CONNECTICUT SITING COUNCIL DOCKET NO. 448

IN THE MATTER OF:

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 831 DERBY MILFORD ROAD IN ORANGE, CONNECTICUT

APPLICANT'S POST-HEARING BRIEF

Submitted by:

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

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EXECUTIVE SUMMARY

On May 13, 2014, Cellco Partnership d/b/a Verizon Wireless ("Cellco") filed an application ("Application") with the Connecticut Siting Council ("Council") for a Certificate of Environmental Capability and Public Need ("Certificate") to construct a wireless telecommunications facility (the "Orange North Facility") on an approximately 34.6 acre parcel at 831 Derby Milford Road in Orange, Connecticut (the "Property"). The Orange North Facility would provide reliable wireless service to existing gaps in portions of Orange, Shelton and Derby and, more importantly, significant capacity relief to several surrounding cell sites that are operating beyond their current capacity limits or are projected to reach their capacity limits in the near future.

Facility Description

Cellco proposes to construct a 100-foot monopole tower in the central wooded portion of the Property. Cellco would install up to fifteen (15) panel-type antennas at a centerline height of 100 feet above ground level ("AGL"). The top of Cellco's antennas would extend slightly 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. Access to the tower site would extend from Derby Milford Road over a new gravel access driveway, a distance of approximately 460 feet.

Alternative Tower Designs

In an effort to reduce the visual impact of the facility, Cellco has presented the Council with two options to disguise the tower; a traditional monopole painted brown and a "monopine" tree tower. Either alternative design option would help to soften the overall visual impact of the tower, particularly from residential properties along Rainbow Trail to the west, where the only views of the tower will be through substantial forested areas during leaf-off conditions. Similar beneficial effects will be realized from residential areas along Derby Milford Road to the south and Glenbrook Road to the east.

Alternative Facility Location

In an effort to address concerns for impacts to on-site wetlands and vernal pools and potentially to Eastern Box Turtle habitat, Cellco offered to relocate the Orange North Facility approximately 90 feet to the south of the proposed location. This alternative location is physically further from wetlands and vernal pools to the west and would be more distant from the interface between the box turtle hibernation and summertime foraging habitats. This alternative location is acceptable to the landowner and would not result in any increase in visual impact on residents surrounding the Property.

Need for the Orange North Facility

The record contains ample evidence that the proposed Orange North Facility will provide reliable wireless service to existing coverage gaps in central Orange, southeast Derby and eastern portions of Shelton. More importantly, however, the Orange North Facility will provide Cellco's wireless network in general, and certain surrounding cell sites, in particular, with significant capacity relief. The Orange North Facility would off-load capacity from Cellco's existing

Milford NE cell site – Alpha sector antennas; Derby cell site – Beta sector antennas; Derby North cell site – Gamma sector antennas; and Shelton 2 cell site – Beta sector antennas, which are all operating at their current capacity limits or are projected to reach their capacity limits in the next 12 to 18 months. The Orange North Facility will also off-load wireless service from Cellco's Orange 2 and Orange 3 cell sites. These two sites, however, are not currently projected to exhaust their capacity limits within the next 36 months.

Nature of Probable Impacts

North Facility, and the proposed alternate facility location 90 feet to the south, would not have a significant adverse impact on the environment at the Property or the surrounding area. Cellco has presented evidence that the location and development of the Orange North Facility will have no effect on historic or archeological resources in the area; will not adversely impact federal or State listed, threatened or endangered species or State species of special concern; will not have any adverse impacts on vernal pools or vernal pool habitat on the Property; will not have any direct or indirect impact on wetlands and watercourses near the proposed cell site or alternate location; will not have any significant visual impacts on any surrounding properties; will not be considered to be an obstruction or hazard to air navigation and, therefore, will not require any FAA marking or lighting; and will operate well within safety limits established by the FCC for radio frequency emissions.

Public Input

Cellco commenced its local input process by meeting with Orange's First Selectman James Zeoli on January 31, 2014. Copies of Cellco's technical report, summarizing Cellco's plans to establish a telecommunications facility as described above, were provided to Mr. Zeoli and to the Orange Planning Director, Paul Denise. Copies of the technical report were also delivered to the Mayor of Shelton, Mark Lauretti. The Orange-Shelton town line is within 2,500 feet of the proposed Orange North Facility. Cellco also appeared before the Orange Planning and Zoning Commission ("PZC") on February 18, 2014, to discuss the Orange North Facility proposal and respond to questions from the PZC and the public.

Conclusion

The evidence in the record clearly demonstrates that there is a need for additional coverage and, more importantly, capacity relief in the area surrounding the proposed Orange North Facility; the proposed Orange North Facility satisfies that need; and that the environmental impacts from the Orange North Facility would be minimal when balanced against that need.

I. INTRODUCTION

Cellco Partnership d/b/a Verizon Wireless ("Cellco" or "Applicant") filed with the Connecticut Siting Council ("Council") an application (the "Application") for a certificate of environmental compatibility and public need ("Certificate"), pursuant to Sections 16-50g et seq. of the Connecticut General Statutes ("Conn. Gen. Stat."), for the construction, maintenance and operation of a wireless telecommunications facility (the "Orange North Facility") on an approximately 34.6 acre parcel at 831 Derby Milford Road in Orange, Connecticut (the "Property"). (Cellco Exhibit 1 ("Cellco 1")). The proposed Orange North Facility will provide coverage to existing gaps in service to portions of Orange, Derby and Shelton and, more importantly, provide significant capacity relief to Cellco's existing Milford NE, Derby, Derby North and Shelton 2 cell sites. These wireless service problems must be resolved in order for Cellco to continue to provide high-quality, uninterrupted and reliable wireless telecommunications service. (Cellco 1).

II. PROCEDURAL BACKGROUND

The Application was filed with the Council on May 13, 2014. Notice of Cellco's intent to file the Application was mailed to all abutting property owners on May 8, 2014, and was published in the *New Haven Register* on May 8 and 9, 2014. (Cellco 1, Tab 4; Cellco 6). On July 2, 2014, Cellco posted a Public Notice Sign on the Property in accordance with the Council's guidelines. (Cellco 5).

On July 16, 2014, the Council conducted an evidentiary hearing and an evening public hearing on the Application. (Hearing Transcript ("Tr."), pp. 4 and 120). The Council's hearing was continued to August 12, 2014, September 16, 2014 and October 23, 2014. Intervenors to this proceeding include Albert Subbloie and Jaqueline Barbara who reside at 908 Rainbow Trail

and Glen and Jill MacInnes who reside at 905 Rainbow Trail (the "Intervenors"). Additional intervenors included State Senator Gail Slossberg and State Representatives Paul Davis, Themis Klarides and James Maroney. (Admin. Record).

Between the hours of 8 A.M. and 6 P.M. on July 16, 2014, Cellco caused a balloon to be flown as prescribed by the Council. (Cellco 1, p. 15; Tr., pp. 29-31; Cellco Exh. 16).

This Post-Hearing Brief is filed on behalf of the Applicant pursuant to Section 16-50j-31 of the Regulations of Connecticut State Agencies ("R.C.S.A.") and at the direction of the Council. (Tr., p. 694). This brief evaluates the Application in light of the review criteria set forth in Section 16-50p of the Connecticut General Statutes and addresses several other issues raised throughout the course of this proceeding.

III. FACTUAL BACKGROUND

A. <u>Pre-Application History</u>

Cellco is licensed to provide wireless services throughout Connecticut in the 700 MHz, 850 MHz, 1900 MHz and 2100 MHz frequency ranges. Cellco's currently provides wireless services in the area around the Property from six (6) existing cell sites identified throughout the Application as Cellco's Shelton 2, Derby, Derby North, Orange 2, Orange 3 and Milford NE cell sites. (Cellco 1, pp. 8-9, Tab 6). These six (6) existing cell sites, and all cell sites in Cellco's wireless network are monitored on a regular basis to ensure that Cellco's wireless network is meeting system performance expectations. In the course of monitoring overall system performance, Cellco's RF and System Performance Engineers have identified a series of gaps in

As discussed further in Section IV.B.3. below, Cellco also floated balloons on August 26, 2014, and again on August 29, 2014, at the proposed cell site and at an alternate site location approximately 90 feet to the south of the proposed location at the request of the Intervenors. The purpose of this additional balloon float was to assess the visibility of the proposed and alternate tower locations from the Intervenors' residences at 905 and 908 Rainbow Trail.

reliable service, at various frequencies, in eastern portions of the Town of Shelton, southeastern portions of the Town of Derby and central and southern portions of the Town of Orange. (Cellco 1; Cellco 4; Cellco 10; Cellco 11; Cellco 14).

In addition to these coverage problems, RF and System Performance Engineers have identified significant capacity problems throughout Cellco's network. These capacity problems are a direct result of the exponential growth in customer demand for high speed wireless data services. (Cellco 1; Cellco 4; Cellco 14; Admin. Notice No. 52). Cellco has developed a proprietary analytical tool to help it evaluate and monitor data usage in each sector of each cell site in its Connecticut network. The tool allows Cellco to monitor the growth of data usage in particular antenna sectors and forecast when an antenna sector is going to exhaust its capacity limit. Cellco engineers review this data on a monthly basis to develop "capacity trending" analyses. These trending analyses allow Cellco to make intelligent decisions regarding how to meet current and future capacity needs in its network. The data analyzed includes (1) Forward Data Volume (FDV) which measures the amount of data transmitted from an antenna sector of a cell site to the data user; (2) Average Scheduled Eligible Users (ASEU) which measures how many customers are using a particular sector of a cell site at the established threshold limits; and (3) Average Active Connections (avgAC) which measures the active connections to the sector of the particular cell site being evaluated. (Cellco 1; Cellco 4; Cellco 14, Attachment 4).

Using this data, Cellco has determined that its Milford NE cell site – Alpha sector antennas are currently operating beyond their current capacity limits (a/k/a exhausting). Cellco's Derby cell site – Beta sector antennas are projected to exhaust their capacity limits by September of 2015. Cellco's Derby North cell site – Gamma sector antennas are projected to exhaust their

capacity limits in June of 2016. Cellco's Shelton 2 – Beta sector antennas are projected to exhaust their capacity limits in March of 2016. While not projected to exhaust in the next three years, data usage in each of the remaining antenna sectors at each of the six (6) surrounding sites continue to increase at a rapid pace. (Cellco 1, Cellco 4; Cellco 14, Attachment 4; Admin. Notice No. 52).

To resolve these coverage and capacity problems, Cellco issued an Orange North search ring and began searching for an appropriate location for a new wireless facility in northwest Orange. (Cellco 1, Tab 8). Consistent with its practice, Cellco first investigated whether there were any existing towers or non-tower structures of suitable height in the area that could be used to satisfy its coverage and capacity objectives. All existing towers within four (4) miles of the Orange North search area are currently being shared by Cellco. No existing non-tower structure of suitable height exists in or near the Orange North search area. (Cellco 1, Tab 8).

If a new tower must be constructed Cellco attempts to identify sites where the construction of a tower would not be inconsistent with area land uses and where the visual impacts of the facility would be reduced to the greatest extent possible. (Cellco 1, Tab 8, Tab 9; Cellco 16). Cellco identified and investigated a total of nine (9) such locations before filing the Application. These nine (9) locations included parcels identified by the Orange Planning and Zoning Commission ("PZC") and First Selectman during Cellco's pre-application municipal consultation process. (Cellco 1, p. 20, Tab 8). During the course of the Council's Docket No. 448 proceeding, at the request of the Intervenors, Cellco investigated several additional alternative parcels including land in residential neighborhoods; the Town-owned Housatonic Overlook parcel which is subject to development restrictions; and the Mount St. Peters Cemetery

in Derby, Connecticut. Each of the alternative locations suggested by the Intervenors were evaluated and rejected by Cellco. Deed restrictions on the Town's Housatonic Overlook parcel prevent development of any kind on this parcel. Due to existing ground elevation, use of the Mount St. Peters Cemetery property would require the development of a tower in excess of 200 feet to satisfy Cellco's objectives in the area. (Cellco 11; Cellco 12; Cellco 14). Cellco determined that an antenna centerline height of 100 feet at the 831 Derby Milford Road location would satisfy its capacity and coverage objectives in the area and that the site selected represents the most feasible alternative of the sites investigated.

B. Local Contacts

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 at the Property (the "Technical Report") (Cellco Exh. 1.d.). 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 northwest Orange and the Connecticut Siting Council application process. That same day, Cellco delivered copies of the Technical Report to Paul Denise, Orange's Planning Director and Mark A. Lauretti, Mayor of the Town of Shelton. The Orange-Shelton town line is within 2,500 feet (to the southwest) of the proposed Orange North Facility. (Cellco 1, p. 20, Tab 1).

C. Tower Sharing

If approved, Cellco will design the Orange North 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. No other wireless carrier nor the Towns of Orange or Shelton have expressed any interest in sharing the Orange North Facility. (Cellco 1, p. 12).

D. The Orange North Facility

1. Proposed Location

The Orange North Facility would be located within a 50' x 50' fenced compound in the central portion of an approximately 34.6 acre parcel at 831 Derby Milford Road approximately 460 feet north of Derby Milford Road. At this location, Cellco would construct an 100-foot self-supporting monopole telecommunications tower. As a part of the Application, Cellco has offered to paint the tower brown or to disguise the tower as a pine tree, as requested by the Orange PZC. (Cellco 1, p. 20, Tab 9; Cellco 16).

Cellco would install up to fifteen (15) panel-type antennas with their centerline at the 100-foot level. The top of Cellco's antennas would extend above the top of the tower to an overall height of approximately 103 feet above ground level ("AGL"). Vehicular access to the site would extend from Derby Milford Road over a new gravel driveway. Utility service will extend underground from existing service along Derby Milford Road to the facility compound. (Cellco 1, p. 2, Tab 1).

2. Alternative Tower Location

To address concerns raised for impacts of the facility compound on nearby wetlands, vernal pools and vernal pool habitat, Cellco identified an alternative cell site location on the Property approximately 90 feet to the south of the proposed location (Cellco 14, Attachment 2). The physical environmental effects of the construction of a telecommunications facility at this alternative location would be comparable to those at the proposed compound. Areas of

disturbances, tree removal, length of access driveway and grading near Derby Milford Road will remain unchanged. Less overall grading within and adjacent to the facility compound would be required at the alternate facility location. Finally, as discussed during the Council's review of the application, the alternative facility location would, however, result in an overall reduction in the facility's impacts on wetlands and vernal pools on the Property and their associated wildlife habitat. (Cellco 1; Cellco 10; Cellco 14; Tr., pp. 489-499).

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 at either of the alternative tower locations described above. 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 topped with three strands of barbed wire. 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. (Cellco 1, Tab 1).

IV. THE APPLICATION SATISFIES THE CRITERIA OF CONN. GEN. STAT. § 16-50p FOR ISSUANCE OF A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

Section 16-50p of the Public Utility Environmental Standards Act ("PUESA"), Conn. Gen. Stat. § 16-50g *et seq.*, sets forth the criteria for Council decisions in Certificate proceedings. The Applicant must satisfy two key criteria in order for the Application to be granted and for a Certificate to issue. First, the Council must final and determine that there is a need for the facility and the basis for that need. Conn. Gen. Stat. § 16-50p(a)(3)(A). Second, the Council

must identify "the nature of the probable environmental impact" of the proposed facility through review of the numerous elements specified in Conn. Gen. Stat. § 16-50p(a)(3)(B), and final that these impacts "are not sufficient reason to deny the application." Conn. Gen. Stat. § 16-50p(a)(3)(C). The evidence in the record for Docket No. 448 establishes that these criteria have been satisfied and that the Applicant is entitled to a Certificate.

A. The Federal Government has Pre-empted the Determination of Public Need by the Council for Wireless Services Provided by the Proposed Orange North Facility

The Federal Telecommunications Act of 1996 (the "Telecommunications Act") recognized an important nationwide public need for high quality wireless telecommunications services of all varieties. The Telecommunications Act also expressly promotes competition and seeks to reduce federal, state and local government regulation in all aspects of the telecommunications industry in order to foster lower prices for consumers and to encourage the rapid deployment of new and advanced wireless telecommunications service and technologies. In addition, the Federal Communications Commission (FCC) has promulgated regulations containing technical and network design standards for wireless services. State and local regulations of these matters is likewise pre-empted. (Cellco 1, pp. 6-8; Adm. Notice No. 4).

Recognizing the significant public safety benefits provided by enhanced wireless networks, Congress enacted the Wireless Communications and Public Safety Act in 1999 and the Enhanced 911 Act in 2004. (Admin. Notice Nos. 6 and 7). Among other things, these public acts promote and enhance public safety and encourage the development of enhanced wireless networks. In 2009, President Obama issued Presidential proclamation No. 8460 which recognized a need to protect the nation's "critical infrastructure" including, among other things, cell towers. (Admin. Notice No. 11). Further, the National Broadband Policy, established in 2010, the Middle Class Tax Relief Act

of 2012 and more recently, the FCC's Order in Docket 14-153 further demonstrate the goal and focus of the federal government generally and the FCC in particular to encourage, promote and assist in the deployment of these enhanced wireless services nationwide. (Cellco 1, pp. 6-8; Admin. Notice Nos. 8, 18 and 20).

The proposed Orange North Facility would be part of Cellco's expanding wireless telecommunications network envisioned by the Telecommunications Act, the National Broadband Plan and Section 6409 of the Middle Class Tax Relief Act and has been developed to help meet these nationwide goals. (Admin. Notice Nos. 8, 18, 20). 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, improve network capacity and improve the overall quality of wireless service to allow for the efficient and reliable use of Cellco's network. (Cellco 1, pp. 6-7).

1. <u>Coverage Benefits</u>

The Docket No. 448 record contains ample, written evidence and testimony that the Orange North Facility would allow Cellco to help resolve certain existing coverage deficiencies in central and southern portions of Orange, southeast portions of Derby, and eastern portions of Shelton.

(Cellco 1; Cellco 4; Cellco 11).

While not its primary objective, the coverage benefits that will be provided by the Orange North Facility, particularly in Cellco's 700 MHz and 2100 MHz frequency ranges, are well documented. Coverage plots included in the Docket No. 448 Application clearly show gaps in wireless service in southeast Derby, southern and central portions of Orange and eastern portions of Shelton. These areas total 1.19 square miles at 700 MHz and 2.07 square miles at 2100 MHz. Significant portions of these existing gaps will be served by the proposed Orange North Facility.

(Cellco 1, Tab 6; Cellco 4; Cellco 11).

2. <u>Capacity Benefits</u>

In addition to these coverage benefits, the Orange North Facility will also provide Cellco's network with significant capacity relief, vital to the provision of high-quality reliable wireless voice and, more importantly, data services in and around the Orange area. (Cellco 1, pp. 8-9; Cellco 4; Cellco 14).

Cellco currently provides wireless service in the area around the Property from six (6) existing cell sites identified as Shelton 2, Derby, Derby North, Orange 2, Orange 3 and Milford NE. (Cellco 1, pp. 8-9, Tab 6). The performance of each of these existing cell sites is monitored on a regular basis. As discussed at length during the course of the Docket No. 448 proceeding, Cellco's Milford NE – Alpha sector antennas, Derby – Beta sector antennas, Derby North – Gamma sector antennas and Shelton 2 – Beta sector antennas are either currently exhausting or are projected to exhaust in the next 12 to 18 months. (Cellco 14, Attachment 4). Cellco's RF Engineers have determined that the proposed Orange North Facility will effectively off-load data traffic from the exhausting antenna sectors of the surrounding Shelton 2, Derby, Derby North and Milford NE cell sites resulting in the provision of advanced wireless services throughout the area.²

B. <u>Nature of Probable Impacts</u>

1. Natural Environment and Ecological Balance

The development of the Orange North Facility at either the proposed location or the alternate location 90 feet to the south, has eliminated, to the extent possible, impacts on the natural environment. All facility improvements would be located within a 50' x 50' fenced compound.

² The Orange North Facility will also off-load wireless capacity from Cellco's Orange 2 and Orange 3 cell sites. These sites, however, are not currently projected to exhaust their capacity limits.

Areas outside the compound will not be disturbed, mowed or maintained following completion of construction. (Cellco 1; Cellco 14). Access to the tower site would extend from Derby Milford Road over a new gravel driveway a distance of approximately 460 feet to the facility compound. Only five (5) trees (6 inch or greater diameter at breast height) will need to be removed to construct these improvements at either alternative location. Moderate grading would be required for construction of the access drive and cell site improvements, including drainage improvements. (Cellco 1, Tab 1; Cellco 14, Attachment 2). Overall, development of the Orange North Facility would have a negligible impact on the physical environment of the Property and the surrounding area. No evidence to refute this conclusion was presented to the Council.

2. Public Health and Safety

Cellco has considered several factors in determining that the nature and extent of potential public health and safety impacts resulting from installation of the Orange North Facility would be minimal or nonexistent.

First, the potential for the facility tower to fall does not pose an unreasonable risk to health and safety. The proposed tower would be designed and built to meet Electronic Industries

Association standards. The closest residence is located at 899 Derby Milford Road, approximately

770 feet to the southwest of the proposed tower site. (Cellco 1, Tab 1; Cellco 7; Tr., pp. 13-14).

Second, worst-case potential public exposure to Radio Frequency ("RF") emission at the closest accessible point to the antennas, in this case the base of the tower, would be well below the established FCC Safety Standards. Actual RF emissions levels from the proposed facility would be far below these "worst-case" calculations. (Cellco 1, p. 17, Tab 1; Cellco 3).

If approved, Cellco will design the facility tower and compound to be shared by other wireless carriers, and the Town of Orange, or local emergency service providers, if a need exists.

This type of tower sharing arrangement would reduce, if not eliminate, the need for other carriers or municipal entities to develop a separate tower in this same area in the future. (Cellco 1, p. 12).

Overall, the nature and extent of potential, adverse public health and safety impacts resulting from construction and installation of the Orange North Facility would be minimal or nonexistent. The public safety benefits, however, would be substantial. No evidence to refute these conclusions was presented to the Council.

3. Scenic Values

As noted in the Application, the primary impact of any tower is visual. Cellco's site search methodology, described in the Site Search Summary, is designed in large part to minimize such visual impacts. As discussed above, wherever feasible, Cellco avoids construction of a new tower by first attempting to identify use and existing towers or other tall non-tower structures in or near a particular search area. Cellco currently shares five (5) existing towers (Derby North, Orange 2, Orange 3, Milford NE and Shelton 2) and one church bell tower structure (Derby), all within approximately four (4) miles of the Orange North Facility location. (Cellco 1, Tab 8). These existing cell sites will all directly interact with the proposed Orange North Facility. However, none of these adjacent facilities can satisfy Cellco's coverage or capacity objectives in the area. (Cellco 1, Tab 8).

If it determines that a new tower must be constructed, Cellco attempts to identify sites where the construction of a tower would not be inconsistent with area land uses and where the visual impact of the site may be reduced to the greatest extent possible. Cellco explored the use of

eight (8) possible alternative parcels in the Orange North search area, prior to commencing the Council's application process, one additional site recommended by the Town during the municipal consultation process and several additional sites recommended for consideration by the Intervenors during the Council hearing. The Orange North Facility at the Property was identified as the most suitable and appropriate for its Orange North Facility. (Cellco 1, Tab 9; Cellco 11; Cellco 12; Cellco 14).

In general, the combination of the relatively low height of the proposed tower, rolling terrain in the area and mature forest results in minimizing the overall visibility of the Orange North Facility. (Cellco 1, Tab 9). The area to the north and west of the proposed tower compound, toward the Rainbow Trail area is buffered by a dense tract of woodlands. The closest residence is located approximately 770 feet to the southwest at 899 Derby Milford Road. (Cellco 1, p. 14, Tab 9; Cellco 14).

Cellco submitted two (2) comprehensive Visibility Analyses prepared by All-Points

Technology Corporation ("APT") as a part of the Docket No. 448 proceeding. Prior to preparing its reports, APT conducted several balloon floats and field reconnaissance surveys to obtain the information necessary for the Visibility Analyses. APT's initial survey was completed in January 2014, when leaves were off the trees, so that the full extent of visual impact could be evaluated. (Cellco 1, Tab 9). Subsequent visual analyses were performed at the request of the Intervenors following the Council's August 12, 2014 hearing. APT conducted balloon floats on August 26 and 29, 2014, at both the proposed tower site and alternate site locations, 90 feet to the south.³

³ One of the goals of the August 29, 2014 balloon float was to assess the visual impacts from the Intervenors' properties and residences at 905 and 908 Rainbow Trail. APT was permitted on the property and in the home of Albert Sabbloie and Jacqueline Barbara at 908 Rainbow Trail but was not allowed onto the property or into the home of Glen and Jill MacInnes at 905 Rainbow Trail.

(Cellco 16).

In each case the conclusions of the visibility analyses were the same. The tower would be visible year-round from approximately 49 acres or 0.6 percent of the 8,042 acre study area and would be limited to areas to the north, east and south of the tower location. Areas where seasonal views are anticipated comprise approximately 300 additional acres, generally occurring in more distant residential areas to the east. Season visibility, through the trees, may be available from the rear portion of the property at 905 Rainbow Trail but would not be available, at all, from the property at 908 Rainbow Trail. (Cellco 1, p. 14, Tab 9; Cellco 16).

4. <u>Historical Values</u>

According to a Historic Resources Review prepared by APT, there are no properties listed on or eligible for listing on the National Register of Historic Places located within ½ mile of the proposed Orange North Facility. In addition, no recorded archeological sites exist at the Property. (Cellco 1, pp. 16-17, Tab 12). No evidence to refute this conclusion was presented to the Council.

5. Recreational Values

There are no recreational activities or facilities on the Property that would be adversely impacted by development of the Orange North Facility. According to the Visibility Analysis prepared by APT, there are no formal trail systems in the two (2) mile study radius. (Cellco 1, pp. 16-17, Tab 9; Cellco 16). Cellco has not discovered nor is it aware of any use restrictions on the Property that would prohibit its use for development of the Orange North Facility. (Cellco 1, Tabs 1 and 15). No evidence to refute this conclusion was presented to the Council.

6. Forests and Parks

There is no State or local forests or park land that will be adversely impacted as the proposed Orange North Facility. (Cellco 1, Tab 9). No evidence to refute this conclusion was presented to the Council.

7. Air and Water Quality

a. Air Quality.

Under normal operating conditions, the Cellco equipment at the Orange North Facility would generate no air emissions. During power outage events and periodically for maintenance purposes, Cellco would utilize a diesel-fueled generator to provide emergency back-up power to the cell site. Cellco's back-up generator will be managed to comply with the "permit by rule" criteria established by the Connecticut Department of Energy and Environmental Protection ("DEEP") Bureau of Air Management pursuant to R.C.S.A. § 22a-174-3b, and therefore is exempt from general air permit requirements. (Cellco 1, p. 21; Cellco 9).

b. Water Quality.

The proposed Orange North Facility would not utilize water, nor would it discharge substances into any surface water, groundwater, or public or private waste water disposal system. Dean Gustafson, Registered Soil Scientist with APT, conducted a field investigation and completed a Wetlands Investigation memorandum for the Orange North Facility. According to this memorandum, the closest wetland area to the tower is located within approximately 200 feet of the proposed or alternate facility locations. In his Wetlands Investigation memorandum, Mr. Gustafson concludes that the Orange North Facility will have no temporary or permanent direct impact to wetlands or watercourses. As long as proper erosion control measures as installed, maintained and monitored during construction, Cellco is confident that the development of the

Orange North Facility will not result in any adverse impacts to nearby wetland resources. (Cellco 1, pp. 19-20, Tab 1; Cellco 8; Cellco 10). No evidence to refute these conclusions was presented to the Council.

8. Fish and Wildlife

As a part of its National Environmental Policy Act ("NEPA") Checklist, Cellco received comments on the Orange North Facility from the U.S. Department of Interior, Fish and Wildlife Service ("USFWS") and the Connecticut Department of Energy and Environmental Protection ("DEEP"). Both the DEEP and the USFWS determined that no federally-listed, threatened or endangered species are known to occur in Orange, Connecticut. (Cellco 1, Tab 10; Cellco 2). According to the Vernal Pool and Eastern Box Turtle Habitat Assessment, construction of the Orange North Facility at either the proposed or alternate site locations will not adversely impact vernal pool habitat or eastern box turtle habitat. Cellco has established an *Eastern Box Turtle* protective measures program to avoid unintentional mortality of this turtle species during construction. With adherence to these guidelines, Cellco does not anticipate any adverse impacts on this species. (Cellco 1, pp. 15-17, Tab 10; Cellco 2; Cellco 10).

C. The Application Should Be Approved Because The Benefits Of The Proposed Facility Outweigh Any Potential Impacts

Following a determination of the probable environmental impacts of the Orange North Facility, Conn. Gen. Stat. § 16-50p requires that the Applicant demonstrate why these impacts "are not sufficient reason to deny the Application." Conn. Gen. Stat. § 16-50p(a)(3). The record establishes that the impacts associated with the proposal would be limited and outweighed by the benefits to the public from the proposed facility and, therefore, requires that the Council approve the Application.

As discussed above, the only potential adverse impact from the proposed tower involves "scenic values." As the record overwhelmingly demonstrates, the Orange North Facility would have minimal impacts on scenic values in the area. (Cellco 1, Tab 9; Cellco 16). These limited aesthetic impacts may be, and in this case are, outweighed by the public benefit derived from the establishment of the facility. Unlike many other types of development, telecommunications facilities do not cause indirect environmental impacts, such as increased traffic and related pollution.

In sum, the potential environmental impacts from the Orange North Facility would be minimal when considered against the benefits to the public. These impacts are insufficient to deny the Application. The site, therefore, satisfies the criteria for a Certificate pursuant to Conn. Gen. Stat. § 16-50p, and the Applicant's request for a Certificate should be granted.

V. CONCLUSION

Based on the overwhelming evidence in the record, the Applicant has established that there is a need for an Orange North Facility and that the environmental impacts associated with the Application would be limited and outweighed by the benefits to the public from the proposed facility and, therefore, requires that the Council approve the Application.

Respectfully submitted, CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

Kenneth C. Baldwin

ROBINSON & COLE LLP

280 Trumbull Street

Hartford, CT 06103-3597

Its Attorneys

CERTIFICATE OF SERVICE

I hereby certify that on this 24th day of November, 2014, a copy of the foregoing was sent via first class mail, postage prepaid, to the following:

Albert Subbloie c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com	Jacqueline Barbara c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com
Glenn MacInnes c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com	Jill MacInnes c/o Mario F. Coppola, Esq. Mark Kovack, Esq. Berchem, Moses and Devlin, P.C. 1221 Post Road East Westport, CT 06880 mcoppola@bmdlaw.com mkovack@bmdlaw.com
State Senator Gayle Slossberg Legislative Office Building Room 2000 Hartford, CT 06106 gslossberg@yahoo.com	State Representative Paul Davis Legislative Office Building Room 4045 Hartford, CT 06106 paul.davis@cga.ct.gov
State Representative Themis Klarides Legislative Office Building Room 4200 Hartford, CT 06106 themis.klarides@housegop.ct.gov	State Representative James Maroney Legislative Office Building Room 5006 Hartford, CT 06106 james.maroney@cga.ct.gov

Kenneth C. Baldwin

STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 438

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 831 DERBY MILFORD ROAD IN ORANGE,

CONNECTICUT : NOVEMBER 24, 2014

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS PROPOSED FINDINGS OF FACT

Introduction

- 1. Cellco Partnership d/b/a Verizon Wireless ("Cellco"), in accordance with the provisions of Connecticut General Statutes ("C.G.S.") §§ 16-50g through 16-50aa, applied to the Connecticut Siting Council ("Council") on May 13, 2014, for the construction, maintenance, and operation of a wireless telecommunications facility located in the Town of Orange, Connecticut ("Orange North Facility"). (Cellco 1, p. 1).
- 2. The Orange North Facility would be located on an approximately 34.6 acre parcel at 831 Derby Milford Road in Orange. At this site, Cellco would construct a 100-foot tall tower within a 50' x 50' fenced compound. Cellco would install up to fifteen (15) antennas at the top of the tower and associated radio equipment and a back-up generator inside a 12' x 30' shelter located near the base of the tower. Vehicular access to the site would extend from Derby Milford Road over a new gravel access driveway a distance of 460 feet. (Cellco 1, Tab 1).
- Cellco is a Delaware corporation with its administrative office at 99 East River Drive, East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless service system in Connecticut. (Cellco 1, pp. 4-5).
- 4. The purpose of the proposed facility is to provide wireless coverage to existing gaps in service in portions of Orange, Derby and Shelton, Connecticut. More importantly, however, the proposed Orange North Facility will provide significant capacity relief to Cellco's surrounding Milford NE, Derby, Derby North and Shelton NE cell sites. (Cellco 1, pp. 1-4, Tab 6; Cellco 14).

- Pursuant to C.G.S. § 16-50m, the Council held a public hearing on July 16, 2014, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Shelton City Hall, 54 Hill Street, Shelton, Connecticut. The hearing was continued to August 12, 2014, September 16, 2014 and October 23, 2014. (Tr., pp. 4, 168, 332, 571).
- 6. The Council and its staff conducted an inspection of the proposed Orange North Facility location on July 16, 2014, beginning at 2:00 p.m. The applicant flew a four-foot diameter balloon at the site from about 8:00 a.m. to 6:00 p.m. to simulate the height of the proposed tower. (Tr., pp. 29-30).
- 7. Notice of the filing of the application was sent to all adjacent property owners by certified mail. Cellco received return receipts from all abutting landowners. (Cellco 1, pp. 5-6, Tab 4).
- 8. Public notice of the filing of the application was published in the *New Haven Register* on May 8 and 9, 2014. (Cellco 1, p. 5; Cellco 6).
- 9. Cellco installed a sign, four-foot by six-foot, at the site entrance on July 2, 2014. The sign presented information regarding the project and public hearing in accordance with the Council's guidelines. (Cellco 5).
- 10. Pursuant to C.G.S. § 16-50*l*(b), Cellco provided a copy of its application to all federal, state and local officials and agencies listed therein. (Cellco 1, p. 5, Tab 2).

State Agency Comment

- 11. Pursuant to General Statutes § 16-50j(h), the following State agencies were solicited to submit written comments regarding the proposed facility: Department of Environmental Protection (DEP), Department of Public Health, Council on Environmental Quality, Department of Public Utility Control, Office of Policy and Management, Department of Economic and Community Development, Department of Transportation and Department of Agriculture, and Department of Emergency Management and Homeland Security.
- The Connecticut Department of Health submitted comments (no comments) on May 28, 2014. (Admin. Record).

Municipal Consultation

- On January 31, 2014, Cellco representatives met with the Town of Orange's First Selectman, James Zeoli to commence the local input process and review the project. Copies of Cellco's Technical Report were provided to Mr. Zeoli and Orange Planning Director, Paul Denise. Because the parcel is within 2,500 feet of the Orange-Shelton Town line, a copy of the Technical Report was also hand-delivered to Mayor Mark Lauretti of the Town of Shelton. (Cellco 1, p. 20).
- 14. Cellco appeared before the Orange Planning and Zoning Commission on February 18, 2014, to discuss the proposed facility. (Cellco 1, p. 20).

15. Cellco offered the Town emergency service providers free space on the tower for emergency service antennas. (Cellco 1, p. 12).

Public Need for Service

- 16. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Admin. Notice No. 4).
- 17. In issuing wireless licenses, the Federal government has preempted the determination of public need for wireless service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. Cellco is licensed by the FCC to provide wireless service to New London County. (Admin. Notice No. 4; Cellco 1, pp. 6-8).
- 18. The Telecommunications Act of 1996, a Federal law passed by the United States Congress, prohibits any state or local entity from regulating wireless telecommunications towers on the basis of environmental effects, which include human health effects, of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also bans the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Admin. Notice No. 4).
- 19. In an effort to ensure the benefits of wireless technologies to all Americans, Congress enacted the Wireless Communications and Public Safety Act of 1999. The purpose of this legislation was to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. (Admin. Notice No. 6).
- In 2004, Congress enacted the Enhanced 911 Act to enhance and promote Homeland Security, public safety and citizen activated emergency response capabilities which can only be satisfied if Cellco, and other wireless carriers maintain a ubiquitous and reliable wireless network. (Admin. Notice No. 7).
- 21. In December of 2009, President Obama issued Presidential Proclamation No. 8460 which recognizes the need to protect the nation's "critical infrastructure" including, among others, cellular phone towers. (Admin. Notice No. 11).
- 22. In 2010, a National Broadband Policy, was developed to ensure access to broadband capabilities to all Americans, establish the United States as a leader in wireless service innovation and establish the world's fastest and most extensive wireless network. (Admin. Notice No. 18).

To ensure a more timely review and approval of wireless facility siting applications the FCC has established a rule establishing time frames for such decisions and, in certain cases, mandates the approval of certain eligible facility modifications. (Admin. Notice Nos. 19 and 20).

Cellco - Existing and Proposed Wireless Coverage

- 24. Initially, Cellco proposes to provide wireless service in its 700 MHz, and, 2100 MHz frequency ranges from the proposed Orange North Facility. (Cellco 1, pp. 2-4, 8-9).
- 25. Cellco seeks to provide coverage to existing coverage gaps in portions of south and central Orange, southeast Derby and eastern Shelton. The proposed Orange North Facility will provide service to significant portions of these coverage gaps. (Cellco 1, pp. 2-3, Tab 6).
- The Orange North Facility will also provide Cellco's network with significant capacity relief to its Milford NE cell site Alpha sector antennas, Derby cell site Beta sector antennas, Derby North cell site Gamma sector antennas and Shelton 2 cell site Beta sector antennas, each of which is operating at their current capacity limits or is projected to reach capacity in the next 12 to 18 months. (Cellco 1, pp. 8-9; Cellco 14).
- 27. Cellco can satisfy its coverage and capacity objectives in the area by installing antennas at a centerline height of 100 feet at the proposed cell site. (Cellco 1).

Site Selection

- 28. The search for alternative sites included a search for existing structures that could be used for telecommunications purposes and an examination of area properties, including municipal parcels. Prior to filing its application, Cellco investigated a total of nine (9) parcels and selected the property at 831 Derby Milford Road for presentation to the Council. During the course of the Council's proceeding, Cellco also investigated and rejected several additional parcels as alternatives to the proposed cell site at 831 Derby Milford Road. (Cellco 1, pp. 11-12 and 20, Tab 8; Cellco 14).
- 29. Cellco maintains six (6) existing facilities within four (4) miles of the proposed Orange North Facility location. (Cellco 1, Tab 8).
- 30. Cellco did not identify any existing buildings or other non-tower structures in or near the Orange North search area that would be suitable for use as a telecommunications facility. (Cellco 1, Tab 8).

Orange North Facility Description

- 31. The proposed Orange North Facility would be located in the central portion of an approximately 34.6 acre parcel at 831 Derby Milford Road in Orange. (Cellco 1, p. 2, Tab 1).
- 32. The property is owned by Walter M. and Maryellen K. Bespuda Living Trust. (Cellco 1,

- Tab 1, Tab 15).
- The Property is located in the Town's Residential zone district and is used for active agricultural purposes. (Cellco 1, p. 19, Tab 1, Tab 9).
- 34. Rolling terrain surrounds the Orange North Facility with ground elevations ranging from 86 feet above mean sea level (amsl) near Derby Milford Road to 134 feet amsl at the proposed cell site. The average tree height in the area is conservatively estimated to be approximately 55 feet. (Cellco 1, Tab 1, Tab 9).
- 35. Land use within a quarter-mile of the site includes active agricultural uses and low density residential uses. (Cellco 1, Tab 1, Tab 9).
- 36. There are eleven (11) residences within 1,000 feet of the Orange North Facility. (Cellco 1, Tab 1; Cellco 7).
- 37. The closest off-site residence is located at 899 Derby Milford Road, approximately 770 feet to the west of the Orange North Facility compound. (Cellco 1, Tab 1; Cellco 7; Tr., pp. 13-14).
- 38. Cellco proposes to construct a 100-foot monopole painted brown and capable of supporting four wireless carriers. The tower would be constructed in accordance with the Electronic Industries Association standard EIA/TIA-222-F. (Cellco 1, Tab 1).
- 39. In accordance with a request from the Orange Planning and Zoning Commission, Cellco is willing to construct a tower disguised as a pine tree to minimize the visual impact of the tower on surrounding residences. (Cellco 1, p. 20, Tab 9; Cellco 16).
- 40. Cellco proposes to install up to fifteen (15) panel antennas on a low-profile antenna platform at a centerline height of 100 feet above ground level. The top of Cellco's antennas would extend to an overall height of 103 feet above ground level. (Cellco 1, p. 2, Tab 1).
- 41. The proposed tower would be located within a 50-foot by 50-foot fenced compound within a 100-foot by 100-foot lease area. An eight-foot high chain link fence would enclose the facility compound. (Cellco 1, p. 2, Tab 1).
- 42. A 12-foot by 30-foot equipment shelter would be installed within the Orange North Facility compound. The shelter would house Cellco's radio equipment and a dieselfueled back-up generator. (Cellco 1, p. 2, Tab 1).
- 43. Access to the proposed cell site would extend from Derby Milford Road along a new gravel driveway a distance of 460 feet to the compound. (Cellco 1, p. 2, Tab 1).
- 44. Utilities would extend underground from existing service along Derby Milford Road. (Cellco 1, p. 2, Tab 1).
- 45. Once the cell site is operational, maintenance personnel will visit the cell site on a monthly

basis. (Cellco 1, pp. 3-4).

46. The estimated construction cost of the Orange North Facility is:

Cell site radio equipment	\$450,000
Tower, coax and antennas	130,000
Power systems	20,000
Equipment building	50,000
Miscellaneous (including site preparation and installation)	125,000
Total estimated cost	\$775,000

(Cellco 1, p. 22).

Environmental Concerns

- 47. According to a Historic Resources Review, there are no properties on or eligible for listing on the National Register of Historic Places located within one-half mile of the proposed Orange North Facility and no recorded archeological sites exist at the subject parcel. (Cellco 1, pp. 16-17, Tab 12).
- 48. According to the U.S. Fish and Wildlife Service (USFWS) no federally listed or proposed threatened or endangered species are known to occur in Orange, Connecticut. (Cellco 1, Tab 10).
- 49. At the request of the Council, Cellco prepared a Vernal Pool and Eastern Box Turtle Habitat Assessment (the "Vernal Pool Study"). The Vernal Pool Study recommends certain measures be undertaken to prevent the incidental "take" of box turtles during construction. (Cellco 10).
- 50. Cellco investigated and presented to the Council an alternative cell site, on the subject parcel, approximately ninety (90) feet to the east. This alternate location will result in a great separating of the cell site to the nearest wetland; would be located outside of the watershed for this nearest wetland area, and would be located more distant from on-site vernal pools and the box turtle hibernation and summertime foraging habitat. (Cellco 14).
- Development of the Orange North Facility would not directly impact any wetlands or watercourses. (Cellco 1, pp. 19-20, Tab 1, Tab 11).
- 52. Cellco would employ appropriate and necessary soil erosion and sedimentation controls in accordance with DEP Guidelines for Sedimentation and Erosion Controls to properly protect nearby wetland resources at the approved tower location. (Cellco 1, pp. 19-20, Tab 1, Tab 2).
- 53. Five (5) trees with a diameter of six inches or greater at breast height would be removed to develop the Orange North Facility. (Cellco 1, Tab 1).

- 54. The Orange North Facility is located in Flood Zone X, designated by the Federal Emergency Management Agency as an area outside of the 500-year floodplain area with a minimal risk for flooding. (Cellco 1, pp. 19-20, Tab 13).
- 55. Aircraft hazard obstruction marking or lighting of the Orange North tower is not required or proposed. (Cellco 1, p. 21, Tab 14).
- The cumulative worst-case maximum radio frequency emissions from the operation of the proposed Cellco's antennas is calculated to be 37.88% of the standard for Maximum Permissible Exposure ("MPE"), as adopted by the FCC. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997). (Cellco 1, p. 17, Tab 1, p. 8).

Orange North Facility Visibility

- 57. The proposed 100-foot Orange North Facility tower would be visible year-round, above the tree canopy from approximately 46 acres within a two-mile radius. (Cellco 1, pp. 14-15, Tab 9; Cellco 16).
- 58. Seasonal views of the tower comprise an additional 300 acres within a two-mile radius of the site, and are located in the immediate vicinity of the Orange North Facility. (Cellco 1, pp. 14-15, Tab 9; Cellco 16).
- 59. Visual effects of the proposed alternate facility location, approximately 90 feet to the south of the proposed tower location, would be comparable to the proposed tower location. (Cellco 16).
- 60. A 100-foot tower at either the proposed location or the alternate location would not be visible, above the trees, from Rainbow Trail. Views of the top of the tower through the trees, may be possible, during the Winter months from the property at 905 Rainbow Trail but not 908 Rainbow Trail. (Cellco 1, Tab 9; Cellco 16).