



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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January 20, 2012

TO: Parties and Intervenors

FROM: Linda Roberts, Executive Director *LR/WAB*

RE: **DOCKET NO. 401** - T-Mobile Northeast, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 208 Valley Road, New Canaan, Connecticut.

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As stated at the hearing in New Britain on December 8, 2011, after the Connecticut Siting Council (Council) issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Council on the Draft Findings of Fact issued on this docket by January 27, 2012.

LR/CMW/jbw

Enclosure

**LIST OF PARTIES AND INTERVENORS**  
**SERVICE LIST**

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
<b>Applicant</b>	<input checked="" type="checkbox"/> U.S. Mail	T-Mobile Northeast, LLC	Julie D. Kohler, Esq. Jesse A. Langer, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 (203) 368-0211 (203) 394-9901 fax <a href="mailto:jkohler@cohenandwolf.com">jkohler@cohenandwolf.com</a> <a href="mailto:jlanger@cohenandwolf.com">jlanger@cohenandwolf.com</a>
<b>Intervenor</b> <i>(granted on 07/1/2010)</i>	<input checked="" type="checkbox"/> E-mail	Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 (860) 275-8299 fax <a href="mailto:kbaldwin@rc.com">kbaldwin@rc.com</a>
<b>Intervenor</b> <i>(granted on 11/18/2010)</i>	<input checked="" type="checkbox"/> U.S. Mail	New Cingular Wireless PCS, LLC	<b>WITHDRAWN</b>

**DOCKET NO. 401** - T-Mobile Northeast LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 208 Valley Road, New Canaan, Connecticut.

Connecticut

Siting

Council

January 13, 2012

## **DRAFT Findings of Fact**

### **Introduction**

1. T-Mobile Northeast LLC (T-Mobile), in accordance with provisions of Connecticut General Statutes (CGS) §§ 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on April 6, 2010 for the construction, maintenance and operation of a 120-foot wireless telecommunications facility at 208 Valley Road in New Canaan, Connecticut. Refer to Figure 1. (T-Mobile 1, p. 1)
2. T-Mobile originally received a Certificate of Environmental Compatibility and Public Need for a facility at the proposed site on October 26, 2004 in Docket No. 243. Order No. 9 in the Council's Decision and Order (D&O) document approving the proposed facility, stated that the decision shall be void unless the facility is operational "within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved." The D&O further states that, if an extension of time is necessary to make the facility operational, the Certificate holder should ask the Council in writing at least 60 days prior to the expiration date. The expiration date lapsed without T-Mobile requesting an extension of time; the Certificate therefore became void. (Council Admin. Notice 23, D&O; T-Mobile 1, p. 2)
3. T-Mobile is a limited liability company, organized under the laws of Delaware, with an office in Connecticut. T-Mobile and its affiliated entities are licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless services system in Connecticut. (T-Mobile 1, p. 3)
4. The party in this proceeding is the applicant. Cellco Partnership d/b/a Verizon Wireless (Cellco) is an intervenor in this proceeding. (Transcript 1, July 13, 2010, 3:00 p.m. [Tr. 1], p. 7; Transcript 2, July 13, 2010, 7:00 p.m. [Tr. 2], pp. 7, 8)
5. The purpose of the proposed facility is to provide service to coverage gaps identified by T-Mobile along Valley Road and Silvermine Road, just east of Route 123, as well as the surrounding area. (T-Mobile 1, p. 6)
6. Pursuant to CGS § 16-50l (b), public notice of the application was published in The Stamford Advocate on March 24 and March 26, 2010 and in The Norwalk Hour on March 26 and March 29, 2010. (T-Mobile 1, p. 5, Tab F)
7. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a public hearing on July 13, 2010, beginning at 3:00 p.m. and continuing at 7:00 p.m. in the auditorium of New Canaan Town Hall, 77 Main Street, New Canaan, Connecticut. (Tr. 1, p. 3; Tr. 2, p. 3)
8. The Council and its staff conducted an inspection of the proposed site on July 13, 2010, beginning at 2:00 p.m. The applicant flew a balloon from 12:00 p.m. to 7:00 p.m. to simulate the height of the proposed tower. Weather conditions during the balloon float were windy and rainy, which made it difficult to keep the balloon at the intended height. (Tr. 1, p. 25)

9. On November 2, 2010, T-Mobile submitted a Motion to Reopen the Evidentiary Hearing in this proceeding in accordance with CGS § 4-181a. T-Mobile requested to reopen the evidentiary hearing for the limited purpose of: submitting a reconfiguration of the monopole to accommodate three wireless carriers while also providing a more narrow tower structure; and allowing New Cingular Wireless PCS, LLC (AT&T) to intervene in this proceeding. (T-Mobile's Motion to reopen hearing, p. 1)
10. On November 18, 2010, the Council voted to reopen the evidentiary hearing for this docket and to make AT&T an intervenor in this proceeding. On August 25, 2011, AT&T withdrew its intervenor status in this proceeding. (minutes of November 18, 2010 Council meeting; record)
11. On December 8, 2011, the Council held a public hearing for the reopened record of this application. The hearing was held at the offices of the Council, Ten Franklin Square, New Britain, Connecticut. (Transcript 3, December 8, 2011, [Tr. 3], p. 3)
12. Pursuant to CGS § 16-501(b), notice of the application was provided to all abutting property owners by certified mail. T-Mobile received return receipts from all adjacent landowners. (T-Mobile 1, p. 5, Tab G; T-Mobile 2, R. 1)
13. Pursuant to CGS § 16-501 (b), T-Mobile provided notice to all federal, state and local officials and agencies listed therein. (T-Mobile 1, p. 5, Tab E)

#### **State Agency Comment**

14. Pursuant to CGS § 16-50j (h), on May 24, 2010, July 14, 2010 and December 12, 2011 the following state agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection, Department of Public Health, Council on Environmental Quality, Public Utility Regulatory Authority, Office of Policy and Management, Department of Economic and Community Development, Department of Agriculture, Department of Transportation; and Department of Emergency Management and Homeland Security. (Record)
15. None of the agencies listed above responded with comment on the application. (Record)

#### **Municipal Consultation**

16. On January 29, 2010, T-Mobile submitted a technical report regarding the proposed facility to New Canaan's First Selectman, the Honorable Jeb Walker. T-Mobile also submitted a technical report to Wilton's First Selectman, the Honorable William F. Brennan, because the proposed facility is within 2,500 feet of the Wilton town boundary. (T-Mobile 1, pp. 18, 19, Tab R)
17. On March 3, 2010, T-Mobile met with First Selectman Walker and Administrative Officer Thomas R. Stradler, regarding the proposed facility. (T-Mobile 1, p. 19)
18. In a letter dated March 25, 2010, the First Selectman's Office expressed support for the proposed tower and co-location of other carriers on the structure. The letter also indicated that the town would be interested in installing municipal antennas on the structure. (T-Mobile 2, Attachment A)
19. T-Mobile would provide space on the tower for the New Canaan municipal public safety communications antennas, for no compensation. (T-Mobile 1, p. 10)



### **Public Need for Service**

20. 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 Admin. Notice 7)
21. 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. The FCC licensed T-Mobile to provide personal wireless communication service to Fairfield County, Connecticut. (Council Admin. Notice 7; T-Mobile 1, p. 8)
22. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Admin. Notice 7)
23. The Telecommunications Act of 1996, a federal law passed by the United States Congress, prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects, which include human health effects, of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Admin. Notice 7)
24. In 1999, Congress passed the Wireless Communications and Public Safety Act (the 911 Act) to facilitate and encourage the prompt deployment of a nationwide, seamless communication infrastructure for emergency services. (T-Mobile 1, p. 7)
25. Following the enactment of the 911 Act, the FCC mandated wireless carriers to provide enhanced 911 services (E911) to allow public safety dispatchers to determine a wireless caller's geographical location within several hundred feet. T-Mobile uses Time Difference of Arrival (TDOA) network technology to comply with E911 requirements. The proposed facility would become a component of T-Mobile's, and Cellco's E911 network in this part of the state. (T-Mobile 1, p. 7; Cellco 3, R. 5)

### **Existing and Proposed Wireless Coverage**

#### ***T-Mobile***

26. T-Mobile operates a personal communications service network within the 1900 and 2100 MHz frequency signals allocated by the FCC. T-Mobile designs the system for in-vehicle coverage with a minimum signal level threshold of -84 dBm, and in-building coverage with a minimum signal level threshold of -76 dBm. (T-Mobile 1, Tab H, Tab P)
27. T-Mobile seeks to provide coverage to Valley Road and Silvermine Road, just east of Route 123, as well as the surrounding area. (T-Mobile 1, p. 6)
28. The existing signal strength in the area of the proposed facility ranges from -80 dBm to -110 dBm. (T-Mobile 2, R. 15)
29. In the area of the proposed facility, T-Mobile's service has an average dropped call rate of 4.11 percent. (T-Mobile 2, R. 14)

30. T-Mobile would provide approximately 3.2 square miles of coverage from the proposed tower at a signal strength of -84 dBm. (T-Mobile 2, R. 16)
31. At -84 dBm, T-Mobile currently has an approximately 2-mile coverage gap along Valley Road and Silvermine Road, which travels from the northwest to southeast; and an approximately 1.7-mile coverage gap along Route 106 (Silvermine Road and New Canaan Road), which travels from northeast to southwest. Refer to Figure 3. (T-Mobile 2, R. 17)
32. The proposed tower would provide T-Mobile with approximately 2.6 miles of coverage along Valley Road and Silvermine Road (northwest to southeast) at -84 dBm, including approximately 1.6 miles of new coverage; and 1.7 miles of coverage along Route 106 (Silvermine Road and New Canaan Road), including approximately 1.4 miles of new coverage. Refer to Figure 4. (T-Mobile 2, R. 18)
33. Adjacent T-Mobile facilities that would interact with the proposed facility include:

Location	Antenna Height above ground level	Approximate Distance from Site
46 Fenwood Lane, Wilton	122 feet	2.0 miles northeast
39 Locust Ave, New Canaan	46 feet	1.5 miles southwest
95 Country Club Road, New Canaan	106 feet	1.6 miles northwest
187 Danbury Road, Wilton	65 feet	2.9 miles northeast
15 Old Danbury Road, Wilton	96 feet	2.9 miles northeast

(T-Mobile 2, R. 20)

34. T-Mobile currently has no additional search rings beyond the proposed site to provide coverage within New Canaan. (Tr. 1, p. 24)

**T-Mobile coverage based on Revised Site Plan**

35. T-Mobile would install three antennas at the 117-foot level of the revised structure. The installation of T-Mobile's antennas in accordance with the revised configuration would not result in a change in coverage from the site. (T-Mobile 5, R. 22, R. 24; Tr. 3, pp. 20, 21)

*Cellco*

36. Cellco is licensed to operate in the cellular (850 MHz), long-term evolution (LTE) (700 MHz) and personal communications system (PCS) (1900 MHz) frequency ranges. Cellco designs its system for -85 dBm signal level threshold. (Cellco 2, p. 2; Cellco 3, R. 2)
37. Cellco currently has cell sites located at 39 Locust Street in New Canaan, Waveny Park in New Canaan, 173 West Rocks in Norwalk, 50 Danbury Road in Wilton, and 187 Danbury Road in Wilton. (Cellco 2, p. 2)
38. At -85 dBm, Cellco would provide approximately 3.2 square miles of PCS coverage, approximately 6.7 square miles of cellular coverage and approximately 8.1 square miles of LTE coverage. (Cellco 3, R. 3)



39. At cellular frequencies, Cellco currently has an approximately 3.5-mile coverage gap along Valley Road and Silvermine Road; and an approximately 3.8-mile coverage gap along Route 106 (Silvermine Road and New Canaan Road). Refer to Figure 5. With the installation of Cellco antennas at the proposed site, an approximately 0.4 mile gap would remain in Cellco's cellular coverage along Valley Road. Refer to Figure 6. (Cellco 2, Tab 1)
40. At LTE frequencies, Cellco currently has an approximately 3.1 mile coverage gap along Valley Road and Silvermine Road, and an approximately 3.2 mile coverage gap along Route 106. Refer to Figure 7. With the installation of Cellco antennas at the proposed site, an approximately 0.3 mile gap would remain in Cellco's LTE coverage along Valley Road. Refer to Figure 8. (Cellco 2, Tab 1)
41. At PCS frequencies, Cellco currently has an approximately 4.2 mile coverage gap along Valley Road/Silvermine Road, and an approximately 3.8 mile coverage gap along Route 106. Refer to Figure 9. Following the installation of Cellco's PCS antennas at the proposed site, an approximately 2.4 mile coverage gap would remain along Valley Road and an approximately 2-mile coverage gap would remain along Route 106. Refer to Figure 10. (Cellco 2, Tab 1)
42. At 87 feet on the proposed tower, a gap would open in Cellco's proposed coverage to the southwest of the site along Silvermine Road (Route 106). (Tr. 1, p. 97)
43. Cellco's dropped call rate in the area of the proposed site is 2.59 percent. (Tr. 1, p. 101)

#### **Cellco coverage based on Revised Site Plan**

44. Cellco's proposed coverage from the revised facility would not be significantly different from coverage from the facility proposed in the application. (Cellco 5, R. 1)

#### **Changes to the Originally Approved Facility of Docket No. 243**

45. The currently proposed monopole is approximately 26.5 feet north of the previously approved monopole at an elevation approximately 4.5 feet lower. Also, the tower would be located within a 25-foot by 50-foot equipment compound/lease area rather than the 40-foot by 60-foot compound within the 75-foot by 75-foot lease area that was negotiated for Docket No. 243. (T-Mobile 2, R. 2)
46. The utility route would be shorter than originally proposed in Docket No. 243. (T-Mobile 2, R. 2)
47. The proposed monopole would be capable of accommodating four levels of antennas, rather than three levels as originally proposed. (T-Mobile 2, R. 2)
48. T-Mobile would remove three trees with a diameter of six inches or greater instead of eight, as originally proposed. (T-Mobile 2, R. 2)
49. Changes to the proposed facility approved in Docket No. 243 were the result of T-Mobile's consultation with the property owner. (T-Mobile 2, R. 2)

### Site Selection

50. No existing structures are suitable for co-location in this area of New Canaan. (T-Mobile 1, p. 9)
51. There are two towers within a two-mile radius of the proposed site. T-Mobile is located on both of these towers. Locations of the existing towers are:
  - a. A 180-foot tower owned by the Connecticut Department of Public Safety located at 46 Fenwood Lane, Wilton – T-Mobile is located at the 122-foot level.
  - b. A 110-foot tower owned by T-Mobile located at 95 Country Club Road, New Canaan – T-Mobile is located at the 106-foot level.(T-Mobile 1, Tab I; T-Mobile 2, R. 19, R. 20)
52. The only feasible alternative to the proposed site that T-Mobile found was the water company property, which was the originally proposed site in Docket 243. During those proceedings, the Town of New Canaan and intervenors in the proceeding agreed that the Silver Hill Hospital property was superior to the Water Company property. (T-Mobile 1, p. 9)
53. Microcells, repeaters, distributed antenna systems (DAS) and other transmitting technologies are not practical alternatives to the proposed facility as a means of providing service to the coverage gap in this area. Terrain, topography and tree cover limit coverage provided by these technologies and preclude their use as alternatives. (T-Mobile 1, p. 8)
54. A DAS would not provide adequate coverage to the area due to variable terrain. (Tr. 1, pp. 66, 67)

### Facility Description as Proposed in the Application

55. The proposed site is located on an approximately 42-acre parcel, owned by Silver Hill Hospital, Inc., a psychiatric hospital, at 208 Valley Road in New Canaan. The host property actually consists of two smaller parcels (parcel A is approximately 23.26 acres; parcel B is approximately 18.79 acres). (T-Mobile 1, pp. 4, 10)
56. The proposed facility would consist of a 120-foot monopole painted brown with antennas concealed within the structure. T-Mobile's antennas would be located at 117 feet and 107 feet above ground level (agl). Cellco would install antennas at the 97-foot level of the tower. Space would remain available at the 87-foot level for another carrier. (T-Mobile 1, p. 10, Tab C; Cellco 2, p. 3)
57. The antennas are proposed to be mounted inside the monopole structure at the request of Silver Hill Hospital. (Tr. 1, p. 32)
58. Any municipal whip antennas located on the structure would extend off the top of the proposed structure. (Tr. 1, p. 38)
59. T-Mobile initially proposed a tower with a diameter of 53 inches at the base, tapering to 30 inches at a height of 80 feet agl, and then continuing with a 30-inch diameter to 120 feet agl. To locate Cellco's antennas within the tower structure, the diameter at the base of the tower would need to be 76 inches, tapering to 54 inches at a height of 80 feet agl, then continuing to 120 feet agl with a diameter of 54 inches. (Cellco 2, p. 3; Tr. 1, pp. 14, 18, 19)



60. If Cellco were to locate its proposed antennas at two levels, occupying the space otherwise left free for another carrier, the diameter of the monopole could be reduced to between 40 and 48 inches. The diameter of the structure is determined by the installation of coax cables and antennas within the pole. The cables and antennas have to be spaced apart to avoid radiofrequency interference. However, the lower antenna height of 87 feet agl would result in less coverage. (Tr. 1, p. 73, 74, 97; Tr. 2, p. 59)
61. Within the monopole structure, T-Mobile would install 7/8-inch diameter cable and Cellco would install 1 1/8-inch diameter cable. (Tr. 1, p. 77)
62. The Silver Hill Hospital property is zoned two-acre residential. New Canaan's Zoning Regulations do not address telecommunications facilities that are under Council jurisdiction. The town allows towers and antennas under town jurisdiction by Special Permit. (T-Mobile 1, p. 17; Zoning Regulations dated June 16, 2007, p. 141)
63. The New Canaan Plan of Conservation and Development identifies a need for enhanced communications, particularly for emergency services. (T-Mobile 1, p. 17)
64. The site is on a slope. Construction of the proposed facility would require approximately 375 cubic yards of cut and 10 cubic yards of fill. (T-Mobile 2, R. 11)
65. T-Mobile proposes to construct a concrete block retaining wall around the south, west and north sides of the compound. (T-Mobile 1, Tab C)
66. T-Mobile does not anticipate a need for blasting for the construction of the proposed site. (T-Mobile 2, R. 12)
67. To handle drainage, T-Mobile would construct a swale along the western and northern edges of the compound that would discharge into a new riprap splash pad outlet at the northeast corner. Additionally, a four-inch drainpipe would continue downslope from the compound, ending at a four-foot by four-foot crushed stone pad at the point of discharge would extend from the northeast corner of the compound. (T-Mobile 1, Tab C)
68. Access to the site would extend from Valley Road, along the existing Silver Hill Hospital driveway. T-Mobile would create a 29-foot by 13-foot parking area along the side of the existing driveway. A new four-foot wide footpath would extend approximately 60 feet from the proposed parking area to the proposed site. (T-Mobile 1, p. 11; T-Mobile 2, R. 10)
69. A 25-foot by 50-foot equipment compound enclosed by an eight-foot brown cedar board fence would be established at the base of the tower. T-Mobile would install two equipment cabinets on a five-foot by ten-foot concrete pad. A battery backup cabinet would be located on a second five-foot by ten-foot concrete pad with space for a future T-Mobile equipment cabinet. The battery backup would provide power to T-Mobile's equipment for 12 to 16 hours. The size of T-Mobile's battery backup system is similar to the size of a fuel cell cabinet to accommodate potential future replacement by a fuel cell. (T-Mobile 1, p. 10, Tab C; Tr. 1, pp. 42, 65)
70. T-Mobile could use a generator to provide backup power. This would require noise mitigation techniques to be used and the installation of the generator within a separate structure.
71. Cellco would install a 12-foot by 24-foot equipment shelter and diesel emergency backup generator within the equipment compound. Cellco would provide backup power to the site for 72 hours using a diesel generator. (Cellco 2, p. 3; Cellco 3, R. 6; Tr. 1, pp. 28, 29, 101; Tr. 3, p. 40)

72. One generator could be installed at the site to provide backup power for both carriers. (Tr. 3, p. 47)
73. The installation of T-Mobile and Cellco equipment in the compound would limit the area available for potential future carriers; however, a carrier with a smaller equipment area needs could fit within the compound. (Tr. 1, p. 21)
74. The tower setback radius would extend approximately 49 feet onto the property at 270 Valley Road, owned by the First Taxing District of the City of Norwalk. The nearest portion of the proposed compound is approximately 39 feet from the nearest property boundary. The tower would be approximately 71 feet from the nearest property boundary. (T-Mobile 1, Tab C; T-Mobile 2, R. 8)
75. T-Mobile could install a yield point in the monopole at approximately 70 feet to allow the structure to remain on the host property in the event of a structure failure. (Tr. 1, p. 56)
76. The estimated construction cost of the proposed facility, not including antennas, is:

Tower and foundation (including installation)	\$ 85,000.
Site development	70,000.
<u>Utility installation</u>	<u>45,000.</u>

Total \$ 200,000.  
(T-Mobile 1, p. 20)

77. The estimated cost of T-Mobile antennas and associated ground equipment for the proposed facility is between \$55,000 and \$65,000. (T-Mobile 2, R. 21)
78. The additional cost of a larger diameter monopole, as required by Cellco, is approximately \$15,000. The additional cost would include additional steel, handling of the larger tower, and foundation work. (Tr. 2, p. 58)
79. The total cost of the proposed facility, including T-Mobile equipment and the larger diameter tower, would be between \$255,000 and \$280,000. (T-Mobile 1, p. 20; T-Mobile 2, R. 21; Tr. 2, p. 58)

#### **Revised Site Plan**

80. On December 1, 2011, T-Mobile submitted revised site plans to replace the site plans proposed in the Docket 401 application. Refer to Figure 2. (T-Mobile 6, T-Mobile 7)
81. T-Mobile would construct a 120-foot monopole with internally mounted antennas in the same location as proposed in the application. T-Mobile would install panel antennas within the structure at a centerline height of 117 feet agl. Cellco would locate three dual band antennas at each of two levels of antennas within the proposed structure at centerline heights of 106 feet and 96 feet agl. (T-Mobile 6, p. 2; Cellco 3, R. 1; Tr. 3, p. 10)
82. Changes to the proposed facility would involve the removal of five trees, rather than three as proposed in the application. The revised site plan would allow for the installation of a double row of six to eight foot arborvitae trees along the eastern side of the compound. (T-Mobile 6, p. 2)
83. The revised monopole would have a diameter of 5 feet 2 inches at the base of the structure tapering to a diameter of 3 feet four inches at the top. (T-Mobile 7)

84. The revised site would include a retaining wall extending on all sides of the proposed compound. The retaining wall would be approximately six feet on the west side of the compound and approximately two feet on the east side of the compound with the north and south sides tapering from west to east. (T-Mobile 7; Tr. 3, pp. 11, 12)
85. The revised monopole design would allow the installation of three antenna locations. All three antenna locations are currently reserved. (Tr. 3, p. 12)
86. The estimated construction cost of the revised facility, not including antennas, is:
- |   |                    |
|---|--------------------|
| Tower and foundation (including installation) | \$ 72,000.         |
| Site development                              | 70,000.            |
| <u>Utility installation</u>                   | <u>45,000.</u>     |
| <u>Total</u>                                  | <u>\$ 187,000.</u> |
- (T-Mobile 5, R. 29)
87. The estimated cost of T-Mobile antennas and associated ground equipment for the revised facility is between \$55,000 and \$65,000. (T-Mobile 5, R. 29)

#### Environmental Considerations

88. The proposed facility would have no effect upon historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (T-Mobile 1, Tab O)
89. T-Mobile consulted with four Native American Indian tribes regarding potential impact of the proposed facility, including Delaware Nation, Mashantucket Pequot Tribe, Narragansett Indian Tribe, and Delaware Tribe of Indians of Oklahoma. With the exception of the Narragansett Indian Tribe, all responded that they do not have interests that would be affected by the proposed facility. The FCC attempted further contact with the Narragansett Indian Tribe and received no response. The FCC concluded that the proposed facility would not affect the interests of the Narragansett Indian Tribe. (T-Mobile 1, p. 16)
90. There are two federally endangered species (piping plover and roseate tern) and one federally threatened species (bog turtle) found in Fairfield County. The proposed facility would not be located in habitat for any of these species. (T-Mobile 1, p. 15)
91. There are no known state listed endangered, threatened or special concern species with in the vicinity of the proposed site. (T-Mobile 1, Tab O)
92. The proposed site is in an upland forested area dominated by sugar maple, tuliptree and Eastern hemlock. (T-Mobile 1, Tab K)
93. The nearest wetland is approximately 400 feet northeast of the proposed site. (T-Mobile 1, p. 11)
94. The nearest public airfield is the Westchester County Airport in White Plains, New York, which is approximately 14 miles southwest of the proposed facility. The nearest private airfield is the Flying Ridge Airstrip in Newtown, Connecticut, which is approximately 16.9 miles northeast of the proposed facility. Obstruction marking and lighting of the tower would not be required. (T-Mobile 1, p. 19; T-Mobile 2, R. 6)



95. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of T-Mobile and Cellco's proposed antennas is 29 percent of the standard for 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. (T-Mobile 1, pp. 14, 15; Tr. 2, pp. 58, 59; T-Mobile 5, R. 28; Cellco 5, R. 4)

#### Visibility

96. The proposed tower would be visible year-round from approximately eight acres within a two-mile radius of the site (refer to Figure 11 of this document). Most of the year-round visibility of the tower would be on the host property and along the nearby portion of Valley Road. There would also be areas of year-round visibility of the tower from the north, northeast and southeast of the facility. The tower would be seasonally visible from an additional 16 acres within a two-mile radius of the site. (T-Mobile 1, Tab N)
97. The tower would be visible year-round from approximately four residences, including three along Valley Road and one on Wardwell Drive. Year-round visibility would also extend onto the adjacent Norwalk water treatment facility property. (T-Mobile 1, Tab N)
98. The tower would be seasonally visible from approximately one-tenth of a mile along Valley Road, adjacent to the host property; portions of Wardwell drive northwest of the facility; portions of Turning Mill Lane; and along Huckleberry Hill Road. (T-Mobile 1, Tab N)
99. The proposed tower would be seasonally visible from eight additional residences, including three along Valley Road, two along Turning Mill Lane, one along Huckleberry Hill Road, one along Thayer Drive and one along Wardwell Drive. (T-Mobile 1, Tab N)
100. There are 23 residences within 1,000 feet of the proposed tower. The nearest residence is approximately 290 feet east of the facility at 253 Valley Road, owned by Christopher Starr Jones. (T-Mobile 1, Tab C, Tab L)
101. The adjacent property to the north is a City of Norwalk water treatment facility. Land use in the remaining surrounding area is medium-density residential. (T-Mobile 1, Tab N)

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

Location	Visible	Approx. Portion of Tower Visible	Approx. Distance and direction from Tower
1. Valley Road (across from Silver Hill Hospital admission building)	Yes	45 feet – above trees	0.23 miles southeast
2. Host Property (Silver Hill Hospital)	Yes	35 feet – above trees & 35 feet – through trees	0.19 miles southeast
3. Valley Road (adjacent to #270)	Yes	35 feet – above trees & 15 feet – through trees	0.09 miles north
4. Valley Road (adjacent to #225)	No	-	0.1 miles southeast
5. Valley Road (adjacent to #229)	Yes	45 feet – through trees	0.09 miles southeast
6. Valley Road (adjacent to #229)	Yes	70 feet – above trees	0.07 miles southeast
7. Valley Road (adjacent to #253)	Yes	45 feet – above trees	0.05 miles northeast
8. Valley Road (adjacent to #269)	Yes	40 feet – above trees	0.07 miles northeast
9. Turning Mill Road (at bend)	Yes	20 feet – through trees	0.21 miles northeast
10. End of Turning Mill Road	No	-	0.21 miles northeast
11. Huckleberry Hill Road (adjacent to #80)	Yes	20 feet – through trees	0.36 miles north
12. End of Wardwell Drive	Yes	10 feet – through trees	0.09 miles west
13. Intersection of Route 106 and Old Kings Highway	No	-	0.55 miles southeast
14. Valley Road (adjacent to #58)	No	-	0.44 miles southeast
15. Devonwood Lane (adjacent to #79)	No	-	0.39 miles southwest
16. Intersection of Huckleberry Hill Road and Valley Road	No	-	0.27 miles northwest
17. Thayer Drive (adjacent to #113)	No	-	0.16 miles west
18. End of Parkers Glen	No	-	0.2 miles southwest

(T-Mobile 1, Tab N)

103. Cellco's proposed increase of the diameter of the structure to 54 inches would not result in more areas of visibility since the height of the structure would not increase. (Cellco 2, Tab 3)
104. The facility location is within a wooded area, which would cover the majority of the bottom of the tower from nearby receptors. (Tr. 1, pp. 46, 47)
105. The revised site plan includes a narrower monopole than was contemplated in the previous proceeding. The visibility of the structure would not change substantially. The profile would be narrower, which would result in an improvement in near field views. (Tr. 3, p. 9)
106. The revised site plan has redesigned the equipment compound to eliminate the view of Cellco's equipment shelter from the nearest down gradient residential structure on the property. (T-Mobile 6, p. 2)



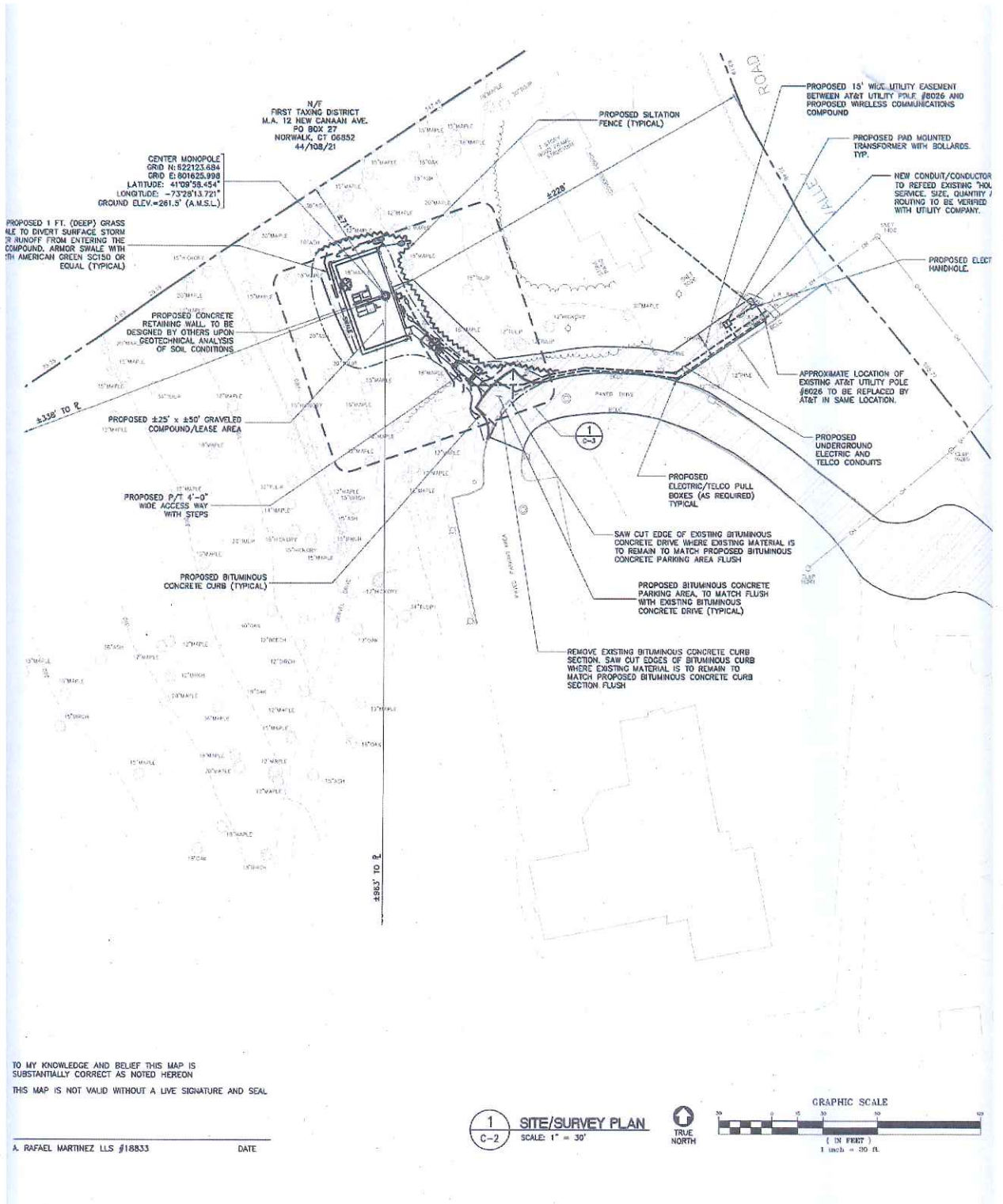
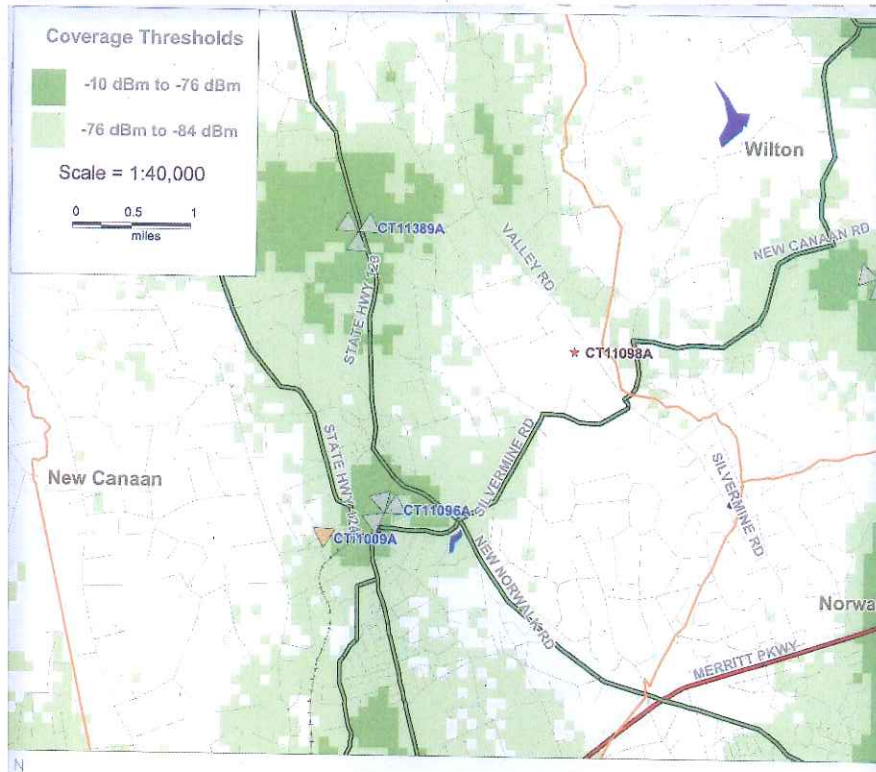


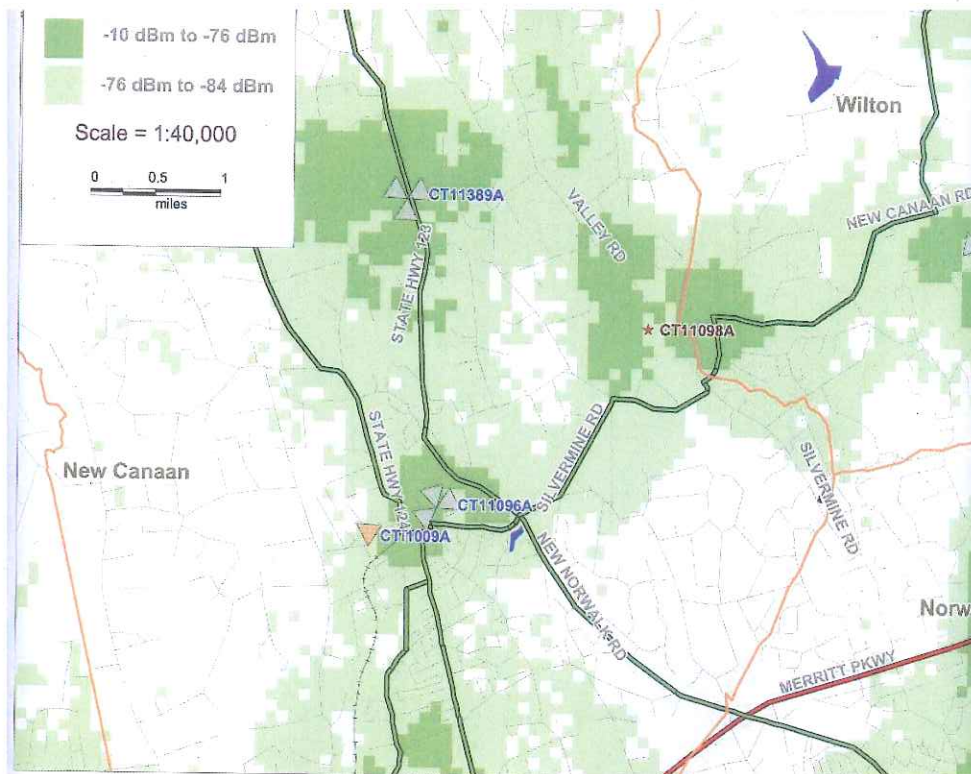
Figure 1. Site plan for the proposed facility at 208 Valley Road in New Canaan. (T-Mobile 1, Tab C)







**Figure 3.** T-Mobile's existing coverage in the area of the proposed site. (T-Mobile 1, Tab H)

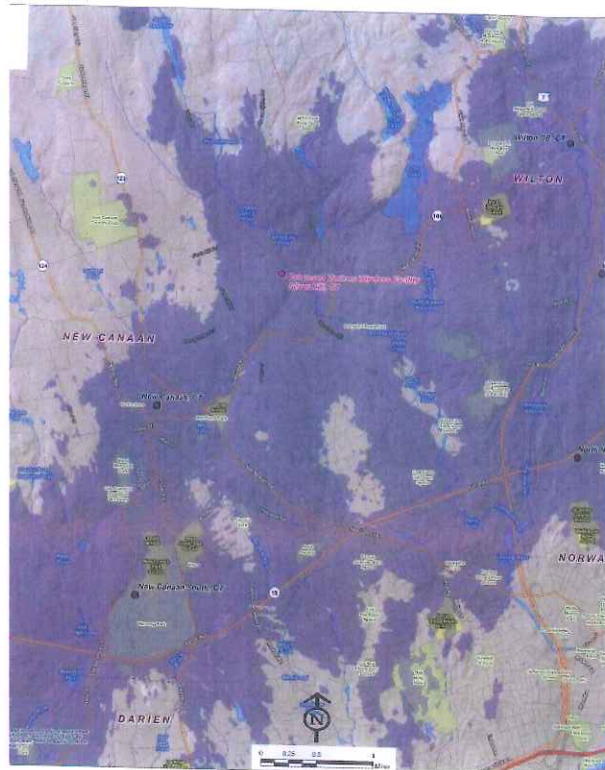


**Figure 4.** T-Mobile's existing coverage and proposed coverage at 117 feet agl. (T-Mobile 1, Tab H)





**Figure 5.** Existing Cellco cellular coverage near the proposed site. (Cellco 2, Tab 1)



**Figure 6.** Existing Cellco cellular coverage and coverage from the proposed site at 97 feet agl. (Cellco 2, Tab 1)

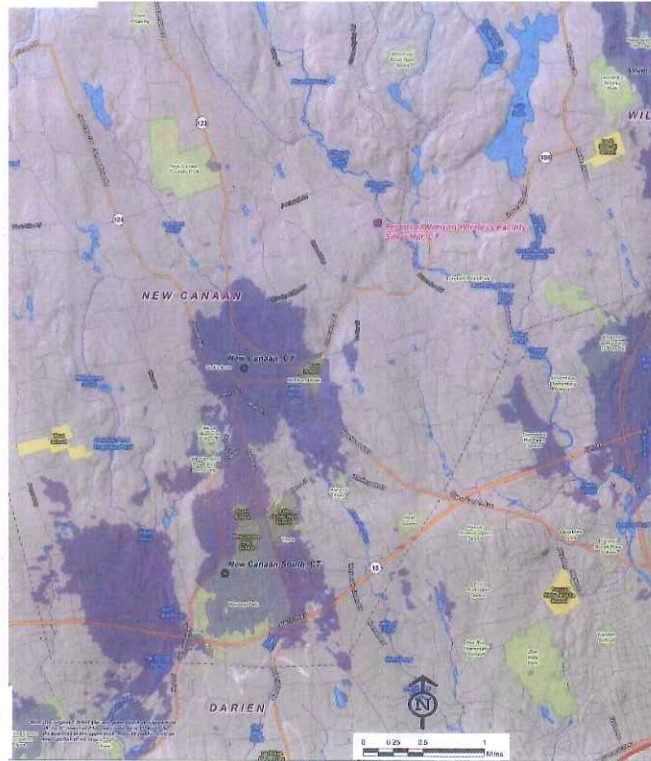




**Figure 7.** Existing Cellco LTE coverage near the proposed site. (Cellco 2, Tab 1)



**Figure 8.** Existing Cellco LTE coverage and coverage from the proposed site at 97 feet agl. (Cellco 2, Tab 1)



**Figure 9.** Existing Cellco PCS coverage near the proposed site. (Cellco, Tab 1)



**Figure 10.** Existing Cellco PCS coverage and coverage from the proposed site at 97 ft. agl. (Cellco 1, Tab 2)



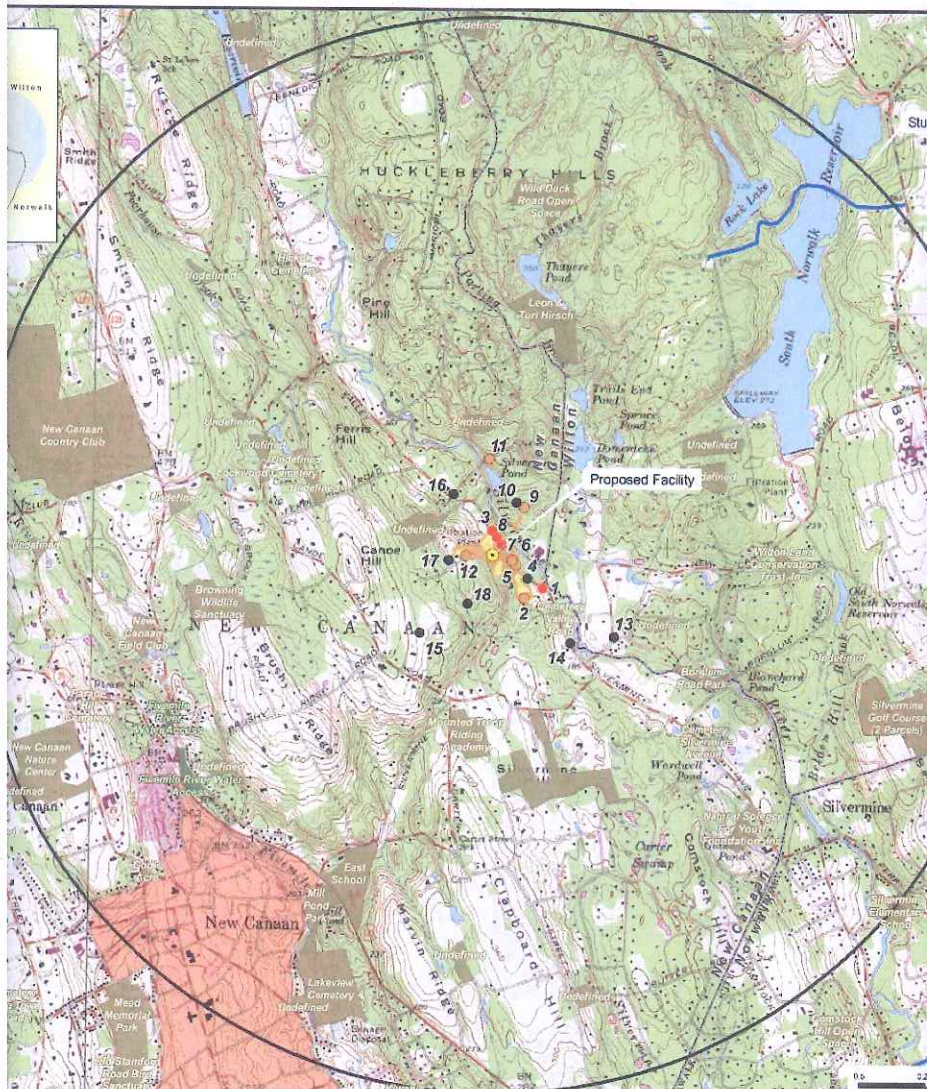


Figure 11. Viewshed analysis of the proposed 120-foot monopole structure. (T-Mobile 1, Tab N)