DOCKET NO. 502 - 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 118 Newton Road, Woodbridge, Connecticut.	}	Connecticut
	}	Siting
	}	Council

December 16, 2021

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 May 13, 2021, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 100-foot monopole wireless telecommunications facility at 118 Newton Road, Woodbridge, Connecticut (refer to Figure 1). (Cellco 1, p. 1)

2. Cellco is a Delaware Partnership with an administrative office located at 20 Alexander Drive, Wallingford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service in the State of Connecticut. (Cellco 1, p. 2)

3. The parties in this proceeding are Cellco and the Town of Woodbridge (Town). The Intervenor and CEPA Intervenor to the proceeding is the Woodbridge Newton Neighborhood Environmental Trust (WNNET). The Party and CEPA Intervenor to the proceeding are Ochsner Place, LLC (OP), Mark Greengarden, and Michele Greengarden (Greengarden). (Record)

4. On July 13, 2021, the Council grouped the following parties and intervenors with the same interests pursuant to CGS §16-50n(c): WNNET, OP and Greengarden. (Council Memoranda dated July 14, 2021; Transcript 1 – July 13, 2021- 2:00 p.m. [Tr. 1], pp. 8-9)

5. The purpose of the proposed facility is to provide reliable wireless communications services for Cellco customers in a portion of the northern section of Woodbridge. (Cellco 1, pp. 6-7, Attachment 6)

6. Pursuant to C.G.S. § 16-50*l* (b), Cellco provided public notice of the filing of the application that was published in the New Haven Register on May 11 and May 12, 2021. (Cellco 1, p. 3; Cellco 2)

7. Pursuant to C.G.S. § 16-50*l* (b), notice of the application was provided to all abutting property owners by certified mail on May 11, 2021. Certified mail receipts from two abutting property owners were not received. Cellco resent notice to these abutters by First Class mail. One of the two confirmed receipt of the first class mail notice. (Cellco 1 p. 3, Attachment 4; Cellco 4, Response 1)

8. On May 11, 2021, Cellco provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50*l* (b). (Cellco 1, p. 3, Attachment 2)

Procedural Matters

9. On March 10, 2020, Governor Lamont issued a Declaration of Public Health and Civil Preparedness Emergencies, proclaiming a state of emergency throughout the state as a result of the COVID-19 pandemic. (Council Administrative Notice Item No. 55)

10. On March 12, 2020, Governor Lamont issued Executive Order No. (EO) 7 ordering a prohibition of large gatherings, among other orders and directives. (Council Administrative Notice Item No. 55)

11. On March 14, 2020, and as subsequently extended, Governor Lamont issued EO 7B ordering suspension of in-person open meeting requirements of all public agencies under CGS §1-225. The Freedom of Information Act defines "meeting" in relevant part as "any hearing or other proceeding of a public agency." (Council Administrative Notice Item No. 55, CGS §1-200, et seq. (2019))

12. EO 7B allows public agencies to hold remote meetings provided that:
    a) The public has the ability to view or listen to each meeting or proceeding in real-time, by telephone, video, or other technology;
    b) Any such meeting or proceeding is recorded or transcribed and such recording or transcript shall be posted on the agency's website within seven (7) days of the meeting or proceeding;
    c) The required notice and agenda for each meeting or proceeding is posted on the agency's website and shall include information on how the meeting will be conducted and how the public can access it any materials relevant to matters on the agenda shall be submitted to the agency and posted on the agency's website for public inspection prior to, during and after the meeting; and
    d) All speakers taking part in any such meeting shall clearly state their name and title before speaking on each occasion they speak.

    (Council Administrative Notice Item No. 55)

13. On March 25, 2020, and as subsequently extended, Governor Lamont issued EO 7M allowing for an extension of all statutory and regulatory deadlines of administrative agencies for a period of no longer than 90 days. (Record; Council Administrative Notice Item No. 55)

14. Upon receipt of the application, the Council sent a letter to the Town on May 14, 2021, as notification that the application was received and is being processed, in accordance with C.G.S. § 16-50gg. (Record)

15. Local zoning regulations do not apply to facilities under the exclusive jurisdiction of the Council. Pursuant to CGS §16-50x, the Council has exclusive jurisdiction over telecommunications facilities throughout the state. It shall consider any location preferences provided by the host municipality under CGS §16-50gg as the Council shall deem appropriate. (CGS §16-50x (2021))

16. During a regular Council meeting on June 3, 2021, the application was deemed complete pursuant to Regulations of Connecticut State Agencies (R.C.S.A.) § 16-50*l*-1a and the public hearing schedule was approved by the Council. (Record)

17. Pursuant to Governor Lamont's EO 7B, as extended. and C.G.S. § 16-50m, on June 4, 2021, the Council sent a letter to the Town to provide notification of the scheduled public hearing via Zoom conferencing and to invite the municipality to participate. (Record)

18. Pursuant to Governor Lamont's EO 7B, as extended, and C.G.S. § 16-50m, the Council published legal notice of the date and time of the remote public hearing via Zoom conferencing in the New Haven Register on June 10, 2021. (Record)

19. In compliance with Governor Lamont's EO 7 prohibition of large gatherings, the Council's Hearing Notice did not refer to a public field review of the proposed site. (Record)

20. Field reviews are neither required by statute nor an integral part of the public hearing process. The purpose of a site visit is an investigative tool to acquaint members of a reviewing commission with the subject property. (Council Administrative Notice Item Nos. 57 and 58; Tr. 1, p. 12)

21. On June 3, 2021, the Council issued a Protective Order related to the disclosure of the monthly rent and financial terms contained within the lease agreement for the proposed site, pursuant to CGS §1-210(b) and consistent with the Conclusions of Law adopted in Docket 366. (Record)

22. On June 9, 2021, in lieu of an in-person field review of the proposed site, the Council requested that Cellco submit photographic documentation of site-specific features into the record intended to serve as a "virtual" field review of the site. On June 30, 2021, Cellco submitted such information in response to the Council's interrogatories. (Record; Cellco 4, Response 37)

23. On June 16, 2021, the Council held a pre-hearing teleconference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists and filing of pre-hearing interrogatories. Procedures for the remote public hearing via Zoom conferencing were also discussed. (Council Pre-Hearing Conference and remote hearing procedure Memoranda, dated June 8, 2021)

24. Consistent with R.C.S.A. § 16-50j-21, Cellco installed two four-foot by six-foot signs in the vicinity of the proposed site; one along Newton Road and the other near the proposed access drive off Soundview Drive. The signs presented information regarding the project and the Council's public hearing. Due to a delay in material delivery, the signs were posted on July 7, 2021 less than 10 days prior to the July 13, 2021 public hearing. (Cellco 5; Tr. 3, pp. 12-13; Tr. 5, pp. 7-9; Record)

25. The only notice of constitutional dimension is notice of the hearing. It does not extend to notice of a pre-hearing application. (*Mobley v. Metro Mobile CTS of Fairfield County, Inc.*, 216 Conn. 1 (1990); Tr. 5, pp. 7-9)

26. Parties do not have standing to raise a lack of notice to any other party. (*Mobley v. Metro Mobile CTS of Fairfield County, Inc.*, 216 Conn. 1 (1990); Tr. 5, pp. 7-9)

27. The Council's project evaluation criteria under CGS § 16-50p does not include the consideration of property values nor is the Council otherwise obligated to take into account the status of property values. (CGS §16-50p (2021); *Westport v. Conn. Siting Council*, 47 Conn. Supp. 382 (2001), affirmed, 260 Conn. 266 (2002); *Goldfisher v. Conn. Siting Council*, 2005 Conn. Super. LEXIS 306 (2005), affirmed, 95 Conn. App. 193 (2006)) *Westport v. Conn. Siting Council*, 47 Conn. Supp. 382 (2001); Tr. 1, p. 7; Tr. 3, p. 6; Tr. 4, p.6; Tr. 5, p.5)

28. Pursuant to C.G.S. § 16-50m, the Council gave due notice of a remote public hearing to be held on July 13, 2021, beginning with the evidentiary session at 2:00 p.m. and continuing with the public comment session at 6:30 p.m. via Zoom conferencing. The Council provided information for video/computer access or audio only telephone access. (Council's Hearing Notice dated May 25, 2021; Tr. 1, p. 1; Transcript 2 – July 13, 2021, 6:30 p.m. [Tr. 2], p. 108)

29. EO 7B expired on June 30, 2021. Public Act (PA) 21-2 took effect on July 1, 2021. Section 149 permits public agencies to hold remote meetings under FOIA and the Uniform Administrative Procedure Act until April 30, 2022. (Council Administrative Notice Item No. 54 and 55).

30. In compliance with Governor Lamont's EO 7B and PA 21-2:
    a) The public had the ability to view and listen to the remote public hearing in real-time, by computer, smartphone, tablet or telephone;
    b) The remote public hearing was recorded and transcribed, and such recording and transcript were posted on the Council's website on July 14, 2021 and July 22, 2021; August 31, 2021 and September 15, 2021; September 21, 2021 and September 29, 2021; and October 19, 2021 and November 8, 2021, respectively;
    c) The Hearing Notice, Hearing Program, Citizens Guide for Siting Council Procedures and Instructions for Public Access to the Remote Hearing were posted on the agency's website;
    d) The record of the proceeding is available on the Council's website for public inspection prior to, during and after the remote public hearing; and
    e) The Council, parties and intervenors provided their information for identification purposes during the remote public hearing.

    (Hearing Notice dated May 25, 2021; Tr. 1; Tr. 2; Record)

31. The Council continued the remote evidentiary hearing session via Zoom conferencing on August 31, 2021 beginning at 2:00 p.m., September 21, 2021 beginning at 2:00 p.m., and on October 19, 2021 beginning at 2:00 p.m. (Council's Continued Hearing Memos dated July 14, September 1, and September 22, 2021; Transcript 3- August 31, 2021 – 2:00 p.m. [Tr. 3], p. 1; Transcript 4- September 21, 2021– 2:00 p.m. [Tr. 4] p. 1; Transcript 5- October 19, 2021– 2:00 p.m. [Tr. 5] p. 1)

32. During the September 21, 2021 evidentiary hearing session, upon a motion by Cellco, the Council struck the testimony of WNNET witnesses George Logan and Sigrun Gadwa from the August 31, 2021 Evidentiary Hearing Transcript and WNNET Exhibit 5 from the evidentiary record due to the failure of these witnesses to appear at the September 21, 2021 evidentiary hearing session for cross examination. WNNET did not object to Cellco's Motion to Strike. (Council Continued Evidentiary Hearing memo dated September 22, 2021; Tr. 4, pp. 59, 73-74)

State Agency Comment

33. Pursuant to C.G.S. § 16-50j (g), on June 4, 2021, 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)

34. On June 8, 2021, the Council received comments from the CAA[1]. The CAA comments are addressed in the Public Safety section of this document. (Record)

35. On August 6, 2021, the Council received correspondence from DOT, stating that it had no comments regarding the proposed project. (Record)

36. No other state agencies responded with comment on the application. (Record)

[1] TO: Parties & Intervenors (ct.gov) (CAA comments)

37. While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies. (*Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)).

Municipal Consultation

38. Pursuant to CGS § 16-50*l*(f), Cellco commenced the 90-day pre-application municipal consultation process by submitting a technical report to the Town on July 17, 2020 for a 140-foot tower facility. On July 28, 2020 Cellco responded to questions from the Town regarding the application. (Cellco 1, p. 21)

39. On October 22, 2020, at the request of the Town, Cellco hosted a Virtual Public Information Meeting (VPIM). Notice of the VPIM was published in the New Haven Register and was mailed to project abutters. (Cellco 1, p. 21)

40. The VPIM was attended by approximately 70 people including Town officials, Cellco representatives and the general public. (Cellco 4, response 2)

41. Concerns expressed at the VPIM included, but were not limited to, visual impact of the 140-foot tower, health effects from radio frequency emissions, placement of the tower within a residential area, and alternative sites. Additional comments were received after the VPIM. (Cellco 1, p. 21; Cellco 4, response 2)

42. Based on community concerns Cellco investigated other potential sites in Woodbridge and examined the tower height and tower visibility. Cellco determined that the other potential sites in the Woodbridge area would not meet coverage objectives. (Cellco 1, p. 7, Attachment 8; Cellco 4, response 2)

43. To address visibility concerns of the proposed tower, Cellco reduced the proposed tower height from 140 feet to 100 feet prior to submitting the application to the Council. A 100-foot tower at the site would meet most of the coverage objectives while reducing the area of year-round tower visibility from 18 acres to 11 acres. (Cellco 1, pp. 1-2, 7; Cellco 4, response 2; Tr. 5, pp. 65-66)

44. On May 26, 2021, the Council received a comment letter from State Senator James Maroney, State Senator Jorge Cabrera, and State Representative Mary Welander requesting that Cellco find an alternative location for the tower. (Record)

45. On June 21, 2021, the Council received a comment letter from Senator Richard Blumenthal stating that an alternative location should be found to avoid impacts to residential neighborhoods. (Record)

46. On August 23, 2021, the Council received a comment letter from Congresswoman Rosa L. DeLauro, requesting that the Council work with the Town to find an alternative location for the tower to reduce impacts to residential neighborhoods. (Record)

Public Need for Service

47. 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)

48. 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 personal wireless communication service to New London County, Connecticut. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Cellco 1, p. 6 and Tab 5)

49. 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)

50. 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)

51. 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)

52. 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)

53. 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 resources and maintaining resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11 –Presidential Proclamation 8460, Critical Infrastructure Protection)

54. In February 2012, Congress adopted the Middle Class Tax Relief and Job Creation Act (also referred to as the Spectrum 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)

55. 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 Administrative Notice Item No. 12 – Presidential

Executive Order 13616, Accelerating Broadband Infrastructure Development; Council Administrative Notice Item No. 23 – FCC Wireless Infrastructure Report and Order)

56. Pursuant to Section 6409(a) of 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. (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 23 – FCC Wireless Infrastructure Report and Order)

57. In June 2020, the FCC issued a declaratory ruling that heights of existing towers located outside of the public right-of-way could increase by up to 20 feet plus the height of a new antenna without constituting a substantial change in the physical dimensions of a tower. (Council Administrative Notice Item No. 27)

58. In November 2020, the FCC issued an order that ground excavation or deployment up to 30 feet in any direction beyond the site boundary of existing towers located outside of the public right-of-way does not constitute a substantial change in the physical dimensions of a tower (Council Administrative Notice Item No. 28)

59. 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)

60. On June 4, 2021, the Council sent correspondence to other telecommunications carriers requesting that carriers interested in locating on the proposed facility in the foreseeable future to notify the Council by July 6, 2021. No carriers responded to the Council's solicitation or have contacted Cellco regarding co-location on the proposed facility. (Cellco 4, response 25; Tr. 1, p. 102; Record)

61. The facility would be designed to accommodate a total of four wireless carriers (including Cellco), the Town and local emergency service providers. (Cellco 1, Attachment 1)

62. The Town did not express an interest in co-locating emergency services antennas on the tower. (Tr. 1, pp. 46-47)

Cellco's Existing and Proposed Wireless Services

Existing Service

63. Cellco designs its network using a -95 dB Reference Signal Received Power (RSRP) standard for reliable in-vehicle service and -85 dB RSRP standard for reliable in-building service. Outdoor coverage is at -105 dB RSRP. (Cellco 1, Attachment 6; Tr, 1pp. 24-25; Tr. 5, pp. 12-14)

64. Currently, Cellco provides wireless service to Woodbridge from 12 existing facilities (9 towers and 3 small cells). Two of the existing tower facilities are located in the southern portion of Woodbridge (77 Pease Road and 50 Woodfield Road) with the remainder located in surrounding towns, including Seymour, New Haven, Hamden, Ansonia and Bethany. (Cellco 1, pp. 6-7, 9-10, Attachment 8)

65. Cellco currently has a significant reliable wireless service deficiency in its communications network in the northern section of Woodbridge particularly in the Route 63, Route 67, Route 114, Newton Road, and Prospect Hill areas. A coverage plot at 700 MHz (refer to Figure 2) indicate that the existing coverage in the proposed service area is a mix of in-vehicle coverage and outdoor coverage refer to Figure 2. There is no 2100 MHz service in the area (refer to Figure 4). (Cellco 1, p. 7, Attachment 6; Tr. 1, pp. 24-25; Tr. 5. pp 13-14)

66. For the 700 MHz and 850 MHz frequencies, Cellco lacks reliable service in an approximate one-mile radius around the proposed site. (Cellco 9, Response 16)

67. Cellco conducted a drive test in the Woodbridge area in September 2020. The drive test measures actual network performance, as opposed to a coverage model of existing service which is based on calculations. The drive test is conducted with a phone in a vehicle that travels through Cellco's service areas. (Cellco 10, LFE 1; Tr. 1, pp. 25-26; Tr. 4, pp. 91-92)

68. The September 2020 drive test indicates non-reliable service occurs on Route 67, Route 63 and Newton Road. (Cellco 4, Response 22, Ex. 4)

69. Cellco has received 45 complaints in the last 2 years regarding substandard service in the Woodbridge area (40 residential, 5 in-vehicle). The complaints reinforce Cellco's coverage modeling and drive test data which indicate deficient service. (Cellco 10, LFE 10; Tr. 3, pp. 16, 37-40)

70. To address customer complaints in the short term, Cellco has deployed network extenders in approximately 30 area residences. The network extenders are devices attached to an internet connection that are typically used to provide Cellco services to residences that have no usable signal within the home. (Tr. 1, pp. 26-27, 72-73)

Proposed Service

71. Cellco would locate at the 100-foot level of the proposed facility. Cellco would designate the site as the Woodbridge N2 facility. (Cellco 1, Attachment 1)

72. Cellco's wireless service objectives for the site include increasing the amount of reliable in-vehicle service on area roads, increasing reliable in-building wireless service and deploying additional frequencies to serve the area. (Cellco 1, Attachment 6; Tr. 1, pp. 27-28; Tr. 5, p. 19)

73. Cellco would deploy 700 MHz, 850 MHz, 1900 MHz, 2100 MHz, 3700 MHz wireless service at the site. All of the frequencies transmit voice and data services. Cellco's network hands off customers seamlessly between frequencies for cell site load balancing. Refer to Figures 3 & 5 for 700 MHz and 2100 MHz proposed service coverage models. (Cellco 1, Attachment 6; Cellco 4, Response 19)

74. Coverage* provided by the proposed site is presented is the table below:

	Route 63	Route 114	Route 67	OVERALL
700 MHz	1.2 miles	1.9 miles	0.1 miles	5.45 square miles
850 MHz	1.2 miles	1.9 mile	0.1 miles	5.2 square miles
1900 MHz	0.25 miles	0.25 miles	0.0 miles	1.15 square miles
2100 MHz	0.15 miles	0.0 miles	0.0 miles	0.6 square miles

*The 3700 MHz coverage footprint was not provided.

(Cellco 8, LFE 7)

75. Cellco's proposed equipment installation would provide the following services;
- 4 G - 700 MHz, 850 MHz, 1900 MHz, 2100 MHz
- 5G – 850 MHz, 3700 MHz

The 2100 MHz band would eventually migrate to 5G. (Cellco 9, Response 12; Tr. 1, pp. 28, 69-70; Tr. 4, p. 100)

76. The proposed site is primarily designed to provide reliable service to the surrounding area. It is not being designed to relieve capacity at adjacent sites. None of the adjacent sites and/or sectors are currently at their capacity limits. (Cellco 1, response 20)

77. Reducing the tower height from 140-feet (pre-application) to 100 feet (as proposed) caused a coverage deficiency according to coverage models on Route 67 and adjacent areas west of the Route 63 intersection. Coverage models indicate there would be unreliable in-vehicle coverage to portions of Route 67 and unreliable in-building service to residential areas to the south of Route 67. (Cellco p. 7, Attachment 6; Cellco 4, response 21)

78. Cellco conducted a continuous wave (CW) test of coverage at 100 feet to confirm this tower height would provide adequate coverage to the Route 63 and Route 67 intersection and along Route 67 south of the intersection. Providing reliable service to the intersection is one of the objectives of the proposed site. (Cellco 9, response 9, response 17)

79. The CW test was conducted in March 2021 for the 700 MHz and 2100 MHz frequency by attaching a transmitter to a 100-foot crane at the site. The CW test is more accurate than a coverage model as it is designed to replicate what a customer would experience within the coverage footprint. (Cellco 9, response 17; Tr. 3, pp. 41-43)

80. Although Cellco mostly relies on propagation modeling to determine network coverage, in this instance, Cellco conducted the CW test to confirm the proposed site would provide reliable in-vehicle service to the Route 67- Route 63 intersection area, given the reduced tower height. The CW test (700 MHz) indicated that Route 63 has adequate coverage to Apple Tree Lane north of the intersection. Route 67 west of the intersection is partially covered - an approximate 0.3-mile coverage gap would occur between Rock Hill Road and Maplevale Drive. (Tr. 3, pp. 41-43, 59-62; Tr. 5, pp. 18-24, 36-39; Cellco 9, response 17; Council Administrative Notice No. 80)

81. Although not part of this application, Cellco proposes to install a small cell facility on an existing utility pole to serve the remaining coverage gap on Route 67, subject to an agreement with United Illuminating. The potential small cell would be able to serve the coverage gap along Route 67 as

well as adjacent areas to a distance of 600 feet from the small cell. Cellco would deploy 700 MHz service at the small cell because it travels the most distance from an antenna. (Tr. 3, pp. 26-28, 55)

Site Selection

82. Cellco issued a Site Acquisition Request Form (SARF) in May 2014 for a new site in northern Woodbridge with the objective of providing service to Route 63, Route 67 and surrounding residences. The SARF listed a preferred search ring centered near the Route 67-Route 63 intersection. The area is entirely residential. Cellco suspended the site search in 2015. (Cellco 1, Attachment 8; Cellco 9, Response 9; Town 3, Response 1)

83. Cellco resumed the site search in 2016. At this time the site search was shifted approximately 0.7 mile to the south, centered in the area of the Prospect Road -Newton Road intersection. The site search ring was shifted because none of the landowners in the initial search area were willing to lease property for tower development. (Cellco 1, Attachment 8; Tr. 3, pp. 67-68; Tr. 1, pp. 29-30

84. Prior to submission of the application to the Council, Cellco investigated 25 sites (refer to Figure 6) throughout north-central Woodbridge, in the southerly portions of Bethany, and the eastern portions of Seymour as follows:

1) **118 Newtown Road Woodbridge, CT (MBL# 1304/1240/18)** – a 6.0 acre parcel that Cellco selected as the proposed site through a lease agreement with the landowner, the Soufrine Family Trust.

2) **19 Soundview Drive, Woodbridge, CT (MBL# 1304/1740/19):** an 8.2-acre residential parcel owned by Jay Michael Soufrine located immediately west of the proposed tower site. The property owner was not interested in leasing space.

3) **16, 18, 20, 22 Soundview Drive, Woodbridge, CT (MBL# 1304/1740/18):** There are four recently subdivided residential parcels owned by Sanford and Betty Soufrine located immediately west of the proposed tower site. The owner was unwilling to lease space on any of these parcels for a tower site.

4) **South Central Connecticut Regional Water Authority (RWA) Property off Sperry Road, Litchfield Turnpike and Morris Road, Woodbridge, CT (MBL# 1002/1000/2060; 0904/1760/30; 0403/30/615):** The RWA owns three large tracts of land in the northeast corner of Woodbridge. Cellco identified and investigated six alternative tower locations on the RWA parcels. Each of these alternatives has a ground elevation that is between 63 and 228 feet lower than the proposed site and were rejected by RF design engineers. In addition, the properties are protected Class 1 & 2 watershed lands and permission from DPH would be required to develop a tower site.

5) **46 Burnt Swamp Road, Woodbridge, CT (MBL# 1403/260/46):** the parcel is subject to a conservation restriction that precludes tower development.

6) **Town's Public Works Garage Area Meetinghouse Lane, Woodbridge, CT (MBL# 1704/1115/7):** an 8.86-acre parcel adjacent to Town Hall owned by the Town. The parcel is currently used for recreational purposes (ball fields and tennis courts) and the Town Department of Public Works maintenance and storage facility. The ground elevation at this parcel is 169 feet lower than the proposed site and was rejected by RF design engineers.

7) **Woodbridge Park Association Inc., 7 Meeting House Lane, Woodbridge, CT (MBL#1704/1115/7):** Cellco investigated three different areas on this 103-acre undeveloped, open space parcel owned by the Town Park Association. The locations were rejected by RF

design engineers.

8) **44 Dillon Road, Woodbridge, CT (MBL# 1403/260/46):** a 7.73-acre parcel owned by Adam Ferguson. Cellco investigated three alternative locations on this parcel, each between 77 feet and 102 feet lower in ground elevation that the proposed site. Each of these locations were rejected by Cellco's RF design engineers.

9) **Woodbridge Transfer Station Acorn Hill Road, Woodbridge CT (MBL# 0701/10/85):** This is a 60.53-acre parcel owned by the Town and is used as the Town's transfer station. The parcel is located approximately 1.8 miles northwest of the 118 Newton Road site and has a ground elevation that is approximately 130 feet lower than the proposed site. This site was rejected by Cellco's RF Engineers.

10) **14 Seymour Road, Woodbridge, CT (MBL# 0903/1690/14):** an 11.37-acre parcel owned by Michael and Stephine Sutch at the southwest corner of Amity Road and Seymour Road. Cellco attempted to reach the parcel owners, via certified mail, on two occasions regarding their interest in leasing a portion of the property for a tower site. The owners did not respond to either letter.

11) **Laticrete International Inc. 91 Amity Road, Bethany, CT. (Bethany MBL# 113-70):** A 19-acre parcel located approximately 1.93 miles north of the proposed site and was suggested by a Woodbridge resident during the Public Information Meeting on October 22, 2020. This location is too far to the north to satisfy Cellco's wireless service objective in Woodbridge and was rejected by RF Engineers.

12) **Elderslie Preserve, 150 North Racebrook Road, Woodbridge CT (MBL# 1301/1210/150):** The Elderslie Preserve consists of two parcels totaling approximately 265-acre, owned by the Town. The parcels are subject to conservation restrictions that preclude tower development.

13) **1 Center View Road, Woodbridge CT (MBL#1703/340/1):** A 2.11-acre parcel used for single family residential purposes. The parcel is located approximately 1.2 miles southwest of the proposed site and has a ground elevation that is between 80 and 100 feet lower than proposed site. This site was rejected by Cellco's RF Engineers.

14) **378 Amity Road, Woodbridge CT (MBL# 1804/30/378):** A 1.4-acre parcel used for commercial/retail purposes. This parcel is located approximately 1.4 miles south of the proposed site and has a ground elevation approximately 210 feet lower than the proposed site. This site was rejected by Cellco's RF Engineers.

15) **639 Amity Road, Bethany, CT (MBL# 117-2A):** This is a 1.5-acre parcel located approximately 4.6 miles north of the proposed site. This site is located too far to the north to satisfy Cellco's service objectives.

16) **22 Old Amity Road, Bethany CT (MBL# 119-10):** A 1.23-acre parcel located approximately 2.3 miles north of the proposed site. This parcel is located too far to the north to satisfy Cellco's service objectives.

17) **33 Old Amity Road, Bethany, CT (MBL# 119-5):** A 3.66-acre parcel located approximately 2.3 miles north of the proposed site. This parcel is located too far to the north to satisfy Cellco's service objectives.

18) **23 Sanford Road, Woodbridge, CT (MBL# 0304/1760/23):** a 3.05-acre undeveloped parcel owned by the Town. This parcel is located nearly 1.4 miles north of the proposed site. This parcel is located too far to the north to satisfy Cellco's service objectives.

19) **35 Sanford Road, Woodbridge, CT (MBL# 0304/1670/35):** This is a 44.15-acre undeveloped parcel owned by the Town. This parcel is located nearly 1.4 miles north of the proposed site. This parcel is located too far to the north to satisfy Cellco's service objectives

20) **282 Seymour Road Woodbridge, CT (MBL#0201/1690/282):** This is a 20.33-acre undeveloped parcel owned by the Town. This parcel is located approximately 2.4 miles northwest of the proposed site and is less than a mile from Cellco's existing Woodbridge North facility at 12 Progress Avenue in Seymour, Connecticut. A facility at this location would not satisfy Cellco's service objectives and provide service that is redundant to that provided by an adjacent, existing Cellco facility located at 12 Progress Avenue in Seymour.

21) **136 New Haven Road Seymour, CT (MBL#1-05-19A-0):** a 1.36-acre undeveloped parcel that is located approximately 2.7 miles northwest of the proposed site. This location would not satisfy Cellco's service objectives.

22) **268 Newton Road, Woodbridge, CT (MBL# 0304/1240/268):** a 3.57-acre undeveloped parcel located approximately 1.4 miles north of the proposed site, abutting the Woodbridge – Bethany town line. This location would not satisfy Cellco's service objectives.

23) **377 Newton Road, Woodbridge, CT (MBL# 0304/1240/377):** a 2.01-acre undeveloped parcel located approximately 1.5 miles north of the proposed site. This location would not satisfy Cellco's service objectives.

24) **259 Seymour Road Woodbridge, CT (MBL#_0202/1690/259):** a 6.18-acre residential parcel owned by the Town located approximately 2.2 miles northwest of the proposed site and less than a mile from Cellco's existing facility at 12 Progress Avenue in Seymour. A facility at this location would not satisfy Cellco's service objectives and would provide service that is redundant to that provided by Woodbridge North.

25) **300 Bear Hill Road, Bethany, CT (MBL# 107/1B):** a 3.75-acre parcel owned by the Town of Bethany (Bethany Volunteer Fire Department). This parcel is located approximately more than 3.0 miles northwest of the proposed site. A facility at this location would not satisfy Cellco's wireless service objectives.

(Cellco 1, Attachment 8; Cellco 4, Responses 6 & 9; Cellco 7, Response 39; Town 3; Tr. 1, pp. 39-40)

85. Several parcels owned by the Town were examined by Cellco at the request of the Town, area residents, and the Council. All of the parcels are subject to conservation restrictions held by the Woodbridge Land Trust (WLT) which would preclude tower development. The parcels are located at 46 Burnt Swamp Road, 150 North Racebrook Road, 211 & 220 Peck Road, 23 Sanford Road, 35 Sanford Road, 282 Seymour Road, and 31 Enoch Drive. In addition, Cellco discussed a WLT property at 584 Amity Road with WLT but the WLT was not receptive due to its location as an interior lot in a residential community. (Cellco 7, Response 39; Town 3, Responses 2, 3, 5, 6 & 7)

86. An existing 170-foot tower at 1990 Litchfield Turnpike in Woodbridge is two miles east of the proposed site. The highest available tower height is 145 feet above ground level (agl) The site would not be able to provide service to the proposed coverage area. (Cellco 8, LFE 9)

87. An existing Cello facility is located on West Rock Ridge in Hamden (1055 Wintergreen Avenue), approximately 2.5 miles southeast of the proposed site. This existing facility offers very little coverage to the proposed site service area as it only served the southern/eastern portion of Woodbridge in the Route 15 and Route 63 area. This facility would be decommissioned by Cellco as it was primarily replaced by a new facility on Woodin Street in Hamden (Hamden Relo site). The Hamden Relo site would not provide coverage to the proposed service area. (Cellco 1, Attachment 6; Cellco 4, Response 24Tr. 1, pp. 55-57; Tr. 4, pp. 111-112; Tr. 5, p. 31)

88. The Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility nor shall the Council be limited in any way by the applicant having already acquired land or an interest therein for the purpose of constructing a facility. (Corcoran v. Connecticut Siting Council, 284 Conn. 455 (2007); CGS §16-50p(g)(2019))

4 & 15 Meetinghouse Lane

89. The Town indicated it would consider leasing space on Town property at 4 Meetinghouse Lane (police station) or at 15 Meetinghouse Lane/149 Center Street (public works department) for a tower site, subject to Board of Selectmen approval and if no legal impediments exist. (Town 3, response 1; Tr. 4, pp. 15-16, 26)

90. The 4 Meeting House Lane property is within the Woodbridge Green Historic District. The Town property at 11,15,17 Meetinghouse Lane (one parcel) is partially within the historic district. The Town Public Works area on this parcel, known as 15 Meetinghouse Lane, is not within the historic district (Cellco 11, Att. 4)

91. At the 4 Meeting House Lane property, an existing 90-foot tall communications tower is located on the south side of the police station facing Route 114. Cellco initially did not examine this tower due to its location outside of their search ring (approximately 0.9 miles south) and the Town suggested a new tower be placed at the adjacent 15 Meetinghouse Lane parcel. (Cellco 11, Att. 4; Tr. 1, pp. 101; Tr. 5, p. 35)

92. Cellco performed coverage modeling at 4 Meetinghouse Lane at 120 feet using a ground elevation of 355 feet above mean sea level (amsl). Coverage modeling at 700 MHz indicates there would be deficient in-vehicle service along Route 63 north and south of the Route 67 intersection, along Route 67 west of the intersection and in adjacent areas. (Cellco 11, Att. 4)

93. The 15 Meetinghouse Lane property and the adjacent parcel to the west at 149 Center Street, consist of the Town's Public Works facility and recreation areas. Both Cellco and WNNET performed coverage studies in the parking lot area of the Public Works Department. (Cellco 11, Att. 4; WNNET 4; WNNET 6)

94. Due to slight differences in elevation data for areas with slopes, some of the coverage models were performed at 305 feet amsl (Cellco) or at 315 feet (WNNET). The elevation differences would not significantly affect the coverage model results. (Tr. 4, pp. 38-41, 95-96)

95. Cellco's coverage model (700 MHz) at 140 feet from 15 Meetinghouse Lane depicts deficient in-vehicle service along Route 63 north and south of the Route 67 intersection, along Route 67 west of the intersection and in adjacent areas. WNNET's coverage model (700 MHz) at 140 feet from 15 Meetinghouse Lane depicts similar deficient coverage (refer to Figure 7A & 7B). (Cellco 11, Att. 4; WNNET 4)

96. WNNET performed an 800 MHz CW test at 15 Meetinghouse Lane at transmitter crane heights of 120 feet and 150 feet, at an approximate ground elevation of 315 feet amsl. The crane test for 150 feet shows in-vehicle coverage (-85 to -95 dBm) on Route 63 north and south of the Route 67 intersection. Coverage on Route 67 west of the intersection is shown as -105 to -95 dBm. Coverage on Route 63 north of the intersection is primarily shown as -105 to -95 dBm. (WNNET 6)

97. WNNET's CW test used an omnidirectional antenna with no post-processing of the obtained data to replicate actual wireless service. Cellco states that by not post-processing of data into three sectors, only optimistic coverage would be shown. (Tr. 4, pp. 77, 99-100)

98. Cellco's CW test of the proposed site was conducted in a low band (750 MHz) and in a high band (2100 MHz) to determine if the proposed site at 100 feet would be acceptable. Cellco uses a high and low band in their network for carrier aggregation, a process where Cellco would combine the data it receives onto both the high and low frequencies. The CW test at 100 feet at the proposed site confirmed 2100 MHz service would extend to the south by one mile, including but not limited to, Route 63, and the Amity Regional High School and Meetinghouse Lane areas. Coverage in the 2100 MHz band would also extend to over a mile to the east and west and 0.5 mile to the north. (Cellco 9, Response 17; Tr. 4, pp. 96-100; Tr. 5, pp. 40-45)

99. Cellco's proposed site would offer more coverage to the proposed service area than a site at Meetinghouse Lane because Meetinghouse Lane is at a much lower elevation (approximately 130 feet lower) and 0.9 miles south of the proposed site. Additionally, the proposed site is near the center of the coverage need area whereas the Meetinghouse Lane area is on the southern periphery of the coverage need area. (Cellco 1, Attachment 6 Attachment 1; Cellco 4, Response 10; Tr. 4, pp. 39-40, 96-99)

100. The proposed site allows for the even distribution of network traffic among three antenna sectors. The Meetinghouse Lane area is at the at the edge of the proposed service area and would not be able to effectively deploy three antenna sectors, and therefore would not be effective from a site capacity standpoint. (Tr. 4, pp. 96-98; Tr. 5, p. 52)

101. Cellco did not conduct a CW test from the Meetinghouse Lane area as it was at a significantly lower elevation than the proposed site. Cellco's coverage models from the police station and public works locations indicated the site would not provide service to the Route 63-Route 67 intersection. Cellco typically does not perform CW testing due to the accuracy of their coverage models. Cellco only performed the CW test at the proposed site prior to submission of the application to the Council to verify if the proposed 100-foot tower would meet most of Cellco's initial coverage objectives (provided by a 140-foot tower). (Cellco 1a; Cellco 1, Attachment 6; Tr. 3, p. 43; Tr. 5, pp. 51-52)

102. WNNET stated that the coverage models submitted by Cellco at various times during the proceeding are inconsistent because they show differing coverage footprints for existing service and their existing coverage drive test results are different than what is shown on their existing coverage models. (WNNET 6; Tr. 4, pp. 55-57, 65-69)

103. The differences in Cellco's coverage plots for existing service is attributed to Cellco upgrading their network by installing different antennas and/or radios on adjacent sites. When a coverage model of existing service is generated, Cellco uses the most recent existing service footprints based on their current network. Although the differences are slight, the existing service coverage models consistently show a need for a site in this area. (Tr. 4, pp. 90-92; 102-104; Tr. 5, pp. 27-31)

104. The drive test of existing coverage is more accurate than a coverage model, therefore differences would occur between the two. Coverage models can have an error factor of 8 to 10 dBs when compared to a drive test. Drive test errors are related to the accuracy of the testing equipment and could be around 1 dB. (Tr. 5, pp. 73-74)

Small Cells

105. Installing numerous small cells in lieu of a tower facility to provide coverage to the entire proposed service area is not feasible. Although a detailed analysis was not performed, approximately 20 to 30 small cells would be required to serve the area. (Cellco 4, Response 11; Tr. 1, pp. 82-83)

106. Small cells would have to be located on existing or new utility poles. There is a lack of existing utility poles in the service area that would be suitable to support wireless infrastructure. Existing poles within the area are encumbered by utility infrastructure such as transformers and powerlines. New poles would have to be installed where no suitable poles exist. (Cellco 4, Response 11; Tr. 3, pp. 28-31)

107. Small cells do not have space for a backup power source in the event power is lost in the area, such as during a storm event. (Cellco 4, Response 11; Tr. 3, pp. 29-30, 62-63)

108. Small cell equipment at each pole would include an antenna, a radio near the antenna, a meter box, cabling and the fiber connection to the pole. Typically, the public utility that owns the pole would limit the amount of infrastructure installed on each pole, usually one antenna and one radio. Cellco cannot provide all of their frequencies on a small cell installation. (Tr. 3, pp. 30, 54-55)

109. A single small cell installation would cost approximately $70,000 to $75,000. The cost to install 20-30 small cells to provide reliable service to the proposed service area would be $1.4 to $2.5 million. (Cellco 8, LFE 2; Tr. 1, pp. 82-83)

110. Cellco mostly uses small cells to enhance capacity in areas served by a tower facility. If power is lost to an area, the small cell will be out of service and the tower facility would run on backup power. Although service may be degraded due to the loss of capacity from the small cell, useable service would still be provided. (Tr. 3, pp. 53-54, 62-63)

111. Cellco operates approximately 400 small cell facilities in Connecticut, of which, 98 percent are used for capacity enhancement and 2 percent are used for coverage. (Cellco 9, Response 5)

112. For this area, a small cell would be deployed to provide service to a small area of deficient coverage on Route 67. Cellco is willing to accept this compromise in coverage reliability to reduce the tower height by 40 feet. (Cellco 4, Response 11; Tr. 1. pp. 62-63)

113. If Cellco installed a tower facility at either Meetinghouse Lane location, more than 4 small cells would be required to meet coverage objectives in the Route 67 and Route 63 area. (Tr. 3, pp .71-72)

114. There are no commercial properties in the Route 67 -Route 63 area to host rooftop small cells. The area is entirely residential. (Cellco 8, LFE 3; Tr. 4, pp. 117-118)

115. There are several Distributed Antenna Systems (DAS) in Massachusetts and Pennsylvania that operate in residential areas. The number of nodes for these systems range from 2 to 70. (WNNET 6)

116. A DAS in Lower Merion Township, PA, is operated by Crown Castle, and consists of 70 nodes. The DAS operates by mounting antennas to utility poles in the right of way as a communication link to the larger tower antennas in the region. The DAS is the preferred option by the Township to improve cell service and avoid the installation of new antenna towers. After DAS node construction, the Township approved subsequent modifications to the DAS that include increasing

the height of nodes by 15 feet and replacing cabinets and antennas with larger models. (WNNET 6)

117. There are no DAS systems in operation in Connecticut. The Council approved a DAS in November 2007 that was specifically designed to only serve the Merritt Parkway from the New York state line to Westport, Connecticut. The approved DAS consisted of 27 nodes and two base stations to provide wireless service to approximately 20 linear miles of the parkway. The Council approved the project with the condition that a Development and Management (D&M) Plan be submitted prior to construction. No D&M Plan was ever submitted. (Council Petition 809; Council Docket 488, Finding of Fact No. 92)

Facility Description

118. Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-2a(29), "Site" means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. (RCSA §16-50j-2a(29))

119. The proposed site is located on an approximate 6.0-acre parcel at 118 Newton Road in Woodbridge. The property has road frontage on Newton Road and at the end of a cul-de-sac on Soundview Drive. An undeveloped portion of Soundview Drive extends along the west property boundary. The proposed site location is depicted on Figure 8. (Cellco 1, p. 7; Attachment 1)

120. The subject property is in a Residence-A zone and is developed with a residence accessed from Newton Road. Open fields are located in the central and western portion of the property. A wooded area extends along the south side of the property. (Cellco 1, p. 19, Attachment 1)

121. Surrounding land use is zoned residential. Developed residential lots exist to the north, south and east of the host property. Undeveloped residential lots owned by the landowner are located to the west. (Cellco 1, p. 19, Attachment 1)

122. The proposed tower site is located at the edge of an open field in the southwest portion of the host parcel. (Cellco 1, Attachment 1)

123. The proposed tower is at an elevation of approximately 454 feet above mean sea level (amsl). (Cellco 1, Attachment 1)

124. The proposed facility would consist of a 100-foot monopole within a 100-foot by 100-foot leased area. The tower would be approximately 50 inches in diameter at the base, tapering to 24 inches at the top (refer to Figure 9). (Cellco 1, Attachment 1)

125. Cellco would install 12 panel antennas and 9 remote radio heads on an antenna platform at a centerline height of 100 feet agl. (Cellco 1, Attachment 1)

126. A 50-foot by 50-foot fenced equipment compound would be established at the base of the tower. Cellco would install a 16-foot by 16-foot concrete pad within the compound to support two equipment cabinets and an emergency generator. A propane tank would also be installed within the compound. (Cellco 1, Attachment 1)

127. The proposed equipment compound would be enclosed by an eight-foot high chain-link fence with a vehicle access gate. (Cellco 1, Attachment 1)

128. Access to the site would be from the end of the cul-de-sac. Access would follow an existing dirt road east along the property line for approximately 120 feet. From there, a new 12-foot wide, 246-foot long gravel drive would be constructed south through a field to the compound location (refer to Figure 10). (Cellco 1, Attachment 1)

129. The landlord prefers that the facility access road extend from the end of Soundview Drive, using the existing dirt road on the property rather than using the existing driveway that extends west from Newton Road as it passes between two residences on the parcel and is proximate to an underground septic system. Cellco could use the existing driveway for construction with consent from the landlord. (Cellco 7, response 38; Tr. 5, pp. 53-55)

130. Cellco does not anticipate the need for blasting at the proposed site. (Cellco 4, Response 12)

131. The site development footprint is approximately 16,000 square feet. (Cellco 4, Response 13)

132. Underground utilities would be installed to the compound along the access drive from a utility pole located at the end of Soundview Drive. (Cellco 1, Attachment 1)

133. The nearest property boundary from the proposed tower is approximately 64 feet to the west which is the undeveloped portion of Soundview Drive. The tower is 128 feet to the south property line, 291 feet to the north property line and 304 feet to the east property line. (Cellco 1, p. 20)

134. Cellco, with consent from the landowner, would be willing to relocate the tower on the host parcel so that the tower is equidistant from the abutting property lines (alternate tower location). At the alternate tower location, the tower would be 201 feet from the north and south property lines and 204 feet from the east and west property lines (refer to Figure 11). (Cellco 8, LFE 4)

135. There are approximately 32 residences within 1,000 feet of the proposed tower. The nearest residence is approximately 360 feet to the southwest at 15 Penny Lane. (Cellco 1, p. 15)

136. Site construction would commence following Council approval of a Development and Management Plan (D&M Plan) for the project and is expected take 6 weeks. Cell site integration and system testing would take an additional two weeks. (Cellco 1, p. 23)

137. Once operational, Cellco technicians would access the site less than once a month for regular maintenance visits. (Cellco 7, Response 7)

138. The estimated cost of the proposed facility is:

Tower	$50,000
Generator	$25,000
Cell Site and Radio Equipment	$150,000
Miscellaneous (site prep, utilities)	$20,000
Total Estimated Costs	**$425,000**

(Cellco 1, p. 23)

139. Cellco would recover the costs of the facility through customer subscriptions. (Cellco 4, Response 3)

Public Safety

140. 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)

141. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Cellco 1, pp. 5-6)

142. 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. 21 – FCC Text-to-911: Quick Facts & FAQs)

143. Cellco's proposed equipment installation would be capable of supporting text-to-911 service. (Cellco 4, response 28)

144. 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 enabled mobile devices to receive geographically-targeted, text 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)

145. Cellco's proposed equipment installation would provide WEA services. (Cellco 4, Response 30)

146. Pursuant to C.G.S. §16-50p(a)(3)(G), the towers would be constructed in accordance with the current governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code. (Cellco 4, Response 16)

147. The proposed tower would not require notice to the Federal Aviation Administration or constitute an obstruction or hazard to air navigation and therefore would not require any obstruction marking or lighting. (Cellco 1, p. 22)

148. In addition to the proposed compound fence, to prevent unauthorized access to facility components, the equipment cabinets would be equipped with silent intrusion alarms and the climbing pegs on the lower portion of the tower would be removed. (Cellco 4, Response 15)

149. The tower setback radius* would extend beyond the west property boundary, the undeveloped portion of Soundview Drive, by 36 feet. Cellco would be willing to design a tower yield point to ensure the tower setback radius remains within the boundaries of the subject property. The tower setback radius for the alternate tower location on the host parcel would be within the boundaries of the subject property. (Cellco 8, LFE 4; Tr 1, pp. 52-53)
*The horizontal distance equal to the tower height that extends radially from the center of the tower.

150. Operational noise from the facility is limited to the equipment cabinets (cooling fans) and emergency generator. Noise from the cabinet cooling fans is minimal (25.2 dBA) and would meet the Town residential noise ordinance of 61 dBA during the day and 51 dBA during the night. Noise from the emergency generator is exempt from DEEP Noise Control Regulations. (Cellco 4, Response 33)

151. Construction noise is exempt from the DEEP Noise Control Regulations §22a-69-1.8(g), which includes, but is not limited to, "physical activity at a site necessary or incidental to the erection, placement, demolition, assembling, altering, blasting, cleaning, repairing, installing, or equipping of buildings or other structures, public or private highways, roads, premises, parks, utility lines, or other property." (R.C.S.A. §22a-69-1.8(g))

152. The cumulative worst-case maximum power density from the radio frequency emissions from the operation Cellco's antennas is 17.7 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, pp. 17-18; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)
*This includes a 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Emergency Backup Power

153. 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. 51)

154. Consistent with the findings and recommendations of the Panel, and in accordance with C.G.S. §16-50*ll*, the Council, in consultation and coordination with DEEP, DESPP and 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. (Council Administrative Notice Item No. 33 – Council Docket No. 432)

155. Commercial Mobile Radio Service (CMRS) providers are licensed by and are under the jurisdiction and authority of the FCC. At present, no standards for backup power for CMRS providers have been promulgated by the FCC. Every year since 2006, AT&T, Sprint, T-Mobile, and Verizon have certified their compliance with the CTIA Business Continuity/Disaster Recovery Program and the Communications Security, Reliability and Interoperability Council standards and best practices to ensure network reliability during power outages. (Council Administrative Notice Item No. 33 – Council Docket No. 432)

156. For backup power, Cellco proposes a 30-kilowatt propane-fueled generator with an associated 500-gallon fuel tank for its own use. Cellco's proposed generator would provide approximately 5 to 7 days of run time before it requires refueling. The generator would be tested periodically. (Cellco 1, p. 22, Attachment 1; Cellco 4, response 27; Tr. 1, pp. 53-54)

157. Cellco would have battery backup system in order to avoid a "re-boot" condition during the generator start-up delay period. The battery backup system alone could provide up to 8 hours of backup power. (Cellco 4, Response 27)

158. The generator would be remotely tested once every 2 weeks to ensure proper operation. (Cellco 4, Response 33)

159. 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 DEEP Noise Control Regulations. (R.C.S.A. §22a-69-1.8)

160. 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, p. 22; R.C.S.A. §22a-174-3b)

Environmental Considerations

161. The Inland Wetlands and Watercourses Act (IWWA), CGS §22a-36, *et seq.*, contains a specific legislative finding that the inland wetlands and watercourses of the state are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed, and the preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the citizens of the state. (CGS §22a-36, et seq.)

162. The IWWA grants regulatory agencies with the authority to regulate upland review areas in its discretion if it finds such regulations necessary to protect wetlands or watercourses from activity that will likely affect those areas. (CGS §22a-42a)

163. The IWWA forbids regulatory agencies from issuing a permit for a regulated activity unless it finds on the basis of the record that a feasible and prudent alternative does not exist. (CGS §22a-41)

164. There are no wetlands adjacent to the site. The nearest wetland is located approximately 830 feet south of the proposed facility. (Cellco 1, p. 20)

165. The site is mostly level, but some grading would be required to create the access road and compound area. (Cellco 1, Attachment 1)

166. The site area slopes to the south-southeast, away from properties on Soundview Drive. Two catch basins are located on the Soundview Drive cul-de-sac. No construction is planned on the paved portion of Soundview Drive. An access way into the host property exists at the end of Soundview Drive. (Cellco 1, Attachment 1; Tr. 4, pp. 75-76)

167. The proposed project would be constructed consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. (Cellco 1, Attachment 1)

168. The proposed site is not located within the Federal Emergency Management Agency designated 100-year or 500-year flood zones. (Cellco 1, pp. 20-21)

169. The site is not located within a state-designated aquifer protection area. (Council Administrative Notice 75)

170. WNNET submitted a Preliminary Review report, prepared by REMA Ecological Services (dated August 23, 2021 and authored by George Logan and Sigrun Gadwa), of the potential environmental impact of the proposed facility. The report and related testimony provided by Mr. Logan and Ms. Gadwa at the August 31, 2021 evidentiary hearing session was stricken from the evidentiary record on September 21, 2021 due to the unavailability of these witnesses for cross examination during the September 21, 2021 evidentiary hearing session. (Council Continued Evidentiary Hearing memo dated September 22, 2021; Tr. 4, pp. 59, 73-74)

171. The proposed facility is not located within a DEEP Natural Diversity Database buffer area. (Cellco 1, p. 16)

172. Several trees with a diameter of six inches or greater at breast height would be removed to develop the compound area for the proposed tower location. No trees would be removed to develop the alternate tower location. (Cellco 1, Attachment 1; Cellco 8, LFE 4; Tr. 1, p. 67)

173. 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 within 0.25 miles and 150-feet, respectively, of the proposed site. The U.S. Fish and Wildlife Service (USFWS) determined that the proposed facility would not have an impact on the NLEB. (Cellco 1, Attachment 10)

174. The nearest Important Bird Area to the proposed site is West Rock Ridge located 1.9 miles to the east. (Cellco 4, Response 32)

175. The proposed facility would comply with the USFWS guidelines for minimizing the potential for telecommunications towers to impact bird species. (Cellco 1, p. 16)

176. No resources listed on the State or National Register of Historic Places were identified within 0.5 mile of the proposed site. Cellco would file a historic resources report with SHPO as part of the FCC National Environmental Policy Act review process. (Cellco 1, Attachment 12)

177. The site and the adjacent developed residential properties are mapped as prime farmland soil. (Cellco 1, Attachment 13)

Visibility

178. Cellco used a combination of predictive computer models, in-field analysis, and a review of various data sources to evaluate the visibility of the proposed facility on both a quantitative and qualitative basis. (Cellco 1 Attachment 9)

179. On March 10, 2021, Cellco conducted a crane test and field reconnaissance at the proposed tower site. The crane test consisted of attaching a brightly colored flag to a crane boom and raising it to a height of approximately 140 feet as this was the height initially contemplated prior to submission of the Application to the Council. Weather conditions were favorable. (Cellco 1 Attachment 9)

180. Prior to the crane test, Cellco flew a balloon at the proposed site (date unknown) to simulate the height of the 140-foot tower. (Tr. 3, p. pp34-37)

181. Information obtained during the field reconnaissance was incorporated into mapping data layers, including observations of the field reconnaissance, photo-simulation locations, areas that experienced land use changes, and places where the initial modeling was found to over- or under-

predict visibility to produce a predictive viewshed map for areas within a two-mile radius (8,042 acres) of the site (Study Area). (Cellco 1, Attachment 9)

182. The final Study Area viewshed map depicts areas where year-round and seasonal visibility (leaf-off conditions) could occur within a two-mile radius of the site, based on computer modeling, aerial imagery review and in-field observations from publicly-accessible locations. Photographs towards the tower location are also shown. (Cellco 1, Attachment 9)

183. Based on the final viewshed analysis (refer to Figure 12), the proposed tower would be visible year-round from approximately 11 acres, or 0.13% of the Study Area). The tower would be seasonally visible (leaf-off conditions) from approximately 39 acres, or 0.48% of the Study Area. (Cellco 6; Tr. 1, p. 20)

184. Year-round and seasonal views of portions of the facility would occur primarily from an area within 0.25 mile of the site. This area includes residential parcels along Penny Lane, Newton Road and Soundview Drive. (Cellco 6)

185. Within the 0.25-mile area, approximately 8 residences, including the landlords, would have year-round views of upper portions of the facility. (Cellco 1, Attachment 8; Cellco 4, Response 35)

186. The entire facility would be visible from the southern portion of Soundview Drive. (Cellco 1, Attachment 8; WNNET 5)

187. Mr. Greengarden took several photographs of the 140-foot crane test on March 10, 2021 from his abutting property to the north at 15 Soundview Drive and from the Soundview Drive roadway. Several large pine trees are located between the 15 Soundview Drive driveway and the property line. Some of the pine trees have a sparse branching pattern, allowing the proposed tower to be visible year-round from the Greengarden property. (WNNET 3; Tr. 3, pp. 86-87)

188. A photo-simulation of the tower from the abutting property to the south at 110 Newton Road indicated the upper half of the tower would be visible year-round. (WNNET 5; Tr. 3, pp. 92-93)

189. Cellco provided ten photo-simulations of a "monopine" tower, a tower that appears as an evergreen tree with simulated branches to conceal the antennas and a portion of the upper monopole. The photo-simulations were developed from existing condition photographs/monopole photo-simulations from the visibility analysis conducted for the proposed site. Several of the photographs of existing Study Area conditions show existing evergreen trees. (Cellco 7, Response 43)

190. Branching patterns for a monopine design are based on customer specifications. A typical antenna platform extends out to 6 feet from the tower. Faux branching would have to extend for 7-8 feet to conceal the antennas. The monopine photo-simulations did not have a tapered, conical top. If a conical top was designed, it would extend to a height of five to seven feet above the top of the 100-foot tower. (Tr. 1, pp. 43-35; Tr. 3, pp. 31-32)

191. Antennas can be painted or covered with a RF transparent sock to match the color of the monopine branching. (Tr. 1, pp. 45-46)

192. A monopine design would increase the cost of the project by $100,000. (Cellco 8, LFE 6)

193. No compound screening is proposed. A chain link fence with privacy slats or a wood fence could be installed to screen the compound area. (Tr. 1, pp. 48-49)

194. Relocation of the site to the alternate tower location on the property would increase the distance of the tower from the 110 Newton Road property by 73 feet and decrease the distance to the 15 Soundview Drive property by 91 feet. The tower would be 201 feet from both property lines. (Cellco 8 LFE 4; Tr. 3, p. 94)

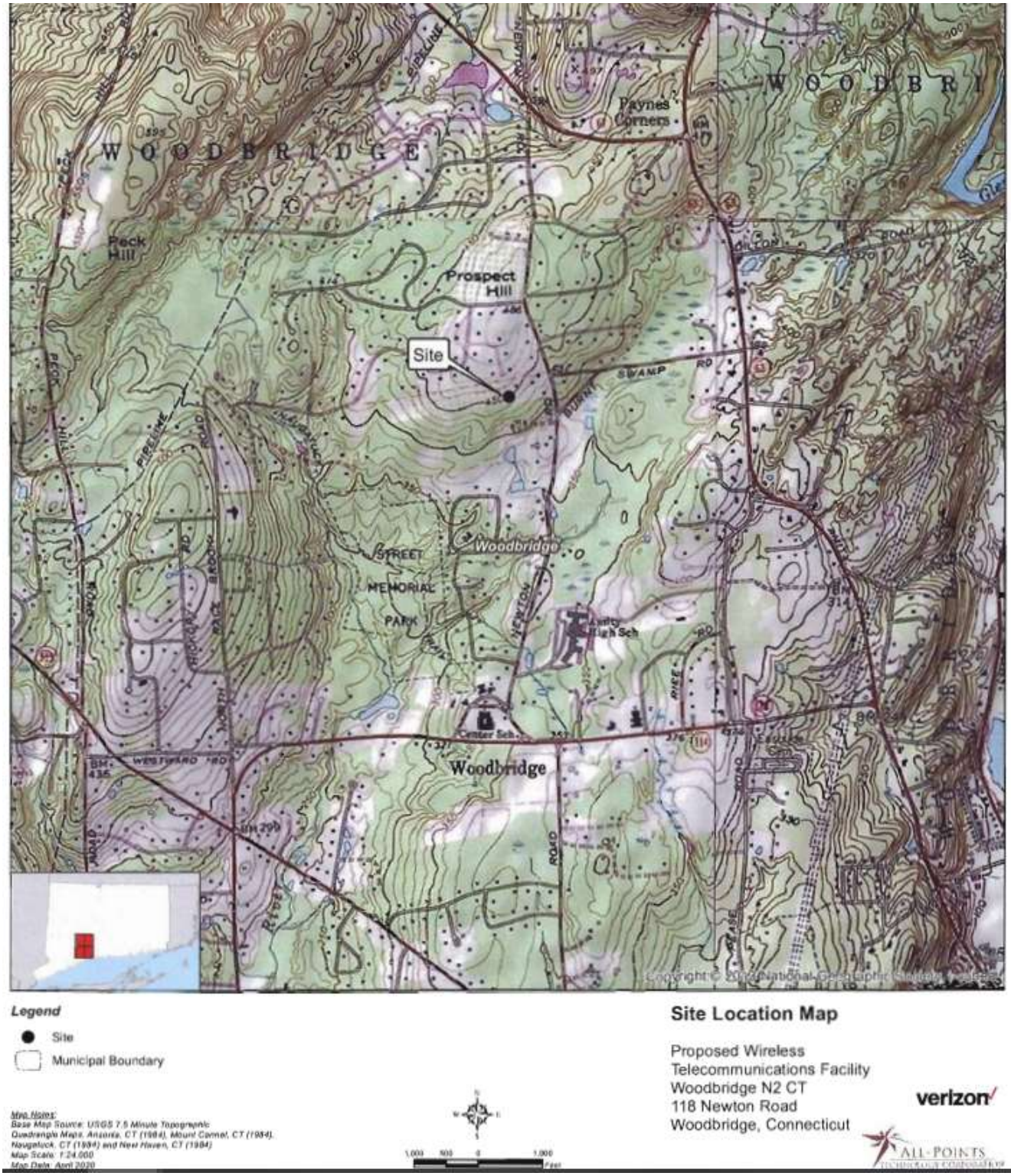
195. Relocation of the tower would make the tower appear larger from the end of the Soundview Drive cul-de-sac and along Newton Road. (Tr. 3, pp. 33-34; 65-66)

196. There are no state or locally-designated scenic roads located within the two-mile study area. (Cellco 1, Attachment 8; Town 3, Response 11)

197. Pursuant to CGS §16-50p(a)(3)(F), no public schools or commercial child day care facilities are located within 250 feet of the site. The nearest building containing a school or commercial day care is the Amity Regional High School, located approximately 0.7 mile south of the site. A portion of the tower may be visible from a ballfield on the school property. (Cellco 1, Attachment 9)

198. There are no "blue-blazed" hiking trails maintained by the Connecticut Forest and Park Association within two-miles of the site. Numerous hiking trails on Town, land trust and other properties are located within two-miles of the site but no visibility of the tower is expected from these areas. (Cellco 1, Attachment 9)

Figure 1 – Site Location – Topographic Map



(Cellco 1, p. i)

Figure 2 – Cellco Existing 700 MHz Coverage

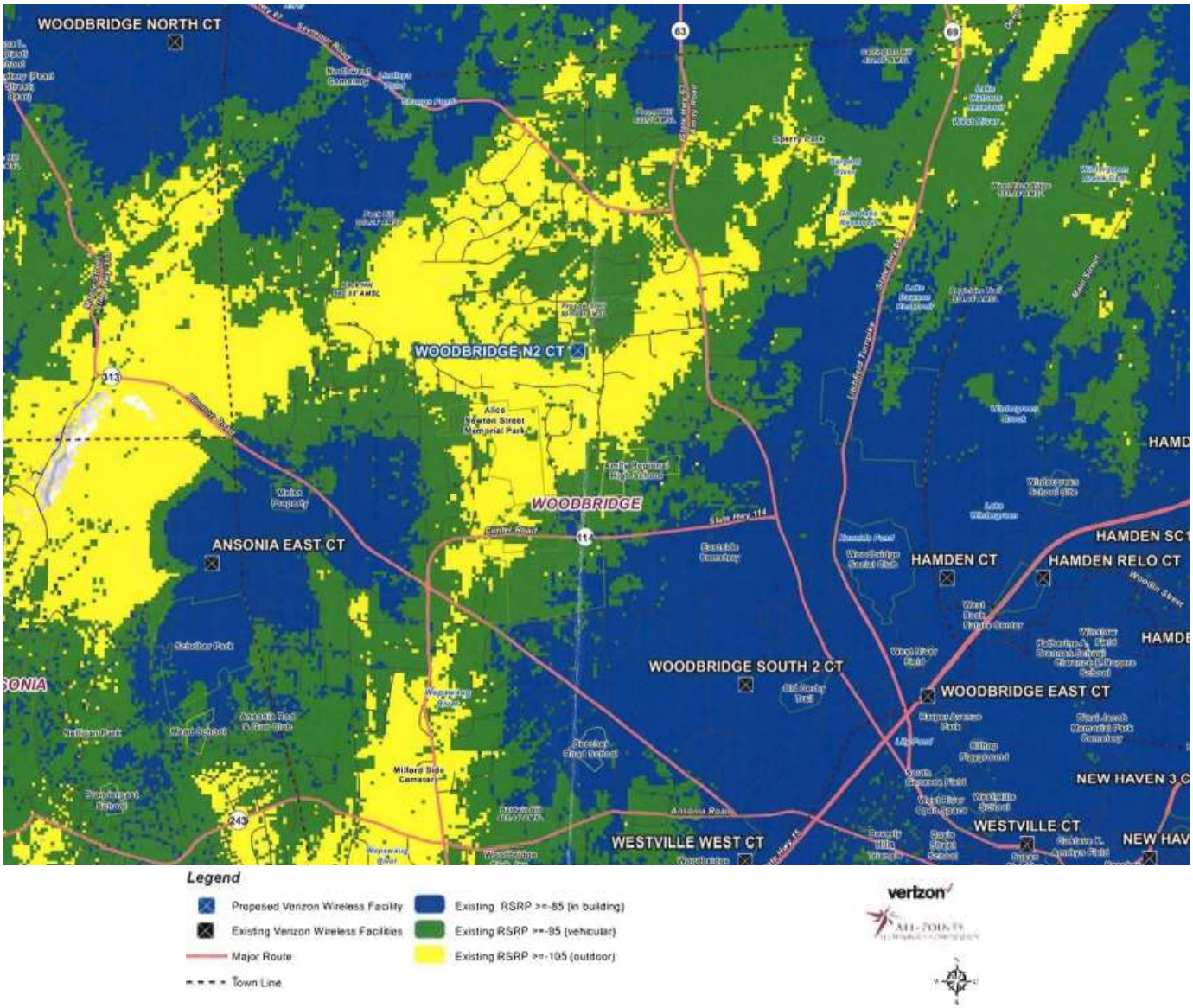


Figure 3 – Cellco Proposed 700 MHz Coverage

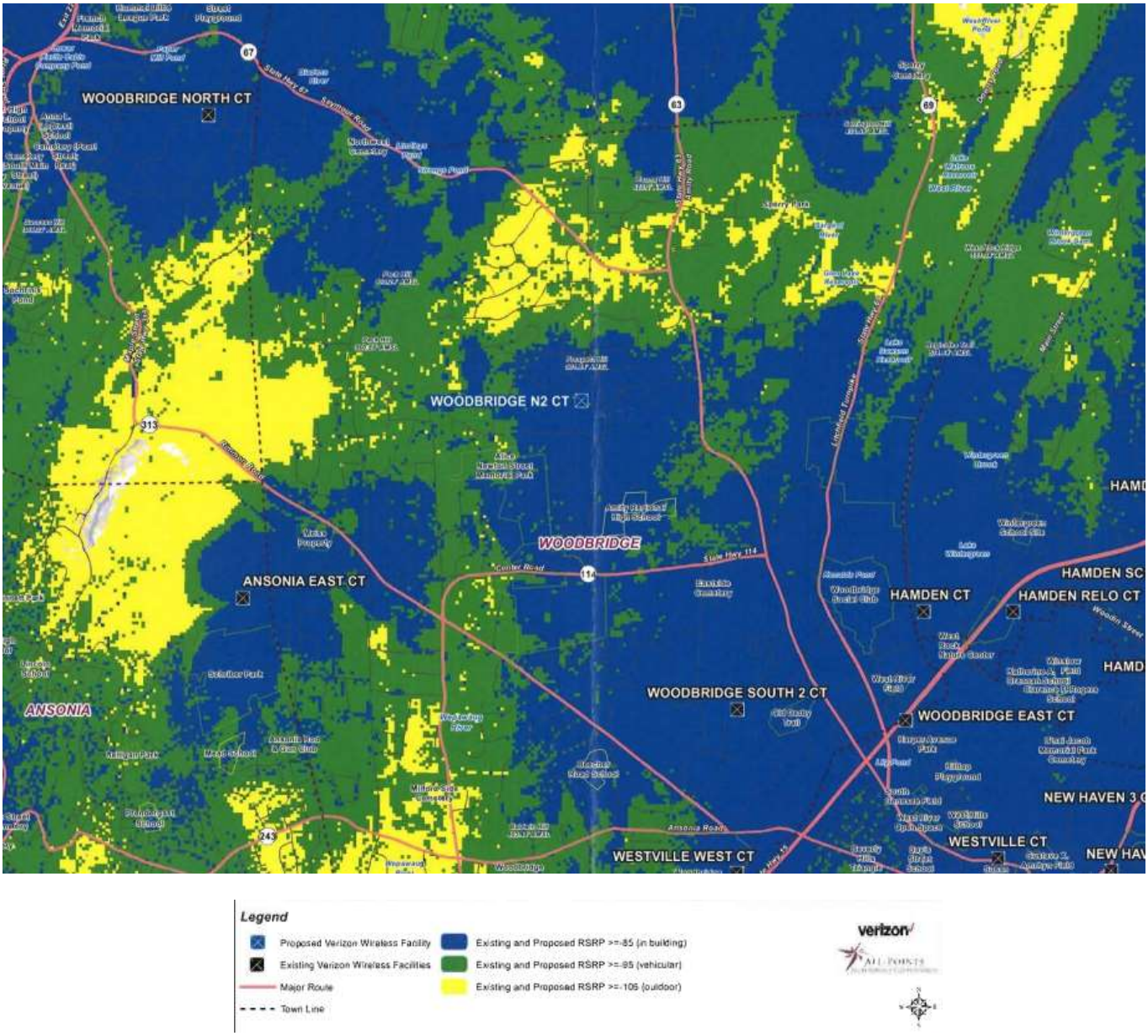


Figure 4 – Cellco Existing 2100 MHz Coverage

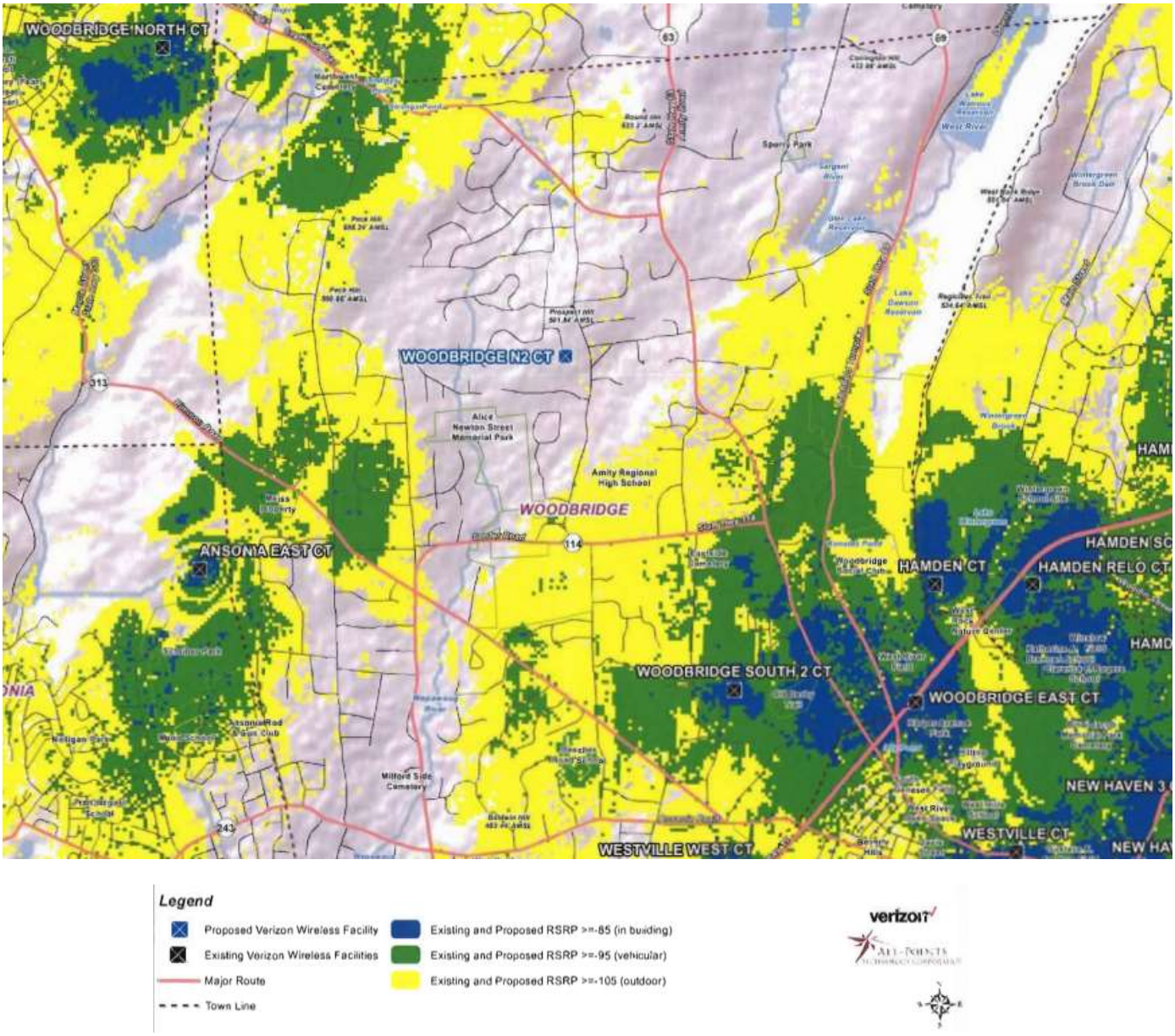


Figure 5 – Cellco Proposed 2100 MHz Coverage

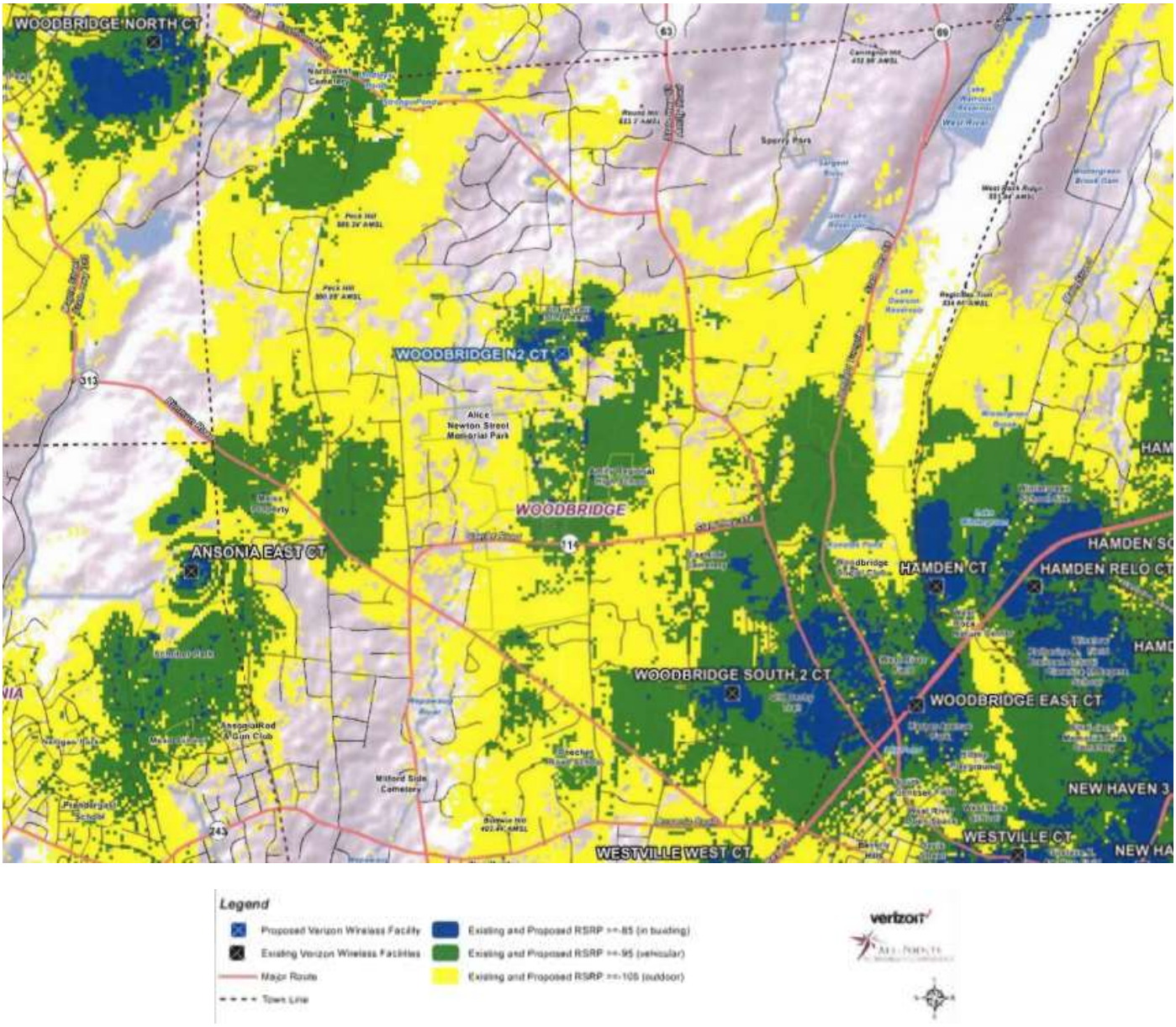
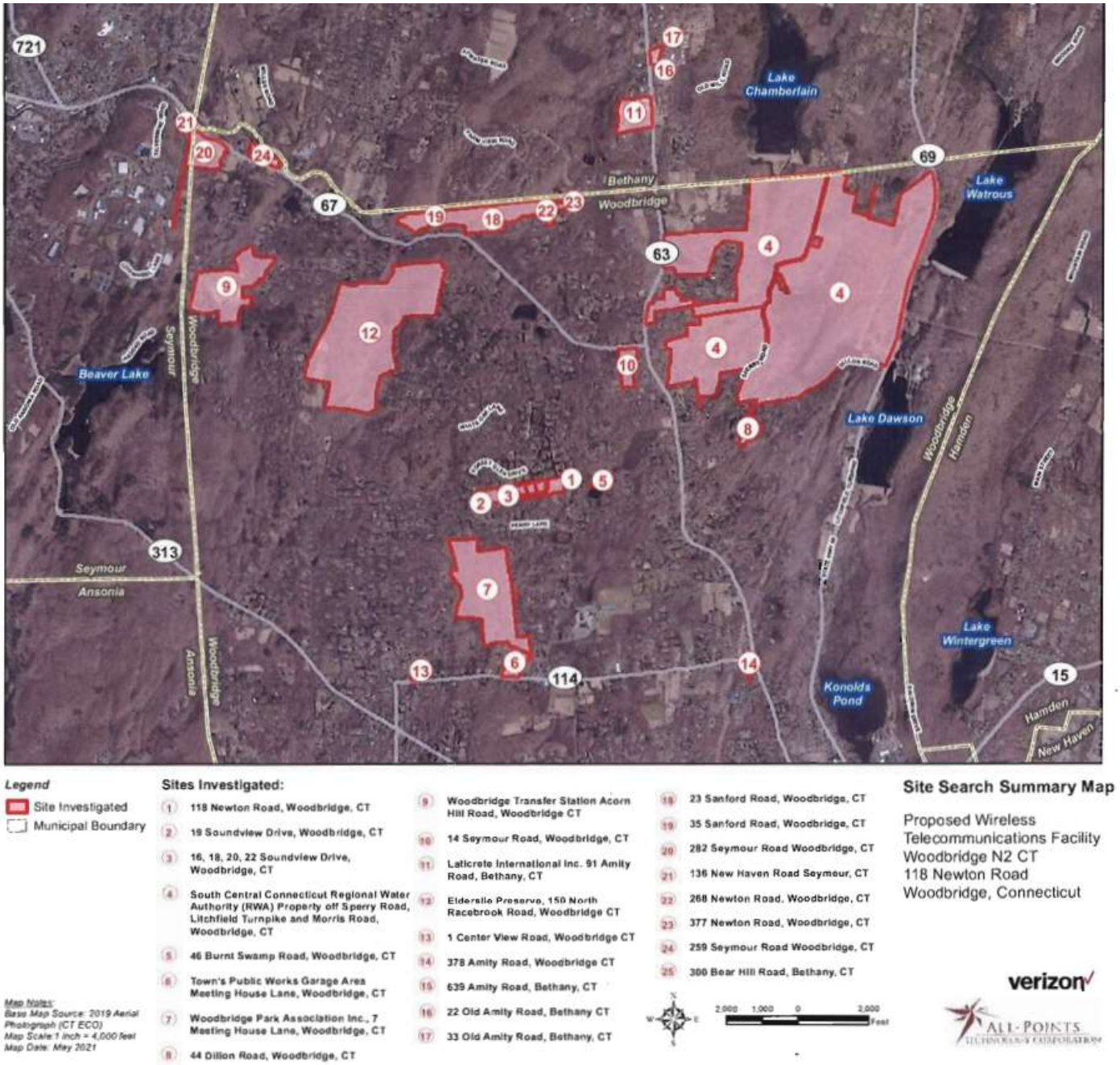


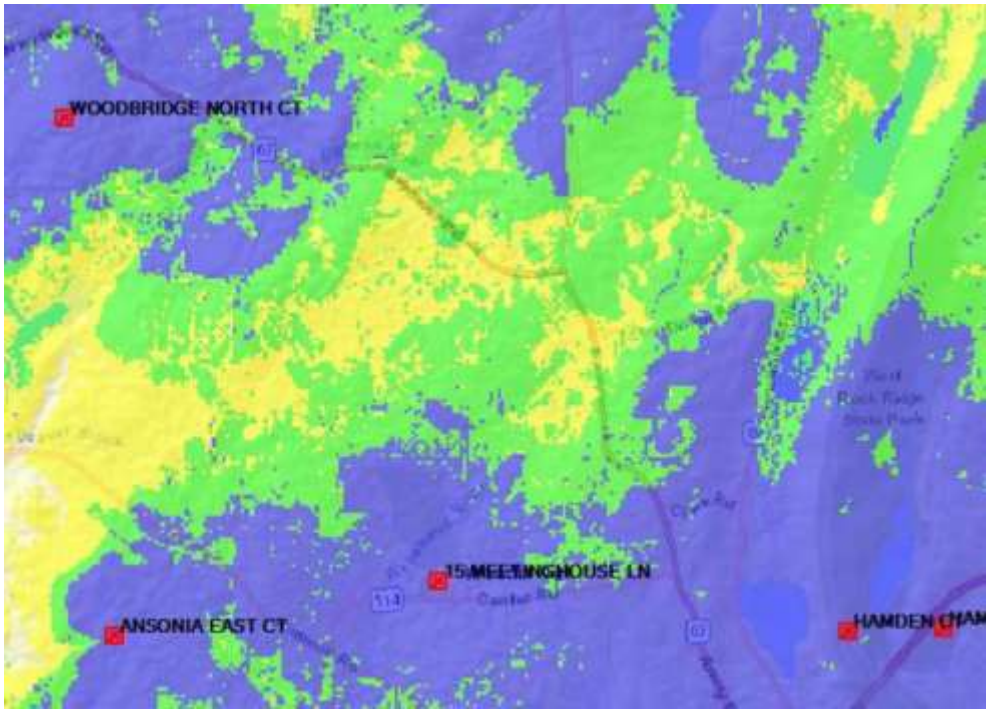
Figure 6 – Site Search Summary Map



1 is the proposed site. #6 is 15 Meetinghouse Lane.

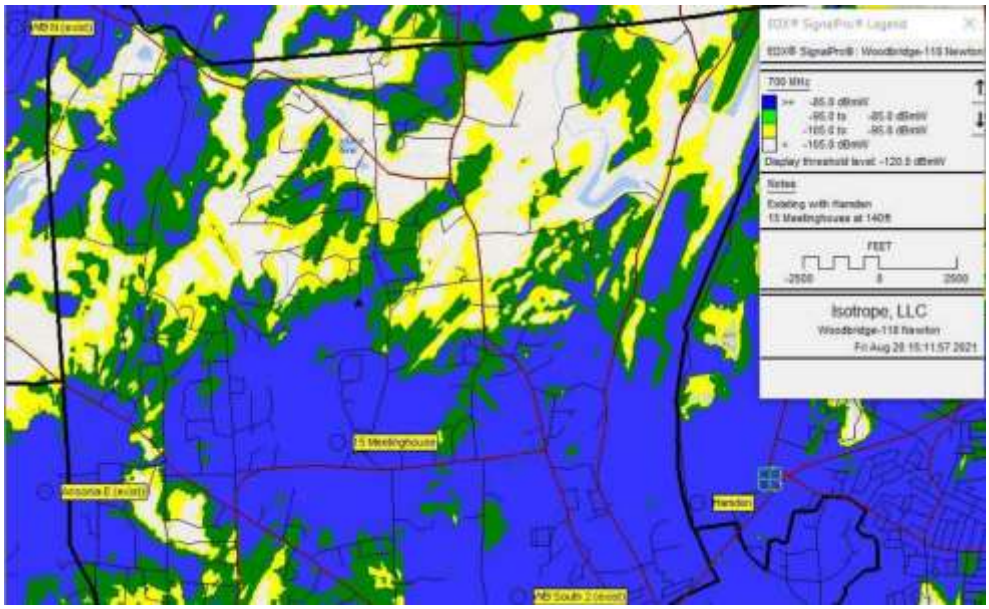
(Cellco 1, Attachment 8)

Figure 7A– Cellco 700 MHz Coverage Model from 15 Meetinghouse Lane at 140 feet



(Cellco 11, LFE3**)**

Figure 7B– WNNET 700 MHz Coverage from 15 Meetinghouse Lane at 140 feet

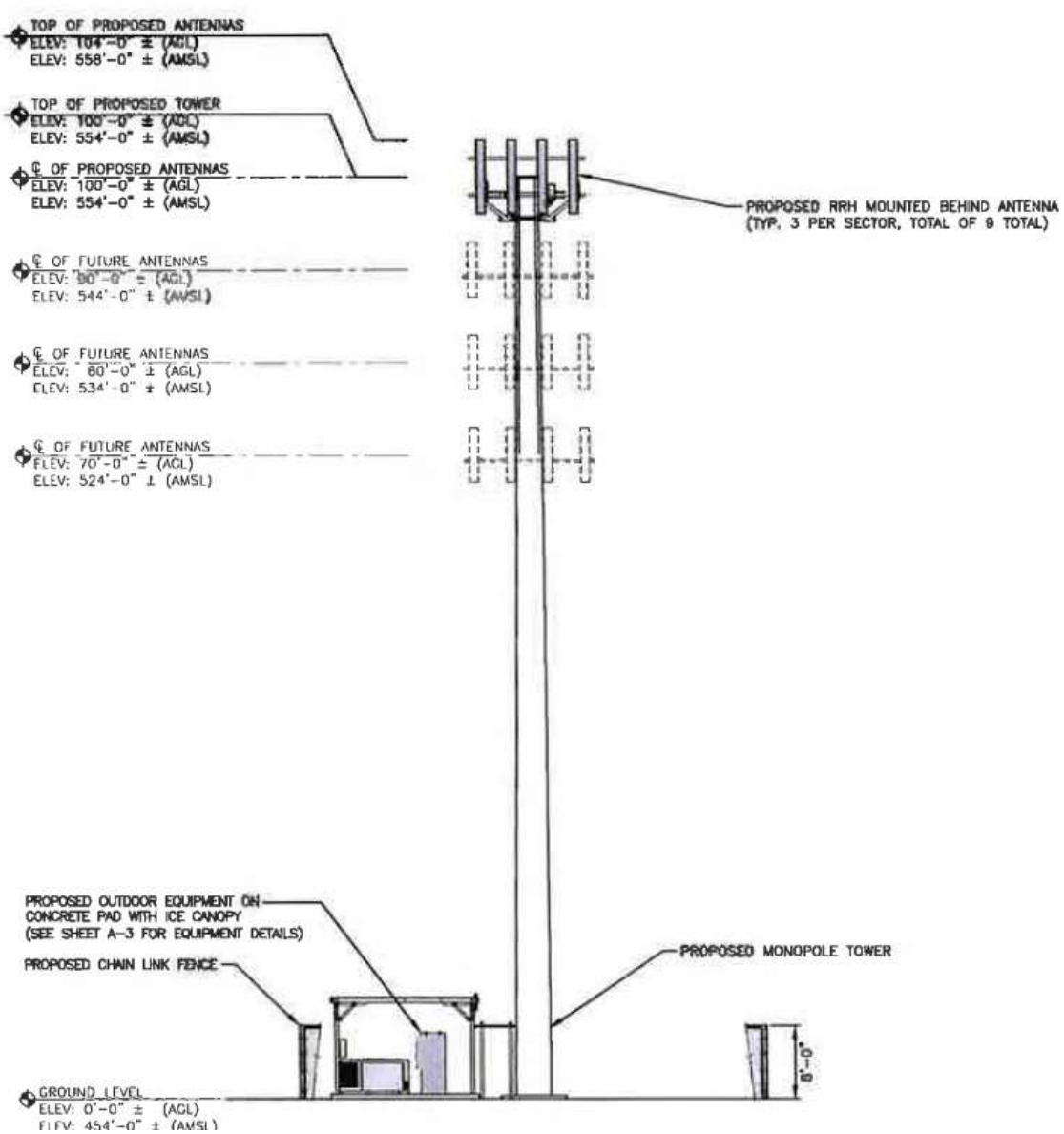


(WNNET 4)

Figure 8 – Proposed Site Location – Aerial Image

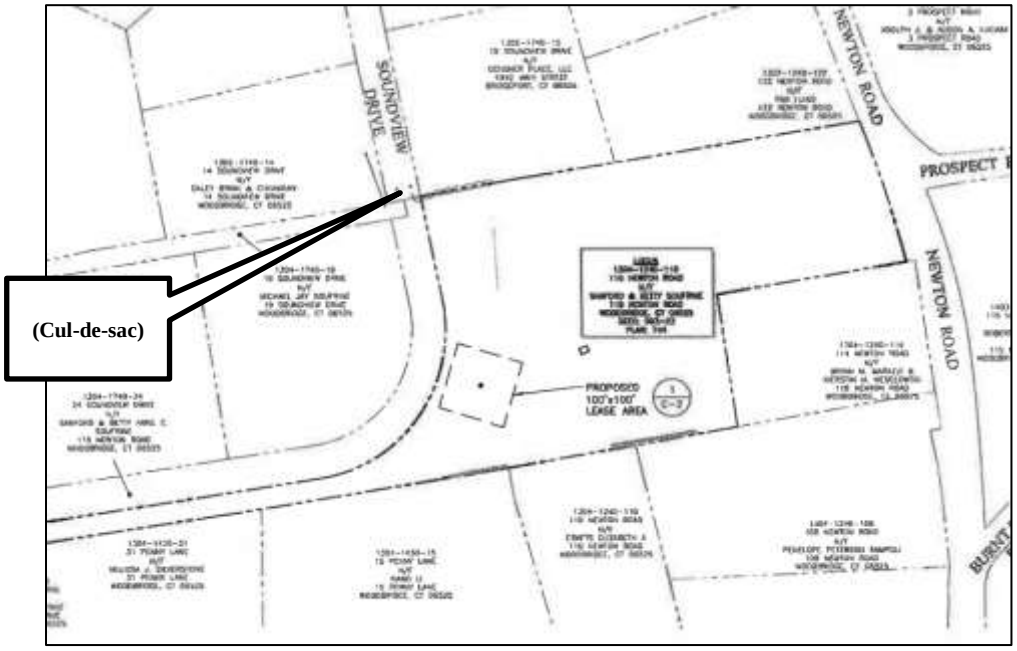
(Cellco 1, p. ii)

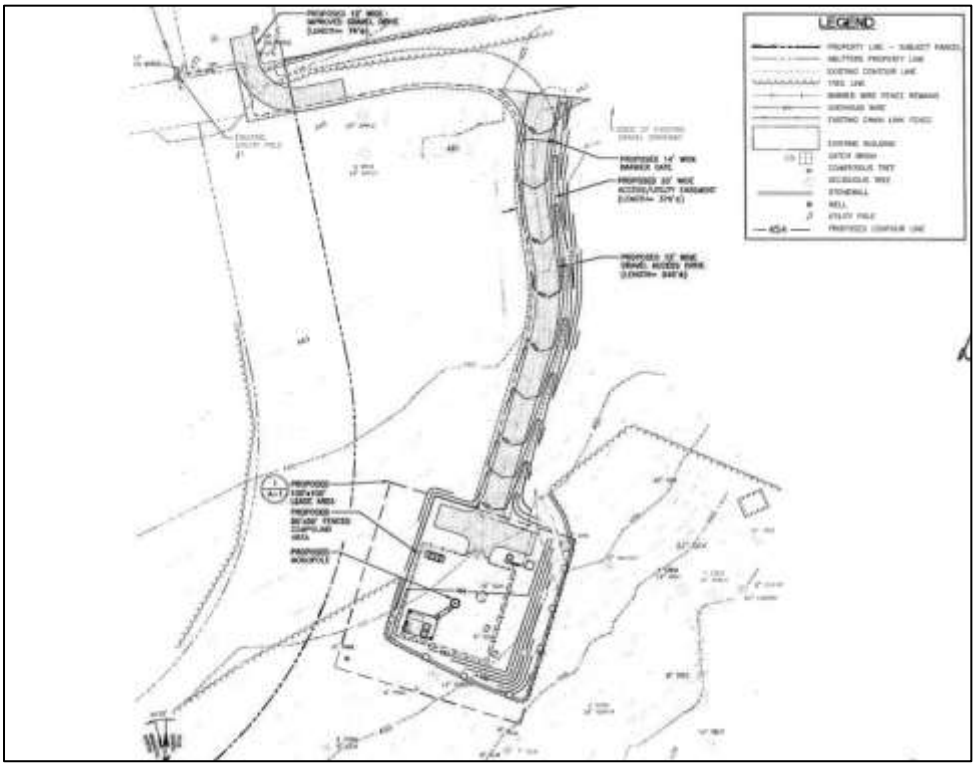
Figure 9 – Tower Site Plan



(Cellco 4, Site Plans)

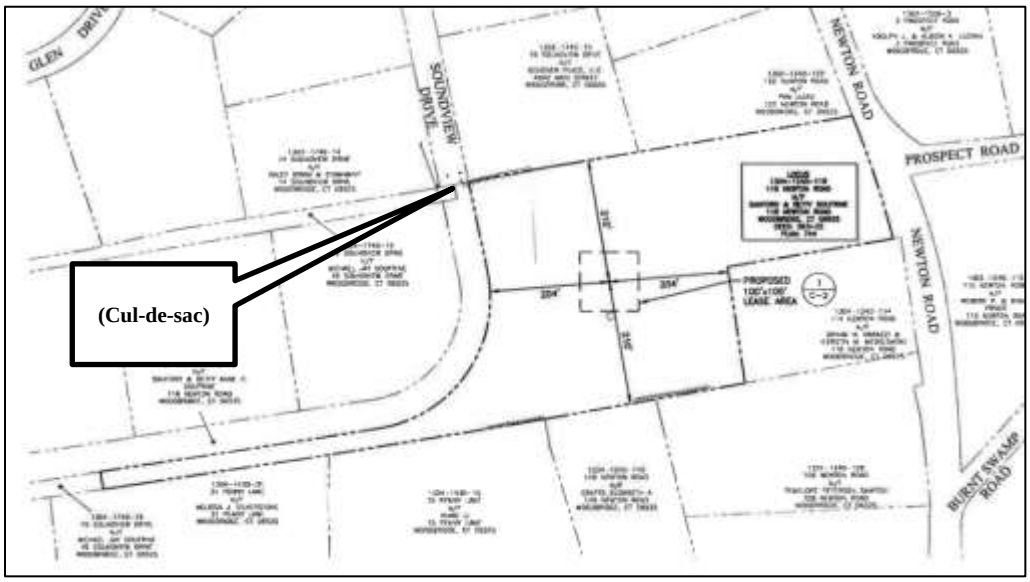
Figure 10 – Proposed Site Location/Site Plan

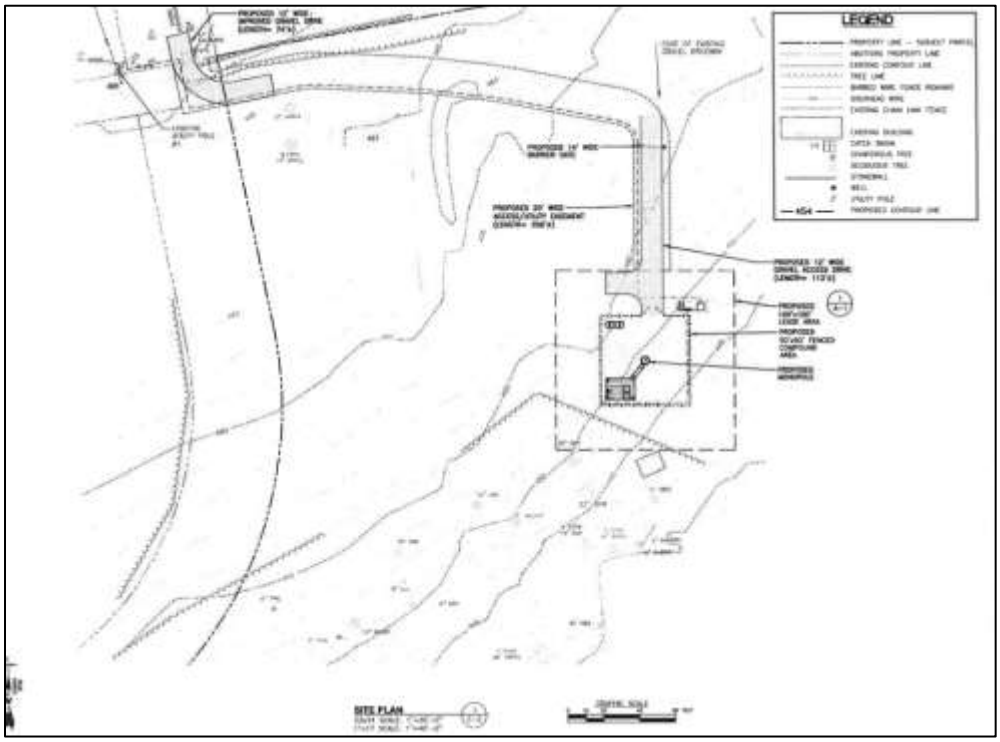




(Cellco 4, Site Plans)

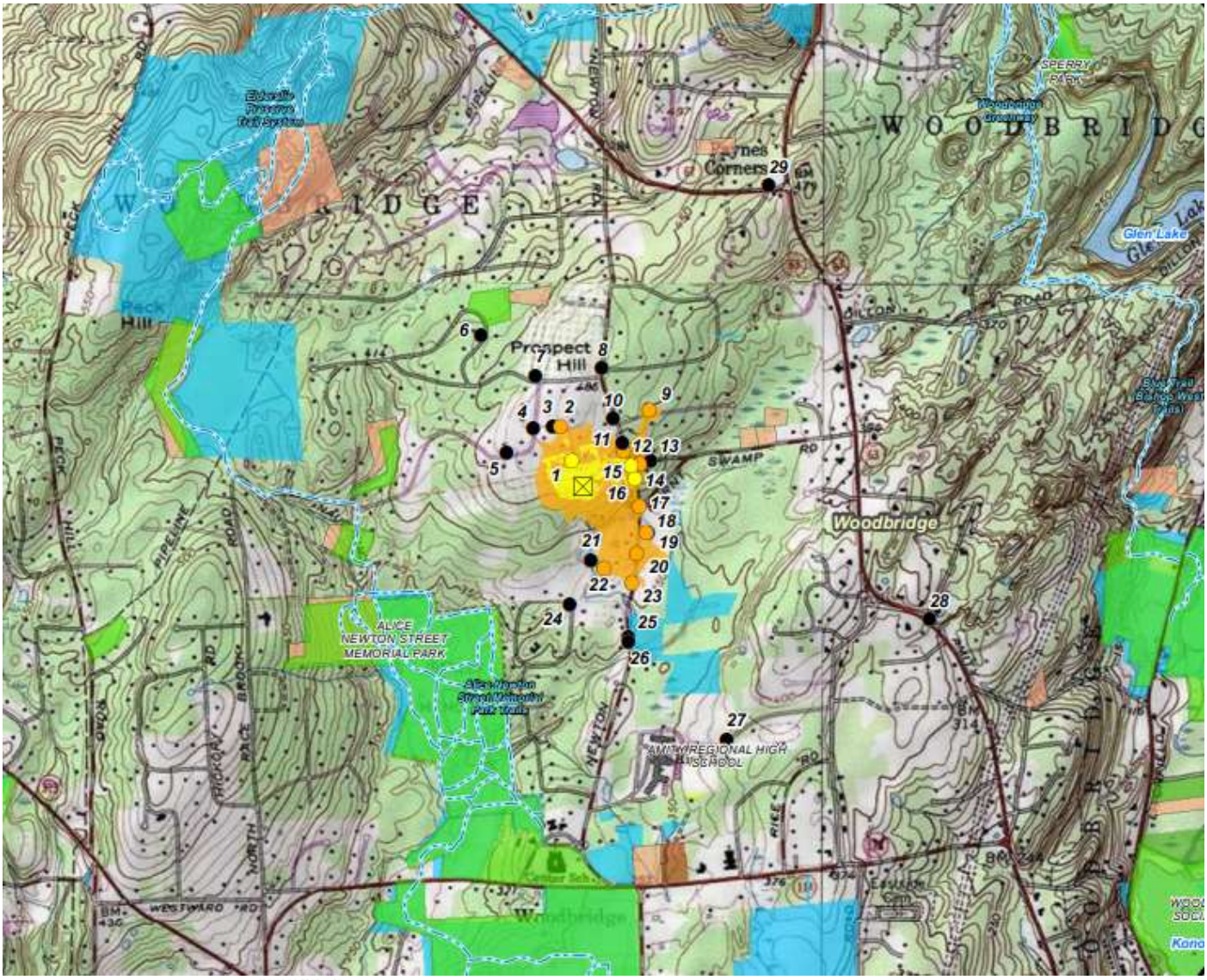
Figure 11 – Alternate Site Location/Site Plan





(Cellco 8- Site Plans)

Figure 12 – Proposed Site Visibility Analysis

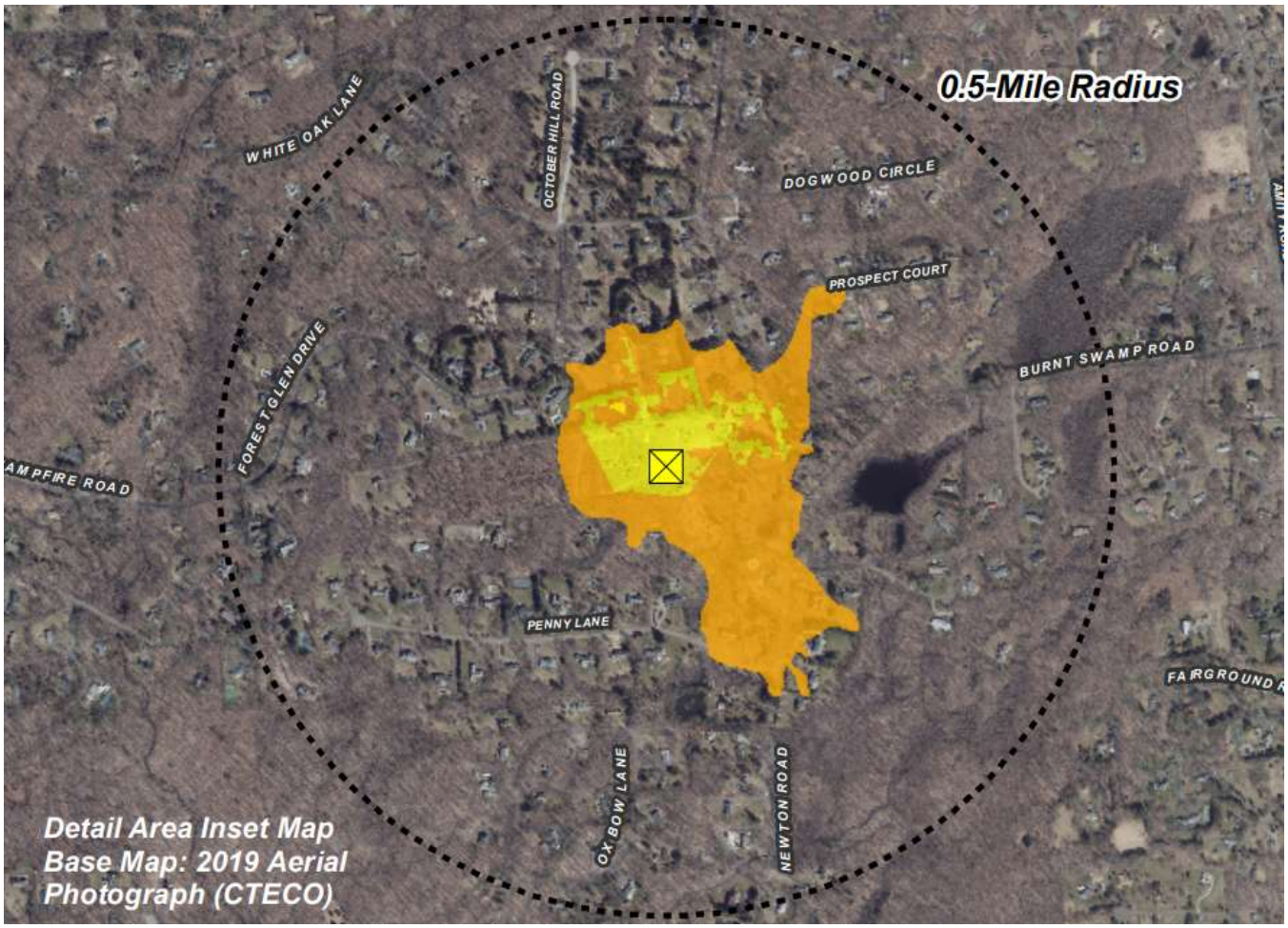


Locations of photos with tower visibility

Photo	Location	Orientation	Distance to Site	Visibility	Height of Tower Visible in Photograph
1	Soundview Drive	Southeast	± 378 Feet	Year Round	100'
2	Soundview Drive	Southeast	± 0.16 Mile	Seasonal	10'-20'
9	Prospect Court	Southwest	± 0.26 Mile	Seasonal	20'-30'
12	Newton Road	Southwest	± 0.14 Mile	Seasonal	20'-40'
14	Burnt Swamp Road	Southwest	± 0.16 Mile	Seasonal	20'-40'
15	Newton Road at Burnt Swamp Road	Southwest	± 0.14 Mile	Year Round	40'-60'
16	Newton Road	West	± 0.13 Mile	Year Round	10'-20'
17	Burnt Swamp Road at Newton Road	Northwest	± 0.15 Mile	Seasonal	1'-10'*
19	Hampton Drive	Northwest	± 0.20 Mile	Seasonal	1'-10'*
20	Newton Road	Northwest	± 0.22 Mile	Seasonal	1'-10'*
22	Penny Lane	Northwest	± 0.21 Mile	Seasonal	1'-10'*
23	Newton Road	Northwest	± 0.27 Mile	Seasonal	1'-10'*

* Tower is visible within the treeline

Visibility of tower within 0.5 mile



(Cellco 4, Response 24; Cellco 6)