

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

# Connecticut Siting Council

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APPLICATION OF CELLCO PARTNERSHIP  
D/B/A VERIZON WIRELESS

ORANGE NORTH FACILITY

DOCKET NO. \_\_\_\_\_

MAY 13, 2014



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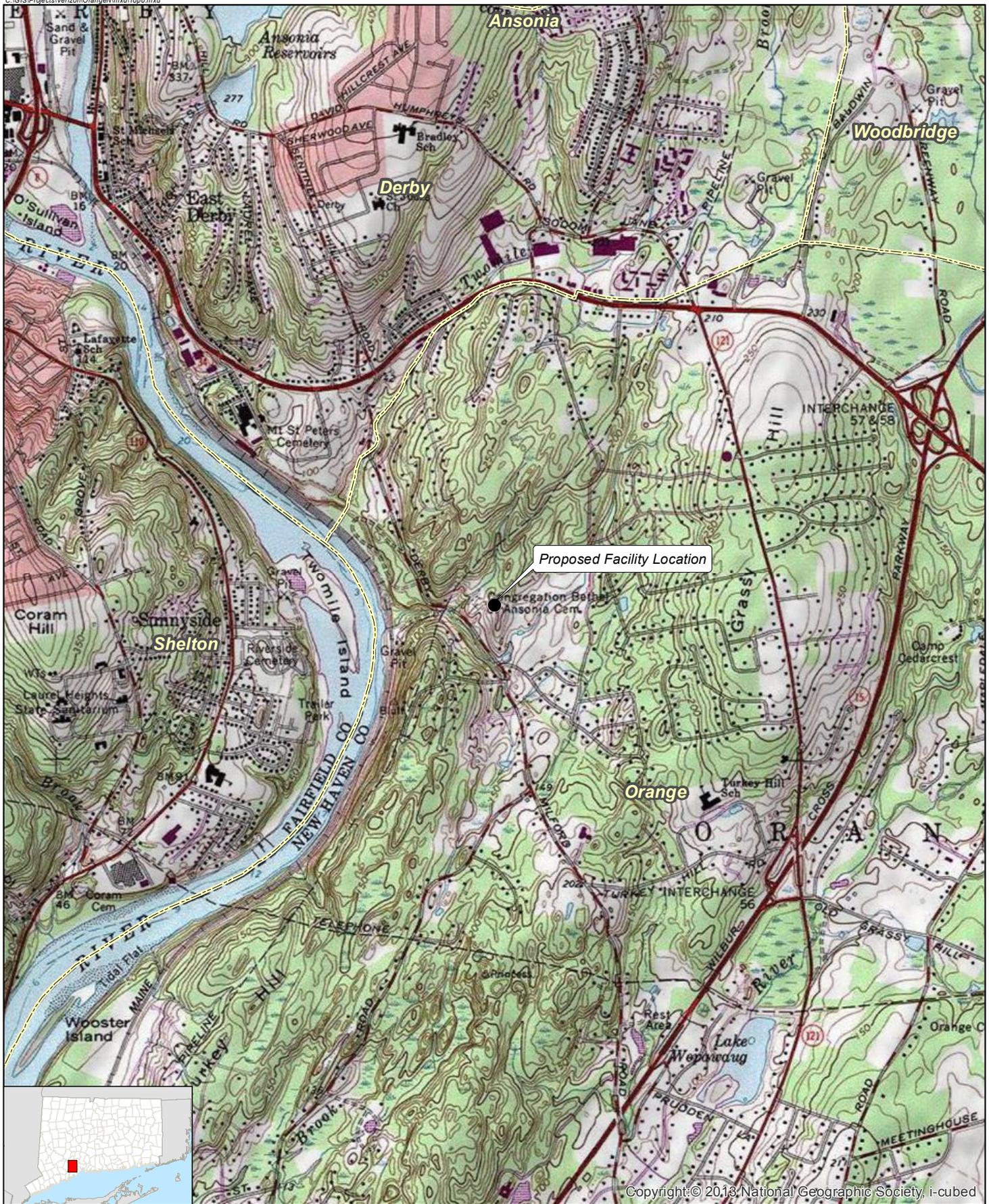
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1. Orange North Facility – Factual Summary and Project Plans
2. Certificate of Service of Application on Government Officials and List of Officials Served
3. Legal Notice in the *New Haven Register*
4. Notice to Landowners; List of Abutting Landowners; Certificate of Service
5. Federal Communications Commission Authorization
6. Coverage Maps – Location of Orange North and Surrounding Cell Sites
7. Antenna and Equipment Specifications
8. Site Search Summary
9. Visibility Analysis
10. USFWS & CTDEEP NDDB Reviews
11. Wetland Investigation
12. Historic Resources Review
13. FEMA – Flood Insurance Rate Map
14. Federal Airways & Airspace Summary Report
15. Redacted Land Lease Agreement – Walter M. and Maryellen K. Bspuda Living Trust

## EXECUTIVE SUMMARY

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) (“Applicant”), proposes to construct a telecommunications tower and related facility (the “Orange North Facility”) on an approximately 34.6 acre parcel at 831 Derby Milford Road in Orange, Connecticut (the “Property”). The Property is owned by the Walter M. and Maryellen K. Bspuda Living Trust. The Orange North Facility would provide reliable wireless service to existing gaps in portions of Orange, Shelton and Derby and increase network capacity in northerly portions of Orange, and in easterly portions of Shelton.

At this site, Cellco proposes the construction of a 100-foot monopole tower. Cellco would install up to fifteen (15) panel-type antennas at a centerline height of 100 feet above ground level (“AGL”). To blend in with the existing landscape, Cellco proposes to paint the monopole and appurtenances brown. The top of Cellco’s antennas will extend above the top of the tower to an overall height of approximately 103 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 50’ x 50’ fenced compound and a 100’ x 100’ leased area. Vehicular access to the tower site would extend from Derby Milford Road over a new 12-foot wide gravel driveway, a distance of approximately 460 feet to the facility compound. Utilities would extend from existing service along Derby Milford Road.



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**Legend**

- Proposed Facility Location
- Municipal Boundary



**USGS Topographic Map**



Proposed Wireless  
 Telecommunications Facility  
 Orange North  
 831 Derby Milford Road  
 Orange, Connecticut





**Legend**

- Proposed Facility Layout
- Approximate Parcel Boundary

**Aerial Photograph**

  
**verizon**wireless  
 Proposed Wireless  
 Telecommunications Facility  
 Orange North  
 831 Derby Milford Road  
 Orange, Connecticut



**STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL**

<b>IN RE:</b>	:	
	:	
<b>APPLICATION OF CELLCO</b>	:	<b>DOCKET NO. _____</b>
<b>PARTNERSHIP D/B/A VERIZON</b>	:	
<b>WIRELESS FOR A CERTIFICATE OF</b>	:	
<b>ENVIRONMENTAL COMPATIBILITY</b>	:	
<b>AND PUBLIC NEED FOR THE</b>	:	
<b>CONSTRUCTION, MAINTENANCE AND</b>	:	
<b>OPERATION OF A WIRELESS</b>	:	
<b>TELECOMMUNICATIONS FACILITY</b>	:	
<b>AT 831 DERBY MILFORD ROAD,</b>	:	
<b>ORANGE, CONNECTICUT</b>	:	<b>MAY 13, 2014</b>

**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 34.6 acre parcel at 831 Derby Milford Road in Orange, Connecticut (the “Property”). This site is known as Cellco’s “Orange North Facility”.

The proposed cell site would be located in the central portion of the Property. At this location, Cellco would construct a 100-foot self-supporting monopole telecommunications tower. Cellco would install up to fifteen (15) panel-type antennas with their centerline at 100 feet above ground level (“AGL”). The top of Cellco’s antennas would extend above the top of the tower to an overall height of approximately 103 feet AGL. To blend in with the existing landscape, Cellco proposes to paint the monopole and appurtenances brown. 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 50’ x 50’ fenced compound and a 100’ x 100’ leased area. Vehicular access to the site would extend from Derby Milford Road over a new 12-foot wide gravel driveway a distance of approximately 460 feet to the cell site. Utilities will extend from existing service along Derby Milford Road.

Initially, Cellco will deploy only 700 MHz and 2100 MHz wireless services at the proposed Orange North Facility.<sup>1</sup> The Orange North Facility will allow Cellco to provide reliable wireless service to a series of coverage gaps (at both 700 MHz and 2100 MHz frequencies) in the central Orange area as well as portions of southeast Derby and eastern Shelton. The Orange North Facility will also provide significant capacity relief to Cellco’s existing Milford NE, Shelton 2, Derby, Derby North, Orange 2 and Orange 3 cell sites. (*See Coverage Plots included in Attachment 6*).

Cellco’s Milford NE cell site consists of antennas at the 110-foot level on an existing 120-foot tower at 528 Wheelers Farm Road in Milford. The Milford NE site is located approximately 4.0 miles south of the proposed Orange North Facility. Cellco’s Shelton 2 cell

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<sup>1</sup> Cellco expects to deploy its 850 MHz and 1900 MHz wireless services at the Orange North Facility in the near future.

site consists of antennas at the 140-foot level on an existing 140-foot tower at 30 Oliver Terrace in Shelton. The Shelton 2 site is located approximately 2.5 miles west of the proposed Orange North Facility. Cellco's Derby cell site consists of antennas at the 68-foot level on a church bell tower at 123 Minerva Street in Derby. The Derby cell site is located approximately 2.5 miles northwest of the proposed Orange North Facility. Cellco's Derby North cell site consists of antennas at the 100-foot level on the existing 120-foot tower at 71 Pleasant View Road in Derby. The Derby North site is located approximately 1.3 miles north of the proposed Orange North Facility. Cellco's Orange 2 cell site consists of antennas at the 160-foot level on an existing 160-foot tower off Ogg Meadow Road in Orange. The Orange 2 cell site is located approximately 1.5 miles northeast of the proposed Orange North Facility. Cellco's Orange 3 cell site consists of antennas at the 120-foot level on the existing 140-foot tower at 700 Grassy Hill Road in Orange. The Orange 3 cell site is located approximately 1.4 miles southeast of the proposed Orange North Facility.

The proposed Orange North Facility will provide service to a 2.11 mile portion of Route 34, a 2.83 mile portion of Route 121, a 4.75 mile portion of Route 110 and an overall area of 12.74 square miles at 700 MHz frequencies; and a 0.70 mile portion of Route 34, a 0.71 mile portion of Route 121, a 3.63 mile portion of Route 110 and an overall area of 5.06 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. A diesel-fueled 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 6-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.

Included in this Application, as Attachment 1, is a factual summary and project plans for the proposed Orange North 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 Orange North 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(b)**

Copies of this Application have been sent to municipal, regional, state and federal officials, pursuant to C.G.S. Section 16-50(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 May 8 and 9, 2014, by Cellco in the *New Haven Register* pursuant to C.G.S. Section 16-50(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(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 Orange North 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 Orange North 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 Orange North 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 New Haven 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 Orange North 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 New Haven 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 throughout the nation and more specifically, the State of Connecticut.

Cellco's currently provides wireless service in the Town of Orange and the surrounding towns from its existing Shelton 2, Derby, Derby North, Orange 2, Orange 3 and Milford NE cell sites. Cellco's surrounding facilities will all, to some extent, interact with the proposed Orange North Facility. Plots showing the extent of reliable wireless service in the area reveal a series of

“coverage gaps” in Cellco’s 700 MHz and 2100 MHz operating frequencies.<sup>2</sup> Significant portions of these coverage gaps will be filled by service from the Orange North Facility. (See Attachment 6).

In addition to the coverage benefits, the proposed Orange North Facility will provide significant capacity relief to Cellco’s beta sector antennas at its Shelton 2 cell site; beta sector antennas at its Derby cell site; beta and gamma sector antennas at its Derby North cell site; gamma sector antennas at its Orange 2 cell site; alpha and gamma sector antennas at its Orange 3 cell site; and alpha sector antennas at its Milford NE cell site. The operation of each of these surrounding antenna sectors is reaching or is forecast to reach their respective capacity limits by 2016.

**2. System Design and Equipment**

**a. System Design**

Cellco’s wireless system in general and the proposed Orange North 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

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<sup>2</sup> Similar service gaps exist at Cellco’s 850 MHz and 1900 MHz frequencies.

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 Orange North 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 northern Orange along portions of Routes 34, 121 and 110 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 maintains six (6) cell sites within approximately four (4) miles of the Orange North Facility location. Cellco's Derby North, Orange 3, Shelton 2 and Milford NE would all interact to some extent with the proposed Orange North 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 more importantly, capacity relief in and near the designated Orange North 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 north Orange. Cellco initiated a site search process for the Orange North cell site and identified the property at 831 Derby Milford Road as a viable candidate for a cell site. Cellco determined that an antenna centerline height of 100 feet at the Property would satisfy its wireless service (coverage and capacity) 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. The tower itself will also be designed to be extended up to 20 feet. 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 Orange or Shelton have expressed any interest in the Orange North Facility.

## **D. Cell Site Information**

### **1. Site Facilities**

Cellco proposes to construct a new 100-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 103 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 6-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 north Orange.<sup>3</sup> The Orange North 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.

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

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<sup>3</sup> 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.

### 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 Orange North 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 painted brown or 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 (“APT”) for the Orange North Facility. The Visibility Analysis assesses the visual impact of the proposed 100-foot tower on the surrounding areas and includes photographic simulations for the Council’s review and consideration of a conventional tower painted brown and a tree tower. As discussed further in

Section III.D.5 below, the Town’s Planning and Zoning Commission (“PZC”) asked Cellco to include, in the Visual Analysis, simulations of a “monopine” tree tower.

According to the Visibility Analysis, areas where the top portion of the tower would be visible above the tree canopy comprise approximately 46 acres or 0.57 percent of the 8,042 acre study area. Areas where seasonal views are anticipated, through intervening trees and branches comprise approximately 300 additional acres. The low height of the proposed tower and the rolling terrain and mature forest in the area overall helps minimize overall visibility of the tower throughout the Study Area.

There are eleven (11) single family residences within 1,000 feet of the Orange North Facility. The closest “off-property” residence is located approximately 850 feet to the southeast at 814 Glenbrook Road. (See Attachment 1 – Plan Sheet C-1).

Weather permitting, the Applicant will raise balloons with a diameter of at least three (3) feet at the Orange North 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 Attachment 10.

**(1) USFWS & CTDEEP NDDB Reviews**

According to the USFWS & CTDEEP Natural Diversity Data Base (“NDDB”) Reviews dated May 2, 2014, no federally listed endangered or threatened species are known to occur in Orange, Connecticut. In addition, APT has determined, following a review of DEEP’s NDDB, no potential conflicts exist with species of concern. (*See* Attachment 10).

**(2) Wetlands Investigation**

As discussed in Section III.D.4.d. below, the development of the Orange North Facility will have no direct impact on wetlands and watercourses on the Property. The proposed site access driveway is approximately 40 feet north of Wetland 1, located on the south side of Derby Milford Road. The proposed facility compound is approximately 100 feet southeast of Wetland 2. A Wetland Investigation report is included in Attachment 11.

**(3) Historic Resources Review**

According to a Historic Resources Review prepared by APT, there are no properties on or eligible for listing on the National Register of Historic Places located within one-half mile of the proposed cell site. In addition, no recorded archeological sites exist at the Property. It is APT’s opinion, therefore, that the proposed facility will not adversely affect historic or archeological resources. Consultation with the State Historic Preservation Office (“SHPO”) is on-going. A

concurrency determination is anticipated and will be forwarded to the Council once it is received. A copy of APT's Historic Resources Review is included in Attachment 12.

**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 well below (37.88%) 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 Orange North Facility. The operations at the approved Orange North 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 Orange North 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 Orange North Facility is located on an approximately 34.6 acre parcel owned by the Walter M. and Maryellen K. Bospuda Living Trust. The Property is located in the Town's Residential zone and is used for agricultural purposes.

**b. Plan of Conservation and Development**

The Town of Orange Plan of Conservation & Development (2000) (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 the Residential zone. Pursuant to Article XII of the Orange 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 Wetlands and Watercourses Regulations**

The Orange 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 Orange IWWC Regulations were filed, in bulk, with the Council.

APT conducted a field investigation and completed a Wetlands Investigation report for the proposed Orange North Facility. The closest wetland area to the tower site is located approximately 100 feet to the northwest. A wetland area on the south side of Derby Milford Road is located approximately 40 feet south of the proposed site entrance driveway. Wetlands Investigation concludes that the Orange North Facility will not result in any adverse impacts on wetlands resources proximate to the site. Cellco’s Wetlands Investigation report is included in Attachment 11.

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.

According to the Federal Emergency Management Agency Flood Insurance Rate Map

(“FIRM”), Map Numbers 090075 and 090087, Panel 416 (Effective December 17, 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 13.

## **5. Local Input**

Section 16-50~~l~~(e) of the Connecticut General Statutes, as amended, requires local input on matters before the Council. On January 31, 2014, Cellco representatives met with Orange’s First Selectman, James Zeoli, to commence the ninety (90) day municipal consultation process. Mr. Zeoli 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 Orange North Facility, the site location being considered, the need for wireless service improvements in north Orange and the Connecticut Siting Council application process. That same day, Cellco delivered copies of this technical information to Mark A. Lauretti, Mayor of the Town of Shelton. The Orange-Shelton town line is within 2,500 feet (to the south) of the proposed Orange North Facility.

Cellco representatives appeared before the Orange Planning and Zoning Commission (“PZC”) at its regular meeting of February 18, 2014, to discuss the Orange North Facility. The PZC asked Cellco to consider the use of a disguised “tree” tower at this location and include additional landscaping to screen views of the ground-mounted structures, particularly from the adjacent parcel to the southwest, owned by the OR Shalom/BJSC Cemetary Association.

## **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 Orange North 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 prepared a Federal Airways & Airspace Summary Report (the “Summary Report”) for the proposed Orange North Facility and determined that the proposed tower would constitute an obstruction or hazard to air navigation. Therefore, no obstruction marking or lighting would be required. A copy of the Summary Report is included in Attachment 14.

**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 Orange North Facility.

**e. Historic Resources Review**

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 Orange North Facility is \$775,000. 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	125,000

**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 Orange North Facility will not have any substantial adverse environmental effects. A public

need exists for high quality reliable wireless service in the Town of Orange and throughout New Haven 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 Orange North Facility.

Respectfully submitted,

CELLCO PARTNERSHIP D/B/A VERIZON  
WIRELESS

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