

DOCKET NO. 415 - Cellco Partnership d/b/a Verizon Wireless } Connecticut
application for a Certificate of Environmental Compatibility and }
Public Need for the construction, maintenance and operation of a } Siting
telecommunications facility located at 87 West Quasset Road, } Council
Woodstock, Connecticut. }

November 17, 2011

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 January 28, 2011 for the construction, maintenance, and operation of a 150-foot wireless telecommunications facility located at 87 West Quasset Road in Woodstock, Connecticut (refer to Figure 1). (Cellco 1, p. i)
2. Cellco is a Delaware Partnership with an office in 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 to the southeast section of Woodstock. (Cellco 1, pp. 1-2, Tab 6)
4. Pursuant to CGS § 16-50m, the Council held a public hearing on May 26, 2011, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Woodstock Town Hall, 145 Route 169, Woodstock, Connecticut. The record closed on June 27, 2011. (Transcript 1 – 05/26/11, 3:00 p.m. [Tr. 1], p. 2; Transcript 2 – 05/26/11, 7:00 p.m. [Tr. 2], p. 2)
5. On July 28, 2011, the Council made its own motion to reopen the evidentiary record for consideration of a possible alternative cell site location on the subject property. The alternative site is referred to as the American Tower Corporation (ATC) replacement site. (Record)
6. A hearing on the re-opened proceeding was held on September 27, 2011 at the office of the Connecticut Siting Council, 10 Franklin Square, New Britain, Connecticut. (Transcript 3 – 09/27/11, 1:00 p.m. [Tr. 1], p. 3)
7. The party in the proceeding is the applicant. American Tower Corporation intervened in the re-opened proceeding. (Record)
8. The Council and its staff conducted an inspection of the site on May 26, 2011, beginning at 2:00 p.m. The applicant flew a balloon at the site from 12:00 p.m. to 6:00 p.m. to simulate the height of the proposed facility. Weather conditions were generally favorable except for some moderate wind gusts late in the day. (Tr. 2, p. 3)
9. Notice of the application was sent to all abutting property owners by certified mail. All return receipts were received except from the owner of the property at 80 West Quasset Road. A second notice was sent to this abutter by first class mail. (Cellco 4a)
10. Pursuant to CGS § 16-50(b), Cellco published public notice of its intent to submit the application on January 26 and 27, 2011 in the Norwich Bulletin. (Cellco 2)

11. Cellco installed a four-foot by six-foot sign at the corner of West Quasset Road and Quasset Hill Road on May 10, 2011. The sign presented information regarding the project and the Council's public hearing. (Cellco 5)
12. Pursuant to CGS § 16-50l(b), Cellco provided notice of the application to all federal, state and local officials and agencies listed therein. (Cellco 1, Tab 2)

State Agency Comment

13. Pursuant to CGS § 16-50j(h), on March 4, 2011, May 31, 2011, and September 28, 2011 the following State agencies were solicited to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP), Department of Public Health, Council on Environmental Quality, Public Utility Regulatory Authority (former Department of Public Utility Control), Office of Policy and Management, Department of Economic and Community Development, Department of Public Safety, Department of Transportation, Department of Agriculture, and Department of Emergency Management and Homeland Security. (Record)
14. No state agencies submitted comments in response to the Council's solicitation. (Record)

Municipal Consultation

15. Cellco began discussion with the Town of Woodstock (Town) in the fall of 2007 regarding telecommunications needs throughout the Town, including the proposed facility. (Cellco 3)
16. Cellco formally notified the Town regarding the proposed facility on September 17, 2010 by meeting with the First Selectman and issuing the technical report. (Cellco 3)
17. Cellco met with the Woodstock Telecommunications Task Force public meeting on October 25, 2010. The task force was not opposed to the new facility. (Cellco 3; Tr. 1, p. 34)
18. Cellco offered the Town rent-free space on the tower for emergency communication equipment. The Town has not responded to this offer. (Tr. 1, p. 17)

Public Need for Service

19. 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 8)
20. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular 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 Windham County. (Council Administrative Notice Item 8; Cellco 1, p. 8)
21. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item 8)

22. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice Item 8)
23. 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. Congress further enacted the Enhanced 911 Act to facilitate emergency response capabilities. (Council Administrative Notice Items 9 & 10)

Cellco - Existing and Proposed Wireless Coverage

24. Cellco currently provides cellular (800 MHz) service to the area from an existing ATC tower on the property. This existing facility is Cellco's last omni-directional site in the State of Connecticut. (Cellco 1, p. 2; Tr. 1, p. 31)
25. ATC intends to decommission and remove the existing tower as soon as possible. (ATC letter of October 5, 2011)
26. From its proposed site, Cellco intends to provide cellular (800 MHz), personal communication service (PCS - 1900 MHz), and long-term evolution (LTE - 700 MHz) services. (Cellco 1, pp. 2, 8; Tr. 1, p. 23)
27. To maintain reliable service, Cellco designs and operates at a signal level threshold of -85 dBm for in-vehicle service and -75 dBm for in-building service. (Cellco 4a, R. 5)
28. The existing site provides adequate cellular coverage to the area. The existing site does not provide PCS service to the area; however, adjacent sites provide PCS service at a signal level of -86 dBm to -105 dBm, signal levels that are not reliable. LTE service has not yet been deployed in this area. The new facility would improve cellular coverage and offer the PCS and LTE services. (Cellco 1, p. 8; Cellco 4a, R. 6; Tr. 1, p. 27)
29. The nearest facilities to the proposed service area are located at 215 Coatney Hill Road in Woodstock, approximately 2.75 miles northwest of the site, and 398 Pomfret Road in Pomfret, approximately 3.25 miles southeast of the proposed site. (Cellco 1, p. 2)
30. Installing antennas at the requested height at either proposed site location would provide the following reliable service (-85 dBm or greater) to the proposed service area:

Coverage Type	Linear miles on Rt. 171	Linear miles on Rt. 169	Square miles
<i>Cellular</i>	3.5	3.6	14.8
<i>PCS</i>	2.3	3.0	7.5
<i>LTE</i>	3.6	3.7	15.6

Refer to Figures 3, 4 & 5 for proposed LTE and PCS coverage. (Cellco 1, p. 2)

31. Reducing the antenna height by 20 feet at either location would cause small coverage gaps in cellular and PCS service to occur along Routes 169 and 171 and a slight reduction in overall coverage to the surrounding area. (Cellco 4a, R. 7; Cellco 9, R. 4, R. 5)

Site Selection

32. Cellco began researching a location for a replacement of its existing omni-directional facility in 2009. (Cellco 3)
33. Cellco discussed the feasibility of replacing the existing tower with its owner, American Tower Corporation, but negotiations were not successful. The existing tower is not structurally capable of supporting Cellco's proposed equipment. (Cellco 1, Tab 8; Tr. 1. pp. 34-35)
34. Cellco examined four other parcels for telecommunications use but rejected them as follows;
 - a) 210 Child Hill Road – use of existing silos would not meet coverage objectives;
 - b) Woodstock Town Hall – town concerns regarding impact to cultural resources;
 - c) First Congregational Church, 543 Rt. 169 – steeple would not meet coverage objectives;
 - d) Woodstock Volunteer Fire Dept. – town concerns regarding impact to cultural resources;(Cellco 1, Tab 8)
35. The Town suggested that Cellco pursue a replacement site on the subject property. (Cellco 1, Tab 8)

87 West Quasset Road Property Description

36. The proposed sites are located on a 29.5-acre parcel, owned by Quasset Hill Farm LLC. It is used as an active farm. (Cellco 1, Tab 1)
37. The property is in the Town's Community District zone. (Cello 1, p. 16)
38. The parcel is located on a ridgeline approximately 2,900 feet south of Route 171. (Cellco 1, Tab 1)
39. The existing ATC tower is 140 feet in height and is located in the southeast corner of the parcel. Cellco is the only tenant on the existing tower. (Cellco Tab 1; Tr. 1, p. 26; Cellco 8a)

Proposed Cellco Facility

40. The proposed Cellco tower site is located in a wooded area in the central portion of the parcel, approximately 710 feet northwest of the existing ATC tower. (Cellco 1, Tab 1)
41. The proposed tower would be located at an elevation of 692 feet above mean sea level (amsl). (Cellco 1, Tab 1)
42. Cellco proposes to construct a 150-foot monopole within a 50-foot by 50-foot fenced compound at the proposed site. (Cellco 1, Tab 1)
43. Cellco would install a 12-foot by 24-foot equipment shelter within the compound, enclosed by an eight-foot high chain link fence. An emergency diesel power generator would be located within the equipment shelter. (Cellco 1, Tab 1)
44. Cellco would install 15 panel antennas on a low-profile platform at the 147-foot level of the tower. (Cellco 1, Tab 1)

45. Access to the proposed site would follow an existing farm path through agricultural fields to a drainage ditch at the north edge of a field. A new access drive would extend across the ditch and 30 feet into the woods to the proposed site. (Cellco 1, Tab 1)
46. Underground utilities would be installed from an existing utility pole along West Quasset Road. The utilities would extend along a farm path before turning north through a field to the proposed site. The landowner and utility company are in agreement with the proposed utility routing. (Cellco 1, Tab 1; Tr. 1, pp. 20-21)
47. The nearest property line to the proposed tower is approximately 350 feet to the north (30 New Sweden Road). The tower setback radius would be contained within the site parcel. (Cellco 1, Tab 1)
48. The nearest residence to the proposed tower site is located approximately 820 feet to the southeast (99 West Quasset Road). (Cellco 1, Tab 1)
49. There are three residences within 1,000 feet of the tower site. (Tr. 1, pp. 10-11)
50. The estimated construction cost of the facility is:

Tower, coax, and antennas	\$100,000.
Radio equipment	450,000.
Power systems	40,000.
Equipment building	50,000.
<u>Miscellaneous (site work)</u>	<u>190,000.</u>
<u>Total estimated cost</u>	<u>\$830,000.</u>

(Cellco 1, pp. 21-22)

Proposed ATC Replacement Facility

51. The proposed ATC replacement site is located adjacent to the existing ATC tower, at an approximate elevation of 685 feet amsl. (Cellco 1, Tab 1; Cellco 11; Tr. 3, pp. 75-76)
52. Cellco would require a 160-foot tower at the ATC replacement site to meet coverage objectives. (Cellco 9, R. 4)
53. ATC would expand the existing lease area by 900 feet to accommodate the replacement tower and Cellco's equipment shelter. (ATC 1)
54. The nearest property line to the proposed replacement tower is approximately 35 feet to the south (99 West Quasset Road). (Cellco 1, Tab 1; ATC 2, R. 4)
55. The replacement tower setback radius would extend onto the 99 West Quasset Road property by 120 feet and onto the abutting property to the east (98 West Quasset Road) by 50 feet. (Cellco 1, Tab 1, ATC 2, R. 4; Cellco 8, R. 4)
56. The nearest residence to the proposed replacement tower site is located approximately 235 feet to the east (80 West Quasset Road). (Cellco 1, Tab 1; ATC 2, R. 4; Cellco 8, R. 4)
57. There are three residences within 1,000 feet of the replacement tower site. (ATC 2, R. 6)

Environmental Concerns

58. Development of the proposed Cellco site would have no adverse effect on historic, architectural or archeological resources listed in or eligible for the National Register of Historic Places. There is no information in the record regarding potential impact of the ATC replacement site on historic resources. (Cellco 1, p. 21, Tab 10; Record)
59. There are no records of any State or Federally endangered, threatened or special concern species in the area of either proposed site. (Cellco 1, p. 21)
60. Development of the proposed Cellco site would require the removal of 11 trees with a diameter of six inches or greater at breast height. No trees would be removed to expand the existing ATC site. (Cellco 1, Tab 1; ATC 1)
61. There are no wetlands at either proposed site. Development of the access road to the proposed Cellco site would require filling 500 square feet of a drainage ditch immediately south of the proposed compound area. (Cellco 1, p. 19; ATC 1)
62. Both proposed sites are located in Flood Zone C, a classification indicating minimal flooding. (Cellco 1, Tab 1, Tab 13)
63. The Town of Woodstock is located within the Quinebaug and Shetucket Rivers Valley National Heritage corridor, a 35-town area encompassing northeast Connecticut and south-central Massachusetts. Congress established the corridor in 1994 to recognize the region as a unique national resource. The designation is intended to encourage preservation and promotion of the region's cultural, historical and natural heritage. The proposed sites would not affect any identified cultural, historical or natural resources identified within the area. (Cellco 4a, R. 9)
64. Neither proposed tower would require aircraft hazard obstruction marking or lighting. (Cellco 1, p. 20; Tr. 1, p. 30)
65. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed Cellco antennas is calculated to be 17.4% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed 150-foot 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, p. 16, Tab 11)

Visibility

66. Both proposed towers would be visible year-round from approximately 177 to 179 acres within a two-mile radius of the subject property (refer to Figures 7& 8). Most of this visibility is from surrounding agricultural fields and from open water areas of Wappaquasset Pond, approximately 0.45 mile southeast of the sites. (Cellco 1, Tab 9; Cellco 10)

67. The distance and projected year-round visibility of the proposed towers from specific locations within a two-mile radius of the sites are as follows:

Specific Location and Area Receptors	Distance/Visibility of Cellco site	Distance/Visibility of ATC Replacement site
Intersection of Quasset Hill Road and West Quasset Road (orchard)	0.2 mile east/ 40 feet	0.14 mile northeast/ 150 feet
Adjacent to #80 West Quasset Road	0.16 mile southeast/ 30 feet	160 feet east/ 150 feet
Adjacent to #99 West Quasset Road	975 feet southeast/very top	475 feet south/ 120 feet
West Quasset Road (old field)	0.77 mile south/ 65 feet	0.73 mile southwest/ 20 feet
Adjacent to #289 West Quasset Road	0.8 mile south/ 65 feet	0.77 mile southwest/ 75 feet
Adjacent to #330 West Quasset Road	Not visible	0.84 mile southwest/ 60 feet
Adjacent to #337 West Quasset Road	0.8 mile southwest/ 10 feet	Not visible
West Quasset Road (field)	0.45 mile southwest/ 60 feet	0.5 mile southwest/ 60 feet
Adjacent to #485 West Quasset Road	0.37 mile west/ 10 feet	0.5 mile northwest/ not visible
Adjacent to #114 New Sweden Road	0.3 miles northwest/ 20 feet	0.47 northwest/ not visible
Route 171 at field	0.7 mile northwest/ 25 feet	0.8 mile northwest/ not visible
Old Hall Road at field (spot view)	0.7 mile north/ 25 feet	0.7 mile north/ not visible
Adjacent to #33 Meehan Road (open field with house)	0.77 mile north/ 40 feet	0.87 mile northwest/ 25 feet
Meehan Road (field area)	0.90 mile north/ 30 feet	1 mile northwest/ 10 feet
Adjacent to #29 Loyola Road	0.6 mile southeast/ 20 feet	Not visible
Adjacent to #22 Shore Road	0.56 mile southeast/ 45 feet	0.43 mile southeast/110 feet
Adjacent to #36 Shore Road	0.5 mile southeast/ 40 feet	0.38 southeast/ 75 feet
End of Shore Road	Visible (not quantified)	0.36 mile east/ 80 feet
Adjacent to # 83 East Quasset Road	Not visible	0.4 mile northeast/60 feet
Adjacent to # 101 East Quasset Road	0.5 mile east/ 50 feet	Seasonal view
Adjacent to # 109 East Quasset Road	Visible (not quantified)	0.37 mile east/ 90 feet
Adjacent to #149 East Quasset Road	0.5 mile southeast/ 50 feet	Visible (not quantified)
Adjacent to #191 East Quasset Road	0.55 mile southeast/ 40 feet	0.5 mile southeast/ 60 feet
Adjacent to #21 Sheldon Street (field)	0.64 mile southeast/ 40 feet	0.63 mile southeast/ 50 feet

(Cellco 1, Tab 10; Cellco 10; Tr. 3, p. 18)

68. The east shoreline of Wappaquasset Pond is residentially developed. Approximately 35 properties in this area would have year-round views of either proposed tower with the ATC replacement tower being more prominent than the Cellco tower. (Cellco 1, Tab 10; Tr. 1, pp. 11-12)
69. The proposed Cellco tower would be visible during “leaf-off” conditions from approximately 205 acres, mostly within a half-mile of the site. Fifteen residential properties are within this area. Seasonal views differ from the ATC replacement site in that views extend west of the site to West Quasset Road, in an area mainly consisting of woods, wetland and fields, and not along the northwest shore of Wappaquasset Pond (refer to Figure 7). (Cellco 1, Tab 9; Cellco 10)
70. The ATC replacement tower would be visible during “leaf-off” conditions from approximately 155 acres, mostly within a half-mile of the site. Seasonal views differ from the Cellco site in that there would be limited views from the West Quasset Road area and additional views along the northwest shore of Wappaquasset Pond (refer to Figure 8). (Cellco 10)
71. The proposed towers would not be visible from any known hiking trails maintained by the DEEP or the Connecticut Forest and Parks Association. (Cellco 1, Tab 9)
72. The proposed towers would not be visible from the four designated scenic roads within two miles of the sites. (Cellco 1, Tab 9; Cellco 10)

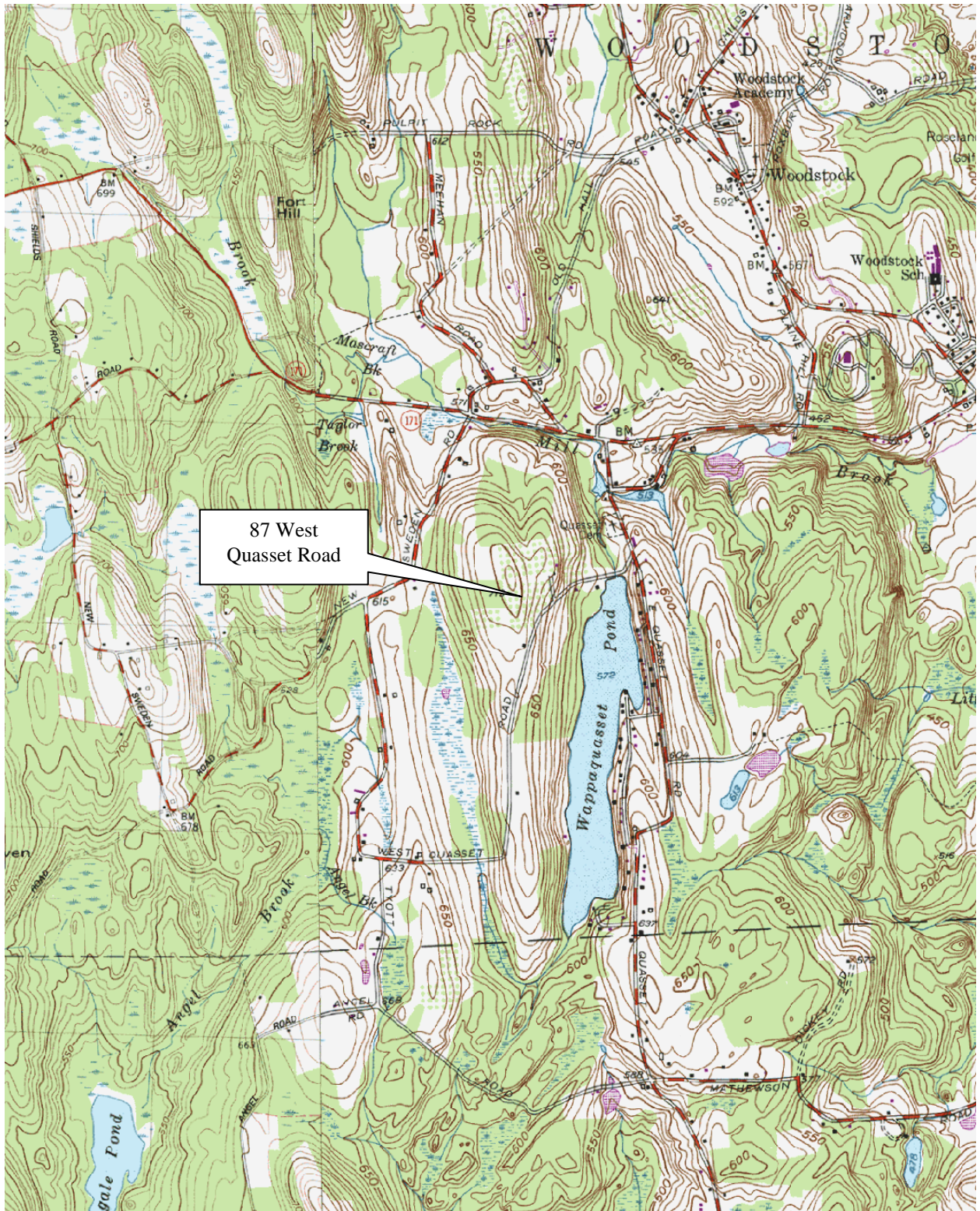


Figure 1: Location of 87 West Quasset Road property (Quasset Hill Farm). (Cellco 1)

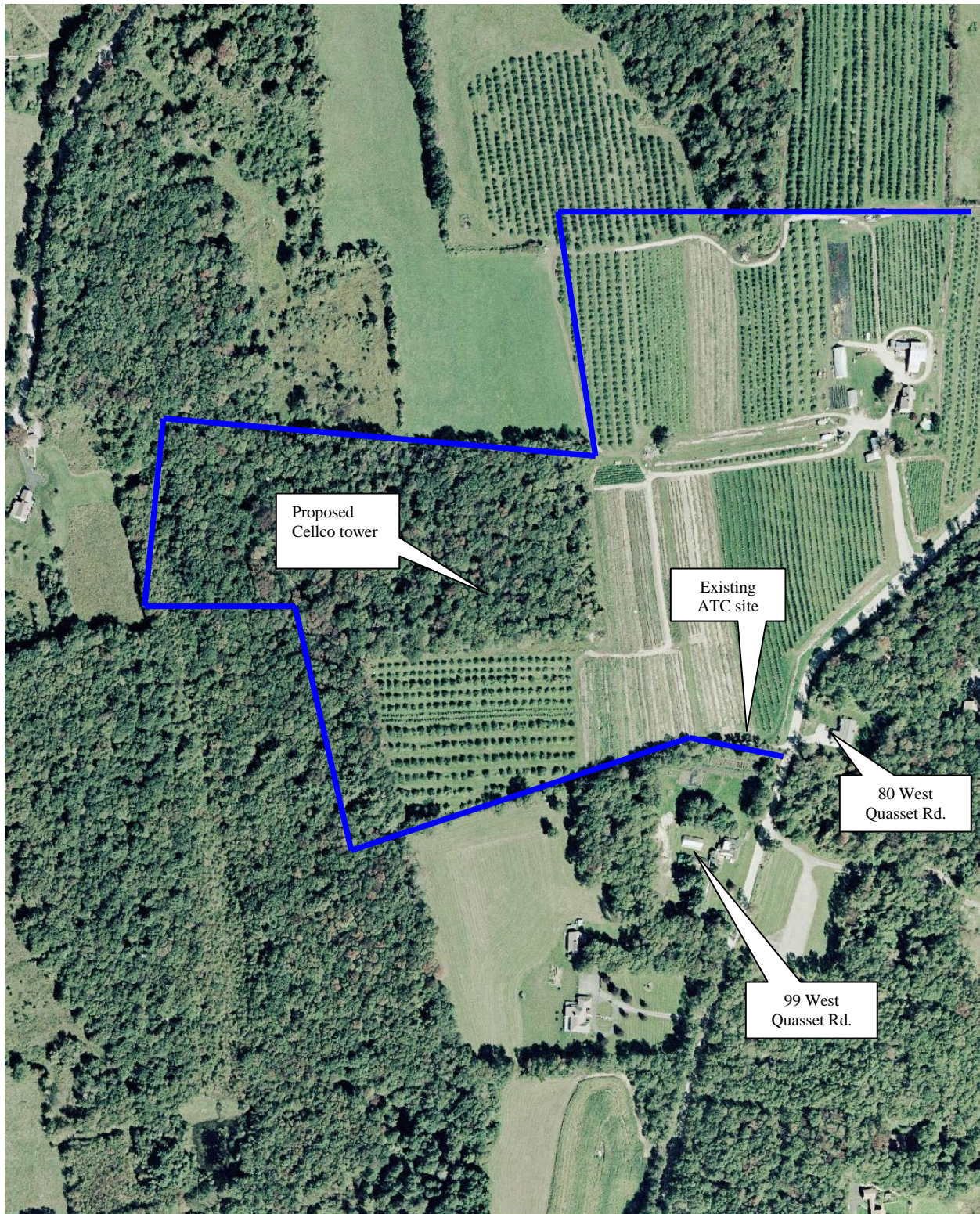


Figure 2: Aerial photograph of proposed Cellco site and existing ATC site. The blue line denotes the *approximate* location of the western, southern and a portion of the northern boundary of the Quasset Hill Farm (3 adjoining parcels). (Cellco 1, p. iii, Tab 1)

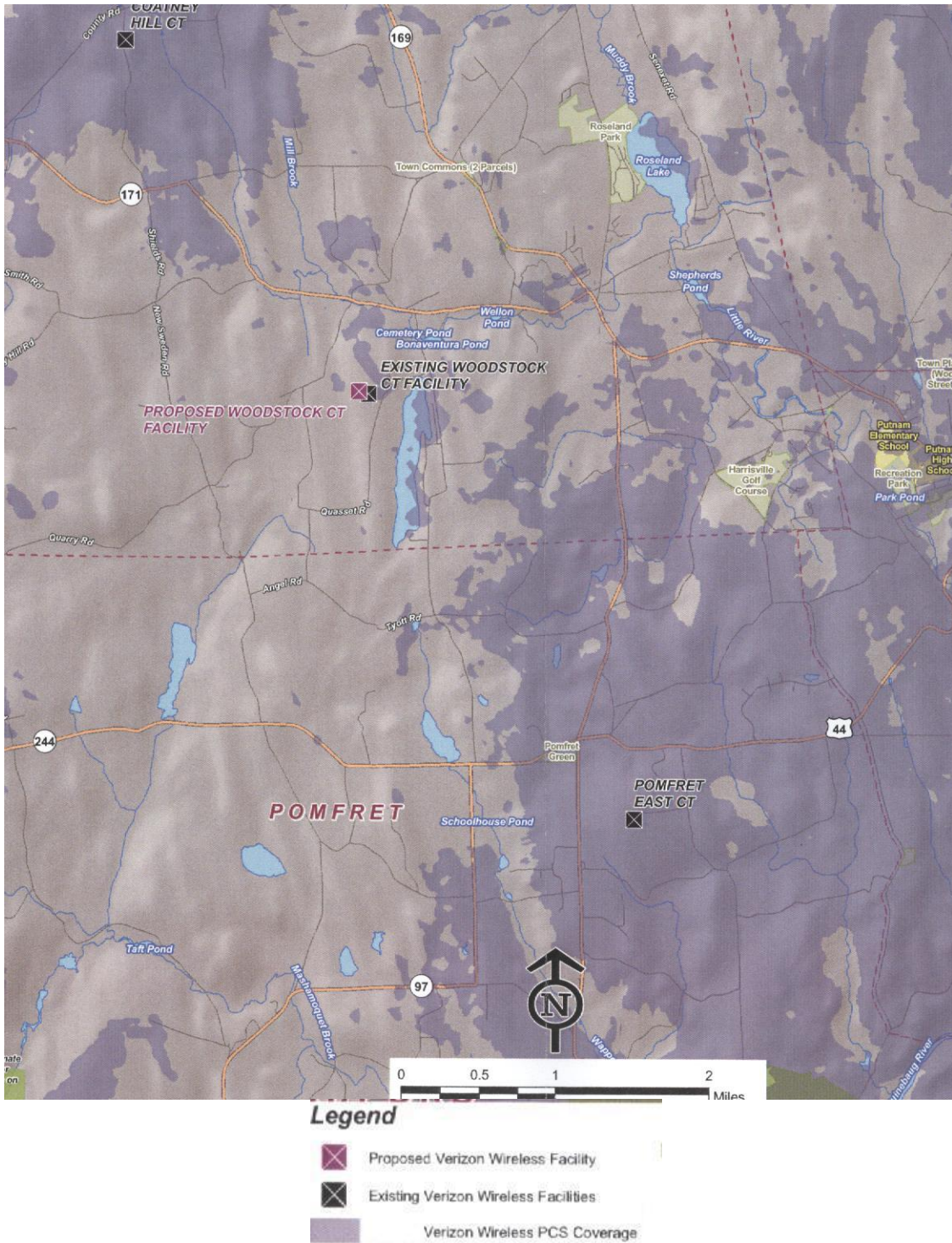


Figure 3: Existing PCS coverage in proposed service area. (Cellco 1, Tab 6)

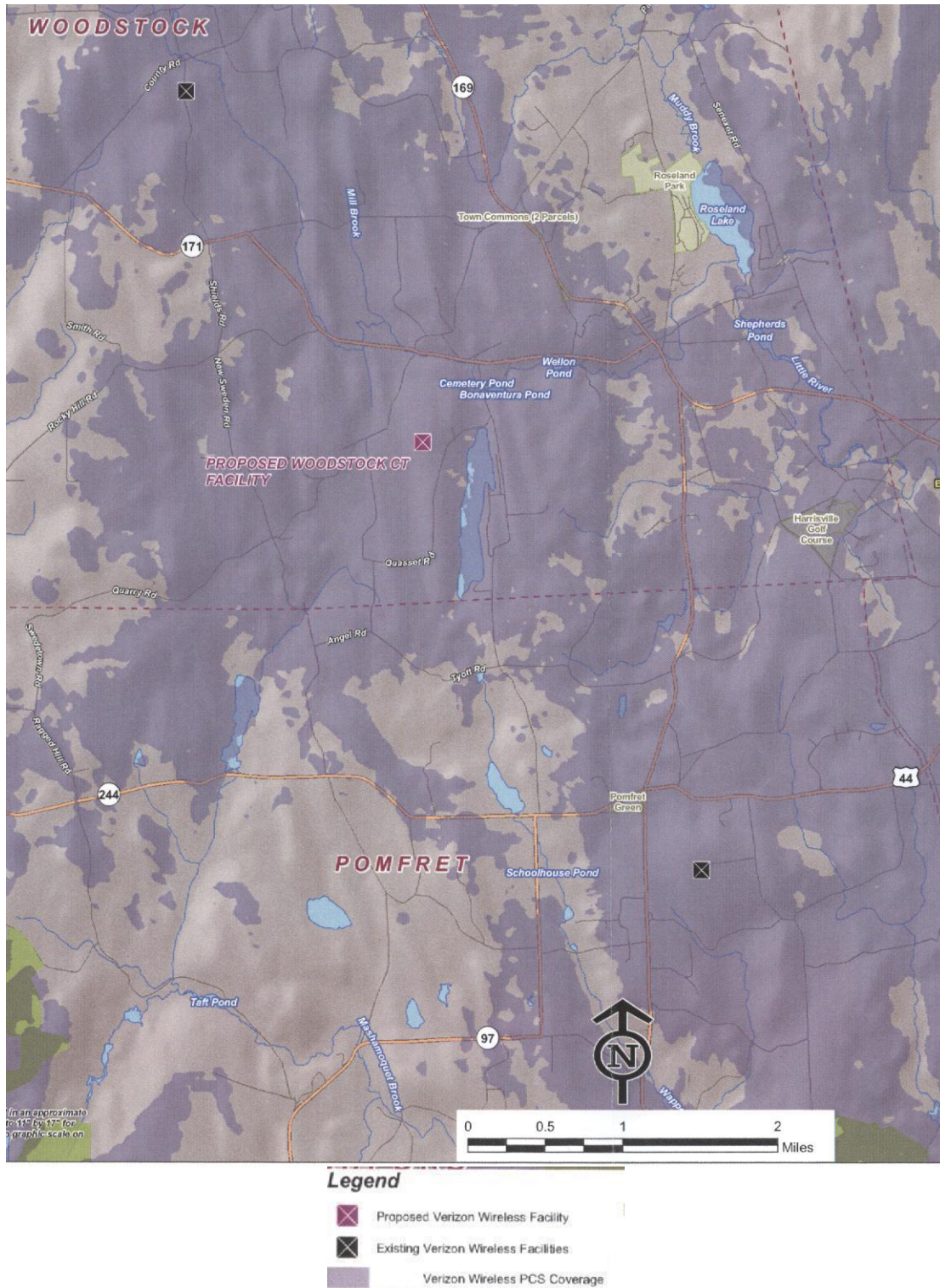


Figure 4: Proposed PCS coverage. (Cellco 1, Tab 6)

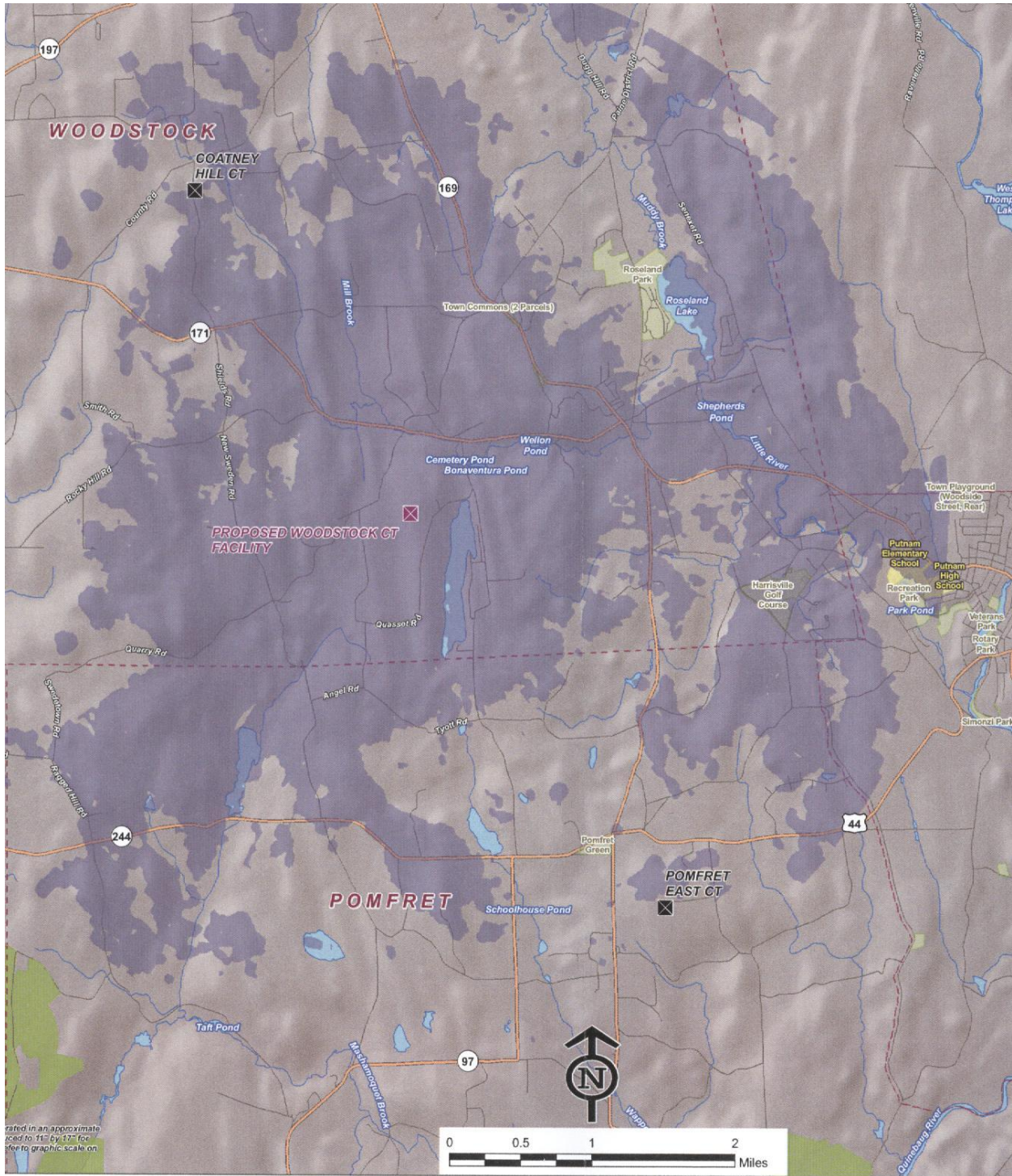


Figure 5: Proposed LTE coverage. (Cellco 1, Tab 6)

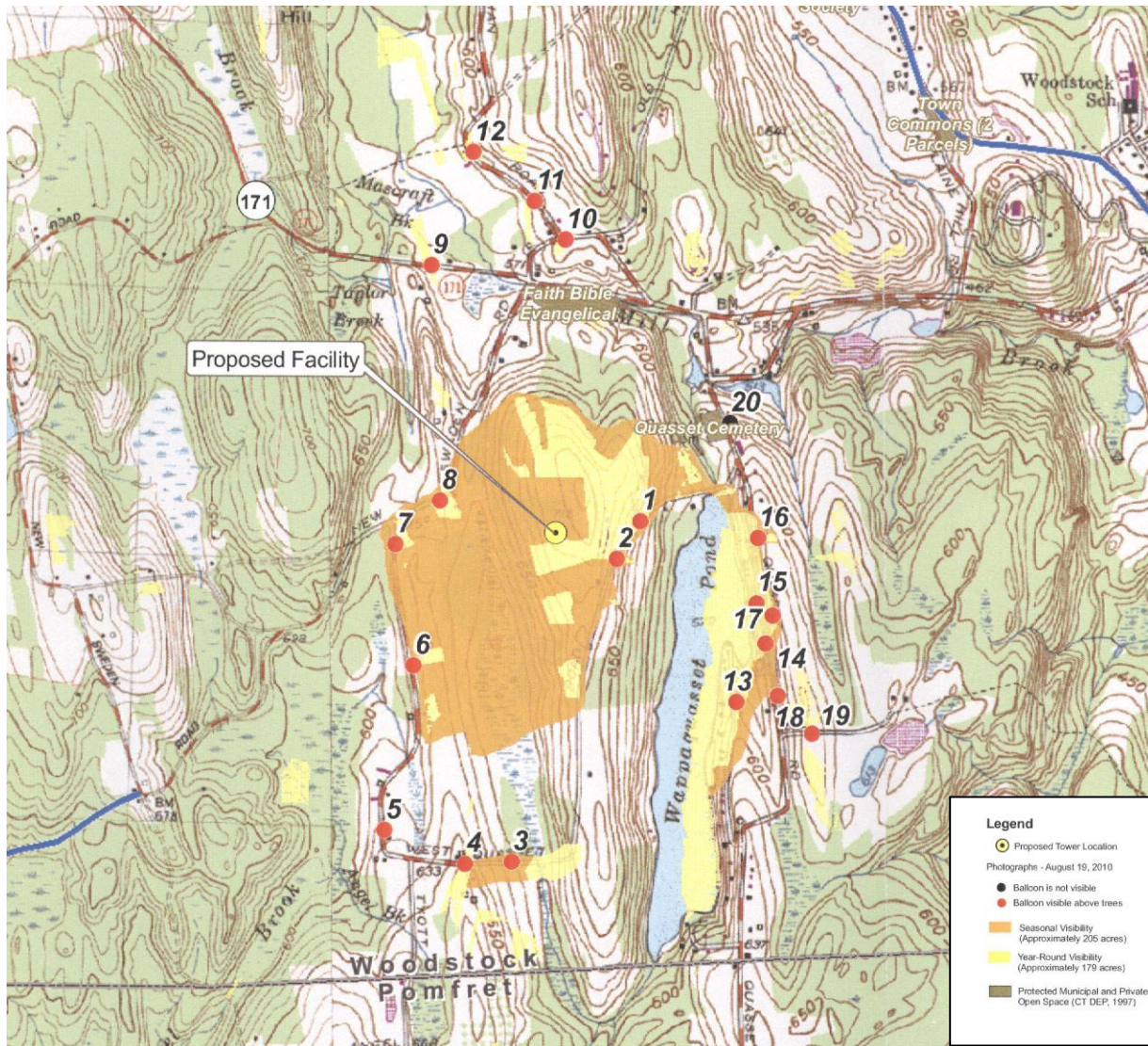


Figure 7: Projected visibility of proposed Cellco site. (Cellco 1, Tab 9)

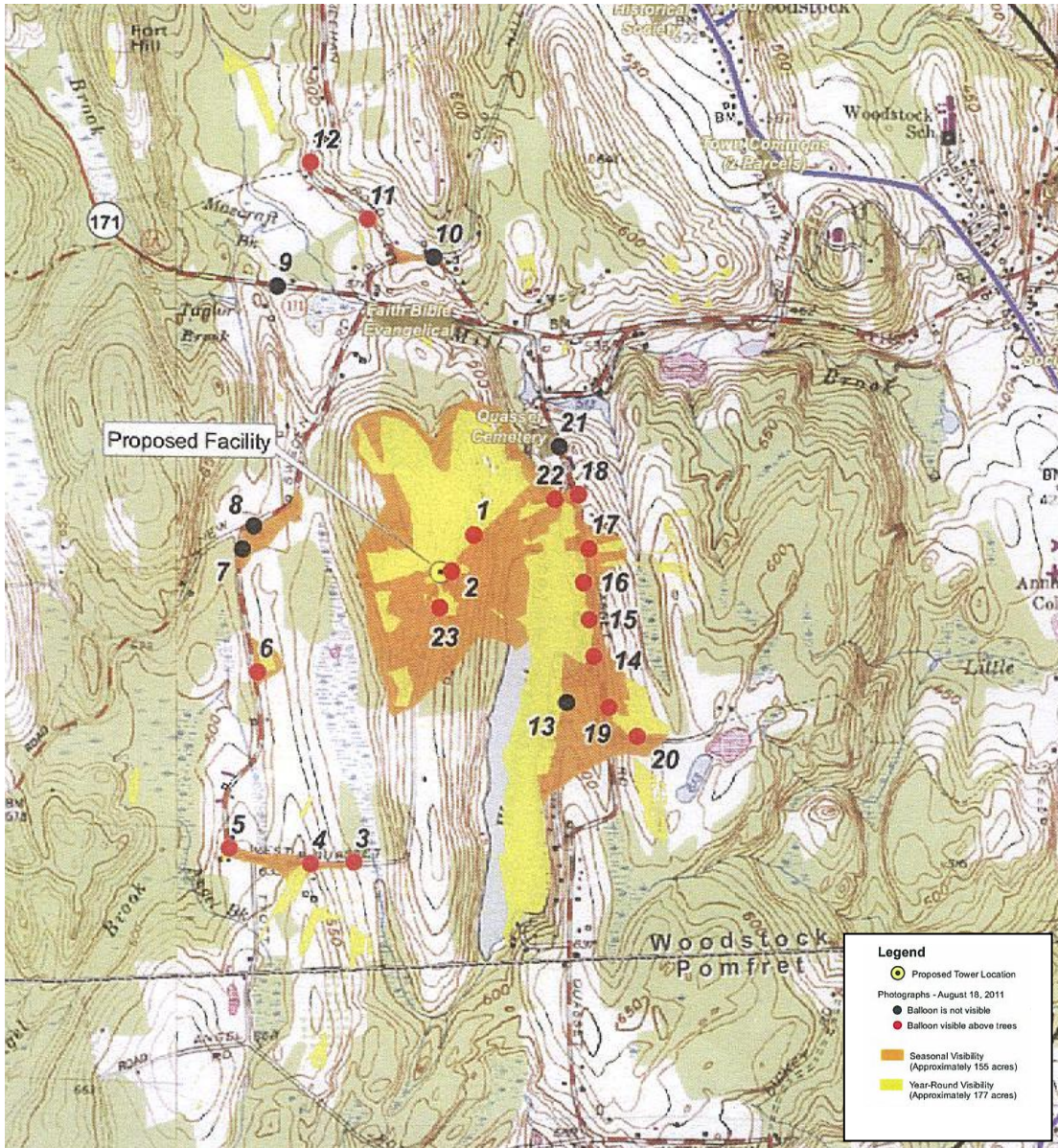


Figure 8: Projected visibility of proposed ATC replacement tower. (Cellco 10)



Figure 9: Photo simulation of 160-foot ATC replacement tower (top) and 150-foot Cellco tower (bottom) from 22 Shore Road. (Cellco 1, Tab 9; Cellco 10)



Figure 10: Photo simulation of 160-foot ATC replacement tower (top) and 150-foot Cellco tower (bottom) from 36 Shore Road. (Cellco 1, Tab 9; Cellco 10)



Figure 11: Photo simulation of 160-foot ATC replacement tower and 150-foot Cellco tower from #33 Meehan Road. (Cellco 1, Tab 9; Cellco 10)

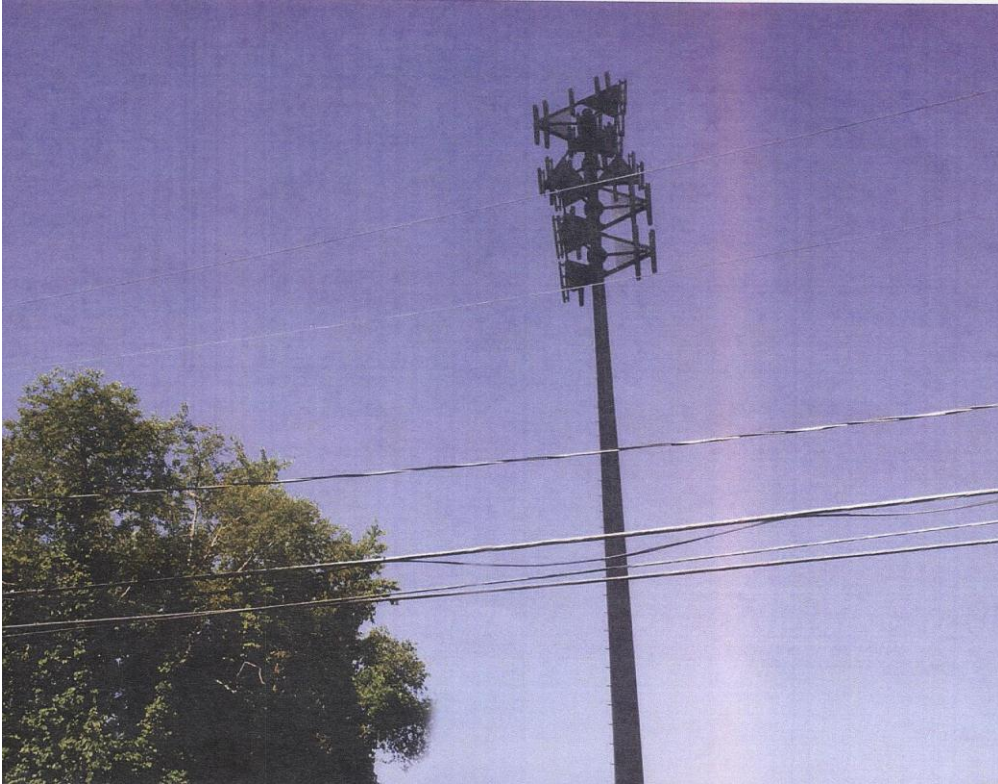


Figure 12: Photo simulation of 160-foot ATC replacement tower (top) and 150-foot Cellco tower (bottom) from 80 West Quasset Road. (Cellco 1, Tab 9; Cellco 10)



Figure 13: Photo simulation of 160-foot ATC replacement tower (top) and 150 foot Cellco tower (bottom) from 289 West Quasset Road. (Cellco 1, Tab 9; Cellco 10)



Figure 14: Photo simulation of proposed Cellco tower from 114 New Sweden Road. The ATC replacement tower would not be visible. (Cellco Tab 9; Cellco 10)