

**DOCKET NO. 486** - Tarpon Towers II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 796 Woodin Street, Hamden, Connecticut. } Connecticut  
Siting  
Council

December 5, 2019

## Findings of Fact

### Introduction

1. Tarpon Towers II, LLC (Tarpon), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on July 15, 2019 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of wireless telecommunications facility at 796 Woodin Street in Hamden, Connecticut. (Tarpon 1, p. 1)
2. Tarpon is a Delaware Partnership with an administrative office located at 1001 3<sup>rd</sup> Avenue West, Suite 420, Bradenton, Florida. Tarpon would construct, maintain and own the proposed facility and would be the Certificate Holder. (Tarpon 1, p. 4)
3. The intervenor in this proceeding is Cellco partnership d/b/a Verizon Wireless (Cellco). Pursuant to C.G.S. §22a-19, SBA Communications Corporation d/b/a MCM Acquisition 2017, LLC (SBA) was granted intervenor status and CEPA intervenor status. On October 16, 2019, SBA withdrew intervenor status in this proceeding. (Transcript 1, September 12, 2019, 3:00 p.m. [Tr. 1], pp. 1, 6-9; SBA Withdrawal of Intervention letter dated October 16, 2019)
4. The purpose of the proposed facility is to allow Cellco to remove its existing facility located on a 250-foot lattice tower at 1055 Wintergreen Lane in Hamden due to interference issues, thereby allowing Cellco to provide enhanced wireless service in the Hamden area. (Council Administrative Notice Nos. 32, 33, & 34; Tarpon 1, pp. 1-2; Cellco 2, response 1)
5. Pursuant to C.G.S. § 16-50l (b), the applicant provided public notice of the filing of the application that was published in the New Haven Register on July 11, 2019. (Tarpon 3, response 1)
6. Pursuant to C.G.S. § 16-50l (b), notice of the application was provided to all abutting property owners by certified mail. (Tarpon 3, response 2)
7. On July 12, 2019, Tarpon provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50l (b). This included notice to the City of New Haven, located within 2,500 feet of the proposed site. (Tarpon 1, Attachment B)
8. On July 17, 2019, the Council deemed the application incomplete as bulk copies of Town of Hamden (Town) Zoning and Inland Wetland regulations, and the Town Plan of Conservation and Development were not provided. Additionally, the application (Attachment A) did not contain the Council's most recent version of its Application Guide. (Record)

9. On July 18, 2019, Tarpon submitted bulk copies of the Town Zoning and Inland Wetland regulations, and the Town Plan of Conservation and Development. On July 24, 2019, Tarpon submitted a revised Application Attachment A. (Tarpon 2; Record)

#### **Procedural Matters**

10. Upon receipt of the application, the Council sent a letter to the Town of Hamden and the City of New Haven, which is within 2,500 feet of the proposed facility, on July 16, 2019, as notification that the application was received and is being processed, in accordance with C.G.S. § 16-50gg. (Record)
11. During a regular Council meeting on August 15, 2019, the application was deemed complete pursuant to Regulations of Connecticut State Agencies (R.C.S.A.) § 16-50/-1a and the public hearing schedule was approved by the Council. (Record)
12. 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 August 20, 2019. (Record)
13. Pursuant to C.G.S. § 16-50m, on August 16, 2019, the Council sent letters to the Town and the City of New Haven to provide notification of the scheduled public hearing in Hamden on September 19, 2019, and to invite the municipalities to participate. (Record)
14. On August 28, 2019, 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 proposed site at the Office of the Council, 10 Franklin Square, New Britain, Connecticut. (Record)
15. In compliance with R.C.S.A. § 16-50j-21, the Applicant installed a four-foot by six-foot sign at the entrance to the subject property on August 30, 2019. The sign presented information regarding the project and the Council's public hearing. (Tarpon 5)
16. The Council and its staff conducted an inspection of the proposed site on September 19, 2019, beginning at 2:00 p.m. During the field inspection, the applicant flew a four-foot diameter red balloon to simulate the height of the proposed tower approximately 15 feet from the proposed tower location due to a dense tree canopy at the proposed tower location. Weather conditions during the balloon flight were favorable and the balloon was flown from 7:45 AM to 6:00 PM for the convenience of the public. (Council's Hearing Notice dated August 16, 2019; Tr. 1, p. 30)
17. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on September 19, 2019, beginning with the evidentiary session at 3:00 p.m. and continuing with the public comment session at 6:30 p.m. at the Memorial Town Hall, Legislative Council Chambers, 2372 Whitney Avenue, Hamden, Connecticut. (Council's Hearing Notice dated August 16, 2019; Tr. 1, p. 1; Transcript 2, September 19 – 6:30 p.m. [Tr. 2], p. 1)
18. The Council continued the public evidentiary hearing on October 22, 2019, at the Council's office at 10 Franklin Square, New Britain, Connecticut. (Council's Continued Hearing Memo dated September 20, 2019; Transcript 3, October 22 – 1:00 p.m. [Tr. 3], p. 1)

### **State Agency Comment**

19. Pursuant to C.G.S. § 16-50j (g), on August 16, 2019, 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)
20. The Council received a response from the DOT's Bureau of Engineering and Construction on August 7, 2019 indicating that the DOT had no comments. (DOT Comments received August 7, 2019)
21. The Council received a response from the CEQ on August 30, 2019 recommending additional viewshed photographs and adherence to the Town's wetland regulations (refer to Attachment A). (CEQ Comments received August 30, 2019)
22. The following agencies did not respond with comment on the application: DEEP, DPH, PURA, OPM, DECD, DOAg, CAA, DESPP, and SHPO. (Record)
23. 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**

24. Tarpon commenced the 90-day pre-application municipal consultation process by submitting copies of the technical report to the Mayor of Hamden, Curt Leng, on December 13, 2018. At the request of the Town, a public information meeting was held on March 7, 2019. Two residents from a property abutting the site attended the meeting. No Town officials attended the meeting. (Tarpon 1, p. 30)
25. Tarpon submitted a technical report to the City of New Haven on March 13, 2019 as New Haven is within 2,500 feet of the project site. On April 17, 2019, Tarpon representatives attended a City Plan Commission meeting, on May 8, 2019, a Tarpon representative attended a New Haven Westville-West Hills Management Team meeting. Additionally, at the request of the City, Tarpon attempted to set up an information meeting for residents of a housing authority property by contacting the appropriate representative, but no response was received. (Tarpon 1, pp. 30-31)
26. The tower would be capable of supporting municipal emergency communications equipment at no cost to the Town. (Tarpon 1, p. 18)

### **Public Need for Service**

27. 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)

28. 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. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
29. 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)
30. 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)
31. 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)
32. 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)
33. 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)
34. 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)

35. 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. 23 – FCC Wireless Infrastructure Report and Order; Council Administrative Notice Item No. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)
36. 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)
37. 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)
38. On August 16, 2019, 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 September 12, 2019. No carriers responded to the Council's solicitation. (Record)
39. T-Mobile has executed a lease with Tarpon to locate at the 100-foot level of the tower. T-Mobile did not intervene in this proceeding, and therefore, the exact details of their installation are not known at this time. (Tarpon 4, response 11; Tr. 1, pp. 25-26)

#### **Cellco's Existing and Proposed Wireless Service**

40. Cellco is currently located on an existing 250-foot lattice tower located on West Rock Ridge with an address of 1055 Wintergreen Avenue, Hamden. Cellco refers to this site in their wireless network as their *Hamden* facility. (Tarpon 1, p. 1; Cellco 2, response 1)
41. Wireless service is provided from the tower by three antenna sectors, referred to as the alpha sector, beta sector, and gamma sector. The sectors are arranged on the tower in a triangular pattern, with each sector providing wireless coverage to a certain geographic area (refer to Figure 7 - antenna plan). (Tarpon 12, Sheet A-2)
42. The existing lattice tower, owned by SBA, is located north of the Route 15 tunnel and is at a ground elevation of 445 feet above mean sea level (amsl). (Tarpon 1, p. 1; Tarpon 4, response 10; Record)
43. Cellco is located at the 170-foot level of the existing lattice tower, with an overall antenna height of 615 feet amsl. (Tarpon 1, p. 1)

44. Due to the high overall ground elevation (445 feet amsl) of the *Hamden* facility in relation to the surrounding low lying terrain, 50-70 feet amsl in southern Hamden and New Haven, the *Hamden* facility is causing interference with other existing Cellco facilities. To resolve the interference issues, Cellco would locate at the 120-foot level at the proposed site, and decommission the existing *Hamden* facility on West Rock Ridge (refer to Figure 1). (Tarpon 1, pp. 1-2; Cellco 2, response 1; Council Administrative Notice No. 75)
45. The network interference is a capacity issue with the existing *Hamden* facility where the wireless signals at their operating frequencies are traveling much farther than desired. Due to unimpeded line of sight of the signals, given the overall height of the *Hamden* facility, these signals are dominant, picking up much more wireless traffic than surrounding Cellco facilities, causing the *Hamden* facility to currently operate beyond its designed capacity. (Tr. 3, pp. 14-15, 19-20, 30)
46. Over-propagation of the *Hamden* facility also degrades the signal of other adjacent sites, causing reduced capacity at these sites as well as a decrease in signal quality. (Tr. 3, pp. 15, 25-26, 33)
47. Interference issues can be measured through data volume and network throughput speeds. High volume leads to less capacity and eventually sector exhaustion if not relieved in some way. Signal degradation leads to slower throughput data speeds, and a reduced customer experience. A throughput speed of less than 3 to 5 megahertz per second is unacceptable. (Tr. 3, pp. 26-29, 41-42)
48. Cellco has already made adjustments at the *Hamden* facility to reduce the interference, such as modifying antenna tilt, and using different antennas, but these adjustments have not resolved the issue and there are no other feasible alternatives to improve network performance. (Tr. 3, pp. 17-18, 30-31, 36-37)
49. Relocating the *Hamden* facility off West Rock Ridge to the proposed site would increase capacity by replacing one sector (beta sector) that is handling a lot of network traffic with three sectors. Additionally, since the dominant signal would be removed, wireless traffic would also be distributed among other surrounding Cellco facilities. (Tr. 3, pp. 31-33, 37-38)
50. Existing Cellco facilities that are experiencing interference from the *Hamden* facility include *Hamden 4* at 1732 Dixwell Avenue, *Hamden 2 CT* at 265 Benham Street, and *New Haven North 2 CT* at 1204 Whitney Avenue. The interference occurs at the 700 MHz, 850 MHz and 2100 MHz frequencies (beta sector). (Cellco 2, response 1; Tr. 3, pp. 18-19)
51. The interference issue was initially identified by Cellco in the Docket 310 proceeding on an application from Omnipoint Communications, Inc. for a new tower facility at 190 Wintergreen Avenue in Hamden Connecticut. The application was subsequently withdrawn in April 2006. In the proceeding, Cellco indicated that in a correctly designed wireless system, a facility would ideally hand off to adjacent sites. In this instance, the service from the *Hamden* facility overshoots the adjacent sites to areas covered by other Cellco facilities that are much farther away. (Council Administrative Notice No. 34; Record)
52. If Cellco only removed the beta sector from the *Hamden* facility to resolve the interference issue, and did not develop the new proposed site, gaps in coverage would result in the Hamden area. (Tr. 3, pp. 64-65)
53. Cellco would deploy 700 MHz, 850 MHz, 1900 MHz and 2100 MHz licensed frequencies at the proposed site. All of the frequencies are Long Term Evolution (LTE) voice and data service

- compatible. Currently, the existing *Hamden* facility does not support 850 MHz or 1900 MHz LTE services (refer to Figures 2, 3, 4 & 5). (Tarpon 1, Exhibit F; Cellco 2, response 2; Tr. 3, pp. 19, 21)
54. Propagation models indicate the proposed facility would provide an approximate service footprint of approximately 46 square miles at 700 MHz, 33 square miles at 850 MHz, 14 square miles at 1900 MHz and 8 square miles at 2100 MHz. (Tarpon 1, p. 7; Cellco 2, response 4)
55. The lower frequencies, such as 700 MHz, are used for overall coverage whereas the higher frequencies, such as 2100 MHz, are used more for capacity. Cellco is allocated more bandwidth within the higher frequencies than the lower frequencies. (Tr. 3, pp. 52-53)
56. Coverage enhancements as a result of the relocation of the Hamden facility to the proposed site include coverage within the Route 15 tunnel in West Rock Ridge. The existing service gap within the tunnel is 0.1 mile in length. Minor areas of coverage would also be improved at the higher frequencies on Route 15 and local roads near the proposed site. (Cellco 2, response 3, Tr. 3, pp. 12, 22)
57. Decommissioning the existing *Hamden* facility on West Rock Ridge would reduce coverage to the Woodbridge area. (Tarpon 1, Exhibit F, Tr. 3, pp. 23-24)
58. Cellco is currently searching for a new location for a facility to serve the eastern portion of Woodbridge. The topography of West Rock Ridge would effectively block coverage from a new Woodbridge facility from extending into Hamden. (Tr. 3, pp. 38-39)
59. Cellco may delay the decommissioning of the existing *Hamden* facility by keeping one or two sectors oriented towards Woodbridge until a suitable site in Woodbridge is found and developed. (Tr. 3, pp. 57-59)

#### Site Selection

60. Tarpon began a site search in the south western portion of Hamden in 2014. Tarpon consulted with wireless carrier radio frequency engineers to determine a need for a tower in this area. (Tarpon 1, p. 17; Tarpon 3, Attachment 4)
61. Cellco examined the existing structures within the proposed site area and determined none would be suitable for their network needs. It is easier and faster for Cellco to locate on an existing structure than to develop a new raw land site. Cellco's ideal location for a new facility is restricted geographically because the new facility must be close to the existing Hamden facility (Tarpon 1, Exhibit G; Tr. 1, pp. 54-55)
62. After determining there were no suitable structures within the search area, Tarpon searched for properties suitable for tower development. Tarpon investigated seven parcels from 2015 to 2019, one of which was selected for site development. The six rejected parcels and the reasons for their rejection are as follows:
- a) South Central Regional Water Property, Hamden – owner indicated there was a lack of suitable space for a tower;
  - b) Wintergreen School, Hamden – Town not interested in leasing space;
  - c) 230 Wintergreen Lane, Hamden – church property, outreach to owner unsuccessful;
  - d) 47 Woodin Street, Hamden – parcel adjacent to Route 15, no interest from owner;
  - e) 985 Wintergreen Avenue – no interest from owner; and

f) 95 Building Brook Road – no interest from owner.  
(Tarpon 1, Attachment G; Tarpon 3, Attachment 4; Tarpon 4, response 12; Tr. 1, pp. 57-58)

63. The proposed tower can provide reliable service to a large area of multiple square miles, whereas alternatives like small cells or a distributed antenna systems can only provide service to specific areas such as a shopping mall or building. For this area, the number of required small cells for comparable coverage would be too great and there is a lack of existing infrastructure to support numerous small cell facilities. (Tarpon 1, p. 16; Tr. 3, pp. 40-41)
64. In the Spring of 2015, Cellco reactivated a search for a new Hamden site after the Docket 310 application was withdrawn, identifying 4 potential candidates, but subsequently suspended its search after learning about the proposed Tarpon site. (Council Administrative Notice Item No. 34; Cellco 2, response 6)

### **Facility Description**

65. The proposed site is located on an approximately 6.7-acre parcel at 796 Woodin Street, zoned Residential R-2 (refer to Figure 6). (Tarpon 1, pp. 3, 6)
66. The subject property is located on the south side of Old Woodin Street, an informal 500-foot extension of Woodin Street that dead ends at the Wilbur Cross Parkway. The property is developed with a residence, several sheds and barns and a small pasture with the remaining areas consisting of forestland. (Tarpon 1, Attachment E, Attachment F, Attachment K)
67. The tower site is located in the southern portion of the property, at an existing elevation of approximately 113 feet amsl. (Tarpon 1, p. 3; Tarpon 12)
68. Land use immediately surrounding the subject parcel is residential to the east and north. The Wilbur Cross Parkway abuts the parcel to the west. The West Rock Nature Center abuts the site to the south. (Tarpon 12)
69. The proposed facility would consist of a 120-foot monopole, designed to support four levels of platform-mounted antennas as well as municipal emergency services antennas (refer to Figure 7). (Tarpon 1, p. 18, Attachment E)
70. Cellco would install 9 panel antennas and 6 remote radio units on an antenna platform at a centerline height of 120 feet agl. The total height of the facility with antennas would be 124 feet agl. (Tarpon 12)
71. A 70-foot by 40-foot fenced equipment compound within a 75-foot by 75-foot lease area would be established at the base of the tower, enclosed by an eight-foot tall chain link fence (refer to Figure 8). (Tarpon 12)
72. Cellco would lease a 157 square foot area within the compound to install radio equipment cabinets and an H-frame utility board on a concrete pad. (Tarpon 12)
73. Cellco would also install a generator on a concrete pad and a separate 500 gallon propane fuel tank within the compound. (Tarpon 12)
74. Tarpon's lease with T-Mobile indicates T-Mobile would install radio equipment on a concrete pad within the compound. (Tr. 1, p. 25)



75. The compound is located on a sloping terrain in the south-central portion of the property. Site grading to create a compound ground elevation of 116 feet amsl would require 163 cubic yards of cut and 604 cubic yards of fill, for a net fill of 441 cubic yards. (Tarpon 12)
76. Access to the proposed site would be from a new 700-foot long, 12-foot wide gravel access drive extending south from Woodin Street along the north property boundary, then turning gradually to the southeast to the compound. A wood kennel building would be relocated to install the access drive. (Tarpon 12)
77. Although the proposed access road is on gently sloping terrain, swales would be installed to collect stormwater that would discharge to upland areas. (Tarpon 12)
78. Utilities would be installed underground along the access drive to the compound from a utility pole on Woodin Street. (Tarpon 12)
79. The nearest property boundary from the proposed tower is approximately 124 feet to the southwest (West Rock Nature Center). (Tarpon 1, Attachment E; Tarpon 12)
80. There are approximately 46 residential structures within 1,000 feet of the proposed tower site. The nearest residence is located at 13 Great Pasture Road, approximately 615 feet northeast of the tower site at 784 Woodin Street. (Tarpon 12)
81. 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 four to five weeks. Installation of the tower and associated equipment is expected to take an additional eight weeks. After the equipment installation, cell site integration and system testing is expected to require about two additional weeks. (Tarpon 1, p. 33)

82. The estimated cost of the proposed facility, not including Cellco's equipment, is:

Tower and Foundation	\$95,000
Site Development	150,000
<u>Utility Installation</u>	<u>45,000</u>
	\$290,000

(Tarpon 1, pp. 32-33)

83. Tarpon would recover tower construction costs through tower lease agreements with wireless carriers that would co-locate on the tower. (Tarpon 4, response 15)

### Public Safety

84. 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)
85. 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; Tarpon 1, p. 14)
86. 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)
87. Pursuant to CGS §16-50p(a)(3)(G), the tower would be constructed in accordance with the American National Standards Institute “Structural Standards for Steel Antenna Towers and Antenna Support Structures” Revision G, the 2018 State Building Code, National Electrical Code (NFPA 70), and the 2018 Connecticut State Fire Safety Code. (Tarpon 4, response 19)
88. The proposed tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Tarpon 1, Exhibit O)
89. To deter unauthorized entry, the fenced compound would be accessed through a locked gate. (Tarpon 4, response 18)
90. The tower radius would remain within the boundaries of the site property. (Tarpon 12)
91. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of all approved antennas and Cellco's proposed antennas is 24.7 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. (Tarpon 1, Attachment J; Cellco 2, response 7; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

### **Emergency Backup Power**

92. 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)
93. In response to the findings and recommendations of the Panel, and in accordance with C.G.S. §16-50//, 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. 31 – Council Docket No. 432)
94. 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. 31 – Council Docket No. 432)
95. Cellco proposes to install a 30-kilowatt propane-fueled generator for its own use. It could run for approximately 4.75 days under normal cell tower loading conditions before refueling of the associated 500 gallon tank is necessary. A battery unit would also be installed that can provide up to 4 hours of emergency power in the event the generator does not start or runs out of fuel. (Cellco 2, response 8)
96. The emergency generator would be tested periodically for a half-hour period. Fuel levels in the tank would be continually monitored and provisions would be made to ensure enough fuel is present in the tank to supply emergency operations in advance of predicted storm events. (Tr. 3, pp. 42-43)
97. Other carriers that locate at the site would be responsible for their own emergency power supply. It is anticipated that T-Mobile would have a 25-kilowatt diesel-fueled generator with a built-in double-walled belly tank for their emergency power needs. (Tr. 1, pp. 27-28, 41, 72, 83-84)
98. 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)
99. Pursuant to R.C.S.A. §22a-174-3b, emergency generators could be managed to comply with DEEP's "permit by rule" criteria, and, therefore, would be exempt from general air permit requirements. (R.C.S.A. §22a-174-3b)

### **Environmental Considerations**

100. There are no prime agricultural soils on the site property. (Tarpon 4, response 20)
101. The proposed site is located within a half-mile of the Heroes Tunnel, a 1,200-foot long, horseshoe-shaped twin barrel highway tunnel built for the Wilbur Cross Parkway to pass through West Rock Ridge. The tunnel, completed in 1949, is eligible for listing on the National Register of Historic Places. The SHPO reviewed the project and determined the proposed tower would not have an adverse effect on the tunnel. (Tarpon 1, p. 21, Exhibit K)
102. Tarpon conducted an archeological resource review, including subsurface testing, of the site and submitted the results to SHPO. SHPO indicated no other archeological survey work is necessary. (Tarpon 1, pp. 20-21)
103. Development of the proposed site would require the removal of 38 trees with a diameter of six inches or greater at breast height. (Tarpon 12)
104. 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 Cellco NLEB submittal, and in accordance with USFWS rules, the project site is thus deemed in compliance and no further action is necessary. (Tarpon 1, Attachment K)
105. Development of the proposed site would not impact any species listed on DEEP's Natural Diversity Database. (Tarpon 1, Attachment K)
106. The site parcel is located approximately 2.9 miles from the East Rock Important Bird Area (IBA), one of 28 Connecticut Audubon Society designated areas with known bird concentrations. (Council Administrative Notice Item No. 73)
107. The design of the proposed facility would comply with USFWS 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 tower lighting, and avoid guy-wires as tower supports, among others. (Tarpon 1, Attachment K)
108. 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.*)
109. 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)
110. 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)

111. During the proceeding, Tarpon shifted the compound area approximately 22 feet to the northwest from its original location to enlarge the overall buffer to the adjacent wetland area. The proposed tower is in the same location. Tarpon also reduced the size of the compound from 70 feet by 70 feet to 70 feet by 40 feet to reduce disturbance to areas adjacent to wetlands. (Tarpon 1, Attachment E; Tarpon 4, response 26; Tarpon 12; Tr. 1, pp. 14-16, 49)
112. Development of the site would not directly impact any wetlands. The compound site is located between two wetland areas that are part of one large wetland complex (Wetland 1). The compound construction area is approximately 4 feet from the long, narrow wetland seep area at its closest point. (Tarpon 13 - Wetland Evaluation Report)
113. Wetland 1 consists of a large hillside seep forested wetland system with two interior watercourses. It is generally located along the eastern portion of the property but has several small 'finger' seeps that extend towards the center and west side of the property. The northern portion of this wetland system has experienced varying degrees of disturbance associated with clearing, filling, cutting, and manure/vegetation piles associated with the subject property's residential and agricultural activities. (Tarpon 1, Attachment M)
114. No vernal pools were identified on the subject property. (Tarpon 1, Attachment M)
115. Further re-location of the site to the upland area to the northwest is not feasible due to the landowner's intention of developing this area into a pasture and a horse paddock for rescue animals. (Tarpon 4, response 23)
116. Tarpon would implement a Wetland Protection Plan during construction which includes, but is not limited to, contractor awareness training, construction isolation procedures and periodic inspection by an environmental monitor. (Tarpon 13 – Wetland Protection Program)
117. The proposed site is not within a DEEP designated Aquifer Protection area. (Tarpon 4, response 24)
118. Construction of the proposed project would comply with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. (Tarpon 1, p. 29; Tarpon 13 - Wetland Evaluation Report)
119. The site is located in the Federal Emergency Management Agency Zone X, an area outside of the 500-year flood zone. (Tarpon 1, Attachment K)
120. Tarpon does not anticipate the need for blasting at the proposed site. (Tarpon 4, response 17)
121. Operation of the proposed facility would not cause any significant noise, air, or water impacts. (Tarpon 1, p. 22)
122. Construction noise is exempt from the State of Connecticut 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))

### Visibility

123. The proposed tower would be visible year-round from approximately 21 acres within a two-mile radius of the site (refer to Figure 11). The tower would be seasonally visible (leaf-off) from an additional approximately 47 acres within a two-mile radius of the site (Figures 9 & 10). (Tarpon 1, Exhibit M)
124. Generally, year-round views of portions of the facility would be limited to areas within an approximate 0.5-mile radius of the subject property. Within this area, year-round visibility of the upper portion of the tower would be possible from some residential areas along Wintergreen Avenue and Wilmont Road. (Tarpon 1, Exhibit M)
125. The residential properties immediately east of the proposed site would have seasonal views of portions of the tower. The tree canopy is generally dense to the rear of these properties as well as on the host property, limiting views. It is possible an isolated year-round view of the upper portion of the tower would occur from select areas on these nearby properties. (Tarpon 1, Exhibit M, Tr. 1 pp. 35-36)
126. Seasonal views of the tower would occur from a hiking trail on the abutting West Rock Nature Center property. (Tarpon 1, Exhibit M; Tr. 1, pp. 32-34)
127. West Rock Ridge State Park is located approximately 0.25-mile northwest of the proposed tower at its closet point. The park contains numerous hiking trails and a recreational water body, Lake Wintergreen. Seasonal views of the tower are expected from certain areas of the park, especially to the south of the tower where several hiking trails ascend the ridgeline. (Tarpon 1, Exhibit M)
128. The upper most 10 to 15-foot portion of the tower may be visible from the western section of Lake Wintergreen, approximately 0.4 miles to the northwest. No visibility is expected from the western shoreline of the lake. The existing towers on West Rock Ridge are visible from the waters of Lake Wintergreen. (Tr. 1, pp. 39-40)
129. The tower would have a galvanized finish. A camouflage paint scheme is not proposed. (Tr. 1, pp. 60-61)
130. 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 two schools, both 0.43 miles from the site in Hamden, are the Clarence Rogers School to the south and the Wintergreen Interdistrict Magnet School to the north. The nearest commercial child day care facility is 0.81 miles to the northeast at 195 Wilmont Road in New Haven. (Tarpon 1, Exhibit M)
131. There are no local or state-designated scenic roads located within the two-miles of the site. (Tarpon 1, Exhibit M; Tarpon 1b, Hamden Plan of Conservation and Development, p. 56)
132. The Town of Hamden has designated scenic viewpoints at the intersection of Main Street and Wintergreen Avenue, approximately 0.6 mile north of the site. The scenic views are oriented towards West Rock Ridge to the north and northwest, away from the tower. (Tarpon 1b, Hamden Plan of Conservation and Development, p. 53)



**Figure 1 – Proposed Site Location and existing Cellco Hamden facility**



**Legend**

- Site
- ☒ Existing Verizon Wireless Facility
- Municipal Boundary

**Map Notes:**  
Base Map Source: USGS 7.5 Minute Topographic  
Quadrangle Map, New Haven, CT (1984)  
Map Scale: 1:24,000  
Map Date: September 2019



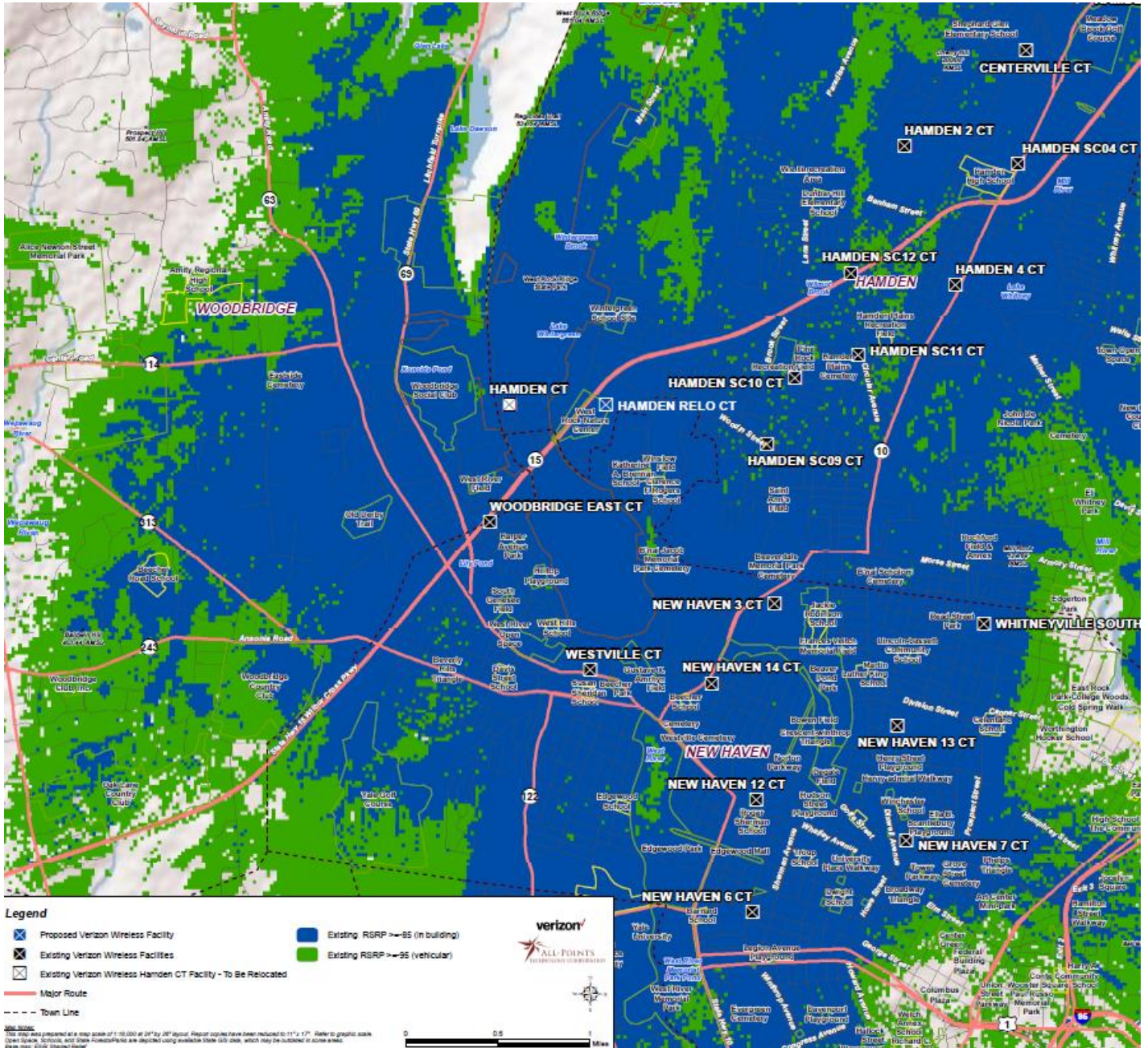
**Site Location Map**

Proposed Wireless  
Telecommunications Facility  
Hamden CT  
796 Woodin Street  
Hamden, Connecticut

(Tarpon 4, Attachment 1)



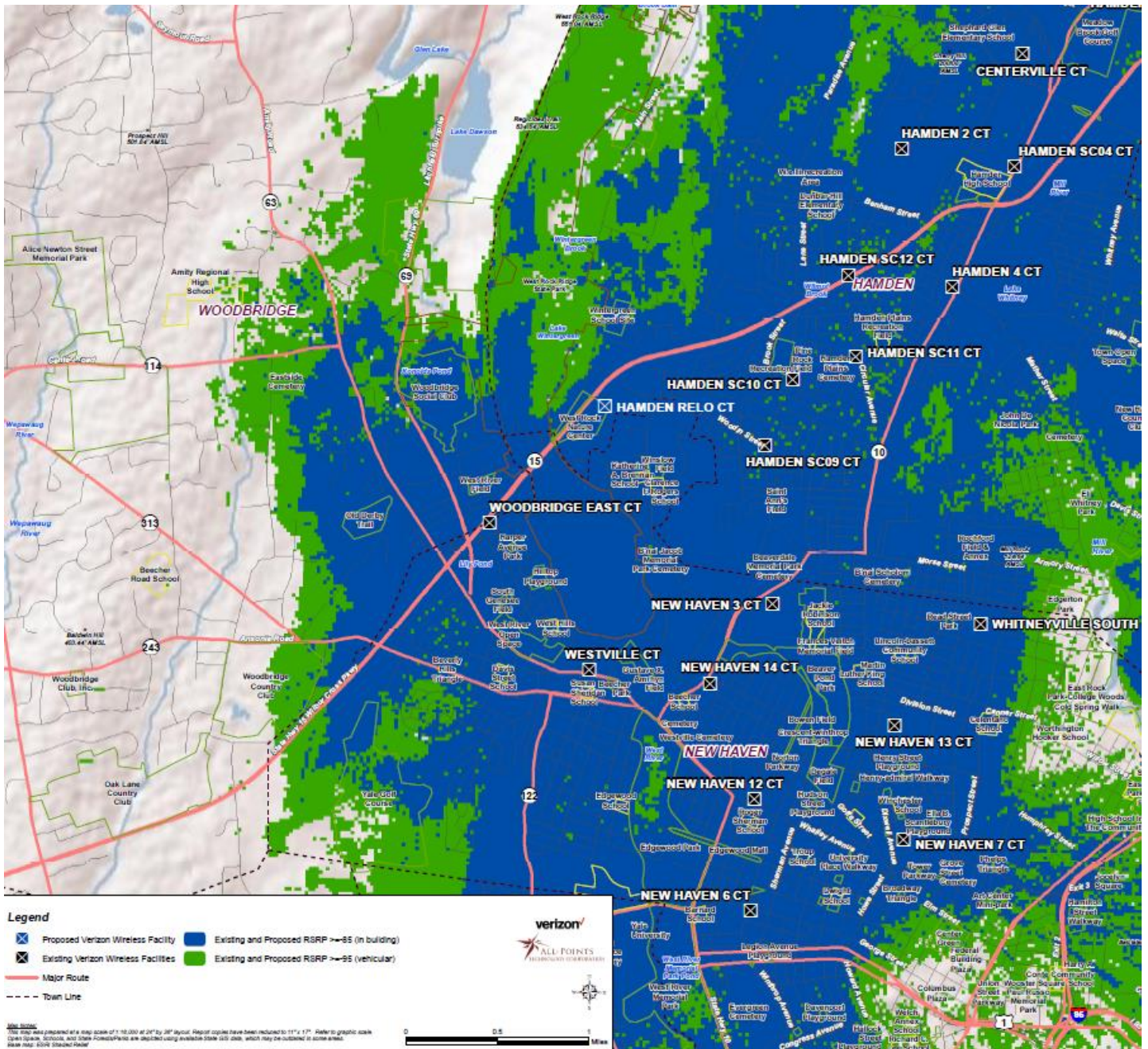
**Figure 2 – Existing 700 MHz Coverage**



Existing Cellco facilities that are experiencing interference include *Hamden 4* at 1732 Dixwell Avenue, *Hamden 2 CT* at 265 Benham Street (both shown above), and *New Haven North 2 CT* at 1204 Whitney Avenue (not shown). The interference occurs at the 700 MHz, 850 MHz and 2100 MHz frequencies. (Tarpon 1, Attachment F; Cellco 2, response 1; Tr. 3, pp. 18-19)



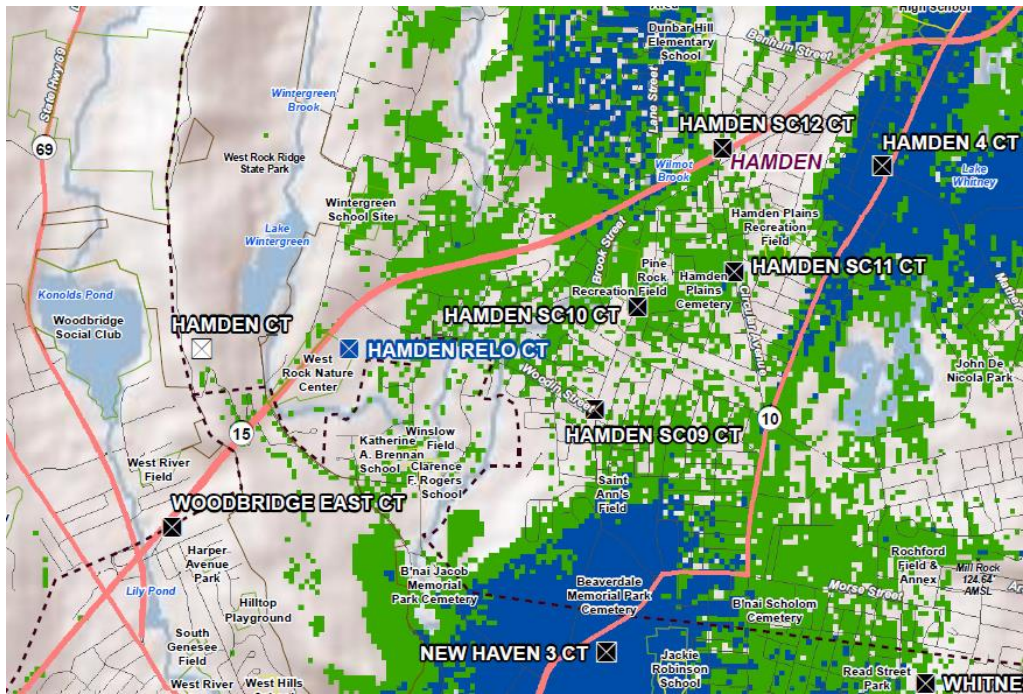
**Figure 3 – Existing 700 MHz service with Proposed Site**



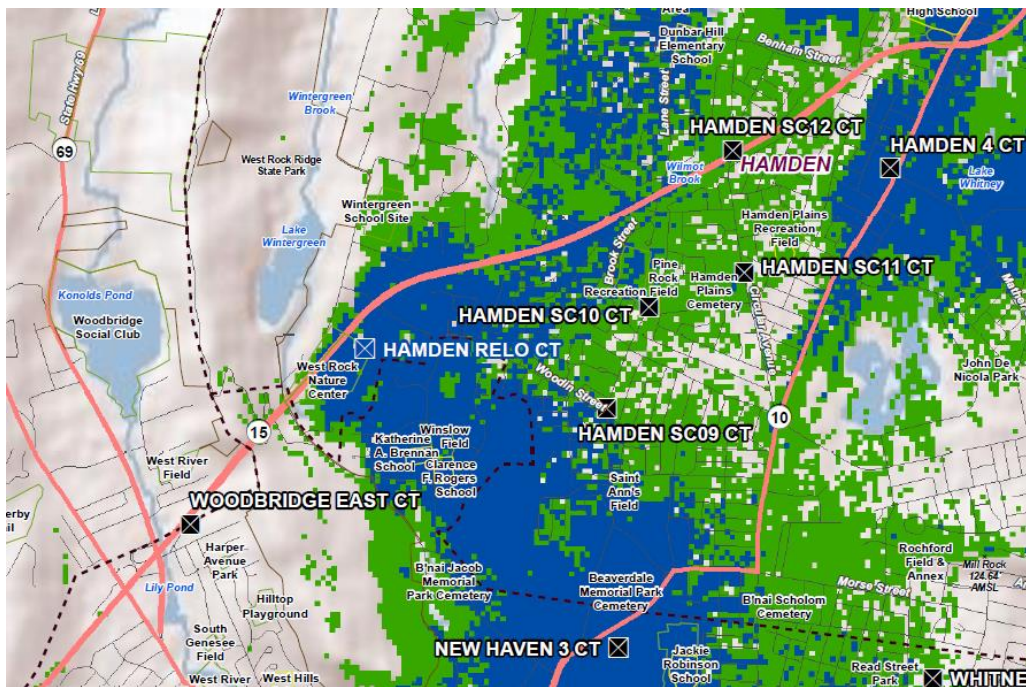
Note degradation of reliable service in the Woodbridge area, west of the proposed site and West Rock Ridge. A new Cellco facility would be eventually be developed to service the Woodbridge area. (Tarpon 1, Exhibit F, Tr. 3, pp. 23-24, 38-39)



**Figure 4 – Existing 1900 MHz service**



**Figure 5 – Existing and Proposed 1900 MHz service**



**Legend**

- ✕ Proposed Verizon Wireless Facility
- ✕ Existing Verizon Wireless Facilities
- Existing and Proposed RSRP >= -85 (in building)
- Existing and Proposed RSRP >= -95 (vehicular)
- Major Route
- - - Town Line





**Figure 6 – Site Location\***



**Legend**

- Proposed Monopole Tower
- Proposed Site Layout
- Proposed Equipment
- ▲ Wetland Flag
- Approximate Wetland
- Delineated Wetland Boundary
- Intermittent Watercourse
- Existing Culvert (By Others)
- Existing Utility Pole (By Others)
- Subject Property
- Approximate Parcel Boundary (CTDEEP)

**Wetland Inspection Map**

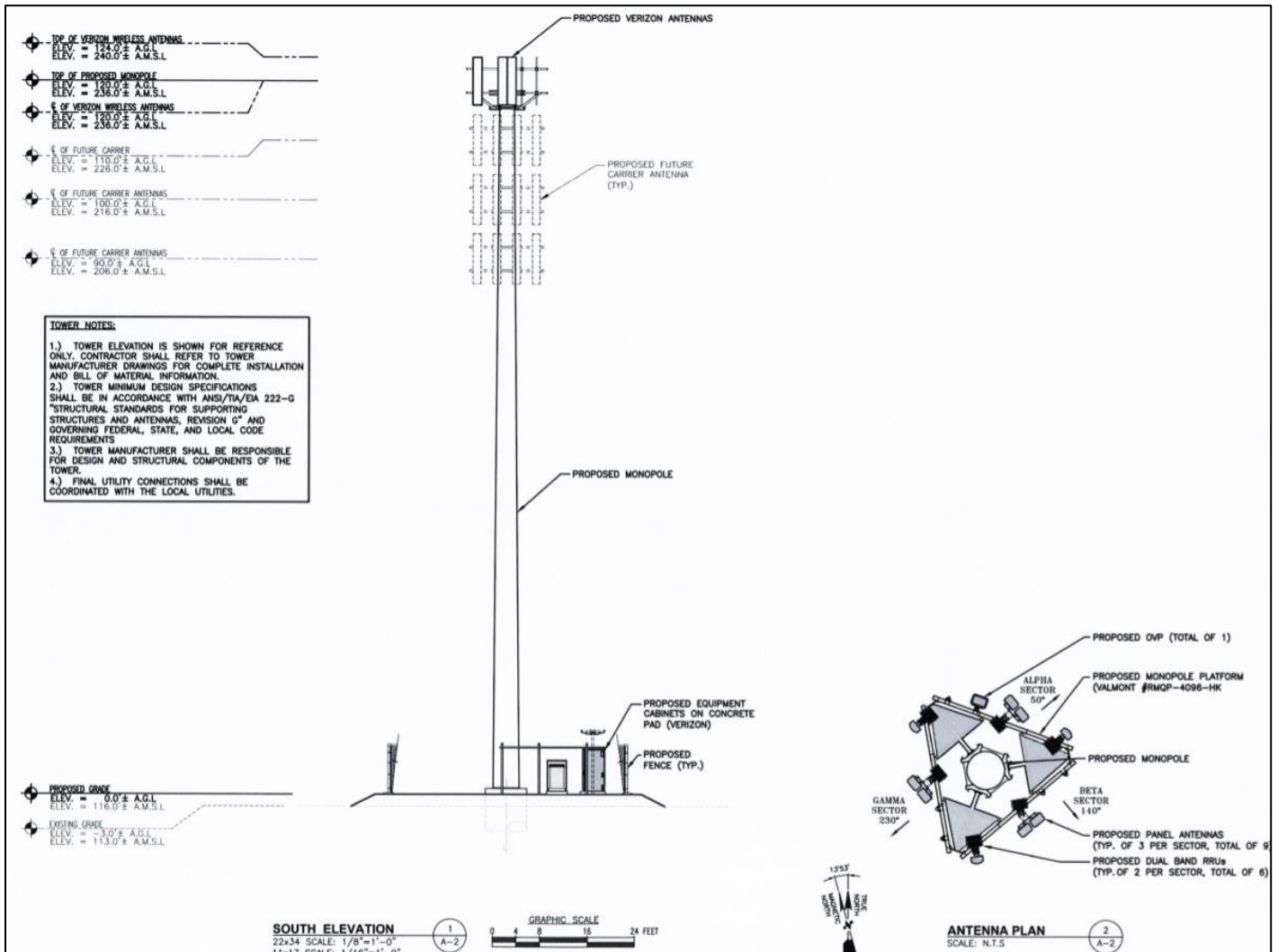
Proposed Wireless  
 Telecommunications Facility  
 Hamden CT Relo  
 796 Woodin Street  
 Hamden, Connecticut

**Map Notes:**  
 Base Map Source: 2016 Aerial Photograph (CTECC)  
 Map Scale: 1 inch = 125 feet  
 Map Date: May 2018



\* Compound location shown has been subsequently modified, shifted to the northwest by 22 feet. Tower location has not changed. (Tarpon 1, p. 4; Tarpon 12)

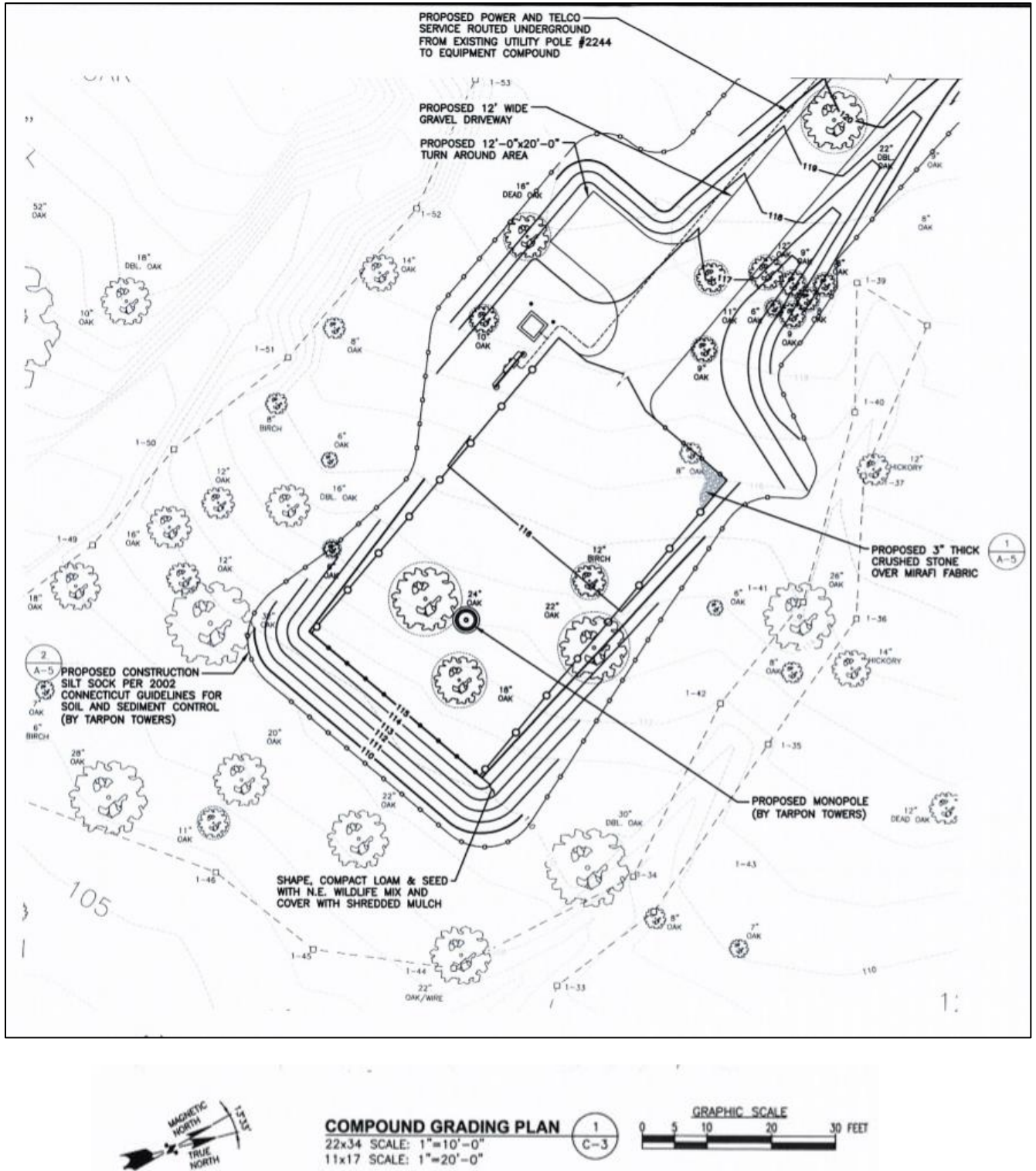
**Figure 7 - Tower Profile**



(Tarpon 12)

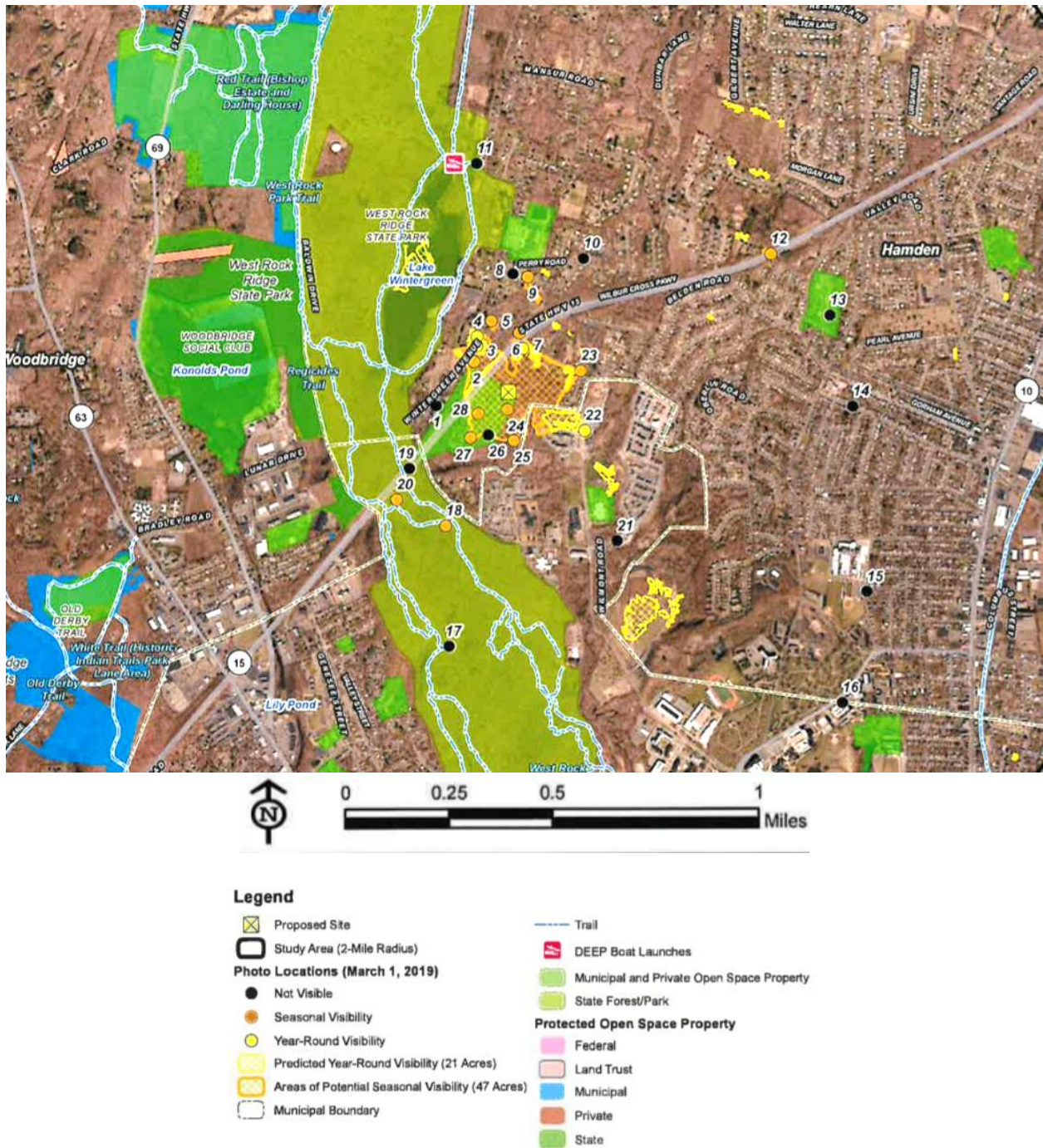


**Figure 8 – Compound Site Plan**



(Tarpon 12)

**Figure 9 – Visibility Analysis**



See next page for photo location description.  
 (Tarpon 12)




**Figure 10 – Photo-locations on Visibility Analysis map**

**Photograph Locations**

<b>View</b>	<b>Location</b>	<b>Orientation</b>	<b>Distance to Site</b>	<b>Visibility</b>
1	Carbonella Drive	Northeast	±0.23 Mile	Not Visible
2	Wintergreen Avenue	Southeast	±0.16 Mile	Seasonal
3	Wintergreen Avenue	Southeast	±0.18 Mile	Year-Round
4	Wintergreen Avenue	Southeast	±0.20 Mile	Seasonal
5	Woodin Street	Southeast	±0.23 Mile	Seasonal
6	Woodin Street	South	±0.19 Mile	Seasonal
7	Woodin Street (At Host Property)	South	±0.14 Mile	Year-Round
8	Perry Road	South	±0.37 Mile	Not Visible
9	Perry Road*	South	±0.36 Mile	Balloon visible through trees
10	Perry Road	Southwest	±0.47 Mile	Not Visible
11	Main Street (At Entrance to West Rock Ridge)	Southeast	±0.71 Mile	Not Visible
12	Wintergreen Avenue (Overlooking Wilbur Cross Parkway)*	Southwest	±0.90 Mile	Balloon visible through trees
13	Pine Rock Recreation Field	Southwest	±1.02 Miles	Not Visible
14	Helen Street	West	±1.06 Miles	Not Visible
15	Fairview Avenue	Northwest	±1.25 Miles	Not Visible
16	Fitch Street (SCSU Parking Garage Rooftop)	Northwest	± 1.38 Miles	Not Visible
17	West Rock – Judge’s Cave	Northeast	±0.80 Mile	Not Visible
18	West Rock*	Northeast	± 0.44 Mile	Balloon visible through trees
19	West Rock – Overlooking Wilbur Cross Parkway	Northeast	± 0.38 Mile	Not Visible
20	West Rock*	Northeast	± 0.48 Mile	Balloon visible through trees
21	Brookside Avenue	Northwest	±0.55 Mile	Not Visible
22	Wilmot Road	Northwest	±0.26 Mile	Year-Round
23	Woodin Street at Fawn Ridge Road*	Southwest	±0.23 Mile	Balloon visible through trees
24	West Rock Nature Center	North	± 256 Feet	Seasonal
25	West Rock Nature Center	North	±0.14 Mile	Seasonal
26	West Rock Nature Center	North	± 0.14 Mile	Not Visible
27	West Rock Nature Center*	Northeast	± 0.18 Mile	Balloon visible through trees
28	West Rock Nature Center*	Northeast	± 0.11 Mile	Balloon visible through trees

## ATTACHMENT A

CEQ Comments to Council, dated August 29, 2019

 <p style="text-align: center;">STATE OF CONNECTICUT</p> <h3 style="text-align: center;">COUNCIL ON ENVIRONMENTAL QUALITY</h3>	
<p>Susan D. Merrow <i>Chair</i></p> <p>Keith Ainsworth</p> <p>Alicea Charamnt</p> <p>David Kalafa</p> <p>Lee E. Dunbar</p> <p>Alison Hilding</p> <p>Kip Kolesinskas</p> <p>Matthew Reiser</p> <p>Charles Vidich</p> <hr/> <p>Peter Hearn <i>Executive Director</i></p>	<p>August 29, 2019</p> <p>Melanie Bachman, Executive Director Connecticut Siting Council Ten Franklin Square New Britain, CT 06051</p> <p>RE: DOCKET NO. 486 - Tarpon Towers II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 796 Woodin Street, Hamden.</p> <p>Dear Ms. Bachman:</p> <p>The Council on Environmental Quality ("the Council") has reviewed the application submitted in Docket 486 for a Certificate of Environmental Compatibility and Public Need. The Council offers the following recommendations for consideration by the Connecticut Siting Council.</p> <p><b>1. Visual Impact</b></p> <p>The Council has observed a deficiency in the application for Docket 486. Though the Viewshed Analysis Map (Appendix H) identifies the northwest shore of Lake Wintergreen as having "Predicted Year-Round Visibility", the application does not provide photo simulations from that area as required in the Siting Council's Application Guide (2012), V.G.1. "<i>Visibility Analyses of the proposed site area and any alternative site areas including, but not limited to: ...5. If proposed in close proximity to a shoreline, including lakes and rivers, photographic documentation from open waters, where possible.</i>"</p> <p>Additionally, the Viewshed Analysis Map shows the area of "Predicted Year-Round Visibility" as abutting, though not overlapping, the recreational trail in West Rock Ridge State Park which is immediately west of Lake Wintergreen. Because Section 16-50p(a)(3)(B) of the Public Utility Environmental Standards Act requires the Siting Council to consider "the nature of the probable environmental impact of the facility ..., including a specification of every significant adverse effect, including, but not limited to, ... (iv) scenic, historic and recreational values", a photo simulation during leaf-off conditions is appropriate, considering the recreational significance of West Rock Ridge State Park. This addition to the application would also satisfy the requirement in section of V.G.1 in the Siting Council's Application Guide, described above.</p> <p style="text-align: center;">79 Elm Street, Hartford, CT 06106 Phone: (860) 424-4000 Fax: (860) 424-4070 <a href="http://www.ct.gov/ceq">http://www.ct.gov/ceq</a></p>



## 2. Inland Wetlands

The Council notes that the proposed site contains a significant area of inland wetlands. The proposed fill for the pad for the proposed tower will be as close as 5-10 feet from these wetlands (flags 1-44 and 1-45). Construction will require clearing of the trees and stumps and the addition of up to six feet of fill at the southern-most edge of the tower pad. Though not controlling in this instance, the Town of Hamden's Inland Wetlands and Watercourses Regulations (Regulations) call for a "Disturbance Buffer Zone" to separate construction, development or other regulated activities from harming a regulated area (wetland). The Town's Regulations require "at a minimum, a Non-Disturbance Buffer Zone encompassing the land area one hundred (100) feet from any wetland or watercourse as a condition of granting wetlands permits unless the applicant demonstrates through substantial evidence in the record that such activity within the 100-foot non-disturbance area does not pose an impact to the regulated area." The Council recommends that the Town's appropriate precautions for construction in wetlands be required conditions for the construction of this tower.

Thank you for your consideration of these comments. Please do not hesitate to contact the Council if you have any questions.

Sincerely,



Peter Hearn

Executive Director