DOCKET NO. 471 - Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Hamden Tax Assessor's Map 2826, Block 24, 208 Kirk Road (a/k/a 1075 Paradise Avenue), Hamden, Connecticut.	} } }	Connecticut Siting Council September 28, 2017

Findings of Fact

Introduction

1. Cellco Partnership d/b/a Verizon Wireless (Cellco), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on March 3, 2017 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a wireless telecommunications facility located at 208 Kirk Road (a/k/a 1075 Paradise Lane) in Hamden, Connecticut (refer to Figure 1). (Cellco 1, p. 1)

2. Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to New Haven County, Connecticut. (Cellco 1, pp. 2, 6, Tab 5)

3. The parties in this proceeding are Cellco and Patricia Sorrentino. (Transcript 1, May 2, 2017, 3:00 p.m. [Tr. 1], p. 5)

4. The purpose of the proposed facility is to provide reliable wireless service to existing gaps in the central portion of Hamden and to increase existing network capacity. (Cellco 1, p. 7, Tab 6)

5. Pursuant to C.G.S. § 16-50*l*(b), public notice of the filing of the application to the Council was published in the New Haven Register on February 28 and March 1, 2017. (Cellco 2)

6. Pursuant to C.G.S. § 16-50*l*(b), notice of the application was provided to all abutting property owners by certified mail. Notice was unclaimed by three abutters and on April 5, 2017, Cellco sent a second notice to these abutters by first class mail. (Cellco 1, Tab 4; Cellco 3, response 27)

7. On March 3, 2017, Cellco provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50*l*(b). (Cellco 1, Tab 2)

Procedural Matters

8. Upon receipt of the application, the Council sent a letter to the Town of Hamden on March 6, 2017, as notification that the application was received and is being processed, in accordance with C.G.S. § 16-50gg. (Record)

9. During a regular Council meeting on March 16, 2017, the application was deemed complete pursuant to Connecticut Regulations of State Agencies (R.C.S.A.) § 16-50*l*-1a and the public hearing schedule was approved by the Council. (Record)

10. Pursuant to C.G.S. § 16-50m, the Council published legal notice of the date and time of the public hearing in the New Haven Register on March 21, 2017. (Record)

11. Pursuant to C.G.S. § 16-50m, on March 17, 2017, the Council sent correspondence to the Town of Hamden (Town) to provide notification of the scheduled public hearing and to invite the Town to participate. (Record)

12. On March 29, 2017, the Council held a pre-hearing conference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, filing of pre-hearing interrogatories and the logistics of the public inspection of the site scheduled for May 2, 2017, at the Office of the Council, 10 Franklin Square, New Britain, Connecticut. (CSC Pre-Hearing Conference Memoranda, dated March 22, 2017)

13. In compliance with R.C.S.A. § 16-50j-21, on April 13, 2017, the Applicant installed a four-foot by six-foot sign at the proposed access road entrance to the subject property on Country Club Drive. The sign presented information regarding the project and the Council's public hearing. (Cellco 4)

14. On April 25, 2017, Adam Thomas and Elena Geanuracos applied for intervenor status. On May 1, 2017, Mr. Thomas and Ms. Geanuracos withdrew their request before the Council could take action on the request. (Record)

15. The Council and its staff conducted an inspection of the proposed site on May 2, 2017, beginning at 2:00 p.m. During the field inspection, the applicant flew a four-foot diameter balloon at the proposed site to simulate the height of the proposed tower. Weather conditions during the field review were windy and the balloon did not consistently reach its intended height of 160 feet above ground level (agl). The balloon was aloft from approximately 7:40 a.m. to 6:00 p.m. for the convenience of the public. Weather conditions were favorable for the balloon fly for most of the morning until noon. (CSC Hearing Procedure Memoranda, dated March 30, 2017; Cellco 9, response 39)

16. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on May 2, 2017, beginning with the evidentiary session of the hearing at 3:00 p.m. and continuing with the public comment session at 7:00 p.m. at the Memorial Town Hall, Legislative Council Chambers, 2372 Whitney Avenue, Hamden, Connecticut. (Council's Hearing Notice dated March 17, 2017; Tr. 1, p. 4; Transcript 2, May 2, 2017 – 7:00 p.m. [Tr. 2], p. 100)

17. The Council continued the public evidentiary hearing on June 13, 2017, at the Council's office at 10 Franklin Square, New Britain, Connecticut. The Council closed the evidentiary hearing on June 13, 2017. (Council's Continued Hearing Memorandum dated May 3, 2017; Transcript 3, June 13, 2017 – 1:00 p.m. [Tr. 3], p. 3)

18. On July 20, 2017, the Council, on its own motion, voted to reopen the evidentiary record to consider additional evidence presented by Ms. Sorrentino relative to the antenna configuration after the close of the hearing on June 13, 2017. (Sorrentino 6; Council's Memorandum dated July 21, 2017)

19. On June 30, 2017, the Council requested that the applicant grant an extension of time for the Council to render a decision in this proceeding to October 13, 2017 to allow the Council to schedule a continued hearing based on Ms. Sorrentino's additional evidence. On July 10, Cellco granted the Council's request for an extension. (Record)

20. The Council continued the evidentiary hearing on August 15, 2017 at the Council's office at 10 Franklin Square, New Britain, Connecticut. Ms. Patricia Sorrentino did not attend the re-opened evidentiary session or offer any new evidence. Ms. Sorrentino's representative Bridget D'Angelo, Esq. declined an opportunity to cross-examine the Applicant. The Council closed the evidentiary hearing on August 15, 2017. (Transcript 4, August 15, 2017 [Tr. 4], pp. 3-4, 30-31)

State Agency Comment

21. Pursuant to C.G.S. § 16-50j(g), on March 17, 2017, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Agriculture (DOAg); Department of Transportation (DOT); Connecticut Airport Authority (CAA); Department of Emergency Services and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)

22. The Council received a response from the CEQ on March 29, 2017 requesting that visual simulations of the proposed tower be made from additional points within West Rock Ridge State Park. (CEQ Comments received March 29, 2017)

23. The Council received a response from the DOT's Bureau of Engineering and Construction on April 17, 2017 indicating that DOT had no comments. (DOT Comments received April 17, 2017)

24. The following agencies did not respond with comment on the application: DEEP, DPH, PURA, OPM, DECD, DOAg, CAA, DESPP, and SHPO. (Record)

Municipal Consultation

25. Cellco commenced the 90-day pre-application municipal consultation process by meeting with the Town of Hamden representatives on September 7, 2016. (Cellco 1, p. 20)

26. The Town requested that Cellco consider installing a telecommunications facility at the Town-owned Laurel View Country Club (LVCC) property as an alternative to the proposed site. Cellco subsequently determined a 180-foot monopole facility at the LVCC property would meet Cellco's service objectives. (Cellco 1, p. 20)

27. At the request of the Town, Cellco hosted a public information meeting regarding the need for a wireless facility in Hamden and presented the two sites under consideration. Notification of the meeting included abutter mailings to both sites and a notice published in the New Haven Register. Approximately 20 residents and Town officials attended the meeting. (Cellco 1, p. 20)

28. Shortly after the public information meeting, the Town requested that Cellco not pursue a site at the LVCC. (Cellco 1, p. 21; Cellco 3, response 12)

29. At the May 2, 2017 public comment session, Attorney Brendan Sharkey, on behalf of Curt Balzano Leng, Mayor of the Town of Hamden, read a statement into the record. This statement was also submitted in written form to the Council indicating that the Town is opposed to the siting of a tower in the Kirk Road neighborhood based on resident comment. Additionally, if the Council found that a tower was necessary, the Town requested an alternate location for both the tower and access road away from nearby residences, a shorter tower height and alternate designs to mitigate visual impact. (Tr. 2, pp. 106-109; Town of Hamden comment of May 2, 2017)

Public Need for Service

30. 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 – Telecommunications Act of 1996)

31. 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 Federal Communications Commission (FCC) to provide personal wireless communication service to New Haven County, Connecticut. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Cellco 1, Tab 5)

32. Section 253 of the Telecommunications Act of 1996 prohibits any state or local statute or regulation, or other state or local legal requirement from prohibiting or having the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)

33. Section 704 of the Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services and from prohibiting or having the effect of prohibiting the provision of personal wireless services. This section also requires state or local governments to act on applications within a reasonable period of time and to make any denial of an application in writing supported by substantial evidence in a written record. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)

34. Section 704 of the Telecommunications Act of 1996 also prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions, which include effects on human health and wildlife, to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)

35. In February 2009, as part of the American Recovery and Reinvestment Act, Congress directed the FCC to develop a National Broadband Plan to ensure every American has "access to broadband capability." Congress also required that this plan include a detailed strategy for achieving affordability and maximizing use of broadband to advance "consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes." (Council Administrative Notice Item No. 18 – The National Broadband Plan)

36. Section 706 of the Telecommunications Act of 1996 requires each state commission with regulatory jurisdiction over telecommunications services to encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans, including elementary and secondary schools, by utilizing regulating methods that promote competition in the local telecommunications market and remove barriers to infrastructure investment. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)

37. In December 2009, President Barack Obama recognized cell phone towers as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other federal stakeholders, state, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan (NIPP) to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11–Presidential Proclamation 8460, Critical Infrastructure Protection)

38. In February 2012, Congress adopted the Middle Class Tax Relief and Job Creation Act to advance wireless broadband service for both public safety and commercial users. The Act established the First Responder Network Authority to oversee the construction and operation of a nationwide public safety wireless broadband network. Section 6409 of the Act contributes to the twin goals of commercial and public safety wireless broadband deployment through several measures that promote rapid deployment of the network facilities needed for the provision of broadband wireless services. (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012)

39. In June 2012, President Barack Obama issued an Executive Order to accelerate broadband infrastructure deployment declaring that broadband access is a crucial resource essential to the nation's global competitiveness, driving job creation, promoting innovation, expanding markets for American businesses and affording public safety agencies the opportunity for greater levels of effectiveness and interoperability. (Council Admin Notice Item No. 20 – FCC Wireless Infrastructure Report and Order; Council Admin Notice Item No. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)

40. Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, also referred to as the Spectrum Act, a state or local government may not deny and shall approve any request for collocation, removal or replacement of equipment on an existing wireless tower provided that this does not constitute a substantial change in the physical dimensions of the tower. The Federal Communications Commission defines a substantial change in the physical dimensions of a tower as follows:
    a) An increase in the existing height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater. Changes in height should be measured from the dimensions of the tower, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
    b) Adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
    c) Installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four, or more than one new equipment shelter.
    d) A change that entails any excavation or deployment outside the current site.
    e) A change that would defeat the concealment elements of the tower.
    f) A change that does not comply with conditions associated with the siting approval of the construction or modification of the tower, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would exceed the thresholds identified in (a) – (d).

    (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 20 – FCC Wireless Infrastructure Report and Order)

41. According to state policy, if the Council finds that a request for shared use of a facility by a municipality or other person, firm, corporation or public agency is technically, legally, environmentally and economically feasible, and the Council finds that the request for shared use of a facility meets public safety concerns, the Council shall issue an order approving such shared use to avoid the unnecessary proliferation of towers in the state. (Conn. Gen. Stat. §16-50aa)

42. To facilitate tower sharing, Cellco intends to construct a tower to support four carriers, with the top level used by Cellco, leaving three tower levels available to other carriers below its antenna array. Cellco's only interest is constructing a tower to meet its needs and to facilitate tower sharing below its antenna equipment. If the tower and foundation was not designed to support an extension and another carrier wanted to locate at the site, the tower could be modified at that time to support an extension. (Tr. 1, pp. 54-55; Tr. 3, pp. 23, 38-42)

43. On March 17, 2017, the Council sent correspondence to other telecommunications carriers requesting that carriers notify the Council if they intervened to locate on the proposed facility in the foreseeable future. AT&T responded on April 3, 2017, stating that AT&T has a need in this area but locating on the tower is not within AT&T's current build plan. No other carriers responded to the Council. (Record)

Cellco's Existing and Proposed Wireless Services

44. Cellco's proposed facility would provide coverage to existing service gaps and would provide capacity relief to adjacent Cellco sites. Cellco would identify the site as "Hamden 8 CT". (Cellco 1, pp. 7-9, Tab 1; Cellco 9, response 31)

45. Cellco would initially deploy Long Term Evolution (LTE) voice and data service equipment in the 700 MHz and 2100 MHz frequency bands at the site. Cellco designs its LTE network using a 114 dB Reverse Link Operational Path Loss standard for in-vehicle service and 95 Reverse Link Operational Path Loss standard for in-building service. (Cellco 3, response 1, response 2)

46. The 700 MHz frequency is the primary frequency of Cellco's LTE network, as it provides a much larger service area than the 2100 MHz network. The 2100 MHz frequency is used for additional LTE capacity within the service 700 MHz footprint. It also offers a higher downlink throughput speed which allows for a better customer network interface. (Cellco 9, response 31)

47. Other frequencies such as the 850 MHz band for CDMA voice and data services and the 1900 MHz band for either LTE or CDMA services would be deployed in the future if the need to improve network performance arises. (Cellco 3, response 2)

48. Cellco examines network service issues such as dropped calls, ineffective attempts, and poor data speeds to determine the need for network improvements to a given area. Network service issues are directly related to deficient coverage to a certain area, capacity issues, or a combination of both. Most customer complaints are related to dropped calls or slow downlink speeds. (Cellco 9, response 31; Tr. 3, pp. 42-43)

49. Existing coverage gaps in the proposed service area total 1.16 square miles for 700 MHz service and 2.3 square miles for 2100 MHz service (refer to Figures 2 and 4). The proposed site would provide service to these areas. (Cellco 3, response 4)

50. Drive test data of existing network performance indicates deficient service on roads around the proposed site, including Shepard Avenue, Hill Street, Dunbar Hill Road, Howard Avenue, Earl Avenue, Evergreen Avenue, Forest Street, and Hamden Hills Drive (refer to Figure 6). (Cellco 9, response 31)

51. Cellco examined network connection performance and determined five of six sectors on existing Cellco sites surrounding the proposed service area did not meet Cellco's New England area performance standard of 0.75 percent for a combined ineffective attempts (IA)/dropped calls (DC) rate. Combined IA/DC rates on underperforming adjacent sectors range from 1.02 to 2.81 percent for LTE service and from 1.02 to 1.61 for CDMA service. The rates were based on an examination of approximately 70,000 calls on six surrounding sectors from May 7 to May 13, 2017. (Cellco 9, response 31; Tr. 3, pp. 23-26, 49-50)

52. Data speeds on five of the six surrounding sectors are less than Cellco's current performance standard. The proposed Hamden 8 Site would improve downlink speeds of these sectors but exact level of performance would not be known until the site is operational and undergoes network testing. (Cellco 9, response 31; Tr. 3, pp. 18-19)

53. The proposed site would provide capacity relief to six 700 MHz sectors on six surrounding Cellco sites that are oriented towards the proposed service area. The sites/sectors currently serving a majority of the area and the anticipated traffic offload once the proposed site is operational are listed below:

Cellco Facility	700 MHz Sector	Projected sector exhaust date	Percent offload
Hamden E	Alpha	Beyond 5 years	30%
Hamden North 2	Beta	Currently exhausting	17%
Hamden 2	Alpha	Beyond 5 years	56%
Centerville	Alpha	Beyond 5 years	63%
Hamden	Alpha	Beyond 5 years	16%
Hamden North	Gamma	June 2017	47%

(Cellco 9, response 31)

54. The proposed site would provide 11.7 square miles of 700 MHz service and 4.0 square mile of 2100 MHz service (refer to Figures 3 and 5). Once deployed, Cellco would optimize the proposed site and existing surrounding sites to efficiently serve certain areas of the wireless network by reducing coverage footprint overlap. Once optimized the effective 700 MHz footprint from the proposed site would total 8.6 square miles. (Cellco 9, response 31)

55. Cellco's proposed facility would interact with the following existing facilities within five miles of the proposed site:

Location	Distance and Direction from Proposed Tower	Antenna height/structure type	Cellco Site name
2321 Whitney Ave, Hamden	1.8 miles southeast	75 feet/rooftop	Hamden East
890 Evergreen Ave., Hamden	1.6 miles north	95 feet/faux silo	Hamden North
150 Willow Street, Hamden	4.0 miles north	147 feet/tower	Hamden North 2
955 Mix Ave., Hamden	1.5 miles south	45 feet/rooftop	Centerville

265 Benham Street, Hamden	1.8 miles south	64 feet/rooftop	Hamden 2
1055 Wintergreen Ave., Hamden	3.8 miles southwest	170 feet/tower	Hamden
93 Old Amity Road, Bethany	3.7 miles west	180 feet/tower	Bethany
719 Amity Road, Bethany	4.5 miles northwest	140 feet/tower	Bethany North

(Cellco 1, pp. 8-9, Tab 8)

Site Selection

56. Cellco established a search area for a site in the Hamden area in May 2014. (Cellco 3, response 8)

57. There are no other existing towers or other sufficiently tall structures available within Cellco's search area that would meet Cellco's coverage objectives. (Cellco 1, p. 11, Tab 8)

58. A proposed macro-cell tower site would be the most efficient and cost effective means of enhancing wireless service in the area and offloading capacity from nearby sites. It is not feasible to service the target service area using small cells due to the significant number of small cell installations required to provide comparable wireless services. Small cells mounted on utility poles would be limited in height and therefore susceptible to attention from surrounding structures and topography. If utility poles are not present or not available due to existing pole restrictions, then new poles would have to be installed. The planning and deployment of a system using multiple small cells to solve Cellco's currently identified wireless service objectives would take years. (Cellco 6, response 7; Tr. 3, pp. 55-61)

59. Cellco investigated five sites for a macro-site deployment, one of which was selected for site development. The four rejected sites and reasons for their rejection are as follows:
    a) 310 West Shepard Avenue, Hamden – Site at LVCC met Cellco's wireless service objectives at a height of 180 feet (serves 81% of target area) and was initially offered by the Town but subsequently withdrawn after a public information meeting.
    b) 1125 Shepard Avenue, Hamden, Site 1 – Town-owned parcel used as a public works facility. Site did not meet wireless service objectives (serves 41% of target area).
    c) 1125 Shepard Avenue, Hamden, Site 2 – Town-owned parcel, known as "Rocky Top", used as a public works facility. Site did not meet wireless service objectives (serves 41% of target area).
    d) 905 Shepard Avenue, Hamden – site did not meet wireless service objectives (serves 45% of target area).

    (Cellco 1, Tab 8; Cellco 3, response 9; Cellco 6, response 13)

60. Cellco reviewed the undeveloped, wooded properties to the north of the host property for tower development. Cellco determined that extending a new road to these parcels as well as the clearing of trees to develop a tower site had a more substantial environmental impact than developing a tower on the host property. Cellco considered developing a site on the abutting parcel at 1105 Paradise Avenue but the property owner was not interested. (Cellco 1, p. iii, Tab 1; Cellco 3, response 10; Tr. 4, pp. 24-25)

61. The proposed site was previously under lease with AT&T for a tower that was not pursued due to changing priorities at AT&T. After AT&T's lease expired, Cellco and the property owner negotiated terms for the proposed site in essentially the same location as AT&T's previous tower site, abbreviating Cellco's search for a suitable tower site that met Cellco's needs. (Cellco 3, response 10; Cellco 10, response 12; Tr. 1, p. 72; Tr. 4, pp. 24-25)

62. An industrial area east of Sherman Road in Hamden was not considered for a tower site as it is too low in ground elevation and would not meet Cellco's wireless service objectives. (Cellco 3, response 11)

63. In addition to the proposed site initially presented in the application, Cellco developed two additional sites on the host property, identified as Alternate Site 1 and Alternate Site 2, based on questions from the Council and Ms. Sorrentino. Cellco attempted to increase the distance between a potential tower site and the south property line, and at the same time, minimize tree removal necessary to build a site. (refer to Figure 7). (Cellco 9, response 33; Tr. 1, pp. 71-76; Tr. 3, p. 8)

64. A fourth potential site located north-northeast of the property owner's residence, referred to as Alternate Site 3, was briefly examined by Cellco, but was rejected by the property owner. The property owner intends to use this area for agricultural purposes. (Cellco 9, response 33; Tr. 3, pp. 20-22, 28)

Site Property Description

65. The site property consists of a 9.3-acre parcel owned by J. Vignola and D. Vignola that is currently used as a Christmas tree farm and a wood cutting business. The property owners' residence is located in the central portion of the property and is accessed from the end of Kirk Road. (Cellco 1, p. 17; Tr. 3, p. 79)

66. The property has frontage along Kirk Road at its east end and along the Country Club Drive cul-de-sac along the south-central portion of the property. (Cellco 1, Tab 1)

67. The property is zoned Residential R-3. Zoning within a quarter-mile of the parcel is Residential R-2 and R-3. (Cellco 1, p. 17, Tab 1)

68. Abutting properties include the LVCC to the west, undeveloped wooded parcels to the north, and residential use to the east and south. (Cellco 1, Tab 1, Tab 8; Cellco 3, response 21)

69. There are approximately 28 residences within 1,000 feet of the proposed site. (Cellco 1, p. 14)

70. The property consists of uneven terrain and is traversed by several small ridges with the eastern portion of the property higher in elevation than the western portion. The tree farm generally occurs on the eastern, northern and western areas of the property, along and between the ridge areas. (Cellco 1, Tab 1)

Facility Description – Proposed Site

71. The Proposed Site is located at the west end of the parcel, in a wooded area bordering the LVCC to the west and Ms. Sorrentino's property at 46 Country Club Road to the south (refer to Figure 8). (Cellco 1, Tab 1)

72. The tower site is located at an elevation of approximately 296 feet amsl. A small ridge rises to the east of the tower site. (Cellco 1, Tab 1)

73. The proposed tower would consist of a 160-foot monopole that would be designed to support four levels of wireless carrier antennas as well as municipal emergency services antennas. The tower would be approximately 50 inches wide at the base tapering to 24 inches wide at the top. (Cellco 1, p. 12, Tab 1, p. 6)

74. Cellco would install six panel antennas and six remote radio heads in a cluster-mount configuration at the 160-foot level of the tower. The cluster-mount design is a new antenna design and mount configuration that would be used by Cellco on future tower installations. The antennas on a cluster mount configuration are closer to the monopole than the traditional platform mounted antennas used on previous tower installations. (Cellco 12, response 40; Tr. 4, pp. 9-10)

75. Cellco does not know if other carriers could utilize a cluster-mount installation at this site. (Tr. 4, pp. 25-26)

76. A 55-foot by 50-foot fenced equipment compound/lease area would be established at the base of the tower, enclosed by an eight-foot tall chain link fence with privacy slats. (Cellco 1, Tab 1)

77. The compound would be located in a wooded area to the west of the tree farm. The compound fence is approximately 48 feet from the west property line with the LVCC. The compound fence and tower location is approximately 180 feet and 220 feet respectively from the Sorrentino property line. (Cellco 1, Tab 1; Cellco 6, response 10)

78. Cellco would install equipment cabinets on an 11.5-foot by 16-foot elevated steel platform, covered by a metal canopy, within the compound. (Cellco 1, Tab 1)

79. A parking area would be established in front of the compound gate on the south side of the compound. A four-foot high retaining wall would be established on the west and part of the north side of the compound and parking area to create a flat surface as the natural grade slopes downgradient to the west. (Cellco 1, Tab 1; Tr. 1, pp. 21-22)

80. Cellco could redesign the compound by shifting it to the northeast and orienting the compound access gate and parking area to the east, increasing the distance between the compound area and the south property line. (Cellco 9, response 28)

81. Access to the Proposed Site would be by a new 12-foot wide, 386-foot long gravel access drive extending from the Country Club Road cul-de-sac through a wooded area between the south property line and more open tree farm area. Cellco would be willing to modify the access drive by moving it northward, generally along the edge of the open tree farm area, so that the wooded buffer along the south property line is retained to the extent possible. (Cellco 1, Tab 1; Cellco 8)

82. Approximately 330 to 410 cubic yards of fill would be required to develop the Proposed Site, depending on which access drive alignment is used. (Cellco 1, Tab 1; Cellco 8; Tr. 1, p. 86)

83. Construction of either access drive would require the removal of rock ledge as it descends the west side of a small ridge. Rip rap would be used to stabilize the road side slopes in this area and geo-grid reinforcement would be used where the access drive slopes attain 15 percent. (Cellco 1, Tab 1; Tr. 1, p. 20)

84. Access from the cul-de-sac would require the removal of approximately 22 feet of curb to accommodate the turning radius for construction vehicles. (Cellco 1, Tab 1)

85. The entrance area of the access drive from the Country Club Road cul-de-sac would be paved for approximately ten feet. (Cellco 1, Tab 1)

86. A chain gate attached to two bollards at the access road entrance was initially proposed. Cellco would be willing to alter the location and use a different style of gate to improve aesthetics. (Cellco 1, Tab 1; Cellco 12, response 42; Tr. 4, pp. 22-23)

87. Utilities would be installed underground to the site from a utility pole on Country Club Drive. The utility run would be constructed concurrently with the access drive. No new utility poles are proposed. (Cellco 10, response 1 d, 1e; Tr. 3, pp. 68-69)

88. Site preparation and engineering would commence following Council approval of a Development and Management Plan (D&M Plan) and are expected to be completed within two to four weeks. Installation of the equipment shelter and tower are expected to take another two to four weeks. Equipment installation is expected to take an additional two weeks after the tower and equipment shelter are installed. After the equipment installation, cell site integration and system testing is expected to require about two additional weeks. (Cellco 1, p. 22)

89. The estimated cost of the Proposed Site facility is:

Cell site radio equipment	$170,000
Tower, coax, antennas	250,000
Utility Installation	50,000
Equipment	98,000
Site development	$45,000
Total Estimated Costs	**$613,000**

(Cellco 9, response 38)

Facility Description – Alternate Site 1

90. Alternate Site 1 is located at the northern edge of the tree farm and near the base of the central ridge on the property. It is approximately 157 feet east northeast of the Proposed Site (refer to Figure 9). (Cellco 9, response 33, plan C-2A)

91. Alternate Site 1 is located at an elevation of approximately 305 feet amsl, about ten feet higher in elevation than the Proposed Site. (Cellco 9, response 33)

92. The Alternate Site 1 facility would consist of a 150-foot monopole within a 55-foot by 50-foot fenced equipment compound/lease area. (Cellco 9, response 33, plan C-2A)

93. A parking area would be established in front of the compound gate on the east side of the compound. (Cellco 9, response 33, plan C-2A)

94. Access to the Alternate Site 1 would be by a new 12-foot wide, 348-foot long gravel access drive extending northerly from Country Club Drive and through the tree farm. The access drive would turn westerly near the north edge of the tree farm, descending at a 20 percent grade to the compound area. Approximately 15 feet of curb would be removed along the cul-de-sac. (Cellco 9, response 33, plan C-2A; Tr. 3, pp. 70-71, 74-75)

95. The section of the access drive descending to the compound area would be paved and would require rip-rap to stabilize side slopes. (Cellco 9, response 33, plan C-2A)

96. The Alternate Site 1 tower would be 347 feet from the Sorrentino residence and 319 feet from the residence at 50 Country Club Drive. (Cellco 9, response 33, plan C-2A)

97. The compound fence would be 10 feet from the north property line. (Cellco 9, response 33, plan C-2A)

Facility Description – Alternate Site 2

98. Alternate Site 2 is located at the northern edge of the tree farm, on top of the central ridge on the property. It is approximately 336 feet east northeast of the Proposed Site. (Cellco 9, response 33, plan C-2B)

99. Alternate Site 2 is located at an elevation of approximately 328 feet amsl, about 32 feet higher in ground elevation than the Proposed Site. (Cellco 9, response 33)

100. The Alternate Site 2 facility would consist of a 120-foot monopole within a 55-foot by 50-foot fenced equipment compound/lease area. (Cellco 9, response 33, plan C-2B)

101. A parking area would be established in front of the compound gate on the south side of the compound. (Cellco 9, response 33, plan C-2B)

102. Access to the Alternate Site 2 would be by a new 12-foot wide, 250-foot long gravel access drive extending northerly from Country Club Drive through the tree farm. Maximum access drive slopes would reach seven percent. Approximately 15 feet of curb would be removed along the cul-de-sac. (Tr. 3, pp. 70-71, 74-75) (Cellco 9, response 33, plan C-2B; Tr. 3, pp. 70-71, 74-75)

103. The Alternate Site 2 tower would be approximately 454 feet from the Sorrentino residence, 364 feet from the residence at 50 Country Club Drive, and 315 feet from the residence at 41 Country Club Drive. (Cellco 9, response 33, plan C-2B, Attachment 6)

104. The compound fence would be 25 feet from the north property line. (Cellco 9, response 33, plan C-2B)

Public Safety

105. The Wireless Communications and Public Safety Act of 1999 (911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (Council Administrative Notice Item No. 6 - Wireless Communications and Public Safety Act of 1999)

106. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Cellco 1, p. 5)

107. Wireless carriers have voluntarily begun supporting text-to-911 services nationwide in areas where municipal Public Safety Answering Points (PSAP) support text-to-911 technology. Text-to-911 will extend emergency services to those who are deaf, hard of hearing, have a speech disability, or are in situations where a voice call to 911 may be dangerous or impossible. However, even after a carrier upgrades its network, a user's ability to text to 911 is limited by the ability of the local 911 call center to accept a text message. The FCC does not have the authority to regulate 911 call centers; therefore, it cannot require them to accept text messages. (Council Administrative Notice Item No. 19 – FCC Text-to-911: Quick Facts & FAQs)

108. Cellco's facility would be capable of supporting text-to-911 service as soon as the PSAP is capable of receiving text-to-911. However, no PSAPs in the vicinity of the proposed tower site are able to accept text-to-911 service at this time. (Cellco 3, response 6)

109. Pursuant to the Warning, Alert and Response Network Act of 2006, "Wireless Emergency Alerts" (WEA) is a public safety system that allows customers who own certain wireless phone models and other enabled mobile devices to receive geographically-targeted, text-like messages alerting them of imminent threats to safety in their area. WEA complements the existing Emergency Alert System that is implemented by the FCC and FEMA at the federal level through broadcasters and other media service providers, including wireless carriers. (Council Administrative Notice No. 5 – FCC WARN Act)

110. Pursuant to CGS §16-50p(a)(3)(G), the tower facility would be constructed in accordance with the American National Standards Institute "Structural Standards for Steel Antenna Towers and Antenna Support Structures" Revision G and all other applicable structural and building code requirements. (Cellco 1, Tab 1; Cellco 10, response 9)

111. The proposed tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Cellco 1, p. 21)

112. Cellco's equipment shelter would be equipped with silent intrusion and system alarms. Cellco would have personnel available on a 24-hour basis to receive and respond to incoming alarms. The compound would be enclosed by an eight-foot tall chain link fence of two inch mesh to accommodate privacy slats. Cellco could install a chain link fence of less than two inch mesh around the compound. (Cellco 1, p. 8; Cellco 3, response 15; Tr. 1, pp. 42-43)

113. The tower radius for all three potential tower locations would extend onto adjacent properties. The monopole is designed with a taper near the top so that if there is a failure, due to high winds speeds for example, the monopole would bend onto itself, remaining upright and not falling over from the base. (Cellco 1, Tab 1; Cellco 9, response 33, plan C-2A, plan C-2B; Tr. 1, pp. 77-78)

114. The cumulative worst-case maximum power density from the radio frequency emissions from the operation Cellco's proposed antennas is 18.4 percent of the standard for the General Public/Uncontrolled 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 in a sector 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. (Cellco 1, Tab 18; Cellco 10, response 8; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

Emergency Backup Power

115. In response to two significant storm events in 2011, Governor Malloy formed a Two Storm Panel (Panel) that was charged with an objective review and evaluation of Connecticut's approach to the prevention, planning and mitigation of impacts associated with emergencies and natural disasters that can reasonably be anticipated to impact the state. (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 44)

116. In response to the findings and recommendations of the Panel, and in accordance with C.G.S. §16-50*ll*, the Council, in consultation and coordination with the Department of Energy and Environmental Protection, the Department of Emergency Services and Public Protection and the Public Utilities Regulatory Authority (PURA), studied the feasibility of requiring backup power for telecommunications towers and antennas as the reliability of such telecommunications service is considered to be in the public interest and necessary for the public health and safety. The study was completed on January 24, 2013. (Council Administrative Notice Item No. 24 – Council Docket No. 432)

117. The Council reached the following conclusions in the study:
    a) "Sharing a backup source is feasible for CMRS providers, within certain limits. Going forward, the Council will explore this option in applications for new tower facilities;" and
    b) "The Council will continue to urge reassessment and implementation of new technologies to improve network operations overall, including improvements in backup power."

    (Council Administrative Notice Item No. 24 – Council Docket No. 432)

118. Cellco proposes to use an emergency power battery as a primary back-up source providing up to four hours of emergency power. A 20-kilowatt diesel fueled generator would also be installed and used to recharge the battery unit. The generator can run for 67 hours, assuming 75 percent cell site loading. Although the lease exhibit depicted a propane tank, Cellco is not proposing a propane tank or a propane generator at this site. (Cellco 1, p. 10; Cellco 6, response 14; Tr. 1, p. 29)

119. The proposed backup generator would have a double-walled fuel tank within the unit protect against fuel leakage. A remote alarm would be triggered if there was a leak. During filling, there is a 2.5 gallon containment system to catch any leaks at the fill location. Additionally an overfill alarm would sound to indicate if the refueling nozzle was accidently left on. Fuel delivery personnel would have spill cleanup materials on-site. (Tr. 1, pp. 28-31; Tr. 3, pp. 54-55)

120. According to R.C.S.A. §22a-69-1.8, noise created as a result of, or relating to, an emergency, such as an emergency backup generator, is exempt from the State Noise Control Regulations. (R.C.S.A. §22a-69-1.8)

121. Pursuant to R.C.S.A. §22a-174-3b, the generator would be managed to comply with DEEP's "permit by rule" criteria, therefore the generator would be exempt from general air permit requirements. (Cellco 1, Tab 1, p. 7)

122. Cellco could install a shared generator but no other carriers have expressed immediate interest in locating at the site and therefore Cellco prefers to install a backup power system for its specific need. (Cellco 3, response 18)

Environmental Considerations

123. One State-registered historic property, the Jeremiah Gilbert House, is located 0.2 mile east of the host property. None of the three potential tower facilities would be visible from this resource and therefore no adverse impact is anticipated. The SHPO did not comment on the proposal. (Cellco 1, p. 16; Cellco 9, Attachment 7; Cellco 10, response 11)

124. The nearest wetland to the Proposed Site is approximately 280 feet south of the access drive entrance on Country Club Road. There are no wetlands on the host property. (Cellco 1, pp. 18-19; Tr. 1, pp. 70-71, 82-83)

125. The host property is located in the Federal Emergency Management Agency Zone X, an area outside of the 500-year flood zone. (Cellco 1, p. 19)

126. Preliminary stormwater control features for the Proposed Site and Alternate Site 1 include rip rap lined swales to collect runoff and level spreaders to disperse runoff overland. Part of the access drives to both sites would be paved where slopes are 15 percent or greater. (Cellco 1, Tab 1; Cellco 9, response 35)

127. No stormwater control features are anticipated for Alternate Site 2 as the site and associated access drive are located along the crest of a north-south oriented ridge and do not traverse steep grades. (Cellco 9, response 35)

128. Final stormwater details would be provided within the Development and Management Plan (D&M Plan). (Cellco 1, Tab 1)

129. The proposed project would comply with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. If approved, the final details of the erosion and sedimentation control plans would be provided in the D&M Plan. (Cellco 1, p. 19)

130. Connecticut is within the range of the northern long-eared bat (NLEB), a federally-listed Threatened species and State-listed Endangered species. There are no known NLEB hibernacula or known maternity roost trees near the project area and thus the proposed facility is not likely to adversely impact the NLEB. The United States Fish and Wildlife Service (USFWS) did not respond to the Applicants NLEB submittal, and in accordance with USFWS rules, the project site is thus deemed in compliance and no further action is necessary. (Cellco 1, Tab 10)

131. The eastern box turtle, a State-listed Species of Special Concern, may occur in the vicinity of the host property. DEEP recommends that Cellco adhere to an Eastern Box Turtle Protection Program during site construction. (Cellco 7)

132. The Proposed Site along the edge of a 54.4 acre oak-beech dominated forested area that is classified as an Edge Forest Block. Development of the Proposed Site and its associated access drive would result in the clearing of 0.45 acre of wooded terrain within the edge forest, including 29 trees with a diameter greater than six inches at breast height (6"dbh). Relocating the access drive out of the wooded area to the edge of the tree farm would reduce the amount of tree clearing to 0.18 acre, including 27 trees with a diameter greater than 6"dbh. Development of Alternate Site 1 and Alternate Site 2 would require minimal tree clearing within the edge forest, including 11 trees and 5 trees with a diameter greater than 6"dbh, respectively. (Cellco 9, response 34; Cellco 10, response 7; Tr. 1, p. 81)

133. Development of any of the three potential sites would not materially affect a small core forest (6.4 acres) located north of the host property. (Cellco 10, response 7)

134. The proposed facility is located within three miles of the Quinnipiac River Tidal Marsh, a National Audubon Society designated Important Bird Area, that supports a wide variety of bird species. Due to the significant distance between the marsh and the proposed site, no adverse impact on this resource, or the bird species it supports, is expected. (Cellco 3, response 19)

135. The design of the proposed facility would comply with United States Fish and Wildlife Service guidelines for minimizing the potential impact of telecommunications towers to bird species. The guidelines recommend that towers be less than 199 feet tall, avoid the use of aviation lighting, and avoid guy-wires as tower supports, among others. (Cellco 3, response 20)

136. The host property is not within the DEEP designated coastal boundary, as defined by the Connecticut Coastal Management Act. (Cellco 3, response 24)

137. Blasting is not anticipated to develop the site. Rock removal can be accomplished by mechanical chipping. (Tr. 1, p. 20)

138. Relocating the proposed access road from the end of the Country Club Drive cul-de-sac to the existing Kirk Road entrance to the property would result in more land disturbance as it would be at least four times longer and would have to traverse one or two ridges on the property. This would require significant tree removal and grading to create a wide enough travel surface for construction vehicle access. The existing driveway passes part of the tree farm and a woodcutting area, then bends sharply to the west, climbing steeply to the landowner's residence. (Cellco 1, Tab 1; Cellco 10, response 3; Tr. 3, pp. 75-83, 89)

Visibility

139. The visibility of the three potential tower facilities within a two-mile radius of the sites is essentially the same. Each tower would be visible year-round from approximately 42 acres and seasonally (leaf-off) visible from approximately 386 acres. A majority of the area designated as having seasonal views are from West Rock Ridge, a largely undeveloped, high elevation area west and southwest of all three potential tower facilities. Other areas with seasonal views include residential areas south and southeast of the site (refer to Figures 11 and 12). (Cellco 1, Tab 9, Cellco 9, Attachment 7)

140. The is no significant difference in the character of seasonal and year-round views of all three potential tower facilities at distances beyond a quarter-mile from the host property due to the close proximity of the three potential sites to each other. Additionally, all three potential tower facilities would extend to relatively the same height above mean sea level. (Cellco 9, Attachment 7)

141. Variations in visibility for all three potential tower facilities mostly occur within a quarter-mile of the host property, especially from Country Club Drive area to the south. In the Country Club Drive and Bear Path Road area, approximately 0.2 miles south of the host property, the Proposed Site tower would be visible during leaf off conditions. The Alternate Site 1 tower would also be seasonally visible but with less intervening vegetation. The upper portion of Alternate Site 2 tower would be visible year-round above the trees in certain locations on Bear Path Road and Country Club Drive. (Cellco 1, Tab 9; Cellco 9, Attachment 7; Tr. 1, pp. 37-38; Tr. 3, pp. 15-16)

142. Visibility of all three potential tower facilities would occur from the LVCC, including the clubhouse located approximately 0.2 miles to the northwest of the host property. Both the Proposed Site tower and Alternate Site 1 tower would be visible year-round from the clubhouse whereas the Alternate Site 2 tower would only be seasonally visible. All three potential tower facilities would be visible during leaf-off conditions from portions of the golf course. (Cellco 1, Tab 9; Cellco 9, Attachment 7)

143. Views of all three potential tower facilities from the south end of Paradise Avenue, located approximately 0.2 miles north-northwest of the host property, would be seasonal in nature with the Proposed Site tower being most visible and the Alternate Site 2 tower being least visible. (Cellco 1, Tab 9; Cellco 9, Attachment 7)

144. From the cul-de-sac area immediately south of the host property, the Proposed Site tower would be visible through the trees during leaf-off conditions from both the road and abutting residences. The Proposed Site compound and portions of the tower would be visible from the Sorrentino property, especially if the original access road alignment was constructed. If the access road was shifted to the south edge of the tree farm, more intervening vegetation would be retained, offering additional screening of the facility. (Tr. 1, pp. 38-41)

145. The Alternate Site 1 location would be less visible from the Sorrentino property than the Proposed Site as it is more distant from the property line and more screening vegetation would be retained. The compound would be sufficiently screened from other abutting properties either by existing vegetation or by intervening topography. The upper portion of the tower would be visible through the trees during leaf-off conditions from adjacent areas. (Cellco 9, Attachment 7; Tr. 3, pp. 8-14)

146. The Alternate Site 2 location would be least visible from the Sorrentino property as it is farthest away. It would be more visible than Alternate Site 1 from the immediate cul-de-sac area, including abutting properties, due to its location on top of the open ridge and somewhat reduced amount of intervening vegetation when compared to the other two potential tower sites. The compound and most of the tower structure would be visible during leaf off conditions from adjacent areas. (Cellco 9, Attachment 7; Tr. 3, pp. 8-14; Tr. 4, pp. 14-18)

147. Cellco designed the access road with a slight curve as it heads north from the cul-de-sac to Alternate Site 1 and Alternate Site 2 in order to preserve large diameter trees and to lessen the impact of straight-on views from the cul-de-sac. (Cellco 9, response 33, plan C-2A, plan C-2B; Tr. 3, pp. 10-13)

148. If a faux pine tree tower design was selected it would be most suitable at Alternate Site 2 given the relatively low tower height required in this location. A faux tree tower would have a wider overall profile from the faux branches that must extend outward to create a tapered tree look. A typical faux tree tower would be about seven feet taller than the monopole to create a tapered cone above the top of the monopole. Most of the mature trees surrounding the host property are deciduous, therefore, the faux pine tree tower could appear out of context with the surroundings. (Cellco 13; Tr. 3, pp. 16-17; 99-101; Tr. 4, pp. 13, 19-20)

149. The additional cost of a tree tower design at Alternate Site 2 is $250,000. (Cellco 12, response 44)

150. A faux tree design would be able to conceal Cellco's cluster antenna mounts and traditional platform antenna mounts. (Tr. 4, pp. 12, 26-27)

151. A monopole would have a galvanized steel gray finish. Paint could be applied to the tower to provide a mottled or a darker finish so that it would blend in with the wooded surroundings, thus eliminating initial glare typical of a galvanized finish. (Tr. 1, pp. 39-40; Tr. 4, pp. 28-29)

152. Cellco would be willing to use other types of road materials for the access drive entrance apron at the cul-de-sac instead of pavement to create a more natural appearance. (Tr. 4, p. 23)

153. To enhance screening of the compound area, Cellco would be willing to install a vinyl coated chain link fence, privacy slats, or a colored vinyl fence. Cellco would be willing to install appropriate landscaping to screen the compound. (Cellco 12, response 41; Tr. 1, pp. 41-44)

154. Ms. Sorrentino requests that if a tower facility was ultimately approved by the Council, that Alternate Site 2 be selected. Ms. Sorrentino requests a faux tree tower in this location. (Sorrentino 6)

155. Ms. Sorrentino requests that a stained wood fence be used to enclose the compound. Cellco does not prefer to use a wood fence due to maintenance issues associated with wood materials. (Sorrentino 6; Cellco 12, response 41)

156. Ms. Sorrentino requests that Cellco install an access gate at least 12 feet off of the cul-de-sac. Cellco would comply with this request and would be willing to examine different styles of gates to match surrounding aesthetics. (Sorrentino 6; Tr. 4, pp. 22-23)

157. Pursuant to CGS § 16-50p(a)(3)(F), no schools or commercial day care facilities are located within 250 feet of the sites. The nearest school and commercial child day care facility are commonly located at Bear Path School, approximately 0.6 miles southeast of the host property. (Cellco 1, Tab 9, p. 6)

158. West Rock Ridge State Park is located approximately 0.75 miles west and northwest of the host property. Most of the park facing the host property features steep, wooded terrain. A few hiking trails traverse the ridge and sides of the ridge with several marked viewpoints that face eastwards towards the host property. In response to CEQ's March 29, 2017 comments, Cellco conducted a visual analysis of the three potential tower facilities on several viewpoints within the park. Cellco's analysis determined that although all three potential tower facilities would be visible from several viewpoints, the viewpoints are much higher in elevation than the host property, thus the potential tower facilities would not be readily discernible among the surrounding landscape. (Cellco 1, Tab 10; Cellco 9, Attachment 7; Tr. 1, pp. 31-33)

159. The three potential tower facilities would not be visible from the western vistas within Sleeping Giant State Park, located approximately 2.25 miles northeast of the facility. Intervening topography and vegetation would effectively screen views of the facilities from these vistas. (Cellco 10, response 13)

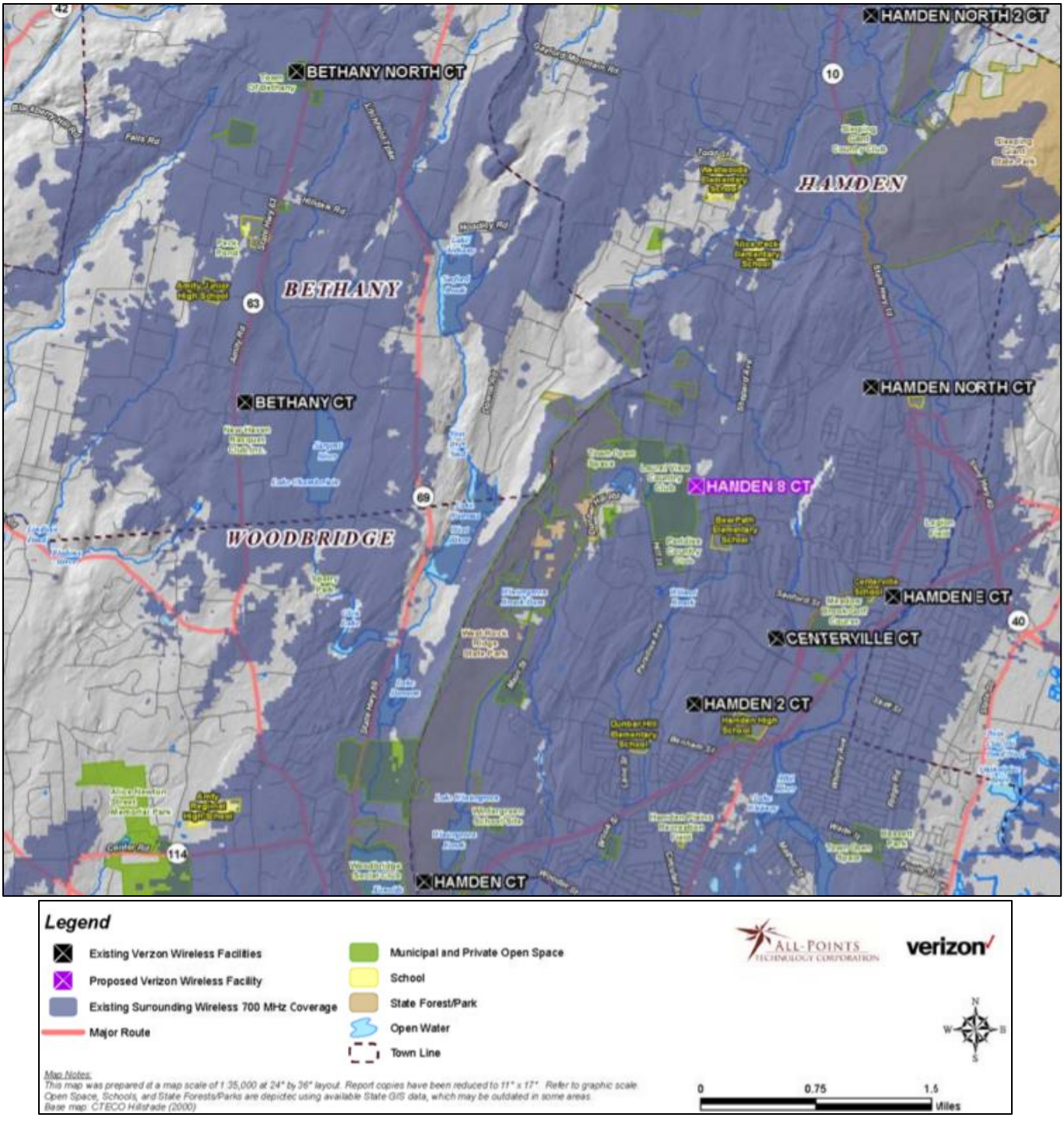
160. The three potential tower facilities would not be visible from the Farmington Canal Trail, a multi-use recreational trail located approximately 0.8 mile east the host property. (Cellco 1, Tab 10; Cellco 9, Attachment 7)

161. There are no scenic roads within a two mile radius of the host property. (Cellco 1, Tab 9)

Figure 1 – Approximate Location of /Host Property

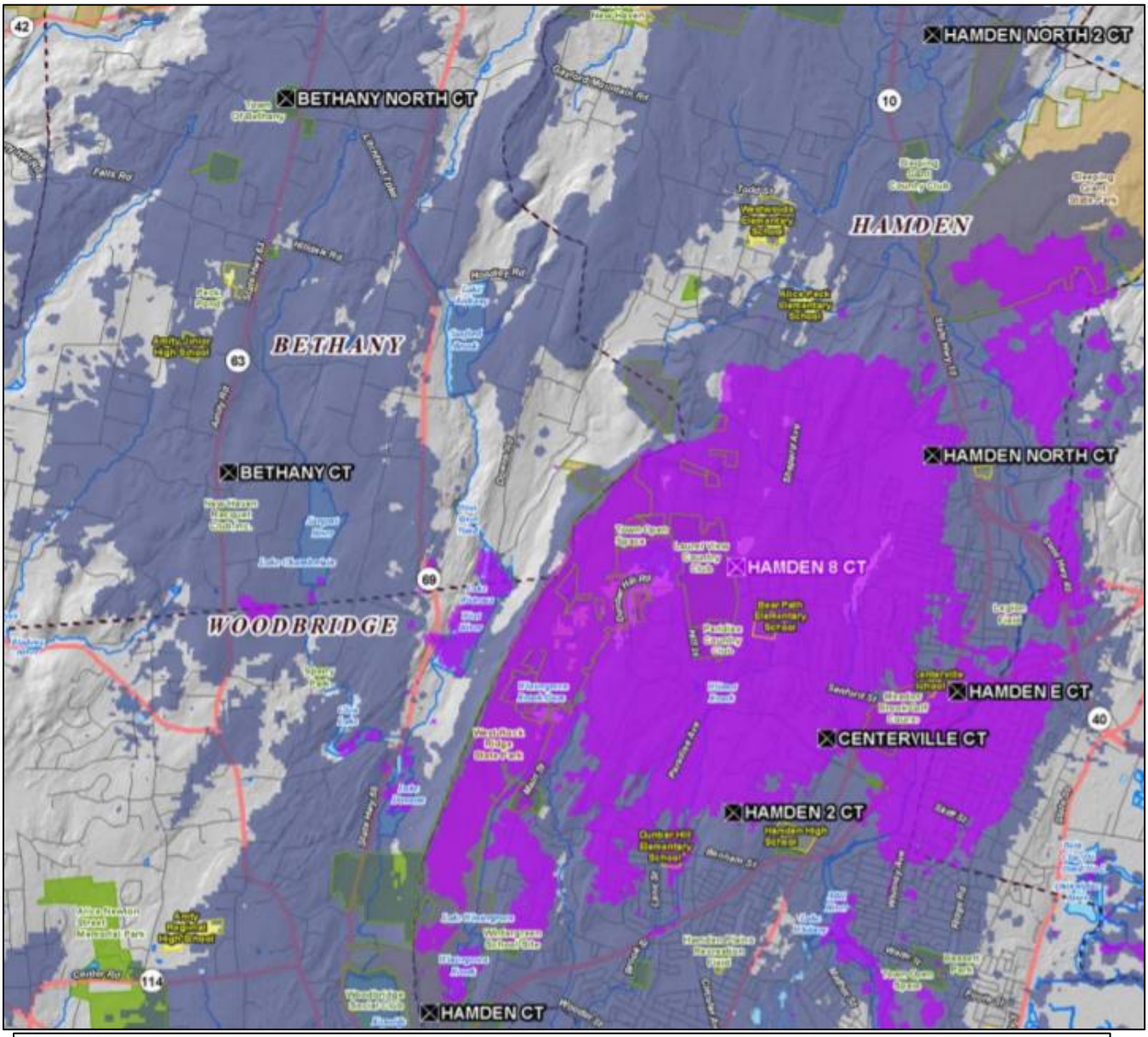
(Cellco 1, Tab 12)

Figure 2 - Existing LTE 700 MHz Service



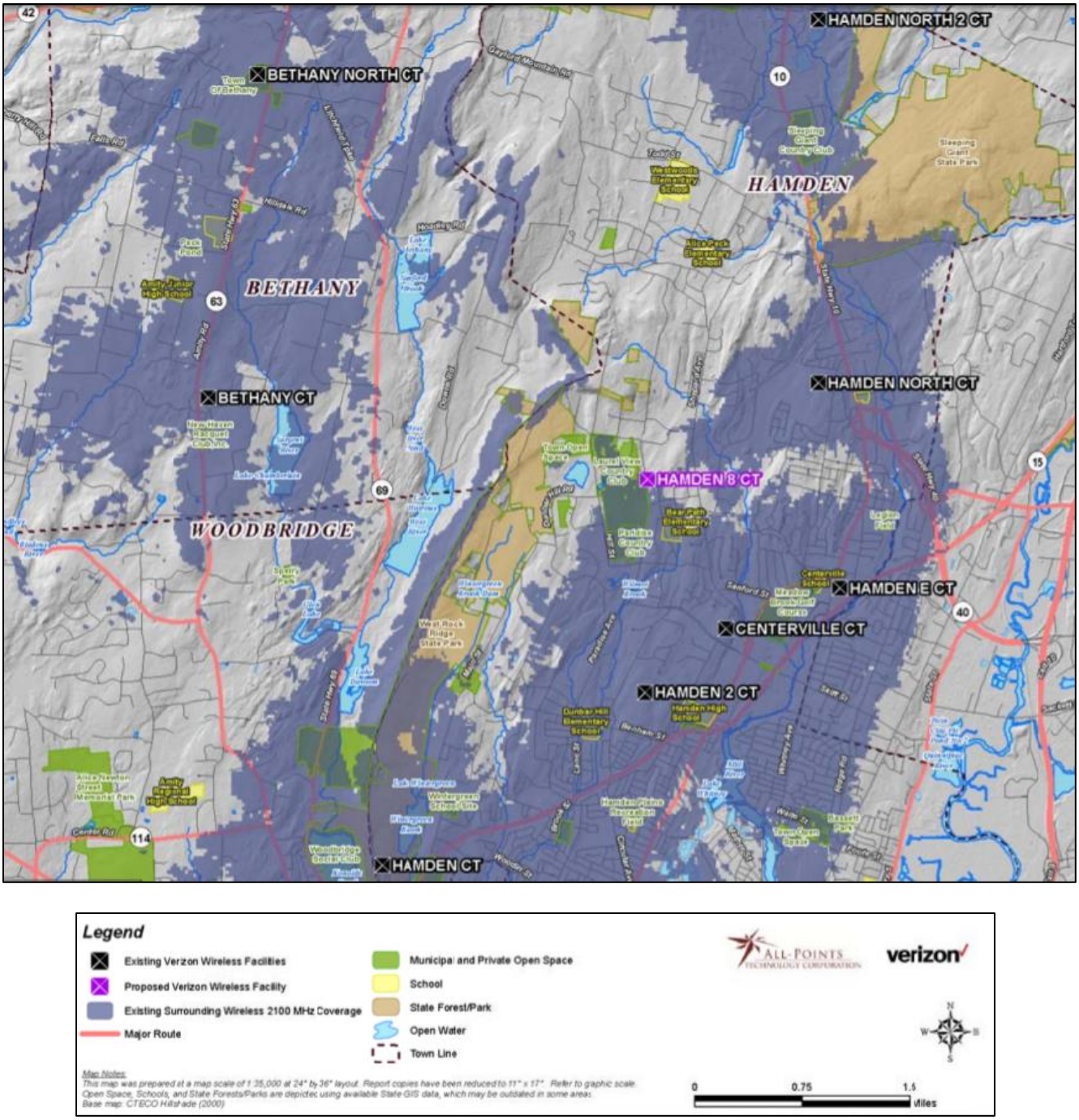
(Cellco 1, Tab 6)

Figure 3 - Proposed LTE 700 MHz Service



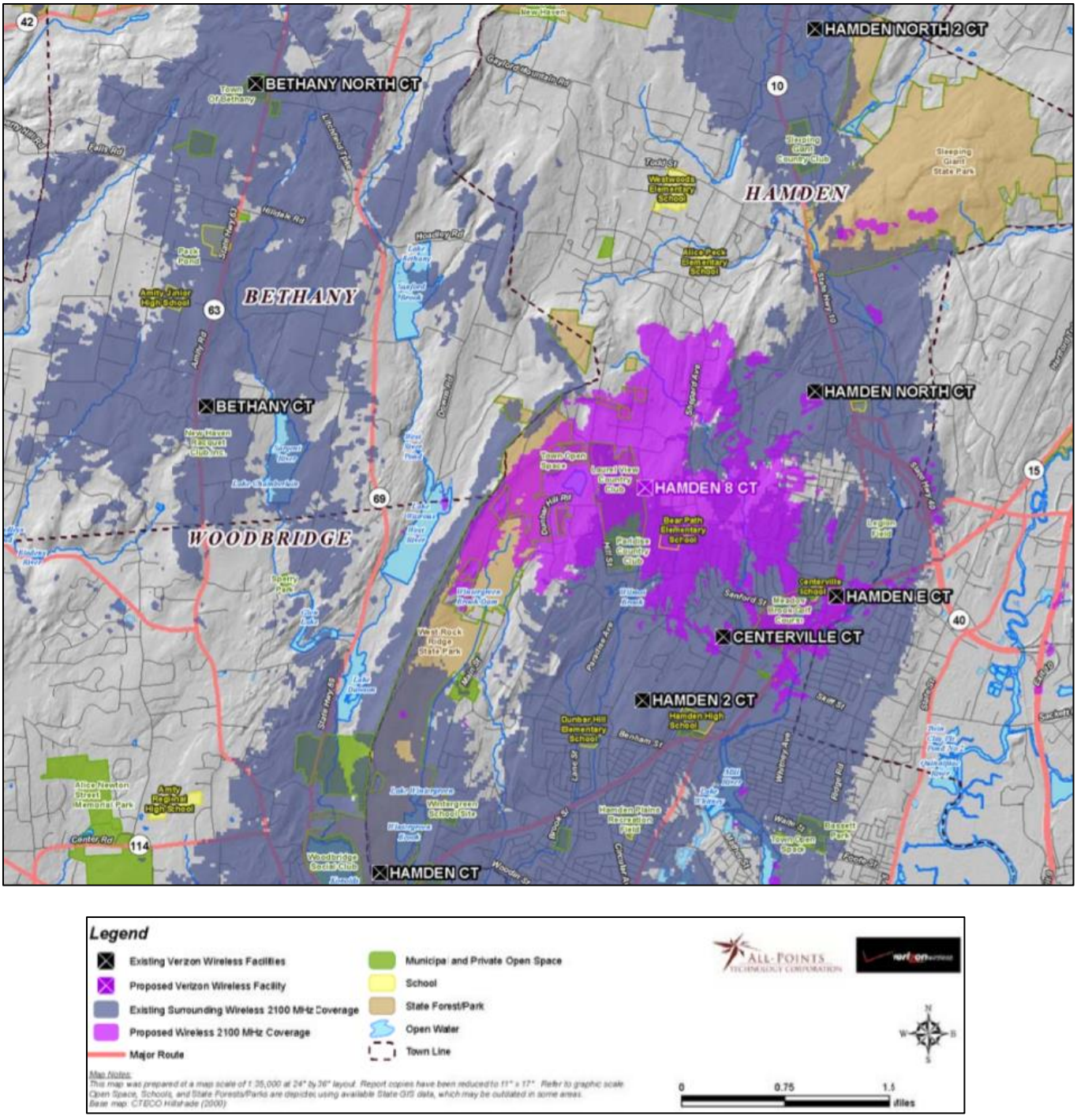
(Cellco 1, Tab 6)

Figure 4 - Existing LTE 2100 MHz Service



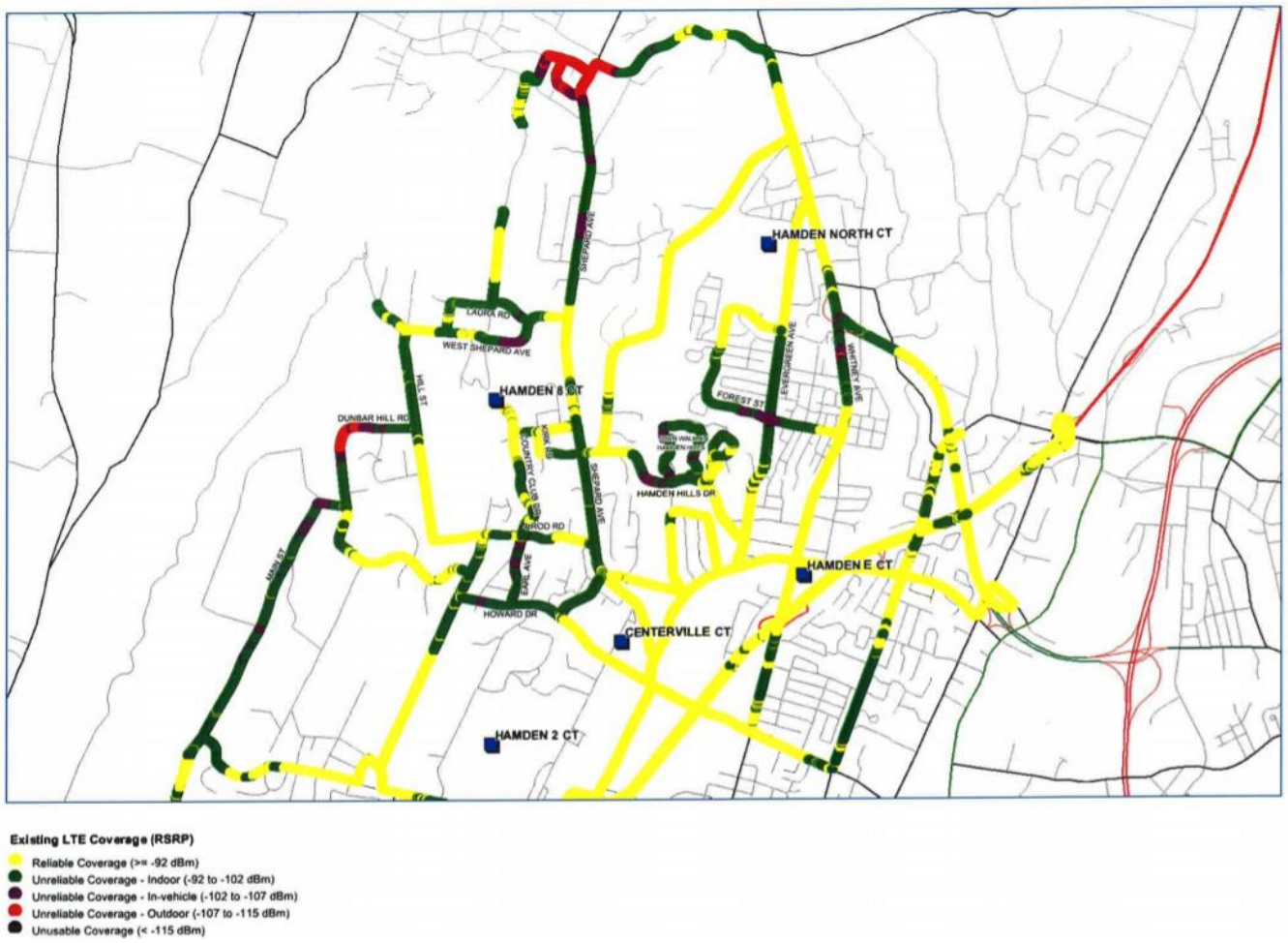
(Cellco 1, Tab 6)

Figure 5 - Proposed LTE 2100 MHz Service



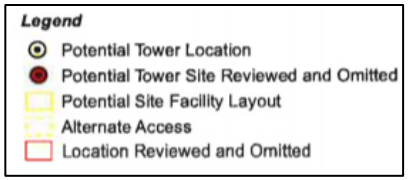
(Cellco 1, Tab 6)

Figure 6 – Drive Test Data of Existing LTE Wireless Service



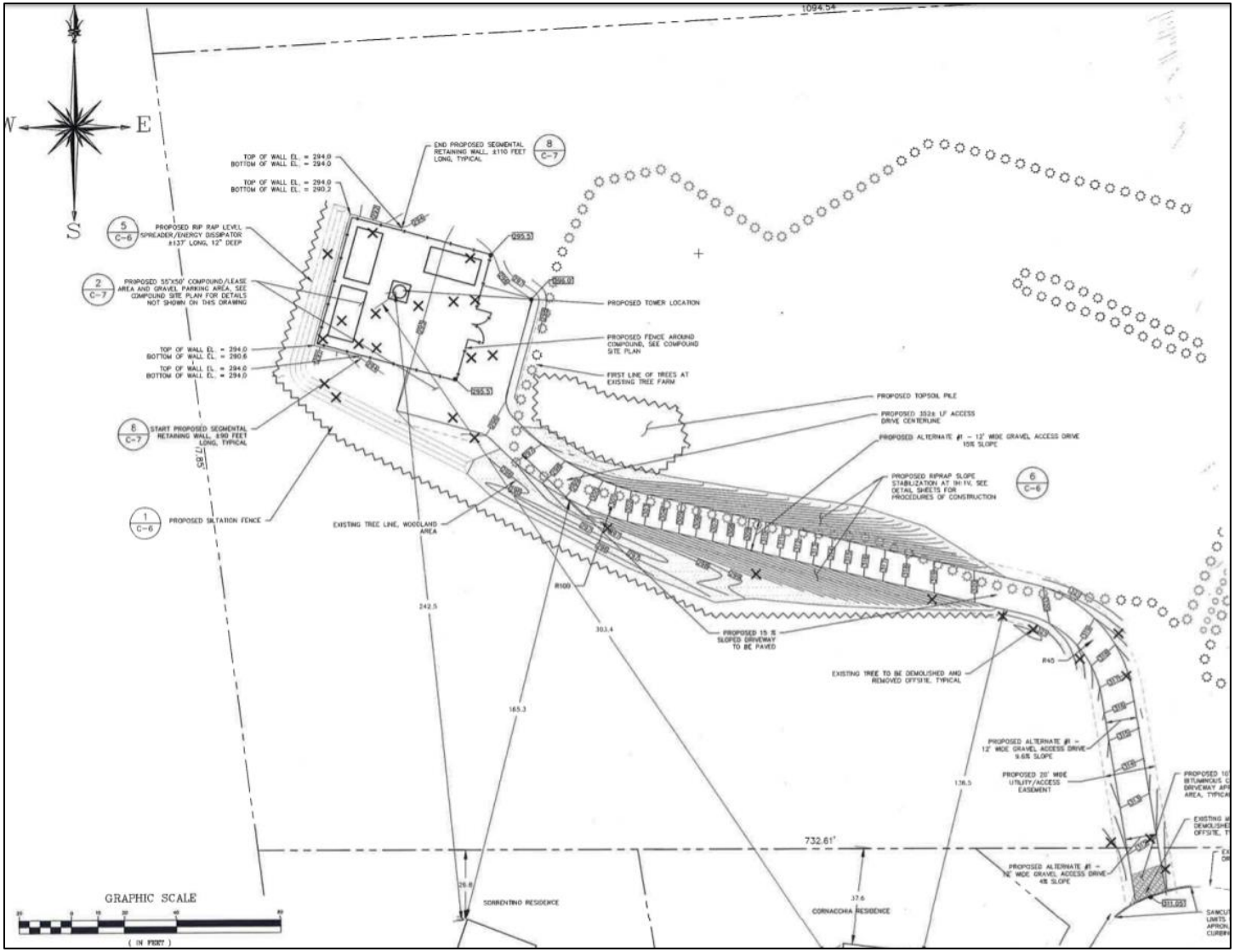
(Cellco 9, Attachment 3)

Figure 7 - Location of three potential sites on west side of property



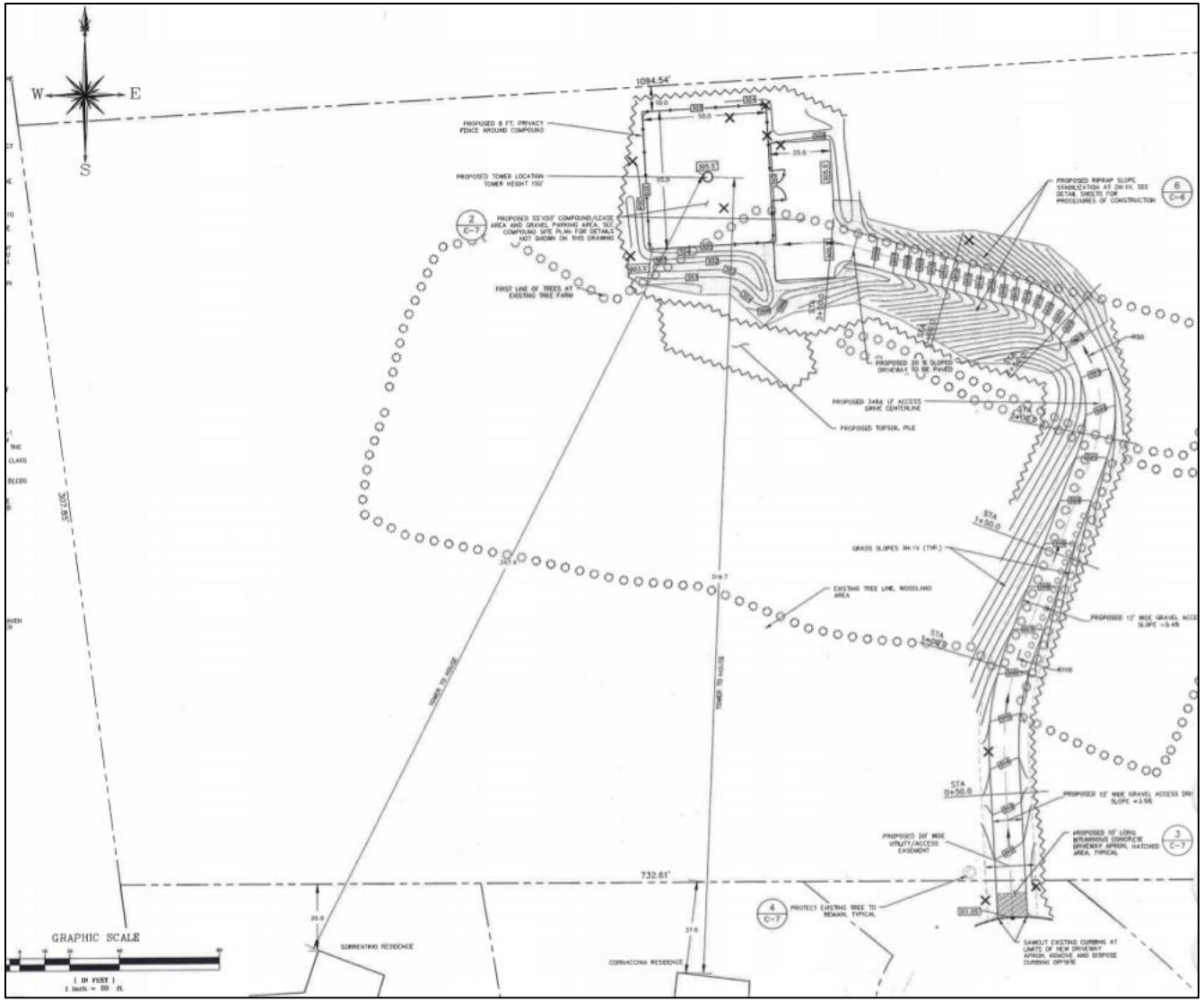
(Cellco 9, Attachment 6)

Figure 8 – Proposed Site – site plan showing modified access drive



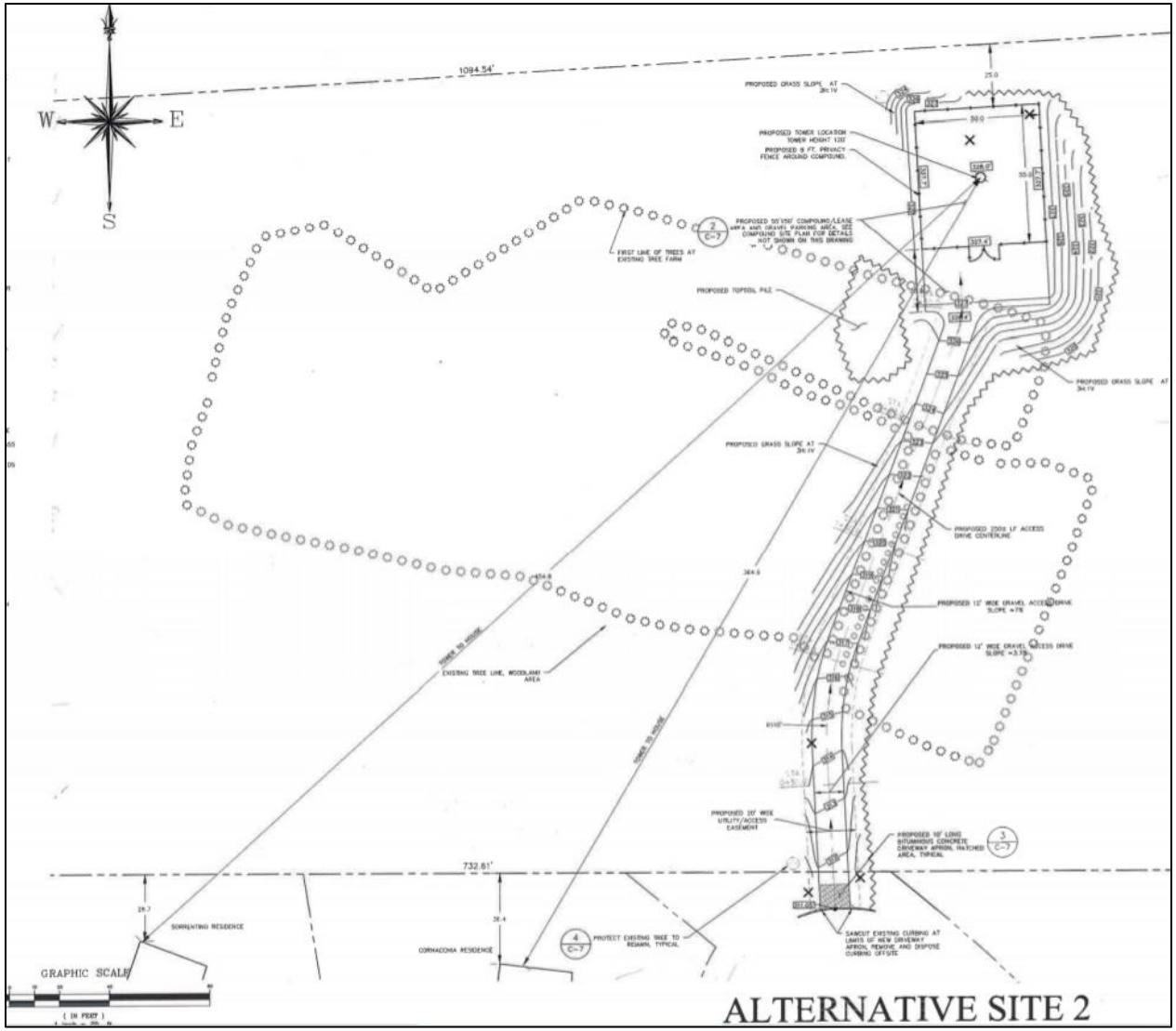
(Cellco 9, Attachment 1)

<u>Figure 9 – Alternate Site 1</u> – Site plan



(Cellco 9, Attachment 4)

<u>Figure 10 – Alternate Site 2</u> – Site plan



(Cellco 9, Attachment 5)

Figure 11 – Projected Visibility of Proposed Site

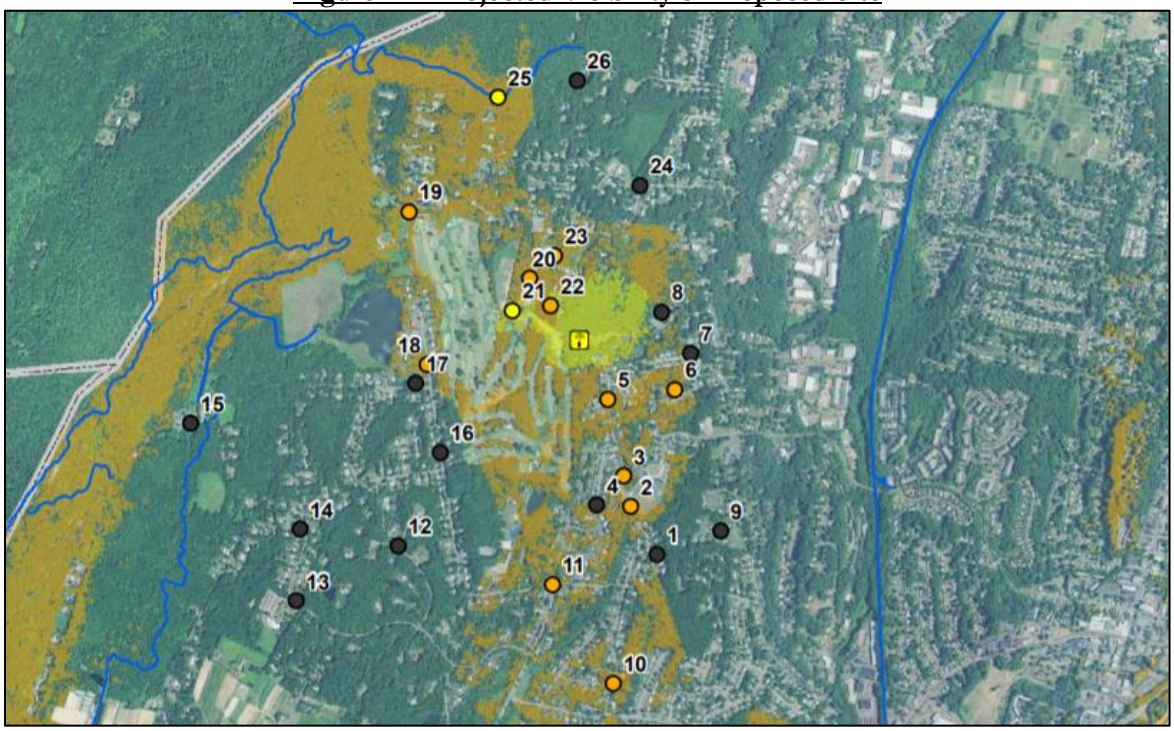
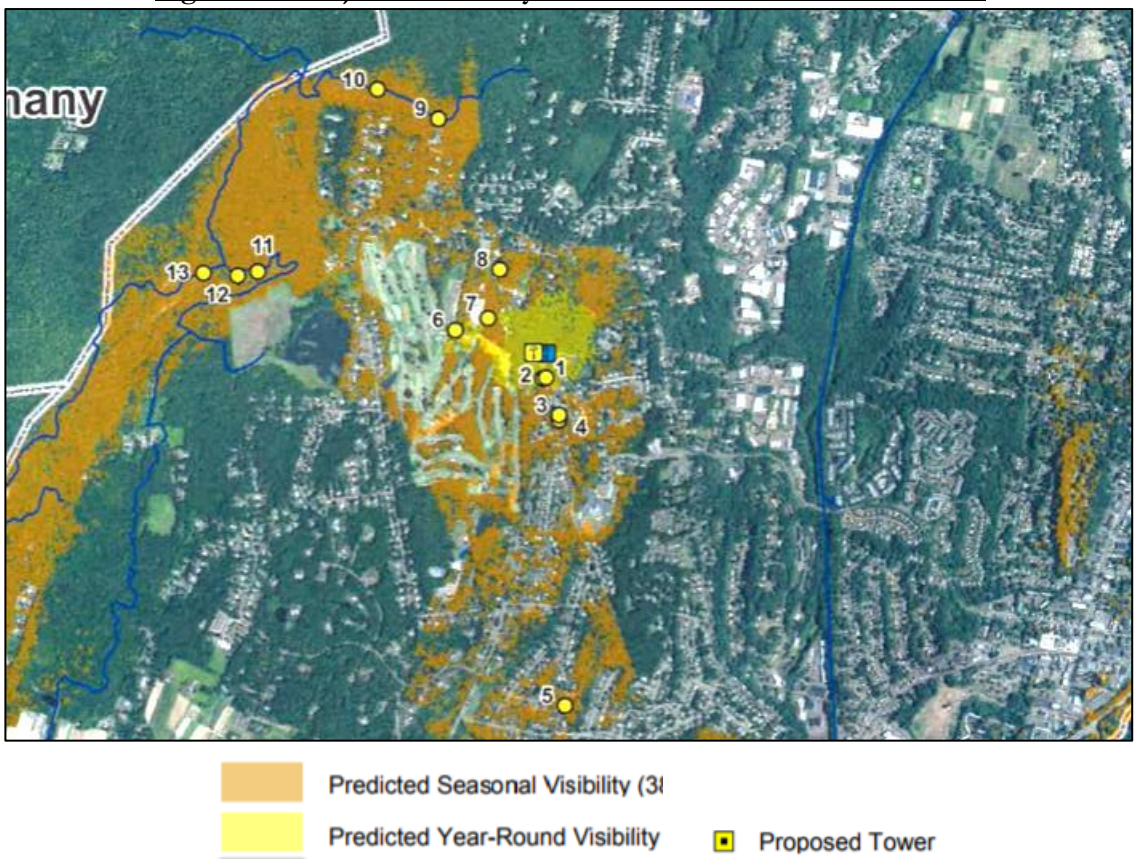


Figure 12 – Projected Visibility of Alternate Site 1 & Alternate Site 2



(Cellco 1, Tab 1; Cellco 9, Attachment 7)