

<p>DOCKET NO. 480 – SectorSite LLC and T-Mobile Northeast, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility on town-owned property behind the Southwest Fire Station located at 2 Westwoods Drive, Farmington, Connecticut.</p>	<p>} Connecticut } Siting } Council } May 10, 2018</p>
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Findings of Fact

Introduction

1. SectorSite LLC and T-Mobile Northeast, LLC (collectively the Applicant), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on December 22, 2017 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 130-foot wireless telecommunications facility at 2 Westwoods Drive in Farmington, Connecticut (refer to Figure 1). (Applicant 1, p. 1)
2. SectorSite LLC (SectorSite) is headquartered in Bradenton, Florida and is a nationwide developer of wireless telecommunication facilities. SectorSite would construct, maintain and own the proposed facility and would be the Certificate Holder. (Applicant 1, pp. 2-3)
3. T-Mobile Northeast, LLC (T-Mobile) is a Delaware limited liability company with an office located at 35 Griffin Road, Bloomfield, Connecticut. T-Mobile is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication services in Connecticut. T-Mobile would lease space on the proposed facility from SectorSite. (Applicant 1, pp. 3-4)
4. The party in this proceeding is the Applicant. (Transcript 1, February 22, 2018, 3:00 p.m. [Tr. 1], p. 4)
5. The purpose of the proposed facility is to provide wireless service to the south-western section of Farmington. (Applicant 1, Tab 1)
6. Pursuant to C.G.S. § 16-50/ (b), the Applicant provided public notice of the filing of the application that was published in the Hartford Courant on December 20, 2017 and December 21, 2017. (Applicant 1, p. 4; Applicant 2)
7. Pursuant to C.G.S. § 16-50/ (b), notice of the application was provided to all abutting property owners by certified mail. Notice was unclaimed by six abutters. The Applicant sent a copy of the notice letter to these six abutters a second time by first class mail on January 9, 2018. (Applicant 1, p. 4, Tab 10; Applicant 3, response 1)
8. On December 21, 2017, the Applicant provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50/ (b). (Applicant 1, p. 4 and Certification of Service list, dated December 21, 2017)

Procedural Matters

9. Upon receipt of the application, the Council sent a letter to the Town of Farmington (Town) on December 27, 2017 as notification that the application was received and is being processed, in accordance with C.G.S. § 16-50gg. (Record)

10. During an energy/telecommunications Council meeting held on January 18, 2018, the application was deemed complete pursuant to Regulations of Connecticut State Agencies (R.C.S.A.) § 16-50/1a and a public hearing schedule was approved by the Council for a hearing in Farmington on February 22, 2018. (Record)
11. Pursuant to C.G.S. § 16-50m, on January 19, 2018, the Council sent a letter to the Town to provide notification of the scheduled public hearing. (Record)
12. Pursuant to C.G.S. § 16-50m, on January 25, 2018, the Council published legal notice of the public hearing in the Valley Press. (Record)
13. On January 31, 2018, the Council held a pre-hearing conference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, filing of pre-hearing interrogatories and the logistics of the public inspection of the site scheduled for February 22, 2018, at the Office of the Council, 10 Franklin Square, New Britain, Connecticut. (Council Pre-Hearing Conference Memoranda, dated January 21, 2018 and February 1, 2018)
14. In compliance with R.C.S.A. § 16-50j-21, on February 5, 2018, the Applicant installed a four-foot by six-foot sign at the entrance to the subject property. The sign presented information regarding the project and the Council's public hearing. (Applicant 5)
15. The Council and its staff conducted an inspection of the proposed site on February 22, 2018, beginning at 2:00 p.m. During the field inspection, the Applicant flew a 3.3-foot diameter red balloon at the proposed site to simulate the height of the proposed tower. The balloon was aloft from approximately 7:00 a.m. to 4:00 p.m. for the convenience of the public. Weather conditions were variable throughout the day with increasing winds and precipitation later in the day. (Applicant 1, p. 13; Tr. 1, pp. 12-13, Council's Hearing Procedure Memorandum dated February 1, 2018)
16. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on February 22, 2018, beginning with the evidentiary session at 3:00 p.m. and continuing with the public comment session at 6:30 p.m. at the Farmington Town Hall, 1 Monteith Drive, Farmington. (Council's Hearing Notice dated January 19, 2018; Tr. 1, p. 1; Transcript 2, February 22, 2018 – 6:30 p.m. [Tr. 2], p. 96)

State Agency Comment

17. Pursuant to C.G.S. § 16-50j (g), on January 19, 2018, 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)
18. The Council received a response from the CAA on January 30, 2018 requesting that the Applicant submit an official Notice of Proposed Construction or Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) due to the proximity of the proposed site to Robertson Airport in Plainville. (CAA Comments received January 30, 2018)

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

Municipal Consultation

20. The proposed site is located on Town property at 2 Westwoods Drive. In 2006, the Town executed a lease agreement with Omnipoint Communications, Inc., the predecessor to T-Mobile, for a flagpole telecommunications facility on the property. (Applicant 1, p. 20, Tab 9)
21. Prior to the execution of the lease agreement, the Town approved the site location and site design through the Town's local approval process. (Applicant 1, p. 20)
22. An amendment to extend the lease was executed with the Town in October 2013. (Applicant 1, Tab 9)
23. On June 9, 2017, T-Mobile notified the Town that the site lease was assigned to SectorSite. (Applicant 3)
24. After the lease was assigned to SectorSite, SectorSite contacted the Town Planner and Town Manager to discuss potential facility design options given new advancements in wireless technology since the time of the initial lease agreement. The Town indicated that other design options would not be considered given that the Town would have to conduct additional public hearings to modify the lease, a potentially lengthy process. (Applicant 4, response 10; Tr. 1, pp. 19-21, 27, 49-50)
25. The Applicant sent notice to the Town on October 31, 2017 indicating that the Council application for the proposed site was being prepared and that the Town had the option to waive the 90-day pre-application municipal consultation process, as set forth in C.G.S. § 16-50(e). (Applicant 1, Tab 9)
26. On December 6, 2017, the Town signed a memorandum agreeing to waive the 90-day pre-application municipal consultation process since the Town already reviewed the project prior to entering into a lease agreement with Omnipoint Communications, Inc. and subsequently reaffirmed the site location and flagpole tower design with SectorSite. (Applicant 1, Tab 9)

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. T-Mobile is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Connecticut. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Applicant 1, pp. 1-2)
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. In February 2009, as part of the American Recovery and Reinvestment Act, Congress directed the FCC to develop a National Broadband Plan to ensure every American has “access to broadband capability.” Congress also required that this plan include a detailed strategy for achieving affordability and maximizing use of broadband to advance “consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.” (Council Administrative Notice Item No. 20 – The National Broadband Plan)
33. 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)
34. 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 to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11 –Presidential Proclamation 8460, Critical Infrastructure Protection)
35. In February 2012, Congress adopted the Middle Class Tax Relief and Job Creation Act to advance wireless broadband service for both public safety and commercial users. The Act established the First Responder Network Authority to oversee the construction and operation of a nationwide public safety wireless broadband network. Section 6409 of the Act contributes to the twin goals of commercial and public safety wireless broadband deployment through several measures that promote rapid deployment of the network facilities needed for the provision of broadband wireless services. (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012)
36. In June 2012, President Barack Obama issued an Executive Order to accelerate broadband infrastructure deployment declaring that broadband access is a crucial resource essential to the nation’s global competitiveness, driving job creation, promoting innovation, expanding markets for American businesses and affording public safety agencies the opportunity for greater levels of effectiveness and interoperability. (Council Admin Notice Item No. 22 – FCC Wireless Infrastructure Report and Order; Council Admin Notice Item No. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)

37. Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, also referred to as the Spectrum Act, a state or local government may not deny and shall approve any request for collocation, removal or replacement of equipment on an existing wireless tower provided that this does not constitute a substantial change in the physical dimensions of the tower. The Federal Communications Commission defines a substantial change in the physical dimensions of a tower as follows:
- a) An increase in the existing height of the tower by more than 10 percent or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater. Changes in height should be measured from the dimensions of the tower, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
 - b) Adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
 - c) Installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four, or more than one new equipment shelter.
 - d) A change that entails any excavation or deployment outside the current site.
 - e) A change that would defeat the concealment elements of the tower.
 - f) A change that does not comply with conditions associated with the siting approval of the construction or modification of the tower, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would exceed the thresholds identified in (a) – (d).
- (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 22 – FCC Wireless Infrastructure Report and Order)
38. 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. (C.G.S. §16-50aa)
39. On January 19, 2018, 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 February 15, 2018. (Record)
40. Cellco Partnership d/b/a Verizon Wireless (Cellco) responded on January 24, 2018, stating that although Cellco has a need in this area, the need is not within Cellco's current build plan. Cellco further stated that it would have to examine the technical aspects of the proposed flagpole tower design before deciding to locate on the proposed facility. If technically feasible, Cellco would seek to locate at the 107-foot and 97-foot levels of the flagpole tower if these tower levels were available. No other carriers responded to the Council. (Cellco letter to Council, received January 24, 2018)

Existing and Proposed Wireless Services

41. T-Mobile's proposed facility would provide coverage to southwestern Farmington including the area of Route 6, Route 177, Cope Farms Road, Greencrest Drive, and Westwoods Drive. The area is largely residential but also includes small businesses, the Westwoods Country Club and Tunxis Community College. (Applicant 1, p. 1, Tab 1)

42. The main objective of the proposed site is to provide in-building service to Tunxis Community College located southeast of the site at the intersection of Route 6 and Route 177. (Tr. 1, pp. 28-30)
43. In addition to the college, the service area contains residential areas with approximately 1,460 residents and includes portions of the Route 6 and Route 177 travel corridors. (Applicant 1, p. 1, Tab 1)
44. T-Mobile has no reliable service to the target service area (refer to Figure 2). (Applicant 1, p. 1, Tab 1)
45. T-Mobile would designate the proposed site as the “CTHA112A” facility in their network (refer to Figure 3). (Applicant 1, Tab 1)
46. T-Mobile’s proposed facility would interact with their adjacent existing facilities identified in the following table:

Site ID	Address	Town	Facility Type	Ant Height (ft)	Distance to Primary (mi)
CT11134A	200 Colt Highway	Farmington	Tower	103	2.66
CT11423B	125 N Mountain Road	New Britain	Monopole	108	3.89
CT11768B	1 Westerberg Drive	Farmington	FlagPole	130	2.75
CTHA110B	77 West Main Street	Plainville	Tower	77	2.80
CT11133C	336 Woodford Avenue	Plainville	Rooftop	70	3.25
CTHA233B	130 Birdseye Road	Farmington	Monopole	100	3.79
CTHA149A	319 New Britain Avenue	Farmington	Monopole	160	2.76
CT11271D	300 Broad Street	Bristol	Rooftop	135	2.96
CT11272D	985 Farmington Avenue	Bristol	FlagPole	115	1.83

(Applicant 1, Tab 1 – Surrounding Site List)

47. T-Mobile would deploy 700 MHz, 1900 MHz, 2100 MHz service at the proposed facility. (Applicant 2, response 25)
48. Most of T-Mobile’s voice and data traffic would be handled by the 1900 MHz and 2100 MHz frequencies since T-Mobile is limited to 5 MHz of spectrum in the 700 MHz frequency band. The 700 MHz frequency would be utilized by data customers that are experiencing lower signal quality when connected to the cell site. (Applicant 2, response 25; Tr. 1, pp. 31-33)
49. T-Mobile’s design signal strengths thresholds for all frequencies are -114 dBm for in-vehicle coverage, -97 dBm for residential in-building coverage, and -91 dBm for commercial in-building coverage. (Applicant 2, response 23)
50. Propagation modeling indicates the proposed site would provide approximately 0.34 square miles of residential in-building coverage at 2100 MHz (refer to Figure 3). The 1900 MHz service footprint would be of similar size. (Applicant 2, response 27; Tr. 1, pp. 68-69)
51. Although the proposed flagpole design limits the optimization of the antennas, the site would still be able to provide adequate service to the Route 6/Route 177 intersection and Tunxis Community College, both key objectives for T-Mobile. (Tr. 1, pp. 23-31)
52. A wet flag on the flagpole tower could cause minor attenuation of higher frequencies, making the signal slightly weaker. (Tr. 1, pp. 22-23)
53. Installing antennas at a lower tower height would degrade T-Mobile’s in-building service to Tunxis Community College. (Tr. 1, p. 57)

Site Selection

54. The initial search ring center was located along Route 6 in Farmington, approximately 0.5 mile west of the Route 6/Route 177 intersection. (Applicant 1, Tab 1; Applicant 4, response 30)
55. There are no sufficiently tall structures in the area that can satisfy T-Mobile's coverage needs. (Applicant 1, Tab 2)
56. In addition to the proposed site, the Applicant investigated 8 other locations to host a wireless facility but determined these locations were not suitable, as follows:
- a) **50 Songbird Lane Farmington** – 98-foot tall water tank; site rejected by T-Mobile's RF department.
 - b) **1214 Farmington Avenue, Bristol** – existing tower site; site rejected by T-Mobile's RF department.
 - c) **Hyde Road, Farmington** – approved tower site, not yet built; site rejected by T-Mobile's RF department.
 - d) **532 Stevens Street, Bristol** – 70-foot tall existing water tank; T-Mobile could not come to terms with landlord, site later rejected by T-Mobile's RF department.
 - e) **Northwest Drive, Plainville** – 37-foot tall utility pole utilized by Verizon; site rejected by T-Mobile's RF department.
 - f) **87 Monce Road, Burlington** – existing tower site; site rejected by T-Mobile's RF department.
 - g) **597 Farmington Avenue, Bristol** – 35-foot tall utility pole utilized by Verizon; site rejected by T-Mobile's RF department.
 - h) **1371 Farmington Avenue, Farmington** – roof top location; site rejected by T-Mobile's RF department.
- (Applicant 1, Tab 2; Applicant 2; Tr. 1, pp. 28-30)
57. Providing coverage to the proposed service area using a distributed antenna system, repeater, microcell or other similar types of technology is not practical or feasible given the large area of coverage needed in this area. These technologies are typically used for specific, defined coverage or capacity needs. (Applicant 1, p. 10)
58. When the lease was reassigned to SectorSite, the Town reaffirmed the site location as specified within the lease. The Town was not interested in relocating the tower to other areas of the parcel. (Tr. 1, pp. 18-20)

Facility Description

59. The proposed site is located on an approximately 230.6 acre parcel zoned Residential (R-40) at 2 Westwoods Drive in Farmington. The parcel is west of Plainville Avenue (Route 177). (Applicant 1, p. 1, Tab 3)
60. The parcel is owned by the Town of Farmington. The eastern portion of the parcel contains the Southwest Fire Station, the historic Fagan House, and an active cornfield. The western portion of the property is developed as the Westwoods Golf Course. (Applicant 1, p. 1, Tab 3; Tr. 1, pp. 13-15)
61. The subject parcel predominantly abuts residential areas with some commercial and agricultural use located along Plainville Avenue. (Applicant 1, Tab 3; Tr. 1, p. 217)

62. The proposed tower site is in the eastern portion of the property, 339 feet from Plainville Avenue and 182 feet north of Westwoods Drive. The tower site is in a cornfield, approximately 200 feet west of the fire station (refer to Figure 4). (Applicant 1, Tab 3)
63. The tower site is at an elevation of 296 feet above mean sea level. (Applicant 1, Tab 3)
64. The proposed facility would consist of a 130-foot flagpole tower. The tower would be designed to support five levels of internally flush-mounted antennas, with the lowest mounting level at 87 feet above ground level (agl). Each tower level could accommodate three panel antennas concealed within a radio-frequency transparent casing (refer to Figure 5). (Applicant 1, Tab 3; Applicant 4, response 9; Tr. 1, pp. 10, 39-40)
65. The tower would be approximately 54 inches in diameter at the base, tapering to 36 inches in diameter from the 90-foot level to the top of the tower. A faux flagpole ball would be installed on top of the tower. (Applicant 1, Tab 3; Applicant 4, response 6)
66. The flagpole tower would not be designed to be expandable in height. A taller tower would require larger diameter internal support pole, thus decreasing the space available for antennas beneath the radio-frequency casing. (Tr. 1, pp. 39-40)
67. A 12-foot by 18-foot flag would be mounted on the tower. In accordance with the site lease, the landlord (Town) would be responsible for daily etiquette/maintenance of the flag. The flag is expected to last two years before a replacement is necessary. The Applicant would provide replacement flags to the Town. (Applicant 3, 2006 Lease Agreement, Section 21; Applicant 4, response 7; Tr. 1, p. 47)
68. The flagpole tower could support a whip antenna mounted at the top of the tower. Whip antennas could not be mounted on the side of the tower due to potentials interference with the flag. (Tr. 1, pp. 41-42)
69. Four flood lights would be mounted 10 feet above grade within the tower compound to illuminate the flag at night. The Applicant would be responsible for maintaining the lights. (Applicant 3, 2006 Lease Agreement, Section 21; Applicant 4, response 8; Tr. 1, p. 11)
70. T-Mobile would install three panel antennas at both the 127 foot and 117 foot tower levels. Each antenna would measure 74.8 inches high by 24 inches wide by 8.7 inches deep. (Applicant 1, Tab 3; Tr. 1, p. 9)
71. A 48-foot by 48-foot compound would be constructed at the base of the facility within a 50-foot by 50-foot lease area. The compound could accommodate T-Mobile's ground equipment and provide space for three other wireless carriers. (Applicant 1, Tab 3; Tr. 1, p. 9)
72. T-Mobile would install equipment cabinets on two 5-foot by 10-foot concrete pads within the compound. (Applicant 1, Tab 3, Sheet A-2)
73. Access to the proposed site would extend from an existing driveway servicing the firehouse. The new access would consist of a 55-foot long, 10-foot wide gravel driveway with a 10-foot by 20-foot gravel vehicle parking, turnaround area adjacent to the compound access gate. (Applicant 1, Tab 3- Site Plans)

74. The proposed site slopes downgradient from the firehouse access drive by about five feet. The proposed compound area would be re-graded to establish a level area about one foot above the surrounding existing grade. (Applicant 1, Tab 3, Sheet A-1; Tr. 1, pp. 54-55)
75. Underground utilities would be installed to the compound from an existing utility pole located adjacent to a sidewalk on the north side of Westwoods Drive. The utilities would be installed within a 10-foot wide, 200-foot long access easement through the existing cornfield. (Applicant 1, p. 12, Tab 3, Sheet C-4)
76. Due to the slight slope of the new gravel access drive, the Applicant would construct a swale on both sides of the access road, near the base of the road that would direct flows into adjacent field areas. (Applicant 1, Tab 3, Sheet A-12; Tr. 1, pp. 54-55)
77. The nearest property boundary from the proposed tower is approximately 154 feet to the south at Westwoods Drive, a Town-owned road that serves the Westwoods Golf Course. The Town also owns land on the south side of Westwoods Drive. (Applicant 1, Tab 3, Site Plans C-1, C-3)
78. The nearest developed residential property is approximately 315 feet east of the tower site, located at 2 Pine Hollow Road. The house on this property is 530 feet from the tower site. (Applicant 4, response 3)
79. There are 17 residential structures within 1,000 feet of the proposed tower site. (Applicant 1, Tab 3, Site Plan C-4)
80. Site preparation would commence following Council approval of a Development and Management Plan (D&M Plan) and is expected to be completed within two to three weeks. Installation of the tower, antennas and associated equipment is expected to take another two to four weeks. After equipment installation, facility integration and system testing is expected to require an additional two weeks. (Applicant 1, p. 21)
81. The estimated cost of the proposed facility is:
- | | |
|----------------------------------|------------------|
| Tower and Foundation | \$125,000 |
| Site Development | 45,000 |
| Utility Installation | 18,000 |
| Subtotal: SectorSite Cost | \$188,000 |
| Antennas and Equipment | \$175,000 |
| Subtotal: T-Mobile Costs | \$175,000 |
| Total Estimated Costs | \$363,000 |
- (Applicant 1, p. 19)
82. SectorSite would recover tower construction costs through tower lease agreements. T-Mobile would recover costs of their equipment through statewide and national customer service contracts. (Applicant 4, response 2)

Public Safety

83. 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)
84. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Applicant 1, p. 9)
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)
86. T-Mobile's equipment would be capable of supporting text-to-911 service as soon as the PSAP is capable of receiving text-to-911. However, no PSAPs have been established to accept text-to-911 service at this time. (Applicant 1, p. 8; Applicant 4, response 31)
87. Pursuant to the Warning, Alert and Response Network Act of 2006, "Wireless Emergency Alerts" (WEA) is a public safety system that allows customers who own certain wireless phone models and other enabled mobile devices to receive geographically-targeted, text-like messages alerting them of imminent threats to safety in their area. WEA complements the existing Emergency Alert System that is implemented by the FCC and FEMA at the federal level through broadcasters and other media service providers, including wireless carriers. (Council Administrative Notice Item No. 5 – FCC WARN Act)
88. Pursuant to C.G.S. §16-50p(a)(3)(G), the tower and associated tower antenna mounts would be constructed in accordance with the American National Standards Institute "Structural Standards for Steel Antenna Towers and Antenna Support Structures" Revision G and the 2012 International Building Code. (Applicant 1, p. 11; Applicant 4, response 19; Tr. 1, p. 9)
89. The site would be monitored remotely on a 24 hours a day, seven days a week basis. (Applicant 1, p. 14)
90. The proposed equipment compound would be secured by an eight-foot high chain-link fence of two inch mesh. The Applicant is amenable to installing a fence with an anti-climb mesh or features. (Applicant 1, Tab 3, Site Plan A-3; Tr. 1, pp. 42-43)
91. The tower radius would remain within the boundaries of the subject property. (Applicant 1, Tab 3, Site Plan C-4)
92. The proposed tower is 1.48 nautical miles northwest of Robertson Field Airport in Plainville. Due to the location of the airport, the FAA determined the tower must be lit with three or more floodlights to provide 15-foot candles of illumination over the top one-third of the tower. The Applicant proposes to install four LED floodlights, equidistant to each other to provide specified tower lighting, as stated in FOF #68. (Applicant 4, response 20; Tr. 1, pp. 34-36, 53)

93. The floodlights would be activated-deactivated at dusk-dawn using an automatic photocell switch. (Tr. 1, pp. 44-46)
94. The floodlights would have a commercial power source and an emergency battery or generator unit in order to keep the structure lit during loss of power to the site. SectorSite is examining different backup power sources specific to the FAA required floodlights (Tr. 1, pp. 36-37, 52-54)
95. It is not practical to utilize T-Mobile's backup power system for the floodlights due to liability issues. If the generator fails during a loss of power, SectorSite would be responsible for notifying the FAA of an unlit structure, in accordance with FAA procedures. The site and floodlights would be remotely monitored and SectorSite has personnel on call 24/7 to take action if a problem was detected. (Tr. 1, pp. 36-37)
96. The FAA determination is valid for a not to exceed height of 130 feet agl. If a whip antenna was installed on top of the tower, the Applicant would have to re-file with the FAA for a hazard determination based on the new overall structure height. (Applicant 4, response 20; Tr. 1, pp. 41-42)
97. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of T-Mobile's proposed antennas is 1.9% of the standard for the General Public/Uncontrolled Maximum Permissible Exposure, as adopted by the FCC, using a -10 dB reduction to account for the antenna pattern. 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 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. (Applicant 1, Tab 8; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

Emergency Backup Power

98. 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. 47)
99. 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 the 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. The study was completed on January 24, 2013. (Council Administrative Notice Item No. 26 – Council Docket No. 432)
100. The Council reached the following conclusions in the study:
 - a) "Sharing a backup source is feasible for Commercial Mobile Radio Service providers, within certain limits. Going forward, the Council will explore this option in applications for new tower facilities;" and
 - b) "The Council will continue to urge reassessment and implementation of new technologies to improve network operations overall, including improvements in backup power."(Council Administrative Notice Item No. 26 – Council Docket No. 432)

101. T-Mobile would install backup a power battery unit and an Auxiliary Power Unit (APU) to provide emergency power in the event of loss of commercial power to the site. The APU is a propane fueled DC generator that would start once the battery unit is near exhaustion. The APU measures 27 inches wide by 40 inches long by 42 inches tall and would be mounted on a small concrete pad within the compound. (Applicant 1, Tab 3, Sheet A-2; Applicant 4, response 33; Tr. 1, p. 44)
102. An associated 120 gallon above ground liquid propane tank measuring 54 inches in height and 30 inches in diameter would be installed near the APU and would contain enough fuel to run for 80 hours under average loading. The above ground propane tank would be situated within the compound to maintain a 10-foot distance from any equipment that could generate a spark. (Applicant 1, Tab 3, Sheet A-2; Applicant 4, response 33; Tr. 1, pp. 43-44, 79)
103. SecorSite would examine the feasibility of a shared generator if a second telecommunications carrier decides to locate at the facility. (Applicant 4, response 34; Tr. 2, pp. 106-107)
104. 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. T-Mobile's generator would run for 15 to 30 minutes once per week for testing. (R.C.S.A. §22a-69-1.8; Tr. 1, p. 10)

Environmental Considerations

105. The proposed facility would have no adverse effect on historic properties. (Applicant 4, response 16)
106. The site is not located within a 100 year or 500 year flood zone. (Applicant 4, response 4)
107. The proposed site is not within a DEEP designated Aquifer Protection Area. (Applicant 1, Tab 5, EBI Report)
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. There are no wetlands or watercourses within the project construction limits. A potential wetland was previously mapped adjacent to the site in 2006 but subsequent field work by the Applicant, including soil testing and an examination of corn crop growth, determined the soils within the potential wetland area did not meet wetland criteria. (Applicant 1, Tab 6; Tr. 1, pp. 71-76)
112. The nearest wetland from the site is an intermittent watercourse approximately 600 feet to the southeast. (Tr. 1, p. 76)

113. Development of the site would disturb an area of 3,600 square feet. The project would be constructed in accordance *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. (Applicant 1, Tab 5; Tr. 1, p. 9)
114. Two State-listed Species of Special Concern, the eastern box turtle and spotted turtle, occur in the vicinity of the project site. The Applicant would adhere to DEEP recommended turtle protection procedures during site construction. (Applicant 1, p. 14, Tab 5)
115. Connecticut is within the range of the northern long-eared bat (NLEB), a federally-listed Threatened species and State-listed Endangered species. Review of DEEP and US Fish and Wildlife Service (USFWS) databases indicates the site is not near any known NLEB hibernacula or known maternity roost trees. (Applicant 4, p. 14)
116. There are no National Audubon Society designated Important Bird Areas within two miles of the proposed site. (Council Administrative Notice Item No. 67; Applicant 1, Tab 5, EBI report)
117. The proposed facility does not have any naturally occurring bird habitat as it is located within a cleared and disturbed agricultural field and is directly adjacent to an asphalt-paved parking lot. (Applicant 1, Tab 5, EBI report)
118. The design of the proposed facility would comply with some of the USFWS guidelines for minimizing the potential impact of telecommunications towers to bird species including limiting new tower heights to less than 199 feet and the avoidance of guy-wires as tower supports. Additionally, any tower lighting should avoid the use of non-flashing red lights. (Council Administrative Notice Item No. 13; Council Administrative Notice Item No. 15)
119. The flag on the flagpole is not expected to create an impact hazard for birds or bats based on observations made at a similar facility located at the Town's wastewater treatment plant at 1 Westerberg Drive. (Tr. 1, pp. 60-62)
120. According to the Farmington Valley Biodiversity Project, the project site is not located within a primary or secondary conservation area. (Tr. 1, p. 69; Tr. 2, pp. 106-106)
121. The project area is not located on any prime farmland soils. Development of the site would remove approximately 3,250 square feet of active cornfield grown in an area marked as Important Agricultural Soils. (Applicant 1, Tab 1, Site Plan T-1; Applicant 4, response 13, response 14)
122. The Applicant could move the site approximately 100 feet to the south, towards the edge of the cornfield, in order to preserve as much of the active cornfield as possible. The current location isolates the southern extent of the cornfield. (Tr. 1, pp. 67-68)
123. The project development area is not part of any land enrolled within the Public Act 490 Program or enrolled within the Farmland Preservation Program. (Applicant 4, response 15; Applicant 7)
124. Operational noise from T-Mobile's ground equipment would comply with DEEP noise control regulations. (Applicant 4, response 18)

Visibility

125. The tower would be visible year-round from approximately 47.6 acres within a one-mile radius of the site (2,021 acres). Most of this year-round visibility is from open agricultural fields and golf course areas within 0.3 mile of the site. The tower would be visible from an additional 50 acres during leaf-off conditions. A map showing projected visibility from the site is provided as Figure 6. (Applicant 1, Tab 7)
126. Two residential lots abutting the site along the north edge of the cornfield and four residential lots abutting the site parcel to the south would have partially obscured views of the tower. (Applicant 1, Tab 7; Tr. 1, pp. 16-17)
127. The tower would be visible year-round from Plainville Avenue abutting the site and from a farm across Plainville Avenue 1,000 feet northeast of the site. (Applicant 1, Tab 7; Tr. 1, pp. 16-17)
128. There are no state or locally-designated scenic roads located within one-mile of the site. (Applicant 1, Tab 7)
129. There are no “blue-blazed” hiking trails maintained by the Connecticut Forest and Park Association within one-mile of the site. (Council Administrative Notice Item No. 65; Applicant 1, Tab 7)
130. Pursuant to CGS § 16-50p(a)(3)(F), no schools or day care facilities are located within 250 feet of the site. The nearest facility is a daycare located 1,162 feet north of the site, abutting the north edge of the cornfield. The daycare property would have full visibility of the tower. (Applicant 1, Tab 3, Site Plan C-4; Tr. 1, pp. 9-10, 15)
131. Although the tower and compound is an open area, no landscaping is proposed. The Applicant would examine the placement of landscaping outside of the lease area or examine the use of stockade fencing to conceal the equipment compound. (Tr. 1, pp. 17-18)
132. Relocating the site approximately 100 feet to the south to preserve the cornfield may increase views of the facility from travelers heading west on Pine Hollow Road, across Route 177 from Westwoods Drive. (Tr. 1, pp. 67-69)
133. The Applicant did not specifically discuss the feasibility of a potential silo design with the Town to complement the existing agricultural uses of the site. A silo facility would have a much larger profile, 21 feet in diameter, and would require a minimum antenna height of 117 feet agl to achieve T-Mobile’s coverage objectives. An antenna height of 107 feet agl is feasible but would cause further degradation of the coverage footprint. The Town’s lease only specifies a flagpole-type facility and the Town is not willing to re-open the lease agreement. (Applicant 4, response 10; Tr. 1, pp. 19-21, 27, 49-50, 65-66)

134. Based on visibility mapping and field reconnaissance, visibility of the proposed tower from specific locations in the site area is presented in the table below:

Specific Location	Photo location on Map*	Approx. Portion of Facility Visible	Approx. Distance & Direction to Tower
741-779 Plainville Ave (in front of firehouse)	1	Year-round – most of facility	391 feet west
Plainville Ave. - Westwoods Dr. intersection	2	Year-round – most of facility	445 feet northwest
796 Plainville Ave.	3	Year-round – most of facility	0.10 mile northwest
2 Pine Hollow Rd.	4	Year-round – most of facility	0.11 mile northwest
Pine Hollow Rd.	5	Not visible	0.12 mile northwest
746 Plainville Ave.	6	Year-round -entire facility	0.20 south
Pine Hollow Rd. – Greencrest Dr. intersection	7	Not visible	0.21 mile west
11 Cutler Lane	8	Not visible	0.26 mile south
813-825 Plainville Ave.	9	Not visible	0.27 mile north
Cope Farms Rd. – Cutler Lane intersection	10	Not visible	0.32 mile southeast
18 Cope Farms Rd.	11	Year-round – upper portion	0.32 mile southeast
Baldwin Dr. (east end)	12	Not visible	0.55 mile west
Hartfield Dr. – Cope Farms Rd. intersection	13	Not visible	0.6 mile southeast
Wisteria Lane	14	Not visible	0.73 mile south
385 Sonstrom Rd.	15	Not visible	0.83 mile east
65 Couture Dr.	16	Not visible	0.89 mile northeast
25 Cranberry Lane	17	Not visible	1.23 mile southeast

* Visibility map attached as Figure 6. (Applicant 1, Tab 7)

Figure 1 – Site Parcel and Tower Location
(Applicant 1, Tab 3, Tab 5)

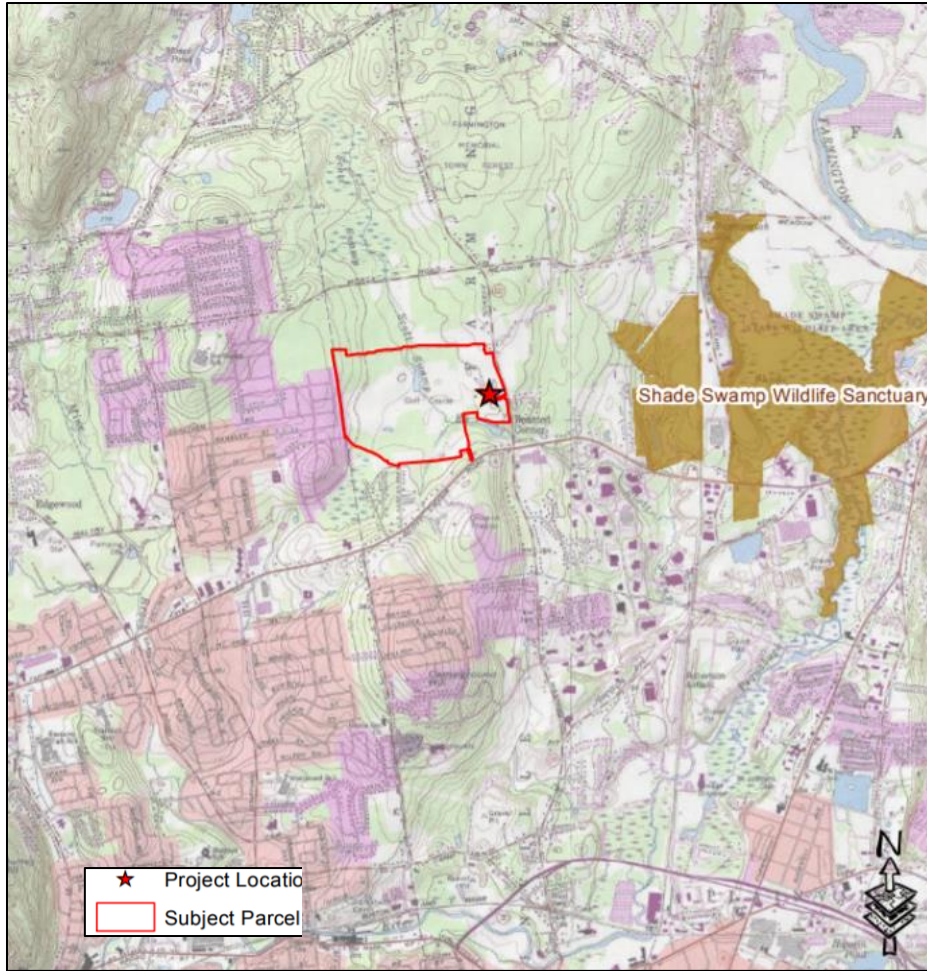


Figure 2 – Existing T-Mobile 2100 MHz Service
(Applicant 1, Tab 1)

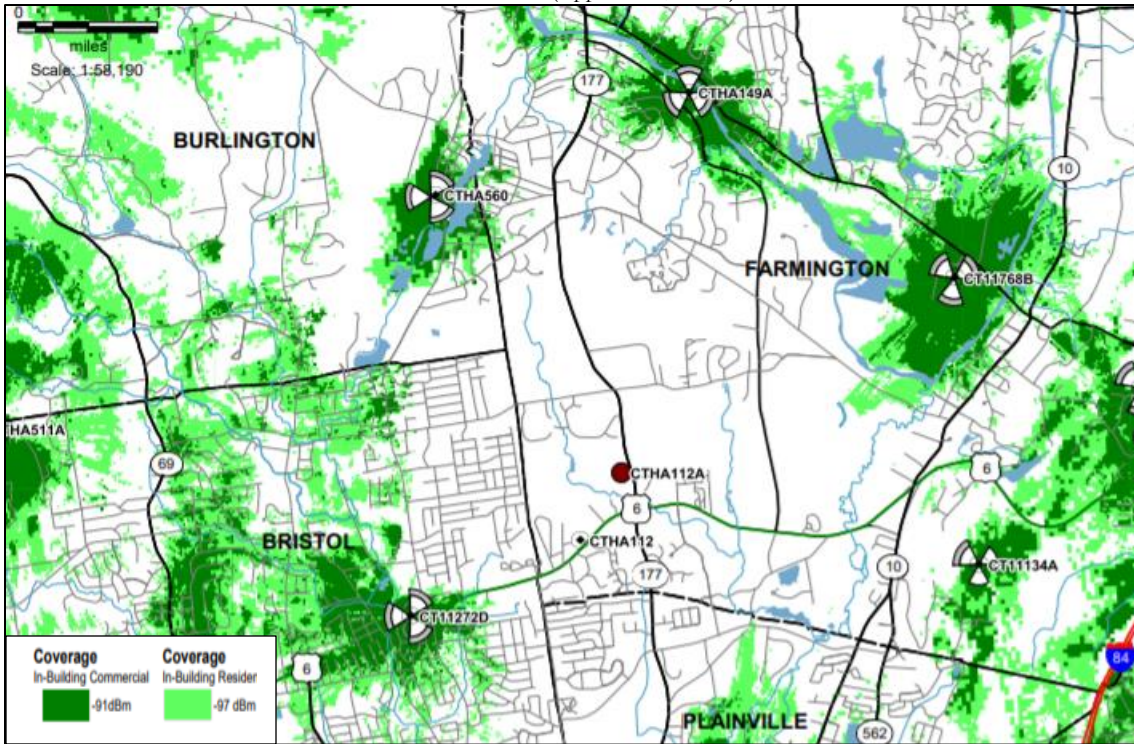


Figure 3 – Proposed and Existing T-Mobile 2100 MHz Service
(Applicant 1, Tab 1)

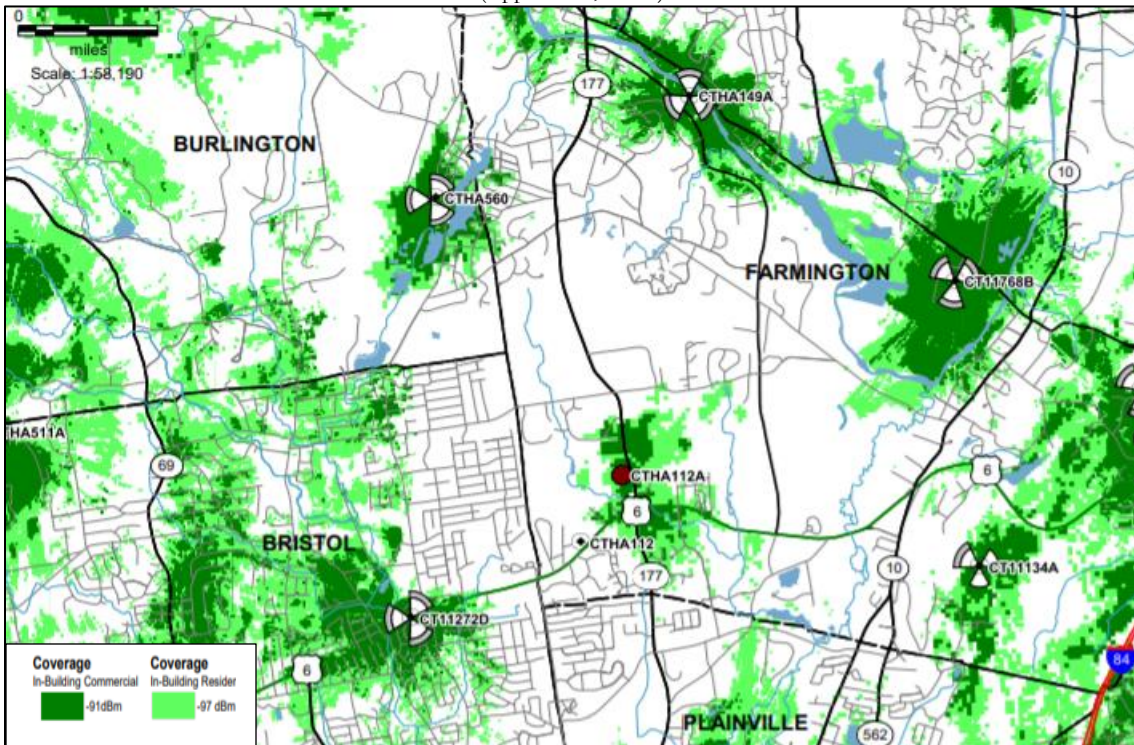


Figure 4 – Site Plan
(Applicant 1, Tab 3– Site Plan C-4)

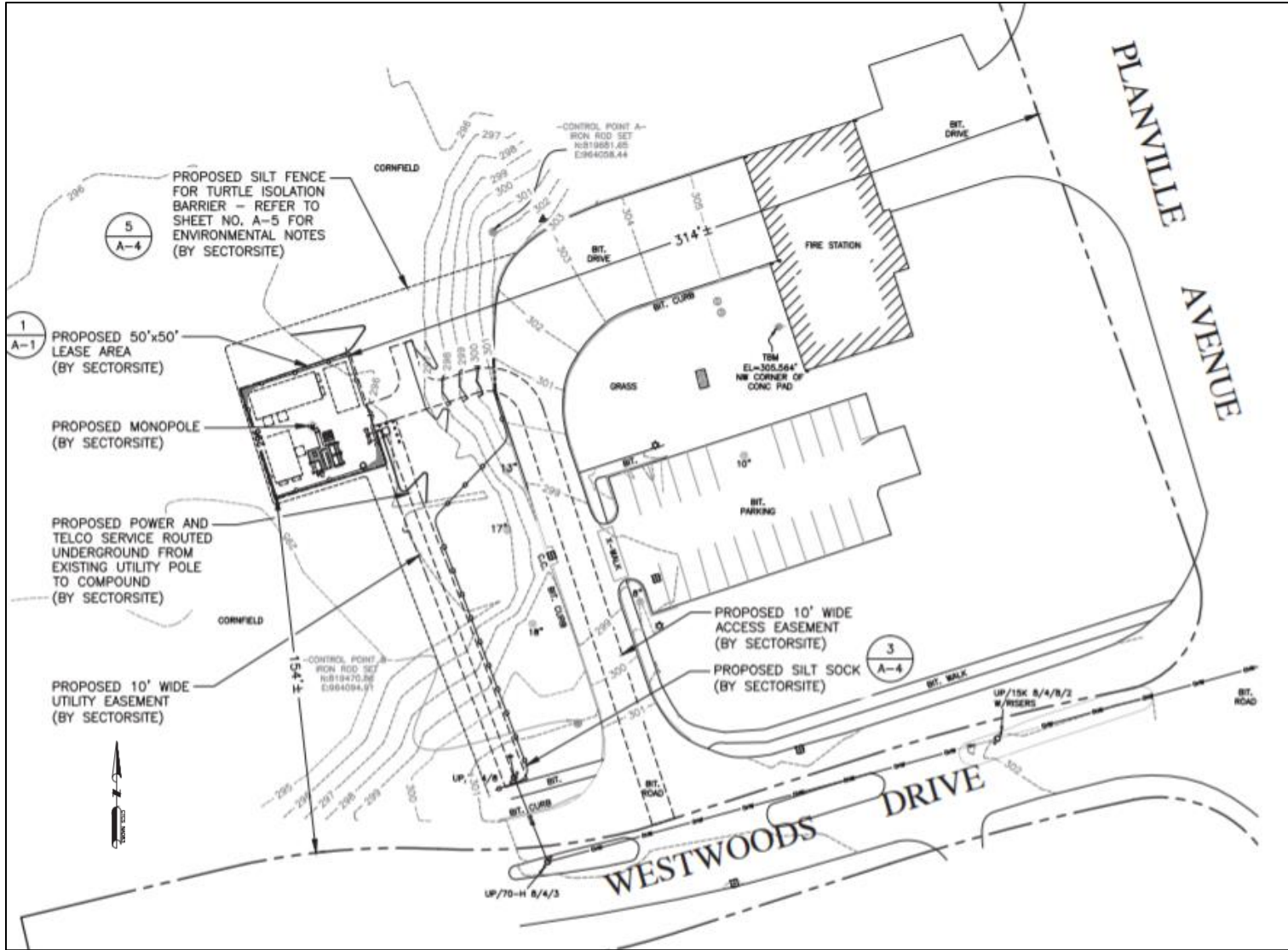


Figure 5 – Tower Profile
(Applicant 1, Tab 3)

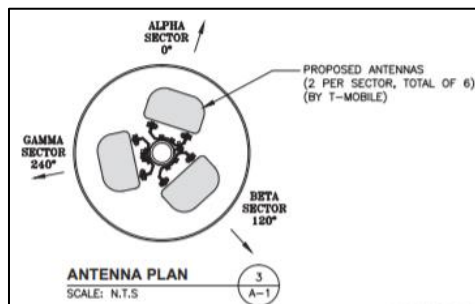
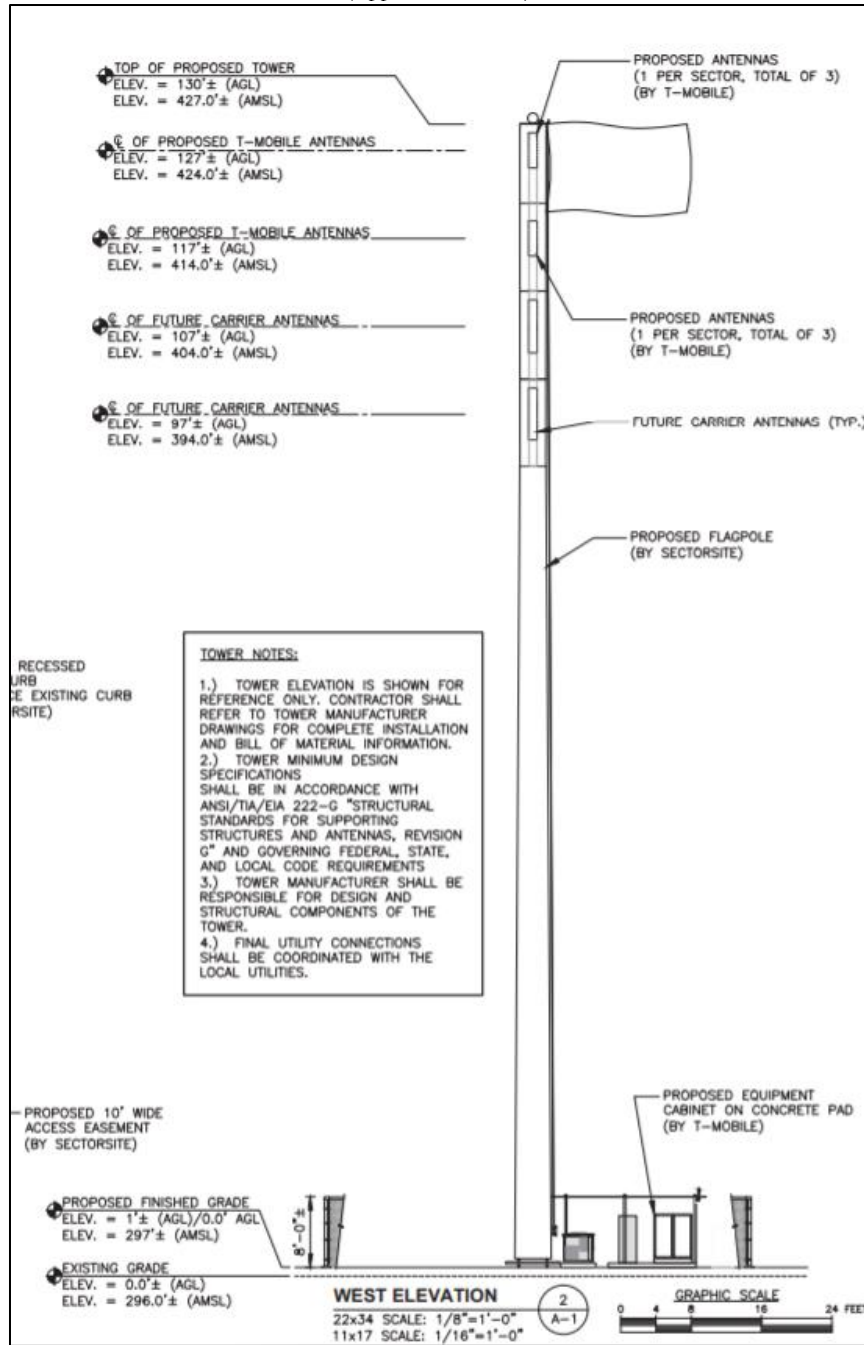
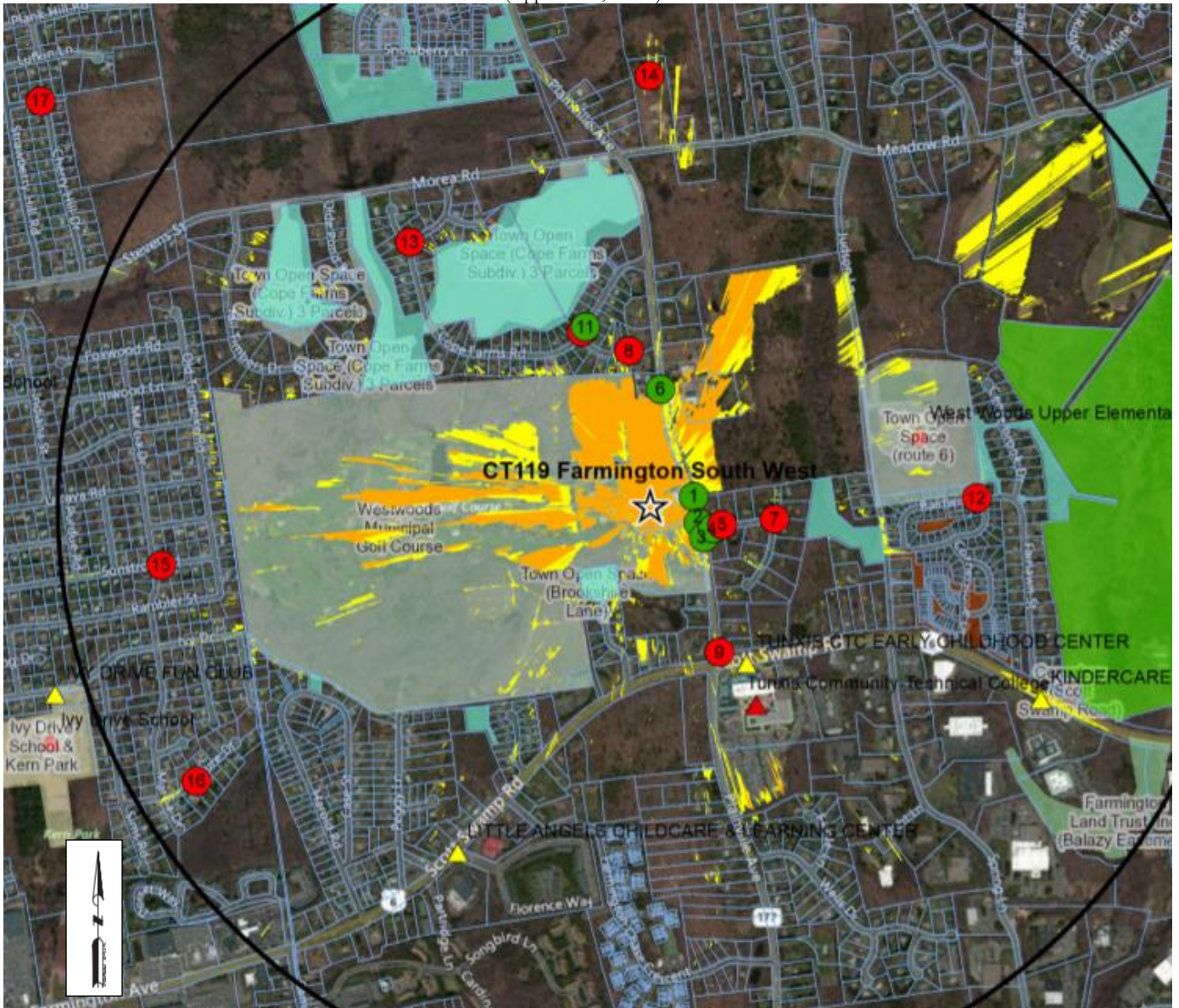


Figure 6 – Visibility Analysis
 (Applicant 1, Tab 7)



(no scale)

