

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

IN RE: :  
 :  
APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 414  
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 36 :  
RITCH AVENUE, GREENWICH, :  
CONNECTICUT : JUNE 8, 2011

**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 (“CGS”) §§ 16-50g et. seq., applied to the Connecticut Siting Council (“Council”) on December 15, 2010 for the construction, maintenance, and operation of an 84-foot tower disguised as a pine tree at 36 Ritch Avenue in Greenwich, Connecticut (“Ritch Avenue Facility”). (Cellco 1, p. 1).
2. 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, p. 4).
3. The purpose of the proposed facility is to provide wireless service to Cellco customers along portions of Interstate 95 (“I-95”) and Route 1, and local roads, as well as residential and commercial areas in southwest Greenwich. (Cellco 1, pp. 1-2, Tab 6).
4. The proposed facility would be shared by three wireless carriers including Cellco, T-Mobile and AT&T. Space at the top of the tower has also been reserved for the Greenwich Police Department. (Cellco 1, p. 11, Tab 1).
5. Notice of Cellco’s intent to file the application was sent to all abutting property owners by certified mail. Cellco received return receipts from two of the four abutters notified. Notice letters that were returned unclaimed or otherwise undeliverable were resent by regular mail. (Cellco 1, p. 5, Tab 4; Cellco 4, Q. 1).

6. Public notice of Cellco's intent to file the application was published in the *Advocate* on December 9 and 10, 2010. (Cellco 1, p. 5; Cellco 2).
7. Pursuant to CGS § 16-50m, the Council held a public hearing on March 29, 2011, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Greenwich Library Cole Auditorium, 101 West Putnam Avenue, Greenwich, Connecticut. (Transcript 1 – 02/03/11, 3:00 p.m. [Tr. 1], p. 2; Transcript 2 – 02/03/11, 7:00 p.m. [Tr. 2], p. 2). The hearing was continued to May 9, 2011 at 1:00 p.m. at the Council's New Britain Office. (Transcript 3 – 05/09/11, 1:00 p.m. [Tr. 3], p. 3).
8. The Council and its staff conducted an inspection of the proposed site on May 29, 2011, beginning at 2:00 p.m. The applicant attempted to fly a balloon at the site but was unsuccessful due to weather conditions. (Tr. 1, pp. 9-10; Tr. 2, p. 5).
9. Cellco installed a four-foot by six-foot sign at the site on March 15, 2011. The sign presented information regarding the project and public hearing in accordance with the Council's application guidelines. (Cellco 5).
10. Pursuant to CGS § 16-50l(b), Cellco provided a copy of its application to all federal, state and local officials and agencies listed therein. (Cellco 1, p. 6, 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. (Record).
12. The Connecticut Department of Transportation ("DOT") submitted a letter in response to the Council's solicitation indicating that it had "no comments" on the application. (Record).
13. No other State Agencies offered any comments of the Application. (Record).

#### **Municipal Consultation**

14. Cellco has been discussing its need for a new cell site in southwest Greenwich with Town officials since 2008. These discussions focused on numerous possible alternative locations for a tower site as well as proposed modifications to the existing AT&T Facility at 36 Ritch Avenue. (Cellco 1, p. 19; Cellco 3; Cellco 10).
15. Cellco representatives met with Greenwich Town officials including the First Selectman, Town Attorney and Planning Department staff to discuss details of the tower proposal at 36 Ritch Avenue on August 19, 2010. (Cellco 1, p. 19; Cellco 3).

16. Cellco submitted technical information to the Town's Planning and Zoning Commission ("PZC") on September 24, 2010. The PZC held two public information hearings on the tower proposal on October 26, 2010 and November 9, 2010. The PZC's comments were submitted to the Council on November 22, 2010. (Cellco 1, p. 19; Cellco 1.d.; Cellco 3).
17. Cellco offered the Town free space on the tower for municipal emergency service antennas if a need exists. In its November 22, 2010 letter to the Council, the PZC asked that space on the tower be reserved for future public safety use. (Cellco 1; Cellco 3; Cellco 10; Tr. 2, pp. 14-16).

### **Public Need for Wireless Services**

18. 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. (Council Administrative Notice, Item No. 8).
19. In issuing wireless licenses, the Federal government has preempted the determination of public need for wireless services 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 Fairfield County and throughout Connecticut. (Council Administrative Notice Item No. 8; Cellco 1, p. 5).
20. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 8).
21. The Telecommunications Act of 1996, a Federal law passed by the United States Congress, prohibits any state or local entity from regulating the placement of wireless telecommunications facilities on the basis of environmental effects, including human health effects, of radio frequency emissions to the extent that such facilities 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. (Council Administrative Notice Item No. 8).
22. 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. (Council Administrative Notice Item No. 9).

### **Cellco – Existing and Proposed Wireless Coverage**

23. Cellco proposes to provide cellular, PCS and LTE services from the proposed site along portions of I-95, Route 1 and local roads, as well as residential and commercial areas in southwest Greenwich. (Cellco 1, pp. 1-3, 8, Tab 6).

24. Cellco can not provide service to these areas from its existing Greenwich South and Greenwich Southwest Facilities. (Cellco 1, pp 1-3, Tab 6).
25. Cellco's existing signal level in the proposed service area ranges from -86 dBm to -98 dBm. (Cellco 4, Q. 6).
26. To provide reliable service, Cellco designs its network to operate at a minimum signal level threshold of -85 dBm for in-vehicle service and -75 dBm for in-building service. (Cellco 4, Q. 4).
27. Cellco currently experiences a 2.56% average dropped call rate and 1.46% average ineffective attempt rate within the proposed service area. Cellco is seeking to reduce the dropped call and ineffective attempt rates to less than 1%. (Cellco 4, Q. 6).
28. Installing cellular, PCS and LTE antennas at the proposed height of 57 feet above ground level (agl) would provide the following reliable service to the proposed service area:

Coverage Type (-85 dBm)	Miles on I-95	Miles on Route 1	Square miles
<i>Cellular</i>	2.16	0.53	5.6
<i>PCS</i>	2.03	1.48	4.06
<i>LTE</i>	2.16	1.06	5.56

(Cellco 1, p. 3).

**Site Selection and Alternatives Considered**

29. Cellco established a search area in southwest Greenwich in December of 2004. (Cellco 1, Tab 8).
30. Cellco maintains five (5) existing facilities within approximately four (4) miles of the proposed Ritch Avenue Facility location. Coverage from these existing facilities does not extend to the areas in southwest Greenwich that Cellco intends to serve with the proposed facility. (Cellco 1, Tab 6 and Tab 8).
31. Cellco investigated a total of four properties in the area as potential alternative cell site locations. Cellco identified two buildings in the Greenwich search area that might have been suitable for use as a telecommunications facility. Neither roof-top was available to Cellco to lease. (Cellco 1, Tab 8).
32. T-Mobile has also been active in its search for a new cell site in southwest Greenwich and investigated at least 13 alternative facility locations. (T-Mobile 1).

33. T-Mobile has a lease in place for the use of property at 44 Talbot Lane, a small residential parcel in Byram, but would prefer to co-locate antennas on the proposed replacement tower at 36 Ritch Avenue. (T-Mobile 1 and 2; Tr. 3, pp. 52-53).

#### **Existing Ritch Avenue Tower**

34. AT&T currently maintains a 70-foot flagpole tower at 36 Ritch Avenue. AT&T maintains antennas at the 57 and 67-foot levels on the tower. (Cellco 1, Tab 8).
35. In 2001, AT&T filed an application with the Town to construct a tower on another parcel in southwest Greenwich. The Town denied the application and AT&T appealed. To resolve the appeal the Greenwich Planning and Zoning Commission (“PZC”) approved AT&T’s use of the 36 Ritch Avenue parcel for telecommunications purposes. (Cellco 1 and Cellco 7, Q. 1).
36. The PZC approved the AT&T facility subject to conditions. Two of these conditions (Nos. 6 and 7) seek to limit the use of the AT&T facility to one carrier, unless the PZC approves future changes. (See Town (PZC) comment letter dated January 11, 2002).
37. In its November 22, 2010 recommendation letter to the Council, the PZC encourages shared use of the tree tower by Cellco, AT&T and T-Mobile and reserved space on the tower for future use by the Greenwich Police Department. (See PZC comments letter – November 22, 2010).
38. If Cellco’s replacement tower is approved at the site, Cellco will be responsible for the removal of the existing AT&T flagpole tower and equipment cabinets. (Cellco 1; Tr. 3, p. 73).
39. Cellco explored the use of a single flagpole tower at the site. This alternative would require the development of a 122-foot tall structure. Such a structure could accommodate the existing AT&T antennas at their current heights, would require the installation of Cellco’s antennas at the 77’, 87’ and 97’ levels and T-Mobile’s antennas at the 107’ and 117’ levels on the flagpole. The diameter of the upper 70-foot portion of a 122-foot flagpole tower would be approximately 42 inches in diameter to accommodate all antennas and antenna cables. The lower portion of the flagpole would be 54 inches in diameter. (Cellco 1, Tab 8; Tr. 1, p. 51).
40. The development of a 122-foot flagpole tower, at 36 Ritch Avenue or on another parcel nearby, would have significantly more overall environmental and visual impacts than the 77-foot tall (84 feet to the top of the simulated branch) tree tower proposed by Cellco. (Cellco 1, Tab 8; Tr. 1, pp. 51-52).

#### **Facility Description**

41. The proposed Ritch Avenue Facility would be located on an approximately 0.267 acre parcel at 36 Ritch Avenue in Greenwich. (Cellco 1, p. 3).
42. The property is owned by 36 Ritch Avenue LLC. (Cellco 1, Tab 1, Tab 16).

43. The property is zoned R-7 District. (Cellco 1, p. 17).
44. The property is currently used by AT&T for wireless telecommunications purposes. (Cellco 1, Tabs 1 and 8).
45. Land use within a quarter-mile of the site includes single-family and multi-family residential, municipal (Byram Park) and commercial. (Cellco 1, Tabs 1 and 9).
46. Cellco proposes to construct a 77-foot tall tower disguised as a pine tree at the site. Simulated branches will extend to an overall height of 84 feet. The proposed tree tower is capable of supporting three levels of antennas for Cellco, AT&T and T-Mobile, with additional space at the top of the tower reserved for the Greenwich Police Department. The tower would be constructed in accordance with the Electronic Industries Association standard EIA/TIA-222-F. (Cellco 1, Tab 1; Cellco 10).
47. Cellco proposes to install fifteen (15) panel antennas at the 57-foot level on the tower. AT&T antennas would be located at the 67-foot level and T-Mobile antennas would be located at the 77-foot level. The top of the tower would be reserved for the Greenwich Police Department's whip and dish antennas. (Cellco 1, p. 3, Tab 1).
48. Cellco would install a 965 square foot multi-carrier equipment shelter to house all of the carriers' radio equipment. The multi-carrier shelter has been designed to blend in with the residential structures in the area. Cellco will install a back-up generator for its equipment space. The compound area will be surrounded by an eight-foot security fence with privacy slats. (Cellco 1, pp. 2-3, Tab 1).
49. Vehicular access to the site would extend from Ritch Avenue. The proposed access driveway will be constructed completely within the limits of the 36 Ritch Avenue LLC property. (Cellco 1, pp. 2-3, Tab 1).
50. Underground utilities would extend from the existing service along Ritch Avenue to the proposed tower location. (Cellco 1, pp. 2-3, Tab 1).
51. Once the cell site is operational, Cellco's maintenance personnel will visit the cell site on a monthly basis. (Cellco 1, p. 4).

52. The estimated construction cost of the facility is:

Cell site radio equipment	\$450,000
Tower, coax and antennas	150,000
Power systems	20,000
Equipment building	120,000
Miscellaneous (including site preparation and installation)	<u>205,000</u>
 Total estimated cost	 \$945,000

(Cellco 1, p. 21).

## Environmental Concerns

53. The proposed facility would have no effect on historic, architectural or archeological resources listed in or eligible for the National Register of Historic Places. (Cellco 1, p. 21, Tab 11).
54. According to the U.S. Fish and Wildlife Service there are no federally-listed endangered or threatened species known to occur in Greenwich, Connecticut. (Cellco 1, p. 20, Tab 11).
55. The DEP determined that there are no extant populations of Federal or State endangered, threatened or special concern species that occur at the subject site. (Cellco 1, p. 20, Tab 11).
56. Development of the facility compound would not directly impact any wetlands or watercourses. The closest wetland area is located approximately 750 feet to the northeast of the facility compound. Byram Harbor, a tidal estuary area is located approximately 1,000 feet to the south of the facility compound. (Cellco 1, pp. 18-19, Tab 1, Tab 12; Tr. 1, pp. 58-60).
57. Site construction will require total cut of approximately 191 cubic yards of material and 7 cubic yards of fill. (Cellco 4, Q. 7).
58. The site is within the Flood Zone X (unshaded), designated by the Federal Emergency Management Agency as an area outside of the 500-year floodplain with a minimal risk for flooding. (Cellco 1, pp. 18-19, Tab 13).
59. Aircraft hazard obstruction marking or lighting of the tower is not required or proposed. (Cellco 1, p. 20, Tab 15).
60. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed Cellco, AT&T and T-Mobile antennas is calculated to be 4.85% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. 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. 16, Tab 10).

## Visibility

61. The existing AT&T flagpole tower is visible year-round, above the tree canopy from approximately 1,559 acres within a two-mile radius of the site. This year-round visibility increases only slightly to approximately 1,567 acres for the proposed 84-foot tall tree tower. A vast majority 99% of the total year-round visibility occurs over the open water of Long Island Sound. (Cellco 1, p. 14, Tab 9).
62. Seasonal visibility of the existing and proposed new tower are comparable, approximately 32 acres of area limited mostly to areas immediately surrounding the site. (Cellco 1, Tab 9).

63. Visual impact of a single 122-foot flagpole tower, 42 inches in diameter at the top, would be more significant than the proposed tree tower. (Tr. 1, pp. 19-24; Tr. 1, pp. 51-52).