

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 IN :  
VOLUNTOWN, CONNECTICUT : JULY 25, 2013

**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 10, 2013, for the construction, maintenance, and operation of a wireless telecommunications facility located at one of two alternate locations in the Town of Voluntown, Connecticut (“Palmer Pond Facility”). (Cellco 1, p. 1).
2. The first alternative site would be located on an approximately 30 acre parcel at 596 Pendleton Hill Road in Voluntown (“Site 1”). At Site 1, Cellco would construct a 130-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 inside a 12’ x 30’ shelter located near the base of the tower. Vehicular access to Site 1 would extend from Pendleton Hill Road over an existing access driveway a distance of 905 feet over a new gravel driveway to the Site 1 facility compound. (Cellco 1, Tab 1; 7/9/13 Transcript [Tr.], p. 11).
3. The second alternative site would be located on an approximately 261 acre parcel at 53 Gallup Road in Voluntown (“Site 2”). At Site 2, Cellco would construct a 150-foot tall tower within a 50’ x 50’ fenced compound. Cellco would install fifteen (15) antennas at the top of the tower and associated radio equipment inside a 12’ x 30’ shelter located near the base of the tower. Vehicular access to Site 2 would extend from Gallup Road over a new gravel driveway a distance of 80 feet to the Site 2 facility compound. (Cellco 1, Tab 2).

4. 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).
5. The purpose of the proposed facility is to provide wireless service for Cellco customers along portions of Route 49 and local roads in the area, to residential and commercial land uses and to significant portions of the Pachaug State Forest, in the central Voluntown area. (Cellco 1, pp. 1-4, Tab 7).
6. Pursuant to C.G.S. § 16-50m, the Council held a public hearing on July 9, 2013, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Voluntown Town Hall, 115 Main Street, Voluntown, Connecticut. (Tr., pp. 1-3).
7. The Council and its staff conducted an inspection of the proposed Site 1 and Site 2 facility locations on July 9, 2013, beginning at 2:00 p.m. The applicant flew a four foot diameter balloon at both Site 1 and Site 2 from about 8:00 a.m. to 6:00 p.m. to simulate the height of the proposed tower. (Tr., pp. 21-23).
8. Notice of the filing of the application was sent to all abutting property owners to the Site 1 and Site 2 facility locations by certified mail. Cellco received return receipts from all abutting landowners. (Cellco 1, p. 6, Tab 5; Cellco 4, Q. 4).
9. Public notice of the filing of the application was published in the Norwich Bulletin on May 6 and 7, 2013. (Cellco 1, p. 6; Cellco 2).
10. Cellco installed two four-foot by six-foot signs, one each at the site entrance for the Site 1 and Site 2 facilities on June 21, 2013. The sign presented information regarding the project and public hearing in accordance with the Council's guidelines. (Cellco 5).
11. Pursuant to C.G.S. § 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 3).

#### **State Agency Comment**

12. 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. No State Agency responded with any comments.

#### **Municipal Consultation**

13. On February 6, 2013, Cellco representatives met with the Town of Voluntown's First Selectman, Ronald Millovitsch to commence the local input process and review the project. (Cellco 1, p. 21; Cellco 3).

14. At the request of the Town, Cellco hosted a Public Information Meeting at the Voluntown Town Hall on March 12, 2013. At this meeting, Cellco discussed the details of the proposed facility, its need for a facility in the area and the Council application process. Notice of this Public Information Meeting was sent to abutting landowners of the Site 1 and Site 2 parcels and published in the *Norwich Bulletin*. (Cellco 1, p. 21; Cellco 3).
15. Cellco offered the Town emergency service providers and the Quinebaug Valley Emergency Communications Inc. free space on the tower for emergency service antennas. (Cellco 1, p. 12; Tr., pp. 68-69).

### **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. (Council Administrative Notice, Item 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. (Council Administrative Notice Item No. 4; Cellco 1, pp. 6-8).
18. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 4).
19. 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. (Council Administrative Notice Item No. 4).
20. 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. 6).

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

21. Cellco proposes to provide cellular (850 MHz), PCS (1900 MHz), LTE (700 MHz), and, eventually, AWS (2100 MHz) services from the proposed Palmer Pond Facility. (Cellco 1, pp. 2-4, 8-9; Tr., pp. 29-32).

22. Cellco seeks to provide coverage along portions of Route 49, local roads, residential and commercial land uses and portions of the Patchaug State Forest in Voluntown. These areas would not be served by Cellco's existing Griswold East Facility (1439 Voluntown Road in Griswold), approved Bailey Pond Facility (497 Ekonk Road in Voluntown) and Voluntown Facility (422 Rockville Road in Voluntown), and proposed North Stonington East Facility (31F Clark Falls Road in North Stonington) and Wyassup Lake Facility (350B Cossaduck Hill Road in North Stonington). (Cellco 1, p. 4, Tab 9; Tr., pp. 28-29).
23. Cellco's existing signal level in the area proposed to be served by the Site 1 or Site 2 facilities ranges from -86 dBm to -105 dBm. (Cellco 4, Q. 6).
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 4, Q. 5).
25. The proposed Site 1 Facility will provide reliable wireless service to a 4.9 mile portion of Route 49, and an overall area of 9.6 square miles at cellular (850 MHz) frequencies; a 4.67 mile portion of Route 49 and an overall area of 9.53 square miles at PCS (1900 MHz) frequencies; a 4.9 mile portion of Route 49, and an overall area of 9.9 square miles at LTE (700 MHz) frequencies; and a 4.0 mile portion of Route 49 and an overall area of 7.44 square miles at AWS (2100) frequencies. (Cellco 1, p. 2; Cellco 4, Q. 17).
26. The proposed Site 2 Facility will provide reliable wireless service to a 4.5 mile portion of Route 49, and an overall area of 9.36 square miles at cellular (850 MHz) frequencies; a 4.2 mile portion of Route 49, and an overall area of 8.95 square miles at PCS (1900 MHz) frequencies; a 4.5 mile portion of Route 49, and an overall area of 9.54 square miles at LTE (700 MHz) frequencies; and a 4.0 mile portion of Route 49 and an overall area of 7.1 square miles at AWS (2100) frequencies. (Cellco 1, p. 3; Cellco 4, Q. 17).
27. Cellco can satisfy its coverage objectives in the area by installing antennas at a height of 130 feet at Site 1 and 150 feet at Site 2. (Cellco 4, Q. 3; Tr., p. 27).

#### Site Selection

28. Cellco established its Palmer Pond search area in May of 2009. (Cellco 1, Tab 9).
29. 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. (Cellco 1, Tab 9).
30. Cellco maintains one (1) existing; two (2) approved; and two (2) proposed wireless facilities within five (5) miles of the proposed Site 1 and Site 2 facility locations. Coverage from these existing, approved and future shared facilities cannot extend to the proposed Palmer Pond service area. (Cellco 1, Tab 7, Tab 9).
31. Cellco did not identify any existing buildings or other non-tower structures in or near the Palmer Pond search area that would be suitable for use as a telecommunications facility. (Cellco 1, Tab 9).

32. After determining there were no viable structures within or near the search area, Cellco searched for properties suitable for tower development. Cellco investigated a total of eleven (11) different locations and selected two for presentation to the Council. The remaining locations were rejected for various reasons. (Cellco 1, Tab 9).

### **Site 1 Facility Description**

33. The proposed Site 1 Facility would be located in the northwest portion of an approximately 30 acre parcel at 596 Pendleton Hill Road in Voluntown. (Cellco 1, p. 2, Tab 1).
34. The property is owned by Benjamin Gallup and Byron D. Gallup. (Cellco 1, Tab 1, Tab 16).
35. The Site 1 facility property is located in the Rural Zone District and is used for active agricultural purposes. (Cellco 1, p. 19, Tab 1, Tab 10).
36. Rolling terrain surrounds the Site 1 facility with ground elevations ranging from 448 feet above mean sea level (amsl) near Pendleton Hill Road to 400 feet amsl at the proposed cell site. The average tree height in the area is approximately 65 feet. (Cellco 1, Tab 1, Tab 10).
37. Land use within a quarter-mile of the site includes active agricultural uses, low density residential, recreational uses associated with the Pachaug State Forest and small commercial uses. (Cellco 1, Tab 1, Tab 10).
38. There are no residences within 1,000 feet of the Site 1 facility. (Cellco 1, p. 15).
39. The closest off-site residence is located at 614 Pendleton Hill Road, approximately 1,167 feet to the south of the Site 1 facility. (Cellco 1, Tab 1).
40. Cellco proposes to construct a 130-foot monopole at Site 1, capable of supporting four levels of platform-mounted antennas. The tower would be constructed in accordance with the Electronic Industries Association standard EIA/TIA-222-F. (Cellco 1, Tab 1).
41. Cellco proposes to install up to fifteen (15) panel antennas on a low-profile antenna platform at a centerline height of 130 feet above ground level. The top of Cellco's antennas would extend to an overall height of 133 feet above ground level. (Cellco 1, p. 2, Tab 1).
42. The Site 1 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).
43. A 12-foot by 30-foot equipment shelter would be installed within the Site 1 facility compound. The shelter would house Cellco's radio equipment and a diesel-fueled back-up generator. (Cellco 1, p. 2, Tab 1).

44. Access to Site 1 would extend from Pendleton Hill Road along a new gravel driveway a distance of 905 feet to the Site 1 compound. (Cellco 1, p. 2, Tab 1; Tr., p. 11).
45. Utilities would extend underground from existing service along Pendleton Hill Road. (Cellco 1, p. 2, Tab 1).
46. Once the cell site is operational, maintenance personnel will visit the cell site on a monthly basis. (Cellco 1, pp. 3-4).
47. The estimated construction cost of the Site 1 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)	<u>135,000</u>
 Total estimated cost	 \$785,000

(Cellco 1, p. 23).

#### **Site 2 Facility Description**

48. The proposed Site 2 Facility would be located in the southeast portion of an approximately 261 acre parcel at 53 Gallup Road in Voluntown. (Cellco 1, pp. 2-3, Tab 2).
49. The property is owned by Benjamin Gallup and Byron D. Gallup. (Cellco 1, Tab 2, Tab 17).
50. The Site 2 facility property is located in the Rural Zone District and is used for active agricultural purposes. (Cellco 1, p. 19, Tab 1, Tab 10).
51. Rolling terrain surrounds the Site 2 facility ranging from a ground elevation of approximately 470 feet amsl near Gallup Road to 400 feet amsl to the north of the Site 2 tower. The average tree height in the area is 65 feet. (Cellco 1, Tab 2, Tab 10).
52. Land use within a quarter-mile of the site includes active agricultural, low density residential use and recreational use, associated with the Pachaug State Forest. (Cellco 1, Tab 2, Tab 10).
53. The closest off-site residence is located at 54 Gallup Road, approximately 1,500 feet to the west of the Site 2 facility. (Cellco 1, Tab 2).
54. There are no residences within 1,000 feet of the Site 2 facility. (Cellco 1, p. 15).

55. Cellco proposes to construct a 150-foot monopole at Site 2, capable of supporting four levels of platform-mounted antennas. The tower would be constructed in accordance with the Electronic Industries Association standard EIA/TIA-222-F. (Cellco 1, Tab 2).
56. Cellco proposes to install up to fifteen (15) panel antennas on a low-profile antenna platform at a centerline height of 150 feet above ground level. The top of Cellco's antennas would extend to an overall height of 153 feet above ground level. (Cellco 1, pp. 2-3).
57. The Site 2 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, pp. 2-3, Tab 2).
58. A 12-foot by 30-foot equipment shelter and 1000 propane fuel tank would be installed within the compound. The shelter would house Cellco's radio equipment and a propane-fueled back-up generator. (Cellco 1, p. 3, Tab 2; Tr., pp. 23-24).
59. Access to Site 2 would extend from Gallup Road along a new gravel driveway a distance of 80 feet to the Site 2 compound. (Cellco 1, p. 3, Tab 2).
60. Underground utilities would extend from existing service along Gallup Road. (Cellco 1, p. 3, Tab 2).
61. Once the cell site is operational, maintenance personnel will visit the cell site on a monthly basis. (Cellco 1, p. 3).
62. The estimated construction cost of the Site 2 facility is:

Cell site radio equipment	\$450,000
Tower, coax and antennas	150,000
Power systems	20,000
Equipment building	50,000
Miscellaneous (including site preparation and installation)	<u>55,000</u>
 Total estimated cost	 \$725,000

(Cellco 1, p. 23).

### **Environmental Concerns**

63. The Connecticut State Historic Preservation Officer, following a review of information on both the Site 1 or Site 2 locations determined that no historic properties will be affected by this project. (Cellco 7).
64. According to the U.S. Fish and Wildlife Service (USFWS) no federally listed or proposed threatened or endangered species or critical habitat are known to occur in Voluntown, Connecticut. (Cellco 1, Tab 11).

65. According to the Connecticut Department of Energy and Environmental Protection (“DEEP”), four (4) State Special Concern Species (Eastern Box Turtle, Pink Sallow Moth, Red Bat and Silver-Haired Bat), may occur in the vicinity of the Site 1 and Site 2 facilities. Cellco conducted an investigation and completed a summary report, including recommendations to be implemented during construction to protect these Special Concern Species. (Cellco 1, Tab 12; Cellco 6).
66. Cellco completed a survey of the development area and the area within 200 feet of the Site 1 and Site 2 facility locations and determined that there is no habitat suitable to support the Pink Sallow Moth. (Cellco 1, Tab 12).
67. Cellco has developed measures and procedures to protect the Eastern Box Turtle during construction activity contemplated at either Site 1 or Site 2. (Cellco 6).
68. DEEP recommends seasonal restrictions for the Red Bat and Silver-Haired Bat, restricting work from being performed outside of the September to May time period when these bat species are roosting. Cellco has asked DEEP to eliminate the seasonal restriction for Site 1 because no trees are to be removed as a part of this site’s development. No roosting habitat will, therefore, be disturbed. Cellco would comply with the seasonal restriction for Site 2. (Cellco 6).
69. Development of either the Site 1 or Site 2 facilities would not directly impact any wetlands or watercourses. The closest wetland area to Site 1 is located approximately 950 feet to the northwest. The closest wetland area to Site 2 is located approximately 160 feet to the northeast. (Cellco 1, p. 20, Tab 1, Tab 2, Tab 13).
70. 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, p. 20, Tab 1, Tab 2).
71. No trees with a diameter of six inches or greater at breast height would be removed to develop the Site 1 facility. (Cellco 1, Tab 1).
72. Twenty-nine (29) trees with a diameter of six inches or greater at breast height would be removed to develop the Site 2 facility. (Cellco 1, Tab 2).
73. Preliminary estimates indicate that Site 1 construction will require cut of approximately 97 cubic yards of material and total fill of approximately 284 cubic yards of material. These estimates and costs associated with construction of the Site 1 facility may change following the completion of a geotechnical survey at the Site 1 location. (Cellco 4, Q. 9).
74. Preliminary estimates indicate that Site 2 construction will require cut of approximately 192 cubic yards of material and total fill of approximately 429 cubic yards of material. These estimates and costs associated with construction of the Site 1 facility may change following the completion of a geotechnical survey at the Site 1 location. (Cellco 4, Q. 9).



75. Both the Site 1 and Site 2 facilities are 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, p. 21, Tab 14; Tr., pp. 34-36).
76. Aircraft hazard obstruction marking or lighting of the tower is not required or proposed for either the Site 1 or Site 2 towers. (Cellco 1, p. 22, Tab 15).
77. The cumulative worst-case maximum radio frequency emissions from the operation of the proposed Cellco's antennas is calculated to be 18.18% of the standard for Maximum Permissible Exposure ("MPE"), as adopted by the FCC, at the base of the proposed tower for Site 1 and 13.20% of the standard for MPE at the base of the Site 2 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 toward the horizon, 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. 17-18, Tab 1, p. 8, Tab 2, p. 8).

#### **Site 1 Visibility**

78. The proposed 130-foot Site 1 tower would be visible year-round, above the tree canopy from approximately 153 acres within a two-mile radius of the site and is confined to portions of the host property. (Cellco 1, p. 15, Tab 10).
79. Seasonal views of the tower comprise an additional 140 acres within a two-mile radius of the site, and are located in the immediate vicinity of the Site 1 facility. (Cellco 1, p. 15, Tab 10).
80. A majority of the Site 1 tower views occur over open farm land in the vicinity. (Cellco 1, p. 15, Tab 10).

#### **Site 2 Visibility**

81. The proposed Site 2 tower would be visible year-round, above the tree canopy from approximately 267 acres within a two-mile radius of the site and is confined to the area immediately surrounding the host property. (Cellco 1, Tab 10).
82. Seasonal views of the tower comprise an additional 60 acres within a two-mile radius of the site, and are located over open farm land in the immediate vicinity of the Site 2 facility. (Cellco 1, Tab 10).