STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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| IN RE: | : | |
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| 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 234 MELBA STREET, MILFORD, CONNECTICUT | : | DOCKET NO. 410 |
| | : | FEBRUARY 24, 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 through 16-50aa, applied to the Connecticut Siting Council ("Council") on October 20, 2010 for the construction, maintenance, and operation of a 136-foot flagpole tower at 234 Melba Street, in Milford, Connecticut ("Bayview 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. 5).

3. The purpose of the proposed facility is to provide wireless service for Cellco customers along portions of Route 162, Edgefield Street, Pond Point Avenue, Buckingham Avenue and other local roads, as well as residential and commercial land uses in the southeast Milford. The Bayview Facility will also provide service to significant portions of Long Island Sound. (Cellco 1, pp. 1-2, Tab 6; Cellco 4, Q. 11; Cellco 6, Q. 22).

4. Pursuant to CGS § 16-50m, the Council held a public hearing on February 3, 2011, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Milford City Hall Auditorium, 110 River Street, Milford, 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).

5. The Council and its staff conducted an inspection of the proposed site on February 3, 2011, beginning at 2:00 p.m. The applicant flew a red, four foot diameter balloon at the

site from 8:00 a.m. to 5:00 p.m. to simulate the height of the proposed flagpole tower. (Tr. 1, pp. 9-10).

6. Notice of Cellco's intent to file the application was sent to all abutting property owners by certified mail. Cellco received return receipts from 56 of the 69 abutters notified. Notice letters that were returned unclaimed or otherwise undeliverable were resent by regular mail. (Cellco 1, p. 6, Tab 4; Cellco 6, Q. 13).

7. Public notice of Cellco's intent to file the application was published in the *Connecticut Post* on October 14 and 15, 2010. (Cellco 1, p. 6; Cellco 3).

8. Cellco installed a four-foot by six-foot sign at the site on January 17, 2011. The sign presented information regarding the project and public hearing in accordance with the Council's application guidelines. (Cellco 5; Tr. 1, p. 53).

9. Pursuant to CGS § 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. 6, Tab 2).

## State Agency Comment

10. 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).

11. No state agencies submitted comments in response to the Council's solicitation. (Record).

## Municipal Consultation

12. On May 5, 2010, Cellco representatives met with Milford's Mayor, James L. Richetelli, Jr., to commence the local input process and review the project. (Cellco 1, p. 20; Cellco 2).

13. Cellco offered the City free space on the tower for municipal emergency service antennas if a need exists. (Tr. 1, p. 8; Tr. 1, p. 15).

14. No City officials appeared at the Council's public hearing and no written communications from the City were received. (Tr. 1, p. 5; Tr. 2, p. 2; Record).

## Public Need for Wireless Services

15. 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).

16. 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 New Haven County and throughout Connecticut. (Council Administrative Notice Item No. 8; Cellco 1, p. 5; Cellco 6, Q. 14).

17. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 8).

18. 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).

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. (Council Administrative Notice Item No. 9).

**Cellco - Existing and Proposed Wireless Coverage**

20. Cellco proposes to provide cellular, PCS and LTE services from the proposed site. Cellular and PCS service would begin immediately. Equipment for LTE service would be installed at the time the site is constructed and activated at some point in the near future. (Cellco 1, p. 3; Tr. 1, pp. 34-35).

21. Cellco seeks to provide coverage along portions of Route 162, Edgefield Street, Pond Point Avenue and Buckingham Avenue as well as residential and commercial areas in southeast Milford. This site will also provide service to significant portions of Long Island Sound. (Cellco 1, pp. 1-3, Tab 6; Cellco 4, Q. 12; Cellco 6, Q. 22).

22. Cellco can not provide service to these areas from its existing Milford South Facility at 200 High Street in Milford, approximately 2.7 miles northwest of the proposed site; Forest Heights Facility at 1052 Boston Post Road in Milford, approximately 2.3 miles northwest of the proposed site; Old Gate Facility at 311 Old Gate Lane in Milford, approximately 1.7 miles north of the proposed site; and Milford South 2 Facility at 185 Research Parkway in Milford, approximately 2.2 miles northeast of the proposed site. (Cellco 1, pp 1-2, Tab 6; Cellco 6, Q. 21).

23. Cellco's existing signal level in the proposed service area ranges from -86 dBm to -98 dBm. (Cellco 6, Q. 19).

24. 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 6, Q. 18).

25. Cellco experiences cellular coverage gaps of approximately 1.03 miles along Route 168, 1.19 miles along Route 187, 1.72 miles along North Stone Street, 1.35 miles along Ratley Road, 0.27 miles along Hill Street and 0.96 miles along Spruce Street. (Cellco 4, Q. 10, Q. 11; Tr. 1, pp. 13, 82-83).

26. Cellco currently experiences significant gaps in PCS and cellular wireless services along portion of Route 162, Edgefield Street, Pond Point Avenue and Buckingham Avenue in southeast Milford. (Cellco 1, Tab 6; Cellco 4, Q. 11).

27. Cellco currently experiences a 1.49% average drop call rate and 2.19% average ineffective attempt rate within the proposed service area. Cellco is seeking to reduce the drop call and ineffective attempt rates to less than 1%. (Cellco 6, Q. 20).

28. Installing antennas at the proposed heights of 130 feet above ground level (agl) for PCS antennas, 120 feet agl for cellular antennas and 110 feet agl for LTE antennas would provide the following coverage to the proposed service area:

| Coverage Type (-85 dBm) | Linear miles on Route 162 | Linear miles on Edgefield Street | Linear miles on Pond Point Avenue | Linear miles on Buckingham Avenue | Square miles (land only) | Square miles (land and LI Sound) |
|---|---|---|---|---|---|---|
| *PCS* | 0.20 | 0.76 | 0.96 | 0.56 | 5.5 | 20.49 |
| *Cellular* | 0.80 | 0.99 | 1.20 | 0.69 | 6.8 | 90.0 |
| *LTE* | 0.85 | 0.99 | 1.21 | 0.70 | 6.96 | 101.45 |

(Cellco 1, p. 3; Cellco 4, Q. 11 and Q. 12; Cellco 6, Q. 22).

29. Installing antennas at heights 10 and 20 feet lower than proposed would not allow Cellco to satisfy its service objectives in southeast Milford. (Cellco 4, Q. 8 and Q. 10).

## Site Selection and Alternatives Considered

30. Cellco established a search area in southeast Milford in September of 2006. (Cellco 1, Tab 8).

31. Due to the significant amount of development in the area, Cellco's site search effort in southeast Milford was limited to several municipal properties and the subject property at 234 Melba Street, which maintains an existing T-Mobile flagpole tower. (Cellco 1, Tab 8; Tr. 1, pp. 11-12).

32. Cellco maintains four (4) existing facilities within approximately three (3) mile of the proposed cell site. Coverage from these existing facilities does not extend to the areas in southeast Milford that Cellco intends to serve with the proposed facility. (Cellco 1, Tab 6 and Tab 8).

33. Cellco did not identify any existing buildings or other structures in or near the search area that would be suitable for use as a telecommunications facility. (Cellco 1, Tab 8).

34. There are no electric transmission line structures in the search area that could be used as an alternative to the proposed flagpole tower. (Tr. 1, p. 17).

35. T-Mobile currently maintains a 135-foot flagpole tower at the site. This tower is shared by Sprint, with antennas at the 130-foot level; T-Mobile, with antennas at the 120-foot and 110-foot levels and AT&T, with antennas at the 100-foot and 90-foot. The existing flagpole tower is not structurally capable of supporting additional antennas and can not be extended. (Cellco 1, Tab 8).

36. The use of a single flagpole tower at the site would require the development of a new, 165-foot tall tower. A 165-foot tall structure could accommodate the existing Sprint, T-Mobile and AT&T antennas at their current heights and require Cellco to install its antennas at the 140, 150 and 160 foot levels for LTE, cellular and PCS antennas, respectively. The diameter of the upper portion of a 165-foot flagpole tower would be between 52 and 54 inches to accommodate all antennas and antenna cables. (Cellco 1, Tab 8; Tr. 1, pp. 32-33).

37. The development of a second flagpole tower, of comparable height, would have less overall visual impact than the taller, larger diameter flagpole. (Cellco 1, Tab 8; Tr. 1, pp. 12, 32-33).

**Facility Description**

38. The proposed Bayview Facility would be located in the westerly portion of an approximately 2.71-acre parcel at 234 Melba Street in Milford. (Cellco 1, p. 3).

39. The property is owned by Melba Realty LLC. (Cellco 1, p. 17, Tab 1, Tab 13).

40. The property is zoned BD-Business District. (Cellco 1, pp. 17-18).

41. The property is currently used for commercial (retail food market) purposes. (Cellco 1, Tabs 1 and 9).

42. The property is generally flat with little or no elevation change, maintaining a ground elevation of approximately 30 feet above mean sea level (amsl). The average tree height in the area is 50 feet. (Cellco 1, Tabs 1 and 9).

43. Land use within a quarter-mile of the site includes single-family and multi-family residential, municipal (parks and fire department), institutional (health care facilities) and commercial. (Cellco 1, Tabs 1 and 9).

44. The closest off-site residential building is a multi-family structure located at 159 Platt Street, approximately 100 feet to the northwest of the tower site. (Cellco 1, Tab 1).

45. The flagpole tower could be designed with a yield point to ensure that the tower's setback radius remains within the boundaries of the subject property. (Cellco 6, Q. 25).

46. There are 53 residential lots and 27 multi-family buildings within 1,000 feet of the proposed facility. (Tr. 1, p. 13).

47. Cellco proposes to construct a 136-foot tall flagpole tower at the site, capable of supporting four levels of internal-mounted antennas, three antenna locations for Cellco's use and two additional levels for future carriers. The tower would maintain a diameter at the base of 56" and taper to a diameter of 42" at a height of 83'. The upper 53 feet of the flagpole tower would maintain the 42" diameter. The tower would be constructed in accordance with the Electronic Industries Association standard EIA/TIA-222-F. (Cellco 1, Tab 1; Tr. 1, pp. 13-14).

48. Cellco proposes to install nine (9) panel antennas inside the top portion of the flagpole behind RF transparent panels. Three PCS antennas would be located at the 130-foot level; three cellular antennas would be located at the 120-foot level; and three LTE antennas would be located at the 110-foot level. (Cellco 1, p. 3, Tab 1).

49. Cellco would install a 12-foot by 24-foot equipment shelter to house its radio equipment and a propane-fueled back-up generator. The flagpole tower, shelter and 1,000 gallon propane fuel tank would be located within a 1,405 square foot facility compound. The compound area will be surrounded by an eight-foot security fence, with privacy slats and one-foot of barbed-wire at the top. (Cellco 1, p. 3, Tab 1; Tr. 1, p. 16).

50. Vehicular access to the site would extend from Melba Street over the existing paved driveway and parking area surrounding the commercial building. (Cellco 1, p. 3, Tab 1).

51. Underground utilities would extend from the existing service at the T-Mobile tower site to the proposed Cellco tower location. (Cellco 1, p. 3, Tab 1; Cellco 6, Q. 23).

52. Once the cell site is operational, maintenance personnel will visit the cell site on a monthly basis. (Cellco 1, p. 4).

53. The estimated construction cost of the facility is:

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|---|---|
| Cell site radio equipment | $450,000 |
| Tower, coax and antennas | 150,000 |
| Power systems | 40,000 |
| Equipment building | 50,000 |
| Miscellaneous (including site preparation and installation) | 43,000 |
| Total estimated cost | $733,000 |

(Cellco 1, p. 22).

54. The existing T-Mobile tower maintains a flag that is undersized given the height of the structure. The flag on the T-Mobile tower is flown 24/7 and is lit at night. (Tr. 1, pp. 35-36; Tr. 2, p. 4).

55. Cellco is not proposing to install a flag on its tower in an effort to avoid potential interference problems with its antennas, the need to maintain the flag and the need for lighting of the flag at night. (Tr. 2, pp. 3-5).

56. Typically, flagpole lighting requires either lighting from the base of the pole up toward the flag or the installation of a light at the top of the pole directed down toward the flag. (Tr. 2, p. 6).

57. Installation of lighting on the flagpole tower to maintain a flag would result in additional light pollution to the area and raises some concern for potential impact on migratory birds. (Tr. 2, p. 7).

58. The correct (proportional) sized flag for a pole of 136 feet in height would be 20 feet tall by 38 feet wide; substantially larger than the flag currently maintained on the T-Mobile flagpole tower. The cost of a flag of this size is approximately $800 and typically would need to be replaced every six to eight months. (Tr. 2, pp. 3-5).

59. T-Mobile would not be opposed to removing the flag from its tower. (Tr. 2, pp. 4 and 7).

**Environmental Concerns**

60. 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. 22, Tab 10).

61. According to the U.S. Fish and Wildlife Service the Piping Plover, a federally-listed species occurs in the Milford Connecticut areas. The Piping Plover is a migratory breeder that nests only in coastal sandy beaches. This habitat does not exist on the subject site. The proposed Cellco facility will not, therefore, have an adverse effect on this listed species. (Cellco 1, p. 21, Tab 10).

62. The DEP determined that there are no extant populations of State endangered, threatened or special concern species that occur at the subject site. (Cellco 1, p. 21, Tab 10).

63. Development of the facility compound would not directly impact any wetlands or watercourses. The closest wetland area is located approximately 13 feet to the north of the facility compound. (Cellco 1, pp. 18-19, Tab 1, Tab 11; Tr. 1, pp. 25-27).

64. The existing wetland area to the north of the facility compound is a developed and disturbed wetland. The wetland edge is defined by a fill line likely associated with the previous development activity at the site. (Tr. 1, p. 26).

65. Cellco would employ erosion and sedimentation controls in accordance with DEP Guidelines for Sedimentation and Erosion Controls to properly protect nearby wetland resources, throughout construction. Cellco has also agreed to seed all disturbed soil areas with a conservation wildlife seed mix and to plant a series of "native shrubs" between the edge of the compound and the limits of disturbance to the north of the compound to enhance the buffer between the facility and the existing wetland edge. (Cellco 1, pp. 18-19, Tab 1, Tab 11; Tr. 1, pp. 25-27).

66. Only six trees with a diameter of six inches or greater at breast height would be removed to develop the site. (Tr. 1, pp. 24-25).

67. Site construction will require total cut of approximately 29 cubic yards of material and zero cubic yards of fill. (Cellco 4, Q. 7).

68. The site is within the unshaded Flood Zone X, designated by the Federal Emergency Management Agency as an area outside of the 500-year floodplain with a minimal risk for flooding. (Cellco 1, p. 19, Tab 11).

69. Aircraft hazard obstruction marking or lighting of the tower is not required or proposed. (Cellco 1, pp. 20-21, Tab 12).

70. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed Cellco's antennas is calculated to be 19.05% 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) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in areas around the tower base. (Cellco 1, pp. 16-17).

71. A combined worst-case RF emissions calculation for the proposed Cellco facility (19.05%) and the existing T-Mobile facility (22.14%) would total 41.19% of the FCC standard. (Cellco 6, Q. 17).

## Visibility

72. The proposed tower would be visible year-round, above the tree canopy from approximately 3,276 acres within a two-mile radius of the site. A vast majority of this year-round visibility (3,258 acres or 99.45%) occurs over the open water of Long Island Sound. (Cellco 1, pp. 14-15, Tab 9).

73. Given the density of development in the area, portions of approximately 81 residential properties may have at least partial year-round views of the facility. The use of a flagpole tower, however, helps to minimize visual effects of the facility. (Cellco 1, Tab 9).

74. The tower would be seasonally visible from an additional 98 acres within a two-mile radius of the site, mostly from areas immediately surrounding the site. (Cellco 1, Tab 9).

75. Limited seasonal views of the facility may occur from 34 additional acres, including 73 residential properties all within the immediate vicinity of the flagpole tower location. (Cellco 1, Tab 9).

76. Visual impact of a single 165 foot flagpole tower, 52 to 54 inches in diameter at the top, would start to dominate the landscape, resulting in a more significant visual impact than two shorter flagpole towers. (Tr. 1, pp. 19-24).