, Connecticut.

The facility would consist of a new 80-foot tower in the northerly portion of an approximately 14-acre parcel at 60 Commerce Drive. Cellco's radio equipment and an emergency back-up generator would be installed inside a 12' x 30' shelter located near the base of the tower. Access to the facility would extend from Commerce Drive along existing paved driveways and parking areas, a distance of approximately 1,365 feet then over a short 100-foot gravel driveway extension to the cell site.

Site plan drawings for the proposed facility are attached for your review. The location and other features of the proposed facilities 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 a facility is proposed to be located must receive notice of the submission of this application. This notice is directed to you either because you may be an abutting land owner or as a courtesy notice.

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

Very truly yours,

Kenneth C. Baldwin

KCB/kmd
Attachment

Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

SITE DIRECTIONS

FROM: 99 EAST RIVER DRIVE, EAST HARTFORD, CONNECTICUT TO: 60 COMMERCE DRIVE, TRUMBULL, CONNECTICUT

1.	Start out going SOUTHWEST on E RIVER DRIVE toward PITKIN ST.	1.3 mi.
2.	Merge onto US-5 S/CT-15 S toward I-91 S / NEW HAVEN.	1.1 mi.
3.	Merge onto I-91 A via EXIT 8B toward NEW HAVEN / NEW YORK CITY.	17.1 mi.
4.	Merge onto CT-15 S via EXIT 17.	30.2 mi.
5.	Merge onto CT-8 N via EXIT 52 toward WATERBURY	1.4 mi.
6.	Take the HUNTINGTON ROAD exit, EXIT 11	0.1 mi.
7.	Take the ramp toward STRATFORD / TRUMBULL.	0.04 mi.
8.	Turn SLIGHT RIGHT onto HUNTINGTON ROAD.	0.03 mi.
9.	Take the 1st RIGHT onto MERRITT BLVD.	0.8 mi.
10.	Take the 1st LEFT onto COMMERCE DRIVE	0.07 mi.

GENERAL NOTES

1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELLCO PARTNERSHIP.

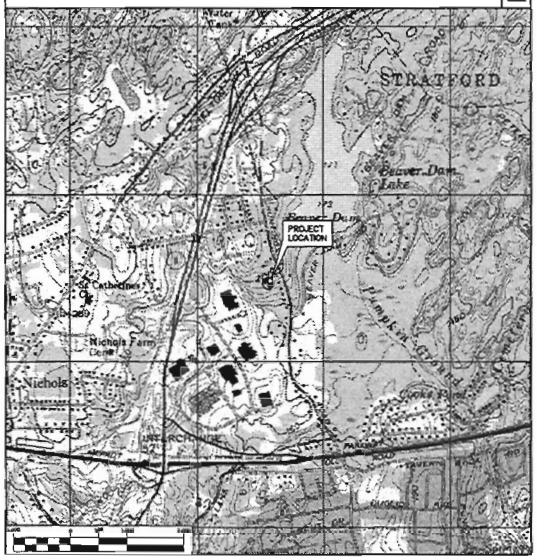
SITE INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

1. THE CONSTRUCTION OF A 24'x77' FENCED WIRELESS COMMUNICATIONS COMPOUND WITHIN A 24'x82' LEASE AREA.
2. A TOTAL OF (12) DIRECTIONAL PANEL ANTENNAS ARE PROPOSED TO BE MOUNTED AT A CENTERLINE ELEVATION OF 80'-0"± AGL ON A 80'-0"± PROPOSED STEEL MONOPOLE TOWER.
3. TOTAL ACCESS DRIVE LENGTH IS 1,485'± OFF OF COMMERCE DRIVE VIA AN EXISTING ACCESS DRIVE.
4. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM EXISTING RESPECTIVE DEMARCS TO THE PROPOSED UTILITY BACKBOARD LOCATED ADJACENT TO THE PROPOSED FENCED COMPOUND. FINAL DEMARC LOCATION AND UTILITY ROUTING TO PROPOSED BACKBOARD WILL BE VERIFIED/DETERMINED BY LOCAL UTILITY COMPANIES. UTILITIES WILL BE ROUTED UNDERGROUND FROM UTILITY BACKBOARD TO THE PROPOSED NOMINAL 12'x30' WIRELESS EQUIPMENT SHELTER LOCATED WITHIN FENCED COMPOUND AREA.
5. FINAL DESIGN FOR TOWER AND ANTENNA MOUNTS SHALL BE INCLUDED IN THE D&M PLANS.
6. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.
7. THERE WILL NOT BE ANY LIGHTING UNLESS REQUIRED BY THE FCC OR THE FAA.
8. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT.

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

SITE NAME:	TRUMBULL SE 4
SITE ADDRESS:	60 COMMERCE DRIVE TRUMBULL, CT 06611
PROPERTY OWNER:	PILOT CORPORATION OF AMERICA 3855 REGENT BLVD JACKSONVILLE, FL 32224
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
CONTACT PERSON:	SANDY CARTER CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
TOWER COORDINATES:	LATITUDE 41°-14'-44.160" LONGITUDE 73°-08'-44.014" PROPOSED GROUND ELEVATION: 170.0'± A.M.S.L. COORDINATES AND GROUND ELEVATION BASED ON FAA 2-C SURVEY CERTIFICATION AS PREPARED FOR VERIZON WIRELESS, BY MARTINEZ COUCH AND ASSOCIATES DATED NOVEMBER 14, 2013

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	3
C-1	ABUTTERS MAP	3
C-1A	PARTIAL SITE/SURVEY PLAN	2
C-2	COMPOUND PLAN, ELEVATION AND ANTENNA MOUNTING CONFIGURATION	2
C-3	SITE CONSTRUCTION, S&E CONTROL NOTES & DETAILS	2
C-4	SITE DETAILS AND NOTES	2
C-5	SITE DETAILS AND SHELTER ELEVATIONS	2
C-6	SHELTER FOUND. PLAN, DETAILS AND NOTES	2

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
3	05/13/14	TMR	DMB	REVISED CSC
2	03/17/14	TMR	DMB	REVISED CSC
1	02/07/14	TMR	DMB	CSC - ISSUED FOR CLIENT REVIEW
0	01/21/14	TMR	DMB	

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. Verizon Wireless

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
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Cellco Partnership
d.b.a. verizonwireless

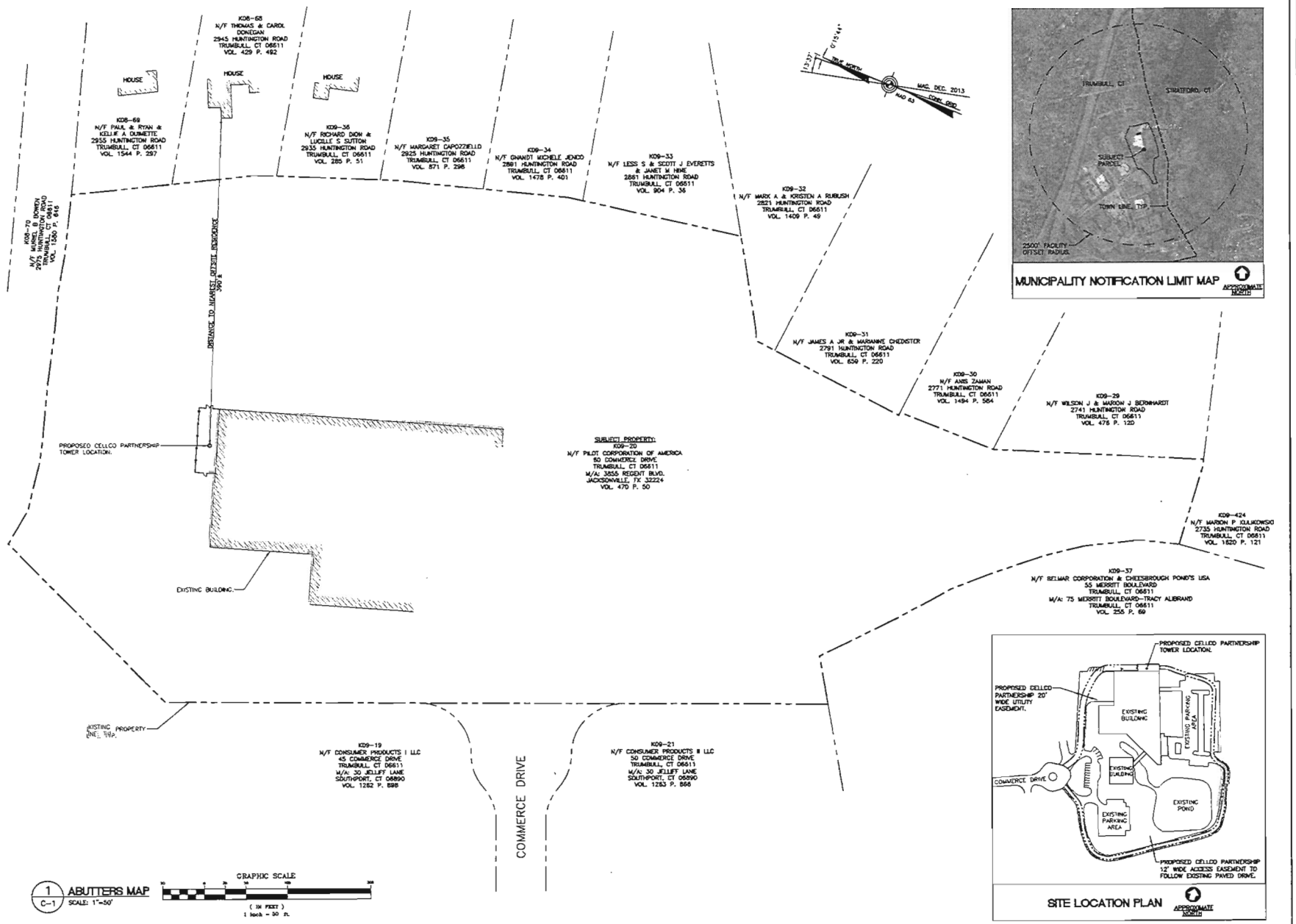
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 01/28/14
SCALE: AS NOTED
JOB NO. 13209.000

TITLE SHEET

T-1

Sheet No. 1 of 8



REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
3	05/15/14	HAR	DMD	REVISED CSC
2	02/17/14	HAR	DMD	REVISED CSC
1	01/27/14	HAR	DMD	CSC - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d/b/a Verizon Wireless

WIRELESS COMMUNICATIONS FACILITY

TRUMBULL SE 4

60 COMMERCE DRIVE
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Cellco Partnership d.b.a. Verizon Wireless

DATE:	01/28/14
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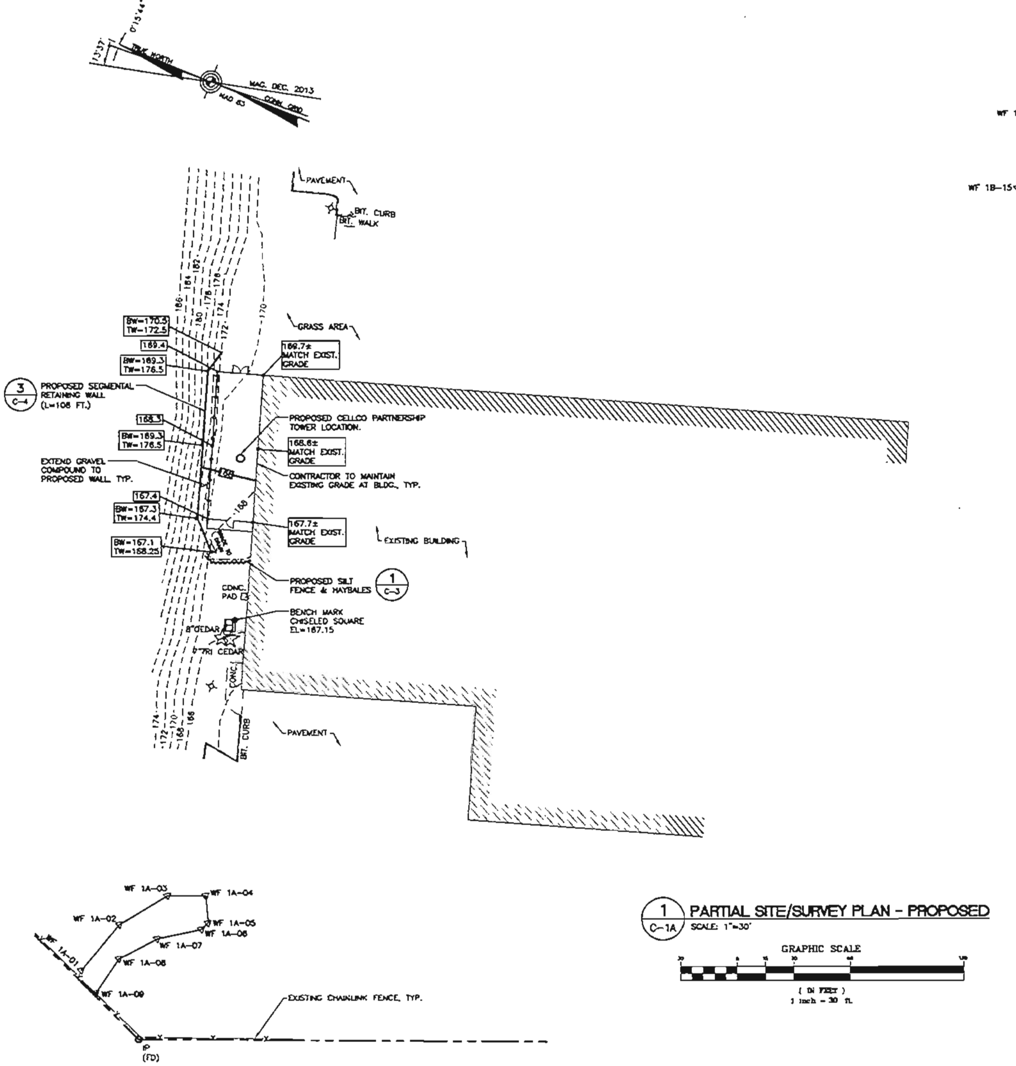
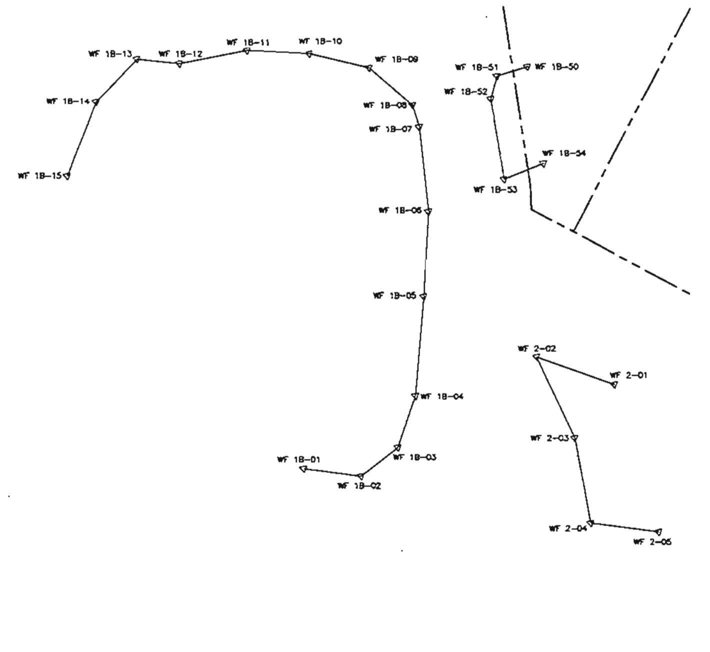
ABUTTERS MAP

C-1

Sheet No. 2 of 8





1 / C-1A **PARTIAL SITE/SURVEY PLAN - PROPOSED**
SCALE: 1"=30'

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

SYMBOLS LEGEND

	PROPERTY LINE
	EASEMENT LINE (PROPOSED)
	DRIVE (EXISTING)
	ACCESS DRIVE (PROPOSED)
	LEASE AREA
---650---	CONTOUR LINE
650	GRADING LINE
	UTILITY POLE
	EXISTING CONIFEROUS TREE
	SILTATION FENCE/ HAYBALES/ SILTATION FENCE "SANDWICH"
	FENCE LINE
X	PROPOSED SPOT GRADE
	WETLAND BOUNDARY

MISCELLANEOUS SITE INFORMATION

DISTANCE TO NEAREST OFF SITE RESIDENCE*	=	390'±
DISTANCE TO NEAREST MUNICIPALITY (STRATFORD)*	=	485'±
ACCESS LENGTH OFF COMMERCE DRIVE	=	1,465'±
NUMBER OF RESIDENTIAL STRUCTURES WITHIN 1000' OF TOWER	=	43±
TOTAL NUMBER OF TREES TO BE REMOVED	=	0
DISTANCE TO NEAREST PROPERTY LINE*	=	200'±
DISTANCE TO NEAREST WETLAND BOUNDARY*	=	230'±

* DISTANCES TAKEN FROM CENTER OF TOWER

SURVEY NOTES

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996. THE TOPOGRAPHIC SURVEY PORTION OF THIS PLAN CONFORMS TO A VERTICAL ACCURACY OF CLASS T-2 AND IS INTENDED TO BE USED TO DEPICT A PROPOSED TELECOMMUNICATION SITE.

THE PROPERTY/BOUNDARY LINES DEPICTED HEREON ARE COMPILED FROM OTHER MAPS, DEEDS AND LIMITED FIELD SURVEY. THESE LINES ARE NOT TO BE CONSTRUED AS A BOUNDARY OPINION AND ARE SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. PROPERTY MAY BE SUBJECT TO ENCUMBRANCES, EASEMENTS, RIGHTS OF WAY AS A TITLE SEARCH REPORT MAY DISCLOSE.

COORDINATES REFER TO NAD 83.

ELEVATIONS REFER TO NGVD 29.

PARCEL OWNER OF RECORD: PILOT CORP. OF AMERICA

PARCEL AREA = 14.02± ACRES.

PARCEL IS IN IL-3 ZONING DISTRICT.

PARCEL ID: MAP 9 LOT 20 TRUMBULL ASSESSOR'S OFFICE.

AREA OF FIELD SURVEY IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT PANEL 432 OF 626, MAP NUMBER 09001C0432F, EFFECTIVE DATE JUNE 18, 2010, BY FEDERAL EMERGENCY MANAGEMENT AGENCY.

REFERENCE IS MADE TO THE FOLLOWING MAPS:

BOUNDARY MAP LOT NO. 4 COMMERCE DRIVE TRUMBULL, CONNECTICUT PREPARED FOR COMMERCE DRIVE ASSOCIATES, SCALE: 1"=50', DATE: DEC. 4, 1981, BY: J & D KASPER & ASSOCIATES.

RESUBDIVISION PLAN LOT NO. 4 COMMERCE DRIVE & HUNTINGTON ROAD TRUMBULL, CONNECTICUT PREPARED FOR DAVID MACK, SCALE: 1"=50', DATE: FEB. 20, 1979, BY: J & D KASPER & ASSOCIATES.

NOT ALL IMPROVEMENTS SHOWN.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL

2/11/14
A. RAFAEL MARTINEZ, LLS #15633 DATE

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	02/11/14	HNR	DMD	REVISED CSC
1	02/04/14	HNR	DMD	CSC
0	01/31/14	HNR	DMD	CSC - ISSUED FOR CLIENT REVIEW

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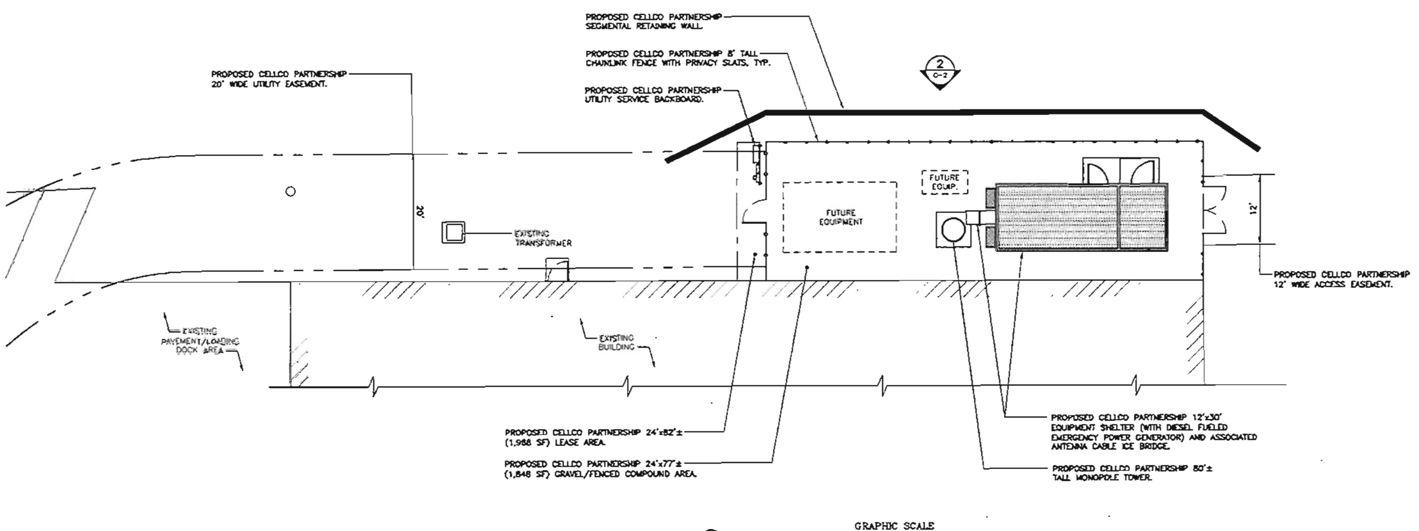
SCALE: AS NOTED
JOB NO. 13209.000

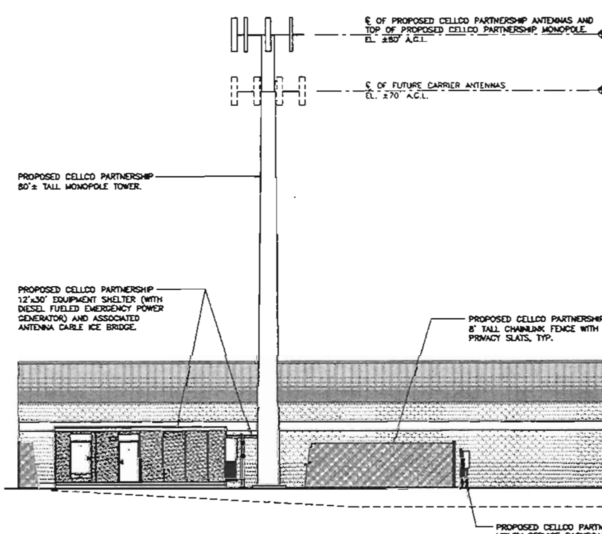
PARTIAL SITE/SURVEY PLAN

C-1A

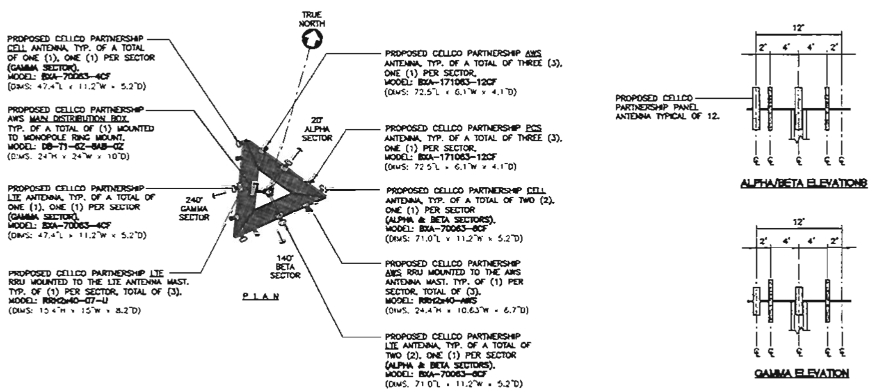
Sheet No. 3 of 8



1 / C-2 COMPOUND PLAN
SCALE: 1" = 10'



2 / C-2 NORTH ELEVATION
SCALE: 1" = 10'



3 / C-2 ANTENNA MOUNTING CONFIGURATION
NOT TO SCALE

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	02/11/14	HAR	DMD	REVISED CSC
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COMPOUND PLAN, ELEVATION AND ANTENNA MOUNTING CONFIG.

C-2

Sheet No. 4 of 8

GENERAL CONSTRUCTION / PRE-CONSTRUCTION NOTES

1. PRIOR TO COMMENCEMNENT OF ANY CONSTRUCTION ACTIVITIES, A MANDITORY ON-SITE PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED WITH THE VERIZON WIRELESS CONSTRUCTION MANAGER, CONTRACTOR'S CONSTRUCTION MANAGER, THE PROJECT EROSION AND SEDIMENTATION CONTROL/ENVIRONMENTAL MONITOR AND THE ENGINEER OF RECORD.
2. THE SOUTHERN PROPERTY LINE ADJACENT TO THE PROPOSED ACCESS DRIVE IS STAKED IN FIELD. THE CONTRACTOR SHALL MAINTAIN THE PROPERTY LINE STAKE LOCATIONS DURING THE ENTIRE PERIOD OF CONSTRUCTION. ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED ON THE SUBJECT PROPERTY.

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.
2. INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
3. REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
4. CONSTRUCT CLOSED DRAINAGE SYSTEM. PRECEPT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
5. CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES AND SILTATION 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.
9. BEGIN EXCAVATION FOR AND CONSTRUCTION OF TOWERS AND PLATFORMS.
10. 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.

SOIL EROSION AND SEDIMENT CONTROL SEQUENCE

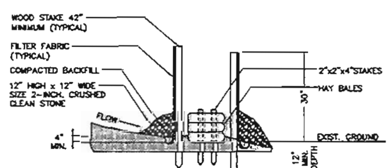
1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS CONSTRUCTION ENTRANCE / ANTI TRACKING PAD, SILTATION FENCE, AND SILTATION FENCE / HAY BALE SHALL BE IN PLACE PRIOR TO ANY GRADING ACTIVITY. INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. MEASURES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND/OR AREA IS STABILIZED.
2. THE ENTRANCE TO THE PROJECT SITE IS TO BE PROTECTED BY STONE ANTI TRACKING PAD OF ASTM C-33, SIZE NO. 2 OR 3, OR D.O.T. 2" CRUSHED GRAVEL. THE STONE ANTI TRACKING PAD IS TO BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
3. THE ENTRANCE TO THE PROJECT SITE IS TO BE PROTECTED BY STONE ANTI TRACKING PAD OF ASTM C-33, SIZE NO. 2 OR 3, OR D.O.T. 2" CRUSHED GRAVEL. THE STONE ANTI TRACKING PAD IS TO BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
4. LAND DISTURBANCE WILL BE KEPT TO A MINIMUM AND RESTABILIZATIONS WILL BE SCHEDULED AS SOON AS PRACTICAL.
5. ALL SOIL EROSION AND SEDIMENT CONTROL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL INCLUDING THE LATEST DATE FROM THE COUNCIL ON SOIL AND WATER CONSERVATION.
6. ANY ADDITIONAL EROSION/SEDIMENTATION CONTROL DEEMED NECESSARY BY TOWN STAFF DURING CONSTRUCTION, SHALL BE INSTALLED BY THE DEVELOPER. IN ADDITION, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE TOWN STAFF.
7. IN ALL AREAS, REMOVAL OF TREES, BUSHES AND OTHER VEGETATION AS WELL AS DISTURBANCE OF THE SOIL IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE. DURING CONSTRUCTION, EXPOSE AS SMALL AN AREA OF SOIL AS POSSIBLE FOR AS SHORT A TIME AS POSSIBLE.
8. SILTATION FENCE SHALL BE PLACED AS INDICATED BEFORE A CUT SLOPE HAS BEEN CREATED. SEDIMENT DEPOSITS SHOULD BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDES OF SILTATION FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR TO BE USED IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. SILTATION FENCE IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE FENCE IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.
9. SWALE DISCHARGE AREA WILL BE PROTECTED WITH RIP RAP SPLASH PAD/ ENERGY DISSIPATER.
10. ALL FILL AREAS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION.
11. THE SOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SODDING OR SEEDING.
12. AFTER CONSTRUCTION IS COMPLETE AND GROUND IS STABLE, REMOVE SILTS IN THE RIP RAP ENERGY DISSIPATERS. REMOVE OTHER EROSION AND SEDIMENT DEVICES.

CONSTRUCTION SPECIFICATIONS - SILT FENCE

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. 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

1. 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.
2. 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.



1 / C-3 — SILTATION FENCE/HAY BALE SILTATION FENCE "SANDWICH" EROSION CONTROL

NOT TO SCALE

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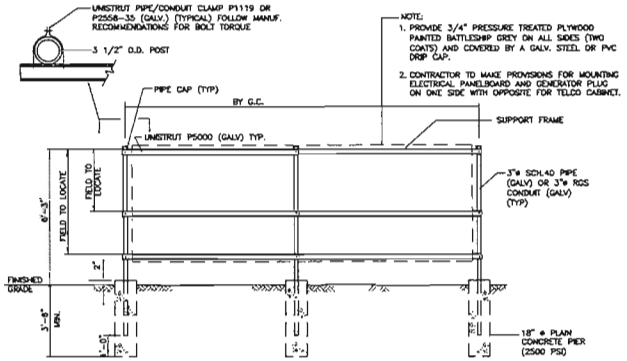
SITE CONSTRUCTION S&E CONTROL NOTES & DETAILS

C-3

Sheet No. 5 of 8



5 C-4 **UTILITY SUPPORT FRAME (TYP)**
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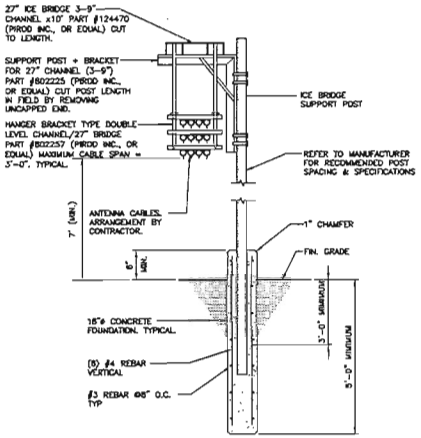
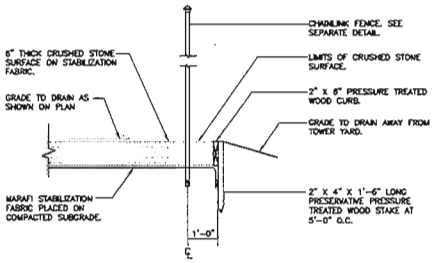


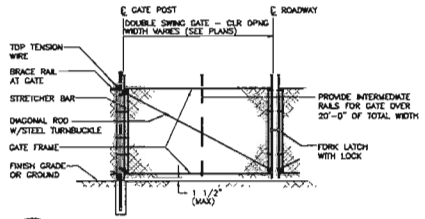
4 C-4 **ICE BRIDGE DETAIL**
NOT TO SCALE



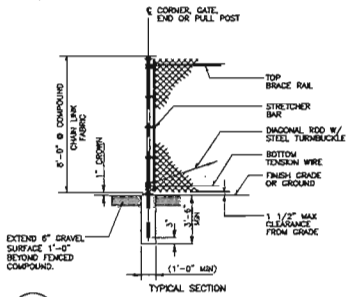
2 C-4 **COMPOUND SURFACING DETAIL**
NOT TO SCALE

WOVEN WIRE FENCE NOTES:

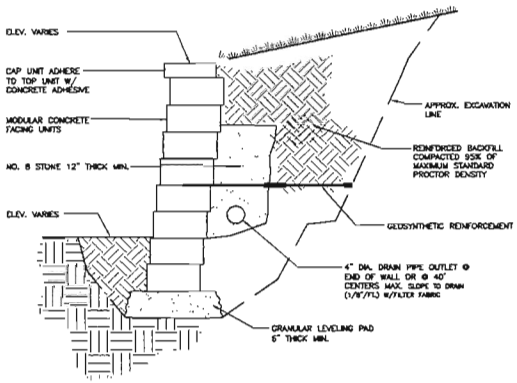
1. GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/2" ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 12 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. GATE LATCH: DROP DOWN LOCKABLE FORK LATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
9. COMPOUND FENCE HEIGHT = 8' VERTICAL.
10. VINYL PRIVACY SLATS TO BE INSTALLED ON ALL FENCE AND GATE SECTIONS. COLOR: GREEN



1A C-4 **WOVEN WIRE SWING GATE-DOUBLE**
NOT TO SCALE



1 C-4 **WOVEN WIRE FENCE DETAIL**
NOT TO SCALE



3 C-4 **SEGMENTAL RETAINING WALL DETAIL**
NOT TO SCALE

MODULAR RETAINING WALL NOTES:

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE SOIL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. BASE SHALL CONSIST OF COMPACTED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 4" THICK.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 2 COURSES OF BLOCK".
8. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
9. NO. 8 CRUSHED STONE SHALL BE INSTALLED BEHIND THE WALL UP TO 18" FROM THE TOP OF THE WALL. CRUSHED STONE SHALL NOT EXTEND BELOW FINISHED GRADE IN FRONT OF WALL.
10. WHERE DRAIN PIPE IS USED, PROVIDE OUTLETS @ MAX. 40 FT C-C.
11. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME BACKFILL BEHIND UNITS IS COMPACTED.
12. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE ENGINEER.
13. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY. (ASTM D-698)
14. SEE SHOP DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION REQUIRED.
15. GEOSYNTHETIC SHALL BE THE TYPE AND LENGTH AS SHOWN ON SHOP DRAWINGS. PULL GEOSYNTHETIC TIGHT PRIOR TO BACKFILLING.
16. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING SHOWING THE COMPLETE WALL SYSTEM AND ALL DETAILS BASED ON THE ACTUAL SOILS IN THE FIELD THESE SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT
18. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
19. IF WALL LEVELING PAD REQUIRES FILL IT SHALL BE COMPACTED GRAVEL FROM BOTTOM OF EXCAVATION TO SUITABLE SOIL TO BOTTOM OF WALL.

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0	01/31/14	MAR	DMS	CSC - ISSUED FOR CLIENT REVIEW
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2	02/17/14	MAR	DMS	REVISED CSC

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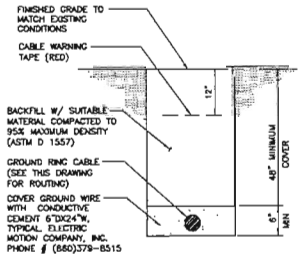
SITE DETAILS AND NOTES

C-4

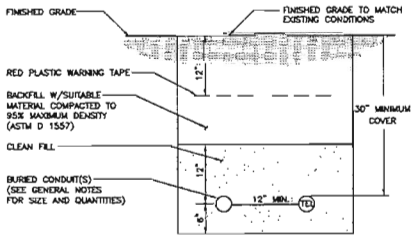
Sheet No. 5 of 8



NOTES:

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.

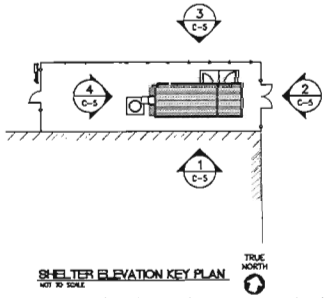
6 / C-5 **TYPICAL BURIAL GROUND CABLE DETAIL**
NOT TO SCALE



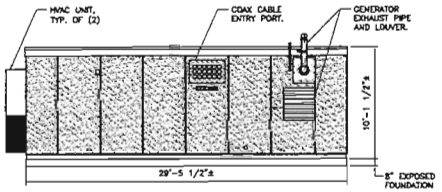
NOTES:

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

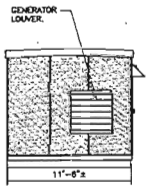
5 / C-5 **TYPICAL ELECTRICAL/TEL TRENCH DETAIL**
NOT TO SCALE



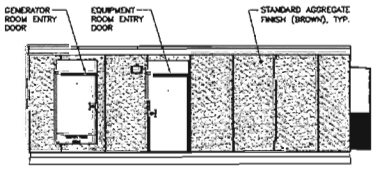
SHELTER ELEVATION KEY PLAN
NOT TO SCALE



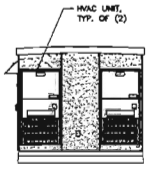
1 / C-5 **SOUTHERN SHELTER ELEVATION**
SCALE: 3/16" = 1'-0"



2 / C-5 **EASTERN SHELTER ELEVATION**
SCALE: 3/16" = 1'-0"



3 / C-5 **NORTHERN SHELTER ELEVATION**
SCALE: 3/16" = 1'-0"



4 / C-5 **WESTERN SHELTER ELEVATION**
SCALE: 3/16" = 1'-0"

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. Verizon Wireless

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	02/17/14	MAR	DWD	REVISED SSC
1	02/07/14	MAR	DWD	SSC - ISSUED FOR CLIENT REVIEW
0	01/31/14	MAR	DWD	

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

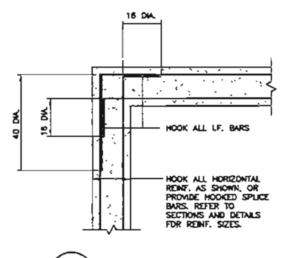
Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 01/28/14
SCALE: AS NOTED
JOB NO. 13209.000

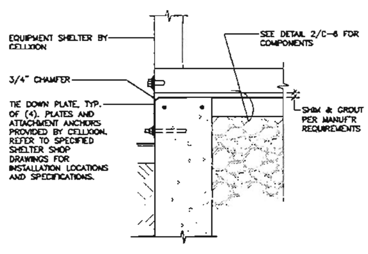
SITE DETAILS AND SHELTER ELEVATIONS

C-5

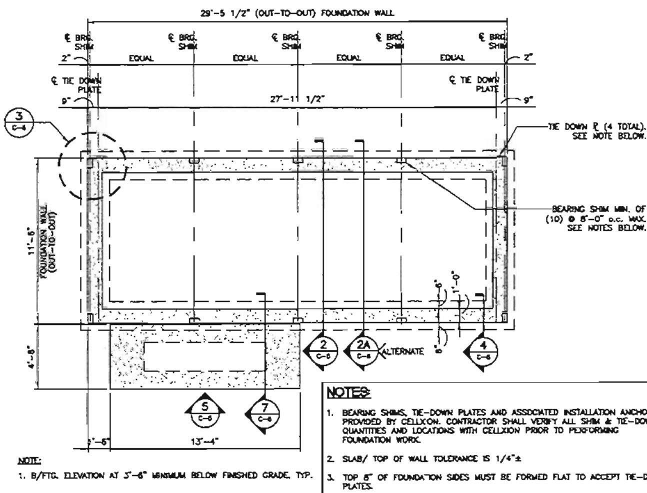
Sheet No. 7 of 8



3 C-6 PLAN DETAIL
NOT TO SCALE



4 C-6 BUILDING TIE DOWN
SCALE: 1"=1'-0"

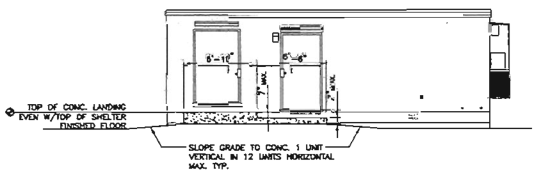


NOTE:
1. B/FTG. ELEVATION AT 3'-6" MINIMUM BELOW FINISHED GRADE, TYP.

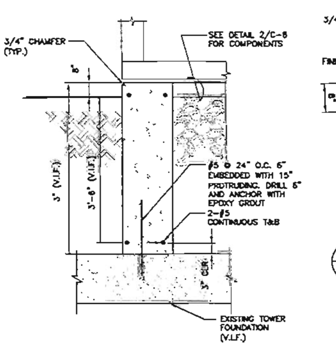
NOTES:

1. BEARING SHIMS, TIE-DOWN PLATES AND ASSOCIATED INSTALLATION ANCHORS PROVIDED BY CELLXION. CONTRACTOR SHALL VERIFY ALL SHIM & TIE-DOWN QUANTITIES AND LOCATIONS WITH CELLXION PRIOR TO PERFORMING FOUNDATION WORK.
2. SLAB/ TOP OF WALL TOLERANCE IS 1/4"±
3. TOP 8" OF FOUNDATION SIDES MUST BE FORMED FLAT TO ACCEPT TIE-DOWN PLATES.

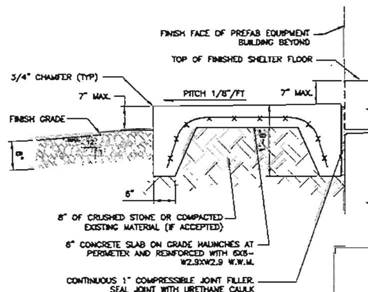
1 C-6 FOUNDATION PLAN
SCALE: 1/4"=1'-0"
APPROX. NORTH



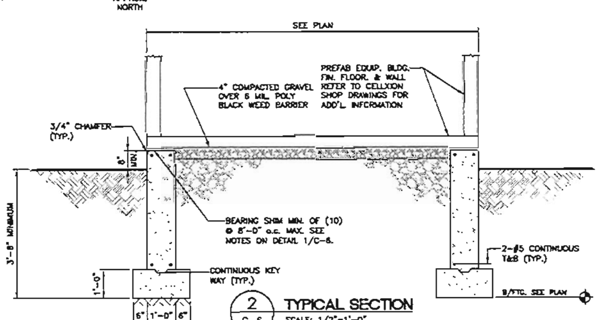
5 C-6 ENTRY STOOP DETAIL - ELEVATION
SCALE: 3/16"=1'-0"



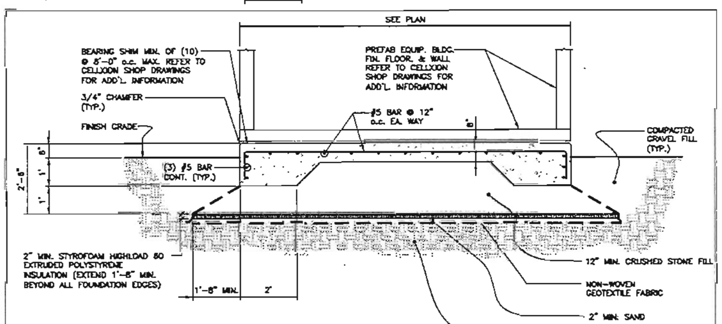
6 C-6 FOUNDATION OVER TOWER FOUNDATION
SCALE: 3/4"=1'-0"



7 C-6 ENTRY STOOP DETAIL - SECTION
SCALE: 3/16"=1'-0"



2 C-6 TYPICAL SECTION
SCALE: 1/2"=1'-0"



2A C-6 FOUNDATION PLAN SLAB ON GRADE ALTERNATE
SCALE: 1/2"=1'-0"

EQUIPMENT SHELTER BY CELLXION. VERIFY ALL SHELTER DIMENSIONS, EQUIPMENT DIMENSIONS, EQUIPMENT LOCATIONS AND UTILITY OPENINGS WITH BUILDING SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.

FOUNDATION NOTES:

1. 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.
3. 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:

1. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
2. ACTIVE EXISTING UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, PRIOR TO PROCEEDING, SHOULD ANY UNCOVERED EXISTING UTILITY PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. ALL RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED OFF SITE AND BE LEGALLY DISPOSED, AT NO ADDITIONAL COST.
4. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
5. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
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.
9. 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:

1. COMPACTED GRAVEL FILL SHALL BE FURNISHED AND PLACED AS A FOUNDATION FOR STRUCTURES, WHERE SHOWN ON THE CONTRACT DRAWINGS OR DIRECTED BY THE ENGINEER.
2. GRAVEL SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE M.02.02 OF THE CONNECTICUT D.O.T. STANDARD SPECIFICATIONS. ADMIXTURES AND SURFACE PROTECTIVE MATERIALS USED TO PREVENT THE GRAVEL FROM FREEZING MUST MEET THE APPROVAL OF THE ENGINEER. THE LARGEST STONE SIZE SHALL BE 3-1/2 INCHES.
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.
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 LEVELED 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 OVER THE ENTIRE AREA OF EACH LAYER IS NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY ACHIEVED BY AASHTO T-99 METHOD C. THE MOISTURE CONTENT OF THE GRAVEL SHALL NOT VARY BY MORE THAN 3 %+ FROM ITS OPTIMUM MOISTURE CONTENT. NO SUBSEQUENT 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 GRAVEL 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.
2. 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.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS OTHERWISE INDICATED.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS OTHERWISE NOTED ON THE DRAWINGS:

   CONCRETE CAST AGAINST EARTH ____ 3 IN.

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER ____ 2 IN.
   #5 AND SMALLER & WWF ____ 1 1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL ____ 3/4 IN.
   BEAMS AND COLUMNS ____ 1 1/2 IN.

5. 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.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	02/11/14	HAR	DWD	REVISED CSC
1	02/04/14	HAR	DWD	CSC
0	01/31/14	HAR	DWD	CSC - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. Verizon wireless

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 01/28/14
SCALE: AS NOTED
JOB NO. 13209.000

SHELTER FOUND. PLAN, DETAILS AND NOTES

C-6

Sheet No. 8 of 8

ADJACENT PROPERTY OWNERS

SITE NAME: TRUMBULL SE 4

OWNER NAME: PILOT CORP OF AMERICA

OWNER ADDRESS: 60 COMMERCE DRIVE, TRUMBULL, CONNECTICUT

ASSESSOR'S REFERENCE: MAP: K09 LOT: 00020

THE FOLLOWING INFORMATION WAS COLLECTED FROM THE TAX ASSESSOR'S RECORDS AND LAND RECORDS OF TRUMBULL TOWN HALL. THE INFORMATION IS CURRENT AS OF FEBRUARY 12, 2014.

THE PARCEL IS ZONED I-L3 INDUSTRIAL.

	Map/Lot	Property Address	Property Owner
1.	K09/424	2735 Huntington Road	Estate of Marion Kulikowski c/o Kathleen J. McGrath, Co-Administrator 2740 Huntington Turnpike Stratford, CT 06614
2.	K09/37	55 Merritt Boulevard	Belmar Corp. Cheeseborough Pond's USA c/o Tracy Albrand 75 Merritt Boulevard Trumbull, CT 06611
3.	K09/21	50 Commerce Drive	Consumer Products II LLC 30 Jelliff Lane Southport, CT 06890
4.	K09/19	45 Commerce Drive	Consumer Products I LLC 30 Jelliff Lane Southport, CT 06890
5.	K08/70	2975 Huntington Road	Muriel B. Bowen 2975 Huntington Road Trumbull, CT 06611
6.	K08/69	2955 Huntington Road	Paul Ouimette and Kellie A. Ryan Ouimette 2955 Huntington Road Trumbull, CT 06611

	Map/Lot	Property Address	Property Owner
7.	K08/68	2945 Huntington Road	Carol Donegan Thomas 2945 Huntington Road Trumbull, CT 06611
8.	K08/36	2935 Huntington Road	Richard Dion and Lucille S. Sutton 2935 Huntington Road Trumbull, CT 06611
9.	K08/35	2925 Huntington Road	Margaret Capozziello 2925 Huntington Road Trumbull, CT 06611
10.	K08/34	2891 Huntington Road	Michele Jenco Gnandt 2891 Huntington Road Trumbull, CT 06611
11.	K08/33	2861 Huntington Road	Janet M. Hine and S. Scott J. Everetts Lee 2861 Huntington Road Trumbull, CT 06611
12.	K09/32	2821 Huntington Road	Mark A. and Kristen A. Rubush 2821 Huntington Road Trumbull, CT 06611
13.	K09/31	2791 Huntington Road	Marianne and James A. Chedister, Jr. 2791 Huntington Road Trumbull, CT 06611
14.	K09/30	2771 Huntington Road	Anis Zaman 2771 Huntington Road Trumbull, CT 06611
15.	K09/29	2741 Huntington Road	Wilson J. and Marion J. Bernhardt 2741 Huntington Road Trumbull, CT 06611

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 list of abutting landowners.

2-20-14
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 - KNKA363 - Cellco Partnership

This license has pending applications: 0003317580

Call Sign	KNKA363	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA042 - Bridgeport-Stamford-Norwalk-Danbury, CT	Channel Block	A
Submarket	0	Phase	2

Dates

Grant	02/05/2008	Expiration	01/22/2018
Effective	02/05/2008	Cancellation	

Five Year Buildout Date

11/20/1992

Control Points

1	180 WASHINGTON VALLEY ROAD, BEDMINSTER, NJ P: (800)852-2671

Licensee

FRN	0003290673	Type	Partnership

Licensee

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

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

Contact

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

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

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation	**Yes**

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 - KNKA363 - Cellco Partnership - Frequencies

Call Sign KNKA363 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 - KNLH264 - Cellco Partnership

Call Sign	KNLH264	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA321 - New York, NY	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000-001895.00000000 001970.00000000-001975.00000000

Dates

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

Buildout Deadlines

1st	06/27/2002	2nd	

Notification Dates

1st	06/04/2002	2nd	

Licensee

FRN	0003290673	Type	Joint Venture

Licensee

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

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

Contact

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

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

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of	No

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?	**Yes**
If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	

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

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

Demographics

Race

Ethnicity Gender

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY #150 - GASA5REG
ALPHARETTA, GA 30004

Call Sign	File Number
WQJQ689	0003382444
Radio Service	
WU - 700 MHz Upper Band (Block C)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-26-2008	11-26-2008	02-17-2019	12-03-2008

Market Number	Channel Block	Sub-Market Designator
REA001	C	0

Market Name
Northeast

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
02-17-2013	02-17-2019		

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

To view the geographic areas associated with the license, go to the Universal Licensing System (ULS) homepage at http://wireless.fcc.gov/uls and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB
August 2007

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY #150 - GASA5REG
ALPHARETTA, GA 30004

Call Sign	File Number
WQJQ696	0003382435
Radio Service WY - 700 MHz Lower Band (Blocks A, B, E)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-26-2008	11-26-2008	02-17-2019	12-03-2008

Market Number	Channel Block	Sub-Market Designator
BEA010	A	0

Market Name
New York-No. New Jer.-Long Isl

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
02-17-2013	02-17-2019		

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

To view the geographic areas associated with the license, go to the Universal Licensing System (ULS) homepage at http://wireless.fcc.gov/uls and select "License Search". Follow the instructions on how to search for license information.

Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: MICHAEL SAMSOCK
CELLCO PARTNERSHIP
1300 I STREET, NW - SUITE 400 WEST
WASHINGTON, DC 20005

Call Sign	File Number
WQGB280	0005272654
Radio Service AW - AWS, 1710-1755/2110-2155 MHz bands	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	08-23-2012	11-29-2021	10-02-2012

Market Number	Channel Block	Sub-Market Designator
CMA049	A	0

Market Name
New Haven-West Haven-Waterbury

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

The license is subject to compliance with the provisions of the January 12, 2001 Agreement between Deutsche Telekom AG, VoiceStream Wireless Corporation, VoiceStream Wireless Holding Corporation and the Department of Justice (DOJ) and the Federal Bureau of Investigation (FBI), which addresses national security, law enforcement, and public safety issues of the FBI and the DOJ regarding the authority granted by this license. Nothing in the Agreement is intended to limit any obligation imposed by Federal lawor regulation including, but not limited to, 47 U.S.C. Section 222(a) and (c)(1) and the FCC's implementing regulations. The Agreement is published at VoiceStream-DT Order, IB Docket No. 00-187, FCC 01-142, 16 FCC Rcd 9779, 9853 (2001).

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: LICENSING MANAGER
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, STE 150 GASA5REG
ALPHARETTA, GA 30009

Call Sign	File Number
WQGA906	50000AWAA12
Radio Service AW - AWS, 1710-1755/2110-2155 MHz bands	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	08-23-2012	11-29-2021	10-02-2012

Market Number	Channel Block	Sub-Market Designator
BEA010	B	15

Market Name
New York-No. New Jer.-Long Isl

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Existing Verizon Wireless 700 Mhz Coverage
Without Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm

TRUMBULL CT
TRUMBULL 3 CT
TRUMBULL CENTER CT
TRUMBULL EAST CT
TRUMBULL SE 4 CT
TRUMBULL 2 CT
STRATFORD NORTH CT
NORTH BRIDGEPORT CT
Shelton
Trumbull
Easton
Bridgeperport
Stratford
Milford
Orange
Derby
Mohegan School
Shelton L. Conservation Trust, Inc. (Mohegan Road)
Shelton L. Conservation Trust, Inc. (surrey Drive)
Town Open Space (Far Mill Street)
Shelton L. Conservation Trust, Inc. (Horse Stable Circle)
Huntington Green Former Huntington School
Brownson Country Club (2 Parcels)
Lawn Cemetery
Shelton L. Conservation Trust, Inc. (Adams Drive)
Shelton L. Conservation Trust, Inc. (Lanes Street)
Shelton L. Conservation Trust, Inc. (Linda & Bella Lanes)
Shelton L. Conservation Trust, Inc. (Bayberry Lane)
Tashua Burial Ground
Tashua Recreation Area
Daniels Farm Cemetery
Town Open Space (Hurd Rd, Marathon Rd, Ranch Dr)
Booth Hill School
Town Park (Riverside Drive)
Town Open Space (Teller Road)
Town Open Space (Broadway)
Town Open Space (Deer Run Drive)
Long Hill Green
Indian Ledge Park
Tashua School
Booth Hill Greenbelt
Town Open Space (Old Village Lane)
Daniels Farm School
Town Open Space (Off Grayrock Road)
Town Open Space (Canfield Drive) 2 Parcels
Capewell Park
Town Open Space (Greenfield Drive)
Shelton L. Conservation Trust, Inc. (September Lane, Rear)
Shelton L. Conservation Trust, Inc. (Commerce Drive)
Town Open Space (Commerce Drive)
Town Open Space (Beard Saw Mill Road)
Shelton L. Conservation Trust, Inc. (Farmill River)
Great Oak Park
Town Park (Lake Avenue)
Town Open Space (Wordins Lane)
Trumbull High School & Hillcrest Jr. High School
Town Open Space (Temple Street)
Madison Junior High School
Jane Ryan School
Mische Brook Park
Robert G. Beach Memorial Park
Roosevelt Forest
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Helen Keller Outdoor Laboratory
Helen Keller Middle School
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Pond View Park
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Middlebrook Park
Twin Brooks Park
Merritt Industrial Park Greenbelt
Abraham Nichols Park
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Nicholas Farm Burial Ground
Unity Cemetery
Unity Park
Chapel Street School
Dover Park
Aspetuck Land Trust, Inc.
Elton G. Rogers Park
Saint Johns Cemetery
Spring Pond Park
North End Park
Boothe Memorial Park Cemetery (Main Street)
Pecks Mill Pond Park
Mill River Country Club
Roger Sherman Baldwin Park
Puglio Park
Veterans Memorial Park
H. Smith Richardson Golf Course
D. Fairchild Wheeler Golf Course (owned By Bridgeport)
Congress Street (Morehouse Highway)
Morehouse Highway
Cascades-mohegan Trails Open Space
North Stratfield Elementary School
Lake Mohegan Beach
Beardsley State Park
Beardsley Park (Zoological & Botanical Gardens)
Wooster Park
Motil Pond Park
Indian Harbor Yacht Club
Nigs Pond
Grass Island
Unknown
Glenwood Park
Svihra Park
Park Cemetery
Manila Street Playground
Long Brook Park
Raybestos Memorial Field
Jonathan Law High School
Silver Sands State Park
Lakeview Cemetery
Old Mill Green
Success Park
Clover Park
Union Cemetery
Cemetery (South Of Church Street)
Saint Augustine Cemetery
Washington Park
Waterview Park
Mount Riga, Inc.
Mass. Farm & Cons.
Appalachain Mountain Club
Cemetery (Long Hill Avenue)
Mount Saint Peters Cemetery
Congregation Bethel Of Ansonia Cemetery
Town Open Space (Bruce Drive)
Town Open Space
Riverside Cemetery
Camp Cedarcrest
Race Brook Country Club
Wepawaug Conservation Area
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Sunnyside Park
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Coram Cemetery
Long Hill School
Town Open Space (River Road)
Orange Center Cemetery
Mary L. Tracy School
Orange Town Green
High Plains Community Center
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Regional High School District Property
Grassy Hill Country Club
Peck Place School
Housatonic Girl Scout Council
Girl Scouts
Far Mill River Park
Pine Rock Parks (2 Parcels)
Sikorsky Field
Undefined Stamford Yacht Club
Oceanview Beach Club
Orange Avenue School
Kings Highway Cemetery
Milford Cemetery

Legend

- Proposed Trumbull SE 4 Facility
- Surrounding Verizon Wireless Facilities
- Verizon Wireless Existing 700 Mhz Coverage from Surrounding Facilities
- Watercourse
- Waterbody
- Town Line
- Municipal and Private Open Space (CT DEEP, 1997)
- State Forest/Park (DEEP Property)

0 0.5 1 2 Miles

Base Map Source: CT DEEP GIS Shaded Relief 2000

ALL-POINTS TECHNOLOGY CORPORATION

verizonwireless

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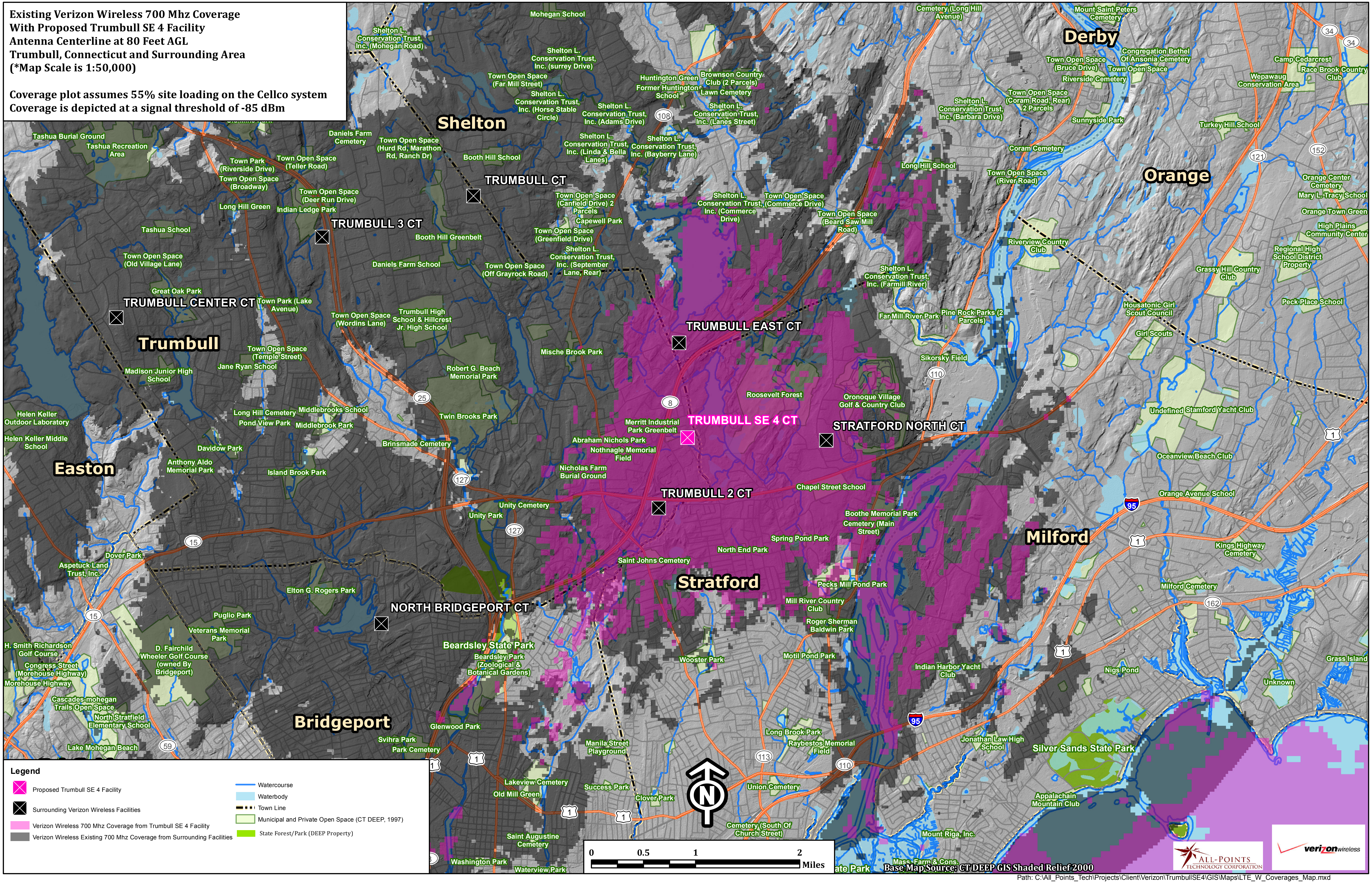
Existing Verizon Wireless 700 Mhz Coverage
With Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)
Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm
Legend
Proposed Trumbull SE 4 Facility
Surrounding Verizon Wireless Facilities
Verizon Wireless 700 Mhz Coverage from Trumbull SE 4 Facility
Verizon Wireless Existing 700 Mhz Coverage from Surrounding Facilities
Watercourse
Waterbody
Town Line
Municipal and Private Open Space (CT DEEP, 1997)
State Forest/Park (DEEP Property)
TRUMBULL SE 4 CT
TRUMBULL CT
TRUMBULL 3 CT
TRUMBULL CENTER CT
TRUMBULL EAST CT
TRUMBULL 2 CT
STRATFORD NORTH CT
NORTH BRIDGEPORT CT
Shelton
Derby
Orange
Trumbull
Easton
Milford
Stratford
Bridgeport
0 0.5 1 2 Miles
N
Base Map Source: CT DEEP GIS Shaded Relief 2000
ALL-POINTS TECHNOLOGY CORPORATION
verizonwireless
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Existing Verizon Wireless 850 Mhz Coverage
Without Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm

Legend

- Proposed Trumbull SE 4 Facility
- Surrounding Verizon Wireless Facilities
- Verizon Wireless Existing 850 Mhz Coverage from Surrounding Facilities
- Watercourse
- Waterbody
- Town Line
- Municipal and Private Open Space (CT DEEP, 1997)
- State Forest/Park (DEEP Property)

Base Map Source: CT DEEP GIS Shaded Relief 2000

ALL-POINTS TECHNOLOGY CORPORATION

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Existing Verizon Wireless 850 Mhz Coverage
With Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm

TRUMBULL SE 4 CT
TRUMBULL CT
TRUMBULL 3 CT
TRUMBULL CENTER CT
TRUMBULL EAST CT
TRUMBULL 2 CT
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NORTH BRIDGEPORT CT
Shelton
Derby
Orange
Trumbull
Easton
Stratford
Bridgeport
Milford
Mohegan School
Shelton L. Conservation Trust, Inc. (Mohegan Road)
Shelton L. Conservation Trust, Inc. (surrey Drive)
Town Open Space (Far Mill Street)
Shelton L. Conservation Trust, Inc. (Horse Stable Circle)
Huntington Green Former Huntington School
Brownson Country Club (2 Parcels)
Lawn Cemetery
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Tashua Recreation Area
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Town Park (Riverside Drive)
Town Open Space (Teller Road)
Town Open Space (Broadway)
Town Open Space (Deer Run Drive)
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Town Open Space (Beard Saw Mill Road)
Shelton L. Conservation Trust, Inc. (Farmill River)
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Town Park (Lake Avenue)
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Roosevelt Forest
Oronoque Village Golf & Country Club
Far Mill River Park
Pine Rock Parks (2 Parcels)
Sikorsky Field
Housatonic Girl Scout Council
Girl Scouts
Riverview Country Club
Grassy Hill Country Club
Regional High School District Property
Peck Place School
High Plains Community Center
Orange Town Green
Orange Center Cemetery
Mary L. Tracy School
Turkey Hill School
Wepawaug Conservation Area
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Race Brook Country Club
Congregation Bethel Of Ansonia Cemetery
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Town Open Space (Bruce Drive)
Riverside Cemetery
Mount Saint Peters Cemetery
Cemetery (Long Hill Avenue)
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Coram Cemetery
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Middlebrook Park
Twin Brooks Park
Davidow Park
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Merritt Industrial Park Greenbelt
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Unity Park
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North End Park
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Puglio Park
Veterans Memorial Park
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D. Fairchild Wheeler Golf Course (owned By Bridgeport)
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Morehouse Highway
Cascades-mohegan Trails Open Space
North Stratfield Elementary School
Lake Mohegan Beach
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Beardsley Park (Zoological & Botanical Gardens)
Glenwood Park
Svihra Park
Park Cemetery
Lakeview Cemetery
Old Mill Green
Success Park
Clover Park
Saint Augustine Cemetery
Washington Park
Waterview Park
Manila Street Playground
Long Brook Park
Raybestos Memorial Field
Union Cemetery
Cemetery (South Of Church Street)
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Mass Farm & Cons.
Wooster Park
Motil Pond Park
Mill River Country Club
Roger Sherman Baldwin Park
Pecks Mill Pond Park
Milford Cemetery
Kings Highway Cemetery
Indian Harbor Yacht Club
Nigs Pond
Grass Island
Unknown
Jonathan Law High School
Silver Sands State Park
Appalachain Mountain Club
Undefined Stamford Yacht Club
Oceanview Beach Club
Orange Avenue School

Legend

- Proposed Trumbull SE 4 Facility
- Surrounding Verizon Wireless Facilities
- Verizon Wireless 850 Mhz Coverage from Trumbull SE 4 Facility
- Verizon Wireless Existing 850 Mhz Coverage from Surrounding Facilities
- Watercourse
- Waterbody
- Town Line
- Municipal and Private Open Space (CT DEEP, 1997)
- State Forest/Park (DEEP Property)

0 0.5 1 2 Miles

Base Map Source: CT DEEP GIS Shaded Relief 2000

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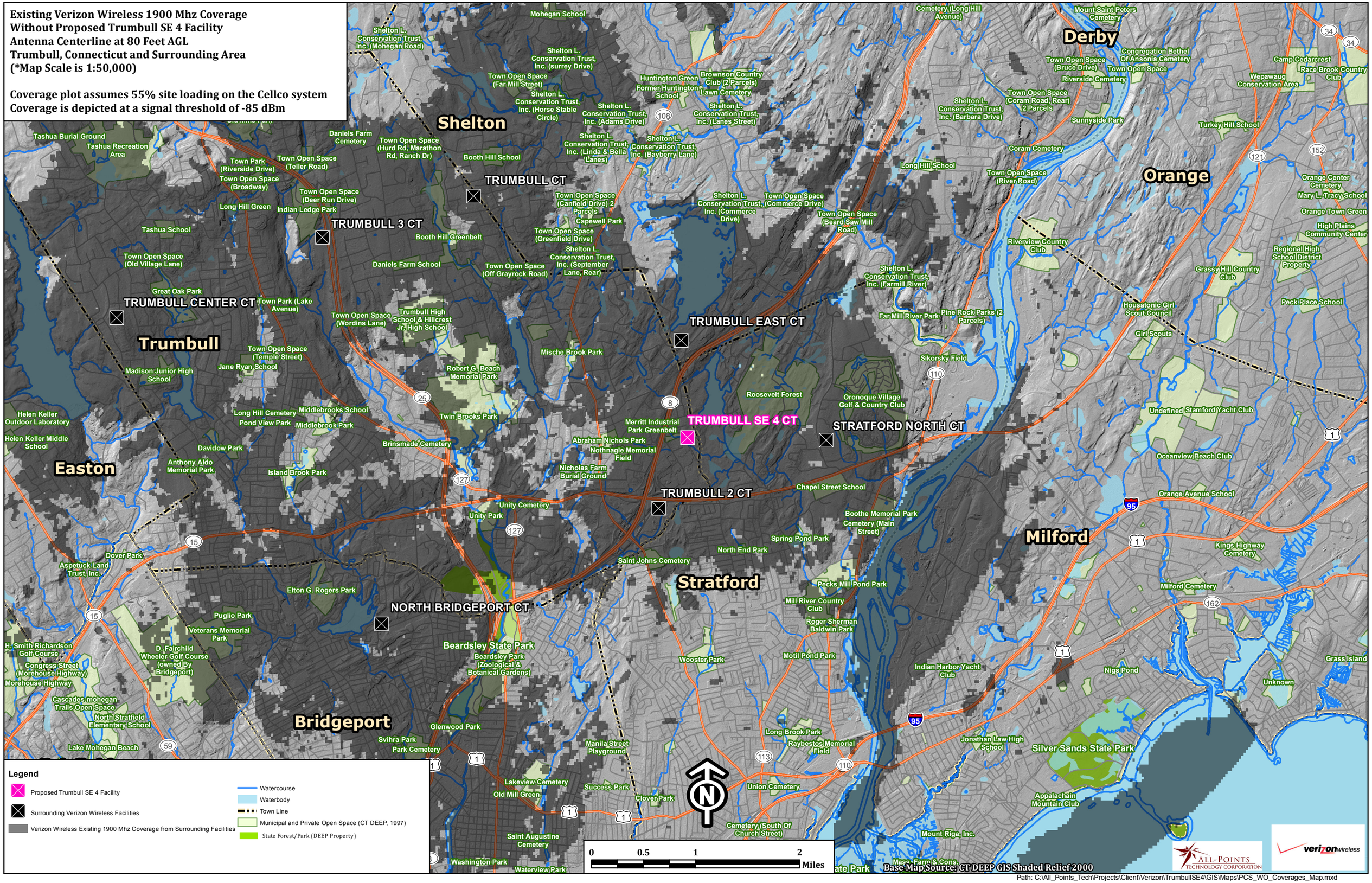
Existing Verizon Wireless 1900 Mhz Coverage
Without Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm



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Existing Verizon Wireless 1900 Mhz Coverage
With Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm

TRUMBULL SE 4 CT
TRUMBULL CT
TRUMBULL 3 CT
TRUMBULL CENTER CT
TRUMBULL EAST CT
TRUMBULL 2 CT
NORTH BRIDGEPORT CT
STRATFORD NORTH CT
Shelton
Derby
Orange
Trumbull
Easton
Stratford
Milford
Bridgeperport

Mohegan School
Shelton L. Conservation Trust, Inc. (Mohegan Road)
Shelton L. Conservation Trust, Inc. (surrey Drive)
Town Open Space (Far Mill Street)
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Huntington Green Former Huntington School
Brownson Country Club (2 Parcels)
Lawn Cemetery
Shelton L. Conservation Trust, Inc. (Adams Drive)
Shelton L. Conservation Trust, Inc. (Lanes Street)
Shelton L. Conservation Trust, Inc. (Linda & Bella Lanes)
Shelton L. Conservation Trust, Inc. (Bayberry Lane)
Daniels Farm Cemetery
Town Open Space (Hurd Rd, Marathon Rd, Ranch Dr)
Booth Hill School
Tashua Burial Ground
Tashua Recreation Area
Town Park (Riverside Drive)
Town Open Space (Teller Road)
Town Open Space (Broadway)
Town Open Space (Deer Run Drive)
Long Hill Green
Indian Ledge Park
Tashua School
Booth Hill Greenbelt
Town Open Space (Old Village Lane)
Daniels Farm School
Town Open Space (Off Grayrock Road)
Town Open Space (Greenfield Drive)
Shelton L. Conservation Trust, Inc. (September Lane, Rear)
Town Open Space (Canfield Drive) 2 Parcels
Capewell Park
Shelton L. Conservation Trust, Inc. (Commerce Drive)
Town Open Space (Commerce Drive)
Town Open Space (Beard Saw Mill Road)
Great Oak Park
Town Park (Lake Avenue)
Town Open Space (Wordins Lane)
Trumbull High School & Hillcrest Jr. High School
Town Open Space (Temple Street)
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Madison Junior High School
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Robert G. Beach Memorial Park
Roosevelt Forest
Twin Brooks Park
Middlebrook Park
Middlebrooks School
Long Hill Cemetery
Pond View Park
Helen Keller Outdoor Laboratory
Helen Keller Middle School
Davidow Park
Brinsmade Cemetery
Anthony Aldo Memorial Park
Island Brook Park
Merritt Industrial Park Greenbelt
Abraham Nichols Park
Nothnagle Memorial Field
Nicholas Farm Burial Ground
Unity Cemetery
Unity Park
Chapel Street School
Boothe Memorial Park Cemetery (Main Street)
Spring Pond Park
North End Park
Saint Johns Cemetery
Dover Park
Aspetuck Land Trust, Inc.
Elton G. Rogers Park
Puglio Park
Veterans Memorial Park
H. Smith Richardson Golf Course
D. Fairchild Wheeler Golf Course (owned By Bridgeport)
Congress Street (Morehouse Highway)
Morehouse Highway
Cascades-mohegan Trails Open Space
North Stratfield Elementary School
Lake Mohegan Beach
Beardsley State Park
Beardsley Park (Zoological & Botanical Gardens)
Glenwood Park
Svihra Park
Park Cemetery
Lakeview Cemetery
Old Mill Green
Saint Augustine Cemetery
Washington Park
Waterview Park
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Success Park
Clover Park
Union Cemetery
Cemetery (South Of Church Street)
Long Brook Park
Raybestos Memorial Field
Jonathan Law High School
Silver Sands State Park
Appalachain Mountain Club
Mount Riga, Inc.
Mass Farm & Cons
Cemetery (Long Hill Avenue)
Mount Saint Peters Cemetery
Congregation Bethel Of Ansonia Cemetery
Town Open Space (Bruce Drive)
Town Open Space
Riverside Cemetery
Camp Cedarcrest
Race Brook Country Club
Wepawaug Conservation Area
Town Open Space (Coram Road, Rear) 2 Parcels
Shelton L. Conservation Trust, Inc. (Barbara Drive)
Sunnyside Park
Turkey Hill School
Coram Cemetery
Long Hill School
Town Open Space (River Road)
Orange Center Cemetery
Mary L. Tracy School
Orange Town Green
High Plains Community Center
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Riverview Country Club
Grassy Hill Country Club
Peck Place School
Housatonic Girl Scout Council
Girl Scouts
Far Mill River Park
Pine Rock Parks (2 Parcels)
Shelton L. Conservation Trust, Inc. (Farmill River)
Sikorsky Field
Roosevelt Forest
Oronoque Village Golf & Country Club
Undefined Stamford Yacht Club
Oceanview Beach Club
Orange Avenue School
Kings Highway Cemetery
Milford Cemetery
Pecks Mill Pond Park
Mill River Country Club
Roger Sherman Baldwin Park
Motil Pond Park
Wooster Park
Indian Harbor Yacht Club
Nigs Pond
Grass Island
Unknown

Legend

- Proposed Trumbull SE 4 Facility
- Surrounding Verizon Wireless Facilities
- Verizon Wireless 1900 Mhz Coverage from Trumbull SE 4 Facility
- Verizon Wireless Existing 1900 Mhz Coverage from Surrounding Facilities
- Watercourse
- Waterbody
- Town Line
- Municipal and Private Open Space (CT DEEP, 1997)
- State Forest/Park (DEEP Property)

0 0.5 1 2 Miles

Base Map Source: CT DEEP GIS Shaded Relief 2000

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

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Existing Verizon Wireless 2100 Mhz Coverage
Without Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm

TRUMBULL SE 4 CT
TRUMBULL CT
TRUMBULL 3 CT
TRUMBULL CENTER CT
TRUMBULL EAST CT
TRUMBULL 2 CT
STRATFORD NORTH CT
NORTH BRIDGEPORT CT
Shelton
Derby
Orange
Trumbull
Easton
Stratford
Milford
Bridgeport
Mohegan School
Shelton L. Conservation Trust, Inc. (Mohegan Road)
Shelton L. Conservation Trust, Inc. (surrey Drive)
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Shelton L. Conservation Trust, Inc. (Horse Stable Circle)
Huntington Green Former Huntington School
Brownson Country Club (2 Parcels)
Lawn Cemetery
Shelton L. Conservation Trust, Inc. (Adams Drive)
Shelton L. Conservation Trust, Inc. (Lanes Street)
Cemetery (Long Hill Avenue)
Mount Saint Peters Cemetery
Congregation Bethel Of Ansonia Cemetery
Town Open Space (Bruce Drive)
Town Open Space
Riverside Cemetery
Camp Cedarcrest
Race Brook Country Club
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Coram Cemetery
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Town Open Space (River Road)
Orange Center Cemetery
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Orange Town Green
High Plains Community Center
Regional High School District Property
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Housatonic Girl Scout Council
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Grassy Hill Country Club
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Town Open Space (Broadway)
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Town Open Space (Off Grayrock Road)
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Brinsmade Cemetery
Anthony Aldo Memorial Park
Island Brook Park
Nicholas Farm Burial Ground
Oceanview Beach Club
Chapel Street School
Unity Cemetery
Unity Park
Orange Avenue School
Boothe Memorial Park
Cemetery (Main Street)
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Dover Park
Aspetuck Land Trust, Inc.
Elton G. Rogers Park
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Milford Cemetery
Mill River Country Club
Roger Sherman Baldwin Park
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Veterans Memorial Park
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Congress Street (Morehouse Highway)
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North Stratfield Elementary School
Glenwood Park
Svihra Park
Park Cemetery
Manila Street Playground
Long Brook Park
Raybestos Memorial Field
Jonathan Law High School
Silver Sands State Park
Lake Mohegan Beach
Lakeview Cemetery
Old Mill Green
Success Park
Clover Park
Union Cemetery
Cemetery (South Of Church Street)
Saint Augustine Cemetery
Washington Park
Waterview Park
Mount Riga, Inc.
Appalachain Mountain Club
Mass. Farm & Cons.

Legend

- Proposed Trumbull SE 4 Facility
- Surrounding Verizon Wireless Facilities
- Verizon Wireless Existing 2100 Mhz Coverage from Surrounding Facilities
- Watercourse
- Waterbody
- Town Line
- Municipal and Private Open Space (CT DEEP, 1997)
- State Forest/Park (DEEP Property)

0 0.5 1 2 Miles

Base Map Source: CT DEEP GIS Shaded Relief 2000

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

Path: C:\All_Points_Tech\Projects\Client\Verizon\TrumbullSE4\GIS\Maps\AWS_WO_Coverages_Map.mxd

Existing Verizon Wireless 2100 Mhz Coverage
With Proposed Trumbull SE 4 Facility
Antenna Centerline at 80 Feet AGL
Trumbull, Connecticut and Surrounding Area
(*Map Scale is 1:50,000)

Coverage plot assumes 55% site loading on the Cellco system
Coverage is depicted at a signal threshold of -85 dBm

TRUMBULL SE 4 CT
TRUMBULL CT
TRUMBULL 3 CT
TRUMBULL CENTER CT
TRUMBULL EAST CT
TRUMBULL 2 CT
STRATFORD NORTH CT
NORTH BRIDGEPORT CT
Shelton
Derby
Orange
Trumbull
Easton
Stratford
Milford
Bridgeperport
Beardsley State Park
Silver Sands State Park
Mohegan School
Cemetery (Long Hill Avenue)
Mount Saint Peters Cemetery
Shelton L. Conservation Trust, Inc. (Mohegan Road)
Shelton L. Conservation Trust, Inc. (surrey Drive)
Town Open Space (Far Mill Street)
Shelton L. Conservation Trust, Inc. (Horse Stable Circle)
Huntington Green Former Huntington School
Brownson Country Club (2 Parcels)
Lawn Cemetery
Shelton L. Conservation Trust, Inc. (Adams Drive)
Shelton L. Conservation Trust, Inc. (Lanes Street)
Town Open Space (Coram Road, Rear) 2 Parcels
Shelton L. Conservation Trust, Inc. (Barbara Drive)
Sunnyside Park
Congregation Bethel Of Ansonia Cemetery
Town Open Space (Bruce Drive)
Town Open Space
Riverside Cemetery
Camp Cedarcrest
Race Brook Country Club
Wepawaug Conservation Area
Turkey Hill School
Tashua Burial Ground
Tashua Recreation Area
Daniels Farm Cemetery
Town Open Space (Hurd Rd, Marathon Rd, Ranch Dr)
Booth Hill School
Shelton L. Conservation Trust, Inc. (Linda & Bella Lanes)
Shelton L. Conservation Trust, Inc. (Bayberry Lane)
Coram Cemetery
Long Hill School
Town Open Space (River Road)
Town Park (Riverside Drive)
Town Open Space (Teller Road)
Town Open Space (Broadway)
Town Open Space (Deer Run Drive)
Long Hill Green
Indian Ledge Park
Town Open Space (Canfield Drive) 2 Parcels
Capewell Park
Shelton L. Conservation Trust, Inc. (Commerce Drive)
Town Open Space (Commerce Drive)
Town Open Space (Beard Saw Mill Road)
Orange Center Cemetery
Mary L. Tracy School
Orange Town Green
High Plains Community Center
Tashua School
Booth Hill Greenbelt
Town Open Space (Greenfield Drive)
Shelton L. Conservation Trust, Inc. (September Lane, Rear)
Riverview Country Club
Regional High School District Property
Town Open Space (Old Village Lane)
Daniels Farm School
Town Open Space (Off Grayrock Road)
Shelton L. Conservation Trust, Inc. (Farmill River)
Grassy Hill Country Club
Great Oak Park
Town Park (Lake Avenue)
Town Open Space (Wordins Lane)
Trumbull High School & Hillcrest Jr. High School
Far Mill River Park
Pine Rock Parks (2 Parcels)
Housatonic Girl Scout Council
Peck Place School
Girl Scouts
Town Open Space (Temple Street)
Jane Ryan School
Mische Brook Park
Sikorsky Field
Madison Junior High School
Robert G. Beach Memorial Park
Roosevelt Forest
Oronoque Village Golf & Country Club
Undefined Stamford Yacht Club
Helen Keller Outdoor Laboratory
Long Hill Cemetery
Pond View Park
Middlebrooks School
Middlebrook Park
Twin Brooks Park
Merritt Industrial Park Greenbelt
Abraham Nichols Park
Nothnagle Memorial Field
Helen Keller Middle School
Davidow Park
Brinsmade Cemetery
Oceanview Beach Club
Anthony Aldo Memorial Park
Island Brook Park
Nicholas Farm Burial Ground
Chapel Street School
Unity Cemetery
Unity Park
Boothe Memorial Park
Cemetery (Main Street)
Orange Avenue School
Spring Pond Park
North End Park
Kings Highway Cemetery
Dover Park
Aspetuck Land Trust, Inc.
Saint Johns Cemetery
Pecks Mill Pond Park
Milford Cemetery
Elton G. Rogers Park
Mill River Country Club
Puglio Park
Roger Sherman Baldwin Park
Veterans Memorial Park
H. Smith Richardson Golf Course
D. Fairchild Wheeler Golf Course (owned By Bridgeport)
Wooster Park
Motil Pond Park
Indian Harbor Yacht Club
Nigs Pond
Grass Island
Unknown
Congress Street (Morehouse Highway)
Morehouse Highway
Cascades-mohegan Trails Open Space
North Stratfield Elementary School
Glenwood Park
Long Brook Park
Raybestos Memorial Field
Jonathan Law High School
Lake Mohegan Beach
Svihra Park
Park Cemetery
Manila Street Playground
Lakeview Cemetery
Old Mill Green
Success Park
Clover Park
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0 0.5 1 2 Miles

Base Map Source: CT DEEP GIS Shaded Relief 2000

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

Path: C:\All_Points_Tech\Projects\Client\Verizon\TrumbullSE4\GIS\Maps\AWS_W_Coverages_Map.mxd

BXA-70063-6CF-EDIN-X

X-Pol | FET Panel | 63° | 14.5 dBd

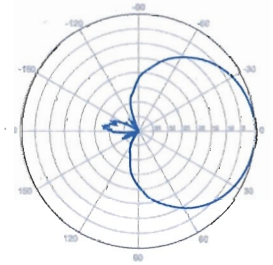
Replace "X" with desired electrical downtilt.

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

Electrical Characteristics	696-900 MHz	
Frequency bands	696-806 MHz	806-900 MHz
Polarization	±45°	
Horizontal beamwidth	65°	63°
Vertical beamwidth	13°	11°
Gain	14.0 dBd (16.1 dBi)	14.5 dBd (16.6 dBi)
Electrical downtilt (X)	0, 2, 3, 4, 5, 6, 8, 10	
Impedance	50Ω	
VSWR	≤1.35:1	
Upper sidelobe suppression (0°)	-18.3 dB	-18.2 dB
Front-to-back ratio (+/-30°)	-33.4 dB	-36.3 dB
Null fill	5% (-26.02 dB)	
Isolation between ports	< -25 dB	
Input power with EDIN connectors	500 W	
Input power with NE connectors	300 W	
Lightning protection	Direct Ground	
Connector(s)	2 Ports / EDIN or NE / Female / Center (Back)	
Mechanical Characteristics		
Dimensions Length x Width x Depth	1804 x 285 x 132 mm	71.0 x 11.2 x 5.2 in
Depth with z-brackets	172 mm	6.8 in
Weight without mounting brackets	7.9 kg	17 lbs
Survival wind speed	> 201 km/hr	> 125 mph
Wind area	Front: 0.51 m² Side: 0.24 m²	Front: 5.5 ft² Side: 2.6 ft²
Wind load @ 161 km/hr (100 mph)	Front: 759 N Side: 391 N	Front: 169 lbf Side: 89 lbf

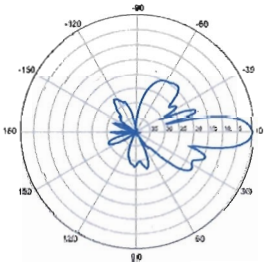
Mounting Options	Part Number	Fits Pipe Diameter	Weight
3-Point Mounting & Downtilt Bracket Kit	36210008	40-115 mm 1.57-4.5 in	6.9 kg 15.2 lbs
Concealment Configurations	For concealment configurations, order BXA-70063-6CF-EDIN-X-FP		

BXA-70063-6CF-EDIN-X



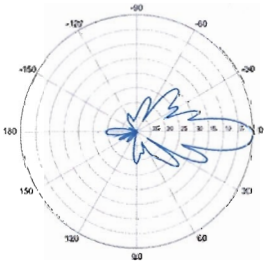
Horizontal | 750 MHz

BXA-70063-6CF-EDIN-0

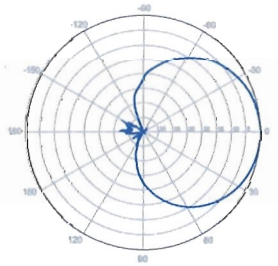


0° | Vertical | 750 MHz

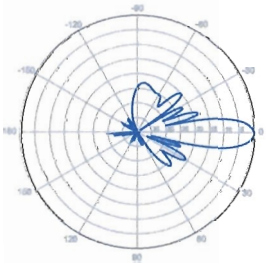
BXA-70063-6CF-EDIN-2



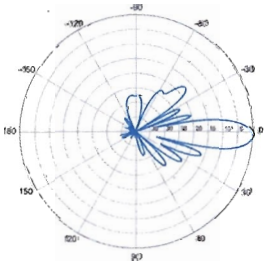
2° | Vertical | 750 MHz



Horizontal | 850 MHz



0° | Vertical | 850 MHz



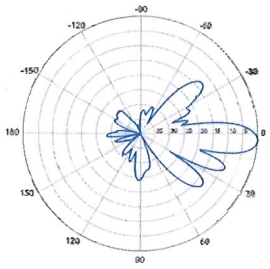
2° | Vertical | 850 MHz

Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

BXA-70063-6CF-EDIN-X

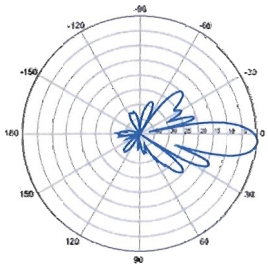
X-Pol | FET Panel | 63° | 14.5 dBd

BXA-70063-6CF-EDIN-3



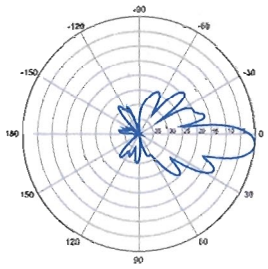
3° | Vertical | 750 MHz

BXA-70063-6CF-EDIN-4

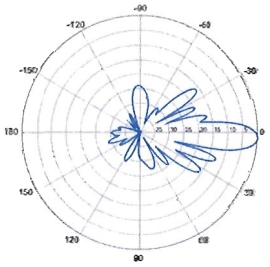


4° | Vertical | 750 MHz

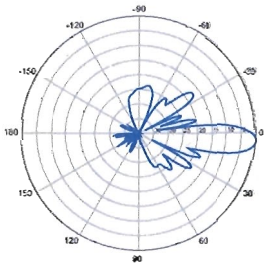
BXA-70063-6CF-EDIN-5



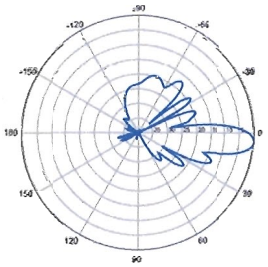
5° | Vertical | 750 MHz



3° | Vertical | 850 MHz

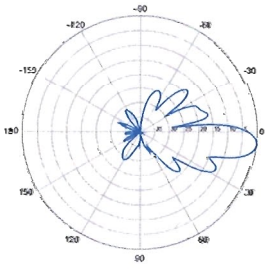


4° | Vertical | 850 MHz



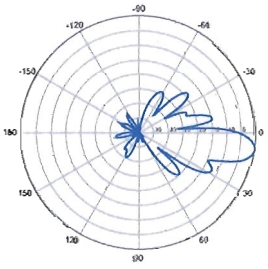
5° | Vertical | 850 MHz

BXA-70063-6CF-EDIN-6



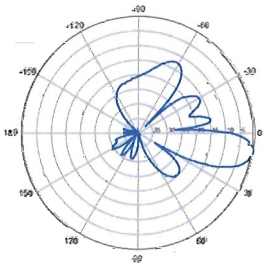
6° | Vertical | 750 MHz

BXA-70063-6CF-EDIN-8

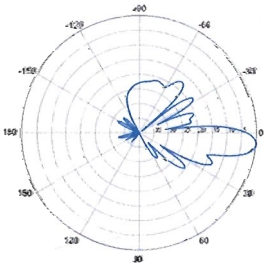


8° | Vertical | 750 MHz

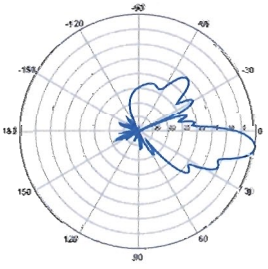
BXA-70063-6CF-EDIN-10



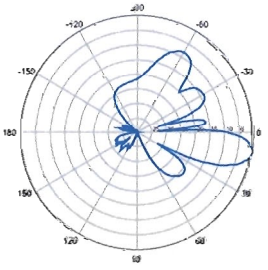
10° | Vertical | 750 MHz



6° | Vertical | 850 MHz



8° | Vertical | 850 MHz



10° | Vertical | 850 MHz

BXA-171063-12CF-EDIN-X

X-Pol | FET Panel | 63° | 19.0 dBi

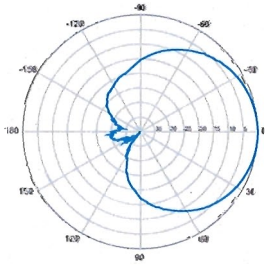
Replace "X" with desired electrical downtilt.

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

Electrical Characteristics	1710-2170 MHz		
Frequency bands	1710-1880 MHz	1850-1990 MHz	1920-2170 MHz
Polarization	±45°	±45°	±45°
Horizontal beamwidth	68°	65°	60°
Vertical beamwidth	4.5°	4.5°	4.5°
Gain	16.1 dBd / 18.2 dBi	16.5 dBd / 18.6 dBi	16.9 dBd / 19.0 dBi
Electrical downtilt (X)	0, 2, 5		
Impedance	50Ω		
VSWR	≤1.5:1		
First upper sidelobe	< -17 dB		
Front-to-back ratio	> 30 dB		
In-band isolation	< -25 dB		
IM3 (20W carrier)	< -150 dBc		
Input power	300 W		
Lightning protection	Direct Ground		
Connector(s)	2 Ports / EDIN or NE / Female / Center (Back)		
Operating temperature	-40° to +60° C / -40° to +140° F		
Mechanical Characteristics			
Dimensions Length x Width x Depth	1842 x 154 x 105 mm		72.5 x 6.1 x 4.1 in
Depth with z-brackets	133 mm		5.2 in
Weight without mounting brackets	5.8 kg		12.8 lbs
Survival wind speed	> 201 km/hr		> 125 mph
Wind area	Front: 0.28 m^2 Side: 0.19 m^2		Front: 3.1 ft^2 Side: 2.1 ft^2
Wind load @ 161 km/hr (100 mph)	Front: 460 N Side: 304 N		Front: 103 lbf Side: 68 lbf

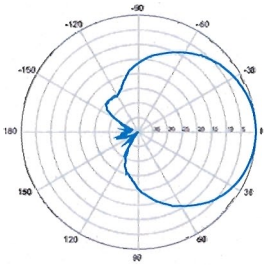
Mounting Options	Part Number	Fits Pipe Diameter	Weight
2-Point Mounting Bracket Kit	26799997	50-102 mm 2.0-4.0 in	2.3 kg 5 lbs
2-Point Mounting & Downtilt Bracket Kit	26799999	50-102 mm 2.0-4.0 in	3.6 kg 8 lbs
Concealment Configurations	For concealment configurations, order BXA-171063-12CF-EDIN-X-FP		

BXA-171063-12CF-EDIN-X



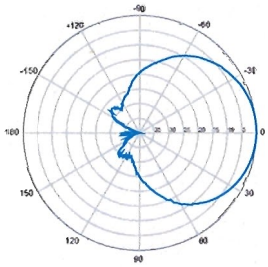
Horizontal | 1710-1880 MHz

BXA-171063-12CF-EDIN-X



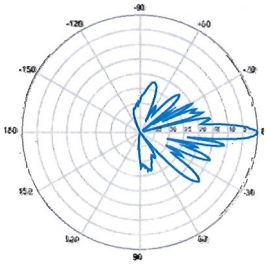
Horizontal | 1850-1990 MHz

BXA-171063-12CF-EDIN-X



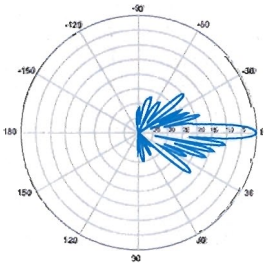
Horizontal | 1920-2170 MHz

BXA-171063-12CF-EDIN-0



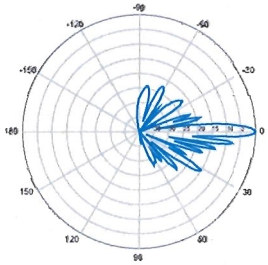
0° | Vertical | 1710-1880 MHz

BXA-171063-12CF-EDIN-0



0° | Vertical | 1850-1990 MHz

BXA-171063-12CF-EDIN-0

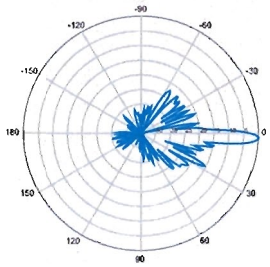


0° | Vertical | 1920-2170 MHz

BXA-171063-12CF-EDIN-X

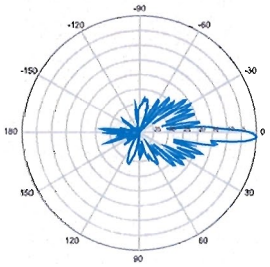
X-Pol | FET Panel | 63° | 19.0 dBi

BXA-171063-12CF-EDIN-2



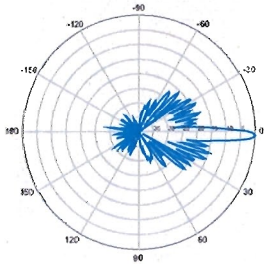
2° | Vertical | 1710-1880 MHz

BXA-171063-12CF-EDIN-2



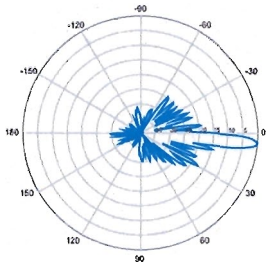
2° | Vertical | 1850-1990 MHz

BXA-171063-12CF-EDIN-2



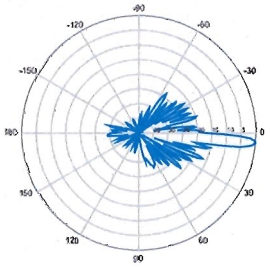
2° | Vertical | 1920-2170 MHz

BXA-171063-12CF-EDIN-5



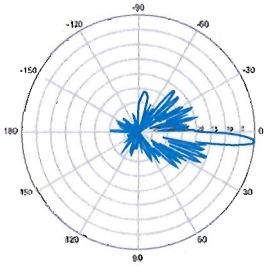
5° | Vertical | 1710-1880 MHz

BXA-171063-12CF-EDIN-5



5° | Vertical | 1850-1990 MHz

BXA-171063-12CF-EDIN-5

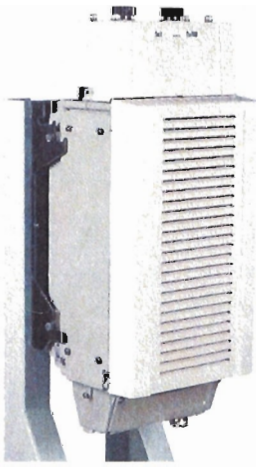


5° | Vertical | 1920-2170 MHz

Alcatel-Lucent RRH2x40-AWS

REMOTE RADIO HEAD

The Alcatel-Lucent RRH2x40-AWS is a high-power, small form-factor Remote Radio Head (RRH) operating in the AWS frequency band (1700/2100MHz - 3GPP Band 4). The Alcatel-Lucent RRH2x40-AWS is designed with an eco-efficient approach, providing operators with the means to achieve high quality and capacity coverage with minimum site requirements.



A distributed eNodeB expands deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of an eNodeB to be installed separately, within the same site or several kilometres apart.

The Alcatel-Lucent RRH2x40-AWS is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information. The Alcatel-Lucent RRH2x40-AWS has two transmit RF paths, 40 W RF output power per transmit path, and is designed to manage up to four-way receive diversity. The device is ideally suited to support macro coverage, with multiple-input multiple-output (MIMO) 2x2 operation in up to 20 MHz of bandwidth.

The Alcatel-Lucent RRH2x40-AWS is designed to make available all the benefits of a distributed eNodeB, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX). The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment or require costly cranes to be employed, leaving coverage holes. However, many of these sites can host an Alcatel-Lucent RRH2x40-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

Fast, low-cost installation and deployment

The Alcatel-Lucent RRH2x40-AWS is a zero-footprint solution and operates noise-free, simplifying negotiations with site property owners and minimizing environmental impacts. Installation can easily be done by a single person because the Alcatel-Lucent RRH2x40-AWS is compact and weighs less than 20 kg (44 lb), eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day — a fraction of the time required for a traditional BTS.

Excellent RF performance

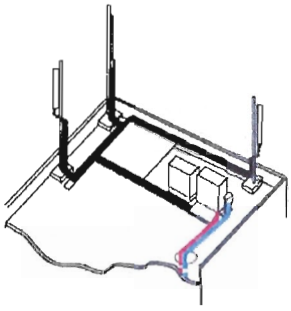
Because of its small size and weight, the Alcatel-Lucent RRH2x40-AWS can be installed close to the antenna. Operators can therefore locate the Alcatel-Lucent RRH2x40-AWS where RF engineering is deemed ideal, minimizing trade-offs between available sites and RF optimum sites. The RF feeder cost and installation costs are reduced or eliminated, and there is no need for a Tower Mounted Amplifier (TMA) because losses introduced by the RF feeder are greatly reduced.
The Alcatel-Lucent RRH2x40-AWS provides more RF power while at the same time consuming less electricity.

Features

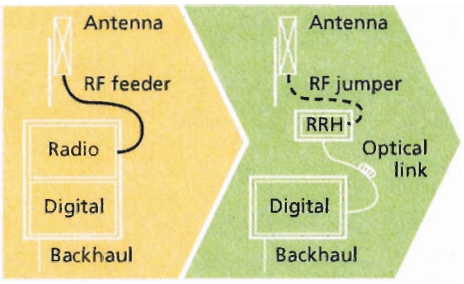
- Zero-footprint deployment
- Easy installation, with a lightweight unit can be carried and set up by one person
- Optimized RF power, with flexible site selection and elimination of a TMA
- Convection-cooled (fanless)
- Noise-free
- Best-in-class power efficiency, with significantly reduced energy consumption

Benefits

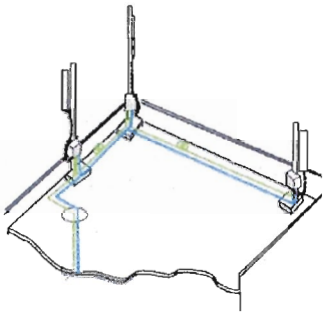
- Leverages existing real estate with lower site costs
- Reduces installation costs, with fewer installation materials and simplified logistics
- Decreases power costs and minimizes environmental impacts, with the potential for eco-sustainable power options
- Improves RF performance and adds flexibility to network planning



Macro



RRH for space-constrained cell sites



Distributed

Technical specifications

Physical dimensions

- Height: 620 mm (24.4 in.)
- Width: 270 mm (10.63 in.)
- Depth: 170m (6.7 in.)
- Weight (without mounting kit): less than 20 kg (44 lb)

Power

- Power supply: -48VDC

Operating environment

- Outdoor temperature range:
  - ¬ With solar load: -40°C to +50°C (-40°F to +122°F)
  - ¬ Without solar load: -40°C to +55°C (-40°F to +131°F)
- Passive convection cooling (no fans)
- Enclosure protection
  - ¬ IP65 (International Protection rating)

RF characteristics

- Frequency band: 1700/2100 MHz (AWS); 3GPP Band 4
- Bandwidth: up to 20 MHz
- RF output power at antenna port: 40 W nominal RF power for each Tx port
- Rx diversity: 2-way or 4-way with optional Rx Diversity module
- Noise figure: below 2.0 dB typical
- Antenna Line Device features
  - ¬ TMA and Remote electrical tilt (RET) support via AISG v2.0

Optical characteristics

Type/number of fibers

- Single-mode variant
  - ¬ One Single Mode Single Fiber per RRH2x, carrying UL and DL using CWDM
  - ¬ Single mode dual fiber (SM/DF)
- Multi-mode variant
  - ¬ Two Multi-mode fibers per RRH2x: one carrying UL, the other carrying DL

Optical fiber length

- Up to 500 m (0.31 mi), using MM fiber
- Up to 20 km (12.43 mi), using SM fiber

Digital Ports and Alarms

- Two optical ports to support daisy-chaining
- Six external alarms

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Alcatel-Lucent RRH2x40-07-U

REMOTE RADIO HEAD

The Alcatel-Lucent RRH2x40-07-U is a high-power, small form-factor Remote Radio Head (RRH) operating in the North American Digital Dividend / 700MHz frequency band (3GPP Band 13). The Alcatel-Lucent RRH2x40-07-U is designed with an eco-efficient approach, providing operators with the means to achieve high quality and capacity coverage with minimum site requirements.

A distributed eNodeB expands deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of an eNodeB to be installed separately, within the same site or several kilometres apart.

The Alcatel-Lucent RRH2x40-07-U is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information. The Alcatel-Lucent RRH2x40-07-U has two transmit RF paths, 40 W RF output power per transmit path, and is designed to manage up to two-way receive diversity. The device is ideally suited to support macro coverage, with multiple-input multiple-output (MIMO) 2x2 operation in up to 10 MHz of bandwidth.

The Alcatel-Lucent RRH2x40-07-U is designed to make available all the benefits of a distributed eNodeB, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX). The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment or require costly cranes to be employed, leaving coverage holes. However, many of these sites can host an Alcatel-Lucent RRH2x40-07-U installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

Fast, low-cost installation and deployment

The Alcatel-Lucent RRH2x40-07-U is a zero-footprint solution and operates noise-free, simplifying negotiations with site property owners and minimizing environmental impacts. Installation can easily be done by a single person because the Alcatel-Lucent RRH2x40-07-U is compact and weights less than 23 kg (50 lb), eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day — a fraction of the time required for a traditional BTS.

Excellent RF performance

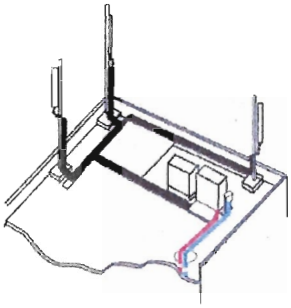
Because of its small size and weight, the Alcatel-Lucent RRH2x40-07-U can be installed close to the antenna. Operators can therefore locate the Alcatel-Lucent RRH2x40-07-U where RF engineering is deemed ideal, minimizing trade-offs between available sites and RF optimum sites. The RF feeder cost and installation costs are reduced or eliminated, and there is no need for a Tower Mounted Amplifier (TMA) because losses introduced by the RF feeder are greatly reduced. The Alcatel-Lucent RRH2x40-07-U provides more RF power while at the same time consuming less electricity.

Features

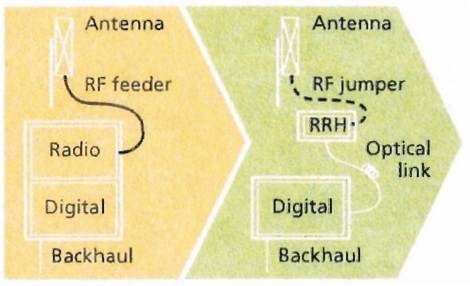
- Zero-footprint deployment
- Easy installation, with a lightweight unit can be carried and set up by one person
- Optimized RF power, with flexible site selection and elimination of a TMA
- Convection-cooled (fanless), noise-free, and heaterless unit
- Best-in-class power efficiency, with significantly reduced energy consumption

Benefits

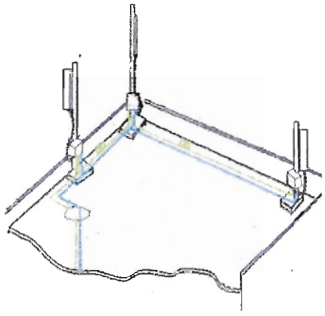
- Leverages existing real estate with lower site costs
- Reduces installation costs, with fewer installation materials and simplified logistics
- Decreases power costs and minimizes environmental impacts, with the potential for eco-sustainable power options
- Improves RF performance and adds flexibility to network planning



Macro



RRH for space-constrained cell sites



Distributed

Technical specifications

Physical dimensions

- Height: 390 mm (15.4 in.)
- Width: 380 mm (15 in.)
- Depth: 210 mm (8.2 in.)
- Weight (without mounting kit): less than 23 kg (50 lb)

Power

- Power supply: -48V

Operating environment

- Outdoor temperature range:
  - ¬ With solar load: -40°C to +50°C (-40°F to +122°F)
  - ¬ Without solar load: -40°C to +55°C (-40°F to +131°F)
- Passive convection cooling (no fans)
- Enclosure protection
  - ¬ IP65 (International Protection rating)

RF characteristics

- Frequency band: 700 MHz; 3GPP Band 13
- Bandwidth: up to 10 MHz
- RF output power at antenna port:
  - ¬ 40 W nominal RF power for each Tx port
- Rx diversity: 2-way or 4-way
- Noise figure: below 2.5 dB typical
- ALD features
  - ¬ TMA
  - ¬ Remote electrical tilt (RET) support (AISG v2.0)

Optical characteristics

Type/number of fibers

- Up to 3.12 Gb/s line bit rate
- Single-mode variant
  - ¬ One SM fiber (9/125 µm) per RRH2x, carrying UL and DL using CWDM (at 1550/1310 nm)
- Multi-mode variant
  - ¬ Two MM fibers (50/125 µm) per RRH2x: one carrying UL, the other carrying DL (at 850 nm)

Optical fiber length

- Up to 500 m (0.31 mi), using MM fiber
- Up to 20 km (12.43 mi), using SM fiber

Alarms and ports

- Six external alarms
- Two optical ports to support daisy-chaining

Alcatel·Lucent

Product Data Sheet HB158-1-08U8-S8J18

HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

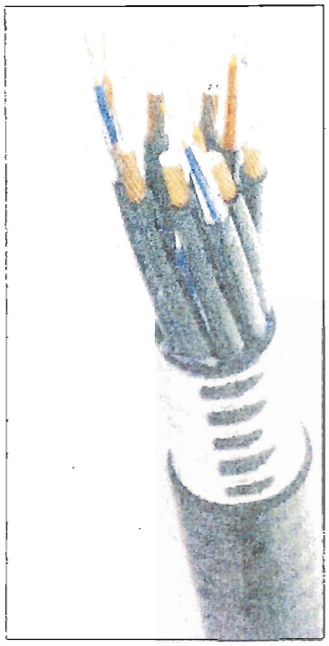


Figure 1: HYBRIFLEX Series

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics – minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket – Ensures long-lasting cable protection

Technical Specifications

Structure			
Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Mechanical Properties			
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
Electrical Properties			
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	.068 (0.205)
DC-Resistance Power Cable, 8.4mm² (8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Fiber Optic Properties			
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[µm]	50/125
Primary Coating (Acrylate)		[µm]	245
Buffer Diameter, Nominal		[µm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL94-V0, UL1666 RoHS Compliant
DC Power Cable Properties			
Size (Power)		[mm² (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm² (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, ICEA S-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Environment			
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

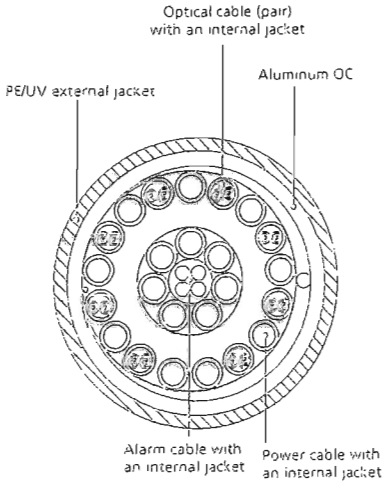
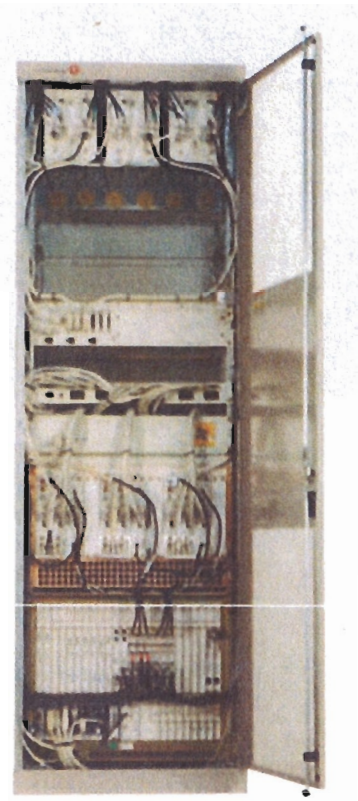


Figure 2: Construction Detail

* This data is provisional and subject to change

Lucent CDMA Modular Cell 4.0B Indoor

For CDMA Networks



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

Features

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

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

Benefits

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

Lucent Technologies
Bell Labs Innovations

Technical Specifications

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

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

MOB-Mod4B-i 0106

Lucent Technologies
Bell Labs Innovations

SD050

GENERAC® | INDUSTRIAL POWER

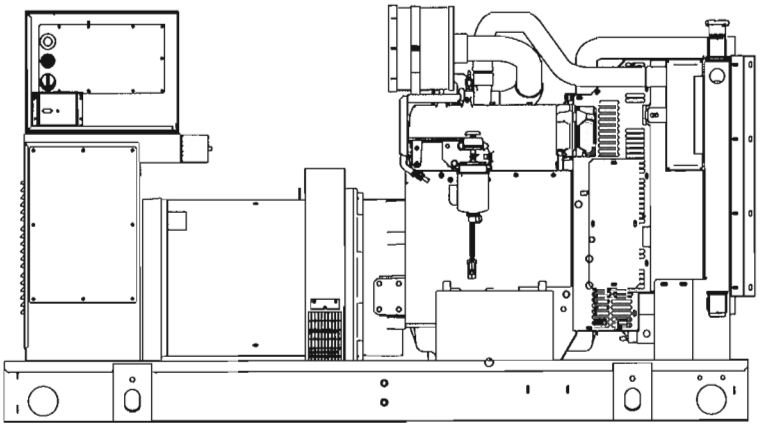
Industrial Diesel Generator Set

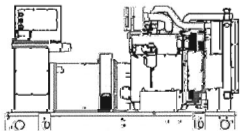
EPA Emissions Certification: Tier IV Interim

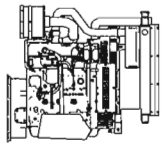
50 kW Diesel

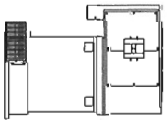
Standby Power Rating
50KW 60 Hz

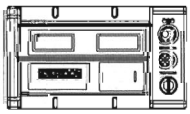
Prime Power Rating
40KW 60 Hz











features benefits

Generator Set

• PROTOTYPE & TORSIONALLY TESTED	▶ PROVIDES A PROVEN UNIT
• UL2200 TESTED	▶ ENSURES A QUALITY PRODUCT
• RHINOCOAT PAINT SYSTEM	▶ IMPROVES RESISTANCE TO ELEMENTS
• WIDE RANGE OF ENCLOSURES AND TANKS	▶ PROVIDES A SINGLE SOURCE SOLUTION

Engine

• EPA TIER COMPLIANT	▶ ENVIRONMENTALLY FRIENDLY
• INDUSTRIAL TESTED, GENERAC APPROVED	▶ FOR INDUSTRIAL APPLICATIONS
• POWER-MATCHED OUTPUT	▶ ENGINEERED FOR PERFORMANCE
• INDUSTRIAL GRADE	▶ IMPROVES LONGEVITY AND RELIABILITY

Alternator

• TWO-THIRDS PITCH	▶ ELIMINATES HARMFUL 3RD HARMONIC
• LAYER WOUND ROTOR & STATOR	▶ IMPROVES COOLING
• CLASS H MATERIALS	▶ HEAT TOLERANT DESIGN
• DIGITAL 3-PHASE VOLTAGE CONTROL	▶ FAST AND ACCURATE RESPONSE

Controls

• ENCAPSULATED BOARD W/ SEALED HARNESS	▶ EASY, AFFORDABLE REPLACEMENT
• 4-20mA VOLTAGE-TO-CURRENT SENSORS	▶ NOISE RESISTANT 24/7 MONITORING
• SURFACE-MOUNT TECHNOLOGY	▶ PROVIDES VIBRATION RESISTANCE
• ADVANCED DIAGNOSTICS & COMMUNICATIONS	▶ HARDENED RELIABILITY

primary codes and standards

NEMA

SD050

application and engineering data

ENGINE SPECIFICATIONS

General

Make	Deere
EPA Emissions Compliance	Tier III
EPA Emissions Engine Reference*	_JDXL03.0113
Cylinder #	4
Type	In-Line
Displacement - L (cu. in.)	2.4 (149)
Bore - mm (in.)	86 (3.39)
Stroke - mm (in.)	105 (4.13)
Compression Ratio	18:1
Intake Air Method	Turbocharged
Number of Main Bearings	5
Connecting Rod Type	Dropped Forged Steel
Cylinder Head Type	Cast Iron, OHV
Piston Type	4 - Alloy Aluminum
Crankshaft Type	Forged Steel

*Underscore Indicates year designation

Valve Train

Lifter Type	Solid
Intake Valve Material	High Temp
Exhaust Valve Material	High Temp

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	+/- 0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Cartridge
Crankcase Capacity - L (gal)(qts)	7.1 (1.875)(7.5)

Cooling System

Cooling System Type	Closed Recovery
Water Pump	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Blade Number	6
Fan Diameter mm (in.)	457.2 (18.0)
Coolant Heater Wattage	1000
Coolant Heater Standard Voltage	120VAC

Fuel System

Fuel Type	#2 Diesel (min. Cetane #40)
Fuel Specifications	ASTM
Fuel Filtering (microns)	10
Fuel Inject Pump Make	Bosch (VE)
Fuel Pump Type	Engine Driven Gear
Injector Type	Pintel - 2100psi
Engine Type	Pre-Combustion
Fuel Supply Line - mm (in.)	6.35 (0.25)
Fuel Return Line - mm (in.)	3.17 (0.125)

Engine Electrical System

System Voltage	12VDC
Battery Charging Alternator	20A
Battery Size (at 0 oC)	700CCA/90AH
Battery Group	27F
Battery Voltage	(1) 12VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Model	390
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<3%
Telephone Interference Factor (TIF)	<50
Alternator Type	Self-Ventilated, Drip-Proof
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Load Capacity - Standby	100%
Load Capacity - Prime	110%
Prototype Short Circuit Test	Y

Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	+/-0.25%

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99
NFPA 110
ISO 8528-5
ISO 1708A.5
ISO 3046
BS5514
SAE J1349
DIN6271
IEEE C62.41 TESTING
NEMA ICS 1

Rating Definitions:
Standby -- Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)
Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.

SD050 operating data (60Hz)

POWER RATINGS (kW)

	STANDBY	PRIME
Single-Phase 120/240VAC @1.0pf	50	44
Three-Phase 120/208VAC @0.8pf	50	44
Three-Phase 120/240VAC @0.8pf	50	44
Three-Phase 277/480VAC @0.8pf	50	44
Three-Phase 600VAC @0.8pf	50	44

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

		480VAC						208/240VAC					
Alternator*	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	50	34	52	69	86	103	120	25.5	39	51.75	64.5	77.25	90
Upsize 1	60	42	63	83	104	125	146	31.5	47.25	62.25	78	93.75	109.5
Upsize 2	NA	-	-	-	-	-	-	-	-	-	-	-	-

*All Generac industrial alternators utilize Class H materials. Standard alternator provides less than or equal to Class F temperature rise. Upsize 1 provides less than or equal to Class B temperature rise. No Upsize 2 is available for this node.

FUEL

Fuel Pump Lift - in (m)
36 (0.9)

Fuel Consumption Rates

STANDBY		PRIME	
Percent Load	Gallons/Hour (liters/Hour)	Percent Load	Gallons/Hour (liters/Hour)
25%	1.1 (4.2)	25%	1.0 (3.8)
50%	2.2 (8.3)	50%	1.9 (7.2)
75%	3.2 (12.1)	75%	2.8 (10.6)
100%	4.2 (15.9)	100%	3.7 (14.0)

COOLING

Coolant Capacities - Gal (L)	
System	4.5(17.0)
Engine	2.75(10.4)
Radiator	

		STANDBY	PRIME
Coolant Flow per Minute	gpm (lpm)	28(106)	28(106)
Heat rejection to Coolant	BTU/min	135,900	109,000
Inlet Air	cfm (m3/hr)	7500(212.4)	7500(212.4)
Max. Operating Radiator Air Temp	F° (C°)	60(140)	60(140)
Max. Operating Ambient Temperature	F° (C°)	50(122)	50(122)

COMBUSTION AIR REQUIREMENTS

		STANDBY	PRIME
Flow at Rated Power	cfm (m3/min)	166(4.7)	140(4.0)

EXHAUST

Exhaust Outlet Size - N.P.T. (female)
2.5"

		STANDBY	PRIME
Exhaust Flow (Rated Output)	cfm (m3/hr)	448(12.7)	380(10.8)
Maximum Backpressure	oHg (Kpa)	2.2	2.2
Exhaust Temp (Rated Output)	oF (oC)	1044(562)	925(496)

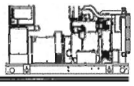
ENGINE

		STANDBY	PRIME
Rated Engine Speed	rpm	1800	1800
Horsepower at Rated kW	hp	79	64
Piston Speed	ft/min (m/min)	1536	1536
BMEP	psi	189	151

Deration -- Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

SD050

standard features and options



GENERATOR SET

● Genset Vibration Isolation	Std
○ Seismic Rated Vibration Isolators	Opt
○ Extended warranty	Opt
○ Export boxing	Opt
○ Gen-Link Communications Software	Opt
○ Steel Enclosure	Opt
○ Aluminum Enclosure	Opt

ENGINE SYSTEM

General

● Oil Drain Extension	Std
○ Oil Make-Up System	Opt
○ Oil Heater	Opt

Fuel System

● Fuel lockoff solecnoid	Std
● Secondary fuel filter	Std
● Stainless steel flexible exhaust connection	Std
● Industrial Exhaust Silencer	Std
○ Critical Exhaust Silencer	Opt
○ Flexible fuel lines	Opt
○ Primary fuel filter	Opt
○ Single Wall Tank (Export Only)	-
○ UL 142 Fuel Tank	Opt
○ Internal Base Tank	

Cooling System

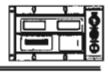
○ 120VAC Coolant Heater	Opt
○ 208VAC Coolant Heater	Opt
○ 240VAC Coolant Heater	Opt
○ Other Coolant Heater_____	-
● Closed Coolant Recovery System	Std
● UV/Ozone resistant hoses	Std
● Factory-Installed Radiator	Std
● Radiator Drain Extension	Std

Engine Electrical System

● Battery charging alternator	Std
● Battery cables	Std
● Battery tray	Std
○ Battery box	Opt
○ Battery heater	Opt
● Solenoid activated starter motor	Std
● Air cleaner	Std
● Fan guard	Std
● Radiator duct adapter	Std
○ 2A battery charger	Opt
○ 10A UL float/equalize battery charger	Opt
● Rubber-booted engine electrical connections	Std

ALTERNATOR SYSTEM

● UL2200 Generator Protector	Std
○ Main Line Circuit Breaker	Opt
○ 2nd Circuit Breaker	Opt
○ 3rd Circuit Breaker	-
○ Alternator Upsizing	Opt
○ Anti-Condensation Heater	Opt
○ Tropical coating	Opt
○ Voltage changeover switch	Opt



CONTROL SYSTEM

Control Panel

● Digital H Control Panel - Dual 4x20 Display	Std
○ Digital G-100 Control Panel - Touchscreen	na
○ Digital G-200 Paralleling Control Panel - Touchscreen	na
● Programmable Crank Limiter	Std
○ 21-Light Remote Annunciator	Opt
○ Remote Relay Panel (8 or 16)	Opt
● 7-Day Programmable Exerciser	Std
● Special Applications Programmable PLC	Std
● RS-232	Std
● RS-485	Std
● All-Phase Sensing DVR	Std
● Full System Status	Std
● Utility Monitoring (Req. H-Transfer Switch)	Std
● 2-Wire Start Compatible	Std
● Power Output (kW)	Std
● Power Factor	Std
● Reactive Power	Std
● All phase AC Voltage	Std
● All phase Currents	Std
● Oil Pressure	Std
● Coolant Temperature	Std
● Coolant Level	Std
○ Oil Temperature	Opt
● Fuel Pressure	Std
● Engine Speed	Std
● Battery Voltage	Std
● Frequency	Std
● Date/Time Fault History (Event Log)	Std
● UL2200 Generator Protector	Std
○ Low-Speed Exercise	-
● Isochronous Governor Control	Std
● -40deg C - 70deg C Operation	Std
● Waterproof Plug-In Connectors	Std
● Audible Alarms and Shutdowns	Std
● Not in Auto (Flashing Light)	Std
● On/Off/Manual Switch	Std
● E-Stop (Red Mushroom-Type)	Std
○ Remote E-Stop (Break Glass-Type, Surface Mount)	Opt
○ Remote E-Stop (Red Mushroom-Type, Surface Mount)	Opt
○ Remote E-Stop (Red Mushroom-Type, Flush Mount)	Opt
● NFPA 110 Level I and II (Programmable)	Std
● Remote Communication - RS232	Std
○ Remote Communication - Modem	Opt
○ Remote Communication - Ethernet	Opt
○ 10A Run Relay	Opt

Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)

○ Low Fuel	Opt
● Oil Pressure (Pre-programmed Low Pressure Shutdown)	Std
● Coolant Temperature (Pre-programmed High Temp Shutdo	Std
● Coolant Level (Pre-programmed Low Level Shutdown)	Std
● Oil Temperature	Std
● Fuel Pressure	Std
● Engine Speed (Pre-programmed Overspeed Shutdown)	Std
● Voltage (Pre-programmed Overvoltage Shutdown)	Std
● Battery Voltage	Std

Other Options

○ _____

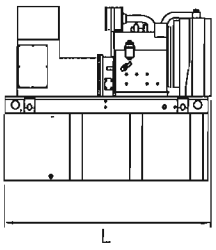
○ _____

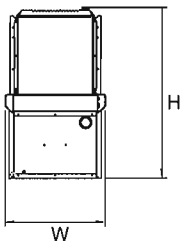
○ _____

GENERAC | INDUSTRIAL POWER

SD050

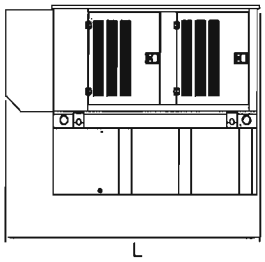
dimensions, weights and sound levels

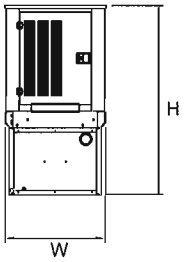




OPEN SET

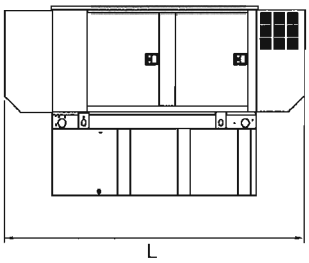
	L	W	H	WT	dBA*
NO TANK	93	38	43	1535	84
8	93	38	56	2057	
12	93	38	56	2057	
24	93	38	68	2293	
36	93	38	68	2293	
48	93	38	80	2517	
72	93	38	80	2517	
96	128	49	80	3500	

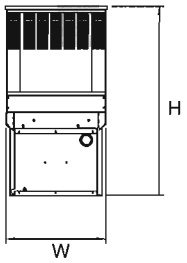




WEATHERPROOF ENCLOSURE

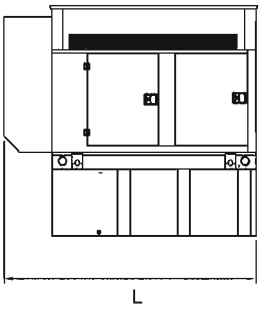
	L	W	H	WT	dBA*
NO TANK	95	38	46	1971	80
8	95	38	59	2493	
12	95	38	59	2493	
24	95	38	71	2729	
36	95	38	71	2729	
48	95	38	83	2953	
72	95	38	83	2953	
96	128	49	83	3936	

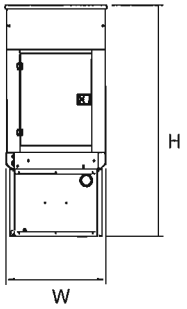




LEVEL 1 SOUND ENCLOSURE

	L	W	H	WT	dBA*
NO TANK	113	38	46	2230	70
8	113	38	59	2752	
12	113	38	59	2752	
24	113	38	71	2988	
36	113	38	71	2988	
48	113	38	83	3212	
72	113	38	83	3212	
96	128	49	83	4195	





LEVEL 2 SOUND ENCLOSURE

	L	W	H	WT	dBA*
NO TANK	95	38	58	1995	68
8	95	38	58	2517	
12	95	38	58	2517	
24	95	38	57	2753	
36	95	38	58	2753	
48	95	38	57	2977	
72	95	38	58	2977	
96	128	49	83	3960	

*All measurements are approximate and for estimation purposes only. Weights are without fuel in tank. Sound levels measured at 23ft (7m). Does not account for ambient site conditions.

Tank Options

MDEQ	OPT
Florida DERM/DEP	OPT
Chicago Fire Code	OPT
IFC Certification	CALL
ULC	CALL

Other Custom Options Available from your Generac Industrial Power Dealer

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Cellco Partnership d/b/a Verizon Wireless
Trumbull SE 4 Facility
Trumbull, Connecticut

Site Search Summary

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 southeast Trumbull are provided below.

Site Search Process

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

The list of available locations may be further reduced if, after preliminary negotiations, the property owners withdraw a site from further consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have greater potential for adverse environmental effects and fewer benefits to the public (i.e., those requiring taller towers, possibly with lights; those with substantial adverse environmental impacts, or in densely populated residential areas; and those with limited ability to share space with other public or private telecommunications service providers). 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.

Need

Within approximately one and a half miles of the proposed Trumbull SE 4 cell site, Cellco maintains three (3) existing telecommunications facilities, identified as its Stratford North, Trumbull East and Trumbull 2 cell sites. Cellco's Stratford North facility consists of antennas at the 98-foot level on an existing 110-foot tower at 630 James Farm Road in Stratford. Cellco's Trumbull East facility consists of antennas at the 84-foot level on an existing water tank at 605 Huntington Street in Shelton. Cellco's Trumbull 2 facility consists of antennas on the roof of the Trumbull Marriott building at 180 Hawley Lane in Trumbull. These existing facilities currently provide wireless coverage in the area around the Trumbull Corporate Park. Cellco's Trumbull 2, Stratford North and, to a lesser extent, Trumbull East facilities are,

however, operating at or near their current capacity limits, resulting in a significant reduction in reliable wireless service in the area. Unfortunately, there are no other existing towers or other sufficiently tall structures available in this area. Construction of a new tower, therefore, is required to resolve Cellco's service problems. Because the proposed tower site provides "capacity" relief to its network, Cellco can keep the overall height of the structure lower than that which might be needed for a pure "coverage site".

Identification of the Trumbull SE 4 Search Area

The purpose of the proposed Trumbull SE 4 Facility is to provide additional network capacity along portions of Route 8 in the Trumbull Corporate Park, and to the surrounding residential neighborhoods in southeast Trumbull. (*See* attached Search Area Map). Because the primary purpose of the Trumbull SE 4 facility is to relieve existing capacity problems at the two closest sites, the search ring issued is small and located approximately the same distance from the two existing sites.

Sites Investigated

Cellco identified and investigated a total of seven (7) sites in the Trumbull Corporate Park. A listing of the sites investigated is provided below.

1. **Pilot Corporation of America – 60 Commerce Drive, Trumbull, CT** – This is the site selected as the Trumbull SE 4 cell site.

2. **Consumer Products LLC – 25 Commerce Drive, Trumbull, CT** – The landowner was not interested in leasing space to Cellco for the development of a cell site.

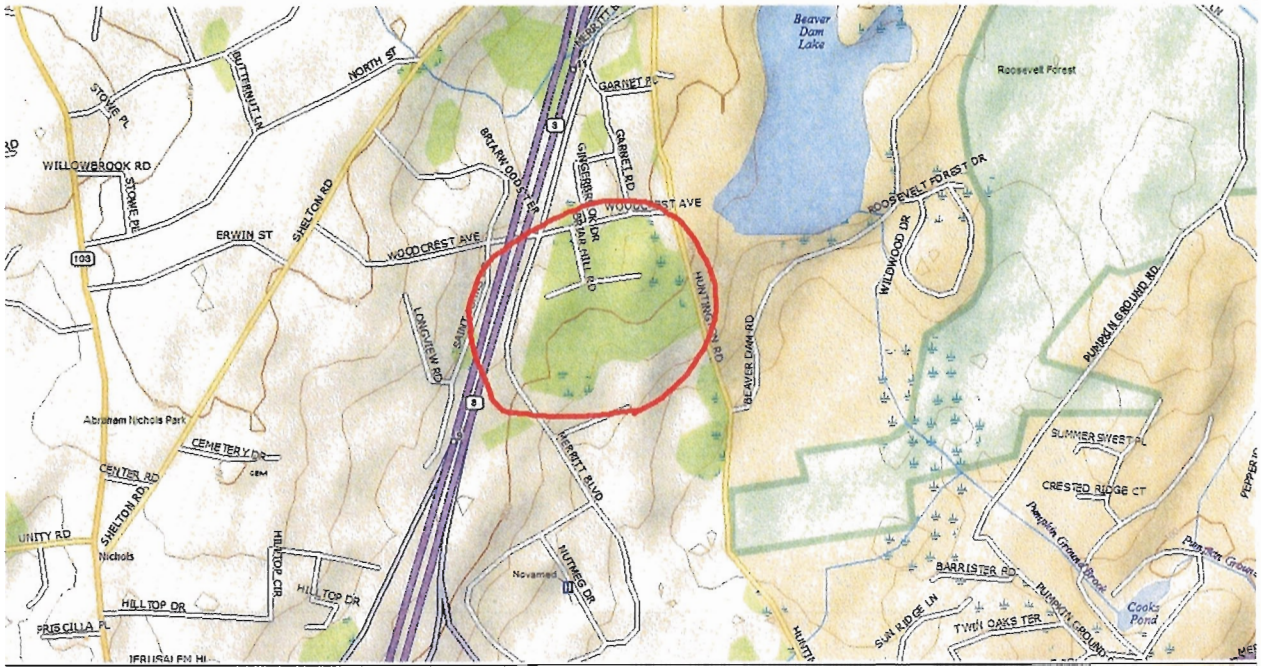
3. **Consumer Products LLC – 45 Commerce Drive, Trumbull, CT** – The landowner was not interested in leasing space to Cellco for the development of a cell site.

4. **Consumer Products LLC – 50 Commerce Drive, Trumbull, CT** – The landowner was not interested in leasing space to Cellco for the development of a cell site.

5. **Conopco Inc. – 20 Merritt Boulevard, Trumbull, CT** – The landowner was not interested in leasing space to Cellco for the development of a cell site.

6. **Conopco Inc. – 40 Merritt Boulevard, Trumbull, CT** – The landowner was not interested in leasing space to Cellco for the development of a cell site.

7. **Belman Corporation – 55 Merritt Boulevard, Trumbull, CT** – The landowner was not interested in leasing space to Cellco for the development of a cell site.



Guidelines for the SAR are shown in the above map to emphasize areas where existing structures may exist.

Source: DeLorme Maps

Photographic Simulations

TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

Prepared in February 2014 by:
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06141

Prepared for Verizon Wireless

ALL-POINTS
TECHNOLOGY CORPORATION

Project Introduction

Cellco Partnership (d/b/a "Verizon Wireless") proposes to construct and operate a wireless telecommunications facility ("Facility") at 60 Commerce Drive in the Town of Trumbull, Fairfield County, Connecticut (identified herein as the "Host Property"). All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate views associated with the proposed Facility with a two mile radius of the proposed site location ("Study Area").

Site Description and Setting

The Host Property is a 14± acre parcel located at the eastern end of Commerce Drive, within a large commercial/industrial complex just north of the Merritt Parkway (CT Route 15) and east of Route 8. The Trumbull Assessor's Office identifies the Host Property as Map K09, Lot 20. The Host Property is developed with a large abandoned building (formerly occupied by Pilot Pen), parking areas and a pond. Residential development occurs to the north and east.

The proposed Facility would be located north of the largest building occupying the parcel, within an area that borders a forested block of land. The Facility would include an 80-foot tall monopole within a fence-enclosed, gravel-base 24-foot by 82-foot equipment compound, at a ground elevation of approximately 170 feet above mean sea level ("AMSL"). The compound area would also be outfitted with a 12-foot by 30-foot equipment shelter and supporting equipment.

The Study Area consists of a mix of commercial/industrial development (to the west and south), residential homes (primarily north and east), and two major transportation routes (farther to the west and south). In addition to the Town of Trumbull, the Study Area also includes parts of the neighboring municipalities of Stratford, Shelton and Bridgeport.

METHODOLOGY

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of potential visibility throughout the entire Study Area including private properties and other areas inaccessible for direct observations. The in-field analyses included a reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory visible and nonvisible locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

Two computer modeling tools are used to calculate those areas from which at least the top of the proposed Facility is estimated to be visible: IDRISI image analysis program (developed by Clark Labs, Clark University) and ArcGIS®, developed by Environmental Systems Research Institute, Inc. Project- and Study Area-specific data were incorporated into the computer model, including the Facility's location,

height, and ground elevation, as well as the surrounding topography and existing vegetation which are two primary features that can block direct lines of sight. Information used in the model included LiDAR[1]-based digital elevation data and customized land use data layers developed specifically for this analysis. The LiDAR-based Digital Elevation Model ("DEM") represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in the year 2000 and has a horizontal resolution of ten (10) feet. In addition, multiple land use data layers were created from National Agricultural Imagery Program (USDA) aerial photography (1-foot resolution, flown in 2012) using IDRISI image processing tools. The IDRISI tools develop light reflective classes defined by statistical analysis of individual pixels, which are then grouped based on common reflective values such that distinctions can be made automatically between deciduous and coniferous tree species, as well as grassland, impervious surface areas, surface water and other distinct land use features. This information is manually cross-checked with the recent USGS topographic land characteristics to quality assure the imaging analysis.

The Study Area includes a total of approximately 8,042 acres. The tree canopy within the Study Area consists mainly of mixed deciduous hardwood species interspersed with scattered stands of conifers, and occupies approximately 6,403 acres (representing nearly 80% of the Study Area). Topography within the Study Area ranges in ground elevations from approximately 20 feet AMSL to 400 feet AMSL and is generally characterized as rolling to hilly terrain.

Once the data layers were entered, image processing tools were applied and overlaid onto USGS topographic base maps and aerial photographs to achieve an estimate of locations where the Facility might be visible. First, only the topography data layer (DEM) was incorporated to evaluate potential visibility with no intervening vegetative screening. The initial omission of the forest cover data layer results in an excessive over-prediction, but provides an opportunity to identify and evaluate those areas with potentially direct sight lines toward the Facility. Eliminating the tree canopy altogether, as performed in the preliminary analysis by assigning a 1-foot height value to this data layer, exaggerates areas of visibility because it assumes unobstructed sight lines everywhere but in those locations where intervening topography rises above the height of the proposed Facility. However, using this technique not only allows for an initial identification of direct sight lines, but also to gain some insight regarding seasonal views when the leaves are not on the trees.

A purposely low average tree canopy height of 55 feet was subsequently incorporated into the forest data layer and added to the DEM for a second iteration of the visibility map. The model was then queried to determine where the top of the Facility can be seen from any point(s) within the Study Area, given the intervening existing topography and vegetation. The results of the preliminary analysis provide a representation of those areas where portions of the Facility may potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of 5 feet above the ground and the combination of intervening topography and tree canopy (year-round) and tree trunks (seasonally, when the leaves are off the deciduous trees). The computer model then outputs shaded areas of predicted visibility that identify locations from within the Study Area where the proposed Facility may potentially be visible. The Facility however may not necessarily be visible from all locations within those shaded areas. It is important to note that the computer model cannot account for mass density, the height, diameter and branching variability of individual trees, or the degradation of views that occur with distance. In addition,

[1] LiDAR is an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar, but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

each point – or pixel - represents about one meter (3.28 feet) in area, and thus cannot predict visibility from all viewpoints through all possible obstacles. Although large portions of the predicted viewshed may theoretically offer visibility of the Facility, because of these unavoidable limitations the quality of those views may not be sufficient for the human eye to recognize the tower or discriminate it from other surrounding objects. Visibility also varies seasonally with increased, albeit obstructed, views occurring during "leaf-off" conditions. Beyond the density of woodlands found within the given Study Area, each individual tree has its own unique trunk, pole timber and branching pattern characteristics that provide varying degrees of screening in leafless conditions which cannot be adequately modeled. Thus, modeling for seasonal variations of visibility generally over-predicts the viewshed in "leaf-off" conditions, even when incorporating conservative constraints into the model (i.e., assuming trees are simply vertical poles with no distinct branching pattern). Therefore, field verification remains a necessary component for cross-checking the model's initial results.

Additional data was reviewed and incorporated into the visibility analysis, including protected private and public open space, parks, recreational facilities, hiking trails, schools, and historic districts. Numerous trails systems are located within the Study Area. The Merritt Parkway is listed on the National Register of Historic Places as a Scenic Byway.

In-Field Activities

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a balloon float, vehicular and pedestrian reconnaissance, and photo-documentation.

Balloon Float and Field Reconnaissance

A balloon float and field reconnaissance were conducted on January 16, 2014 to obtain photographs for use in this report. The balloon float consisted of raising an approximately four-foot diameter, red helium-filled balloon tethered to a string height of 80 feet above ground level ("AGL") at the proposed Facility location. Weather conditions were favorable for the in-field activities, with calm winds (less than 3 miles per hour) and overcast skies. Once the balloon was secured, APT conducted a Study Area reconnaissance by driving along the local and State roads and other publicly accessible locations to document and inventory where the balloon could be seen above/through the tree mast and canopy. Visual observations from the reconnaissance were also used to evaluate the results of the preliminary visibility mapping and identify any discrepancies in the initial modeling.

During the balloon float and in-field activities, several trees were randomly surveyed using a Suunto Tandem clinometer to ascertain their heights. The heights of trees adjacent to the site were field measured to document the surrounding canopy elevation. Numerous off-site locations were also selected to obtain tree canopy heights, including along roadways, wooded lots, and high- and low-lying areas to provide for the irregularities associated with different land characteristics and uses found within the Study Area. The average canopy height was developed based on these measurements and comparative observations, in this case approximately 65 feet AGL. Information obtained during the balloon float was subsequently incorporated into the computer model to refine the visibility map.

Photographic Documentation

During the field reconnaissance, observations of the balloon were recorded and photo-documented to inventory those areas where it was and was not visible. Photographs were obtained from several vantage points to document the view towards the Facility.

At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") equipment. Photographs were taken with a Nikon D-3000 digital camera body and Nikon 18 to 135 mm zoom lens, with the lens set to 50 mm. A 50 mm focal length best approximates the relation of sizes between objects similar to what the human eye might perceive.

> *"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."*[2]

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the balloon float, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over-predict visibility. The revised average tree canopy height data (65 feet AGL) was merged with the DEM and added to the base ground elevations of the forested areas data layer. Once the additional data was integrated into the model, APT re-calculated the visibility of the proposed Facility from within the Study Area to produce the final visibility map.

Photographic Simulations

Photographic simulations were generated to portray scaled renderings of the proposed Facility from ten (10) representative locations where the proposed Facility would be visible either on a year-round or seasonal basis. Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the site area and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs[3].

Photo-documentation of the balloon float and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The balloon float photos provide visual reference points for the approximate height and location of the proposed Facility relative to the scene. The photo-simulations are intended to provide the reader with a general understanding of the different views that might be achieved of the Facility. It is important to consider that the publicly-accessible locations selected are typically representative of a "worst case" scenario. They were chosen to present unobstructed view lines (wherever possible), are static in nature and do not necessarily fairly characterize the prevailing

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

[3] As a final step, the accuracy and scale of select simulations are tested against photographs of similar existing facilities with recorded camera position, focal length, photo location, and tower location.

views from all locations within a given area. From several locations, moving a few feet in any direction will result in a far different perspective of the Facility than what is presented in the photographs. In several cases, a view of the Facility may be limited to the immediate area of the specific photo location.

For presentation purposes in this report, the photographs were taken with a 50 mm focal length and produced in an approximate 7-inch by 10.5-inch format. The simulations provide a representation of the Facility under similar settings as those encountered during the balloon float and reconnaissance. Views of the Facility can change substantially throughout the season and are dependent on environmental conditions, including (but not necessarily limited to) weather, light conditions, seasons, time of day, and the viewer location.

Photograph Locations

The table below summarizes characteristics of the photographs and simulations presented in the attachment to this report including a description of each location, view orientation, the distance from where the photo was taken relative to the proposed Facility and the general characteristics of that view. The photo locations are depicted on the visibility analysis maps provided as attachments to this report.

View	Location	Orientation	Distance To Site	View Characteristics
1	Entrance to Pilot Pen	Northeast	±0.10 Mile	Year-round
2	Adjacent to #16 Twin Circle Drive	South	±0.12 Mile	Year-round
3	Adjacent to #41 Twin Circle Drive	Southeast	±0.17 Mile	Seasonal
4	Adjacent to #27 Twin Circle Drive	Southeast	±0.15 Mile	Seasonal
5	St. Johns Drive	Northeast	±0.38 Mile	Year-round
6	Merritt Boulevard	Northeast	±0.21 Mile	Year-round
7	Adjacent to #2771 Huntington Road	Northwest	±0.22 Mile	Seasonal
8	Adjacent to #2975 Huntington Road	Southwest	±0.09 Mile	Year-round
9	Beaver Dam Road	Southwest	±0.43 Mile	Not visible
10	Beaver Dam Road at Huntington Road Intersection	Northwest	±0.15 Mile	Seasonal
11	Host Property	Northwest	±0.12 Mile	Year-round

Visibility Analysis Results

Results of this analysis are graphically displayed on the visibility analysis maps provided in the attachment at the end of this report. The maps include a photolog that depict the photo locations.

In general, the combination of the relatively low height of the Facility, rolling terrain and mature forest results in minimizing the overall visibility throughout the Study Area, limiting views to select areas within 0.5 mile or less of the Host Property. Areas from where the proposed Facility would be visible above the tree canopy year-round comprise a total of approximately 61 acres. When the leaves are off the trees, seasonal views through intervening tree trunks and branches are anticipated to occur over an

additional 144± acres. Being located within a commercial/industrial park setting, numerous potential visual receptors are other business tenants (photograph locations 1, 5 and 6 for example).

The Host Property is separated from residential areas to the north, and to a lesser degree eastward, by mature stands of mostly deciduous trees that serve to effectively obstruct direct lines of sight, even during those months of year when there is no foliage. Locations to the north are buffered by a dense tract of woods 500± feet in width (see photographs 3 and 4 as examples). Seasonal views are heavily screened by the intervening trees. To the east, six abutting residential parcels along Huntington Road have a narrower tree buffer (about 50 to 100 feet wide) separating them from the Host Property's parking lot. However, several of the intervening trees are conifers which assist in breaking up direct lines of sight throughout the year. Photo locations 7, 8 and 10 provide representative examples of those views. Once beyond the immediate vicinity of the Host Property, views diminish rapidly. No views would be achieved from along the Merritt Parkway, which lies approximately 0.6 mile to the south.

The visibility maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography and an assumed tree canopy height of 65 feet. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the Host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

Proximity to Schools And Commercial Child Day Care Centers

No schools or commercial child day care centers are located within 250 feet of the Host Property. The nearest school is Bunnell High School, located at One Bulldog Avenue in Stratford, approximately 1.44 miles to the southwest. The nearest commercial child day care center is Huntington Point Child Development Center, located at 1079 Bridgeport Avenue in Shelton, approximately 0.83 mile to the north. No views of the Facility are anticipated from either of these locations.

ATTACHMENTS

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**ENTRANCE TO PILOT PEN PROPERTY**	**NORTHEAST**	**+/- 0.10 MILE**	**YEAR ROUND**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**ENTRANCE TO PILOT PEN PROPERTY**	**NORTHEAST**	**+/- 0.10 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**ADJACENT TO #16 TWIN CIRCLE DRIVE**	**SOUTH**	**+/- 0.12 MILE**	**YEAR ROUND**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**ADJACENT TO #16 TWIN CIRCLE DRIVE**	**SOUTH**	**+/- 0.12 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**ADJACENT TO #41 TWIN CIRCLE DRIVE**	**SOUTHEAST**	**+/- 0.17 MILE**	**SEASONAL**

DOCUMENTATION

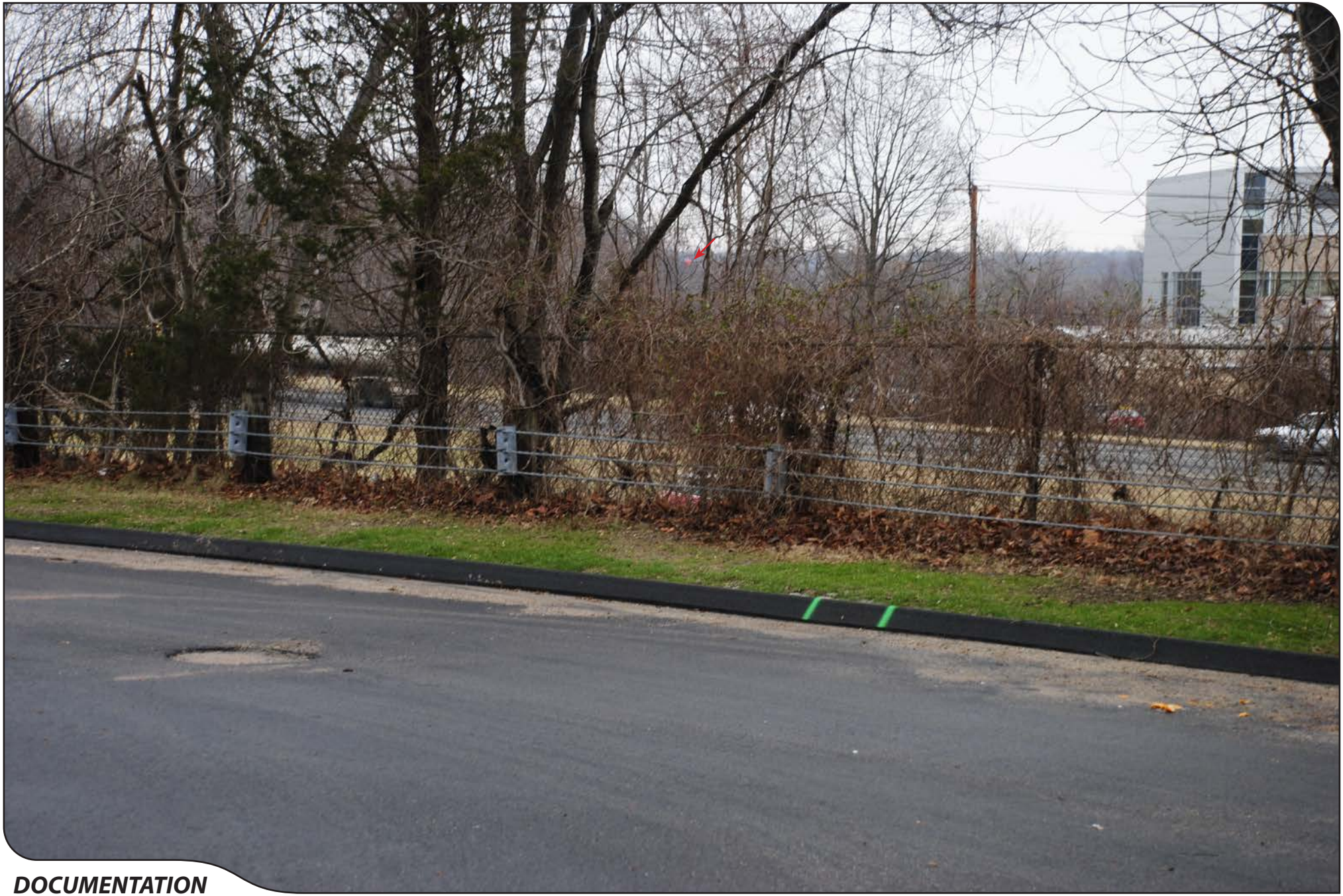
PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**ADJACENT TO #27 TWIN CIRCLE DRIVE**	**SOUTHEAST**	**+/- 0.15 MILE**	**SEASONAL**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**ADJACENT TO #27 TWIN CIRCLE DRIVE**	**SOUTHEAST**	**+/- 0.15 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**ST. JOHNS DRIVE**	**NORTHEAST**	**+/- 0.38 MILE**	**YEAR ROUND**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**ST. JOHNS DRIVE**	**NORTHEAST**	**+/- 0.38 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

verizonwireless

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**MERRITT BOULEVARD**	**NORTHEAST**	**+/- 0.21 MILE**	**YEAR ROUND**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**MERRITT BOULEVARD**	**NORTHEAST**	**+/- 0.21 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**ADJACENT TO #2771 HUNTINGTON ROAD**	**NORTHWEST**	**+/- 0.22 MILE**	**SEASONAL**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**ADJACENT TO #2771 HUNTINGTON ROAD**	**NORTHWEST**	**+/- 0.22 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**ADJACENT TO #2975 HUNTINGTON ROAD**	**SOUTHWEST**	**+/- 0.09 MILE**	**YEAR ROUND**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**ADJACENT TO #2975 HUNTINGTON ROAD**	**SOUTHWEST**	**+/- 0.09 MILE**	**YEAR ROUND**

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	**BEAVER DAM ROAD**	**SOUTHWEST**	**+/- 0.43 MILE**	**NOT VISIBLE**

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	**BEAVER DAM ROAD AT INTERSECTION WITH HUNTINGTON ROAD**	**NORTHWEST**	**+/- 0.15 MILE**	**SEASONAL**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	**BEAVER DAM ROAD AT INTERSECTION WITH HUNTINGTON ROAD**	**NORTHWEST**	**+/- 0.15 MILE**	**SEASONAL**

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DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	**HOST PROPERTY**	**NORTHWEST**	**+/- 0.12 MILE**	**YEAR ROUND**

SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	**HOST PROPERTY**	**NORTHWEST**	**+/- 0.12 MILE**	**YEAR ROUND**

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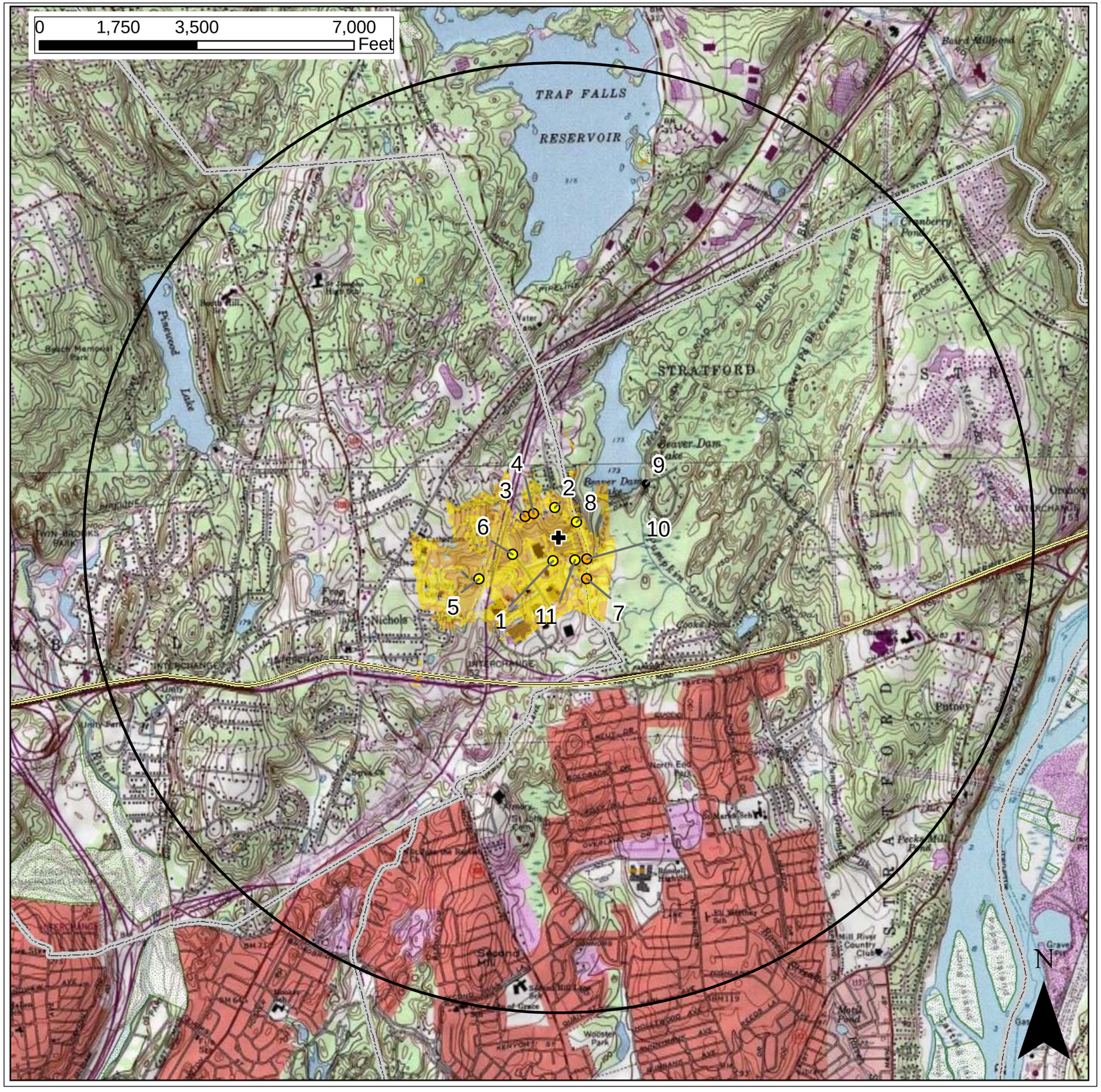
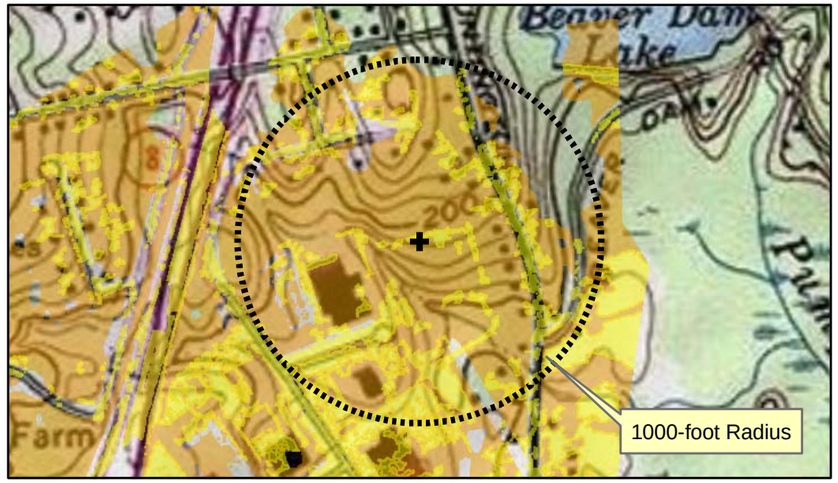
verizonwireless





Visibility Analysis – Topo Base

Proposed Wireless Telecommunications Facility
Trumbull SE 4
60 Commerce Drive, Trumbull, CT

Proposed facility height is 80 feet AGL.
Existing tree canopy height estimated as 65 feet.
Study area encompasses a two-mile radius and includes 8,042 acres of land.

Map compiled 02/09/2014

Map information field verified by APT on 01/16/2014.

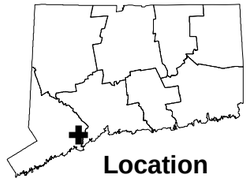
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower

Photo Locations

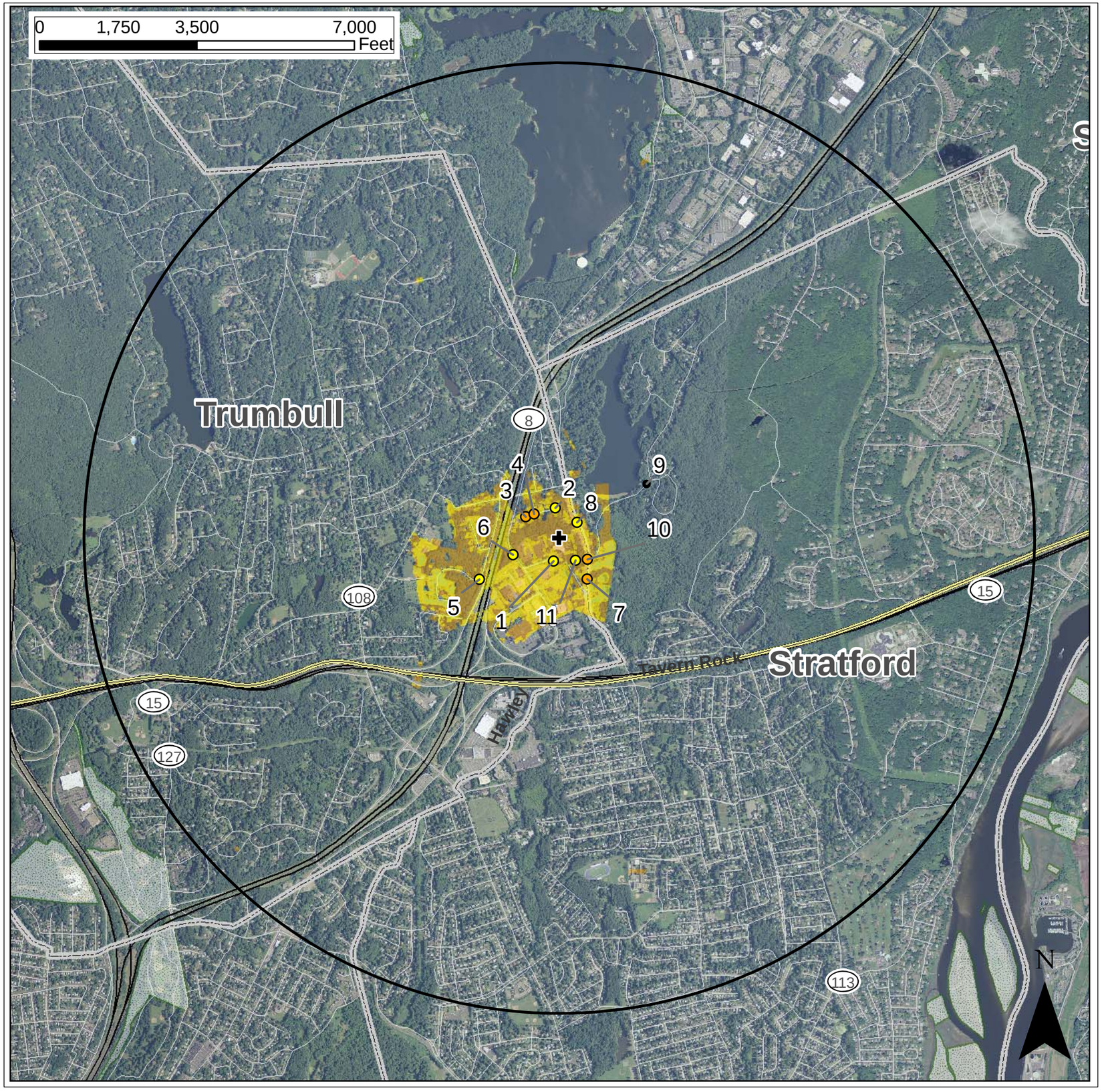
- Not Visible
- Seasonal Views
- Year-round Views
- Predicted Seasonal Visibility (144 Ac.)
- Predicted Year-Round Visibility (61 Ac.)
- Towns
- 2-Mile Study Area
- Open Space
- Scenic Roads

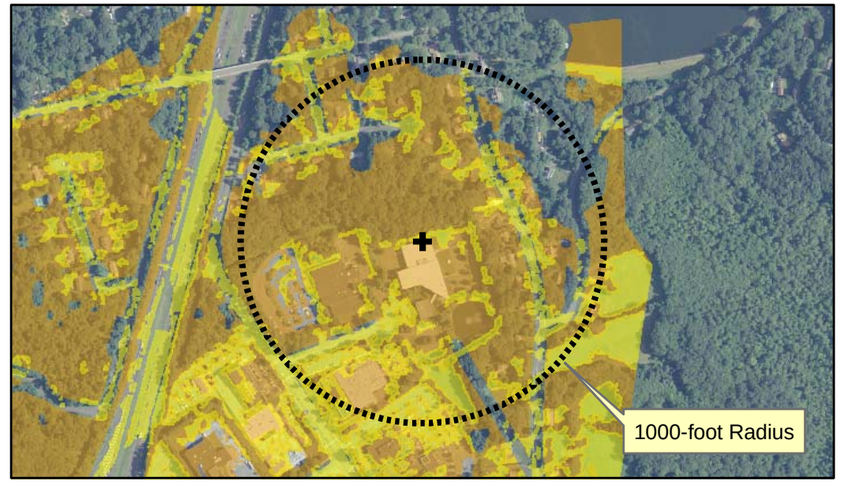


Location

verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION





Visibility Analysis – Aerial Base

Proposed Wireless Telecommunications Facility
Trumbull SE 4
60 Commerce Drive, Trumbull, CT

Proposed facility height is 80 feet AGL.
Existing tree canopy height estimated as 65 feet.
Study area encompasses a two-mile radius and includes 8,042 acres of land.

Map compiled 02/09/2014

Map information field verified by APT on 01/16/2014.

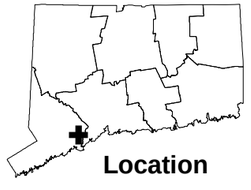
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views
- Predicted Seasonal Visibility (144 Ac.)
- Predicted Year-Round Visibility (61 Ac.)
- Towns
- 2-Mile Study Area
- Open Space
- Scenic Roads



Location

verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION

DOCUMENTATION

SOURCES CONSULTED FOR VISBILITY ANALYSIS MAPS
60 Commerce Drive
Trumbull, Connecticut

Physical Geography / Background Data

Center for Land Use Education and Research, University of Connecticut (http://clear.uconn.edu)
- *Land Use / Land Cover (2006)
- *Coniferous and Deciduous Forest (2006)
- *LiDAR data – topography (2000)

United States Geological Survey
- *USGS topographic quadrangle maps – Bridgeport, Long Hill, Ansonia, and Milford (1984)

National Resource Conservation Service
- *NAIP aerial photography (2012)

Heritage Consultants
- ^State Scenic Highways (based on Department of Transportation data, updated monthly)
- ^Municipal Scenic Roads (by website, phone and/or email/fax - current)

Cultural Resources

Heritage Consultants
- ^National Register
- ^ Local Survey Data

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP)
- *DEEP Property (May 2007)
- *Federal Open Space (1997)
- *Municipal and Private Open Space (1997)
- *DEEP Boat Launches (1994)

Connecticut Forest & Parks Association
- ^Connecticut Walk Book West – The Guide to the Blue-Blazed Hiking Trails of Western Connecticut, 19th Edition, 2006.

Other

- ^ConnDOT Scenic Strips (based on Department of Transportation data)

*Available to the public in GIS-compatible format (some require fees).
^ Data not available to general public in GIS format. Reviewed independently and, where applicable, GIS data later prepared specifically for this Study Area.

LIMITATIONS

The visibility analysis map(s) presented in this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography and an assumed tree canopy height of 65 feet. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The photo-simulations in this report are provided for visual representation only. Actual visibility depends on various environmental conditions, including (but not necessarily limited to) weather, season, time of day, and viewer location.

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

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

Memorandum

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

Date: January 16, 2014

Project No.: 41680.49

From: Jeffrey Peterson
Senior Environmental Scientist

1/17/14
Signature

Re: 2014 USFWS Compliance Determination for Proposed Telecommunications Tower Site Number 17136 – Site Name: Trumbull SE 4 CT
Site Type: Raw Land-New Build
Tower Type: Monopole
Overall Tower Height including attachments: 83 feet
60 Commerce Drive
Trumbull, Connecticut (Fairfield County)
Latitude/Longitude Coordinates: N41°14'44.16" W73°8'44.014"
Size of Leased Area: 1,968 Sq. Feet
Sub Region Name: Pumpkin Ground Brook
Sub Basin No.: 6026

In accordance with the National Environmental Policy Act (NEPA), Vanasse Hangen Brustlin, Inc. (VHB) has prepared this United States Department of the Interior Fish and Wildlife (USFWS) compliance memorandum for Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless). Verizon Wireless is proposing to construct a new wireless telecommunications facility at 60 Commerce Drive in Trumbull, Connecticut. The proposed facility would consist of an 80-foot tall monopole tower with antennas with an overall height of 83-feet. The tower site is situated in a landscaped area next to a large industrial/office building. Access to the lease compound would be over existing site drives and through a parking lot for this facility. A short, 12-foot wide gravel access road will be constructed from the edge of parking lot over an existing lawn to the compound area.

VHB has searched the resources of the United States Department of the Interior Fish and Wildlife Service (USFWS) New England Field Office to determine if there are any threatened or endangered species that may occur at our proposed location. The referenced Site is located in Trumbull, Connecticut (Fairfield County). No federally-listed endangered or threatened species are known to occur in Trumbull, Connecticut (refer to the enclosed listing date 11/6/2013 and Consultation Tracking Number: 05E1NE00-2014-SLI-0110 dated 1/16/2014) and as such the proposed development will not result in an effect to any known population of federally-listed endangered or threatened species.

This tower appears to be compliant of the USFWS recommendations published in Interim Guidelines for Recommendations on Communication Tower Siting, Construction, Operation, and Decommissioning for the Migratory Bird Treaty Act:

- This tower would be less than 200 feet tall.
- No guy wires are required.
- This tower would accommodate future carriers.

In addition, VHB has also reviewed the Connecticut Department of Energy and Environmental Protection's (DEEP) Natural Diversity Data Base December 2013 map regarding Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife and the Site does not fall within the buffered areas.

Therefore, VHB anticipates it is unlikely that the proposed undertaking would impact any potential threatened or endangered species, designated critical habitats, or migratory bird species protected under the Migratory Bird Treaty Act.

November 6, 2013 List of Federally Listed Endangered and Threatened Species in Connecticut & January 16, 2014 documentation from the USFWS website

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN CONNECTICUT

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Fairfield	Piping Plover	Threatened	Coastal Beaches	Westport, Bridgeport and Stratford
	Roseate Tern	Endangered	Coastal beaches, Islands and the Atlantic Ocean	Westport and Stratford
	Bog Turtle	Threatened	Wetlands	Ridgefield and Danbury.
Hartford	Dwarf wedgemussel	Endangered	Farmington and Podunk Rivers, Muddy Brook, Philo Brook, Stony Brook	South Windsor, East Granby, Suffield, Simsbury, Avon and Bloomfield.
Litchfield	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Sharon.
	Bog Turtle	Threatened	Wetlands	Sharon and Salisbury.
Middlesex	Roseate Tern	Endangered	Coastal beaches, islands and the Atlantic Ocean	Westbrook and New London.
	Piping Plover	Threatened	Coastal Beaches	Clinton, Westbrook, Old Saybrook.
	Puritan Tiger Beetle	Threatened	Sandy beaches along the Connecticut River	Cromwell, Portland
New Haven	Bog Turtle	Threatened	Wetlands	Southbury
	Piping Plover	Threatened	Coastal Beaches	Milford, Madison and West Haven
	Roseate Tern	Endangered	Coastal beaches, Islands and the Atlantic Ocean	Branford, Guilford and Madison
	Indiana Bat	Endangered	Mines, Caves	
New London	Piping Plover	Threatened	Coastal Beaches	Old Lyme, Waterford, Groton and Stonington.
	Roseate Tern	Endangered	Coastal beaches, Islands and the Atlantic Ocean	East Lyme and Waterford.
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Waterford
Tolland	None			
Windham	None			

-Eastern cougar, gray wolf, Indiana bat, Seabeach amaranth and American burying beetle are considered extirpated in Connecticut.
-There is no federally-designated Critical Habitat in Connecticut.

11/06/2013

United States Department of the Interior

FISH AND WILDLIFE SERVICE
NEW ENGLAND ECOLOGICAL SERVICES FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Tracking Number: 05E1NE00-2014-SLI-0110 January 16, 2014
Project Name: Proposed Cell Tower: Trumbull SE 4 CT 6 Site 17136

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Proposed Cell Tower: Trumbull SE 4 CT 6 Site 17136

Official Species List

Provided by:

NEW ENGLAND ECOLOGICAL SERVICES FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

Consultation Tracking Number: 05E1NE00-2014-SLI-0110
Project Type: Communications Tower
Project Description: Site address:60 Commerce Drive, Trumbull, CT. A new telecommunication monopole tower with an overall height of 83 feet with attachments. Other equipment will be housed in a fenced compound with a leased area of 1,968 square feet. The facility will be located in the lawn area north of the building shaded in the locus map. Access to site along existing site drives with a short 12-foot wide gravel drive into compound from large parking lot east of building.

United States Department of Interior
Fish and Wildlife Service

Project name: Proposed Cell Tower: Trumbull SE 4 CT 6 Site 17136

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-73.1467284 41.2459123, -73.1443042 41.246485, -73.143403 41.2441698, -73.1455917 41.2436858, -73.1467284 41.2459123)))

Project Counties: Fairfield, CT

United States Department of Interior
Fish and Wildlife Service

Project name: Proposed Cell Tower: Trumbull SE 4 CT 6 Site 17136

Endangered Species Act Species List

There are a total of 0 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

There are no listed species identified for the vicinity of your project.

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Site Photographs

Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611

Photograph 1 – Beginning of existing access drive.

Photograph 2 – Proposed access driveway from parking lot to proposed compound area (looking west) (approximately 1,456 feet long).

Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611

Photograph 3 – Proposed compound area looking east.

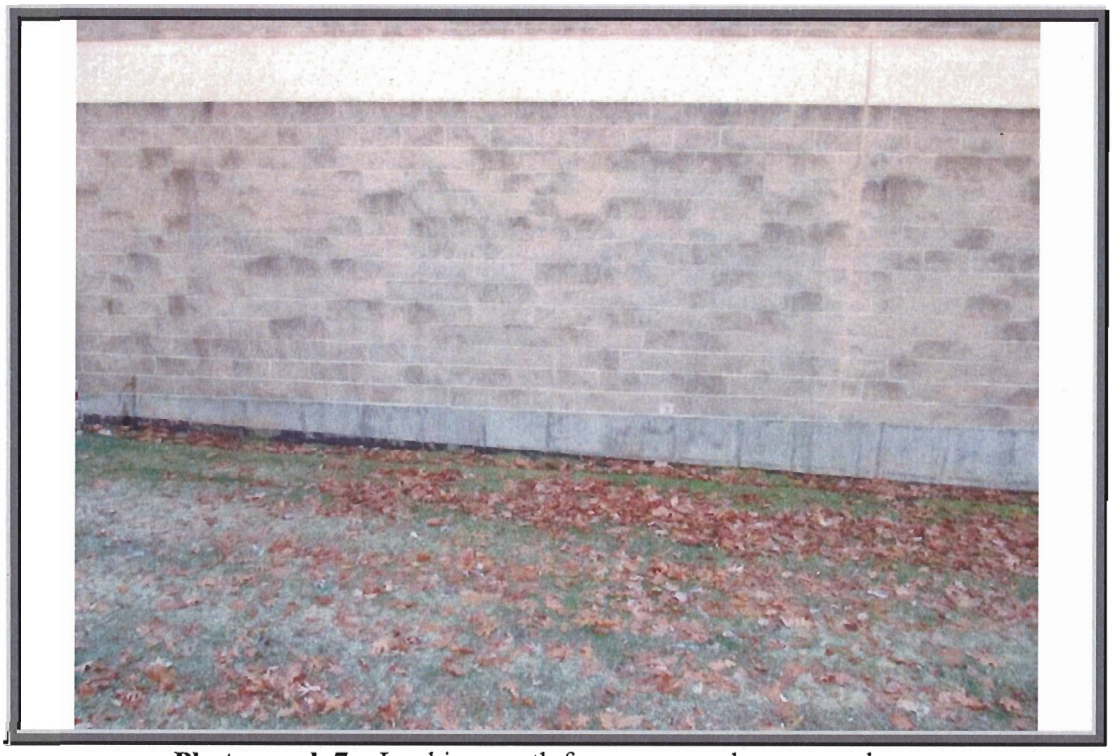
Photograph 4 – Looking north from proposed compound area.

Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611

Photograph 5 – Looking west from proposed compound area.

Photograph 6- Looking east from proposed compound area.

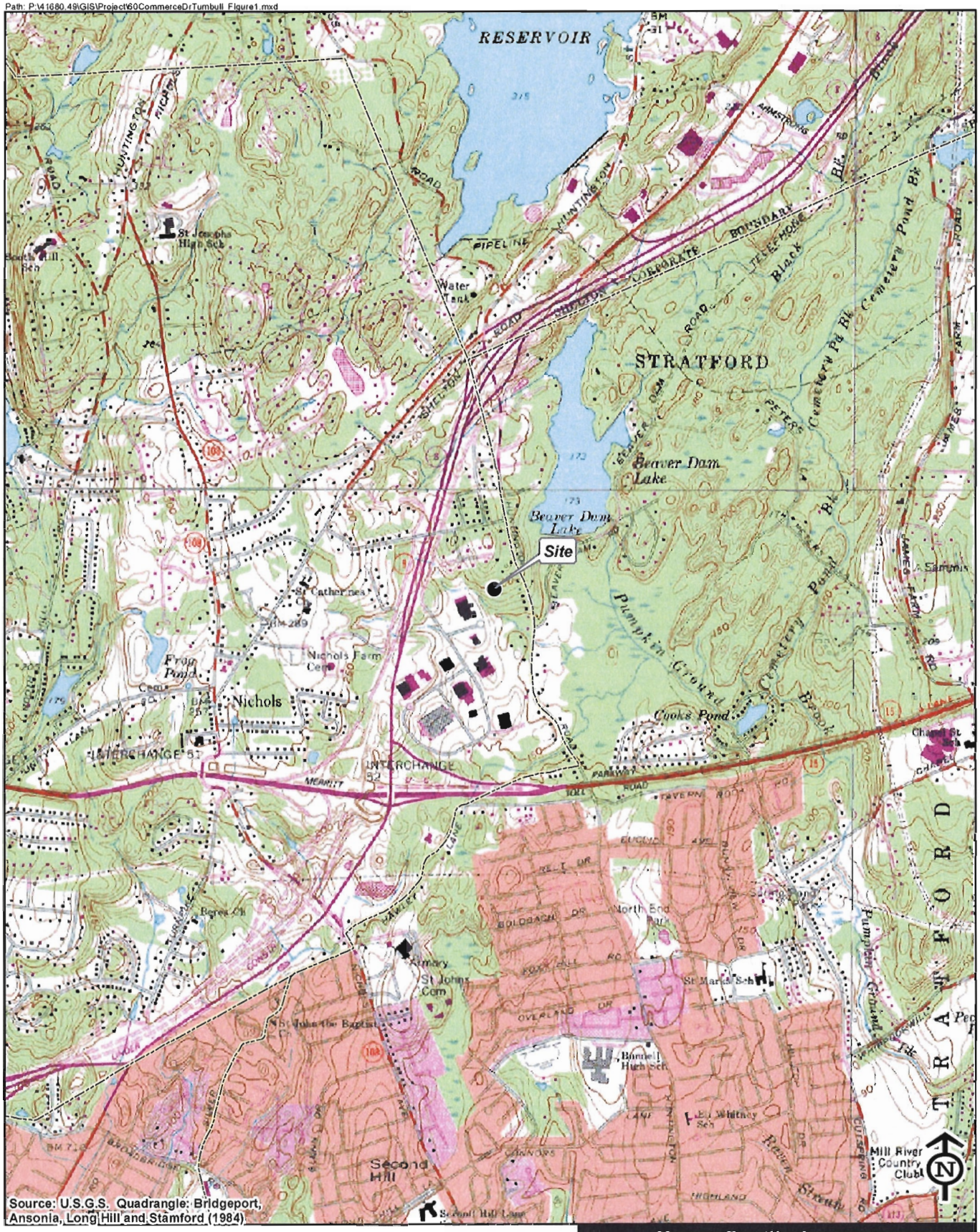
Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611



Photograph 7 – Looking south from proposed compound area.

Site Location Map

Path: P:\41680.49\GIS\Project\60CommerceDrTrumbull_Figure1.mxd



1,000 500 0 1,000 Feet

Quadrangle Location

Vanasse Hangen Brustlin, Inc.

Figure 1
Site Location Map
Trumbull SE 4
60 Commerce Drive
Trumbull, Connecticut

verizonwireless

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Bureau of Natural Resources
Wildlife Division
Natural History Survey – Natural Diversity Data Base

February 10, 2014

Ms. Coreen Kelsey
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457
ckelsey@vhb.com

Regarding: Trumbull SE 4 CT, 60 Commerce Drive, Trumbull - Installation of a Telecommunications Facility Consisting of a Monopole Tower, Antennas and Associated Ground Equipment - Natural Diversity Data Base 201400583

Dear Ms. Kelsey:

In response to your request for a Natural Diversity Data Base (NDDB) Review of State Listed Species for project Trumbull SE 4 CT, our records indicate the following extant populations of species on or within the vicinity of the site:

Eastern box turtle (*Terrapene carolina Carolina*) Protection Status: Species of Special Concern

Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Recommendations: The following guidelines should be met to protect turtles:

- Silt fencing should be installed around the work area prior to activity;
- After silt fencing is installed and prior to work being conducted, a sweep of the work area should be conducted to look for turtles;
- Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);

- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and positioned in the same direction that it was walking;
- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and
- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

The Natural Diversity Data Base 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 Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. If the project is not implemented within 12 months, then another Natural Diversity Data Base review should be requested for up-to-date information.

Please 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 DEEP for the proposed site.

Thank you for consulting the Natural Diversity Data Base. If you have any questions, I can be reached by email at Elaine.Hinsch@ct.gov.

Sincerely,
/s/
Elaine Hinsch
Program Specialist II
Wildlife Division

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street, Hartford, CT 06106-5127
www.ct.gov/deep
Affirmative Action/Equal Opportunity Employer

ALL-POINTS
TECHNOLOGY CORPORATION

February 18, 2014

Ms. Elaine Hinsch
Department of Energy & Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127
Elaine.Hinsch@ct.gov

APT Project No.: CT1411620

Re: **NDDB #201400583**
Proposed Verizon Wireless
Trumbull SE 4 CT Facility
60 Commerce Drive
Trumbull, Connecticut

Dear Ms. Hinsch,

On behalf of Verizon Wireless, All-Points Technology Corporation, P.C. ("APT") is pleased to respond to your letter of February 10, 2014 (enclosed) regarding Natural Diversity Data Base ("NDDB") records indicating the following extant populations of state species of special concern eastern box turtle (*Terrapene carolina Carolina*) within the vicinity of the referenced proposed telecommunications facility.

The enclosed eastern box turtle protective measures program ("Program") has been designed to avoid unintentional mortality to this turtle species as a result of construction activities occurring during this species' active period. Provided the project receives approval by the Connecticut Siting Council, this turtle protection program would be incorporated as environmental notes into the construction drawings (Development and Management Plans) to promote acknowledgement and implementation of the protective measures. The program follows previous Connecticut Department of Energy & Environmental Protection-approved turtle protection programs, that consist of several components: isolation of the project perimeter; periodic inspection and maintenance of isolation structures; turtle sweeps; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; and, reporting. An example of the poster material that would be posted at the construction site as part of the contractor education component is also enclosed. With adherence to this eastern box turtle protection program, the proposed development at this property would not have an adverse effect on this listed species.

It is our continuing pleasure to work with you regarding the protection of Connecticut's rare species. We thank you for your time and respectively request your written concurrence to this approach. Please feel free to contact me by telephone at (860) 984-9515 or via email dgustafson@allpointstech.com with any questions or if additional information is required.

Sincerely,

Dean Gustafson
Senior Environmental Scientist

Enclosures

February 10, 2014 NDDB Letter

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Bureau of Natural Resources
Wildlife Division
Natural History Survey – Natural Diversity Data Base

February 10, 2014

Ms. Coreen Kelsey
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457
ckelsey@vhb.com

Regarding: Trumbull SE 4 CT, 60 Commerce Drive, Trumbull - Installation of a Telecommunications Facility Consisting of a Monopole Tower, Antennas and Associated Ground Equipment - Natural Diversity Data Base 201400583

Dear Ms. Kelsey:

In response to your request for a Natural Diversity Data Base (NDDB) Review of State Listed Species for project Trumbull SE 4 CT, our records indicate the following extant populations of species on or within the vicinity of the site:

Eastern box turtle (*Terrapene carolina Carolina*) Protection Status: Species of Special Concern

Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Recommendations: The following guidelines should be met to protect turtles:

- Silt fencing should be installed around the work area prior to activity;
- After silt fencing is installed and prior to work being conducted, a sweep of the work area should be conducted to look for turtles;
- Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);

- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and positioned in the same direction that it was walking;
- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and
- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

The Natural Diversity Data Base 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 Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. If the project is not implemented within 12 months, then another Natural Diversity Data Base review should be requested for up-to-date information.

Please 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 DEEP for the proposed site.

Thank you for consulting the Natural Diversity Data Base. If you have any questions, I can be reached by email at Elaine.Hinsch@ct.gov.

Sincerely,
/s/
Elaine Hinsch
Program Specialist II
Wildlife Division

Eastern Box Turtle Protection Plan

EASTERN BOX TURTLE PROTECTION PROGRAM

State special concern eastern box turtle (*Terrapene carolina carolina*), afforded protection under the Connecticut Endangered Species Acts, is known to occur in the vicinity of this project. The following protective measures shall be followed to help avoid unintentional mortality as a result of construction activities for the site improvements proposed. These protective measures satisfy recommendations from the Connecticut Department of Energy & Environmental Protection ("CTDEEP") Wildlife Division as specified in a February 10, 2014 letter and follow protocols developed from previous rare species consultations and state-approved protection plans. This protection plan is valid until February 10, 2015, at which point if construction has not been initiated, a new Natural Diversity Data Base review request from CTDEEP is required.

It is of the utmost importance that the Contractor complies with the requirement for the installation of protective measures and the education of its employees and subcontractors performing work on the project site particularly if work will occur during the turtle's active period (April 1 to November 15). All-Points Technology Corporation, P.C. ("APT") will serve as the Environmental Monitor for this project to ensure that eastern box turtle protection measures are implemented properly and will provide an education session on eastern box turtle prior to the start of construction activities. The Contractor shall contact Dean Gustafson, Senior Environmental Scientist at APT, at least 5 business days prior to the pre-construction meeting. Mr. Gustafson can be reached by phone at (860) 984-9515 or via email at dgustafson@allpointstech.com.

The proposed project will not result in direct impact to wetlands or watercourses. The Contractor is strictly prohibited from placing fill in wetlands or watercourse or temporarily storing equipment or materials in wetlands or watercourses.

The proposed eastern box turtle protection program consists of several components: isolation of the project perimeter; use of appropriate erosion control measures to minimize wildlife entanglement; periodic inspection and maintenance of isolation structures and erosion control measures; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; and, reporting.

1. **Isolation Measures & Erosion and Sedimentation Controls**

    a. Plastic netting used in a variety of erosion control products (i.e., erosion control blankets, fiber rolls [wattles], reinforced silt fence) has been found to entangle wildlife, including reptiles, amphibians, birds and small mammals. No permanent erosion control products or reinforced silt fence will be used on the Verizon Wireless project. Temporary Erosion control products will use either erosion control blankets and fiber rolls composed of processed fibers mechanically bound together to form a continuous matrix (net less) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.

    b. Installation of conventional silt fencing, which will also serve as an isolation of the work zone from surrounding areas and required for erosion control compliance, shall be performed by the Contractor prior to any earthwork. APT will inspect the work zone area prior to and following barrier installation to ensure the area is free of eastern box turtles prior to start of construction activities.

    c. The fencing will consist of non-reinforced conventional erosion control woven fabric, installed approximately six inches below surface grade and staked at seven to ten-foot intervals using four-foot oak stakes or approved equivalent. In addition to required daily inspection by the Contractor, the fencing will be inspected for tears or breeches in the fabric following installation and at either on a weekly or biweekly

inspection frequency by APT. If inspections are performed on a biweekly basis, such inspections will also include inspections following storm events of 0.25 inch or greater. Inspections will be conducted by APT throughout the course of the construction project.

d. The extent of the barrier fencing will be as shown on the site plans. The Contractor shall have additional barrier fencing should field conditions warrant extending the fencing as directed by APT.

e. No equipment, vehicles or construction materials shall be stored outside of barrier fencing.

f. All silt fencing shall be removed within 30 days of completion of work and permanent stabilization of site soils so that reptile and amphibian movement between uplands and wetlands is not restricted.

2. Contractor Education

a. Prior to work on site, the Contractor shall attend an educational session at the pre-construction meeting with APT. This orientation and educational session will consist of an introductory meeting with APT providing photos of eastern box turtles and emphasizing the non-aggressive nature of eastern box turtles, the absence of need to destroy animals that might be encountered and the need to follow Protective Measures as described in Section 4 below. Workers will also be provided information regarding the identification of other turtle species that could be encountered.

b. The education session will also focus on means to discriminate between the species of concern and other native species to avoid unnecessary "false alarms". Encounters with any species of turtles will be documented.

c. The Contractor will be provided with cell phone and email contacts for APT personnel to immediately report any encounters with eastern box turtle or other turtle species. Educational poster materials will be provided by APT and displayed on the job site to maintain worker awareness as the project progresses.

3. Petroleum Materials Storage and Spill Prevention

a. Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill due to the project's location in proximity to sensitive wetlands.

b. A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.

c. The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.

i. Petroleum and Hazardous Materials Storage and Refueling

1. Refueling of vehicles or machinery shall occur a minimum of 100 feet from wetlands or watercourses and shall take place on an

impervious pad with secondary containment designed to contain fuels.

2. Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.

ii. Initial Spill Response Procedures

1. Stop operations and shut off equipment.
2. Remove any sources of spark or flame.
3. Contain the source of the spill.
4. Determine the approximate volume of the spill.
5. Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby waterways or wetlands.
6. Ensure that fellow workers are notified of the spill.

iii. Spill Clean Up & Containment

1. Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
2. Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.
3. Isolate and eliminate the spill source.
4. Contact the appropriate local, state and/or federal agencies, as necessary.
5. Contact a disposal company to properly dispose of contaminated materials.

iv. Reporting

1. Complete an incident report.
2. Submit a completed incident report to the Connecticut Siting Council.

4. Turtle Protective Measures

a. Prior to the start of construction each day, the Contractor shall search the entire work area for turtles.

b. If a turtle is found, it shall be immediately moved, unharmed, by carefully grasped in both hands, one on each side of the shell, between the turtle's forelimbs and the hind limbs, and placed just outside of the isolation barrier in the approximate direction it was walking.

c. Special care shall be taken by the Contractor during early morning and evening hours so that possible basking or foraging turtles are not harmed by construction activities.

5. **Herbicide and Pesticide Restrictions**

    a. The use of herbicides and pesticides at the proposed wireless telecommunications facility and along the proposed access drive are strictly prohibited.

6. **Reporting**

    a. Biweekly inspection reports (brief narrative and applicable photos) will be submitted to the Connecticut Siting Council for compliance verification.

    b. Following completion of the construction project, APT will provide a summary report to CTDEEP documenting the monitoring and maintenance of the barrier fence and erosion control measures.

    c. Any observations of eastern box turtle will be reported to CTDEEP by APT, with photo-documentation (if possible) and with specific information on the location and disposition of the animal.

Eastern Box Turtle Poster

CAUTION

EASTERN BOX TURTLES ARE KNOWN TO INHABIT THIS AREA

Identification: Eastern Box Turtles *(Terrapene c. carolina)* are small, terrestrial turtles ranging from 4.5 to 6.6 inches in length. The shell (carapace) is readily distinguished by its high domed shaped. The color of the shell is brown or black with numerous irregular yellow, orange or reddish markings. The belly (plastron) typically has a light and dark variable pattern, but may be completely tan, brown or black. The head, neck and legs also vary in color but are generally dark with orange or yellow mottling. Box turtles are terrestrial and inhabit many types of habitats including deciduous forests, brushy fields, thickets, streams, ponds and wetlands.

What to do if you find a box turtle: Box turtles are protected by Connecticut's threatened and endangered species legislation and **cannot** be injured, killed, or retained as a pet. If you find a box turtle move the turtle to a safe location away from any construction activity in the direction that the turtle was heading. Carefully pick up the turtle by its shell (carapace) between the front and hind legs with both hands. Be sure to hold the turtle closer to their hind legs as they may reach over and bite if your hands are too close to the head. The turtle may hiss and should retract into its shell.

Who to contact: Please report any finds and relocation of Eastern Box Turtle immediately to **Dean Gustafson of All-Points Technology Corporation, P.C. at (860) 984-9515.**

ALL-POINTS TECHNOLOGY CORPORATION

WETLAND INVESTIGATION

February 11, 2014

Verizon Wireless
99 East River Drive
East Hartford, CT 06108

APT Project No.: CT1411620

Attn: Alexandria Carter

Re: Proposed Trumbull SE 4 Facility
60 Commerce Drive
Trumbull, Connecticut

Dear Ms. Carter,

All-Points Technology Corporation, P.C. ("APT") understands that a wireless telecommunications facility ("Facility") is proposed by Verizon Wireless at 60 Commerce Drive in Trumbull, Connecticut ("Subject Property"). At your request, Matthew Gustafson, a Connecticut registered Soil Scientist with APT conducted inspections of the Subject Property on September 6, 2013 and January 30, 2014 to determine the presence or absence of wetlands and watercourses within approximately 200 feet of proposed development activities ("Study Area"). The delineation methodology followed was consistent with both the Connecticut Inland Wetlands and Watercourses Act (IWWA) and the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012). The results of this wetland investigation are provided below.

Site and Project Description:

The Subject Property consists of an approximately 14 acre parcel primarily developed with a large abandoned industrial and office building formerly occupied by Pilot Corp of America identified as 60 Commerce Drive in Trumbull, Connecticut. The area proposed for the wireless communications facility is located directly adjacent to the existing building within a maintained lawn area along the northern building edge south of a narrow mesic (upland) forested block. Access to the Facility is proposed to be gained off Commerce Drive and follow an existing paved access road through the rear parking lot. The Study Area is dominated by commercial and industrial development with a small block of upland forest to the north and a stream (possible perennial) system located west and northwest of the proposed tower location that is piped underneath the existing development. The surrounding land-use consists of residential development to the north and east, commercial/industrial development to the south and CT State Route 8 to the west.

Two wetland areas were delineated within the Study Area consisting of a stream system located adjacent to the paved parking areas where the stream system enters a culvert that conveys flows under the existing development. This stream system then outlets into an aerated detention pond that receives stormwater discharges from various impervious surfaces from the existing development. A paved drive provides access to the rear parking lot, bisecting the detention pond feature from a perennial stream system to the south. A second wetland area was delineated south of the detention pond consisting of a small depressional wetland area. Please refer to the enclosed Wetland Delineation Map for approximate location of the identified wetland resource area. Wetlands were marked with pink and blue plastic flagging tape numbered with the following sequence: WF 1A-01 to 1A-09, WF 1B-01 to 1B-

15, WF 1B-50 to 1B-54, WF 2-01 to 2-05. General weather conditions encountered during the above-referenced inspection on September 6, 2013 included low 70° F temperatures with sunny skies and on January 30, 2014 consisted of mid 20° F temperatures with sunny skies with frost conditions of 0 to 6 inches and 2 to 4 inches of snow cover.

Regulation of Wetlands:

Wetlands and watercourses are regulated by local, state and federal regulations, with each regulatory agency differing slightly in their definition and regulatory authority of resource areas, as further discussed below. The proposed Facility is under the exclusive jurisdiction of the State of Connecticut Siting Council and therefore exempt from local regulation, although local wetland regulations are considered by the Siting Council. If wetlands are identified on the Subject Property and direct impact is proposed, those wetlands may be considered Waters of the United States and therefore the activity may also be subject to jurisdiction by the U.S. Army Corps of Engineers ("ACOE") New England District.

Town of Trumbull: The Town of Trumbull regulates activities within wetlands and watercourses and within 100 feet of wetlands and watercourses through administration of the Connecticut Inland Wetlands and Watercourses Act (IWWA).

State of Connecticut: **Freshwater Wetlands:** The IWWA requires the regulation of activities affecting or having the potential to affect wetlands under Sec. 22a-36 through 22a-45 of the Connecticut General Statutes. The IWWA is administered through local municipalities. The IWWA defines wetlands as areas of poorly drained, very poorly drained, floodplain, and alluvial soils, as delineated by a soil scientist. Watercourses are defined as bogs, swamps, or marshes, as well as lakes, ponds, rivers, streams, etc., whether natural or man-made, permanent or intermittent. Intermittent watercourse determinations are based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus; (2) the presence of standing or flowing water for a duration longer than a particular storm incident; and (3) the presence of hydrophytic vegetation.

ACOE: The U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act. Waters of the United States are navigable waters, tributaries to navigable waters, wetlands adjacent to those waters, and/or isolated wetlands that have a demonstrated interstate commerce connection. The ACOE Wetlands Delineation Manual defines wetlands as "[t]hose areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) prohibits the unauthorized obstruction or alteration of any navigable water of the United States. This section provides that the construction of any structure in or over any navigable water of the United States, or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless the work has been approved by the ACOE.

Soil Description:

Soil types encountered throughout the Subject Property were generally consistent with digitally available soil survey information obtained from the Natural Resources Conservation Service ("NRCS")[1]. The exception is the lack of mapped wetland soils within the Study Area by NRCS, which was field identified as Raypol silt loam soils. The non-wetland soils were examined along the wetland boundary and more distant upland areas during the delineation, including the proposed Facility location. They are dominated by Canton Charlton soils and Udorthents-Urban Land complex. Detailed descriptions of wetland and upland soil types are provided below.

Wetland Soils:

The **Raypol** series consists of very deep, poorly drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to gently sloping soils in shallow drainageways and low-lying positions on terraces and plains. The soils have a water table at or near the surface much of the year.

Upland Soils:

The **Canton** series consists of very deep, well drained soils formed in a loamy mantle underlain by sandy glacial till. They are on nearly level to very steep glaciated plains, hills, and ridges. Slope ranges from 0 to 35 percent. Permeability is moderately rapid in the solum and rapid in the substratum. The soils developed in a fine sandy loam mantle over acid sandy glacial till of Wisconsin age derived mainly from granite and gneiss and some fine-grained sandstone.

The **Charlton** series is a very deep, well drained loamy soil formed in friable till. They are nearly level to very steep soils on till plains and hills. Depth to bedrock and the seasonal high water table is commonly more than 6 feet.

Udorthents is a miscellaneous land type used to denote moderately well to excessively drained earthen material which has been so disturbed by cutting, filling, or grading that the original soil profile can no longer be discerned.

Urban land is a miscellaneous land type consisting mostly of buildings, paved roads and parking lots. Typically included with this unit are small, intermingled areas disturbed by cutting, filling, or grading such that the original soil profile can no longer be discerned.

Wetlands Discussion:

Wetland 1 Classification Summary:

Wetland 1[2] (WF 1A-01 to 1A-09, 1B-50 to 1B-54)	**System** Palustrine	**Subsystem**	**Class** Forested	**Subclass** Broad-leaved Deciduous	**Water Regime** Seasonally Flooded	**Special Modifier** Artifical
(WF 1B-01 to 1B-15)	Palustrine		Unconsolidated Bottom	Sand	Permanently Flooded	Artifical
Watercourse Type (unnamed)	Perennial ☒	Intermittent ☐	Tidal ☐	**Special Aquatic Habitat** (none)	Vernal Pool ☐	Other ☐

[1] NRCS Web Soil Survey, http://websoilsurvey.nrcs.usda.gov/app/, accessed on September 5, 2013.

[2] Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Online. http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm - contents.

Wetland 1 Description:

Wetland 1 is an unnamed narrow stream (possible perennial) system with narrow bordering vegetated areas. This wetland system enters the Subject Property from the northwest corner and generally flows from the northwest to the southeast. As Wetland 1 flows towards the existing paved and developed areas near the Subject Property's loading dock area it enters a 48-inch corrugated metal pipe with a concrete headwall and rip-rap armored side-slopes. A number of plunge pools along with man-made spillway/weir structures are located within the streambed before it enters the culvert. This stream system daylights southeast of the existing building where it outlets into a detention pond. Side slopes along the detention pond are stabilized with various ornamental plantings and areas of rip-rap armoring. Two aerators are also located within the detention pond. The detention pond also receives stormwater from various impervious surfaces from the existing development through at least five culvert outlets located around the pond. This detention pond outlets via twin 24-inch reinforced concrete pipes to the south/southeast under an existing paved drive that provides access to the rear parking lot. This culvert outlets into a forested stream corridor located south of the paved access.

Wetland 1 Dominant Vegetation:

Dominant Wetland Species Common Name (Latin Name)	**Dominant Adjacent Upland Species** Common Name (Latin Name)
Purple Loosestrife* (Lythrum salicaria)	Maintained grass/lawn
Japanese Knotweed* (Polygonum cuspidatum)	Autumn Olive* (Elaeagnus umbellate)
Asiatic Bittersweet* (Celastrus orbiculatus)	Northern Red Oak (Quercus rubra)
Tulip Poplar (Liriodendron tulipifera)	Shagbark Hickory (Carya ovata)
Highbush Blueberry (Vaccinium corymbosum)	White Oak (Quercus alba)
Silky Dogwood (Cornus amomum)	Asiatic Bittersweet* (Celastrus orbiculatus)
Red Maple (Acer rubrum)	various landscape cultivars
Sweet Pepperbush (Clethera alnifolia)	

* denotes Connecticut Invasive Plants Council invasive species

Wetland 2 Classification Summary:

Wetland 2 (WF 2-01 to 2-05)	**System** Palustrine	**Subsystem**	**Class** Forested	**Subclass** Broad-leaved Deciduous	**Water Regime** Temporarily Flooded	**Special Modifier** Artifical
Watercourse Type (none)	Perennial ☐	Intermittent ☐	Tidal ☐	**Special Aquatic Habitat** (none)	Vernal Pool ☐	Other ☐

Wetland 2 Description:

Wetland 2 is a small perched wetland system formed in disturbed soils likely as a result of historic disturbance associated with the original development of the Subject Property. The northern delineated boundary follows along an existing chain-link fence and steep fill slop associated with the existing paved access drive. Wetland 2 is vegetated with mature hardwood trees with a sparse understory.

Wetland 2 Dominant Vegetation:

Dominant Wetland Species Common Name (Latin Name)	Dominant Adjacent Upland Species Common Name (Latin Name)
Highbush Blueberry (Vaccinium corymbosum)	Maintained grass/lawn
Red Maple (Acer rubrum)	Northern Red Oak (Quercus rubra)
Asiatic Bittersweet* (Celastrus orbiculatus)	Shagbark Hickory (Carya ovata)
White Oak (Quercus alba)	White Oak (Quercus alba)
	Asiatic Bittersweet* (Celastrus orbiculatus)

* denotes Connecticut Invasive Plants Council invasive species

Summary:

Based on APT's understanding of the proposed Verizon Wireless development, no temporary or permanent direct impact to wetlands, the identified watercourse or detention pond will result from the proposed activity. Access to the proposed Facility will use the existing paved access drive and rear parking lot. The proposed Facility will be located approximately 180 feet from the nearest wetland/watercourse (west end of retaining wall to wetland flag WF 1A-04; the west side of the compound is 190 feet away). The proposed underground utility easement through the paved loading dock area is approximately 30 feet southeast of wetland flag WF 1A-04. No temporary impacts associated with Verizon Wireless' construction activities are anticipated to nearby wetland and watercourse resources provided sedimentation and erosion controls are designed, installed and maintained during construction activities in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. Long term secondary impacts to wetland and watercourse resources possibly associated with the operation of this Facility are minimized by the fact the ecological integrity of the wetland and watercourse resources have already been diminished due to existing development and culverting activities and high level of human activity, the proposed Verizon Wireless development is unmanned and creates minimal traffic, and the gravel surfaced compound promotes infiltration. Therefore, it is APT's opinion that the proposed Verizon Wireless development will not result in a likely adverse impact to wetland or watercourse resources.

If you have any questions regarding the above-referenced information, please feel free to contact me by telephone at (860) 617-0613 or via email at mgustafson@allpointstech.com.

Sincerely,

All-Points Technology Corporation, P.C.

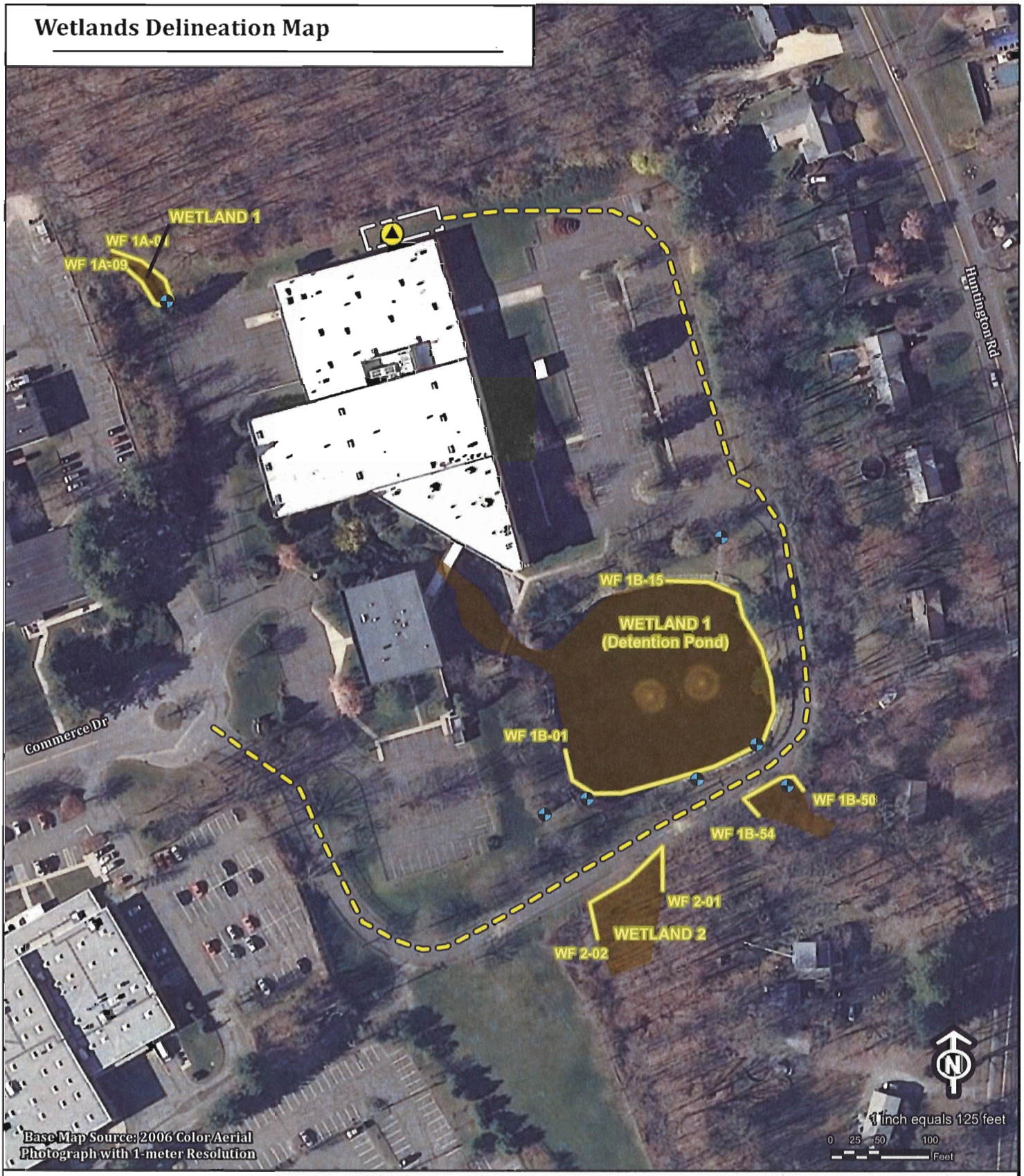
Matthew Gustafson

Registered Soil Scientist

Enclosure

Wetland Delineation Map

Wetlands Delineation Map



Legend

- Proposed Tower Location
- Culvert
- Proposed Access Route
- Proposed 24' x 77' +/- Gravel/Fenced Compound Area
- APT Delineated Wetland Boundary
- Approximate Wetland Area

Proposed Verizon Telecommunications Tower
60 Commerce Drive
Trumbull, Connecticut

Friday, February 07, 2014

verizon wireless

ALL-POINTS TECHNOLOGY CORPORATION

Path: C:\All_Points_Tech\Projects\Client\Verizon\TrumbullSE4\GIS\Maps\CT_Wetlands_Delineation_Map2.mxd

Department of Economic and Community Development

Connecticut
still revolutionary

January 30, 2014

Ms. Coreen Kelsey
Vanasse Hangen Brustlin, Inc
54 Tuttle Place
Middletown, CT 06457-1847

Subject: Proposed Telecommunications Facility
60 Commerce Drive
Trumbull, CT

Dear Ms. Kelsey:

The State Historic Preservation Office is in receipt of the proposal for the above-referenced project, submitted for review and comment pursuant to the National Historic Preservation Act and in accordance with Federal Communications Commission regulations.

After completing review of 60 Commerce Drive, Vanasse Hangen Brustlin (VHB) has in their professional opinion stated that there will be no historic properties affected by the proposed installation of an 80' monopole tower and associated equipment shelter within a 24' x 77' compound. Furthermore, Heritage Consultants' archeological review, dated January 7, 2014, concluded that "Both the newly proposed lease area and access road retain little, if any, possibility for significant archaeological deposits. Based on this information, it is the professional opinion of Heritage Consultants llc that additional cultural resources investigations of the proposed telecommunications tower location are not warranted.

Based on the information provided to this office, SHPO concurs that no historic properties will be affected by this project.

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For further information please contact Todd Levine, Environmental Reviewer, at (860) 256-2759 or todd.levine@ct.gov.

Sincerely,

Daniel T. Forrest
State Historic Preservation Officer

January 7, 2014

Ref: 41680.49

Mr. Todd Levine
State of Connecticut Department of
Economic & Community Development
State Historic Preservation Office
One Constitution Plaza, Second Floor
Hartford, CT 06103

Re: Verizon Wireless Telecommunications Facility
Site Number: 17136 – Site Name: Trumbull SE 4 CT
60 Commerce Drive
Trumbull, CT 06611

Dear Mr. Levine:

Vanasse Hangen Brustlin, Inc. (VHB) has been retained by Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) to review environmental resource information outlined in 47 CFR Ch.1 § 1.1307 sections (a) and (b) for environmental consequences pursuant to the Federal Communications Commission ("FCC or Commission") requirements. VHB determines the presence of resources listed under the National Environmental Policy Act (NEPA) on or near sites where Verizon Wireless proposes to locate a facility or collocate on an existing facility.

Verizon Wireless is proposing to build an 80-foot monopole telecommunications tower at 60 Commerce Drive, Trumbull, CT. The top height of the tower with the antennas would be 83-feet tall. The proposed tower and associated equipment will be located adjacent to a building within a 24-foot by 77-foot gravel compound area. A diesel fueled back-up generator would be located within the 12-foot by 30-foot equipment shelter. An 1,465 -foot access driveway will be constructed off of the existing paved access drive. Please see site plans for details.

VHB reviewed the National Park Service NRIS database to identify any individually listed properties and/or historic districts that are in the National Register of Historic Places (NRHP). We did not identify any NRHP-listed properties located within the 0.5-mile area of potential effects (APE). A 0.5-mile radius is defined as the APE required in the Nationwide Programmatic Agreement (NPA), as the proposed tower would be less than 200 feet in height. As a result, it is VHB's opinion that there are no historic properties affected for visual effects under Section 106 of the National Historic Preservation Act of 1966, as amended.

The APE for direct effects is limited to the area of proposed ground disturbance on the property. Based on Heritage Consultants' *Preliminary Archeological Assessment* dated January 7, 2014, there does not appear to be any archeological resources located on the subject property. Heritage Consultants, LLC concluded that "Both the newly proposed lease area and access road retain little, if any, possibility for significant archeological deposits. Based on this information, it is the professional opinion of Heritage Consultants, LLC that additional cultural resources investigations of the proposed telecommunications tower location are not warranted".

54 Tuttle Place
Middletown, Connecticut 06457-1847
860.632.1500 ▪ FAX 860.632.7879
www.vhb.com

It is VHB's opinion that there are no historic properties affected for direct effects under Section 106 of the National Historic Preservation Act of 1966, as amended.

We respectfully request a written opinion from your office regarding the potential effect or no effect of proposed activities on historic properties within 30 days of your receipt of this submittal.

Very truly yours,
VANASSE HANGEN BRUSTLIN, INC.

Coreen Kelsey

Coreen Kelsey
Project Coordinator

Rita Walsh

Rita Walsh
Senior Preservation Planner

Enclosures

54 Tuttle Place
Middletown, Connecticut 06457-1847
860.632.1500 • FAX 860.632.7879
www.vhb.com

FCC Form 620

Notification Date: **7AM EST 01/14/2014**
File Number: **0006096572**

FCC Wireless Telecommunications Bureau
New Tower ("NT") Submission Packet

Approved by OMB
3060 – 1039
See instructions for
public burden estimates

General Information

1) (Select only one) **(NE)** **NE** – New **UA** – Update of Application **WD** – Withdrawal of Application	
2) If this application is for an Update or Withdrawal, enter the file number of the pending application currently on file.	File Number:

Applicant Information

3) FCC Registration Number (FRN): **0012845343**
4) Name: **Verizon Wireless**

Contact Name

5) First Name: **Robin**	6) MI:	7) Last Name: **Haeffner**	8) Suffix:
9) Title: **VZW-HQ - NEPA Regulatory Compliance**			

Contact Information

10) P.O. Box:	And /Or	11) Street Address: **6 Campus Circle Suite 500**	
12) City: **Westlake**		13) State: **TX**	14) Zip Code: **76272**
15) Telephone Number: **(501)529-5377**		16) Fax Number:	
17) E-mail Address: **npa@verizonwireless.com**			

Consultant Information

18) FCC Registration Number (FRN): **0013690326**
19) Name: **Vanasse Hangen Brustlin, Inc. (VHB)**

Principal Investigator

20) First Name: **Rita**	21) MI:	22) Last Name: **Walsh**	23) Suffix:
24) Title: **Senior Preservation Planner**			

Principal Investigator Contact Information

25) P.O. Box:	And /Or	26) Street Address: **101 Walnut Street**	
27) City: **Watertown**		28) State: **MA**	29) Zip Code: **02472**
30) Telephone Number: **(617)607-2967**		31) Fax Number:	
32) E-mail Address: **rwalsh@vhb.com**			

Professional Qualification

33) Does the Principal Investigator satisfy the Secretary of the Interior's Professional Qualification Standards?	(X) Yes ( ) No

34) Areas of Professional Qualification:

( ) Archaeologist

(X) Architectural Historian

(X) Historian

( ) Architect

( ) Other (Specify) _____

Additional Staff

35) Are there other staff involved who meet the Professional Qualification Standards of the Secretary of the Interior?	(X) Yes ( ) No

If "YES," complete the following:

36) First Name: **Catherine**	37) MI:	38) Last Name: **Labadia**	39) Suffix:

40) Title: **Principal Investigator**

41) Areas of Professional Qualification:

(X) Archaeologist

( ) Architectural Historian

( ) Historian

( ) Architect

( ) Other (Specify) _____

Site Information

Tower Construction Notification System

1) TCNS Notification Number:	103755

Site Information

2) Site Name: **Trumbull SE 4 CT**		
3) Site Address: **60 Commerce Drive**		
4) City: **Trumbull**	5) State: **CT**	6) Zip Code: **06611**
7) County/Borough/Parish: **FAIRFIELD**		
8) Nearest Crossroads: **Merritt Blvd. and Nutmeg Drive**		
9) **NAD 83** Latitude (DD-MM-SS.S): **41-14-44.1**	(**X**) N or ( ) S	
10) **NAD 83** Longitude (DD-MM-SS.S): **073-08-44.0**	( ) E or (**X**) W	

Tower Information

11) Tower height above ground level (include top-mounted attachments such as lightning rods): 25.3 ( ) Feet (**X**) Meters

12) Tower Type (Select One):

( ) Guyed lattice tower

( ) Self-supporting lattice

(**X**) Monopole

( ) Other (Describe):

Project Status

13) Current Project Status (Select One):

(**X**) Construction has not yet commenced

( ) Construction has commenced, but is not completed — Construction commenced on: _____

( ) Construction has been completed — Construction commenced on: _____

Construction completed on: _____

Determination of Effect

14) Direct Effects (Select One):

(X) No Historic Properties in Area of Potential Effects (APE)

( ) No Effect on Historic Properties in APE

( ) No Adverse Effect on Historic Properties in APE

( ) Adverse Effect on one or more Historic Properties in APE

15) Visual Effects (Select One):

(X) No Historic Properties in Area of Potential Effects (APE)

( ) No Effect on Historic Properties in APE

( ) No Adverse Effect on Historic Properties in APE

( ) Adverse Effect on one or more Historic Properties in APE

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(X) Yes ( ) No

2a) Tribes/NHOs contacted through TCNS Notification Number: 103755 Number of Tribes/NHOs: 7

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: 0

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Delaware Nation**

Contact Name

5) First Name: **Tamara**	6) MI:	7) Last Name: **Francis-Fourkiller**	8) Suffix:

9) Title: **Cultural Preservation Director**

Dates & Response

10) Date Contacted 12/26/2013 11) Date Replied

(X) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Delaware Tribe of Indians of Oklahoma**

Contact Name

5) First Name: **Dr. Brice**	6) MI:	7) Last Name: **Obermeyer**	8) Suffix:

9) Title:

Dates & Response

10) Date Contacted 12/25/2013 11) Date Replied

(X) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(X) Yes ( ) No

2a) Tribes/NHOs contacted through TCNS Notification Number: 103755 Number of Tribes/NHOs: 7

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: 0

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Keweenaw Bay Indian Community**

Contact Name

5) First Name: **Juliet**	6) MI: **K**	7) Last Name: **Goyen**	8) Suffix:

9) Title: **THPO/NAGPRA Technician**

Dates & Response

10) Date Contacted 12/25/2013 11) Date Replied 12/30/2013

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

(X) Replied/Other

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Lac Vieux Desert Band of Lake Superior Chippewa Indians**

Contact Name

5) First Name: **Giiwegiizhigookway**	6) MI:	7) Last Name: **Martin**	8) Suffix:

9) Title: **THPO and NAGPRA Representative**

Dates & Response

10) Date Contacted 12/25/2013 11) Date Replied 01/02/2014

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

(X) Replied/Other

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(X) Yes ( ) No

2a) Tribes/NHOs contacted through TCNS Notification Number: 103755 Number of Tribes/NHOs: 7

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: 0

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Mashantucket Pequot Tribe**

Contact Name

5) First Name: **Kathleen**	6) MI:	7) Last Name: **Knowles**	8) Suffix:

9) Title: **THPO**

Dates & Response

10) Date Contacted **12/25/2013** 11) Date Replied _____

(X) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Mohegan Indian Tribe**

Contact Name

5) First Name: **Elaine**	6) MI:	7) Last Name: **Thomas**	8) Suffix:

9) Title: **Deputy THPO**

Dates & Response

10) Date Contacted **12/26/2013** 11) Date Replied **01/07/2014**

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

(X) Replied/Other

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(X) Yes ( ) No

2a) Tribes/NHOs contacted through TCNS Notification Number: 103755 Number of Tribes/NHOs: 7

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: 0

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Narragansett Indian Tribe**

Contact Name

5) First Name: **Sequahna**	6) MI:	7) Last Name: **Mars**	8) Suffix:

9) Title: **Program Manager-Cell Tower Division**

Dates & Response

10) Date Contacted 12/26/2013 11) Date Replied

(X) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Other Tribes/NHOs Contacted

Tribe/NHO Information

1) FCC Registration Number (FRN):
2) Name:

Contact Name

3) First Name:	4) MI:	5) Last Name:	6) Suffix:
7) Title:			

Contact Information

8) P.O. Box:	And /Or	9) Street Address:		
10) City:			11) State:	12) Zip Code:
13) Telephone Number:		14) Fax Number:		
15) E-mail Address:				
16) Preferred means of communication: ( ) E-mail ( ) Letter ( ) Both				

Dates & Response

17) Date Contacted _____ 18) Date Replied _____

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Historic Properties

Properties Identified

1) Have any historic properties been identified within the APEs for direct and visual effect?	( ) Yes (X) No
2) Has the identification process located archaeological materials that would be directly affected, or sites that are of cultural or religious significance to Tribes/NHOs?	( ) Yes (X) No
3) Are there more than 10 historic properties within the APEs for direct and visual effect? If "Yes", you are required to attach a Cultural Resources Report in lieu of adding the Historic Property below.	( ) Yes (X) No

Historic Property

4) Property Name:
5) SHPO Site Number:

Property Address

6) Street Address:		
7) City:	8) State:	9) Zip Code:
10) County/Borough/Parish:		

Status & Eligibility

11) Is this property listed on the National Register? Source: _____	( ) Yes ( ) No
12) Is this property eligible for listing on the National Register? Source: _____	( ) Yes ( ) No
13) Is this property a National Historic Landmark?	( ) Yes ( ) No

14) Direct Effects (Select One):

( ) No Effect on this Historic Property in APE

( ) No Adverse Effect on this Historic Property in APE

( ) Adverse Effect on this Historic Property in APE

15) Visual Effects (Select One):

( ) No Effect on this Historic Property in APE

( ) No Adverse Effect on this Historic Property in APE

( ) Adverse Effect on this Historic Property in APE

Local Government Involvement

Local Government Agency

1) FCC Registration Number (FRN):
2) Name: **Town of Trumbull**

Contact Name

3) First Name: **Timothy**	4) MI: **M**	5) Last Name: **Herbst**	6) Suffix:
7) Title: **First Selectman**			

Contact Information

8) P.O. Box:	And /Or	9) Street Address: **5866 Main Street**	
10) City: **Trumbull**		11) State: **CT**	12) Zip Code: **06611**
13) Telephone Number: **(203)452-5005**		14) Fax Number:	
15) E-mail Address: **FirstSelectman@trumbull-ct.gov**			

16) Preferred means of communication:

( ) E-mail

( ) Letter

(**X**) Both

Dates & Response

17) Date Contacted **12/19/2013** 18) Date Replied _____

(**X**) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Additional Information

19) Information on local government's role or interest (optional):

Other Consulting Parties

Other Consulting Parties Contacted

1) Has any other agency been contacted and invited to become a consulting party?	( ) Yes (X) No

Consulting Party

2) FCC Registration Number (FRN):
3) Name:

Contact Name

4) First Name:	5) MI:	6) Last Name:	7) Suffix:
8) Title:			

Contact Information

9) P.O. Box:	And /Or	10) Street Address:		
11) City:			12) State:	13) Zip Code:
14) Telephone Number:		15) Fax Number:		
16) E-mail Address:				
17) Preferred means of communication: ( ) E-mail ( ) Letter ( ) Both				

Dates & Response

18) Date Contacted _____ 19) Date Replied _____

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Additional Information

20) Information on other consulting parties' role or interest (optional):

Designation of SHPO/THPO

1) Designate the Lead State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) based on the location of the tower.

SHPO/THPO

Name: **Connecticut Commission on Culture & Tourism**

2) You may also designate up to three additional SHPOs/THPOs if the APEs include multiple states. If the APEs include other countries, enter the name of the National Historic Preservation Agency and any state and provincial Historic Preservation Agency.

SHPO/THPO Name: _____

SHPO/THPO Name: _____

SHPO/THPO Name: _____

Certification

I certify that all representations on this FCC Form 620 Submission Packet and the accompanying attachments are true, correct, and complete.

Party Authorized to Sign

First Name: **Rita**	MI:	Last Name: **Walsh**	Suffix:

Signature: **Rita Walsh** Rita Walsh Date: **01/13/2014**

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Attachments :

Type	Description	Date Entered
Resumes/Vitae	Cathy Labadia Resume	01/08/2014
Resumes/Vitae	Rita Walsh Resume	01/08/2014
Local Government Involvement	Local Government notification	01/08/2014
Public Involvement	Electronic tear sheet	01/08/2014
Tribal/NHO Involvement	FCC NOO email	01/08/2014
Maps	Site Location Map	01/08/2014
Area of Potential Effects	Determination of Effects	01/08/2014
Historic Properties for Visual Effects	Cultural Resources Screen Map	01/08/2014
Photographs	Photographs	01/08/2014
Additional Site Information	Site Plans	01/08/2014
Historic Properties for Direct Effects	Preliminary Archeological Assessment	01/08/2014
Other	Cover letter to SHPO	01/08/2014

CATHERINE LABADIA, M.A.

PRESIDENT & PRINCIPAL INVESTIGATOR

EDUCATION

Bachelor of Arts in Anthropology with specialization in archeology, Central Connecticut State University, New Britain, Connecticut, 1991 Advisor: Dr. Kenneth Feder

Master of Arts in Anthropology with specialization in archeology, University of Connecticut, Storrs, Connecticut, 1996 Advisor: Dr. Kevin McBride

Ph.D. Candidate, Department of Anthropology, Pennsylvania State University, University Park, Pennsylvania Advisor: Dr. Dean Snow

Introduction to Federal Projects and Historic Preservation Law, Section 106 Compliance Course, 2001

NEPA and the Transportation Decision Making Process, 2003

Federal Energy Regulatory Commission, Environmental Report Preparation Seminar, 2003

HONORS AND AWARDS

Town of Windsor, Connecticut - Research Support, 1998

Sigma Xi, Grant in Aid of Research, 1998

University of Connecticut Anthropology Department Pre-Doctoral Fellowship, 1995

Central Connecticut State University Anthropology Departmental Honors Award, 1991

State of Connecticut Academic Scholarship, 1988-1991

PROFESSIONAL EXPERIENCE

Smithsonian Institution, Aerial America Series, Historical Accuracy Consultant, 2010 - Present

Principal Investigator, Heritage Consultants, LLC, February 2004 - Present.

Project Manager, R. Christopher Goodwin & Associates, Inc., New Orleans, Louisiana, November 1999-2004

Research Assistant, R. Christopher Goodwin & Associates, Inc., New Orleans, Louisiana, April-November 1999

Principal Investigator/Field Supervisor, Town of Windsor, Connecticut, May-July 1998

Principal Investigator/Field Supervisor, Town of Lynne, Connecticut, July-September 1998

Staff, Matson Museum of Anthropology, University Park, Pennsylvania, 1997-1998

Teaching Assistant, Pennsylvania State University, Department of Anthropology, 1996-1998

Undergraduate Laboratory Supervisor, Pennsylvania State University, Department of Anthropology, Fall 1997 and Fall 1996

Teaching Assistant, University of Connecticut, Department of Anthropology, 1994-1996

Crew Chief, Connecticut Office of the State Archaeologist, 1996

Lab Assistant, Mashantucket Pequot Museum Conservation Lab, Ledyard, Connecticut, 1993-1996

Field Technician/Lab Technician, Public Archaeology Survey Team, Inc., 1993-1996

Research Assistant, University of Connecticut, Department of Anthropology, Spring 1995

PROFESSIONAL MEMBERSHIPS

Society for American Archaeology

TRAINING AND SPECIAL SKILLS

Environmental Impact Statement/Environmental Assessment Report Preparation

Alternatives Analysis/Corridor Selection Studies

Existing Conditions/Disturbance Investigations

SHPO/Native American Consultation

Geologic Thin-sectioning

Computer Skills: Quickbooks, Microsoft Office, and Adobe Suite Products

GIS Skills: ArcInfo, ArcView, ArcGIS, MapInfo, Idrisi, AutoCad, digitizing, and GPS units

Photography

Transit Operation

Non-computer Aided Drafting

Lab Skills: Artifact stabilization and conservation

World Wide Web design and authoring

GRAPHICS PUBLISHED

1998a AutoCad images of the Read Shell Mound contours, burials, and artifacts (Figures 4 and 5). In G. Milner and R. Jeffries' Read Archaic Shell Mound in Kentucky. *Southeastern Archeology.*

1998b AutoCad images of Cahokia. In G. Milner's *The Cahokia Chiefdom: The Archeology of a Mississippian Society.* Smithsonian Series in Archeological Inquiry.

INVITED LECTURES & PRESENTATIONS

1997a *The Read Shell Midden: Site Formation and Structure.* Paper presented at the Southeastern Archeological Conference, Baton Rouge, Louisiana (with G. Milner and R. Jeffries).

1997b *The Mississippian Period Population of Cahokia and the American Bottom.* Delivered at the join symposium of the Ontario Archeological Society and the Midwest Archaeological Conference, North York, Ontario (with G. Milner).

1998 *Migration and the Maintenance of Cultural Integrity: The Linearbandkeramik as a Case Study.* Delivered at the 63rd annual meeting of the Society for American Archeology, Seattle, Washington.

1999 *Formulating and Testing Archaeological Predictive Models using a Geographic Information System.* Delivered at the 64th annual meeting of the Society for American Archaeology, Chicago Illinois.

2002 *A Preliminary Assessment of Mortuary Practices as the Braziel Baptist Cemetery.* Delivered at the 35th annual meeting of the Society for Historical Archaeology, Mobile, Alabama (with M. Thornton).

2004 *Data Recovery Excavations at the Daniel Benton Homestead in Tolland, Connecticut.* Presented at the Town of Tolland, Connecticut's Celebration on the Green (with D. George and W. Keegan).

2006 *Cast Upon a Reef: Archival Research and Mapping of Shipwrecks in the Connecticut Waters of Long Island Sound.* Presented at the Annual Meeting of the Archaeological Society of Connecticut, New London, Connecticut (with D. George and W. Keegan).

MANUSCRIPTS AND TECHNICAL REPORTS

1999a *Phase I Cultural Resources Survey of SR 30 (US 98) Retention Ponds 3 and 4; State Project No.: 48280-3510, Escambia County, Florida* (with Randy Lichtenberger, Ralph Draughon, Angele Montana, William P. Athens and Letisha Leucking). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

1999b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed SR 30 (US 98) Thomas Drive Intersection Project; State Project No.: 46010-1537, Bay County, Florida* (with Randy Lichtenberger, Susan Barrett Smith and William P. Athens). Submitted by R. Christopher Goodwin & Associates & Inc. to the Florida Department of Transportation, District III.

1999c *Phase I Cultural Resources Survey and Archeological Inventory of Five Proposed Retention Ponds Adjacent to SR77* (with Cove Boulevard/Martin Luther King Boulevard), Bay County, Florida (with Randy Lichtenberger, Susan Barrett Smith, Charlene Keck and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

1999d *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed US 90 (SR 10) Weigh Station Project, Escambia County, Florida* (with Randy Lichtenberger, Susan Barrett Smith, Charlene Keck and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

1999e *Cultural Resources Background Research and Sample Survey of Areas West of Morgan City, Louisiana as Part of the Lower Atchafalaya Basin Reevaluation Study* (with Randy Lichtenberger and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc to the U.S. Army Corps of Engineers, New Orleans District.

1999f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Gulfstream Natural Gas System L.L.C. 36 Inch O.D. Project in Mobile County, Alabama* (with William P. Athens, David George, Jeremy Pincoske, Ralph B. Draughon, Jr., and Dave D. Davis). Submitted by R. Christopher Goodwin & Associates, Inc. to ANR Pipeline Company, Inc.

1999g *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Country Drive Expansion Project Area, Terrebonne Parish, Louisiana* (with Kari Krause and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to T. Baker Smith & Son, Inc.

1999h *Cultural Resources Survey and Inventory, Florida Gas Transmission Phase V Expansion, Gulf Power Lateral, Palmetto Power Lateral, Loop C, Loop D, Loop E, Loop G, Loop H St. Petersburg Lateral, Loop I St. Petersburg Lateral, Jacksonville Loop, and FP&L Lateral* (with David George, Jeremy Pincoske, Susan Barrett Smith, Ralph B. Draughon, Jr., Charlene Keck, Colleen Hanratty, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission.

2000a *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Country Drive Expansion Project Area, Terrebonne Parish, Louisiana* (with Kari Krause and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to T. Baker Smith and Son, Inc.

2000b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed SR 30 (US 98) Expansions Corridor from Mack Bayou Road to CR 83 (US 331), Walton County, Florida* (with Susan Barrett Smith, Ralph B. Draughon, Jr., Jeremy Pincoske, James Hollingsworth, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

2000c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed SR 30 (US 98) Expansion Corridor from CR 83 (US 331) to Peach Creek, Walton County, Florida* (with Susan Barrett Smith, Ralph B. Draughon, Jr., Jeremy Pincoske, James Hollingsworth, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

2000f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 71 (Greenwood Highway) Expansion Corridor from State Road 10 (US 90) to North of the City Limits of Greenwood, in Jackson County, Florida* (with Katy Coyle, David George, James Hollingsworth, Kari Krause, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

2000g *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Schooner Bayou Project Corridor in Vermilion Parish, Louisiana* (with Kari Krause, Jeremy Pincoske, Colleen Hanratty, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.

2000h *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Quincy Bypass, i.e., the Corridor Designed to Connect US 90 (State Road 10) and State Road 12, Gadsden County, Florida* (with Matthew Keelean, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation, District III.

2000i *Phase I Cultural Resources Survey and Archeological Inventory of Two Pipeline Loops (Loop J and Loop K) and 10 Ancillary Use Facilities Associated with the Proposed Florida Gas Transmission Phase V Expansion, FGT Mobile Bay Lateral, Loop A, and Loop B, Gilchrist and Levy Counties, Florida* (with David George, Susan Barrett Smith, David Roth, Kristin Vanwert, James Eberwine, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.

2000j *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 269 Bridge Replacement Corridor, Walker County, Alabama* (with Katy Coyle, Jeremy Pincoske, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.

2000k *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 119 Bridge Replacement Corridor, Shelby County, Alabama* (with Katy Coyle, Jeremy Pincoske, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.

2000l *Phase I Cultural Resources Inventory of the Proposed Cypress Natural Gas Company, L.L.C., Cypress Pipeline Project, Nassau, Duval, and Clay Counties, Florida* (with Susan Barrett Smith, Katy Coyle, Jeremy Pincoske, Jon VandenBosch, Paul Heinrich, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Cypress Natural Gas Company, L.L.C.

2000m *Phase I Cultural Resources Survey And Archeological Inventory Of The Proposed 7.56 KM (4.7 MI) 36 Inch O.D. Gulfstream Pipeline Project Corridor, Mobile County, Alabama* (with William P. Athens, David George, Ralph Draughon, Jr., Jeremy Pincoske, Dave D. Davis). Submitted by R. Christopher Goodwin & Associates, Inc. to Gulfstream Natural Gas System, L.L.C.

2000n *Phase II National Register Testing and Evaluation of Site 8BF145, Bradford County, Florida* (with William P. Athens, Jeremy Pincoske, Ellen Wilmer, and Darryl Byrd). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.

2000o *Phase II National Register Testing and Evaluation of Site 8CO105, Columbia County, Florida* (with William P. Athens, Jeremy Pincoske, Ellen Wilmer, and Darryl Byrd). Submitted by R. Christopher Goodwin & Associates, Inc. to Florida Gas Transmission Company.

2001a *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Mississippi River Gulf Outlet Dredged Material FY 98 Disposal Areas, St. Bernard Parish, Louisiana* (with Katy Coyle, Paul Heinrich, Jeremy Pincoske, James Eberwine, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, New Orleans District.

2001b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 30 (U.S. 98) and State Road 368 (23rd Street) Intersection Expansion, Bay County, Florida* (with Susan Barrett Smith, Jeremy Pincoske, James Eberwine, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the Florida Department of Transportation.

2001c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 119 Bridge Replacement Corridor, Shelby County, Alabama* (with Katy Coyle and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Consoer Townsend Envirodyne Engineers, Inc.

2001d *Phase I Cultural Resources Survey and Archeological Inventory of the Soda Lake Mitigation Area, Red River Waterway, Mississippi to Shreveport in Caddo Parish, Louisiana* (with Paul Heinrich, Jeremy Pincoske, Susan Barrett Smith, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to the U.S. Army Corps of Engineers, Vicksburg District.

2001e *Phase I Cultural Resources Survey and Archeological Inventory Conducted at the Proposed Aiken Meter Station Facility Expansion, Aiken, South Carolina* (with Kari Krause and David R. George). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

2001f *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company North System Expansion II Pipeline Project in Harris, Talbot, Monroe, Bib, Jones, Baldwin, Washington, Jefferson, and Richmond Counties, Georgia* (with Kari Krause, Meg Thornton, Katy Coyle. Jeremy Pincoske, Jon VandenBosch, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

2001g *South System Expansion II Pipeline Project, in Autauga, Elmore, Hale, Lee, Marengo, Perry, Sumter, and Tallapoosa Counties, Alabama* (with Kari Krause, Susan Barrett Smith, Jeremy Pincoske, Jon VandenBosch, Sean Coughlin, Elizabeth Stoffers, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

2002a *Phase I Cultural Resources Survey and Archeological Inventory of the Alabama Portion of the Proposed Colonial Pipeline Project Corridor, Talladega, Calhoun, St. Clair, Blount, Cullman, Marshall, Morgan, Madison, and Limestone Counties, Alabama* (with David R. George, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, Kari Krause, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Colonial Pipeline Company.

2002b *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Liquefied Natural Gas (SLNG) Elba Island Expansion Project in Chatham County, Georgia* (with William P. Athens, Kari Krause, Sean Coughlin, Alicia Ventresca, David George, Katy Coyle, Andrew Ivester, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy Corporation.

2002c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Liquefied Natural Gas Wetland Creation Project on Elba Island, Chatham County, Georgia* (with William P. Athens, Kari Krause, Sean Coughlin, Alicia Ventresca, Andrew Ivester, Katy Coyle, Jeremy Pincoske, and David George). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Energy Corporation.

2002d *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed State Road 79 Expansion Project Through Portions of Washington and Holmes Counties, Florida* (with William P. Athens, Rebecca Sick, Katy Coyle, Jeremy Pincoske, and David R. George). Submitted by R. Christopher Goodwin & Associates, Inc. to FDOT, District III.

2002e *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company South System Expansion II Pipeline, Sumter, Marengo, Hale, Perry, Autauga, Elmore, Tallapoosa, and Lee Counties, Alabama* (with William P. Athens, Kari Krause, Jeremy Pincoske, Susan Barrett Smith, Jon VandenBosch, Sean Coughlin, and Elizabeth Stoffers). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

2002f *Phase I Cultural Resources Survey and Archeological Inventory of the Soda Lake Mitigation Area, Red River Waterway, Mississippi River to Shreveport In Caddo Parish, Louisiana* (with William P. Athens, Paul Heinrich, Jeremy Pincoske, and Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, Vicksburg District.

2002g *Phase II National Register Testing and Evaluation of Sites 1LE293, 1LE294, 1EE505, and 1TP54 in Lee, Elmore, and Tallapoosa Counties, Alabama* (with William P. Athens, Kari Krause, Katy Coyle, Jeremy Pincoske, Rebecca Sick, and James Eberwine). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

2002h *Phase I Cultural Resources Survey and Archeological Inventory of Proposed ANR Pipeline Company, Wisconsin WestLeg Project, Walworth and Rock Counties, Wisconsin* (with William P. Athens, Kari Krause, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, and Sean Coughlin). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Corporation.

2002i *Phase I Cultural Resources Survey and Archeological Inventory of Proposed ANR Pipeline Company, Wisconsin WestLeg Project, McHenry County, Illinois* (with William P. Athens, Kari Krause, Alicia Ventresca, Susan Barrett Smith, Jeremy Pincoske, and Sean Coughlin). Submitted by R. Christopher Goodwin & Associates, Inc. to El Paso Corporation.

2002j *Phase II National Register Testing and Evaluation of Sites 22LW616, 22LW617, 22LW618, 22LW619, 22LW620, 22LW621, and 22LW622, Lawrence County, Mississippi* (with William P. Athens, Kari Krause, Rebecca Sick, David George, Katy Coyle, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to MDOT.

2002k *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Vermilion River Dredge Disposal Project Area, Lafayette Parish, Louisiana* (with William P. Athens, Susan Barrett Smith, Alicia Ventresca, Eric Vogelheim, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.

2002l *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Southern Natural Gas Company South System Expansion II Pipeline Project in Harris, Talbot, Monroe, Bibb, Jones, Baldwin, Washington, Jefferson, and Richmond Counties, Georgia* (with William P. Athens, Jon VandenBosch, Kari Krause, Katy Coyle, Jeremy Pincoske, and Daya Naef). Submitted by R. Christopher Goodwin & Associates, Inc. to Southern Natural Gas Company.

2003a *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project Corridor and its Associated Access Roads and Ancillary Facilities, Palm Beach and Martin Counties, Florida* (with William P. Athens, David George, Katy Coyle, Eric Vogelheim, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.

2003b *Phase II National Register Testing and Evaluation of Sites 16CA114 and 16CA115, Caldwell Parish, Louisiana* (with William P. Athens, David George, James Eberwine, Andrea White, and Heather Backo). Submitted by R. Christopher Goodwin & Associates, Inc. to Denmon Engineering, Inc.

2003c *Phase I Cultural Resources Survey and Archeological Inventory of the Proposed Vermilion River Dredge Disposal Project Area, Lafayette, Parish, Louisiana* (with William P. Athens, Susan Barrett Smith, Alicia Ventresca, Eric Vogelheim, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.

2003d *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida* (with William P. Athens, David R. George, Katy Coyle, Eric Vogelheim, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.

2003e *Phase I Cultural Resources Survey and Archeological Inventory of the Onshore Florida Portion of the Proposed Seafarer U.S. Pipeline System Project in Palm Beach and Martin Counties, Florida* (with William P. Athens, David R. George, Eric Vogelheim, Katy Coyle, Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to Seafarer U.S. Pipeline System, LLC.

2003f *Phase I Cultural Resources Survey and Archeological Inventory of a Proposed 1.12 ha (2.78 ac) Borrow Pit and an Associated Access Road, Ascension Parish, Louisiana* (with David George, Marie Pokrant, and Jeremy Pincoske). Submitted by R. Christopher Goodwin & Associates, Inc. to U.S. Army Corps of Engineers, New Orleans District.

2003g *Phase I Cultural Resources Survey and Archeological Inventory of the Chaland Headland Restoration Project, Plaquemines Parish, Louisiana* (with William P. Athens, David George, and Rebecca Sick). Submitted by R. Christopher Goodwin & Associates, Inc. to Tetra Tech EM, Inc.

2003h *Phase IB Cultural Resources Survey and Archeological Inventory of a 16.2 ha (40 ac) Project Parcel Rocky Hill, Connecticut* (with David George and Andrea White). Submitted by R. Christopher Goodwin & Associates, Inc., to Vanasse Hangen Brustlin, Inc.

2004a *Phase IA Cultural Resources Records Review and Literature Research of the Paul J. Rainey Wildlife Sanctuary, Vermilion Parish, Louisiana* (with William P. Athens, David George, and Susan Barrett Smith). Submitted by R. Christopher Goodwin & Associates, Inc. to Tetra Tech EM, Inc.

2004b *Phase I Cultural Resources Survey and Archeological Inventory of a Proposed Project Parcel in Rocky Hill, Connecticut* (with Catherine Labadia, Andrea White, and William P. Athens). Submitted by R. Christopher Goodwin & Associates, Inc. to Vanasse Hangen Brustlin, Inc.

2004c *Phase I Cultural Resources Reconnaissance Survey of Proposed Sprint PCS Wireless Communications Facility Numbers CT-11-390-G and CT-11-390-J, North Branford, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2004d *Phase I Cultural Resources Reconnaissance Survey of Proposed AT&T Wireless Communications Facility Numbers CT-668-A and CT-668-B, Madison, Connecticut* (with William Keegan and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2004e *Historic Research and Building Documentation of the Hanford House, 180-182 Main Street, Bridgeport, Connecticut.* (with William Keegan and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2004f *Phase I Cultural Resources Survey and Archeological Inventory of a 8.09 ha (20 ac) Project Parcel Associated with the Proposed Fieldstone Commons Commercial Development, Tolland, Connecticut* (with William Keegan and David George). Submitted to Prospect Enterprises Hartford, Connecticut.

2004g *Phase I Cultural Resources Reconnaissance Survey of the Proposed Rockville Bank Branch Office Location, Tolland, Connecticut* (with William Keegan and David George). Submitted to Rockville Bank, South Windsor, Connecticut.

2004h *Phase I Cultural Resources Reconnaissance Inventory of a Proposed Housing Subdivision in Goshen, Connecticut* (with William Keegan and David George). Submitted to Henne Development, Southbury, Connecticut.

2004i *Archeological Investigation of Stone Piles Located on a 16.8 ha (41.5 ac) parcel of land in Stafford, Connecticut* (with William Keegan and David George)t. Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2005a *Phase I Cultural Resources Reconnaissance Survey of a Proposed Housing Subdivision at 25 Starrs Ridge Road in Redding, Connecticut* (with William Keegan and David George). Submitted to Mr. Jason Addison, Greenwich, Connecticut.

2005b *Phase I Cultural Resources Reconnaissance Survey of a Proposed Water Line in Colchester, Connecticut* (with William Keegan and David George). Submitted to Weston & Sampson Engineers, Inc., Glastonbury, Connecticut.

2005c *Phase I Cultural Resources Reconnaissance Survey of the Proposed Carriage Crossing Housing Subdivision in Tolland, Connecticut* (with William Keegan and David George). Submitted to Strategic Properties, LLC, Simsbury, Connecticut.

2005d *Phase I Archeological Assessment and Cultural Resources Reconnaissance Surveys for the Proposed Gateway Zone Sewer Extension Project in Tolland, Connecticut* (with William Keegan and David George). Submitted to Town of Tolland, Tolland, Connecticut.

2005e *Phase I Cultural Resources Reconnaissance Survey of a 4.5 ha (11 ac) Proposed Project Area and Phase II National Register Testing and Evaluation of Site 165-6 in Windsor Locks, Connecticut* (with William Keegan and David George). Submitted to Fahey Landolino & Associates, LLC, Windsor Locks, Connecticut.

2005f *Phase I Cultural Resources Reconnaissance Survey of Cellular Communications Facility CT54CX773, Hamden, Connecticut* (with William Keegan and David George). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2005g *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 7 Broadway Avenue Extension, Stonington, Connecticut* (with William Keegan and David George). Submitted to EBI Consulting, Inc., Burlington, Massachusetts.

2005h *Phase I Cultural Resources Reconnaissance Survey of a Proposed Housing Subdivision at 80 Laurel Lane, Redding, Connecticut* (with William Keegan and David George). Submitted to Mr. Adam Lubarsky, Redding, Connecticut.

2005i *Phase I Cultural Resources Reconnaissance Survey of 2.8 ha (6.9 ac) of the Proposed Grace Estates Housing Subdivision, West Hartford, Connecticut* (with William Keegan and David George). Submitted to Grace Estates, West Hartford, Connecticut.

2005j *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 395 Round Hill Road, Greenwich, Connecticut* (with William Keegan and David George). Submitted to EBI Consulting, Inc., Burlington, Massachusetts.

2005k *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 135 Brandagee Avenue, Groton, Connecticut* (with William Keegan and David George). Submitted to EBI Consulting, Inc., Burlington, Massachusetts.

2006a *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT70XC133, Bristol, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006b *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT33XC272, Watertown, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006c *Phase IA Cultural Resources Assessment and Phase IB Cultural Resources Reconnaissance Surveys of the Proposed Ryder Farm Subdivision at 224 Umpawaug Road in Redding, Connecticut* (with David George and William Keegan). Submitted to Falciglia & Valeri Construction LLC, Danbury, Connecticut

2006d *Phase IA Cultural Resources Assessment Survey and Phase IB Cultural Resources Reconnaissance Survey of the Killingly 2G Substation Project, Killingly and Putnam, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006e *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located Within the Grounds of The Pequabuck Golf Club, Bristol, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006f *Phase IA Cultural Resources Assessment Survey of the Proposed Thornberry Ridge Condominium Complex in Bristol, Connecticut* (with David George and William Keegan). Submitted to The Bongiovanni Group, Inc., Newington, Connecticut

2006g *Phase I Cultural Resources Reconnaissance Survey for a Proposed Cellular Communications Facility Located at 111 Long Street in Warwick, Rhode Island* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006h *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 19 Church Street in Shelton, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006i *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 12 Orchard Drive, Ledyard, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006j *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located Along Crystal Lake Road in Ellington, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006k *Phase I Cultural Resources Reconnaissance Survey of Two Proposed Cellular Communications Facility Alternatives (A & B) Located Within the Grounds of The Camp Candlewood Girl Scout Camp, New Fairfield, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006l *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 52 Stadley Rough Road, Danbury, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006m *Phase I Cultural Resources Reconnaissance Survey of a Proposed Telecommunications Facility off Graham Road in Ashford, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006n *Phase IA Cultural Resources Assessment Survey of Proposed Cellular Communications Facility CT33XC522, Weston, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006o *Phase IA Cultural Resources Assessment Survey of the Proposed Winding River Estates Condominium Complex in Southington, Connecticut* (with David George and William Keegan). Submitted to Mark IV Construction Company, Southington, Connecticut

2006p *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 1605 Sherman Avenue, Hamden, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006q *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 237 Sandy Hollow Road, Mystic, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006r *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility CTNH331B, Waterbury, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006s *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located along Fairchild Road, Middletown, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006t *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility CTNH357A, Watertown, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006u *Phase I Cultural Resources Reconnaissance Survey of the Proposed Newtown Technology Park, Newtown, Connecticut* (with David George and William Keegan). Submitted to Spath-Bjorklund Associates, Inc., Monroe, Connecticut

2006v *Phase I Cultural Resources Reconnaissance Survey of the Proposed Mortgage Lenders Development Project, Wallingford, Connecticut* (with David George and William Keegan). Submitted to Bohler Engineering, PC, Southboro, Massachusetts

2006w *Phase I Cultural Resources Reconnaissance Survey of the Proposed Johnnycake Mews Cluster Development, Burlington, Connecticut* (with David George and William Keegan). Submitted to Brycorp, Inc., Burlington, Connecticut

2006x *Phase I Cultural Resources Reconnaissance Survey of the Proposed Barbour Hill Substation Modification Project, South Windsor, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006y *Phase IB Cultural Resources Reconnaissance Survey of the Proposed Cabela's Development Project within Rentschler Field in East Hartford, Connecticut* (with David George and William Keegan). Submitted to Baystate Environmental Consultants, Inc., East Hartford, Connecticut

2006z *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 1662 Goldstar Highway, Groton, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006aa *Phase I Cultural Resources Reconnaissance Survey of the Proposed Shallot Meadow Development Project, Canton, Connecticut* (with David George and William Keegan). Submitted to David F. Whitney Consulting Engineers, Avon, Connecticut

2006bb *Phase I Cultural Resources Reconnaissance Survey of Proposed Prospect Street Housing Subdivision in Woodstock, Connecticut* (with David George and William Keegan). Submitted to CME Associates, Inc., Woodstock, Connecticut

2006cc *Phase I Cultural Resources Reconnaissance Survey of Proposed Fordham Estates Development, New Fairfield, Connecticut* (with David George and William Keegan). Submitted to Ms. Denise Toomey, Danbury, Connecticut

2006dd *Phase I Cultural Resources Reconnaissance Survey of the Proposed Tyler Ridge Housing Subdivision, Goshen, Connecticut* (with David George and William Keegan). Submitted to Mr. William Colby, Goshen, Connecticut

2006ee *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 4124 Tower Hill Road, South Kingstown, Rhode Island* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006ff *Phase IA Archeological Investigation of the Proposed Walnut Ridge Chase Housing Subdivision on Grassy Hill Road in East Lyme, Connecticut* (with David George and William Keegan). Submitted to BL Companies, Meriden, Connecticut

2006gg *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 260 Pound Hill Road, North Smithfield, Rhode Island* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006hh *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Along Route 63, Goshen, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006ii *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 111 Upper Fish Rock Road in Southbury, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006jj *Phase I Cultural Resources Reconnaissance Survey of the Proposed New Milford Northwest Cellular Communications Tower, Gaylordsville, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006kk *Phase I Cultural Resources Reconnaissance Survey of the Proposed Clairmont Cluster Subdivision in Stonington, Connecticut* (with David George and William Keegan). Submitted to Meehan Group, LLC, Collinsville, Connecticut

2006ll *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located along Old Baird Road, Watertown, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006mm *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 5081 Old Post Road, Charlestown, Rhode Island* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006nn *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility at 1027 Middle Turnpike East, Manchester, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006oo *Phase IA Cultural Resources Assessment Survey of a Proposed Cellular Communications Facility Located Within Floyd Bennett Field, Brooklyn, New York* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006pp *Phase IA Cultural Resources Assessment Survey of Proposed Cellular Communications Facility CT54XC768, Redding, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2006qq *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility Located at 167 New Milford Turnpike in Washington, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2006rr *Phase I Cultural Resources Survey of the Proposed Day Hill Road Development Project, Windsor, Connecticut* (with David George and William Keegan). Submitted to Clohessy, Harris, and Kaiser, LLC, Simsbury, Connecticut

2006ss *Phase I Cultural Resources Reconnaissance Survey of the Proposed Chapman Chase Housing Subdivision and Phase II National Register Testing and Evaluation of Site 165-7, Windsor Locks, Connecticut* (with David George and William Keegan). Submitted to The Keystone Companies, LLC, Avon, Connecticut

2007a *Phase I Cultural Resources Reconnaissance Survey of the proposed Walnut Ridge Chase Housing Subdivision on Grassy Hill Road in East Lyme, Connecticut* (with David George and William Keegan). Submitted to Centerplan Development Company, Hartford, Connecticut

2007b *Phase I cultural resources reconnaissance survey of proposed telecommunications facility CT33XC019 located off of Cove Road in Haddam, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2007c *Phase I cultural resources reconnaissance survey of proposed cellular telecommunications facility CT-3665 located along Route 7 in Sharon, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007d *Phase I cultural resources reconnaissance survey of a proposed housing subdivision located at 333 Valley Road in Killingly Connecticut* (with David George and William Keegan). Submitted to 333 Valley Road, LLC, Thompson, Connecticut

2007e *Phase I Cultural Resources Reconnaissance Survey of the Proposed Newtown Technology Park, Newtown, Connecticut* (with David George and William Keegan). Submitted to Spath-Bjorklund Associates, Inc., Monroe, Connecticut

2007f *Phase I cultural resources reconnaissance survey of a proposed cellular communications facility to be constructed at 297 East Canaan Road in East Canaan, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007g *Phase IA Cultural Resources Assessment Survey and Phase IB Cultural Resources Reconnaissance Survey of Proposed Sewer Lines and Associated Facilities in the Pine Grove Community of East Lyme, Connecticut* (with David George and William Keegan). Submitted to Weston & Sampson Engineers, Inc., Rocky Hill, Connecticut

2007h *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility, Route 7, Falls Village, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007i *Phase I Cultural Resources Reconnaissance Survey of the Proposed Quinnipiac River Linear Trail Project, Wallingford, Connecticut* (with David George and William Keegan). Submitted to the Town of Wallingford, Wallingford, Connecticut

2007j *Documenting Shipwrecks in the Connecticut Waters of Long Island Sound* (with David George and William Keegan). Submitted to the Connecticut Department of Environmental Protection, Office of the Long Island Sound Program, Hartford, Connecticut

2007k *Phase IA Cultural Resources Assessment Survey of the Proposed Orvedal Property Subdivision in East Lyme, Connecticut* (with David George and William Keegan). Submitted to Angus McDonald/Gary Sharpe & Associates, Inc., Old Saybrook, Connecticut

2007l *Intensive (Locational) Archaeological Survey of a Proposed Optasite Cellular Telecommunications Facility off Stony Hill Road, Wilbraham, Massachusetts* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007m *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT33XC272, Watertown, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2007n *Phase I cultural resources reconnaissance survey of property owned by the Connecticut Light & Power Company located north of Rood Avenue in Windsor, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2007o *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT-999-0102, South Windsor, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2007p *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility 4PR0626E Located at 0 Chopmist Hill Road in Glocester, Rhode Island* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007q *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility on Chase Road, Thompson, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2007r *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT-999-0101, Glastonbury, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2007s *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications on Old Turnpike Road in Woodstock, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007t *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility, on Town Farm Road, Farmington, Connecticut* (with David George and William Keegan). Submitted to EBI Consulting, Inc., Burlington, Massachusetts

2007u *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT-999-0074, Manchester, Connecticut* (with David George and William Keegan). Submitted to Kleinfelder, Inc., Windsor, Connecticut

2008a *Phase IA Cultural Resources Assessment Survey of a Proposed Development in Lebanon, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008b *Phase I Cultural Resources Reconnaissance Survey of Two Proposed Cellular Communications Facility Alternatives off Sterling Road, Plainfield, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008c *Phase IA Cultural Resources Assessment Survey of a Proposed Development in Watertown, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008d *Phase I Cultural Resources Reconnaissance Survey of Proposed Cellular Communications Facility CT-999-0093, Norwich, Connecticut* (with David George and William Keegan). Submitted to Kleinfelder, Inc., Windsor, Connecticut

2008e *Phase I Cultural Resources Reconnaissance Survey of Lot 123 of the Proposed Walnut Hill Chase Subdivision in East Lyme, Connecticut* (with David George and William Keegan). Submitted to BL Companies, Inc., Meriden, Connecticut

2008f *Phase IB Cultural Resources Reconnaissance Survey of a Proposed Development in Waterford, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008g *Intensive (Locational) Archaeological Survey of Proposed Optasite Cellular Telecommunications Facility 967-0018 off Stony Hill Road, Wilbraham, Massachusetts* (with David George and William Keegan). Submitted to Kleinfelder, Inc., Windsor, Connecticut

2008h *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility on Prospect Street in Woodstock, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008i *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility, Along Elmwood Hill Road, Putnam Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008j *Phase IB Cultural Resources Reconnaissance Survey of the Waterford Substation Project Area, Waterford, Connecticut* (with David George and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut

2008k *Phase I Cultural Resources Reconnaissance Survey of the Proposed Mansfield Four Corners Cellular Communications Facility to be Constructed at 343 Daleville Road in Willington, Connecticut* (with Catherine Labadia and William Keegan). Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2008l *Phase I Cultural Resources Reconnaissance Survey of the Coogan Property, Mystic, Connecticut* (with Catherine Labadia and William Keegan). Submitted to Fuss and O'Neill, Inc., Manchester, Connecticut and Northeast Utilities, Berlin, Connecticut.

2008m *Phase I Cultural Resources Reconnaissance Survey of the proposed Manchester Substation to Manchester Junction 345-kV Transmission Line 310/368 Separation Project, Manchester, Connecticut* (with Catherine Labadia and William Keegan). Submitted to Connecticut Light & Power Company, Berlin, Connecticut.

2009a *Archaeological Monitoring of the Interior Alterations & Repairs to the U.S. Coast Guard Housing at Fort Wadsworth, Staten Island, New York.* Submitted to American Alliance Group, Toms River, New Jersey.

2009b *Phase I Cultural Resources reconnaissance Survey of a 2.1 ac Parcel of Land Along Center Street in Manchester, Connecticut.* Submitted to Community Health Resources, Harford, Connecticut.

2009c *Archaeological Monitoring Test Bores at Fort Wadsworth, Staten Island, New York.* Submitted to ConEdison Solutions, Cherry Hill New Jersey.

2009d *Archaeological Monitoring Test Bores at the U.S. Coast Guard Facility at Sandy Hook, New Jersey.* Submitted to ConEdison Solutions, Cherry Hill New Jersey.

2009e *Phase I Cultural Resources Reconnaissance Survey of the Proposed Cornwall Elderly Housing Project along Kent Road (Route 7) in Cornwall, Connecticut.* Submitted to Cornwall Housing Corporation, Cornwall, Connecticut.

2009f *Phase I Cultural Resources Reconnaissance Survey of the Squantz Pond Bank Stabilization and Retaining Wall Project, New Fairfield, Connecticut.* Submitted to Connecticut Department of Environmental Protection State Parks and Public Outreach Division Hartford, Connecticut.

2009g *Phase IA Cultural Resources Assessment Survey of a parcel of land located at 312 Ferry Road in Old Lyme, Connecticut.* Submitted to Mr. David Eklund, Old Lyme, Connecticut.

2009h *Phase I Cultural Resources Reconnaissance Survey of an 11.7 ac Parcel of Land Located along Route 75 in Suffield, Connecticut.* Submitted to Executive Valet Parking, Suffield, Connecticut.

2009i *Phase IA Cultural Resources Assessment Survey of a 300 ac Parcel of Land Located in Westbrook, Connecticut.* Submitted to Lee Company, Westbrook, Connecticut.

2009j *Phase I Cultural Resources Reconnaissance Survey of the Proposed Extension to the Charter Oak Greenway From Gardner Street to Wyllys Street, Manchester, Connecticut.* Submitted to the Town of Manchester and the Connecticut Department of Transportation, Newington, Connecticut.

2009k *Phase IA Cultural Resources Assessment Survey of The Hillstead in Avon Development Parcel, Avon, Connecticut.* Submitted to Metro Realty Group, Ltd., Farmington, Connecticut.

2009l *Phase IB Cultural Resources Reconnaissance Survey of The Hillstead in Avon Development Parcel, Avon, Connecticut.* Submitted to Metro Realty Group, Ltd., Farmington, Connecticut.

2009m *Preliminary Archeological Assessment of the Proposed Uncasville Substation Expansion Project, Montville, Connecticut.* Submitted to Northeast Utilities, Berlin, Connecticut.

2009n *Phase I Cultural Resources Reconnaissance Survey of the Proposed New Oxford High School Project, Oxford, Connecticut.* Submitted to Town of Oxford, Oxford, Connecticut.

2009o *Phase I Cultural Resources Reconnaissance Survey of a Water Tank and Associated Cross-Country Appurtenances in Stockbridge, Massachusetts.* Submitted to the Town of Stockbridge, Stockbridge, Massachusetts.

2009p *Phase IA Cultural Resources Assessment Survey of Connecticut Department of Transportation, State Project Number 17-174, a Proposed Realignment of the Intersection of Church, Union, and South Streets in Bristol, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut and the Connecticut Department of Transportation, Newington, Connecticut.

2009q *Phase IA Cultural Resources Assessment Survey of a parcel of Land Located in Westport, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut and Northeast Utilities, Berlin, Connecticut.

2009r *Phase IB Cultural Resources Reconnaissance Survey of a parcel of Land Located in Westport, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut and Northeast Utilities, Berlin, Connecticut.

2009s *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility to be Constructed at 723 Leete's Island Road in Branford, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut.

2009t *Phase I Cultural Resources Reconnaissance Survey of a Proposed Cellular Communications Facility to be Constructed at 49 Brainerd Road in East Lyme, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut.

2009u *Phase I Cultural Resources Reconnaissance Survey of Two Proposed Alternative Cellular Communications Facilities Located Adjacent to Residential Properties Near Main Street in Glastonbury, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut.

2009v *Phase I Cultural Resources Reconnaissance Survey of Two Cellular Communications Facility Alternatives in Pomfret, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut.

2010a *Phase I Cultural Resources Reconnaissance Survey of Proposed Project Items Associated with the Perry House located at 1128 West Broad Street in Stratford, Connecticut.* Submitted to Town of Stratford Department of Community/Economic Development.

2010b *Phase I Cultural Resources Reconnaissance Survey of the Proposed Reconstruction of Peck Hill Road in Woodbridge, Connecticut (CT-DOT Project Number 167-104/Luchs No. 27014).* Submitted to Luchs Consulting Engineers, LLC, Meriden, Connecticut and the Connecticut Department of Transportation, Newington, Connecticut.

2010c *Archeological Monitoring of Housing Upgrades to the U.S. Coast Guard Housing at Fort Wadsworth, Staten Island, New York.* Submitted to American Alliance Group, Toms River, New Jersey.

2010d *Phase I Cultural Resources Reconnaissance Survey of Two Proposed Alternative Cellular Communications Facilities Located Within Residential Lots Along Plainfield Pike in Sterling, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut.

2010e *Phase I Cultural Resources Reconnaissance Survey of A Proposed Cellular Communications Facility Located proposed at 14 Cross Lane in Old Lyme, Connecticut.* Submitted to Vanasse Hangen Brustlin, Middletown, Connecticut.

2010f *Phase I Cultural Resources Reconnaissance Survey of a 14 ac Parcel of Land Located along Oak Ridge Drive in Windsor Locks, Connecticut.* Submitted to M & L Development Corporation, Windsor Locks, Connecticut.

2010g *Archeological Monitoring of Additional Housing Upgrades to the U.S. Coast Guard Housing at Fort Wadsworth, Staten Island, New York.* Submitted to American Alliance Group, Toms River, New Jersey.

2011a *Phase I Cultural Resources Reconnaissance Survey of the Proposed Valley Service Road Extension Project in North Haven, Connecticut.* Submitted to Diversified Technology Consultants, Hamden, Connecticut.

2011b *Phase I Cultural Resources Reconnaissance Survey of the proposed Oyster Shores Development Project.* Submitted to Housing Enterprises, Inc., Suffield, Connecticut.

2011c *Phase IA Cultural Resources Assessment Survey of a Parcel of Land Located at 120 Colebrook River Road in Winsted, Connecticut.* Submitted to PCNK, LLC, Winsted, Connecticut.

2011d *Preliminary Archeological Assessment of the OPGW Phase III Line Replacement Project in Hampden County, Massachusetts and Hartford County, Connecticut.* Submitted to Northeast Utilities Services Company, Berlin, Connecticut.

2011e *Preliminary Archeological Assessment of the Line 321 Replacement Project from the Long Mountain to Plumtree Substation in Western Connecticut.* Submitted to Northeast Utilities Services Company, Berlin, Connecticut.

2011f *Preliminary Archeological Assessment of the Montague Substation to Podick Substation Line Replacement Project in Franklin and Hamilton Counties, Massachusetts*. Submitted to Northeast Utilities Services Company, Berlin, Connecticut.

2011g *Preliminary Archeological Assessment of the Millstone Line Separation Project in Waterford, Connecticut*. Submitted to Northeast Utilities Services Company, Berlin, Connecticut.

2011h *Phase I Cultural Resources Reconnaissance Survey of Two Proposed Alternative Cellular Communications Facilities Located in East Hartland, Connecticut*. Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2011i *Phase I Cultural Resources Reconnaissance Survey of the Proposed Willington Senior Cottages Project in Willington, Connecticut*. Submitted to Housing Enterprises, Inc., Suffield, Connecticut.

2011j *Archeological Monitoring of Additional Housing Upgrades to the U.S. Coast Guard Housing at Fort Wadsworth, Staten Island, New York*. Submitted to American Alliance Group, Toms River, New Jersey.

2011k *Phase I cultural resources reconnaissance survey of a proposed cellular communications facility at 17 Warren Road in Washington, Connecticut*. Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2011l *Phase IA Cultural Resources Assessment Survey of a Parcel of Land located at 6 Fitch Street, Norwalk, Connecticut*. Submitted to Tighe & Bond, Inc., Middletown, Connecticut.

2011m *Phase I cultural resources reconnaissance survey of a proposed cellular communications facility located at 520 Somers Road in Ellington, Connecticut*. Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2011n *Phase I cultural resources reconnaissance survey of a proposed cellular communications facility to be constructed within a parcel of land located at 64 Codfish Hill Road in Bethel, Connecticut*. Submitted to Infinigy Engineering & Surveying, PLLC, Latham, New York.

2011o *Phase I cultural resources reconnaissance survey of a proposed cellular communications facility located at 111 Second Hill Road in Bridgewater, Connecticut*. Submitted to Vanasse Hangen Brustlin, Inc., Middletown, Connecticut.

2012a *Phase I Cultural Resources Reconnaissance Survey of the Proposed Christian Street Reconstruction Project in Oxford, Connecticut (ConnDOT #107-166)*. Submitted to DeCarlo & Doll, Inc., Meriden, Connecticut.

2012b *Phase I Cultural Resources Cultural Resources Assessment and Reconnaissance Surveys of 177 Utility Structure Replacements Locations Along the Northeast Utilities 1990 Line, Frost Bridge Substation to the Stevenson Dam Substation in Oxford, Middlebury, Waterbury, and Watertown Connecticut*. Submitted to Northeast Utilities Services Company, Berlin, Connecticut.

2012c *Phase I Cultural Resources Reconnaissance Survey of the Proposed Reconstruction of Route 34 (Main Street), Derby Project in Derby, Connecticut (ConnDOT #36-184)*. Submitted to DeCarlo & Doll, Inc., Meriden, Connecticut.

Rita G. Walsh, NCICP

Cultural and Historic Resources

Ms. Walsh brings 30 years experience to VHB in cultural resources compliance and historic preservation services. She provides expertise in a broad range of services including Section 106 reviews and other local and state compliance processes, historic preservation tax credit applications, National Register nominations, interpretive planning, and historical research. Ms. Walsh meets the Secretary of the Interior's Professional Qualification Standards for an Architectural Historian and Historian (36 CFR 61).

30 years of professional experience

NHDOT NH Route 33 Bridge Section 106 Services, Portsmouth, NH
Researched the presence of previously inventoried above ground resources and compiled archival sources for the area of NH Route 33 between I-95 and Peverly Hill Road. Fieldwork involved photographic documentation, assessment of the condition of previously inventoried resources, and identification of new above ground resources along the corridor. Oversaw preparation of New Hampshire Division of Historical Resources inventory forms for 3 additional properties. Presented findings at state cultural resources agencies committee. Currently preparing NH Historic Bridge Documentation report for the NH Route 33 bridge that will be demolished.

Cultural Resources Assessment, NH 125 from Epping to Rochester, NH
Researched the presence of previously inventoried above ground resources and archaeological sites and compiled archival sources for a 20-mile segment of NH 125 between Epping and Rochester. Fieldwork involved photographic documentation, assessment of the condition of previously inventoried resources, and identification of new above ground resources along the corridor. Outlined issues and recommendations regarding the status of above ground resources and future steps.

Point Neighborhood Historic Resources Survey and Neighborhood Preservation Plan, Salem, MA
Contracted by the City of Salem to document and evaluate historic and architectural significance of buildings and structures and to prepare a preservation plan, in advance of a master plan, for the Point neighborhood in Salem. The assignment included the preparation of a substantial Massachusetts Historical Commission area inventory form for the entire neighborhood. The study produced a series of required reports that conformed to MHC survey methodology.

Suffolk University Institutional Master Plan, Boston, MA
Coordinated Chapter 254 reviews on the Modern Theatre and Metropolitan District Commission building with MHC, Boston Landmarks Commission, and the Boston Preservation Alliance. She prepared a preservation plan for the University, which has been formalized in the Institutional Master Plan.

Boston College Institutional Master Plan, Boston and Newton, MA
Ms. Walsh contributed to the institutional master plan preparation through identification, mapping, and evaluation of historic properties on and adjacent to the College's three campuses. Provided guidance to the College IMP team on National Register criteria and compliance processes.

West Lexington Greenway Plan, West Lexington, MA
Part of the VHB team to produce a master plan for the new West Lexington Greenway. Extending five miles in length, the West Lexington Greenway represents, in aggregate, the potential for one of the largest open space networks within the metropolitan Boston area. Provided site file search results on the presence of historic properties and provided guidance on their significance.

Continued, p. 2

Project Reviews with Massachusetts Historical Commission
Prepared and coordinated MHC Project Notification Forms (PNF) and Historic and Archaeological sections of MEPA Environmental Notification Forms (ENF) for many Massachusetts projects subject to state or federal review. Typical tasks include MHC site file research, preparation of pertinent sections of PNF or ENF, coordination with MHC staff, coordination with local historical commissions and other interested parties, preparation of Memoranda of Agreement, and carrying out mitigation stipulations, including archival photography, exhibits, and historical narratives. Rita has worked on a variety of project in many communities across the Commonwealth.

Blackstone Canal Feasibility Study, Worcester, MA
Provided historical research and narrative on the canal's development from its construction in 1825-1828 through its subsequent use as part of the city's sewer system and conversion of its right-of-way for use as the current Harding Street. Contributed to an assessment of the historic and functional character of properties in the study area.

Education	MS, Historic Preservation, University of Vermont, 1982
	BA, Historic Preservation, University of Michigan, 1979
Professional Registrations/ Certifications	National Charrette Institute Charrette Planner®
Affiliations/ Memberships	Boston Preservation Alliance, Board Member
	National Trust for Historic Preservation, Forum Member
	Vernacular Architecture Forum, Board Member
Publications	Camp Curtis Guild: A History of Eastern Massachusetts State Rifle Range, 2007
	The Blackstone Canal Preservation Study (MA), presented at the Blackstone Canal Symposium, November 3 & 4, 2006
	History in the Making,: The Historic Tax Credit is a significant revitalization tool for historic buildings, Revitalization: The Magazine of Community Renewal and Natural Resource Restoration, March/April 2006
	New Technologies in Survey: Dorchester and Mattapan Preliminary Survey Plan, presented at the MHC Statewide Historic Preservation Conference, September 20, 2006

Transportation
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Vanasse Hangen Brustlin, Inc.

December 19, 2013

Timothy M. Herbst
First Selectman
Town Hall, 2nd floor
5866 Main Street
Trumbull, CT 06611

To comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, Cello Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless) has retained Vanasse Hangen Brustlin, Inc. (VHB) to evaluate its proposed telecommunication facilities for any adverse effect it may have on historic properties.

Verizon Wireless is proposing to build an 83-foot Monopole Telecommunications Tower at 60 Commerce Drive in Trumbull, Connecticut. Associated equipment shelter will be installed as well.

We understand that Trumbull does not have a Historic District Commission. We are also posting public notice of this proposed undertaking in the *CT Post* on December 24, 2013 to invite comments regarding any potential effects the proposed undertaking may have upon historic properties from relevant individuals or groups.

Parties interested in submitting comments regarding any potential effects of the proposed facility on historic properties may do so by sending them to Vanasse Hangen Brustlin, Inc., 54 Tuttle Place, Middletown, CT, 06457, to Coreen Kelsey, emailed to ckelsey@vhb.com, or by calling (860) 632-1500 ext. 4306.

If you have any comments or questions regarding this matter, please contact us with thirty days from your receipt of this letter.

Sincerely yours,
Vanasse Hangen Brustlin, Inc.

Coreen Kelsey

Coreen Kelsey
Project Coordinator

54 Tuttle Place
Middletown, Connecticut 06457-1847
860.632.1500 • FAX 860.632.7879
www.vhb.com

Advertisement Tools
- Print Ad
- Add to my clip-list
- Email ad to a friend
- Report ad to moderator

Advertisement Details

Ad Id:	22681852
Location:	Middletown, CT
Created:	Dec 24, 2013
Expires:	Jan 1, 2014
Views:	90

Advertiser Details

Username:	tmp2e884f9
Joined:	Dec 4, 2009
Ads Placed:	9

PUBLIC NOTICE: Cellco Partnership and its controlled affiliates doing business as Verizon Wireless is...

Reply By Email

Source: Hearst Media Services

DescriptionBasic Info

PUBLIC NOTICE: Cellco Partnership and its controlled affiliates doing business as Verizon Wireless is proposing to build a 83-foot Monopole Telecommunications Tower in the vicinity of 60 Commerce Drive, Trumbull, CT 06611. Public comments regarding potential effects from this site on historic properties may be submitted within 30-days from the date of this publication to: Coreen Kelsey, Vanasse Hangen Brustlin, Inc., 54 Tuttle Place, Middletown, CT, 06457, ckelsey@vhb.com, or (860) 632-1500 ext. 4306.

Location:	06457
City:	Middletown

From:	towernotifyinfo@fcc.gov
To:	Kelsey, Coreen
Cc:	kim.pristello@fcc.gov; diane.dupert@fcc.gov
Subject:	NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER CONSTRUCTION NOTIFICATION INFORMATION - Email ID #3557242
Date:	Friday, December 27, 2013 3:01:16 AM

Dear Sir or Madam:

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this electronic mail message is to inform you that the following authorized persons were sent the information you provided through TCNS, which relates to your proposed antenna structure. The information was forwarded by the FCC to authorized TCNS users by electronic mail and/or regular mail (letter).

Persons who have received the information that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribes"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs). For your convenience in identifying the referenced Tribes and in making further contacts, the City and State of the Seat of Government for each Tribe and NHO, as well as the designated contact person, is included in the listing below. We note that Tribes may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Pursuant to the Commission's rules as set forth in the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA), all Tribes and NHOs listed below must be afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below, unless the proposed construction falls within an exclusion designated by the Tribe or NHO. (NPA, Section IV.F.4).

The information you provided was forwarded to the following Tribes and NHOs who have set their geographic preferences on TCNS. If the information you provided relates to a proposed antenna structure in the State of Alaska, the following list also includes Tribes located in the State of Alaska that have not specified their geographic preferences. For these Tribes and NHOs, if the Tribe or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribe or NHO has agreed to different procedures (NPA, Section IV.F.5). In the event such a Tribe or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribe or NHO, you must seek guidance from the Commission (NPA, Section IV.G). These procedures are further set forth in the FCC's Declaratory Ruling released on October 6, 2005 (FCC 05-176).

1. Cultural Preservation Director Tamara Francis-Fourkiller - Delaware Nation - Anadarko, OK - regular mail
Details: The Delaware Nation located in Anadarko, Oklahoma
charges a $500 administrative fee for the review of ALL projects.
(Change Effective 5/21/2013).
Send fee payable to the Delaware Nation in the form of a check or money order.
All projects for review by the Delaware Nation must pay the $500 fee.
Please note that the Delaware Nation and the Delaware Tribe of Indians ARE NOT the same enitity.
Send all correspondence for the Delaware Nation to
The Delaware Nation
ATTN: Cultural Preservation Department
31064 State Hwy 281
Anadarko, OK 73005.

2. THPO Kathleen Knowles - Mashantucket Pequot Tribe - Mashantucket, CT - electronic mail

Details: The Mashantucket Pequot Tribal Nation requires a $500 research and review fee for all proposed projects.

Please make your check payable to the "Mashantucket Pequot Tribal Nation," and mail to:

Mashantucket Pequot Tribal Nation
Natural Resources Protection & Regulatory Affairs
550 Trolley Line Blvd.
P.O. Box 3202
Mashantucket, CT 06338-3202

For every tower construction, the Mashantucket Pequot Tribal Nation requires a site location map. If there will be ground disturbance, we also require the site plans and a detailed description of the proposed site. If the proposed project is to be located on an already existing building, we would like to be informed of that as well.

Once your $500 payment is received, we will make every effort to respond to you within thirty days.

Sincerely,
Kathleen Knowles, THPO
Mashantucket Pequot Tribal Nation
kknowles@mptn-nsn.gov
860-396-6887

3. Deputy THPO Elaine Thomas - Mohegan Indian Tribe - Uncasville, CT - electronic mail and regular mail
Details: Beginning February 18, 2013 the Mohegan Indian Tribe of Connecticut will charge a $500.00 research fee per all proposed cell tower projects in the State of Connecticut. Please make checks payable to Mohegan THPO, and include, 4990-0300, AA code 52, on all checks along with the TCNS#. Please send checks to: Mohegan THPO c/o James Quinn, 13 Crow Hill Road, Uncasville, CT 06382.

After we have received the research fee, we will commence our research of the proposed cell tower project. The Mohegan Tribe is interested in all notifications of proposed cell tower projects that are within the State of Connecticut.

4. Program Manager-Cell Tower Division Sequahna Mars - Narragansett Indian Tribe - Wyoming, RI - electronic mail and regular mail
Details: NITHPO respectfully requests that additional contacts following initial TCNS notification be made via e-mail to Sequahna Mars, at sequahna@yahoo.com.

NITHPO respectfully requests a site map and photographs for all projects that involve ground disturbance.

Please note that NITHPO's current review fees are as follows:
For projects in which there is to be no ground disturbance the review fee is $500.
For ALL projects which include ground disturbance, the review fee is $1000.

5. THPO/NAGPRA Technician Juliet K Goyen - Keweenaw Bay Indian Community - Baraga, MI - electronic mail
Details: The KBIC THPO reviews all projects within historic homelands for the presence of cultural resources with significance to the Anishinaabe. Your request will go through a preliminary review by our THPO/NAGPRA Technician, the review consists of relevant studies submitted by the applicant regarding cultural resources documentation, in house literature search, database search and GIS search for further information. If any cultural resources are identified during this process, the file will be turned over to

the Tribal Historic Preservation Officer in order to make a determination of effects.
Information required in order to complete this process are as follows:
Project Name
Project Location
Physical Address
Latitude and Longitude
State, County,Township, Range, Section quarters
Brief Project Description
Existing studies for archaeological sites, and cultural resources.

As of May 1, 2013 the KBIC THPO will be charging a fee of $300.00 per review/collocation unless the review covers more than one section of land in which case the fee is $300.00 per section. Fees in this process cover the research and other activities required to provide you with a timely response so your project can stay on track. Please submit payment of $300.00 for each project application submitted, checks should be made payable to KBIC THPO, 16429 Beartown Road, Baraga, Michigan 49908. Any questions can be directed to: Gary F. Loonsfoot, Jr., Director of Cultural Resources or Juliet K. Goyen, THPO/NAGPRA Technician via email: gloonsfoot@kbic-nsn.gov, jgoyen@kbic-nsn.gov or thpo@kbic-nsn.gov or by phone: 906-353-6623 ext. 4178 or 4278.

6. THPO and NAGPRA Representative Giiwegiizhigookway Martin - Lac Vieux Desert Band of Lake Superior Chippewa Indians - Watersmeet, MI - electronic mail
Details: Effective: January 1, 2013:

To enable us to participate fully, the Ketegitigaaning Ojibwe Nations fee for such services is $100. $50.00 for historical/cultural records research and $50.00 for archaeological records review per section of land. The fee must be submitted so that the research can be done. At that time we will review and make our determinations with the appropriate information that we have on file with our Tribe pertaining to this area.

All Collocation Projects will be handled in the same manner as new projects UNLESS the Ketegitigaaning Ojibwe Nation commented on the original project.

Should you have any questions, please feel free to contact me at 906-358-0137.

Miigwetch,

giiwegiizhigookway Martin, THPO

Fee can be sent along with the requested information to:
Make Check Payable to:
Ketegitigaaning Ojibwe Nation THPO
P.O. 249
Watersmeet, Michigan 49969
Office: 906-358-0137
Fax: 906-358-4850Email: gmartin@lvdtribal.com

7. Dr. Brice Obermeyer - Delaware Tribe of Indians of Oklahoma - Emporia, KS - electronic mail
Details: In order to receive a formal response, please provide a consultation fee of $250 payable to: Delaware Tribe of Indians. The fee should be included with the mailed notification packet. Notification should include a cover letter describing the project and a topographic map depicting the project's location.

The Delaware Tribe is not interested in receiving notifications for projects that do not include ground disturbance.

Thank you.

Sincerely,
Dr. Brice Obermeyer
Delaware Tribe Historic Preservation Office
1200 Commercial, Roosevelt Hall - Room 212
Emporia, Kansas 66801
620-341-6699
bobermeyer@delawaretribe.org

The information you provided was also forwarded to the additional Tribes and NHOs listed below. These Tribes and NHOs have NOT set their geographic preferences on TCNS, and therefore they are currently receiving tower notifications for the entire United States. For these Tribes and NHOs, you are required to use reasonable and good faith efforts to determine if the Tribe or NHO may attach religious and cultural significance to historic properties that may be affected by its proposed undertaking. Such efforts may include, but are not limited to, seeking information from the relevant SHPO or THPO, Indian Tribes, state agencies, the U.S. Bureau of Indian Affairs, or, where applicable, any federal agency with land holdings within the state (NPA, Section IV.B). If after such reasonable and good faith efforts, you determine that a Tribe or NHO may attach religious and cultural significance to historic properties in the area and the Tribe or NHO does not respond to TCNS notification within a reasonable time, you should make a reasonable effort to follow up, and must seek guidance from the Commission in the event of continued non-response or in the event of a procedural or substantive disagreement. If you determine that the Tribe or NHO is unlikely to attach religious and cultural significance to historic properties within the area, you do not need to take further action unless the Tribe or NHO indicates an interest in the proposed construction or other evidence of potential interest comes to your attention.

None

The information you provided was also forwarded to the following SHPOs in the State in which you propose to construct and neighboring States. The information was provided to these SHPOs as a courtesy for their information and planning. You need make no effort at this time to follow up with any SHPO that does not respond to this notification. Prior to construction, you must provide the SHPO of the State in which you propose to construct (or the Tribal Historic Preservation Officer, if the project will be located on certain Tribal lands), with a Submission Packet pursuant to Section VII.A of the NPA.

8. SHPO Cara Metz - Massachusetts Historical Commission - Boston, MA - electronic mail

9. SHPO Frederick C Williamson - Rhode Island Historic Preservation & Heritage Comm - Providence, RI - regular mail

10. Deputy SHPO Edward F Sanderson - Rhode Island Historic Preservation & Heritage Comm - Providence, RI - electronic mail

11. SHPO Karen J Senich - Connecticut Commission on Culture and Tourism - Hartford, CT - electronic mail and regular mail

If you are proposing to construct a facility in the State of Alaska, you should contact Commission staff for guidance regarding your obligations in the event that Tribes do not respond to this notification

within a reasonable time.

Please be advised that the FCC cannot guarantee that the contact(s) listed above opened and reviewed an electronic or regular mail notification. The following information relating to the proposed tower was forwarded to the person(s) listed above:

Notification Received: 12/19/2013
Notification ID: 103755
Tower Owner Individual or Entity Name: Cellco Partnership dba Verizon Wireless
Consultant Name: Coreen Kelsey
Street Address: 54 Tuttle Place
City: Middletown
State: CONNECTICUT
Zip Code: 06457
Phone: 860-807-4306
Email: ckelsey@vhb.com

Structure Type: MTOWER - Monopole
Latitude: 41 deg 14 min 44.1 sec N
Longitude: 73 deg 8 min 44.0 sec W
Location Description: 60 Commerce Drive
City: Trumbull
State: CONNECTICUT
County: FAIRFIELD
Ground Elevation: 51.8 meters
Support Structure: 24.4 meters above ground level
Overall Structure: 25.3 meters above ground level
Overall Height AMSL: 77.1 meters above mean sea level

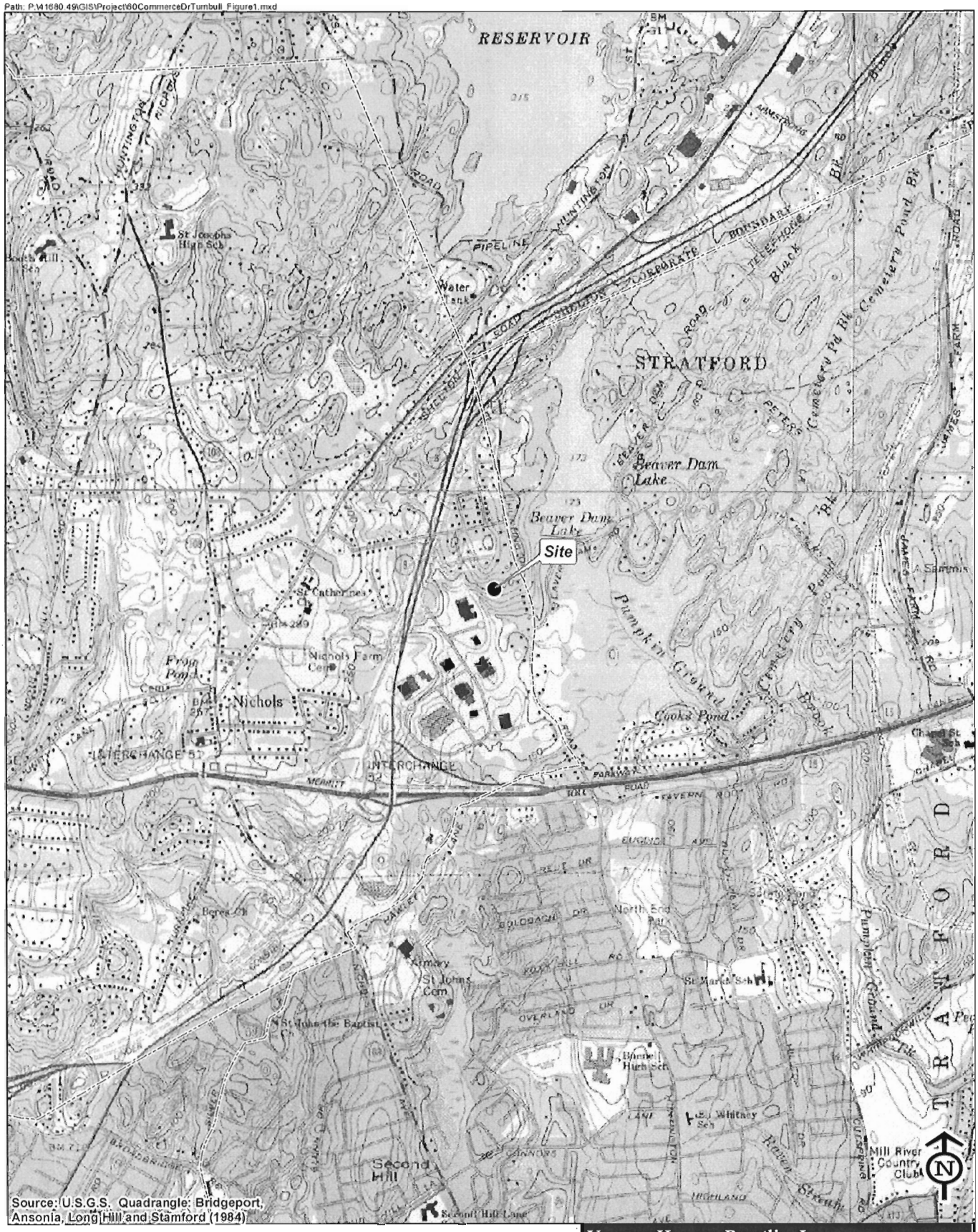
If you have any questions or comments regarding this notice, please contact the FCC using the electronic mail form located on the FCC's website at:

http://wireless.fcc.gov/outreach/notification/contact-fcc.html.

You may also call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are from 8 a.m. to 7:00 p.m. Eastern Time, Monday through Friday (except Federal holidays). To provide quality service and ensure security, all telephone calls are recorded.

Thank you,
Federal Communications Commission

Path: P:\41680.49\GIS\Project\60CommerceDrTurnbull_Figure1.mxd



1,000 500 0 1,000 Feet

Quadrangle Location

Vanasse Hangen Brustlin, Inc.

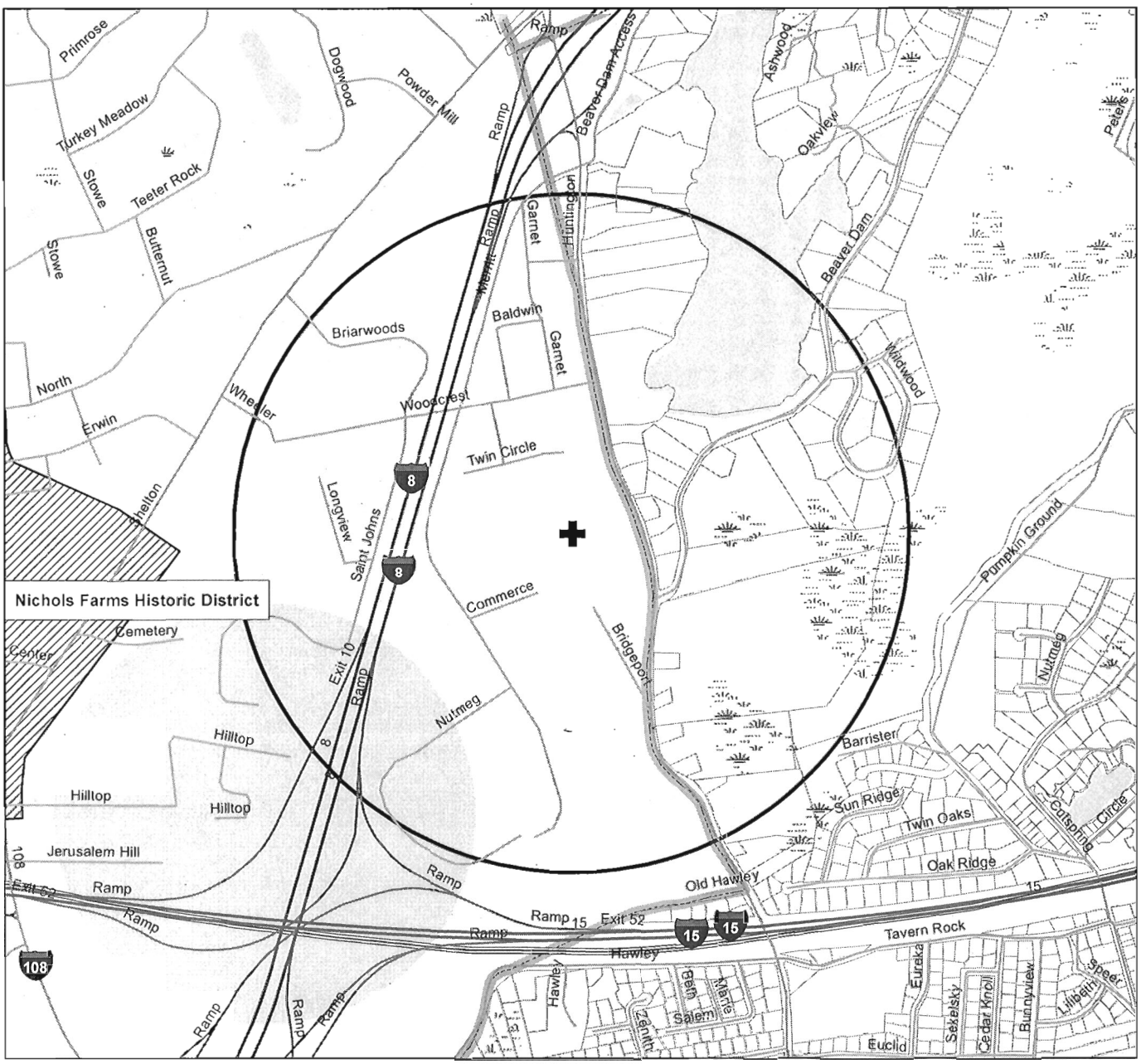
Figure 1
Site Location Map
Trumbull SE 4
60 Commerce Drive
Trumbull, Connecticut

verizon wireless

Determination of Effects

VHB reviewed the National Park Service NRIS database to identify any individually listed properties and/or historic districts that are in the National Register of Historic Places (NRHP). The area of potential effects (APE) for the proposed tower would be a half-mile radius, as overall tower height is less than 200 foot tall. Our Cultural Resources Screen did not reveal the presence of historic or architectural resources listed or eligible for listing in the National Register of Historic Places (NRHP) at or within half-mile of the Site. Due to the fact that there are no historic resources within the half-mile radius of the Site, it is VHB's opinion that there are no historic properties affected for visual effects under Section 106 of the National Historic Preservation Act of 1966, as amended.

The APE for direct effects is limited to the area of proposed ground disturbance on the property. Based on Heritage Consultants' *Preliminary Archeological Assessment* dated January 7, 2014, there does not appear to be any archeological resources located on the subject property. Heritage Consultants, LLC concluded that "Both the newly proposed lease area and access road retain little, if any, possibility for significant archeological deposits. Based on this information, it is the professional opinion of Heritage Consultants, LLC that additional cultural resources investigations of the proposed telecommunications tower location are not warranted". It is VHB's opinion that there are no historic properties affected for direct effects under Section 106 of the National Historic Preservation Act of 1966, as amended.



Legend

- Proposed Facility
- 1/2 Mile Buffer
- National Register (points)
- National Register (polygon)
- Scenic Highways (CT)
- Reported Archaeological Sites
- Parcels
- Primary US and State Highways
- Secondary State and County Highway
- Freeway ramp
- Local or Rural Road
- Water
- Marsh on Quad

Vanasse Hangen Brustlin, Inc.

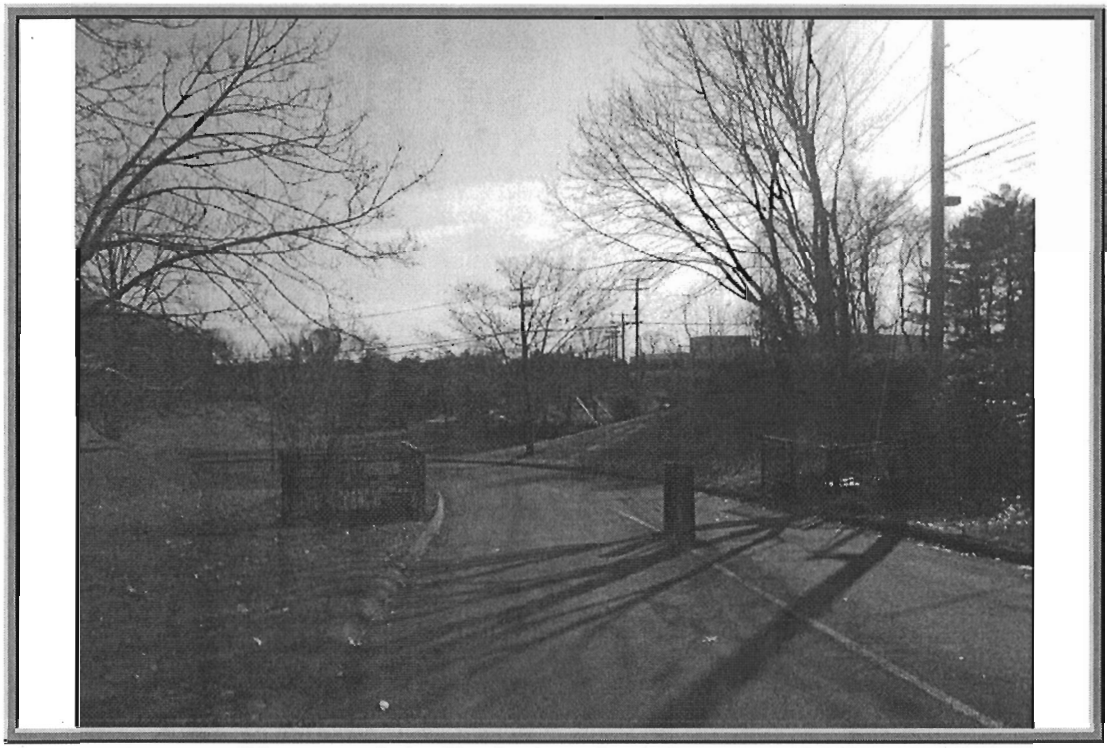
Cultural Resources Screen
PROPOSED WIRELESS FACILITY
60 COMMERCE DRIVE
TRUMBULL, CONNECTICUT
SEPTEMBER 16, 2013
USGS QUAD:BRIDGEPORT

N

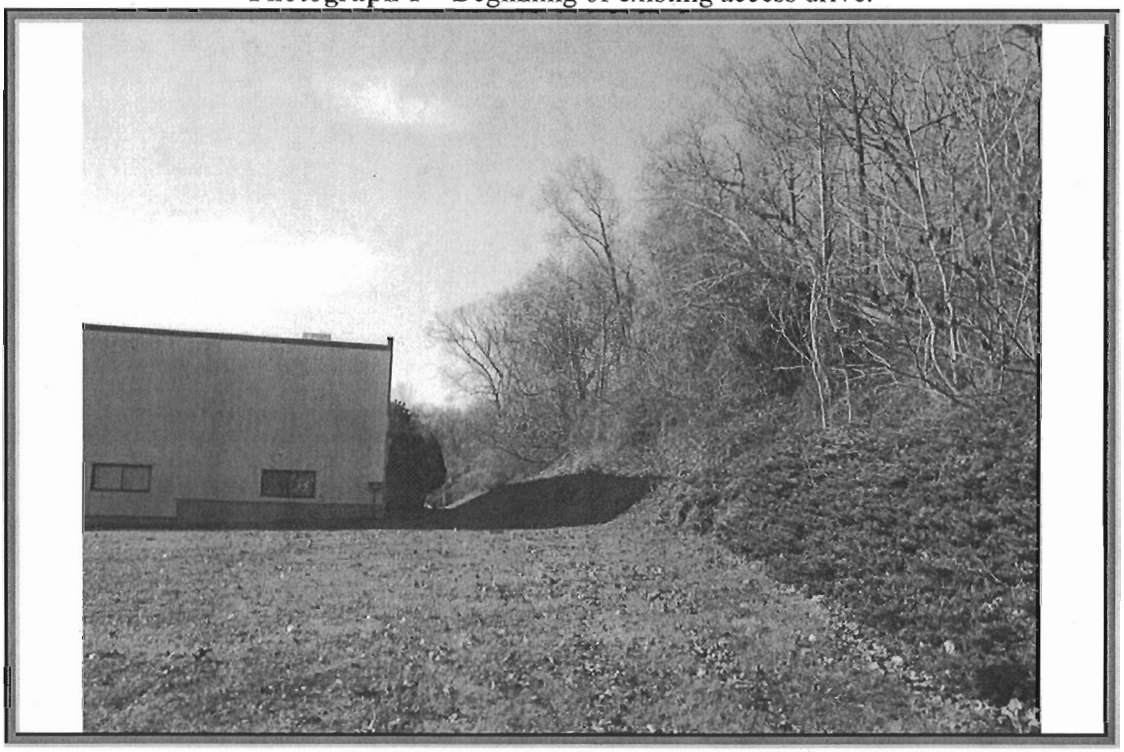
0 0.2 0.4 Miles

Prepared for Vanasse Hangen Brustlin, Inc by Heritage Consultants- 2013

Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611

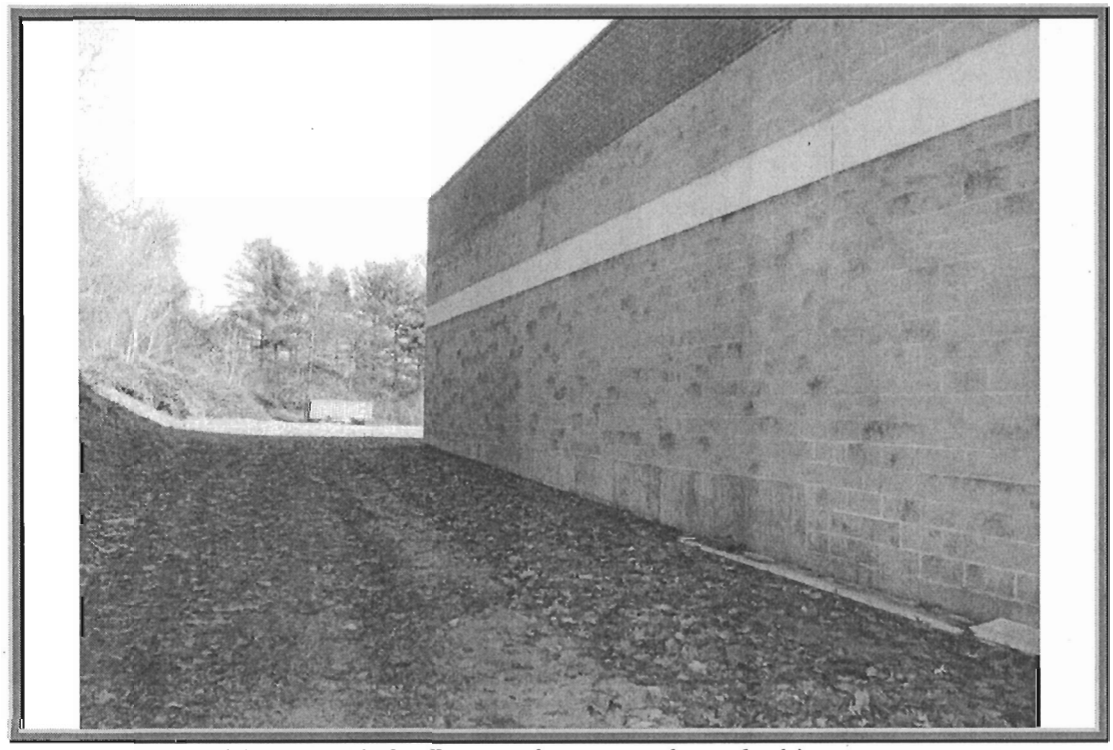


Photograph 1 – Beginning of existing access drive.



Photograph 2 – Proposed access driveway from parking lot to proposed compound area (looking west) (approximately 1,456 feet long).

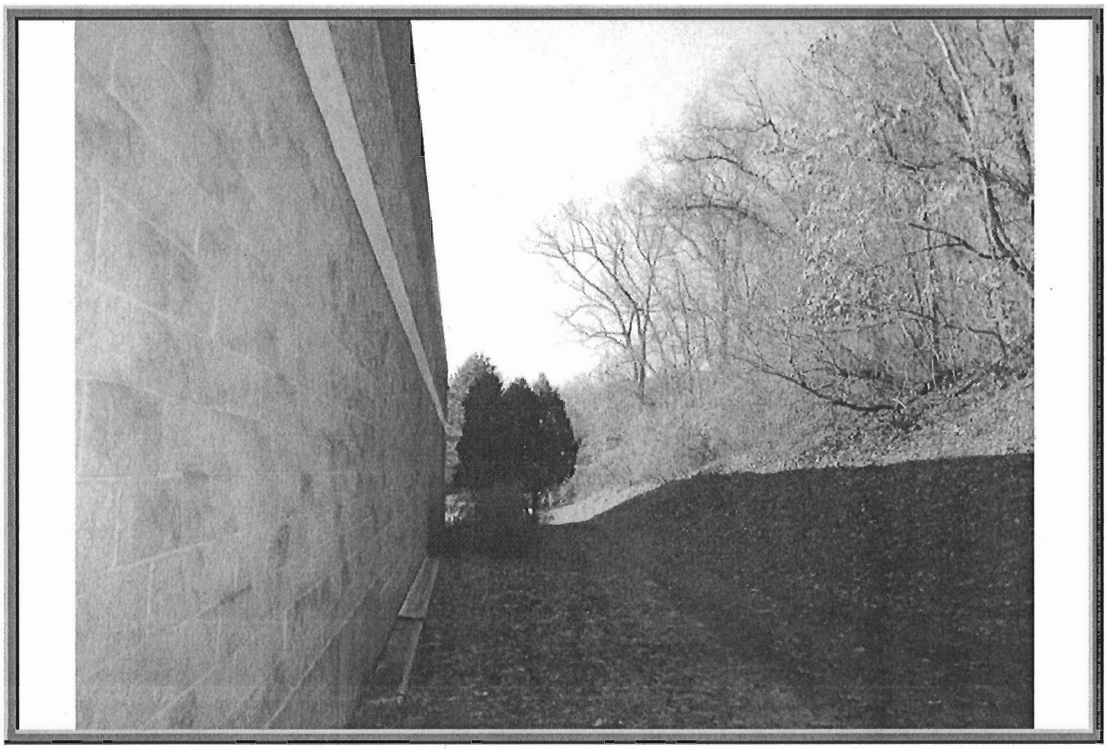
Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611



Photograph 3 – Proposed compound area looking east.

Photograph 4 – Looking north from proposed compound area.

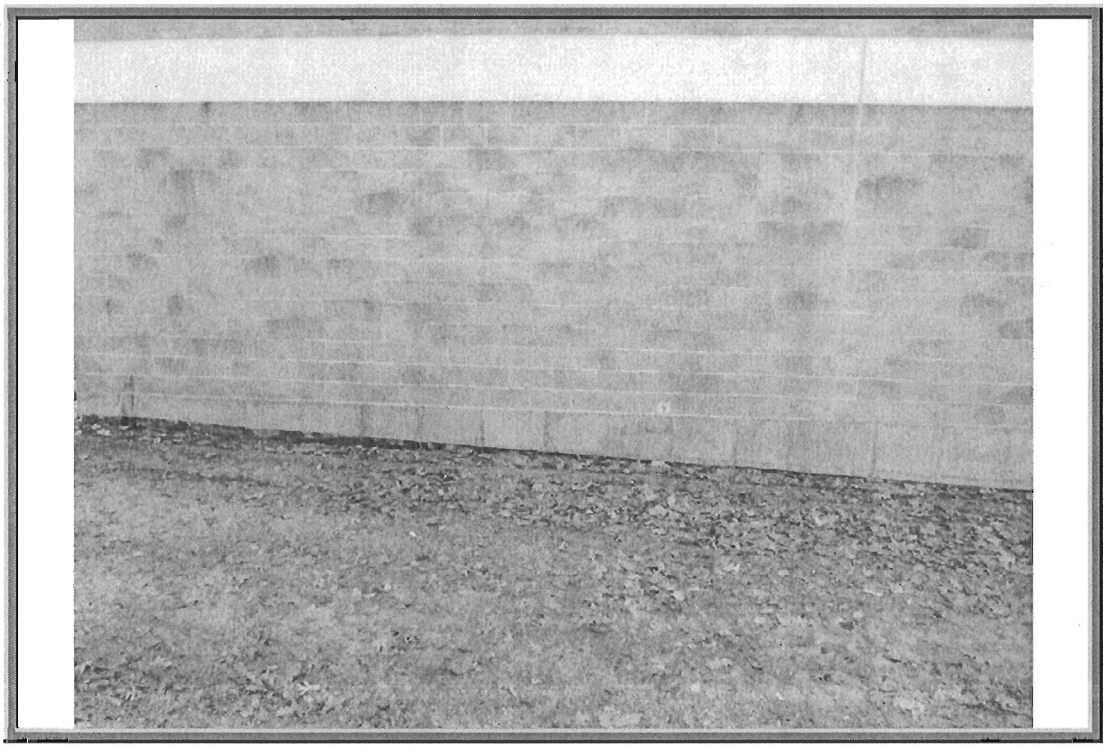
Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611



Photograph 5 – Looking west from proposed compound area.

Photograph 6- Looking east from proposed compound area.

Trumbull SE 4 CT Telecommunications Site
Site Number 17136
60 Commerce Drive, Trumbull, Connecticut 06611



Photograph 7 – Looking south from proposed compound area.

Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

SITE DIRECTIONS

FROM: 99 EAST RIVER DRIVE, EAST HARTFORD, CONNECTICUT
TO: 60 COMMERCE DRIVE, TRUMBULL, CONNECTICUT

1.	Start out going SOUTHWEST on E RIVER DRIVE toward PITKIN ST.	1.3 mi.
2.	Merge onto US-5 S/CT-15 S toward I-91 S / NEW HAVEN.	1.1 mi.
3.	Merge onto I-91 A via EXIT 86 toward NEW HAVEN / NEW YORK CITY.	17.1 mi.
4.	Merge onto CT-15 S via EXIT 17.	30.2 mi.
5	Merge onto CT-8 N via EXIT 52 toward WATERBURY	1.4 mi.
6.	Take the HUNTINGTON ROAD exit, EXIT 11	0.1 mi.
7.	Take the ramp toward STRATFORD / TRUMBULL.	0.04 mi.
8.	Turn SLIGHT RIGHT onto HUNTINGTON ROAD.	0.03 mi.
9.	Take the 1st RIGHT onto MERRITT BLVD.	0.8 mi.
10.	Take the 1st LEFT onto COMMERCE DRIVE	0.07 mi.

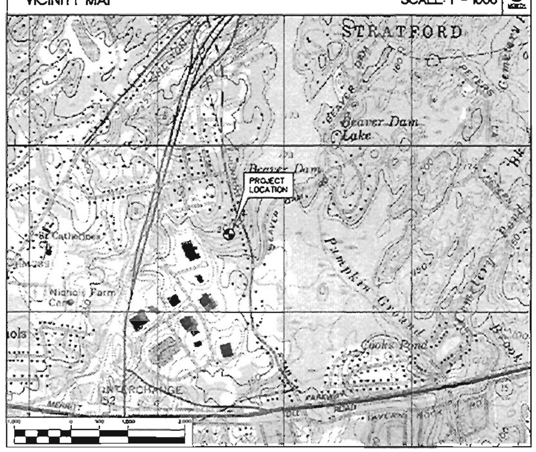
SITE INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

1. THE CONSTRUCTION OF A 24'X77' FENCED WIRELESS COMMUNICATIONS COMPOUND WITHIN A 24'X82' LEASE AREA.
2. A TOTAL OF UP TO TWELVE (12) DIRECTIONAL PANEL ANTENNAS ARE PROPOSED TO BE MOUNTED AT A CENTERLINE ELEVATION OF 80'-0"± AGL ON A 80'-0"± PROPOSED STEEL MONOPOLE TOWER.
3. TOTAL ACCESS LENGTH IS 1,465'± OFF OF COMMERCE DRIVE VIA EXISTING ACCESS DRIVE.
4. POWER AND TELCO UTILITIES SHALL BE ROUTED UNDERGROUND FROM EXISTING RESPECTIVE DEMARCS TO THE PROPOSED UTILITY BACKBOARD LOCATED ADJACENT TO THE PROPOSED FENCED COMPOUND. FINAL DEMARC LOCATION AND UTILITY ROUTING TO PROPOSED BACKBOARD WILL BE VERIFIED/DETERMINED BY LOCAL UTILITY COMPANIES. UTILITIES WILL BE ROUTED UNDERGROUND FROM UTILITY BACKBOARD TO THE PROPOSED NOMINAL 12'x30' WIRELESS EQUIPMENT SHELTER LOCATED WITHIN FENCED COMPOUND AREA.
5. FINAL DESIGN FOR TOWER AND ANTENNA MOUNTS SHALL BE INCLUDED IN THE D&M PLANS.
6. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.
7. THERE WILL NOT BE ANY LIGHTING UNLESS REQUIRED BY THE FCC OR THE FAA.
8. THERE WILL NOT BE ANY SIGNS OR ADVERTISING ON THE ANTENNAS OR EQUIPMENT.

VICINITY MAP

SCALE: 1" - 1000'



PROJECT SUMMARY

SITE NAME:	TRUMBULL SE 4
SITE ADDRESS:	60 COMMERCE DRIVE TRUMBULL, CT 06611
PROPERTY OWNER:	PILOT CORPORATION OF AMERICA 3855 REGENT BLVD JACKSONVILLE, FL 32224
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
CONTACT PERSON:	SANDY CARTER CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
TOWER COORDINATES:	LATITUDE 41°-14'-44.160" LONGITUDE 73°-08'-44.014" GROUND ELEVATION: 170.0'± A.M.S.L. (REFERENCED FROM FAA 2-C SURVEY CERTIFICATION AS PREPARED BY MARTINEZ COUCH AND ASSOCIATED LLC, DATED NOVEMBER 14, 2013)

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	0
EXS-1	SITE LOCATION PLAN	0
EXS-2	COMPOUND PLAN, ELEVATION & ANTENNA CONFIGURATION	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	11/15/13	CLT	CFC	ISSUED FOR EXSITE 106 REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. verizon wireless

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
TRUMBULL SE 4
60 COMMERCE DRIVE
TRUMBULL, CT 06611

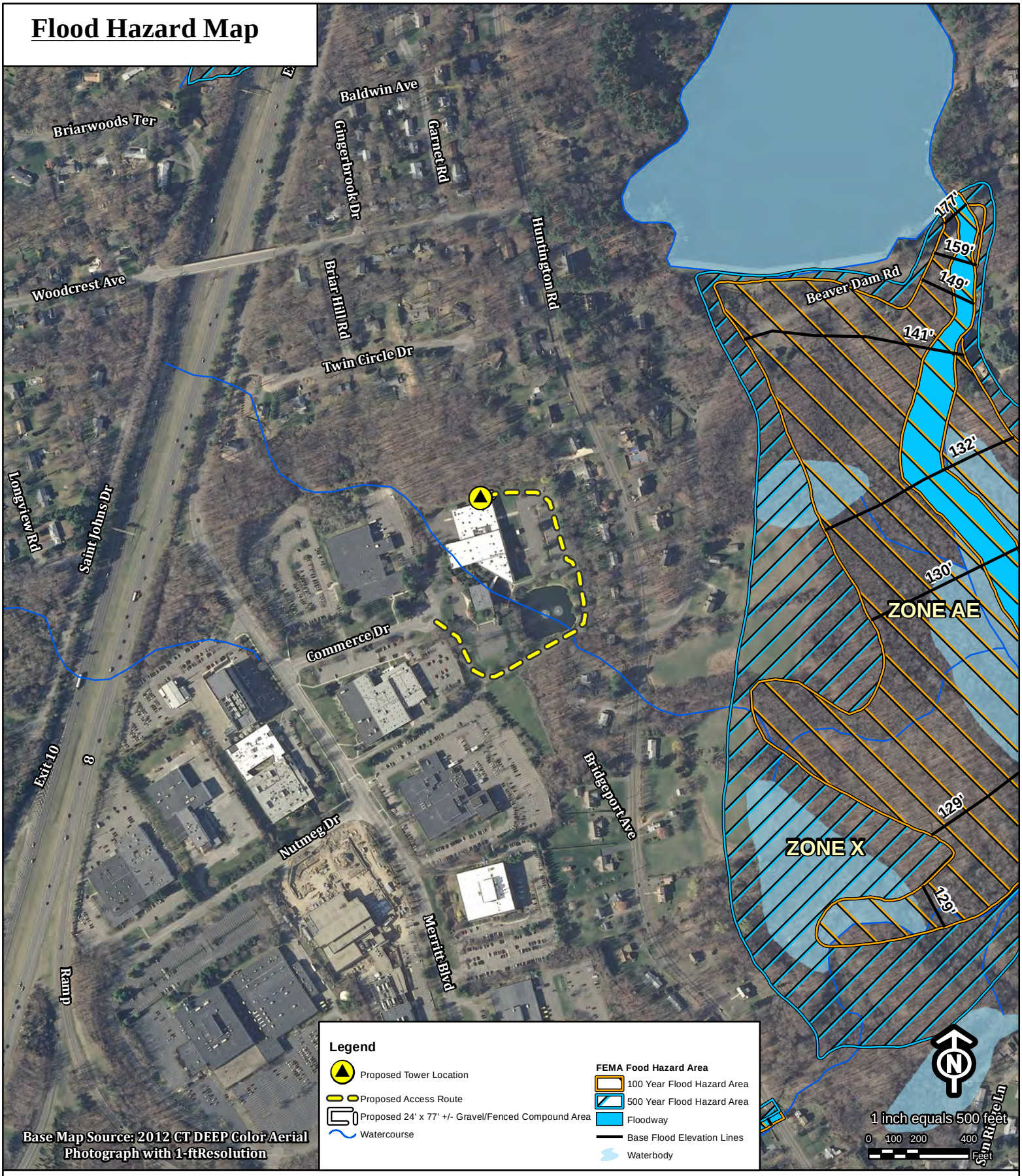
DATE:	11/14/13
SCALE:	AS NOTED
JOB NO.	13209.000

TITLE SHEET

T-1

Sheet No. 1 of 2

Flood Hazard Map



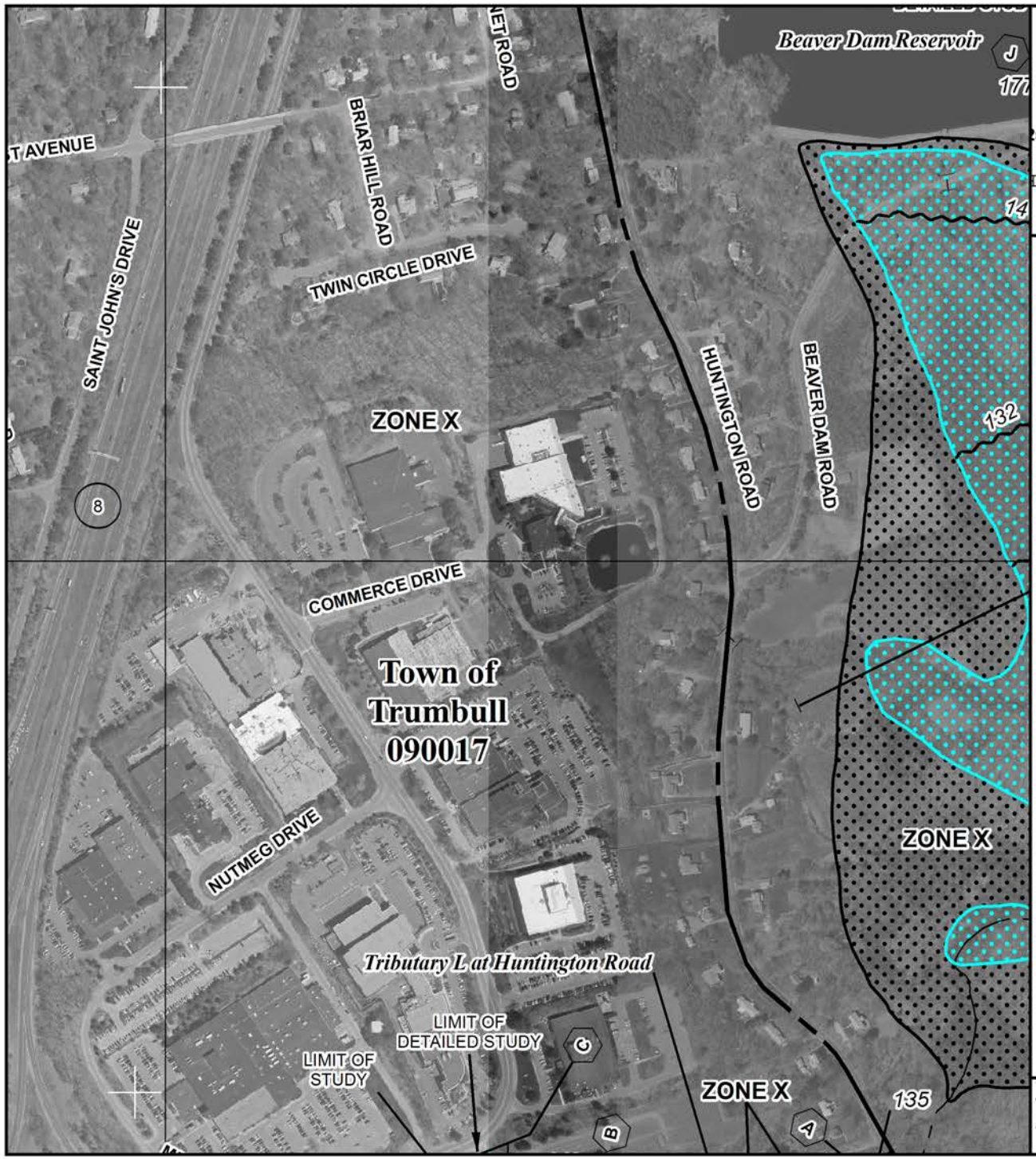
Proposed Verizon Telecommunications Tower
60 Commerce Drive
Trumbull, Connecticut

verizonwireless

ALL-POINTS TECHNOLOGY CORPORATION

Tuesday, February 11, 2014

Path: C:\All_Points_Tech\Projects\Client\Verizon\TrumbullSE4\GIS\Maps\Flood_Haz_Map.mxd



MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0432F

FIRM

FLOOD INSURANCE RATE MAP

FAIRFIELD COUNTY, CONNECTICUT
(ALL JURISDICTIONS)

PANEL 432 OF 626

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
STRATFORD, TOWN OF	090016	0432	F
TRUMBULL, TOWN OF	090017	0432	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
09001C0432F

EFFECTIVE DATE
JUNE 18, 2010

Federal Emergency Management Agency

TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates	
Latitude	41-14-44.2 north
Longitude	073-08-44.0 west
Measurements (Meters)	
Overall Structure Height (AGL)	25.3
Support Structure Height (AGL)	24.4
Site Elevation (AMSL)	51.8
Structure Type	
MTOWER - Monopole	

Tower Construction Notifications
Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW

Federal Aviation Administration

« OE/AAA

Notice Criteria Tool

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	41 Deg 14 M 44.16 S N
Longitude:	73 Deg 08 M 44.01 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	170 (nearest foot)
Structure Height (AGL):	83 (nearest foot)
Traverseway:	No Traverseway (Additional height is added to certain structures under 77.9(c))
Is structure on airport:	(•) No ( ) Yes

Results

You exceed the following Notice Criteria:

Your proposed structure is in proximity to a navigation facility and may impact the assurance of navigation signal reception. The FAA, in accordance with 77.9, requests that you file.

The FAA requests that you file

FAA 2-C SURVEY CERTIFICATION

Applicant:	Verizon Wireless 99 East River Drive East Hartford, CT 06108
Site Name:	TRUMBULL SE 4
Address:	60 Commerce Drive Trumbull, Ct 06611
Horizontal Datum:	NAD 83
Vertical Datum:	NGVD 1929 (A.M.S.L.)
Structure Type:	Proposed Monopole Tower
Latitude: **Longitude:**	41°-14'-44.160"N NAD 83 73°-08'-44.014"W NAD 83
Ground Elevation:	170.0'± feet A.M.S.L.
Top of Proposed Tower:	80.0'± feet A.G.L (250.0'± A.M.S.L.)
Top of Proposed Antennas:	83.0'± feet A.G.L. (253.0'± A.M.S.L.)

Certification: I certify that the Latitude and Longitude noted hereon are accurate to within ± 50 feet horizontally and that the site elevation is accurate to within ± 20 feet vertically. With a proposed top antenna height of 83.0'± A.G.L, the overall height will be 253.0'± A.M.S.L. The horizontal datum (coordinates) are in terms of the North American Datum of 1983 (NAD 83) and are expressed in degrees minutes and seconds to the nearest hundredth of a second. The vertical datum (heights) are in terms of the National Geodetic Vertical Datum of 1929 and expressed to the nearest foot.

Company: Martinez Couch and Associates L.L.C.

Signature: _____

Surveyor/seal: Angel R. Martinez L.S. **(SEAL)**

Date: November 14, 2013

SITE NAME: Trumbull SE4, CT
SITE NUMBER: 20130931986
ATTY/DATE: Saunders/2013

(REDACTED)

LAND LEASE AGREEMENT

This Agreement, made this 18th day of October, 2013 between Pilot Corporation of America, a Delaware corporation with its principal offices located at 3855 Regent Boulevard, Jacksonville, Florida 32224, hereinafter designated LESSOR and Cellco Partnership d/b/a Verizon Wireless, a Delaware general partnership with its principal office located at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 (telephone number 866-862-4404), hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

1. PREMISES. LESSOR hereby leases to LESSEE a portion of that certain parcel of property (the entirety of LESSOR's property is referred to hereinafter as the Property), located at 60 Commerce Drive in the Town of Trumbull, County of Fairfield and State of Connecticut, and being described as a parcel containing 1,968 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, Commerce Drive, to the Land Space, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along one or more rights of way from the Land Space, said Land Space and Rights of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "A" attached hereto and made a part hereof. The Property is also shown on the Tax Map K/09 of the Town of Trumbull as Block N/A, Lot 20 and is further described in Deed Book 470 at Page 50 as recorded in the Office of the Trumbull Town Clerk.

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

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

3. TERM; RENTAL.

a. This Agreement shall be effective as of the date of execution by both Parties, provided, however, the initial term shall be for five (5) years and shall commence on the Commencement Date (as hereinafter defined) at which time rental payments shall commence and be due at a total annual rental of to be paid in equal monthly installments on the first day of the month, in advance, to LESSOR or to such other person, firm or place as LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date by notice given in accordance with Paragraph 23 below. 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 date of execution of the Agreement by the Parties, whichever is later. In the event the date at which LESSEE is granted a building permit or the date of execution of the Agreement, whichever is applicable, falls between the 1st and 15th of the month, the Agreement shall commence on the 1st of that month and if such date 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"). LESSOR and LESSEE acknowledge and agree that initial rental payment(s) shall not actually be sent by LESSEE until thirty (30) days after the Commencement Date. By way of illustration of the preceding sentence, if the Commencement Date is January 1, LESSEE shall send to the LESSOR the rental payments for January 1 and February 1 by February 1.

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.

b. LESSOR hereby agrees to provide to LESSEE certain documentation (the "Rental Documentation") evidencing LESSOR's interest in, and right to receive payments under, this Agreement, including without limitation: (i) documentation, acceptable to LESSEE in LESSEE's reasonable discretion, evidencing LESSOR's good and sufficient title to and/or interest in the Property and right to receive rental payments and other benefits hereunder; and (ii) a complete and fully executed Internal Revenue Service Form W-9, or equivalent, in a form acceptable to LESSEE, for any party to whom rental payments are to be made pursuant to this Agreement. From time to time during the Term of this Agreement and within thirty (30) days of a written request from LESSEE, LESSOR agrees to provide updated Rental Documentation in a form reasonably acceptable to LESSEE. The Rental Documentation shall be provided to LESSEE in accordance with the provisions of and at the address given in Paragraph 23. Delivery of Rental Documentation to LESSEE shall be a prerequisite for the payment of any rent by LESSEE and notwithstanding anything to the contrary herein, LESSEE shall have no obligation to make any rental payments until Rental Documentation has been supplied to LESSEE as provided herein.

Within fifteen (15) days of obtaining an interest in the Property or this Agreement, any assignee(s), transferee(s) or other successor(s) in interest of LESSOR shall provide to LESSEE Rental Documentation in the manner set forth in the preceding paragraph. From time to time during the Term of this Agreement and within thirty (30) days of a written request from LESSEE, any assignee(s) or transferee(s) of LESSOR agrees to provide updated Rental Documentation in a form reasonably acceptable to LESSEE. Delivery of Rental Documentation to LESSEE by any assignee(s), transferee(s) or other successor(s) in interest of LESSOR shall be a prerequisite for the payment of any rent by LESSEE to such party and notwithstanding anything to the contrary herein, LESSEE shall have no obligation to make any rental payments to any assignee(s), transferee(s) or other successor(s) in interest of LESSOR until Rental Documentation has been supplied to LESSEE as provided herein.

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

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

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

7. TAXES. LESSEE shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property which LESSOR demonstrates is the result of LESSEE's use of the Premises and/or the installation, maintenance, and operation of the LESSEE's improvements, and any sales tax imposed on the rent (except to the extent that LESSEE is or may become exempt from the payment of sales tax in the jurisdiction in which the Property is located), including any increase in real estate taxes at the Property which LESSOR demonstrates arises from the LESSEE's improvements and/or LESSEE's use of the Premises. LESSOR and LESSEE shall each be responsible for the payment of any taxes, levies, assessments and other charges imposed including franchise and similar taxes imposed upon the business conducted by LESSOR or LESSEE at the Property. Notwithstanding the foregoing, LESSEE shall not have the obligation to pay any tax, assessment, or charge that LESSEE is disputing in good faith in appropriate proceedings prior to a final determination that such tax is properly assessed provided that no lien attaches to the Property. Nothing in this Paragraph shall be construed as making LESSEE liable for any portion of LESSOR's income taxes in connection with any Property or otherwise. Except as set forth in this Paragraph, LESSOR shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property and shall do so prior to the imposition of any lien on the Property.

LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which LESSEE is wholly or partly responsible for payment. LESSOR shall reasonably cooperate with LESSEE at LESSEE's

expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by LESSEE, there is a reduction, credit or repayment received by the LESSOR for any taxes previously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit or repayment. In the event that LESSEE does not have the standing rights to pursue a good faith and reasonable dispute of any taxes under this paragraph, LESSOR will pursue such dispute at LESSEE's sole cost and expense upon written request of LESSEE.

8. 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). 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 the use the Premises is obsolete or unnecessary, 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.

9. INDEMNIFICATION. Subject to Paragraph 10 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.

10. INSURANCE.

a. Intentionally Omitted.

b. LESSEE agrees that, at its own cost and expense, it will maintain commercial general liability insurance with limits not less than $5,000,000.00 for injury to or death of one or more persons in any one occurrence and $5,000,000.00 for damage or destruction to property in any one occurrence. LESSEE agrees that it will include the LESSOR as an additional insured on all applicable policies.

11. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs 9 and 29, 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.

12. ANNUAL TERMINATION. Notwithstanding anything to the contrary contained herein, provided LESSEE is not in default hereunder beyond applicable notice and cure periods, LESSEE shall have the right to terminate this Agreement upon the annual anniversary of the Commencement Date provided that three (3) months prior notice is given to LESSOR.

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

14. REMOVAL AT END OF TERM. LESSEE shall, upon expiration of the Term, or within ninety (90) days after any earlier termination of the Agreement, remove its building(s), antenna structure(s) (except footings), equipment, conduits, fixtures and all personal property and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that all of the equipment, conduits, fixtures and

personal property of LESSEE shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable Laws (as defined in Paragraph 33 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.

15. HOLDOVER. LESSEE has no right to retain possession of the Premises or any part thereof beyond the expiration of that removal period set forth in Paragraph 14 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 14 and this Paragraph 15, then the rent then in effect payable from and after the time of the expiration or earlier removal period set forth in Paragraph 14 shall equal to the rent applicable during the month immediately preceding such expiration or earlier termination.

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

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

LESSEE under this Agreement, and LESSEE shall have the right to look to LESSOR and the third party for the full performance of this Agreement.

18. 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.

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

20. INTEGRATION. It is agreed and understood that this Agreement contains all agreements, promises and understandings between LESSOR and LESSEE and that no verbal or oral agreements, promises or understandings shall be binding upon either LESSOR or LESSEE in any dispute, controversy or proceeding at law, and any addition, variation or modification to this Agreement shall be void and ineffective unless made in writing signed by the Parties or in a written acknowledgment in the case provided in Paragraph 3. In the event any provision of the Agreement is found to be invalid or unenforceable, such finding shall not affect the validity and enforceability of the remaining provisions of this Agreement. The failure of either Party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights under the Agreement shall not waive such rights and such Party shall have the right to enforce such rights at any time and take such action as may be lawful and authorized under this Agreement, in law or in equity.

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

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

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

LESSOR: Pilot Corporation of America
3855 Regent Boulevard
Jacksonville, Florida 32224
Attention: Nicholas Niejelow

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

25. SUBORDINATION AND NON-DISTURBANCE. LESSOR shall obtain not later than fifteen (15) days following the execution of this Agreement, a Non-Disturbance Agreement, as defined below, from its existing mortgagee(s), ground lessors and master lessors, if any, of the Property. At LESSOR's option, this Agreement shall be subordinate to any future master lease, ground lease, mortgage, deed of trust or other security interest (a "Mortgage") by LESSOR which from time to time may encumber all or part of the Property or right-of-way; provided, however, as a condition precedent to LESSEE being required to subordinate its interest in this Agreement to any future Mortgage covering the Property, LESSOR shall obtain for LESSEE's benefit a non-disturbance and attornment agreement for LESSEE's benefit in the form reasonably satisfactory to LESSEE, and containing the terms described below (the "Non-Disturbance Agreement"), and shall recognize 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 beyond applicable notice and cure periods. The Non-Disturbance Agreement shall include the encumbering party's ("Lender's") agreement that, if Lender or its successor-in-interest or any purchaser of Lender's or its successor's interest (a "Purchaser") acquires an ownership interest in the Property, Lender or such successor-in-interest or Purchaser will (1) honor all of the terms of the Agreement, (2) fulfill LESSOR's obligations under the Agreement, and (3) promptly cure all of the then-existing LESSOR defaults under the Agreement. Such Non-Disturbance Agreement must be binding on all of Lender's participants in the subject loan (if any) and on all successors and assigns of Lender and/or its participants and on all Purchasers. In return for such Non-Disturbance Agreement, LESSEE will execute an agreement for Lender's benefit in which LESSEE (1) confirms that the

Agreement is subordinate to the Mortgage or other real property interest in favor of Lender, (2) agrees to attorn to Lender if Lender becomes the owner of the Property and (3) agrees to accept a cure by Lender of any of LESSOR's defaults, provided such cure is completed within the deadline applicable to LESSOR. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other real property 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 other real property interest and 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. RECORDING. LESSOR agrees to execute a Memorandum of this Agreement which LESSEE may record with the appropriate recording officer. The date set forth in the Memorandum of Lease is for recording purposes only and bears no reference to commencement of either the Term or rent payments.

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

28. 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.

29. ENVIRONMENTAL.

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 damages) and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding which is in any way related to: a) failure to comply with any environmental or industrial hygiene law, including without limitation any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene concerns or conditions as may now or at any time hereafter be in effect, unless such non-compliance results from conditions caused by LESSEE; and b) any environmental or industrial hygiene conditions arising out of or in any way related to the condition of the Property or activities conducted thereon, unless such environmental conditions are caused by LESSEE.

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

31. 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.

32. SUBMISSION OF AGREEMENT/PARTIAL INVALIDITY/AUTHORITY. The submission of this Agreement for examination does not constitute an offer to lease the Premises and this Agreement becomes effective only upon the full execution of this Agreement by the Parties. If any provision herein is invalid, it shall be considered deleted from this Agreement and shall not invalidate the remaining provisions of this Agreement. Each of the Parties hereto warrants to the other that the person or persons executing this Agreement on behalf of such Party has the full right, power and authority to enter into and execute this Agreement on such Party's

behalf and that no consent from any other person or entity is necessary as a condition precedent to the legal effect of this Agreement.

33. 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.

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

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

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

LESSOR:
Pilot Corporation of America

Elena Bischof
WITNESS

By: _____

Its: Vice President NBD

Elena Bischof

Date: August 24, 2013

LESSEE:
Cellco Partnership d/b/a Verizon Wireless

Diane Mirola
WITNESS

By: _____
David R. Heverling
Its: Area Vice President Network

Karin Paul

Date: 10 10 13

All that certain piece or parcel of land, together with the buildings and improvements there on, situated in the Town of Trumbull, County of Fairfield and State of Connecticut being shown and designated as Lot 4 A = 610,700 S.F. 14.02 AC. on certin map entitled "Boundary Map Lot No 4 Commerce Drive Trumbull, Connecticut Prepared for Commerce Drive Associates Scale:1"=50' Date: Dec. 4, 1981" which map was revised on 5-4-82 is on file in the Office of the Town Clerk of Trumbull as Map No. 2213.

Exhibit "A" (Page 2 of 2)

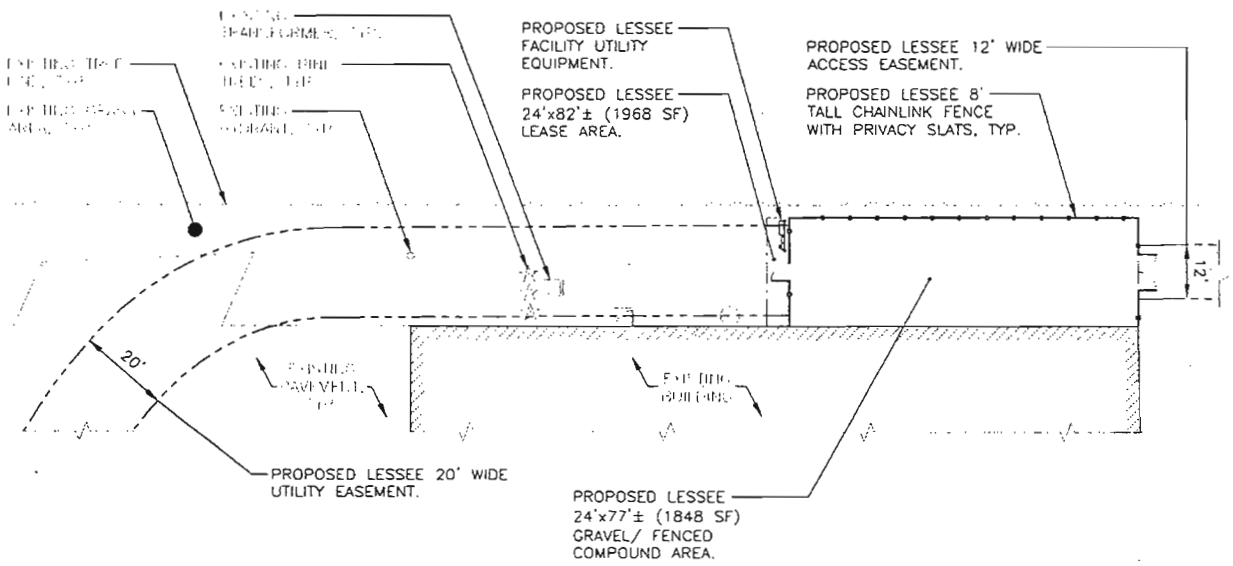
NOTES:

1. PROPOSED LESSEE EQUIPMENT SHELTER TO HOUSE A DEISEL FUELED EMERGENCY POWER GENERATOR.
2. PROPOSED LESSEE 80' TALL MONOPOLE TOWER TO BE LOCATED WITHIN THE PROPOSED LEASE AREA.

LEASE EXHIBIT

THIS LEASE PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF SITE SURVEY AND FACILITY DESIGN.

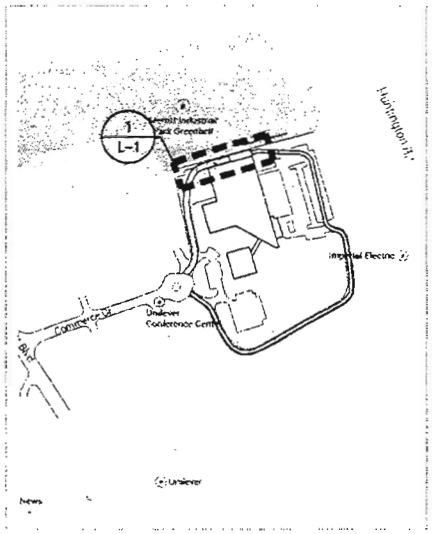
SITE COORDINATES: (TAKEN IN FIELD)	LAT.: 41°-14'-44" LNG.: 73°-08'-44"
GROUND ELEVATION:	185' ± A.M.S.L.



1 / L-1 **PARTIAL SITE PLAN**
SCALE: 1" = 25'

APPROXIMATE NORTH

GRAPHIC SCALE
25 0 12.5 25 50 100
(IN FEET)
1 inch = 25 ft.



SITE KEY PLAN
SCALE: 1" = 400'

APPROXIMATE NORTH

DESIGNED BY:			CTC
DRAWN BY:			MMR
CHK'D BY:			GWD
2	08/28/13	MMR	LEASE EXHIBIT
1	08/09/13	MMR	LEASE EXHIBIT
0	07/08/13	MMR	LEASE EXHIBIT - ISSUED FOR CLIENT REVIEW
REV.	DATE	DRAWN BY	CHK'D BY DESCRIPTION

PROFESSIONAL ENGINEER SEAL

CENTEK engineering
Centered on Solutions
www.CentekEng.com
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road, Branford, CT 06405

Cellco Partnership d/b/a Verizon Wireless

TRUMBULL SE 4

60 COMMERCE DRIVE
TRUMBULL, CT 06611

DATE: 08/06/13
SCALE: AS SHOWN
JOB NO. 13209.000

SHEET NO.
L-1