DOCKET NO. 452 - Homeland Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Salisbury Tax Assessor Map 16 Lot 5, 250 Canaan Road, Salisbury, Connecticut.	}	Connecticut Siting Council March 5, 2015

Findings of Fact

Introduction

1. Homeland Towers, LLC (HT) and New Cingular Wireless PCS, LLC (AT&T) collectively referred to as the Applicant (Applicant), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on October 7, 2014 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 150-foot monopole wireless telecommunications facility disguised as a tree at 250 Canaan Road, Salisbury, Connecticut. (Applicant 1, pp. 1-2)

2. HT is a New York limited liability company with offices at 22 Shelter Rock Lane, Danbury, Connecticut. HT currently owns and operates numerous tower facilities in the State of New York and is developing tower sites in Connecticut. HT would construct, maintain, and own the proposed facility and would be the Certificate holder. (Applicant 1, p. 2)

3. AT&T is a Delaware limited liability company with an office at 500 Enterprise Drive, Rocky Hill, Connecticut. The company's member corporation is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless services system. The company does not conduct any other business in the State of Connecticut other than the provision of wireless services under FCC rules and regulations. (Applicant 1, pp. 2-3)

4. The parties in this proceeding are the Applicant and the Town of Salisbury (Town). (Transcript 1- 3:00 p.m. [Tr. 1], p. 5)

5. The purpose of the proposed facility is to provide reliable wireless services to residents, businesses, schools, municipal facilities, and visitors to eastern Salisbury. (Applicant 1, p. 1)

6. Pursuant to C.G.S. § 16-50l (b), public notice of the application was published in The Lakeville Journal on September 25, 2014 and October 2, 2014. (Applicant 1, p. 4 and Tab 12; Applicant 2)

7. On September 29, 2014, notice of the application was provided to all abutting property owners by certified mail. All certified mail receipts for the notices sent to abutting property owners were received by the Applicant. (Applicant 1, p. 4 and Tab 12; Applicant 3, response 2)

8. On October 6, 2014, the Applicant provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50l (b). (Applicant 1, Tab 13 – Certification of Service)

9. Upon receipt of the application, the Council sent a letter to the Town of Salisbury on October 7, 2014 as notification that the application was received and is being processed in accordance with C.G.S. §16-50gg. (record)

10. Pursuant to C.G.S. §16-50m, the Council published legal notice of the date and time of the public hearing in The Lakeville Journal on November 6, 2014. (record)

11. Pursuant to C.G.S. § 16-50l (m), on October 31, 2014, the Council sent a letter to the Town of Salisbury to provide notification of the scheduled public hearing and to invite the municipality to participate. (record)

12. Pursuant to 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 November 16, 2014. The sign presented information regarding the project and the Council's public hearing. (Applicant 6)

13. The Council and its staff conducted an inspection of the proposed site on December 4, 2014, beginning at 2:00 p.m. During the field inspection, the Applicant flew a four-foot diameter red balloon at the proposed site to simulate the height of the proposed tower. Weather conditions were blustery in the morning, and one balloon was lost. However, by the time of the field review, the winds had calmed and the balloon was fairly straight/vertical. During the field review, the balloon reached a height of 157 feet above ground level (agl). The balloon was aloft from 7:00 a.m. to 4:00 p.m. for the convenience of the public. (Council's Hearing Notice dated October 31, 2014; Tr. 1, pp. 14-16)

14. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on December 4, 2014, beginning with the evidentiary portion of the hearing at 3:00 p.m. and continuing with the public comment session at 7:00 p.m. at the Salisbury Town Hall, Upstairs Meeting Room, 27 Main Street, Salisbury, Connecticut. (Council's Hearing Notice dated October 31, 2014; Tr. 1, p. 1; Transcript 2 – 7:00 p.m. [Tr. 2], p. 87)

State Agency Comment

15. Pursuant to C.G.S. § 16-50j (g), on October 31, 2014 and December 5, 2014, 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 Management and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)

16. The Council received a response from the DOT's Bureau of Engineering and Construction dated November 26, 2014 that the agency has no comments. (DOT Comments dated November 26, 2014)

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

Municipal Consultation

18. The Applicant notified the Town of Salisbury of the proposal on May 30, 2014 by sending a technical report to First Selectman Curtis Rand. Approximately the last week of June 2014, the Applicant had discussions with First Selectman Rand who advised that he had referred the matter to other Town agencies for review and comment. A follow-up letter was sent from the Applicant to First Selectman Rand on August 1, 2014 inquiring as to the Town's preferred consultation process. A follow-up call with First Selectman Rand from the Applicant's representatives in September confirmed that the Town had no preferences and no official comment on the proposed facility. (Applicant 1, p. 20 and Tab 11)

19. The Town has a need to co-locate emergency services antennas on the tower to improve public safety, especially in the vicinity of the Twin Lakes. The Applicant would provide space on the tower for the Town's emergency communication services for no compensation. (Tr. 1, pp. 30-31)

20. Litchfield County Dispatch (LCD) is also interested in co-locating on the proposed tower. LCD's needs may include three whip antennas: two at the top of the tower and one located at a lower height. (Tr. 1, pp. 29-30)

21. At the evidentiary hearing held on December 4, 2014, Second Selectman Jim Dresser made a statement that the Town has no comments about the specifics of the tower, but noted that there is definitely a need for cell service in the Taconic region of Salisbury. (Tr. 1, p. 7)

22. There are no municipalities located within 2,500 feet of the proposed tower site. (Applicant 4)

Public Need for Service

23. 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)

24. 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. AT&T is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Litchfield County, Connecticut. (Council Administrative Notice Item No. 4; Applicant 3, response 8)

25. 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)

26. 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)

27. 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, which include effects on human health and wildlife, of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. (Council Administrative Notice Item No. 4)

28. 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."(The National Broadband Plan - Council Administrative Notice Item No. 19)

29. 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)

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

31. 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)

32. 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 21 – FCC Report and Order; Council Admin Notice Item 12 – Executive Order 13616)

33. Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, also referred to as the Spectrum Act, a state or local government may not deny and shall approve any request for collocation, removal or replacement of equipment on an existing wireless tower provided that this does not constitute a substantial change in the physical dimensions of the tower. The Federal Communications Commission defines a substantial change in the physical dimensions of a tower as follows:

a) An increase in the existing height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater. Changes in height should be measured from the dimensions of the tower, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
b) Adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
c) Installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four, or more than one new equipment shelter.
d) A change that entails any excavation or deployment outside the current site.
e) A change that would defeat the concealment elements of the tower.
f) A change that does not comply with conditions associated with the siting approval of the construction or modification of the tower, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would exceed the thresholds identified in (a) – (d).

(Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 21 – FCC Report and Order)

34. 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)

Existing and Proposed Wireless Services – AT&T

35. AT&T's proposed facility is needed for both coverage and capacity. (Applicant 3, response 20)

36. AT&T would provide service over 700 MHz, 850 MHz, and 1900 MHz frequency bands. 700 MHz and 850 MHz would be primarily for coverage, and 1900 MHz would provide extra capacity. All three bands would be used for voice and data. All three bands would be on air when the site enters service. (Applicant 3, responses 9, 20, 21)

37. For 700 MHz, AT&T's design signal strengths for in-building and in-vehicle coverage are -83 dBm and -93 dBm, respectively. For 850 MHz, the design signal strengths for in-building and in-vehicle coverage are -74 and -82 dBm, respectively. For 1900 MHz, the design signal strengths for in-building and in-vehicle coverage are -86 dBm and -96 dBm, respectively. (Applicant 3, responses 23 and 29)

38. For 700 MHz, AT&T's existing signal strength in the area of the proposed facility ranges from -93 dBm to -120 dBm. For 850 MHz, AT&T's existing signal strength ranges from -82 dBm and lower (i.e. weaker signal strength). For 1900 MHz, AT&T's existing signal strength ranges from -96 dBm to -120 dBm. (Applicant 3, response 24)

39. The table below indicates AT&T's current coverage gaps along main routes.

Street Name	Coverage Gap at 700 MHz	Coverage Gap at 850 MHz	Coverage Gap at 1900 MHz
Belden Street	0.14 miles	0.14 miles	0.26 miles
Canaan Road	2.07 miles	2.07 miles	2.86 miles
East Main Street	0.18 miles	0.18 miles	0.27 miles
Salisbury Road	0.05 miles	0.05 miles	0.63 miles
Route 41	1.07 miles	1.07 miles	1.07 miles
Under Mountain Rd.	3.13 miles	3.13 miles	3.24 miles
Main Road Total	6.64 miles	6.64 miles	8.33 miles

(Applicant 3, response 26)

40. The table below indicates AT&T's current total coverage gaps along secondary routes.

Street Name	Coverage Gap at 700 MHz	Coverage Gap at 850 MHz	Coverage Gap At 1900 MHz
Secondary Road Total	32.46 miles	32.46 miles	35.89 miles

(Applicant 3, response 26)

41. The tables below indicate the distances that AT&T would cover along main roads in the area of its proposed facility at various heights.

Street Name	700 MHz Coverage at 146 feet	700 MHz Coverage at 136 feet	850 MHz Coverage at 146 feet	850 MHz Coverage at 136 feet
Canaan Road	0.71 miles	0.69 miles	0.71 miles	0.67 miles
Under Mountain Road	1.00 miles	0.84 miles	0.87 miles	0.80 miles
Main Road Total	1.71 miles	1.53 miles	1.58 miles	1.47 miles

Street Name	1900 MHz Coverage at 146 feet	1900 MHz Coverage at 136 feet
Canaan Road	0.61 miles	0.61 miles
Under Mountain Road	0.54 miles	0.44 miles
Main Road Total	1.15 miles	1.05 miles

(Applicant 5, response 2)

42. The tables below indicate the distances that AT&T would cover along secondary roads in the area of its proposed facility at various heights.

Street Name	700 MHz Coverage at 146 feet	700 MHz Coverage at 136 feet	850 MHz Coverage at 146 feet	850 MHz Coverage at 136 feet
Secondary Road Total	9.51 miles	9.32 miles	8.88 miles	8.45 miles

Street Name	1900 MHz Coverage at 146 feet	1900 MHz Coverage at 136 feet
Secondary Road Total	4.72 miles	4.42 miles

(AT&T 5, response 2)

43. AT&T's proposed facility would interact with the adjacent existing facilities identified in the following table.

Site Location	Distance and Direction from Proposed Tower	Height of AT&T Antennas	Structure Type
497 Lime Rock Road, Lakeville	5.44 miles south	42 feet	Monopole
38 Lower Road, North Canaan	3.37 miles east	148 feet	Lattice Tower
477 Route 7, Sharon	6.81 miles south-southeast	100 feet	Monopole
52 Library Street, Salisbury	2.25 miles southwest	144 feet	Monopole

(Applicant 3, response 10; Applicant 1, Tab 1 – Radio Frequency Analysis Report, pp. 8-9)

44. This table indicates the total areas that AT&T would cover from its proposed facility at various heights.

Antenna Height	Area Coverage* with 700 MHz	Area Coverage* with 850 MHz	Area Coverage* with 1900 MHz
146 feet	4.52 square miles	4.95 square miles	2.42 square miles
136 feet	4.31 square miles	4.73 square miles	2.21 square miles

*Based on the more conservative in-building coverage thresholds rather than in-vehicle.
(Applicant 3, response 28)

45. AT&T's minimum design antenna centerline height to meet coverage objectives is 146 feet. (Applicant 3, response 22)

46. At lower antenna heights than 146 feet, further loss of road and area coverage would occur. (Tr. 1, p. 31; Applicant 3, response 28; Applicant 5, response 2)

47. The proposed facility would provide reliable service to Salisbury School, which has a student/faculty/employee population of approximately 450. (Applicant 1, p. 8)

48. The proposed facility would also provide reliable service to the Twin Lakes (i.e. Lakes Washinee and Washining). (Applicant 3, response 12)

Site Selection

49. HT established a formal search ring for this area in January 2012. HT concentrated its search along Route 44 in the vicinity of the Salisbury School with an approximately ½ mile search radius. The center of the search ring is located at 42° 0' 1.47" north latitude and 73° 23' 28.31" west longitude. (Applicant 3, response 1)

50. HT met with First Selectman Rand in February 2012 to discuss its preliminary search area. At that meeting, First Selectman Rand suggested the Salisbury School property due to large acreage available. (Applicant 1, Tab 2, Site Search Summary, p. 2)

51. AT&T independently established its search ring for this area in August 2013. AT&T concentrated its search along Route 44 in the vicinity of Prospect Mountain Road and Taconic Road with an approximately ½ mile search radius. The center of this search ring is located at 41° 59' 51.9" north latitude and 73° 24' 20.82" west longitude. (Applicant 3, response 1)

52. There are two existing towers/structures located within a four-mile radius of the center of AT&T's search ring. The locations of the two existing towers and the reasons for the rejections are listed below:

    a) 52 Library Street, Salisbury – AT&T is already co-located on this existing monopole facility.
    b) Bunker Hill Road, Salisbury – This existing lattice tower facility would not meet AT&T's coverage objectives.

    (Applicant 1, Tab 2, Existing Tower/Cell Site Listing)

53. After determining there were no suitable structures existing within their search area, AT&T searched for properties suitable for tower development. AT&T investigated four parcels/areas, one of which was selected for site development. The three rejected parcels/areas and reasons for their rejection are as follows:
    a) 167 Canaan Road, Salisbury (Salisbury Garden Center) – AT&T rejected this site due to wetland resources on the site.
    b) 171 Canaan Road, Salisbury – The property is for sale with several buildings to be demolished. AT&T rejected this site due to uncertainty regarding property ownership
    c) 15 Prospect Mountain Road, Salisbury – AT&T rejected this site because this smaller residential property was not deemed suitable for siting.

    (Applicant 1, Tab 2, Properties Investigated by AT&T)

54. HT independently searched for properties suitable for tower development. HT investigated five parcels/areas, one of which was selected for site development. The four rejected parcels/areas and reasons for their rejection are as follows:

    a) Housatonic River Road (Salisbury School) – Salisbury School was not interested in a tower on this parcel because its preference was to keep this parcel undeveloped.
    b) Taconic Road, Salisbury (Edith Scoville Memorial Sanctuary) – The property has multiple conservation restrictions and covenants that would will not allow development of a tower.
    c) 251 Canaan Road, Salisbury (Salisbury School – Main Campus) – Salisbury School was not interested in a tower on the parcel that contains its main campus.
    d) Canaan Road, Salisbury (Map/Lot 16/4) (Salisbury School) – Salisbury School was not interested in a tower on this parcel because its preference was to keep this parcel undeveloped.

    (Applicant 1, Tab 2, Properties Investigated by HT)

55. Repeaters, microcell transmitters, distributed antenna systems, and other types of transmitting technologies are not a practicable or feasible means to providing such services within Salisbury. These technologies are better suited to provide new coverage at certain small, specially defined areas such as commercial buildings, shopping malls, and tunnels, or to address capacity. Closing the coverage gaps and providing reliable wireless services in eastern Salisbury requires a tower site that can provide reliable service over a footprint that spans several thousand acres. (Tr. 1, pp. 45-48)

Facility Description

56. The proposed site is located on a 169.3-acre parcel located at 250 Canaan Road (Route 44) in Salisbury. The parcel is owned by Salisbury School Inc. The parcel includes a large, undeveloped wooded area to the north of a maintenance garage and athletic fields. The facility is proposed within the undeveloped portion of the parcel. The parcel is zoned RR-1 residential. (Applicant 1, pp. 1 and 17)

57. Land use in the surrounding area includes undisturbed wooded areas and residential land to the east and west, undisturbed wooded area and Lake Washinee to the north, and Salisbury School campus to the south. (Applicant 4, Site Evaluation Report)

58. The proposed facility would consist of a 150-foot stealth tree monopole or "monopine." The total height to the top of the faux tree branch material would be 157 feet agl. The monopole or "tree trunk" would be approximately five feet wide at the base tapering to 3.5 feet wide at the top. The tower would be designed to support six levels of antennas (including AT&T) with a 10-foot center-to-center vertical separation. (Applicant 1, Tab 3 – Facilities and Equipment Specifications; Applicant 1, Tab 4 – Sheet SP-2)

59. Because of proximity to a culturally sensitive area proximate to the proposed facility location, on November 19, 2014, the Applicant shifted the location of the tower and compound by approximately 107 feet to the southwest. The original tower site was removed from consideration. The relocation of the tower and compound is expected to provide adequate separation distance from the culturally sensitive area, which would be left isolated in situ and physically protected during construction activities. (Applicant 4; Tr. 1, pp. 14, 22, 26-28)

60. The proposed tower would be located approximately 1,869 feet north of Canaan Road at 42° 00' 22.40" north latitude and 73° 23' 29.22" west longitude at an elevation of 893 feet AMSL. (Applicant 4, Sheets T-1 and A-1)

61. Pursuant to C.G.S. § 16-50p(a)(3)(G), no occupied school structures are located within 250 feet of the proposed tower. The closest building that may be occupied is the maintenance garage, located about 744 feet to the southwest. The nearest commercial day care center is Puddle Jumpers Day Care Center, located at 19 Park Avenue in North Canaan, approximately 2.15 miles to the east. The nearest commercial day care center within the Town of Salisbury is located at 30B Salmon Kill Road, approximately 2.5 miles to the southwest. (Applicant 1, p. 14 and Tab 8 – Visibility Analysis, p. 7; Applicant 4, Sheet A-1)

62. The nearest property boundary from the proposed tower is approximately 756 feet to the east (Kenneth property). (Applicant 4 – Sheet A-1)

63. There are no residences within 1,000 feet of the proposed tower site. The closest off-site residence is located at 284 Canaan Road, approximately 2,180 feet to the southeast. (Applicant 4, Site Impact Statement and Abutters Map – Sheet A-1)

64. HT does not plan to design the tower to be expandable in height. However, the tower could be designed to be expandable in height if requested by the Council. (Tr. 1, pp. 32-33)

65. A 60-foot by 70-foot equipment compound (within a 70-foot by 80-foot leased area) would be enclosed by an eight-foot high chain link fence would be established at the base of the tower. The size of the lease area would be able to accommodate the equipment of six wireless carriers including AT&T. (Applicant 1, Tab 3, Facilities and Equipment Specifications; Applicant 4, Sheet SP-2)

66. AT&T would install an 11-foot 5-inch by 16-foot equipment shelter inside the fenced compound. (Applicant 4, Sheet SP-2)

67. AT&T would install 12 panel antennas, 21 remote radio heads, and six surge suppressors on T-arm mounts at the 146 foot agl of the tower. (Applicant 3, response 6; Tr. 1, p. 20)

68. The faux tree branch material would disguise the antenna array because the T-arms are approximately three feet long, and the faux tree branches are approximately six to eight feet long at the top of the tower. (Applicant 3, response 47)

69. Only one other carrier, Cellco Partnership d/b/a Verizon Wireless (Cellco), expressed an interest in co-locating on the proposed tower. However, Cellco did not intervene in the proceeding. (Tr. 1, p. 16; Record)

70. Access to the proposed site would extend from Canaan Road in a northerly direction over an existing paved access drive, then continue north along an existing gravel access drive (towards the boathouse/lakes area), and then turn east for approximately 500 feet over new, proposed gravel drive that utilizes an existing logging road path to reach the equipment compound. The average grade of the new, proposed access would be 5.4 percent. (Applicant 1, p. 12; Applicant 3, response 7; Applicant 4)

71. Telephone utility service would run underground approximately 1,400 feet in a northerly direction from an existing demarcation point located near the maintenance garage. Then, it would turn eastward and run underground for about 500 feet parallel to the new, proposed gravel driveway. (Tr. 1, pp. 20-21; Applicant 4, Sheet A-1)

72. Electric utility service would connect to an existing distribution line on the existing boathouse access road. Then the electric utilities would run underground for about 500 feet to reach the compound. (Tr. 1, p. 21; Applicant 4, Sheet A-1)

73. Both underground telephone and electric utility services could be run along the northerly side of the new, proposed gravel access drive (as opposed to the south side as proposed) to increase the distance from the wetland. (Tr. 1, p. 21)

74. Development of the site would require approximately 550 cubic yards of cut for utility trenching in addition to 30 cubic yards of fill and approximately 215 cubic yards of crushed stone for the compound and driveway construction. (Applicant 4 – Site Evaluation Report)

75. The site preparation phase of construction would be expected to take four to five weeks. Installation of the tower, antennas, and other equipment would take an additional three weeks. After completion of construction, facility integration and system testing would take an additional approximately two weeks before the site would be operational. (Applicant 1, p. 21)

76. The estimated construction cost of the proposed facility is:

Tower and Foundation	$ 160,000.
Site Development	$ 105,000.
Utility Installation	$ 45,000.
Facility Installation	$ 45,000.
HT Subtotal	$355,000.
Antennas and Equipment	$250,000.
AT&T Subtotal	$250,000.
Total Estimated Cost	$605,000.

(Applicant 1, p. 21; Tr. 1, p. 20)

Backup Power

77. 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. Two of the Panel's findings are as follows:
    a) "Wireless telecommunications service providers were not prepared to serve residential and business customers during a power outage. Certain companies had limited backup generator capacity;" and
    b) "The failure of a large portion of Connecticut's telecommunications system during the two storms is a life safety issue."
    (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 40)

78. The Panel made the following recommendations:
    a) "State regulatory bodies should review telecommunications services currently in place to verify that the vendors have sufficient generator and backhaul capacity to meet the emergency needs of consumers and businesses:" and
    b) The Connecticut Siting Council should require continuity of service plans for any cellular tower to be erected. In addition, where possible, the Siting Council should issue clear and uniform standards for issues including, but not limited to, generators, battery backups, backhaul capacity, response times for existing cellular towers."
    (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 40)

79. In response to the findings and recommendations of the Panel, Public Act 12-148, An Act Enhancing Emergency Preparedness and Response, codified at C.G.S. §16-50ll, required the Council, in consultation and coordination with the Department of Energy and Environmental Protection, the Department of Emergency Services and Public Protection and the Public Utilities Regulatory Authority (PURA), to study 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 Docket No. 432, Council Administrative Notice Item No. 25)

80. The Council's study included consideration of the following matters:
    a) Federal, state and local jurisdictional issues of such backup power requirements, including, but not limited to, siting issues;
    b) Similar laws or initiatives in other states;
    c) The technical and legal feasibility of such backup power requirements;
    d) The environmental issues concerning such backup power; and
    e) Any other issue concerning backup power that PURA deems relevant to such study.
    (Council Docket No. 432, Council Administrative Notice Item No. 25)

81. The Council reached the following conclusions in the study:
    a) "Sharing a backup source is feasible for CMRS providers, within certain limits. Going forward, the Council will explore this option in applications for new tower facilities;" and
    b) "The Council will continue to urge reassessment and implementation of new technologies to improve network operations overall, including improvements in backup power."
    (Council Docket No. 432, Council Administrative Notice Item No. 25)

82. For backup power, AT&T would utilize a 50 kW diesel generator on an 11-foot 5-inch by 24-foot concrete pad within the fenced compound and next to AT&T's equipment shelter. It would have a 200-gallon fuel tank. The estimated full-load run time of the generator before it requires refueling is 48 hours. (Applicant 3, response 36; Applicant 4, Sheet SP-2; Tr. 1, p.20)

83. AT&T would also have a battery backup in order avoid a "re-boot" condition during the generator start-up delay period. In the event that the generator fails to start, the battery backup system alone could provide approximately four to six hours of backup power. (Applicant 2, response 37)

84. While the backup generator would only be sized for AT&T's needs, the Applicant would consider reserving space within the fenced compound for the possible deployment of a larger shared generator should another carrier decide to deploy one in the future. (Applicant 3, response 35)

85. 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, are exempt from the State Noise Control Regulations. (R.C.S.A. §22a-69-1.8)

Public Safety

86. 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)

87. AT&T's facility would be in compliance with the requirements of the 911 Act (Applicant 1, pp. 9-10)

88. The proposed facility would provide Enhanced 911 services. This allows carriers to help 911 public safety dispatchers identify wireless callers' geographical locations within several hundred feet. (Applicant 1, pp. 9-10)

89. On May 15, 2014, AT&T as well as other 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. Even with carrier upgrades to its telecommunications system, the 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 centers; therefore, it cannot require 911 centers to accept text messages. (Council Admin. Notice No. 6; Applicant 1, pp. 7-8)

90. AT&T would be able to support text-to-911 service at the proposed facility once this functionality is supported and requested by the PSAP. AT&T is not aware that this functionality has yet been requested for this area. (Applicant 3, response 18)

91. Pursuant to the Warning, Alert and Response Network Act of 2006, the FCC has established a Personal Localized Alerting Network (PLAN) that requires wireless communication providers to issue text message alerts from Federal bodies, including the President of the United States. PLAN would allow the public to receive e-mails and text messages on mobile devices based on geographic location. The proposed facility would enable the public to receive e-mails and text messages from the CT Alert ENS system. (Applicant 1, p. 10)

92. The tower will be constructed in accordance with the American National Standards Institute TIA/EIA-222 "Structural Standards for Steel Antenna Towers and Antenna Support Structures" Versions F and G, using the more stringent of the two standards. The tower design would be in compliance with the applicable International Building Code standards as adopted by the State of Connecticut. (Applicant 1, Tab 3; Applicant 3, response 3)

93. The proposed equipment compound will be surrounded by an eight-foot high chain-link fence. The fence would have an anti-climb weave and would not have barbed wire. (Applicant 3, response 16; Applicant 4, Sheet SP-2; Applicant 3, response 16)

94. In addition to the gated and locked compound, AT&T's equipment shelter would be locked and remotely monitored for intrusion on a 24-hour basis. (Applicant 3, response 17)

95. The tower setback radius would remain within the boundaries of the subject property. (Applicant 1, Tab 4 – Sheets A-1 and SP-1)

Environmental Considerations

96. A review of historic resources data indicates that no sites listed on the National Register of Historic Places are located within a 0.5-mile radius. (Applicant 1, Tab 10, p. 15; Tr. 1, pp. 55-56)

97. Vegetation at the site consists mainly of mixed deciduous hardwood species interspersed with scattered stands of conifers. The average tree canopy height in the vicinity of the tower site is approximately 85 feet. (Application 1, Tab 8, p. 4; Applicant 3, response 45)

98. Approximately 35 trees six inches or greater in diameter would be removed to construct the facility. (Tr. 1, pp. 11-12)

99. The northern long-eared bat, a State-designated Species of Special Concern, is known to occur in the vicinity of the tower site. Given the known concentrated seasonal use of this area by bats, DEEP recommends the following:
    a) Tree cutting should be conducted from November 1 through March 30 to ensure that bats are safely situated in their hibernacula; and
    b) Retaining large diameter trees 12 inches in diameter or greater wherever possible at the site may additionally minimize the potential for negative impacts to bats.

    (Applicant 1, Tab 9, DEEP Letter dated August 10, 2014; Tr. 1, p. 23)

100. The Applicant has retained large diameter trees in the facility design to the extent possible to comply with DEEP's recommendation. (Tr. 1, p. 25)

101. The Applicant would also perform tree clearing during the November 1 through March 30 window. Such details would be included in the Development and Management Plan (D&M Plan). (Tr. 1, p. 23)

102. The proposed tower site is not proximate to an Important Bird Area (IBA). The closest IBA is the White Memorial Foundation in Litchfield, approximately 20.7 miles to the southwest. (Applicant 3, response 43)

103. The proposed tower would comply with the U.S. Fish and Wildlife Services guidelines for minimizing the potential impacts to birds. (Applicant 3, response 44)

104. There are two wetlands on the host property: Wetland 1 to the northeast of the proposed site and Wetland 2 to the south and southwest of the site. (Applicant 1, Tab 6)

105. Wetland 1 is a hillside seep headwater wetland system located northeast of the proposed facility. A seasonal diffuse intermittent watercourse is centrally located with this wetland system, starting with a seasonal spring with shallow flows to the north. (Applicant 1, Tab 6, p. 4)

106. Wetland 1 is located approximately 211 feet to the northeast of the proposed facility compound and approximately 275 feet to the northeast of the proposed access drive. (Applicant 4, Sheet SP-1)

107. Wetland 2 is a forested wetland system associated with an unnamed perennial watercourse that flows to the west, then turns north at an existing culvert crossing associated with the Salisbury School's gravel road that leads to the boathouse on Washinee Lake. (Applicant 1, Tab 6, p. 4)

108. Wetland 2 is located approximately 119 feet to the southwest of the proposed facility compound at its closest point. It is located approximately eight feet to the south of the proposed gravel access drive at its closest point. (Applicant 4; Tr. 1, p. 22)

109. While an alternate access route could have been designed farther to the north to increase the distance from Wetland 2, such an alternative would have been associated with a greater disturbance to forested uplands. In addition, it would require greater tree removal. Thus, the Applicant proposes to utilize the existing logging road. (Applicant 1, Tab 6, p. 5)

110. No temporary impacts associated with the construction activities to nearby wetlands and watercourses are anticipated provided that erosion and sedimentation controls are designed, installed, and maintained during construction activities in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* (2002 E&S Guidelines). (Applicant 1, Tab 6, p. 5)

111. Long term secondary impacts to wetland resources associated with the operation of the facility are expected to be minimized by the fact that the facility would be unmanned, minimizes the creation of impervious surfaces with the use of a gravel access drive and compound and creates minimal traffic. (Applicant 1, Tab 6, p. 5)

112. In addition to compliance with 2002 E&S Guidelines, the Applicant's environmental consultant, All Points Technology, Inc., recommends that stormwater generated by the proposed development would be properly handled and treated in accordance with the *2004 Connecticut Stormwater Quality Manual* (2004 Stormwater Manual), with an emphasis on the utilizing Green Infrastructure/Low Impact Development techniques where appropriate. (Applicant 1, Tab 6, p. 5)

113. The erosion and sedimentation control plans and stormwater management plans would be submitted as part of the D&M Plan. (Applicant 1, Tab 6, p. 5)

114. With 2002 E&S Guidelines and 2004 Stormwater Manual compliance, the project would not likely result in an adverse impact to wetland resources. (Applicant 1, Tab 5, p. 6; Tr. 1, p. 22)

115. The backup generator's diesel fuel tank has double-walled containment to protect against leakage. (Tr. 1, p. 20)

116. Obstruction marking and lighting of the tower would not be required. Notice to the Federal Aviation Administration would also not be required. (Applicant 4, Site Safe Report)

117. The proposed equipment shelter would have a 100-watt exterior light fixture. The light would be off except when turned on by a motion sensor. (Applicant 3, response 15)

118. The HVAC units would meet State noise standards at the property boundaries. (Applicant 3, response 53)

119. The proposed site is located in Federal Emergency Management Agency Zone X, an area outside of the 100-year and 500-year flood zones. (Applicant 4, Sheets A-1 and T-1; Applicant 3, response 14)

120. The cumulative worst-case maximum power density from the radio frequency emissions from the operation AT&T's proposed antennas is 24.1% 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 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. (Council Administrative Notice Item No. 18; Applicant 1, Tab 7 – Power Density Table; Applicant 3, response 33)

Visibility

121. The proposed tower would be visible year-round from approximately 138 acres within a two-mile radius of the site (refer to Figure 14). It would be seasonally visible from approximately 343 acres within a two-mile radius of the site. (Applicant 1, Tab 8 – Viewshed Map)

122. The proposed tower would be visible year-round from less than ten homes, including a few along Twin Lakes Road (at two miles away and greater), Taconic Road (approximately 1.5 miles to the northwest), and Between the Lakes Road (approximately 1.6 miles northeast). However, at these distances, the tower would be barely recognizable as anything other than a tree among the existing tree canopy. (Applicant 3, response 50)

123. The proposed tower would be seasonally visible from approximately another 10 to 12 residential properties, including the same areas with year-round visibility as well as select locations off the southern end of Between the Lakes Road near its intersection with Canaan Road (within 0.75 miles) and possibly off Weatogue Road (at distances of approximately two miles away). (Applicant 3, response 50)

124. Visibility of the proposed tower from specific locations within a two-mile radius of the site is presented in the table below:

Location	Visible	Approx. Portion of Tower Visible	Approx. Distance to Tower
Twin Lakes Road	Yes	15 feet – above trees	1.98 miles southwest
Between the Lakes Road	Yes	20 feet - through trees	1.58 miles south
Taconic Road	Yes	20 feet – through trees	1.49 miles southeast
Edith Scoville Memorial Sanctuary	Yes	70 feet – through trees	0.31 miles east
Edith Scoville Memorial Sanctuary at the edge of playing fields	Yes	70 feet – through trees	0.18 miles east
Host Property	Yes	50 feet – through trees	0.16 miles northeast
Host Property	Yes	70 feet – above trees	0.24 miles northeast
Host Property	Yes	70 feet – above trees	0.37 miles north
Host Property	Yes	70 feet – above trees	0.42 miles north
Host Property	Yes	60 feet – above trees	0.42 miles north
Appalachian Trail	No	None	1.86 miles north
Appalachian Trail	No	None	1.62 miles north
Prospect Mountain Summit	No	None	1.83 miles northwest

(Applicant 1, Tab 8 – Visibility Analysis

125. Residential halls and faculty residences located at Salisbury School campus would likely experience some year-round views of the proposed tower. (Applicant 3, response 50)

126. Some year-round views of the proposed tower from Lake Washinee are possible. They could extend from a few feet to upwards of 40 feet above the existing tree canopy. (Applicant 1, Tab 8, Viewshed Map; Applicant 3, response 51)

127. Limited seasonal views of the tower from the Edith Scoville Memorial Sanctuary (ESMS) are possible along portions of the eastern-most trails within the ESMS. (Applicant 3, response 19)

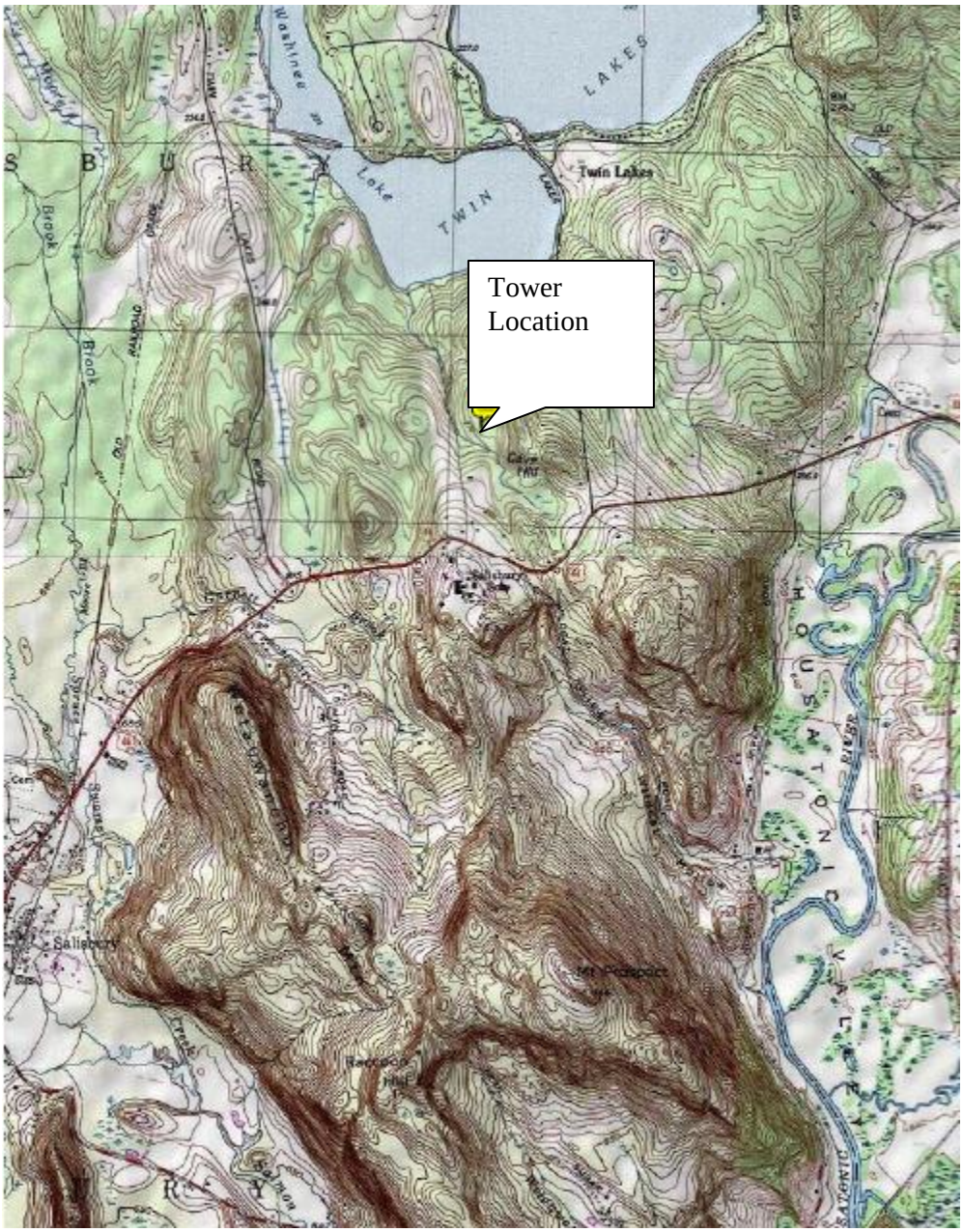
128. The proposed tower would not be visible from the Appalachian Trail. (Applicant 1, Tab 8, Viewshed Map)

129. The proposed facility is located within the Upper Housatonic Valley National Heritage Corridor (UHVNHC). However, it is not expected to adversely impact the UHVNHC because of the limited visibility and the stealth "tree" design. (Tr. 1 pp. 17-18)

130. The monopole or "tree trunk" is proposed as a galvanized steel grey color, but it could be painted brown if requested. (Tr. 1, p. 28)

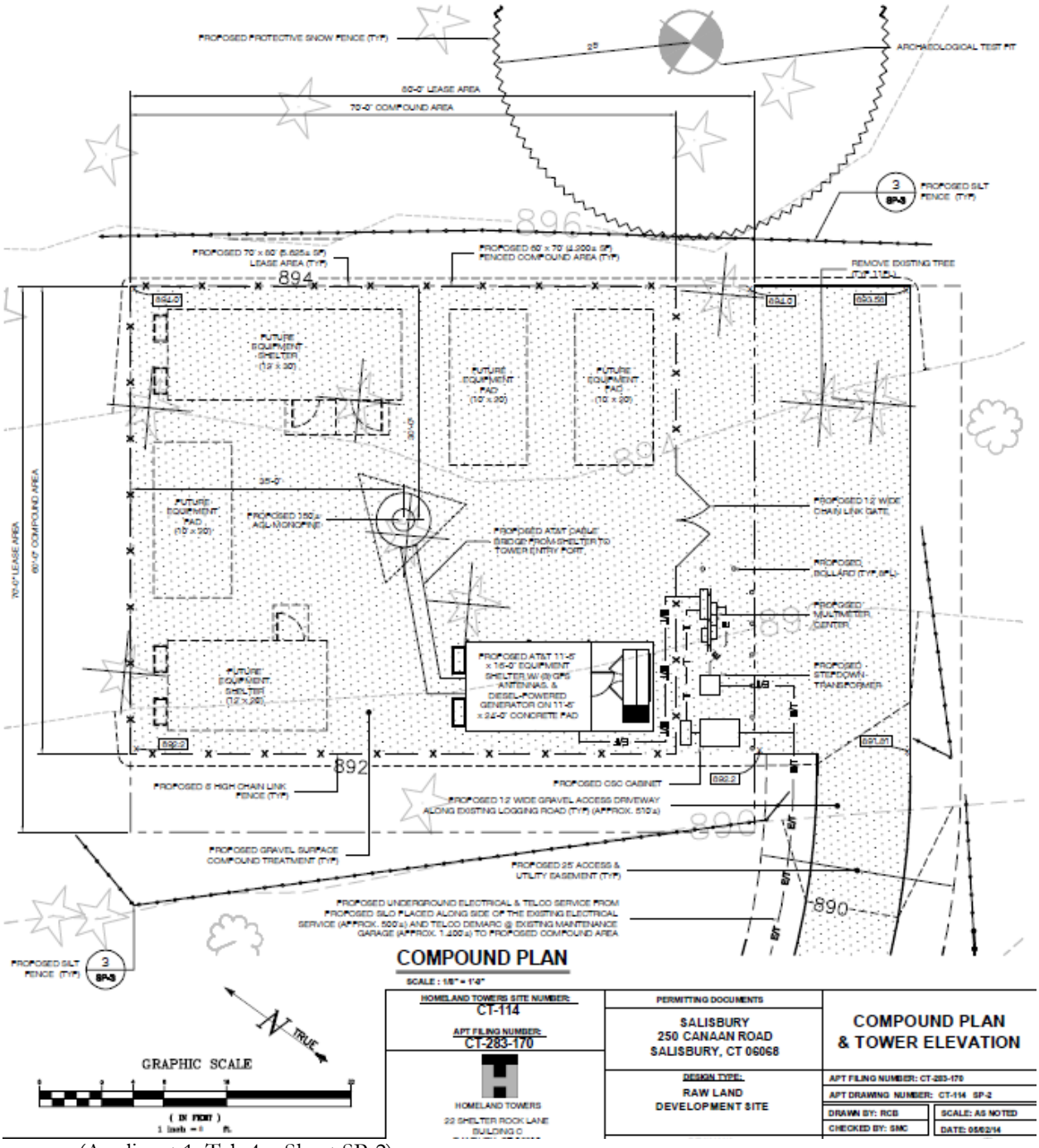
131. The antennas and antenna mounts could be painted to blend in with the faux tree branch material where exposed. (Applicant 3, response 48)

Figure 1 – Site Location



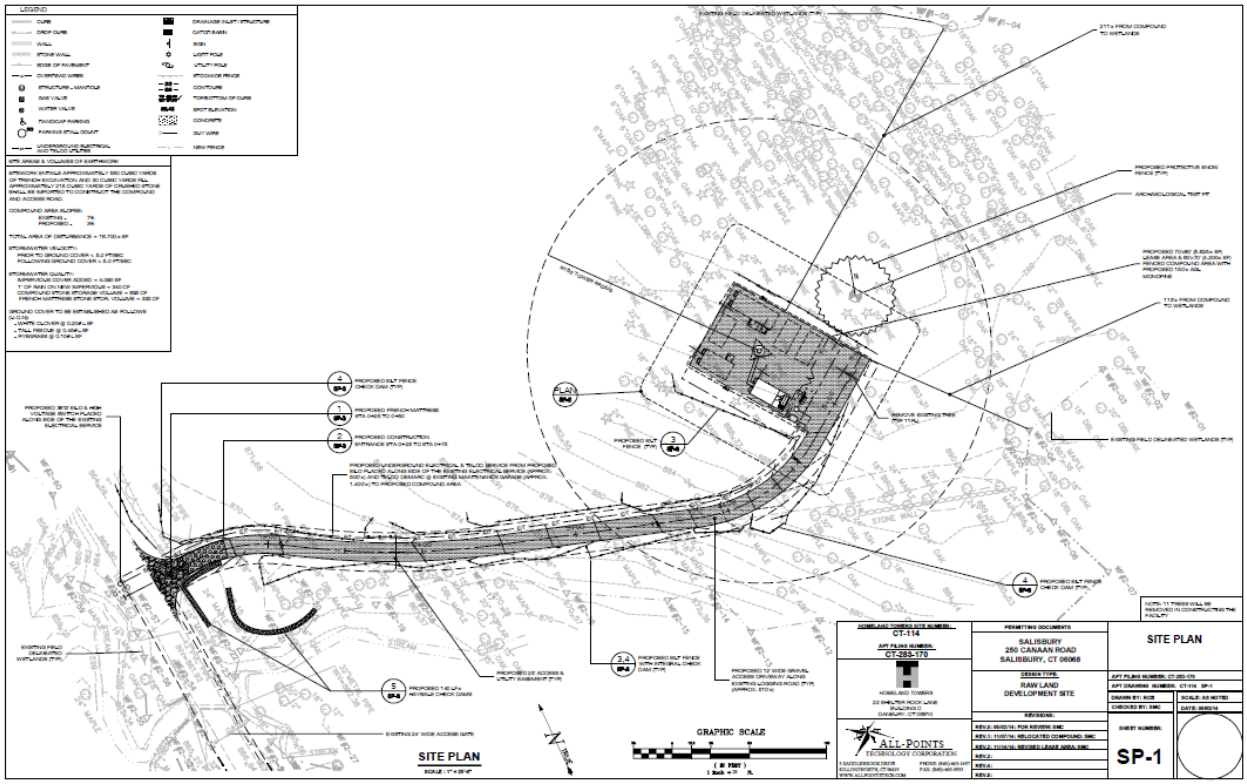
(Applicant 4)

Figure 2 – Compound Plan



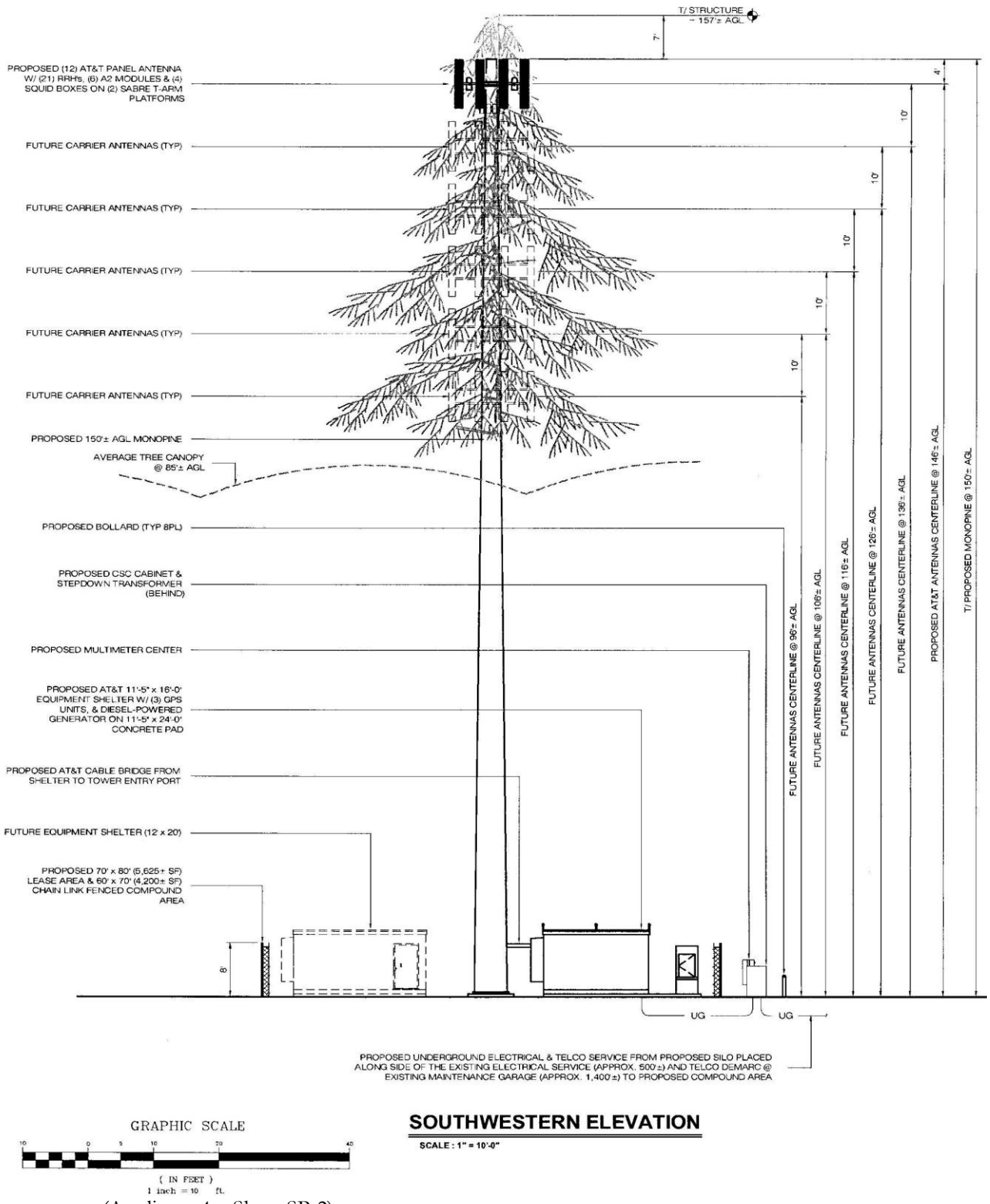
(Applicant 1, Tab 4 – Sheet SP-2)

Figure 3 – Access Drive Drawing



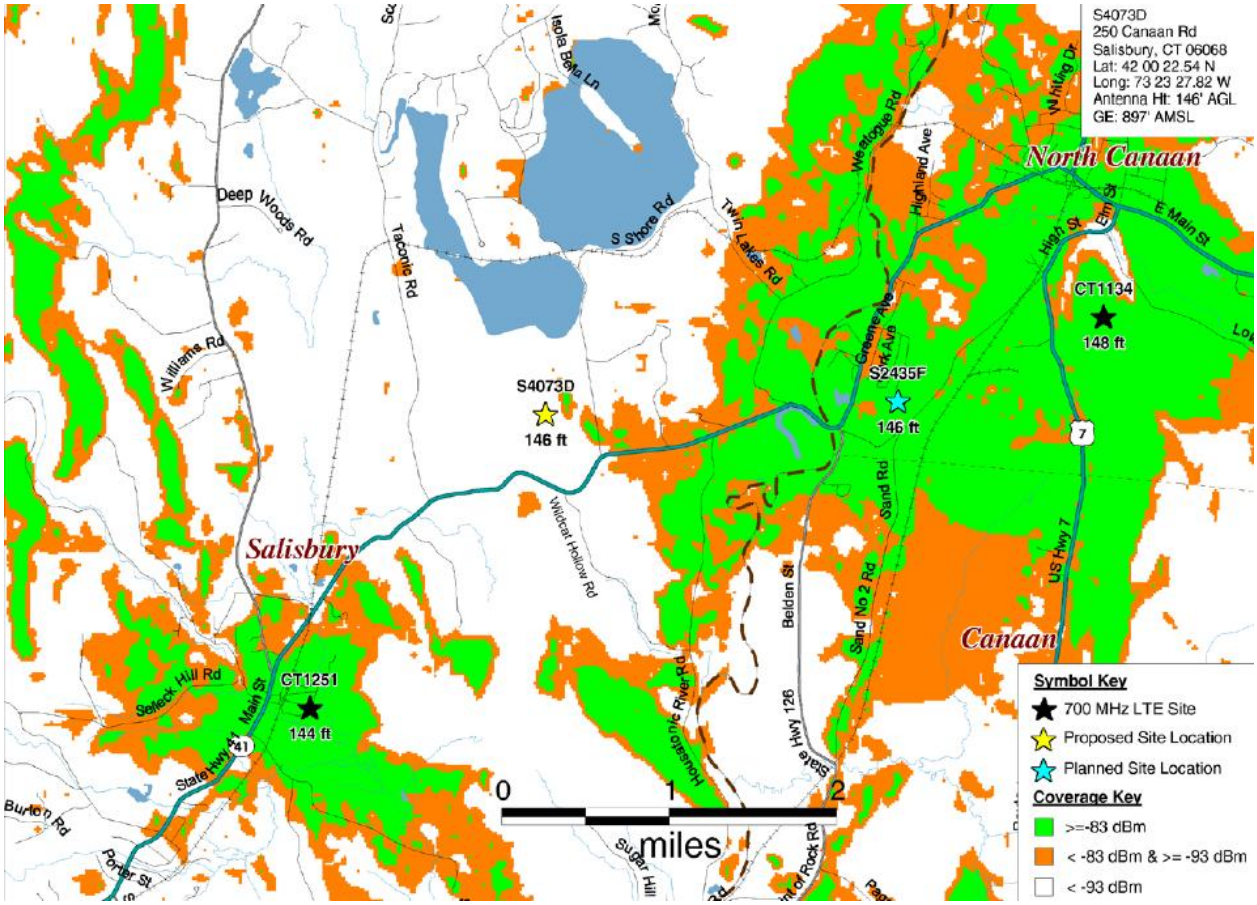
(Applicant 4 – Sheet SP-1)

Figure 4 – Tower Elevation Drawing



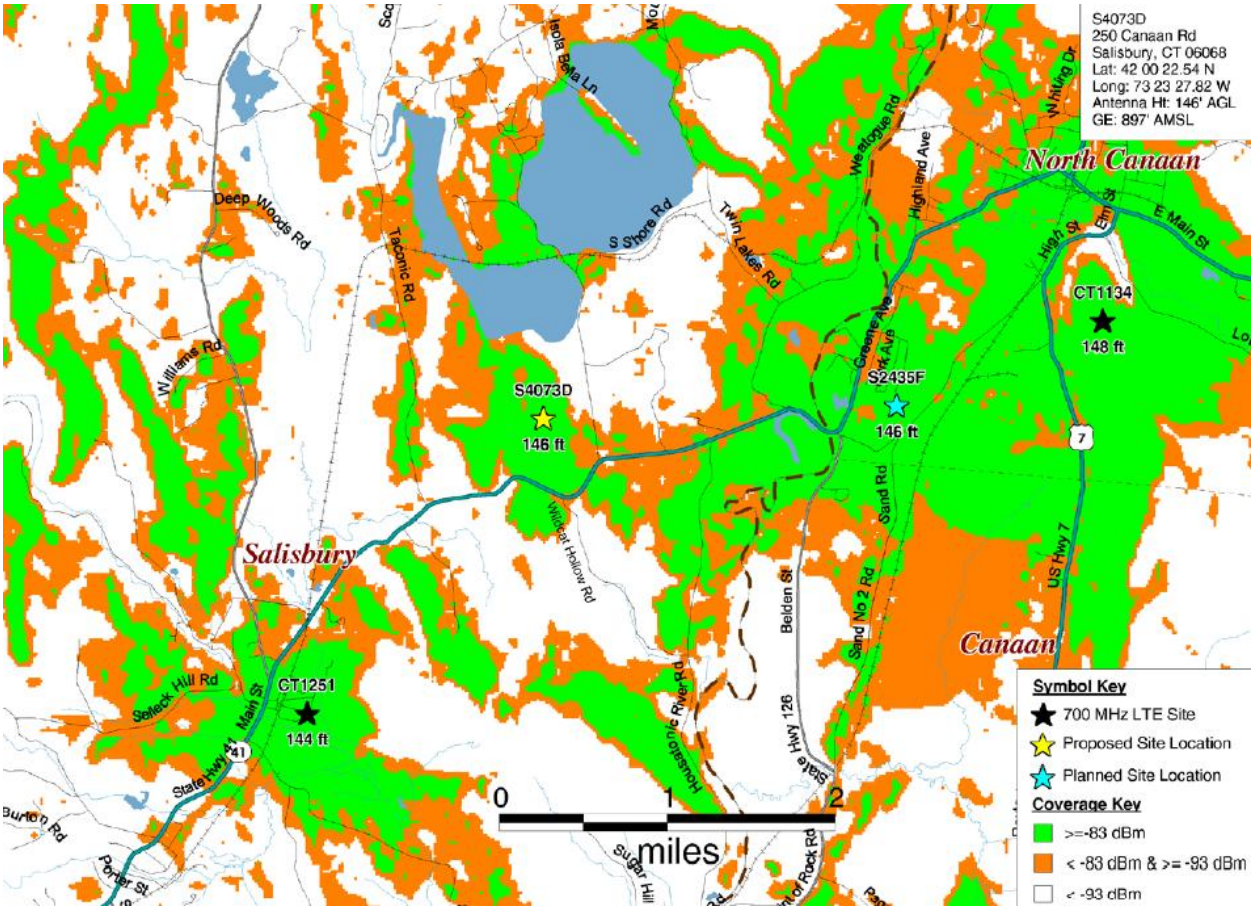
(Applicant 4 – Sheet SP-2)

Figure 5 – AT&T's Existing 700 MHz Coverage



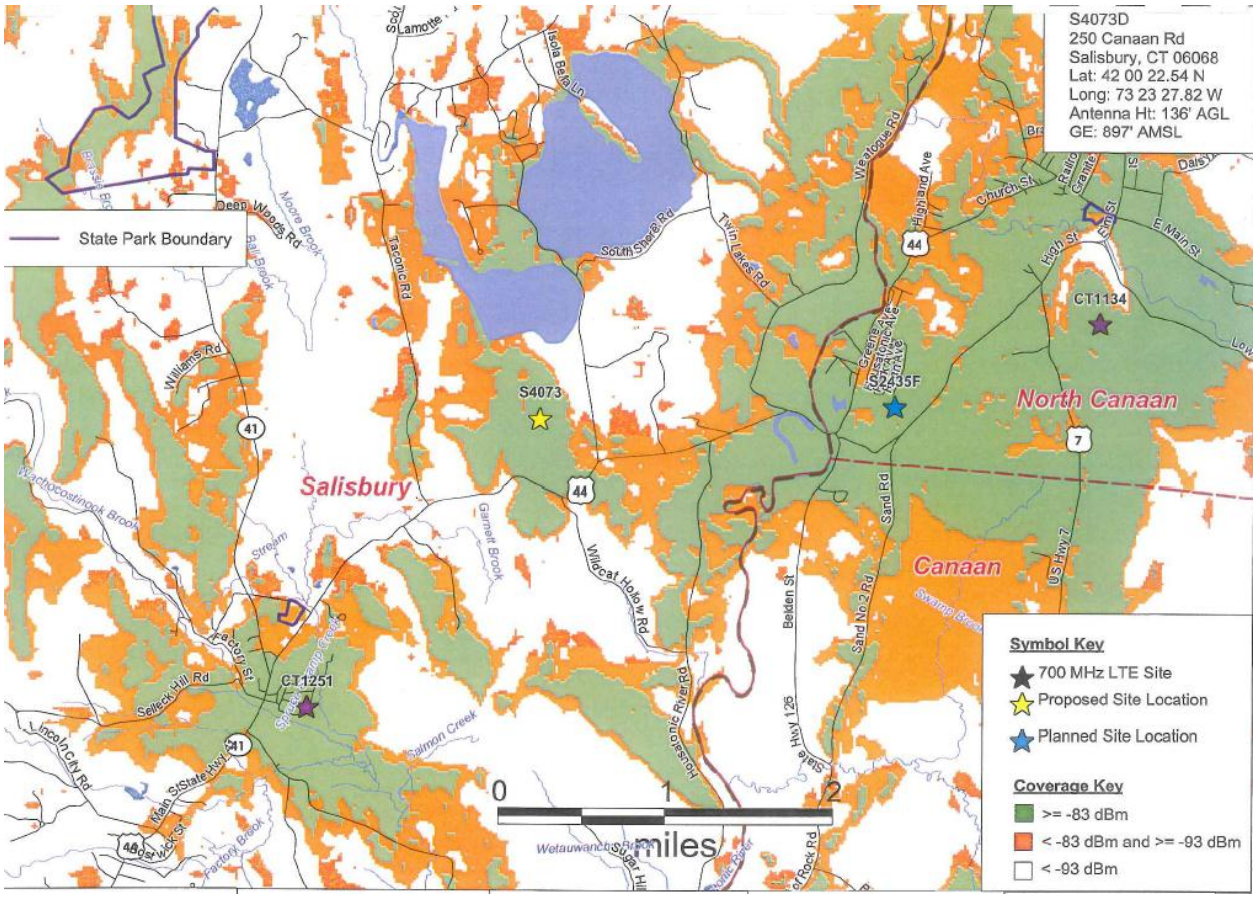
(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 10)

Figure 6 – AT&T's Existing and Proposed 700 MHz Coverage at Antenna Centerline Height of 146 feet



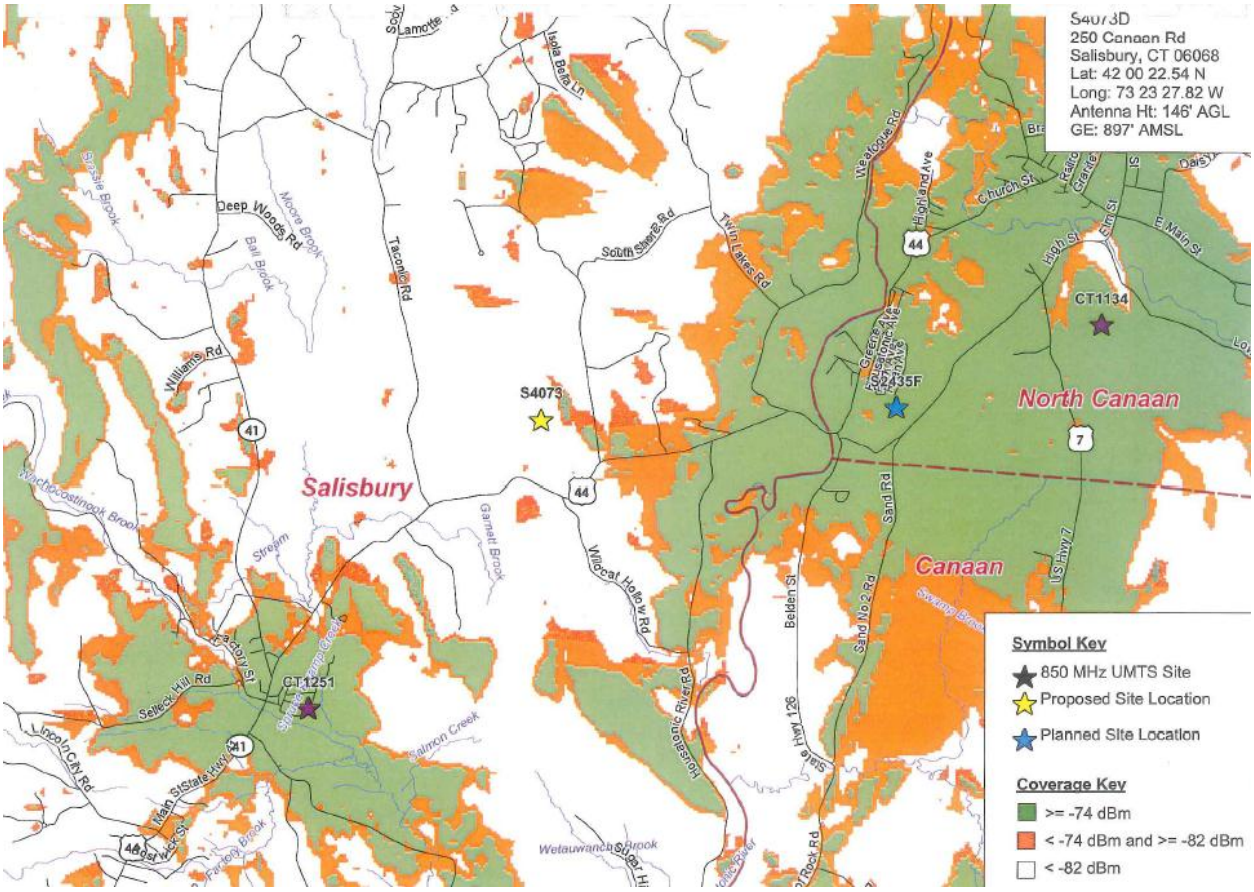
(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 11)

Figure 7 – AT&T's Existing and Incremental 700 MHz Coverage at Antenna Centerline Height of 136 feet



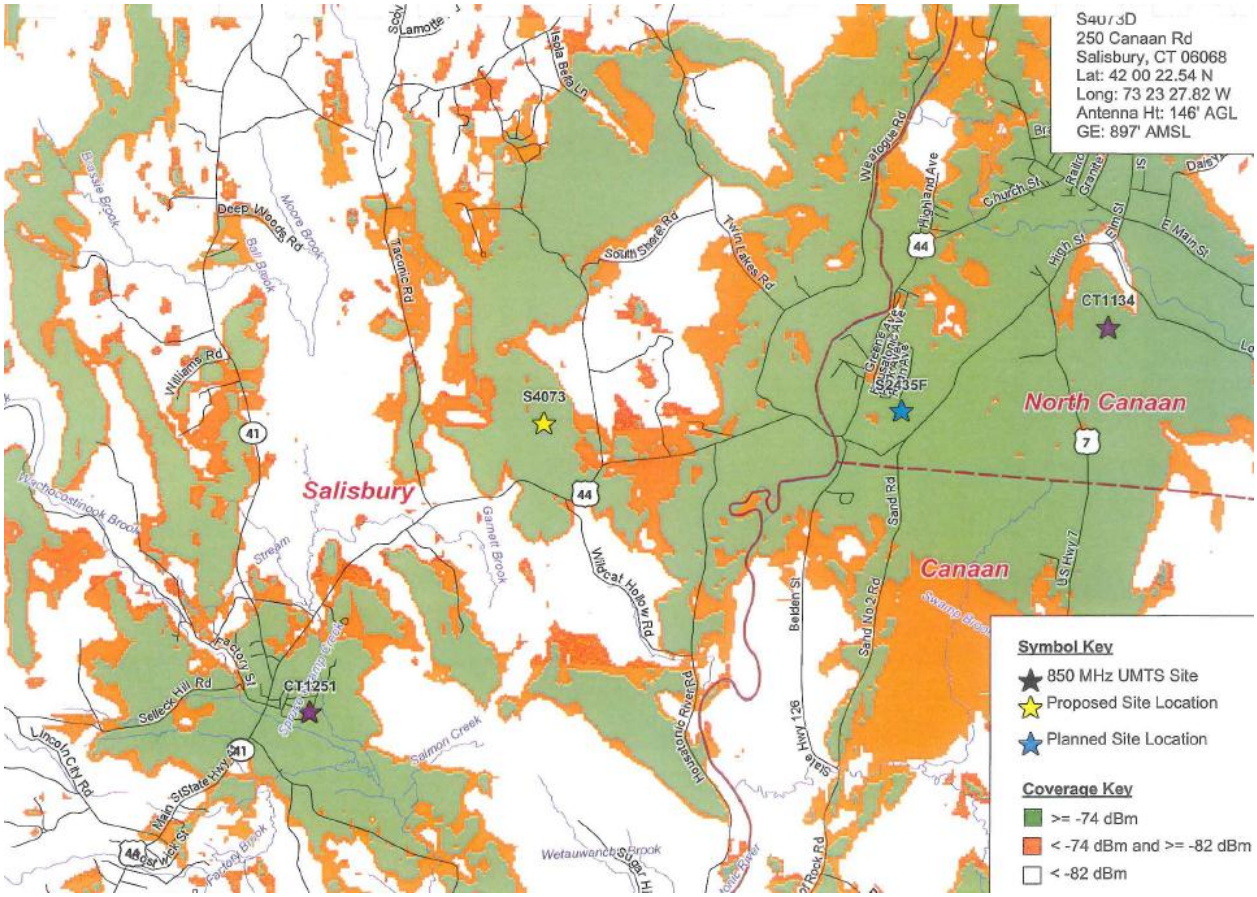
(Applicant 3, response 30)

Figure 8 – AT&T's Existing 850 MHz Coverage



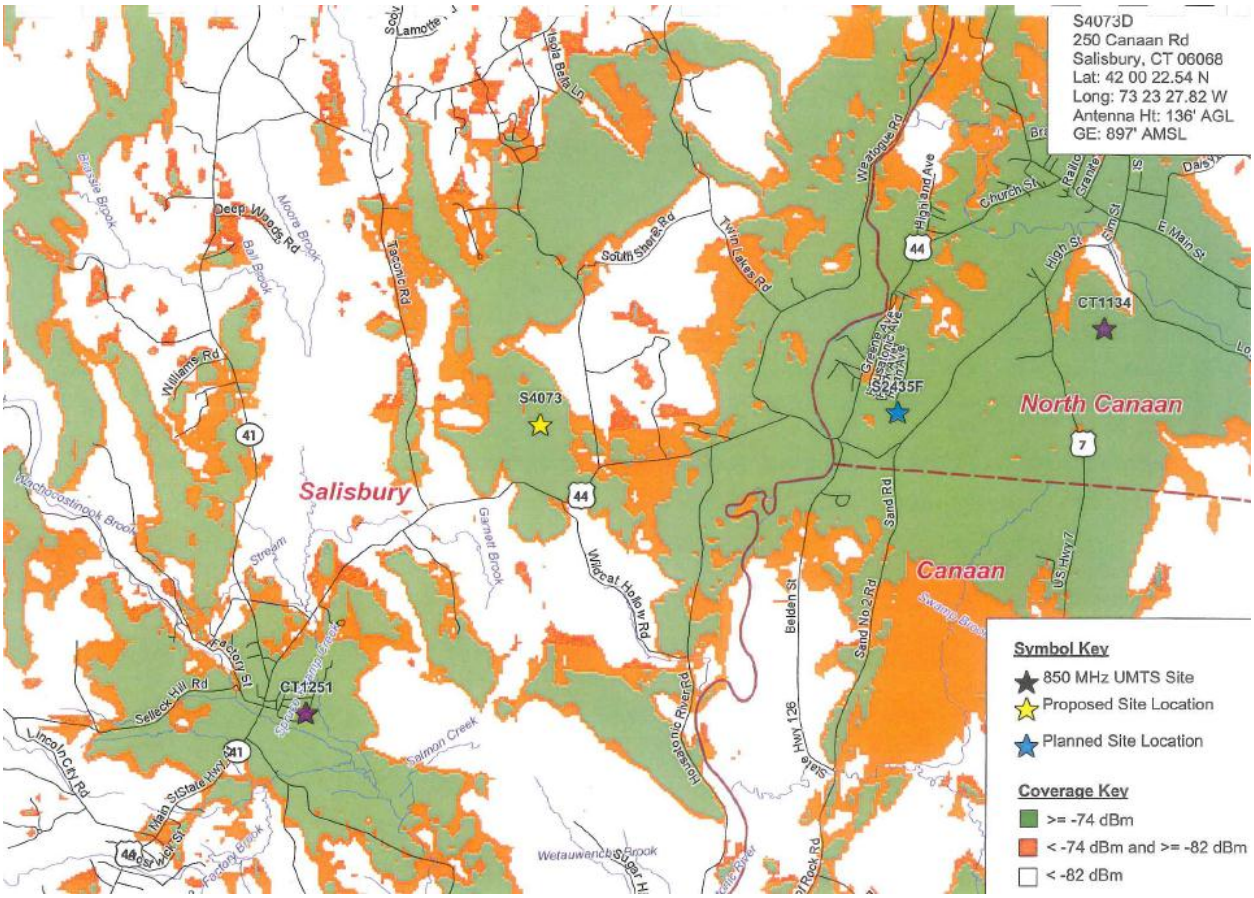
(Applicant 3, response 29)

Figure 9 – AT&T's Existing and Proposed 850 MHz Coverage at Antenna Centerline Height of 146 feet



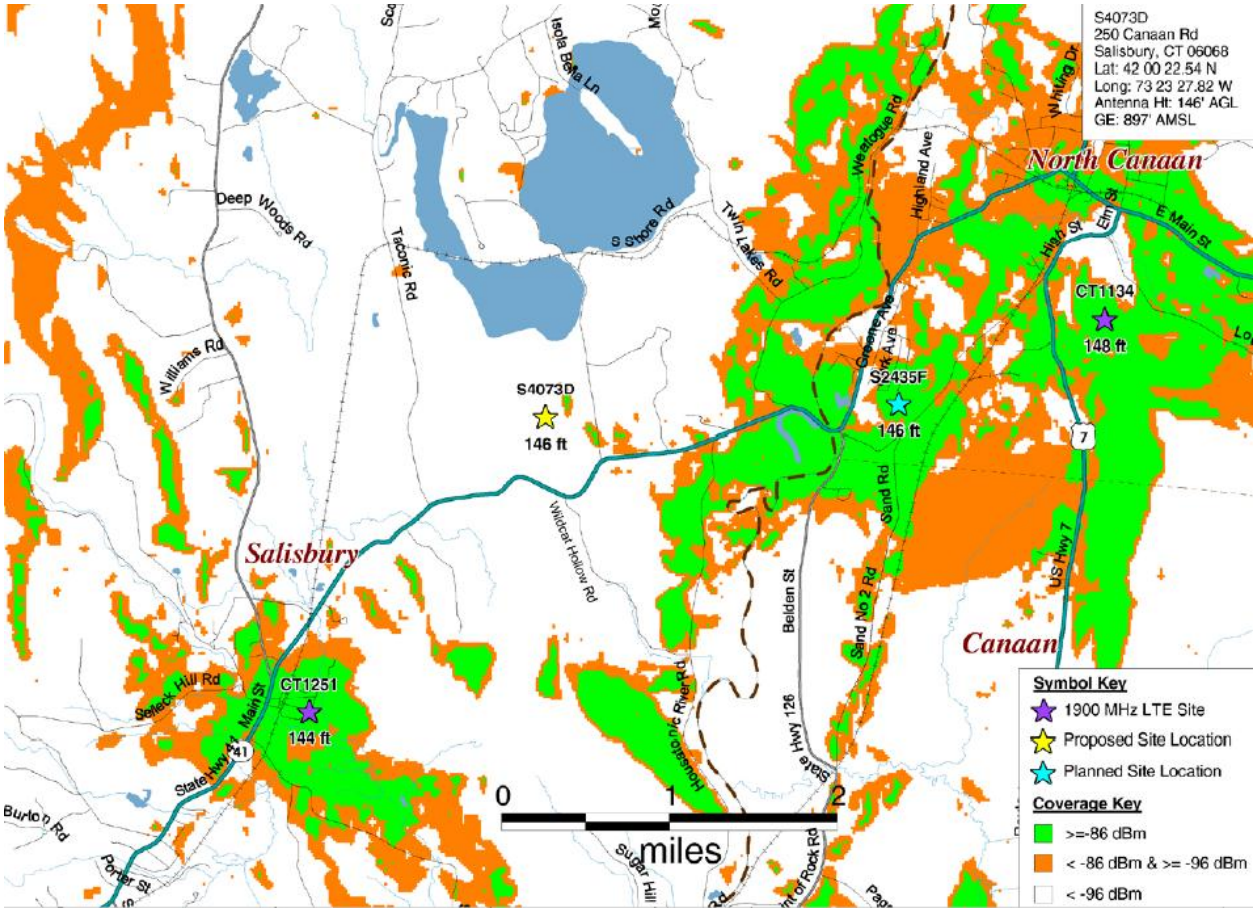
(Applicant 3, response 29)

Figure 10 – AT&T's Existing and Incremental 850 MHz Coverage at Antenna Centerline Height of 136 feet



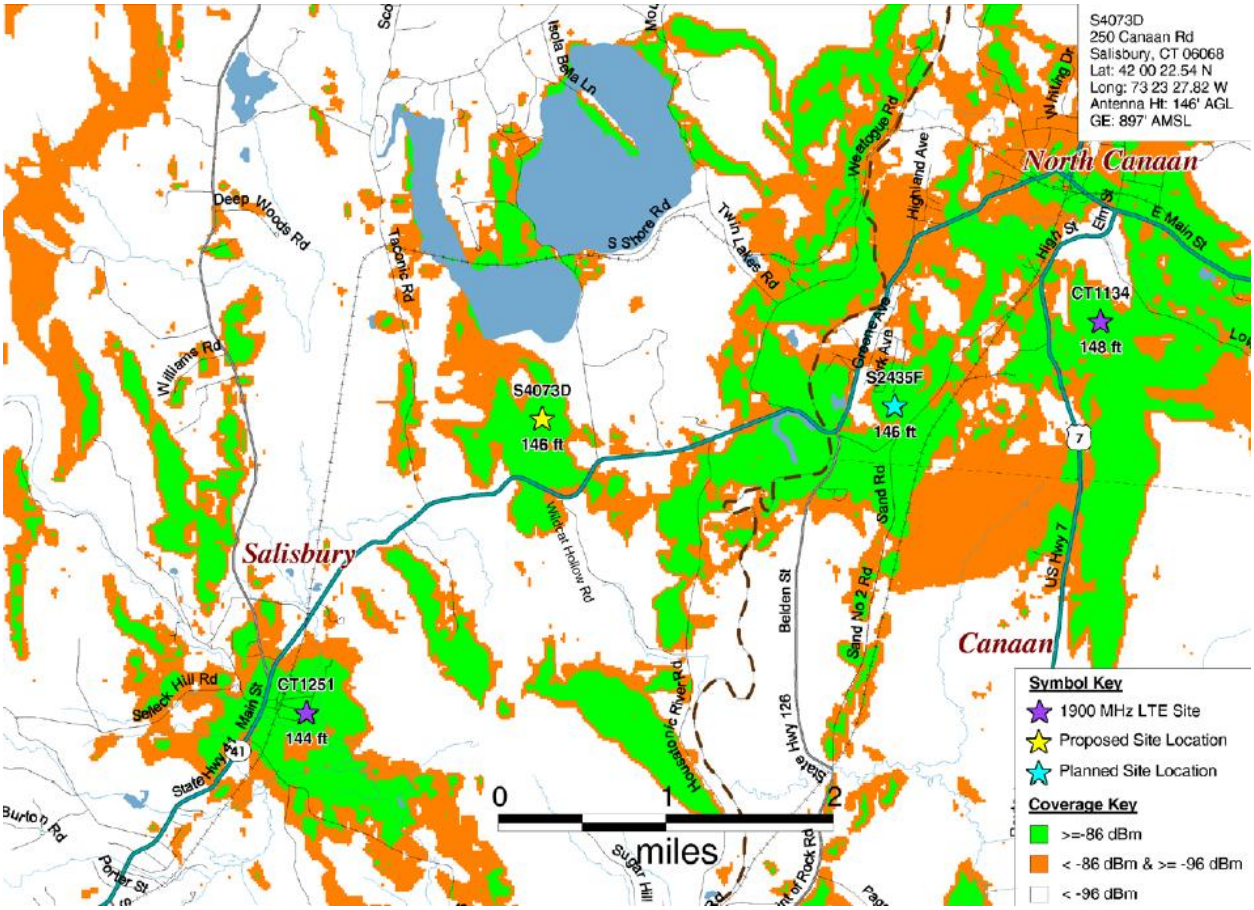
(Applicant 3, response 30)

Figure 11 – AT&T's Existing 1900 MHz Coverage



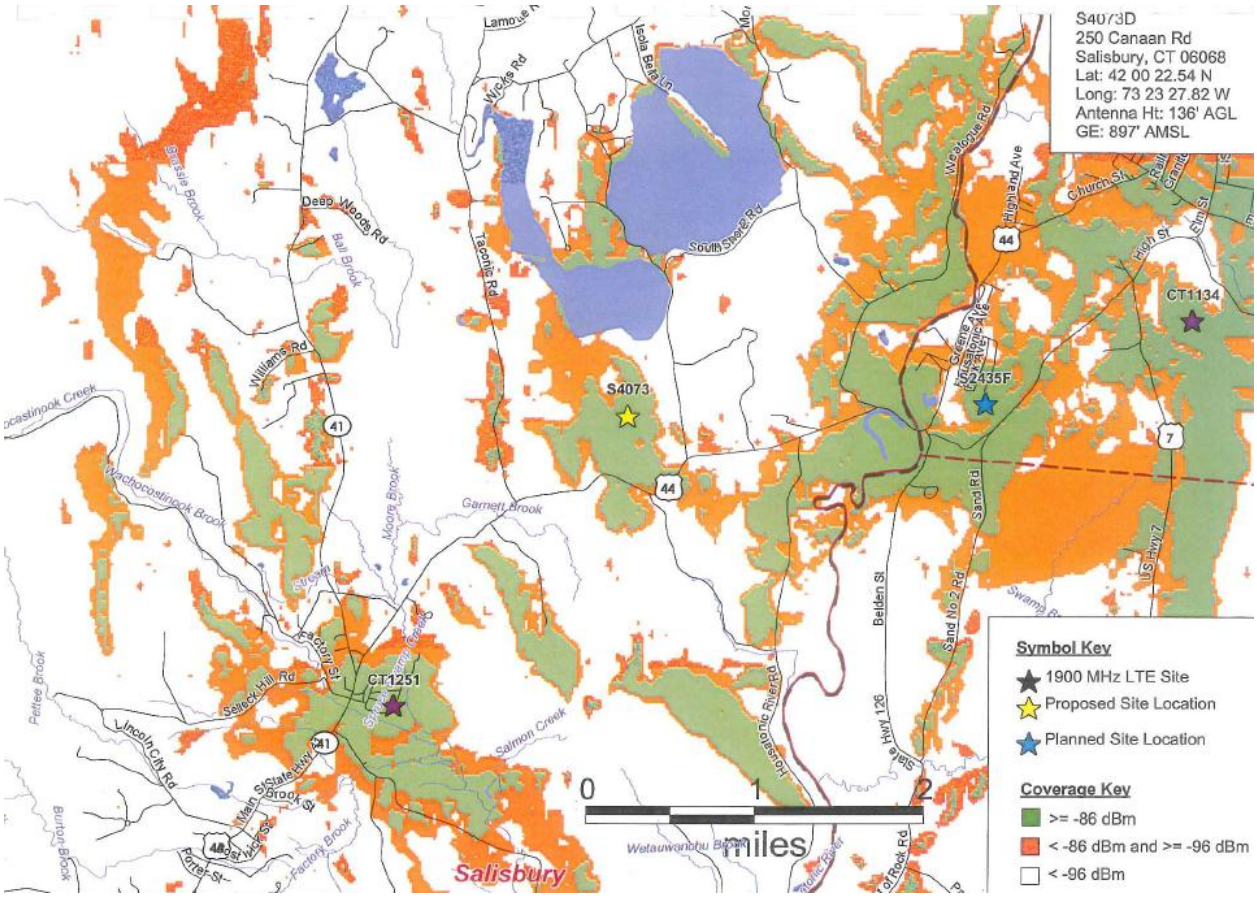
(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 12)

Figure 12 – AT&T's Existing and Proposed 1900 MHz Coverage at Antenna Centerline Height of 146 feet



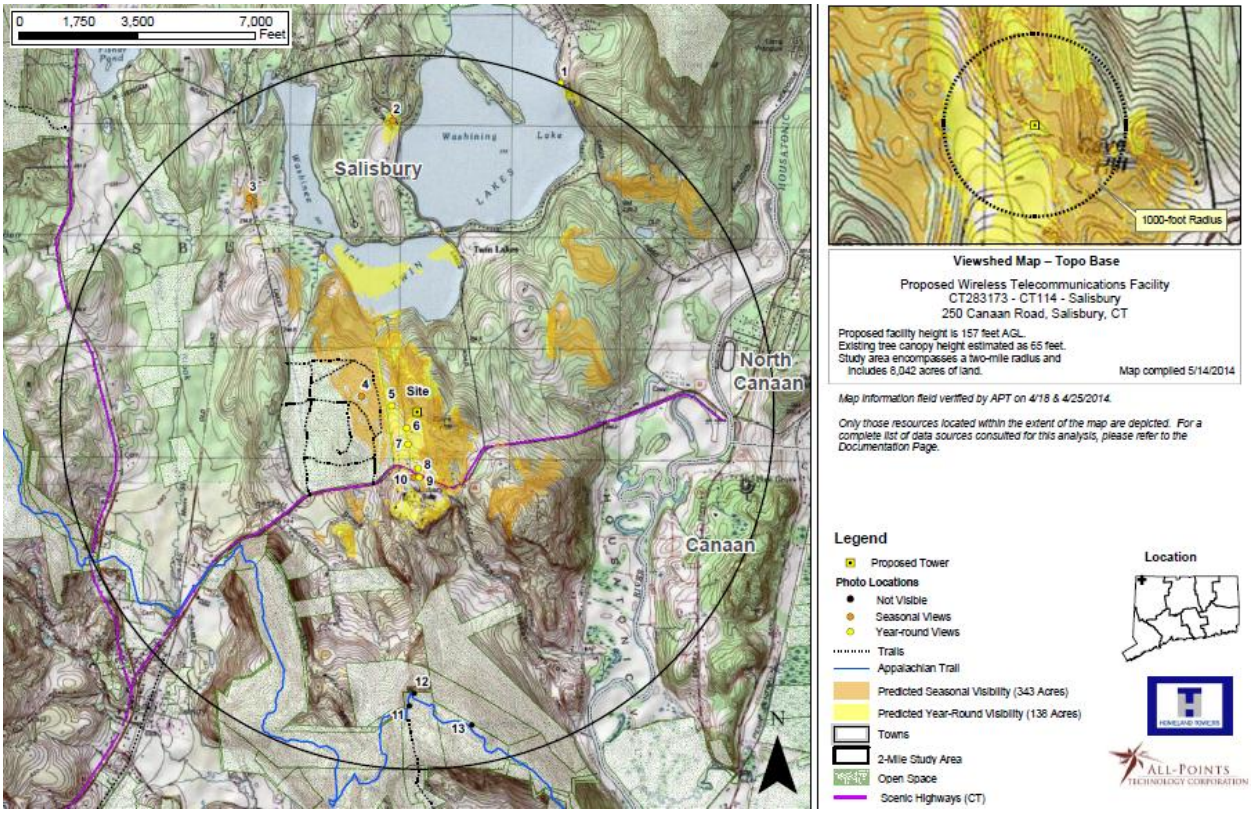
(Applicant 1, Tab 1 – Radio Frequency Analysis Report, p. 13)

Figure 13 – AT&T's Existing and Incremental 1900 MHz Coverage at Antenna Centerline Height of 136 feet



(Applicant 3, response 30)

Figure 14 – Visibility Analysis



(Applicant 1, Tab 8 – Viewshed Map)

Figure 15 – Photo-simulation

(Applicant 1, Tab 8 – Photo-simulation No. 1)

Figure 16 – Photo-simulation

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	EDITH SCOVILLE MEMORIAL SANCTUARY AT EDGE OF PLAYING FIELDS	EAST	+/- 0.18 MILE	YEAR ROUND

(Applicant 1, Tab 8 – Photo-simulation No. 5)