



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

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August 27, 2009

TO: Parties and Intervenors

FROM: S. Derek Phelps, Executive Director

RE: **DOCKET NO. 373** - New Cingular Wireless PCS, LLC (AT&T) application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at the St. Matthew Lutheran Church, 224 Lovely Street, Avon, Connecticut.

A handwritten signature in blue ink, consisting of several overlapping loops and a central flourish, positioned over the 'FROM' and 'RE' lines of the memo.

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As stated at the hearing in New Britain on July 7, 2009, after the 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 Connecticut Siting Council on the Draft Findings of Fact issued on this docket by September 10, 2009.

SDP/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 type="checkbox"/> E-mail  <input checked="" type="checkbox"/> U.S. Mail	New Cingular Wireless PCS, LLC	Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14 <sup>th</sup> Floor White Plains, NY 10601 (914) 761-1300 (914) 761-5372 fax <a href="mailto:cfisher@cuddyfeder.com">cfisher@cuddyfeder.com</a>
<b>Party (granted on February 19, 2009)</b>	<input type="checkbox"/> E-mail  <input checked="" type="checkbox"/> U.S. Mail	Patricia & Thomas McMahon 21 Greenwood Drive Avon, CT 06001 860-673-3747	
<b>Party (granted on February 19, 2009)</b>	<input type="checkbox"/> E-mail  <input checked="" type="checkbox"/> U.S. Mail	Sheridan & Mark Toomey 9 Greenwood Drive Avon, CT 06001 860-404-1741 <a href="mailto:markctoomey@msn.com">markctoomey@msn.com</a>	
<b>Party (granted on February 19, 2009)</b>	<input type="checkbox"/> E-mail  <input checked="" type="checkbox"/> U.S. Mail	Jane Garrett 15 Greenwood Drive Avon, CT 06001 860-673-2729	
<b>Party (granted on February 19, 2009)</b>	<input type="checkbox"/> E-mail  <input checked="" type="checkbox"/> U.S. Mail	Peter Emmett Wiese 240 Lovely Street Avon, CT 06001 860-673-5098 860-508-7951 <a href="mailto:Peter.wiese@jud.ct.gov">Peter.wiese@jud.ct.gov</a>	

<p><b>Party (granted on March 31, 2009)</b></p>	<p><input type="checkbox"/> E-mail</p> <p><input checked="" type="checkbox"/> U.S. Mail</p>	<p>Town of Avon</p>	<p>Andrew W. Lord Loni S. Gardner Murtha Cullina LLP 185 Asylum Street Hartford, Connecticut 06103 203-772-7705 860-240-5962 fax <a href="mailto:lgardner@murthalaw.com">lgardner@murthalaw.com</a></p>
<p><b>Intervenor (granted on March 31, 2009)</b></p>	<p><input type="checkbox"/> E-mail</p> <p><input checked="" type="checkbox"/> U.S. Mail</p>	<p>Juan Fernandez 246 Lovely Street Avon, CT 06001 860-673-8837 <a href="mailto:Fermar13@yahoo.com">Fermar13@yahoo.com</a></p>	
<p><b>Intervenor (granted on March 31, 2009)</b></p>	<p><input type="checkbox"/> E-mail</p> <p><input checked="" type="checkbox"/> U.S. Mail</p>	<p>David Lampert 4 Clearwater Court Avon, CT 06001 860-352-2462 <a href="mailto:stalflampert@yahoo.com">stalflampert@yahoo.com</a></p>	
<p><b>Intervenor (granted on March 31, 2009)</b></p>	<p><input type="checkbox"/> E-mail</p> <p><input checked="" type="checkbox"/> U.S. Mail</p>	<p>Michael Pastore 80 Wildwood Drive Avon, CT 06001 860-673-3911 <a href="mailto:Michael.Pastore@kaman.com">Michael.Pastore@kaman.com</a></p> <p>Stuart Noyes 3 Clearwater Court Avon, CT 06001 860-673-3147 <a href="mailto:amstunoyes@aol.com">amstunoyes@aol.com</a></p> <p>Mary Ann Keenan 24 Quail Ridge Drive Avon, CT 06001 860-673-8542 <a href="mailto:makeenan823@comcast.net">makeenan823@comcast.net</a></p>	

<b>Intervenor (granted on March 31, 2009)</b>	<input type="checkbox"/> E-mail  <input checked="" type="checkbox"/> U.S. Mail	Youghioghenny Communications- Northeast, LLC (Pocket)	Carrie L. Larson, Esq. Pullman & Comley, LLC 90 State House Square Hartford, CT 06103-3702 860-424-4312 860-424-4370 fax
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**DOCKET NO. 373** - New Cingular Wireless PCS, LLC (AT&T) } Connecticut  
application for a Certificate of Environmental Compatibility and }  
Public Need for the construction, maintenance and operation of a } Siting  
telecommunications facility located at the St. Matthew Lutheran } Council  
Church, 224 Lovely Street, Avon, Connecticut. }

August 20, 2009

## **DRAFT Findings of Fact**

### **Introduction**

1. New Cingular Wireless PCS, LLC (AT&T), in accordance with the provisions of Connecticut General Statutes (CGS) §§ 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on January 9, 2009 for the construction, operation, and maintenance of a 100-foot wireless telecommunications facility located at 224 Lovely Street in Avon, Connecticut. (AT&T 1, p. 2)
2. AT&T is a Delaware corporation with an office in Rocky Hill, Connecticut. AT&T is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless service system in Connecticut. (AT&T 1, p. 2)
3. The parties to this proceeding are the applicant, Peter Weise, Patricia and Thomas McMahon, Sheridan and Mark Toomey, Jane Garret and the Town of Avon. Intervenors to the proceeding are Juan Fernandez, David Lampert, Youghioghny Communications-Northeast LLC (Pocket), and the group of Michael Pastore, Stuart Noyes, and Mary Ann Keenan. (Transcript 1 – 03/31/09, 3:00 p.m. [Tr. 1], pp. 7-11)
4. The purpose of the proposed facility is to provide wireless service for AT&T and Pocket to Lovely Street (Route 177) and adjacent local roads in the northwest section of Avon. (AT&T 1, pp. 4-5)
5. Notice of the application was provided to all abutting property owners by certified mail. AT&T received return receipts from all of the mailings. Public notice of the application was published in The Hartford Courant on December 23 and 24, 2009. (AT&T 1, pp. 3-4; AT&T 3, Q. 1, Q. 14)
6. AT&T installed a four-foot by six-foot sign describing the proposed project at the corner of Greenwood Drive and Lovely Street. (Council's Pre-Hearing Conference memo dated March 20, 2009; Tr. 2, pp. 36, 39)
7. Pursuant to CGS § 16-50l(b), AT&T provided notice to all federal, state and local officials and agencies listed therein. (AT&T 1, p. 3, Tab 8)
8. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a public hearing on March 31, 2009, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Avon Senior Community Center, 635 West Avon Road, Avon, Connecticut. The public hearing was continued on April 29, 2009 and July 7, 2009 at the office of the Connecticut Siting Council, 10 Franklin Square, New Britain, Connecticut. (Tr. 1, p. 4; Transcript 2 – 03/31/09, 7:00 p.m. [Tr. 2], p. 4; Transcript 3 – 04/29/09, 11:00 a.m. [Tr. 3], p. 4; Transcript 4 – 07/07/09, 1:00 p.m. [Tr. 4], p. 4)



9. The Council and its staff conducted an inspection of the proposed site on March 31, 2009, beginning at 2:00 p.m. The applicant flew two balloons at the site, a red balloon at the proposed location and a gray balloon in the lawn area towards the rear of the property to simulate the height of the proposed facility. Winds caused the balloons to fly at various heights during the field review. (Council's Pre-Hearing Conference memo dated March 20, 2009; Tr. 1, p. 85; Tr. 4, pp. 122- 125, 183)

#### **State Agency Comment**

10. Pursuant to General Statutes § 16-50j(h), on February 23, 2009 and July 9, 2009, the following State agencies were solicited to submit written comments regarding the proposed facility: Department of Environmental Protection (DEP), Department of Public Health (DPH), Council on Environmental Quality (CEQ), Department of Public Utility Control (DPUC), Department of Agriculture (DOAg), Office of Policy and Management (OPM), Department of Economic and Community Development (DECD), and the Department of Transportation (DOT). (Record)
11. The Council received a written response from the DPH on March 13, 2009, stating that the DPH has no comment. (Record)
12. No response was received from the DOT, DOAg, DEP, CEQ, DPUC, OPM, or DECD. (Record)

#### **Municipal Consultation**

13. AT&T had ongoing discussions with the town regarding a facility in the Lovely Street area since early 2008. (AT&T 1, pp. 6-7; AT&T 6, Q. 4)
14. AT&T filed a technical report with the Town of Avon on October 11, 2008. (AT&T 1, p. 15)
15. AT&T sent correspondence to the town on November 20, 2008, offering lease free space on the tower for emergency communications equipment. The town indicated that it might place two whip antennas at the top of the proposed tower. The town also indicated it would be willing to forgo such installation if the tower was designed in an alternative form that blends in with the surroundings and could not support whip antennas. (AT&T 1, Tab 5; Tr. 2, pp. 56-58; Tr. 1, pp. 44-45; Tr. 4, p. 68)
16. AT&T attended a public meeting of the Avon Planning and Zoning Commission on November 18, 2009 where the proposed facility was discussed. The commission did not comment on the proposal at the hearing. (AT&T 1, p. 15, Tab 5)
17. The Avon Planning and Zoning Commission issued recommendations to the Council on March 11, 2009 stating that other properties should be explored for telecommunications use and if no properties are suitable, then AT&T should use the existing steeple or construct a faux steeple attached to the church. If those preferred options were not possible and a freestanding structure were constructed, the commission recommended the facility take the following forms, in order of descending preference:
  - a. Installation of a free standing steeple;
  - b. Installation of a flagpole without a flag;
  - c. Installation of a monopole with flush mounted antennas, painted an earth tone color to blend in with the environment;

Additionally the commission recommends relocating the freestanding facility to another location of the property, away from the residences on Greenwood Drive and limiting the height of any freestanding structure to 80 feet. (Town 1, Tab A; Tr. 2, pp.53, 62-63,80; Tr. 4, pp. 59-60, 62-67, 69)

### Public Need for Service

18. 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. 7)
19. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. (Council Administrative Notice Item No. 7)
20. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 7)
21. 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 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 Administrative Notice Item No. 7)
22. In an effort to ensure the benefits of wireless technologies to all Americans, Congress enacted the Wireless Communications and Public Safety Act of 1999. The purpose of this legislation was to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. (AT&T 1, pp. 5-6)
23. AT&T and Pocket would provide enhanced 911 services to the target service area. (AT&T 1, p. 5; Pocket 1, Q. 5)

### Site Selection

24. AT&T established a search ring for the target service area in 2007 after drive test results indicated weak coverage in the area. The search included identification of potential structures that could be used for telecommunication purposes, discussion with town officials regarding suitable locations, and the examination of town records to identify potential telecommunications sites. (AT&T 1, pp. 6-7; Tr. 3, pp. 181-184)
25. AT&T investigated the potential use of the existing 65-foot high steeple at the church but rejected this option since the narrow width of the steeple could only accommodate antennas at the 35-foot level. (AT&T 1, p. 7; AT&T 5, Q. 5)
26. AT&T investigated the possibility of rebuilding the existing steeple to a height of 95-110 feet but rejected that option since the project would require construction within the church sanctuary. The church is not amenable to construction disturbing the interior of the church or disrupting church activities. (AT&T 1, Tab 2; AT&T 4, Q. 5; AT&T 5, Q. 13; Tr. 1, pp. 28-29, 96-99; Tr. 4, pp. 202-203)



27. AT&T did not identify any existing structures that would provide adequate coverage to the target service area. The nearest telecommunication site to the proposed site is a water tank located approximately 1.4 miles to the southeast. (AT&T 1, pp. 5-6, Tab 1; AT&T 5, Q. 11)
28. After determining there were no viable structures within the search area, AT&T searched for properties suitable for tower development. AT&T investigated nine parcels prior to the filing of the application and selected the proposed site for tower development. The eight rejected parcels and reasons for their rejection are as follows:
  - a. 183 Juniper Drive, Avon – would not achieve coverage objectives;
  - b. 232 West Avon Road, Avon – would not achieve coverage objectives;
  - c. Avon Volunteer Fire Dept., 106 Secret Lake Road, Avon – property too small;
  - d. Briarcliff Swim Club, 107 Craigmere Circle, Avon – visual impact high;
  - e. Brighenti Properties (various locations), Avon – owner not interested in lease;
  - f. Vibert Property, 335 Lovely Street, Avon – property is at a lower elevation and slightly smaller than church parcel with a location adjacent to subdivision;
  - g. Roaring Brook School, 30 Old Wheeler Lane, Avon – Town not interested;
  - h. Lamonica Property, 25 Frank's Way, Avon – south and east of target area, on-site ponds and wetlands.(AT&T 3, Q. 5; AT&T 5, Q. 10; Tr. 1, p. 25; Tr. 4, pp. 194-196)
29. After filing of the application, the Town recommended AT&T investigate three areas for potential telecommunications use: Found Land property, Huckleberry Hill open space, or property in the Pond Ledge area. (Town 1, Tab A)
30. After further review, the Town indicated the town-owned Found Land property has a deed restriction that does not allow telecommunication use. (Town 2, Q. 3)
31. The Town conducted several hearings to determine if it wanted to lease space to AT&T in the town-owned Huckleberry Hill property. Although AT&T stated a 150-foot tower would provide adequate coverage to the target service area, the Town ultimately decided not to enter into lease with AT&T. The Town was concerned a tower could hinder future development of a school on the parcel. (Town 7; AT&T 10; Tr. 4, pp. 55-58)
32. Property in the Pond Ledge area consists of town-owned open space and Avon Water Company land. A deed restriction on the town-owned parcels prevents telecommunications use. The Avon Water Company property contains a 10-foot high water tank that is not tall enough for telecommunications use. If a tower were constructed on the water company parcel, the height would be well over 200 feet and too visually obtrusive to the area. (AT&T 9, Q. 3; Town 2, Q. 2, Q. 3; Tr. 1, pp. 22-23)

#### **Facility Description**

33. The proposed facility is located on a 5.25-acre parcel owned by the St. Matthew Lutheran Church located at 224 Lovely Street (Route 177) in Avon (refer to Figures 1 & 2). The property contains a church and parsonage with associated parking and lawn areas. (AT&T 1, Tab 3)
34. The parcel is zoned Residential, R-30. (AT&T 1, p. 9)
35. The tower site is located in a lawn area behind the church building, approximately 45 feet north of the side parking lot. A row of six, 75 to 80-foot tall pine trees is located immediately south of the proposed compound area. (AT&T 1, Tab 3; Tr. 3, pp. 78-79, 231)



36. AT&T proposes to construct a 100-foot self-supporting monopole at the site. The tower would be approximately 42 inches in diameter at the base, tapering to approximately 18 to 26 inches at the top. (AT&T 1 p. 8, Tab 3)
37. The tower would be designed to support three levels of platform mounted antennas and Town emergency communication antennas. (AT&T 1 p. 8, Tab 3)
38. AT&T proposes to install six panel antennas on a low-profile platform at a centerline height of approximately 98 feet. A low profile platform uses single pipe construction and does not have a walkway. The diameter of the platform is ten feet. (AT&T 1, p. 8, Tab 3; Tr. 1, pp. 51-52)
39. Pocket proposes to install three flush mounted antennas at a centerline height of 88 feet. (Tr. 2, pp. 266, 278)
40. AT&T proposes to construct a 49-foot by 49-foot equipment compound within a 50-foot by 50-foot lease area. An eight-foot high stockade fence would enclose the compound. The compound would include the tower site and sufficient space for three wireless carriers. (AT&T 1, p. 9, Tab 3; Tr. 3, pp. 35-36)
41. Once constructed, AT&T would access the compound by parking in the existing church parking lot and walking to the compound on a 30-foot long gravel walkway. Technicians would visit the site approximately once a month. (Tr. 1, pp. 55-56; Tr. 4, pp. 51-56, 226-227)
42. Underground utilities would service the compound from an existing utility pole on the property. (AT&T 1, Tab 3)
43. AT&T proposes to install a 12-foot by 20-foot equipment shelter on a concrete pad within the compound. Pocket would install equipment cabinets within the compound. (AT&T 1, Tab 3; Tr. 1, pp. 27-28; Tr. 2, p. 279)
44. AT&T does not propose any landscaping at the site. (AT&T 5, Q. 20)
45. The tower radius would be contained within the site property. The church building and parsonage are within the tower radius. (AT&T 1, Tab 3; Tr. 3, p. 141)
46. The nearest abutting property from the tower site is approximately 188 feet to the south (Garret Property). (AT&T 3, Q. 7; Tr. 1, pp. 15-16)
47. The nearest off-site residence from the proposed tower site is approximately 238 feet to the south at 21 Greenwood Drive (McMahon Property). (AT&T 3, Q. 8)
48. There are 39 residences within 1,000 feet of the tower site. (AT&T 3, Q. 9)
49. Land use within a quarter-mile of the site is predominately residential with some open space areas. (AT&T 1, Tab 3; AT&T 9, Tab 1)
50. The tower site is located at an elevation of 293 feet above mean sea level. The site is in a valley with a gently sloping ridge to the east and a sharp sloping ridge to the west. Route 177 traverses the valley between the ridges in a north-south direction. (AT&T 1, Tab 3)

51. The estimated construction cost of the facility, not including AT&T's or Pocket's antennas and radio equipment, is:

Tower and foundation	\$120,000.
Site development	40,000.
<u>Utilities</u>	<u>40,000.</u>
<u>Total estimated cost</u>	<u>\$200,000.</u>

(AT&T 1, pp. 15-16)

### **Environmental Concerns**

52. The project would have no effect on historic resources. (AT&T 1, Tab 7)
53. The site is within the range of the eastern box turtle (*Terrapene carolina carolina*), a state species of special concern. Turtles have been observed in the surrounding neighborhood. The site itself does not contain habitat for the turtle since the turtle favors old field and deciduous forest habitat. (AT&T 1, Tab 7; AT&T 4, Q. 7; Tr. 1, p. 38; Tr. 4, pp. 112-113, 184, 188-189)
54. The site is not within a 100-year or 500-year floodplain. The nearest wetland/watercourse is Roaring Brook, approximately 235 feet east of the site. (AT&T 1, pp. 14-15, Tab 3; AT&T 9, Tab 3)
55. Development of the site would require the removal of three cedar trees and two poplar trees. (AT&T 1, Tab 3; Tr. 3, pp. 78-79)
56. AT&T expects to use a pad and pier foundation to support the tower. This design would require the excavation of a 15-foot by 15-foot area to a depth of four feet. To avoid disturbing the root structure of the adjacent pine trees, AT&T could shift the location of the tower within the compound 10 feet to the north. (Tr. 3, pp. 229-230; Tr. 4, pp. 215-216)
57. Minimal grading would be required to level the site. No filling would be necessary. Excavated soils would be removed from the site. Site blasting is not anticipated. (AT&T 1, Tab 3; AT&T 3, Q. 4; Tr. 3, pp. 200, 210-212)
58. Aircraft hazard obstruction marking or lighting of the tower is not required or proposed. (AT&T 1, Tab 3)
59. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of the proposed AT&T and Pocket antennas is calculated to be 23.5% 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. (AT&T 1, Tab 3; Pocket 1, Q. 10)



Visibility

60. Visibility of the proposed tower from specific locations within a one-mile radius of the site is as follows (refer to Figure 3):

<b>Specific Location and Area Receptors</b> [photolocation on corresponding Figure 3]	<b>Approximate Portion of Tower Visible</b>	<b>Approximate Distance from Tower</b>
Blueberry Lane [2]	Visible during leaf-off conditions	700 feet southeast
Intersection of Greenwood Lane and Lovely Street [3]	20 feet – above trees 30 feet through trees	250 feet southwest
Front of church [5 & 9]	60 feet – unobstructed	250 feet west
East end of Greenwood Lane [6]	20 feet – unobstructed	450 feet east
Bridgewater Lane at #94 [7]	70 feet - unobstructed with hillside as backdrop	1,700 feet southeast
Bridgewater Lane at #86 [15]	Visible during leaf-off conditions	1,500 feet southeast
Intersection of Bridgewater Lane and Lovely Street [10]	70 feet – unobstructed	300 feet northwest
Bridgewater Lane [11]	45 feet - unobstructed	500 feet northwest
361 Lovely Street [17]	Minimal visibility during leaf-off conditions	2,800 feet south

(AT&T 1, Tab 4; AT&T late file of August 4, 2009; Tr. 1, pp. 85-86)

61. The tower would be visible from portions of a subdivision that begins 0.2 miles west of the site. The development extends up the side of a ridge and contains several cul-de-sacs. Year-round views include approximately 300 feet of Bridgewater Drive between house numbers 86-94, the intersection of Bridgewater Drive and Lovely Street, and a short section of Quail Ridge that contains two residences. The balloon was not observed during field reconnaissance on Wildwood Drive, Brighton Way, Stockbridge Lane, and Clearwater Court. Wooded areas between Quail Ridge and Lovely Street prevent year-round views of the tower from the backyards of residences on the east side of Quail Ridge. (AT&T 1, Tab 4; Tr. 3, pp. 240-244)
62. Approximately 20-acres in the Bridgewater Drive area would have year-round visibility of the tower. Tower views from this area would be of the tower with vegetation as a backdrop. The tower would not be silhouetted against the sky. (AT&T 1, Tab 4; Tr. 4, pp. 189-190)
63. Three residences are located on Greenwood Drive, abutting the church property to the south. All three would have partial year-round views of the tower and compound. The upper 20-25 feet of the proposed tower would be visible from the McMahon residence and Toomey residence, located at 21 Greenwood Drive and 9 Greenwood Drive, respectively. (AT&T 4, Q. 1; Tr. 3, pp. 65-67; Tr. 4, pp. 156-158, 181-183, 244-246)
64. The upper 25-30 feet of the tower would be visible from the side yard and backyard of the Weise property, an abutter located approximately 250 feet from the tower site at the corner of Lovely Street and Greenwood Drive. (Tr. 4, pp. 122-125)
65. Approximately 30-acres in the area encompassing the site, Greenwood Drive, and adjacent areas of Lovely Street, would have year-round visibility of the tower. (Tr. 1, p. 189)



66. The upper 10-20 feet of the tower would be visible year-round from the Norris property, an abutting property to the northwest that fronts Lovely Street. (Tr. 4, p. 247)
67. The upper portion of the tower would be visible from the Grant property, an abutting property to the north. A line of vegetation along the property line would screen the lower portions of the tower. (AT&T 4, Q. 1; Tr. 4, pp. 248-249)
68. The tower would not be visible year-round from Cold Spring Road, a residential street that is located a tenth of a mile west of the site, beyond Roaring Brook. (AT&T 4, Q. 1; Tr. 4, pp. 240-241)
69. The tower may be visible during leaf-off conditions from Briarcliff Club, Red Mountain Lane Open Space, Juniper Road Open Space, Horsegaurd State Park Scenic Reserve, Lofgren Road Open Space, Avon Land Trust property on Route 177, Roaring Brook Elementary School, and Huckleberry Hill Open Space. (AT&T 1, Tab 4; Tr. 1, p. 92)
70. The tower would not be visible from any known hiking trails maintained by the Connecticut Forest and Parks Association. (Council Administrative Notice No. 9; AT&T late file of August 4, 2009)

#### Alternative Sites and Tower Designs

71. During the proceeding, AT&T presented two alternative locations on the church parcel, known as Option 2 and Option 3 (refer to Figure 4). (AT&T 9, Q. 4; AT&T late file of August 4, 2009, Tab 1)
72. Option 2 is located to the rear of the lawn area, mostly in the wooded area west of Roaring Brook. If the tower were placed in the center of the compound, the tower would be 145 feet from the east property line (Panetta property) and 185 feet from the Grant residence to the north. The site would be screened by vegetation on the east, north and south sides. The open lawn area is adjacent to the west side of the compound. (AT&T 9, Q. 4; AT&T late file of August 4, 2009, Tab 1)
73. Option 3 is located approximately 55 feet northeast of the parsonage in the area of a former sandpit. The site is 83 feet west of the Panetta property. The nearest residences are the Panetta residence and the Grant residence, both approximately 240 feet from the tower site. Vegetation surrounds the site with the exception of the yard area of the parsonage. The sandpit area is approximately 20 feet lower in elevation, which would require the tower to be 20 feet higher to achieve the same coverage objectives. (AT&T late file of August 4, 2009, Tab 1; Tr. 4, pp. 218-221)
74. The church is not willing to allow a tower adjacent to or attached to the rear portion of the church north of the proposed compound due to plans to expand the church. AT&T could move the compound westward, closer to the church but that would necessitate relocation of an oil tank on the property. (AT&T 5, Q. 13; Tr. 1, pp. 30-33, 101-103; Tr. 4, pp. 203-207)
75. AT&T would be willing to construct a 100-foot flagpole tower. A flagpole tower would have a minimum diameter of 28 inches at the top and would be able to accommodate three levels of antennas with a ten-foot separation. Three interior flush mounted antennas could be accommodated at each level. (AT&T 5, Q. 16; Tr. 1, p. 76)
76. If a 100-foot flagpole were constructed, AT&T would use the 97-foot and 87-foot levels to meet coverage objectives. Only the 77-foot level would be available for another carrier to mount three antennas. (Tr. 1, pp. 79-81; Tr. 4, p. 278)

77. A flagpole design could not accommodate the town's emergency communication whip antennas due to the presence of a fiberglass enclosure at the top. (Tr. 1, pp. 44-45)
78. AT&T would be willing to construct a monopole with exterior flush mounted antennas. Tower dimensions for this design would be approximately 38 inches at the base tapering to approximately 18 inches at the top. This design would also require AT&T to occupy the 97-foot and 87-foot levels since only three antennas could be accommodated per level. (AT&T 5, Q. 12, Q. 18; Tr. 1, pp. 77-81; Tr. 4, pp. 216-217)
79. If a flush mounted tower design were used, Pocket would have to locate at the 77-foot level rather than their proposed 88-foot level. (Tr. 3, p. 278)
80. A freestanding faux steeple design would require a 25-foot wide base, with a faux brick mass rising to approximately 30 feet, tapering to 18 feet wide. The remainder of the steeple would extend to 120 feet with architectural elements characteristic of a New England type steeple. The steeple could accommodate AT&T's antennas at the 100-foot and 90-foot levels and Pocket's antennas at the 80-foot level. (AT&T 5, Q. 13; AT&T late file of August 4, 2009; Tr. 4, pp. 207-209)
81. AT&T would not be willing to construct a faux steeple due to construction costs and visibility concerns. (AT&T 5, Q. 13; Tr. 4, pp. 144-146)
82. AT&T would be willing to install a wood laminate pole with exterior, flush mounted antennas. Antenna coax would have to be installed on multiple sides of the exterior of the pole to maintain structural integrity. (Tr. 4, pp. 216-217, 225-226)
83. AT&T would be willing to install a tree design but the town and Mr. Weise oppose such an installation, believing it would be out of character with the neighborhood. (AT&T 5, Q. 12; Tr. 4, pp. 62-63, 119-120, 216-217)
84. Tower heights less than 77 feet are probably not viable since radio frequency transmissions would be blocked by vegetation in the area, leading to signal loss. (Tr. 1, pp. 20-21, 79-81)
85. Alternative tower designs would still require a 49-foot-by-49-foot equipment compound since the size of the ground equipment would not change. (AT&T 5, Q. 17)
86. AT&T could construct a single building to accommodate all tower users or require each carrier to install a shelter or building with a pitched roof to resemble area architecture. (Tr. 3, pp. 227-228; Tr. 4, p. 210)
87. An underground shelter could be constructed at the site to conceal ground equipment although an air-conditioning unit and a GPS unit would need to be located above ground. There are no such AT&T installations in Connecticut. (Tr. 1, pp. 38-39; Tr. 4, pp. 209-210)
88. If a telecommunications facility was constructed at the church property, Mr. Weise prefers the following designs, ranked in descending order of preference;
  - a. install an attached or freestanding steeple;
  - b. install a flagpole;
  - c. install a wood laminate pole; or
  - d. install a monopole with flush mounted antennas.(Tr. 4, pp. 133-134)



89. If a telecommunications facility was constructed at the church property, Mr. Toomey prefers an attached or freestanding steeple, followed by a flagpole without a flag, painted with a color to blend in with the surroundings. Mr. Toomey also prefers that site be moved to another location on the east side parcel and that the compound be installed underground, or, if not feasible, designed to blend in architecturally with the neighborhood. (Tr. 4, pp. 180-182)

**AT&T - Existing and Proposed Wireless Coverage**

90. AT&T operates in both the cellular (800 MHz) and PCS (1900 MHz) frequency bands. AT&T is designing the site with a signal level threshold of -74 dBm, sufficient for in-building coverage. Signal levels below -74 dBm are not considered reliable and have greater incidence of dropped calls. AT&T's design threshold for in-vehicle coverage is -82 dBm. (AT&T 1, Tab 3; AT&T 5, Q. 1; Tr. 1, pp. 19-20; Tr. 3, pp. 29-32)

91. AT&T's existing cellular coverage in the target service area along Lovely Street ranges from -82 dBm to -92 dBm for approximately one mile. Cellular coverage in the adjacent neighborhood to the east ranges from -92 dBm to -105 dBm (refer to Figure 5). (AT&T 3, Q. 11; AT&T 5, Q. 4)

92. The nearest AT&T sites to the target service area are listed below. None of these sites provides reliable cellular or PCS coverage to the target service area.

<b>Location</b>	<b>Facility Type</b>	<b>Antenna Ht.</b>	<b>Approx. Distance from Site</b>
14 Canton Springs Road, Canton	140-foot monopole	130'	1.6 miles northeast
10 Redwood Lance, Avon	105-foot monopole	97'	1.9 miles south
24 Ridgewood Drive, Avon	66-foot water tank	55'	1.4 miles southeast
530 Bushy Hill Road, Simsbury	120-foot flagpole	104'	1.8 miles northeast
277 Huckleberry Hill Road, Avon	100-foot wood tower	90'	1.5 miles southwest

(AT&T 1, Tab 1)

93. Installing antennas at 100 feet above ground level (agl) would provide adequate cellular coverage to the target service area (refer to Figure 6). Coverage models show that AT&T could achieve coverage objectives at a height of 77 feet but the trees in the area would interfere with the signal and could cause signal loss. AT&T's design standard is to be a minimum of 10 feet above the trees to prevent signal attenuation. (AT&T 3, Q. 12; Tr. 1, pp. 21-22)

94. PCS coverage to the area would be about 8 dBm less than cellular due to the characteristics of the PCS frequency. (AT&T 5, Q. 4)

**Pocket - Existing and Proposed Wireless Coverage**

95. Pocket is licensed by the FCC to provide PCS service using frequencies in the 2100 MHz range. (Pocket 1, Q. 4)

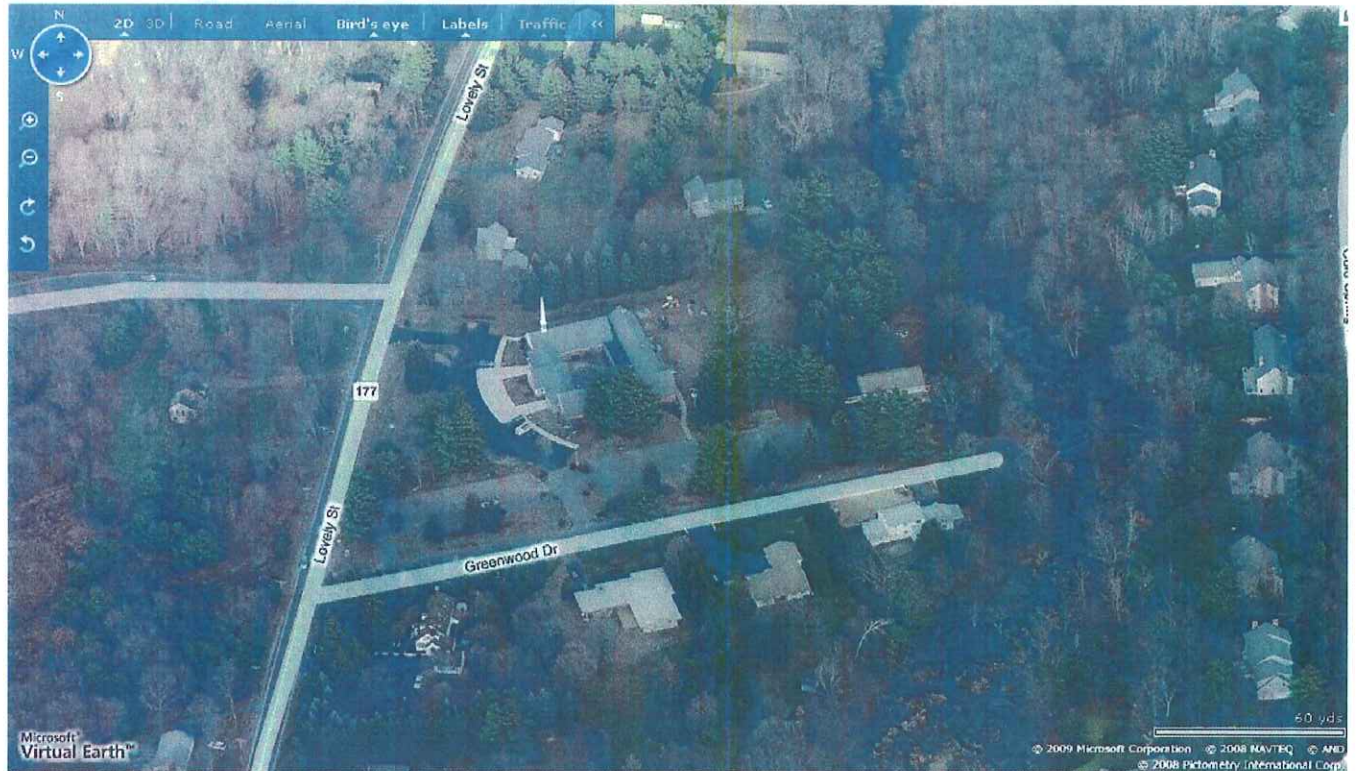
96. Pocket is designing the site with a signal level threshold of -92 dBm, sufficient for in-vehicle coverage with a 98% call success rate. Pocket's design threshold for in-building coverage is -85 dBm. (Pocket 1, Q. 5; Tr. 4, p. 25)



97. Pocket currently has no coverage in the Lovely Street area (refer to Figure 7). (Pocket 1)
98. Installing antennas at the 88-foot level of the proposed tower would provide adequate coverage to the target service area (refer to Figure 8). (Pocket 1, Q. 8)
99. Installing antennas at the 77-foot level would cause a degradation of coverage south of the site on Lovely Street near Midlands Road (refer to Figure 9). The degraded area, approximately a tenth of mile, would result in a greater incidence of dropped calls. Pocket would probably locate at this height if a higher location were not available. (Tr. 4, pp. 14-29)

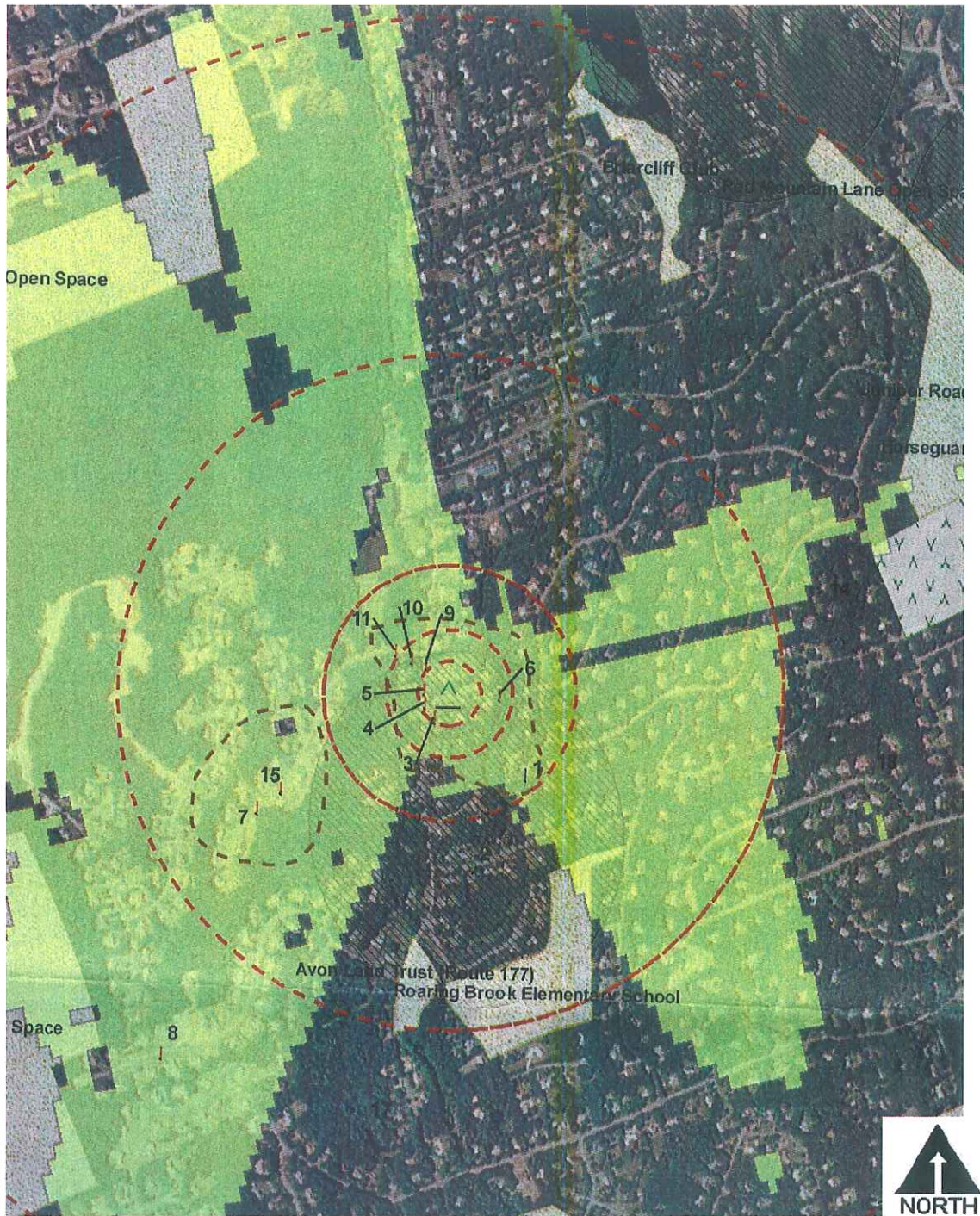


Aerial Photo of St. Matthew Church - northern orientation






**Figure 2:** Aerial view of 224 Lovely Street, Avon.  
(AT&T 3, Tab A)





**Legend**

-  Project Site
-  Project Radius at 250', 500', 1000', 1/2, and 1 mile
-  Based on surface elevation plus estimated tree canopy of 60', 5.5' viewer height and 100' tower height
-  Field Verified Area

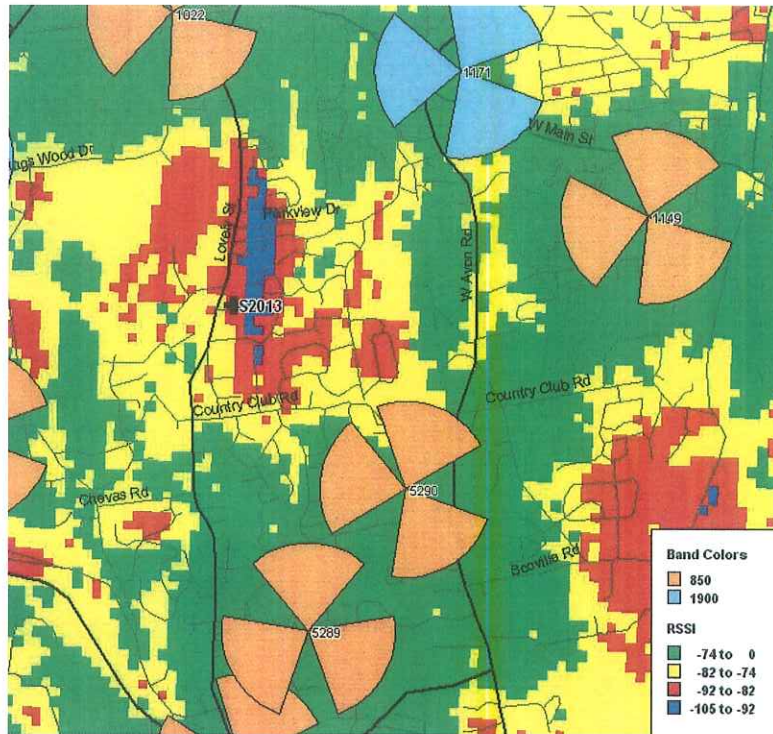
**Figure 3:** Projected visibility of proposed site. (AT&T late file of August 4, 2009)



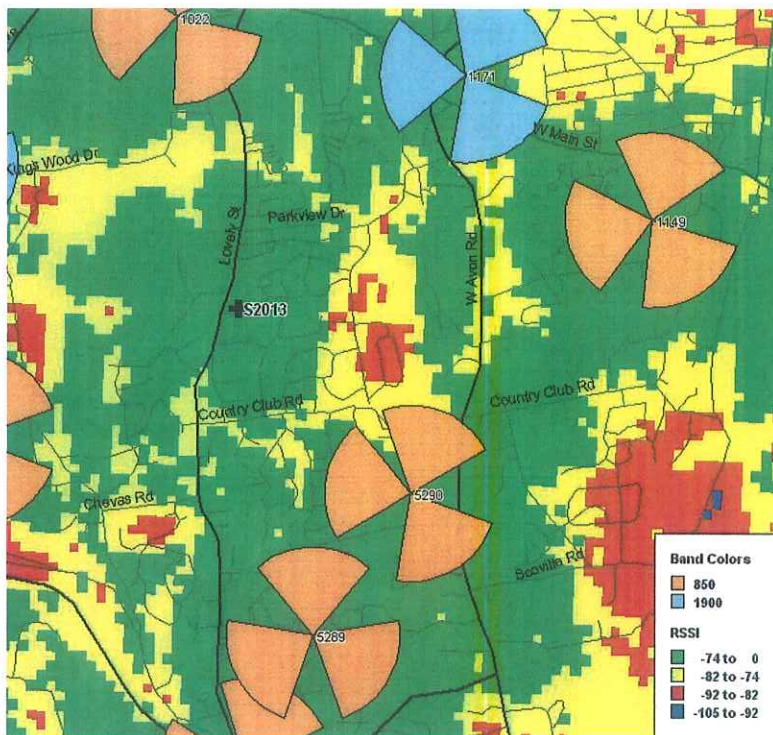


**Figure 4:** Location of three potential tower sites on the property.  
(AT&T late file of August 4, 2009)





**Figure 5:** AT&T existing cellular coverage.  
(AT&T 3, Q 11)



**Figure 6:** AT&T proposed coverage with an antenna height of 98 feet.  
(AT&T 3, Q. 12)



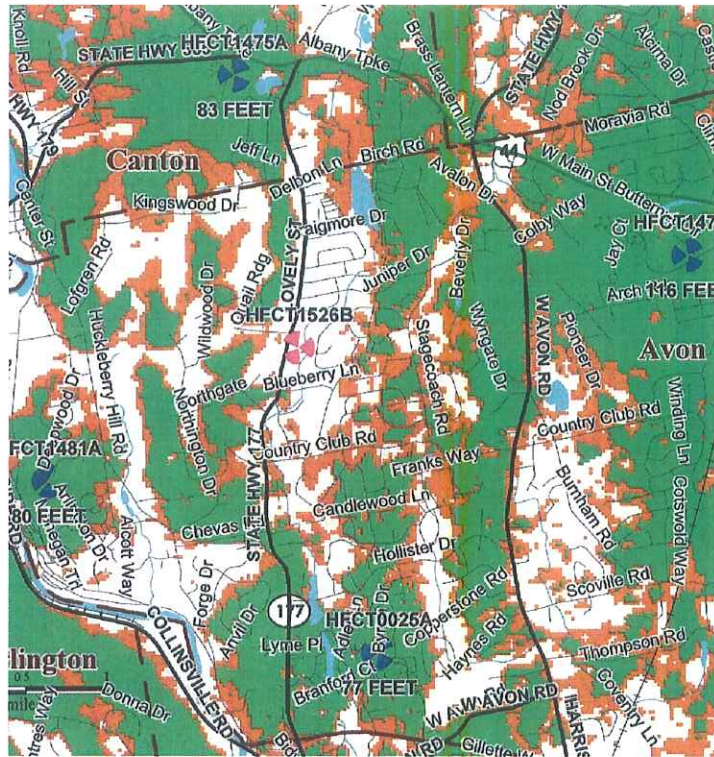


Figure 7: Pocket existing coverage. (Pocket 1)

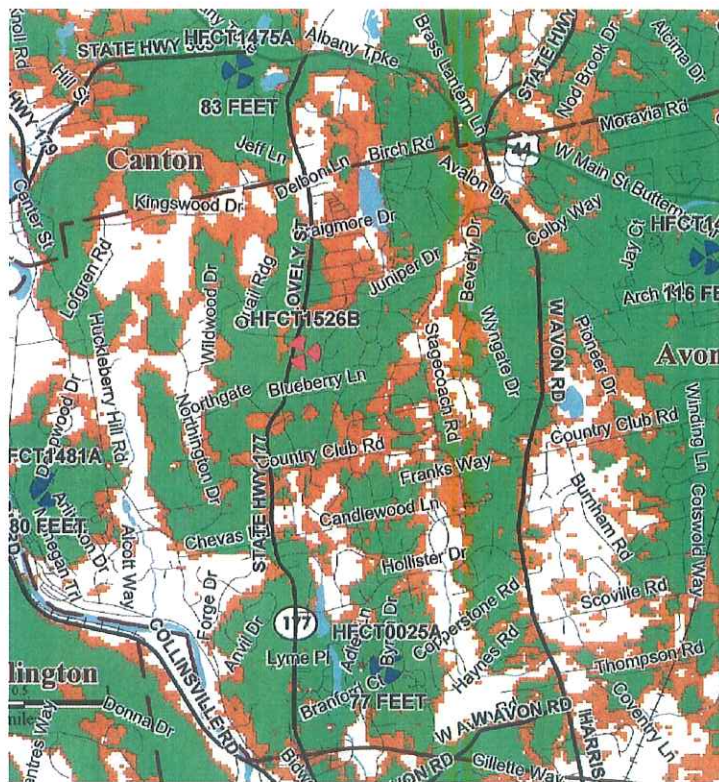
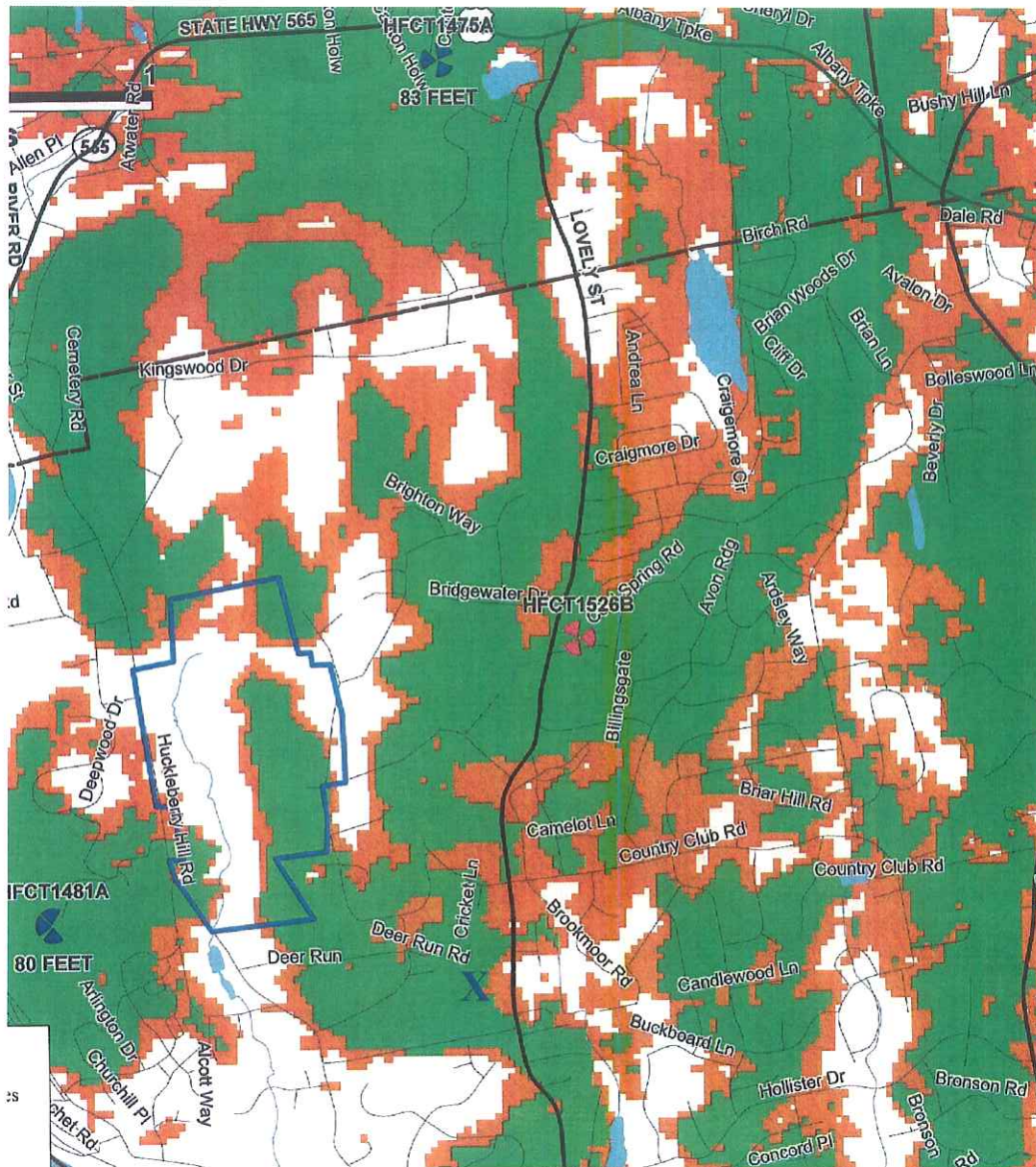


Figure 8: Pocket proposed and existing coverage with antennas mounted at 88 feet. (Pocket 1)





**Figure 9:** Pocket existing coverage and coverage from the site with antennas at 77 feet.

**X** – Area on Lovely Street where coverage would degrade.

(Pocket 2; Tr. 4, pp. 14-29)