

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

July 20, 2009

TO: Parties and Intervenors

FROM: S. Derek Phelps
Executive Director

RE: **DOCKET NO. 374** – Celco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public need for the construction, maintenance and operation of a telecommunications facility located at 199 Town Farm Road, Farmington, Connecticut.

At a public meeting of the Connecticut Siting Council held on July 16, 2009, the Connecticut Siting Council (Council) considered and approved the admission of Party Susan Edelson's late filed exhibits and denied the Applicant's Request to Reject Late Filed Exhibits.

In addition, as stated at the hearing in Farmington on May 14, 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 August 6, 2009.

SDP/CDM/laf

c: Parties & Intervenors

DOCKET NO. 374 - Cellco Partnership d/b/a Verizon Wireless } Connecticut
application for a Certificate of Environmental Compatibility and }
Public Need for the construction, maintenance and operation of a } Siting
telecommunications facility located at 199 Town Farm Road, }
Farmington, Connecticut. } Council

July 8, 2009

DRAFT

Findings of Fact

Introduction

1. Pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes (CGS), as amended, and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies (RCSA), Cellco Partnership d/b/a Verizon Wireless (Cellco) applied to the Connecticut Siting Council (Council) on January 23, 2009 for the construction, operation, and maintenance of a telecommunications facility at 199 Town Farm Road in the Town of Farmington, Connecticut. (Cellco 1, p. i)
2. Cellco's application is a re-submittal of a previously submitted application, designated as Docket 356, that was withdrawn. (Cellco 1, p. 1 - footnote)
3. Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to operate a wireless telecommunications system in Connecticut. The operation of wireless telecommunications systems and related activities are Cellco's sole business in Connecticut. (Cellco 1, p. 4)
4. The parties in this proceeding are the applicant, Susan Edelson, and Claude Brouillard. (Transcript, May 14, 2009, 3:25 p.m. [Tr. 1], pp. 6-7)
5. The purpose of the proposed facility is to provide coverage along Route 10 and nearby local roads in the northeasterly portion of the Town of Farmington and the southeasterly portion of the Town of Avon. The facility would also provide additional traffic handling capacity in the Farmington area by off-loading traffic from Cellco's existing sites in the area. (Cellco 1, p. 2; Cellco 1, Attachment 9, p. 2)
6. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a public hearing on May 14, 2009, beginning at 3:25 p.m. and continuing at 7:00 p.m. in Farmington, Connecticut. (Tr. 1, p. 3 ff.)
7. The Council and its staff conducted an inspection of the proposed site on May 14, 2009, beginning at 2:00 p.m. The applicant flew a balloon at the site from 7:00 a.m. until approximately 6:30 p.m. at a height of 117 feet to simulate the proposed tower. Weather conditions were difficult for the balloon flight with strong winds and periods of rain. Several balloons were lost due to the weather conditions, and it was difficult to keep a balloon at the proposed height of the tower. Visibility was approximately one mile. (Tr. 1, pp. 29 ff)

8. Pursuant to CGS § 16-50(b), Cellco published notice of its intent to submit this application on January 20 and 21, 2009 in The Hartford Courant. (Cellco 1, p. 5; Hartford Courant Affidavit of Publication, dated January 21, 2009)
9. In accordance with CGS § 16-50(b), Cellco sent notices of its intent to file an application with the Council to each person appearing of record as owner of property abutting the property on which the site is located. (Cellco 1, pp. 5-6; Attachment 5)
10. Cellco received return receipts from all but eight of the abutting property owners to whom it sent notices. For five of these eight owners, Cellco received back notices from the post office that the certified letters were unclaimed. Cellco sent follow-up, first class mail letters to these five property owners. (Cellco 5, Response 6)
11. Pursuant to CGS § 16-50(b), Cellco provided notice to all federal, state and local officials and agencies listed therein. (Cellco 1, p. 5; Attachment 3)
12. On April 24, 2009, Cellco posted a sign on the host property informing the public of its pending application. Information on the sign included the time and date of the Council's scheduled public hearing in this application and contact information for the Council. (Cellco 8; Tr. 1, p. 33)

State Agency Comment

13. Pursuant to CGS § 16-50, the Council solicited comments on Cellco's application from the following state departments and agencies: Department of Agriculture, Department of Environmental Protection, Department of Public Health, Council on Environmental Quality, Department of Public Utility Control, Office of Policy and Management, Department of Economic and Community Development, and the Department of Transportation. The Council's letters requesting comments were sent on March 18, 2009 and May 15, 2009. (CSC Hearing Package dated March 18, 2009; CSC Letter to State Department Heads dated May 15, 2009)
14. The Connecticut Department of Transportation (ConnDOT) responded to the Council's solicitation with no comments. (Letter from ConnDOT dated May 4, 2009)
15. The Connecticut Department of Public Health (DPH) responded to the Council's solicitation with no comments. (Memorandum from DPH dated April 27, 2009)
16. Governor M. Jodi Rell submitted a letter urging the Council to balance its decision on the need for improved telecommunications with land conservation. (Letter from M. Jodi Rell, dated May 14, 2009)

17. In response to the Council's solicitation for comments for Docket 356, the Department of Environmental Protection (DEP) submitted correspondence that addressed several issues related to Cellco's application. DEP concluded that it was unlikely that any homes in the Devonwood residential development would have views of the proposed tower. DEP also stated that the portion of the Town of Farmington-owned property being leased to Cellco was not covered by the Conservation and Public Recreation Easement and Agreement between DEP and the town under the Open Space and Watershed Lands Acquisition Program. Finally, DEP opined that a monopine tower, because of its comparatively greater width and visual mass, would be more visible from distant viewpoints than a typical monopole tower. (Cellco 1, Attachment 11, Letter from Frederick Riese dated April 11, 2008)
18. Besides the state officials and agencies identified above, the Council did not receive comments from any other state agencies. (Record)

Municipal Consultation

19. Cellco representatives met with Farmington Town Manager Kathleen Eagen and Avon Town Manager Philip Schenk on September 14, 2007 to commence the 60-day municipal consultation process for the application that was submitted as Docket 356. At these meetings both town managers received copies of technical information summarizing Cellco's plans to establish a new telecommunications facility in Farmington. (Cellco 1, p. 18)
20. The Town of Farmington requested that Cellco construct a monopine tower. (Cellco 1, p. 13)
21. Cellco would provide space on its proposed tower for town public safety antennas, should such a need exist, at no charge. (Cellco 1, p. 11; Tr. 1, p. 41)
22. At a meeting of the Farmington Town Plan and Zoning Commission held on July 23, 2007, the Commission voted to recommend approval of the lease of land located at 199 Town Farm Road for a communications tower. (Cellco 1, p. 18; Cellco 5, Tab C - Minutes of Regular Meeting Town Plan and Zoning Commission, July 23, 2007)
23. On August 14, 2007, the Farmington Town Council voted to authorize the Town Manager to enter into a lease agreement with Cellco for the purpose of constructing and operating a cellular tower at 199 Town Farm Road. (Cellco 1, p. 18; Cellco 5, Tab C - Minutes of the Regular Meeting of the Farmington Town Council held August 14, 2007)
24. On February 14, 2008, the Farmington Town Planner, Jeffrey Ollendorf, contacted Cellco regarding concerns raised by Ronald Simmons, one of the farmers who lease the host property from the Town of Farmington, about Cellco's proposed telecommunications facility. (Cellco 1, p. 19)
25. Cellco addressed the concerns of Ronald Simmons in a letter sent to Jeffrey Ollendorf on March 19, 2008. (Cellco 1, p. 19)

26. In February 2008, Mr. Ollendorf also contacted Cellco regarding the visibility of its proposed facility from the Devonwood neighborhood. (Cellco 1, p. 19)
27. Cellco responded to Mr. Ollendorf about the facility's visibility from Devonwood on March 21, 2008. (Cellco 1, p. 19)
28. Prior to re-submitting its application, Cellco met with Farmington Town Manager Kathleen Eagen on November 6, 2008 to re-commence the sixty day municipal review period. (Cellco 1, p. 19)
29. The Avon Town Manager, Philip Schenk, requested that Cellco send him copies of its technical report on the facility in lieu of a meeting. Copies of the technical report were sent on November 6, 2008. (Cellco 1, p. 19)

Public Need for Service

30. In its Report and Order issued May 4, 1981 in FCC Docket No. 79-318, the FCC recognized the public need for technical improvement, wide-area coverage, high quality service and a degree of competition in mobile telephone service. (Cellco 1, p. 6)
31. The federal Telecommunications Act of 1996 (Act), a federal law passed by the United States Congress, recognized a nationwide public need for high-quality wireless telecommunication services. The Act also promoted competition among wireless service providers, tried to foster lower prices for consumers, and encouraged the rapid deployment of new telecommunications technologies. (Cellco 1, p. 6)
32. Cellco's proposed facility at 199 Town Farm Road would be part of its expanding wireless telecommunications network envisioned by the Act. (Cellco 1, p. 6)
33. Cellco holds licenses issued by the FCC to provide wireless services at cellular (800 MHz frequency band), Personal Communications Service (PCS – 1900 MHz frequency band), and 700 MHz frequencies in Hartford County. (Cellco 1, pp. 7-8; Attachment 6)
34. 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, Telecommunications Act of 1996)
35. The Telecommunications Act of 1996 prohibits local and state bodies from discriminating among providers of functionally equivalent services. (Council Administrative Notice, Telecommunications Act of 1996)

36. The Telecommunications Act of 1996 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, Telecommunications Act of 1996)
37. 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 911 Act). 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. (Council Administrative Notice, Wireless Communications and Public Safety Act of 1999)
38. Cellco's antennas would comply with the requirements of the 911 Act. (Cellco 5, Response 2)
39. Cellco asked other wireless carriers licensed in Connecticut if they might be interested in using this site. No other carrier indicated an interest at this time. (Cellco 5, Response 16)

Site Selection

40. The search ring for the site Cellco identified as Farmington North 2 (formerly Avon 3) was first issued in August 2000. The search was approximately 0.4 miles east to west and 1.3 miles north to south and initially centered on an area north of the proposed site. As part of a site search of its own, AT&T had previously identified the Simmons Family Farm property as a potential tower location and had discussed a lease with the Town of Farmington. Cellco reviewed the coverage possible from this location, and, due to the town's apparent willingness to lease the property, felt that the Simmons property was an appropriate tower location. (Cellco 5, Response 13)
41. In 2000, when Cellco first began searching for a site in this area, it only operated on cellular frequencies. Cellco purchased the right to operate on PCS frequencies in 2003. As a result of adding PCS frequencies, Cellco had to adjust the location of sites that could potentially provide acceptable coverage. (Tr. 1, p. 76)

42. Cellco has antennas mounted on eight existing communications facilities located within approximately four miles of its proposed site in Farmington. The existing facilities are listed below:

| Facility Owner | Facility Type | Location | Cellco's Antenna Ht. |
|---------------------------------------|------------------------|---------------------------------------|----------------------|
| Avon Water Company | Water Tank | Darling Drive, Avon | 123' |
| Avon Water Company | Water Tank | 24 Ridgewood Road, Avon | 61' |
| Talcott Mountain Science Center | 60-foot lattice tower | Talcott Mountain, Bloomfield | 56' |
| Marlin Tower | 346-foot lattice tower | 3114 Albany Avenue, West Hartford | 130' |
| Private Company | Roof-top | 1371 Farmington Avenue, Farmington | 84' |
| UCONN Health Center | Roof-top | 263 Farmington Avenue, Farmington | 131' |
| Sprint | 140-foot monopole | 130 Birdseye Road, Farmington | 110' |
| First Church of Christ, Unionville | Church Steeple | 61 Main Street, Unionville | 95' |

(Cellco 1, p. 10; Attachment 9; Tr. 1, p. 39)

43. Cellco determined that there were no existing structures that would provide suitable coverage to its target area. (Cellco 1, pp. 10-11)
44. Cellco identified and investigated 29 potential sites for its proposed facility. These sites and the determinations of their suitability are described below.
- a. Simmons Family Farm: This is a 9.9-acre parcel owned by the Town of Farmington, located on the west side of Route 10 not far south of the Avon town line. This is the site of Cellco's proposed facility.
 - b. Avon Old Farms – Field House: This is an approximately 900-acre parcel located on the west side of Route 10, north of the Simmons Farm parcel. It is the site of the Avon Old Farms School. Repeated phone calls to the owners of this property were never returned.
 - c. Avon Old Farms – Water Tank: Repeated phone calls and emails to the owners of this property were never returned.
 - d. Avon Old Farms – Playing Fields: Repeated phone calls and emails to the owners of this property were never returned.
 - e. Town of Avon Department of Public Works: This is an approximately 11-acre parcel off Arch Road in Avon. This site's proximity to Cellco's existing Avon (Darling Drive and Ridgewood Road) cell sites would result in significant redundant coverage.

- f. Rotondo Inc.: This is an approximately 12-acre parcel at 151 Old Farms Road in Avon. This site's proximity to Cellco's existing Avon (Darling Drive and Ridgewood Road) cell sites would result in significant redundant coverage.
- g. Sandford & Hawley: This is an approximately 6.4-acre parcel off Sandscreen Road in Avon. This site's proximity to Cellco's existing Avon (Darling Drive and Ridgewood Road) cell sites would result in significant redundant coverage.
- h. Pinnacle Tower Site – This is an approximately 30.3-acre parcel off of Deercliff Road in Avon. Because of its location at the top of Avon Mountain, a facility here would not be able to satisfy Cellco's coverage objectives because it would overshoot the target area.
- i. WTIC Radio Tower – This is an approximately 21.6-acre parcel off of Deercliff Road in Avon. Because of its location at the top of Avon Mountain, a facility here would not be able to satisfy Cellco's coverage objectives because it would overshoot the target area.
- j. Farmington Country Club – This is an approximately 37.4-acre parcel with a street address of 806 Farmington Avenue. This location is too far south to achieve Cellco's coverage objectives.
- k. Women's Health Property – This is an approximately 3.6-acre parcel located at 22 Waterville Road in Avon. This location is too far north to achieve Cellco's coverage objectives.
- l. River Farms Property – This is a parcel located off of Route 10 in Avon. This location is too far north to achieve Cellco's coverage objectives.
- m. Charles Atkinson Property – This is an approximately 3-acre parcel located at 117 Cider Brook Road in Avon. In order for Cellco to achieve its coverage objectives from this site, it would need a structure of at least 200 feet in height.
- n. Damico/Matteo Property – This property consists of two parcels at 610 Waterville Road (approximately 3.4 acres) and 630 Waterville Road (approximately 6 acres) in Avon. The presence of wetlands and multiple watercourses on these properties would make finding a suitable location extremely difficult.
- o. Julianne Wayne Property – This is an approximately 13.1-acre parcel at 210 Cider Brook Road in Avon. Wetlands on this property would make finding a suitable location for Cellco's facility difficult.
- p. Frank Zawisa Property – This is an approximately 3.8-acre parcel off of Route 10 in Avon. In order to achieve its coverage objectives from this location, Cellco would need a structure of at least 200 feet in height.

- q. Philip Schenck (now Emer Coyne) Property – This is an approximately 8.8-acre at 595 Waterville Road in Avon. The majority of this property is encumbered by wetlands and a floodplain associated with the Farmington River. Finding a suitable location for Cellco's facility on this property would be difficult.
- r. Bruce Mantemach Property – This is an approximately 23.6-acre parcel at 112 Cider Brook Road in Avon. In order for Cellco to achieve its coverage objectives from this site, it would need a structure at least 200 feet in height.
- s. Tillottson Road/CL&P Structure – In order for Cellco to achieve its coverage objectives from this site, the structure would need to be at least 200 feet in height.
- t. Route 10/CL&P Structure - In order for Cellco to achieve its coverage objectives from this site, the structure would need to be at least 200 feet in height.
- u. Merrifield/Coyne Property – This is an approximately 17.25-acre parcel at 575 Waterville Road in Avon. In order for Cellco to achieve its coverage objectives from this site, it would need a structure at least 200 feet in height.
- v. Charlotte Church Property – This is an approximately 2.2-acre parcel at 47 Cider Brook Road in Avon. In order for Cellco to achieve its coverage objectives from this site, the structure would need to be at least 200 feet in height.
- w. Lackey Property – This is an approximately 6-acre parcel at 691 Waterville Road in Avon. Because this property is located within the floodplain of the Farmington River, finding a suitable location for Cellco's facility on this property would be difficult.
- x. Arute Property – This is an approximately 20-acre parcel at 245 Waterville Road in Avon. This location is too far north for Cellco to achieve its coverage objectives.
- y. Low Property – This is an approximately 8.1-acre parcel at 333 Waterville Road in Avon. This location is too far north for Cellco to achieve its coverage objectives.
- z. Pachucki Property – This is an approximately 3.3-acre parcel at 4 Hickory Hill Road in Avon. This location is too far north for Cellco to achieve its coverage objectives.
- aa. Percival Property – This is an approximately 4-acre parcel at 25 Hickory Hill Road in Avon. This location is too far north for Cellco to achieve its coverage objectives.
- bb. Farmington Country Club – This is an approximately 93.9-acre parcel off of Route 10 in Farmington. This location is too far south for Cellco to achieve its coverage objectives.
- cc. Farmington Polo Grounds – This is an approximately 59.5-acre parcel located at 152 Town Farm Road in Farmington. In order for Cellco to achieve its coverage objectives from this site, it would need a structure at least 200 feet in height.
(Cellco 1, Attachment 9)

45. Cellco investigated downtilting its antennas on the towers on Deercliff Road in order to cover its target area. Even with significant downtilting, antennas on these towers would be subject to shadowing along Route 10, Cellco's main coverage target from this site, and could not effectively cover this area. (Tr. 1, pp. 39-40 and 61-62)
46. Approximately 80 percent of the Farmington Polo Grounds property lies within the floodway of the Farmington River, which is a high energy flood zone that is restrictive for development. The portion of the Polo Grounds property not within the floodway is adjacent to Town Farms Road. (Transcript, May 14, 2009, 7:00 p.m. [Tr. 2], pp. 47, 59-62)
47. The Farmington Club, located just to the north of the Farmington Polo Grounds, was rejected as a potential site because most of the property is largely encumbered by the floodway of the Farmington River. (Tr. 2, p. 46)
48. After the filing of Cellco's application with the Council, a representative of Avon Old Farms School (School) contacted Cellco to inquire about the feasibility of locating its proposed facility at the School. Cellco representatives visited the School and looked at two locations that had sufficiently high ground elevations to be potentially feasible: the School's field house at 220 feet above mean sea level (AMSL) and a cabin site near Beaver Dam Pond at 250 feet AMSL. After investigating both of these locations, Cellco determined that it could not achieve its coverage objectives from either of them. Even with a tower greater than 200 feet in height, Cellco would still experience significant coverage gaps on Route 10, which is the primary coverage target for this facility. (Cellco 4, Supplemental Information dated March 27, 2009)
49. Cellco maintains that there is no equally effective technological alternative that could provide the same service as the facility being proposed. (Cellco 1, p. 10)

Site Description

50. Cellco's proposed site would be located on a 9.9 acre parcel (known as the Simmons Family Farm) at 199 Town Farm Road (Figures 1 and 2). The parcel is owned by the Town of Farmington and is leased for agricultural use. The Simmons Family Farm is located approximately 3,000 feet west of Route 10. (Cellco 1, p. 2; p. ii)
51. The 9.9 acre parcel referred to as the Simmons Family Farm is not designated as open space by the State of Connecticut nor is it listed on any federal, state, or local register of historic places. (Tr. 2, pp. 111-113, 117-118; Cellco Exhibit 10)
52. The Simmons Family Farm is located in an R-40 residential zone. Farmington allows wireless telecommunications facilities in residential zones with a special permit approval. (Cellco 1, p. 2; Cellco 1, Bulk file -- Farmington Regulations for Zoning)

53. Cellco's site would be located in the western portion of the Simmons Family Farm property. Cellco would lease a 100-foot by 100-foot parcel at the proposed location, within which it would develop a 60-foot by 60-foot compound that would include a 110-foot monopole tower disguised as a pine tree (Figure 3). The simulated branches of the monopine tower would extend an additional seven feet above the top of the tower to an overall structure height of 117 feet above ground level. (Cellco 1, pp. 2-3; Attachment 1, p. 1)
54. Cellco considered enclosing its tower within a silo structure, but the Town of Farmington preferred a monopine structure. (Tr. 1, pp. 34-35)
55. Cellco engineers its monopine towers in order that the artificial tree branches can be removed and/or relocated to accommodate additional carriers coming onto the tower. (Tr. 1, p. 37)
56. The proposed tower would be located at 41° 45' 27.99" N latitude and 72° 49' 47.75" W longitude. Its elevation at ground level would be approximately 189 feet above mean sea level. (Cellco 1, Attachment 1)
57. Cellco's tower would be designed in accordance with the specifications of the Electronic Industries Association Standard EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures." The diameter of the tower would be approximately 60 inches at its base and 30 inches at its top. It would be designed to accommodate four carriers. (Cellco 1, Attachment 1, p. 6; Tr. 1, pp. 33-34)
58. Cellco would install 15 antennas (six cellular, six PCS, and three 700 MHz) using T-arm mounts at a centerline height of 110 feet above ground level (AGL). There would be five antennas in each of three sectors. (Cellco 1, p. 11; Cellco 5, Response 22; Tr. 1, p. 47)
59. Cellco's ground equipment would be housed in a 12-foot by 30-foot single story shelter near the base of the tower. Cellco would install a propane-fueled generator for use during power outages. The generator would periodically operate for maintenance purposes. Cellco's facility would include a 1,000 gallon propane tank to fuel the generator. The propane tank would be located in the northeast corner of the facility's compound. (Cellco 1, p. 3)
60. Cellco would use a propane-fueled generator at this site in order to be able to more clearly distinguish its fuel from that used by the farm operations on the property in the event of an unintended fuel release. (Cellco 5, Response No. 21)
61. Cellco's compound would be enclosed by an eight-foot high chain link fence topped with three strands of barbed wire. (Cellco 1, p. 3; Attachment 1, Drawing SC-3)
62. Development of the proposed site would require 2.1 cubic yards of cut and 4.5 cubic yards of fill. (Cellco 5, Response 11)
63. Vehicular access to the site would extend westerly from Town Farm Road approximately 580 feet over a new gravel driveway. (Cellco 1, p. i, Attachment 1, p. 1)

64. Utilities would extend underground from existing service on Town Farm Road and would follow the gravel driveway. (Cellco 1, Attachment 1, Drawing SC-1; Cellco 5, Response No. 18)
65. Cellco does not anticipate that blasting would be required to develop this site. (Cellco 5, Response 19)
66. The proposed tower's setback radius would extend slightly beyond the limits of the Simmons Family Farm property to the south and to the north onto other property owned by the town. (Cellco 5, Response 23)
67. There are 13 residences within 1,000 feet of proposed facility. (Cellco 1, p. 14)
68. The nearest residence is located approximately 750 feet to the west of the proposed tower location. It is owned by Susan Edelson. (Cellco 1, p. 14)
69. Land use in the surrounding area consists of agricultural uses, undeveloped woodlands, and residential development. (Cellco 1, p. 16)
70. The estimated cost of the facility, including antennas and radio equipment, is:

| | |
|---------------------------------|---------------|
| Cell site radio equipment | \$475,000 |
| Tower, coax, and antennas costs | 365,000 |
| Power systems costs | 20,000 |
| Equipment building costs | 60,000 |
| <u>Miscellaneous costs</u> | <u>45,000</u> |
| Total | \$965,000 |

(Cellco 1, pp. 21-22)

Environmental Considerations

71. Cellco's proposed facility would have no effect on Connecticut's historic, architectural, or archaeological heritage. (Cellco 1, Attachment 11 – Letter from State Historic Preservation Office dated December 17, 2007)
72. There are no known extent populations of Federal or State Endangered, Threatened or a state Special Concern Species at Cellco's proposed site. (Cellco 1, Attachment 11 – Letter from Connecticut DEP dated October 1, 2007)
73. There are no wetlands or watercourses within 100 feet of Cellco's proposed facility. (Cellco 1, Attachment 12 – Letter from Thomas Pietras, Soil Scientist dated January 22, 2008)
74. The nearest wetlands are located over 500 feet to the east and are associated with the flood plain of the Farmington River. (Tr. 1, p. 43)

75. Cellco would establish and maintain appropriate soil erosion and sedimentation control measures, in accordance with the Connection Soil Erosion Control Guidelines established by the Council for Soil and Water Conservation, throughout the construction period of its proposed facility. (Cellco 1, p. 17)
76. Cellco would remove 12 trees with diameters at breast height of six inches or more to develop the proposed facility. (Cellco 1, Attachment 1, p. 4; Cellco 5, Response 10)
77. An air-space analysis conducted by Cellco indicated that, according to Federal Aviation Administration standards, its proposed tower would not constitute an obstruction or hazard to air navigation and would not require obstruction marking or lighting. (Cellco 1, p. 20; Attachment 13)
78. According to calculations performed by Cellco, the maximum power density from the radio frequency emissions of Cellco's proposed antennas would be 23.94% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on a 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. (Cellco 1, p. 15)

Visibility

79. Cellco's proposed tower would be visible above the tree canopy on a year-round basis from approximately 102 acres in the surrounding vicinity. The main areas of visibility occur along Town Farm Road and Tillotson Road and adjacent open areas to the east and west of the roadway corridor. Intermittent views of the proposed tower are likely on select portions of Bishop Lane and Cider Brook Road. (Cellco 1, Attachment 10, p. 4)
80. The proposed tower would be seasonally visible from approximately 9 additional acres, most of which would occur on the host property and its immediate vicinity. (Cellco 1, Attachment 10, p. 5)
81. The proposed tower would be visible year-round from portions of an estimated four residential properties. Three of these properties would be located on Cider Brook Road. One property would be located on Stonefield Road. (Cellco 1, Attachment 10, p. 4)
82. Based upon a visit to the home of Dr. and Mrs. Edelson on Belgravia Terrace at a time when leaves were off the trees, VHB, Cellco's environmental consultant, concluded that there is little likelihood that there would be significant views of the proposed tower from Devonwood. (Tr. 1, p. 38)
83. Some homes along a mountain ridge approximately a mile and a half to a mile and three-quarters to the east of the site could have partial views of the proposed tower when leaves are off the trees. (Tr. 1, pp. 44, 45)
84. The elevated views of the tower from these homes would have a backdrop of vegetation, making the tower less prominent in the landscape. (Tr. 1, p. 45)

85. The tower would not be visible from the Metacomet Trail, which is approximately 1.7 miles to the east of Cellco's proposed site. (Tr. 1, p. 41; Cellco 1, Attachment 10 – Viewshed Map)
86. The visibility of Cellco's proposed tower from different vantage points in the surrounding vicinity is summarized in the following table. The locations of the vantage points listed are identified by their corresponding number in the Visual Resource Evaluation Report contained in Attachment 10 of Cellco's application (Figure 8).

| <u>Location</u> | <u>Site Visible</u> | <u>Approx. Portion of (117') Tower Visible (ft.)</u> | <u>Approx. Distance and Direction to Tower</u> |
|-----------------------------------------------|---------------------|------------------------------------------------------|------------------------------------------------|
| 1 – Town Farm Road adjacent to host Property | Yes | Upper 70' | 690 feet; SW |
| 2 – Tillotson Road (Town Farm Road in Avon) | Yes | Upper 50' | 1,700 feet; SW |
| 3 – Tillotson Road (Town Farm Road in Avon) | Yes | Upper 30' | 4,100 feet; SW |
| 4 – Old Farms Road, adjacent to Trautman Park | Yes | Upper 20' | 5,600 feet; S |
| 5 – Bishop Lane and Cider Brook Road | Yes | Upper 30' | 5,800 feet; SW |

(Cellco 1, Attachment 10 – Photographic Simulations)

Existing and Proposed Wireless Coverage

87. In Hartford County, Cellco is licensed to operate in the cellular frequency bands:

869-880 and 890-891.5 MHz for Transmit (Tx)
 824-835, 845-846.5 MHz for Receive (Rx)

and in the PCS F Block frequency bands:

1970-1975 MHz for Transmit
 1890-1895 MHz for Receive

Cellco also recently acquired radio spectrum in the 700 MHz range:

746-757 MHz for Transmit
 776-787 MHz for Receive

Cellco would utilize all of its licensed frequencies at the proposed site.
 (Cellco 5, Response 1)

88. Cellco uses its cellular frequency band primarily for voice calls and its PCS frequency band primarily for data services, which include email, Blackberries, and laptops. (Tr. 2, pp. 37-38)

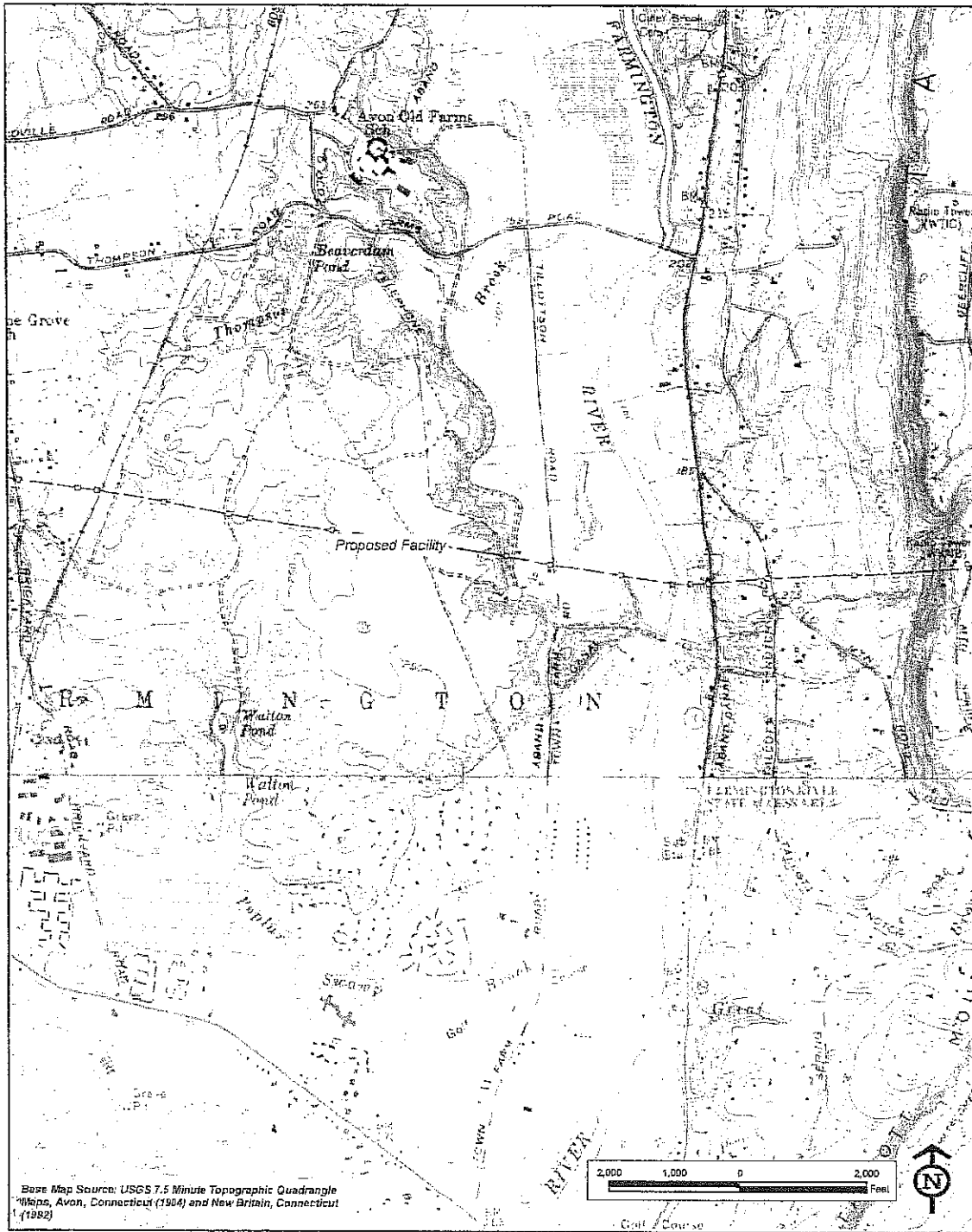
89. Cellco's design signal coverage threshold is -85 dBm for in-vehicle coverage and -75 dBm for in-building coverage. (Cellco 5, Response 7)
90. Cellco's existing signal strengths in the area that would be served by the proposed facility ranges from -86 dBm to -95 dBm. These signal strengths were determined through the use of baseline drive data and propagation modeling tools. (Cellco 5, Response 8)
91. Cellco's coverage objective is to stay below one percent of Ineffective Attempts and Lost Calls. It is experiencing an Ineffective Attempt rate of calls of 0.96% and a Lost Call rate of 0.81% in the area that would be covered by the proposed facility. (Tr. 2, p. 40; Data submitted by Cellco on June 15, 2009)
92. Cellco experiences a 2.65 mile coverage gap on Route 10 at cellular frequencies (Figure 4) and a 5.5 mile gap at PCS frequencies (Figure 6). (Cellco 5, Response 9)
93. At cellular frequencies, Cellco's antennas would cover an approximately 4.01 mile portion of Route 10 (Figure 5). At PCS frequencies, its antennas would cover approximately 2.56 miles on Route 10 (Figure 7). (Cellco 1, p. 2)
94. Cellco's cellular antennas would cover a total area of approximately 5.1 square miles from the proposed location. Its PCS antennas would cover an area of approximately 2.1 square miles. (Cellco 1, p. 2)
95. If the proposed tower were to be approved, Cellco would still have coverage gaps along Route 10 to the south near the intersection with Route 4 and to the north near the intersection with Route 44. Cellco is actively searching for sites to cover these areas. (Tr. 1, pp. 43-44)
96. Cellco's proposed facility would hand off signals with the adjacent facilities identified in the following table.

| Site Location | Distance and Direction to Site |
|------------------------------------|---------------------------------------|
| Darling Drive, Avon | 3.45 miles to north |
| 24 Ridgewood Road, Avon | 2.72 miles to west |
| Talcott Mountain, Bloomfield | 4.19 miles to northeast |
| 3114 Albany Avenue, West Hartford | 3.15 miles to northeast |
| 1371 Farmington Avenue, Farmington | 1.88 miles to southwest |
| 263 Farmington Avenue, Farmington | 2.76 miles to southeast |
| 130 Birdseye Road, Farmington | 3.06 miles to south |

(Cellco 5, Response 3; Tr. 1, p. 39)

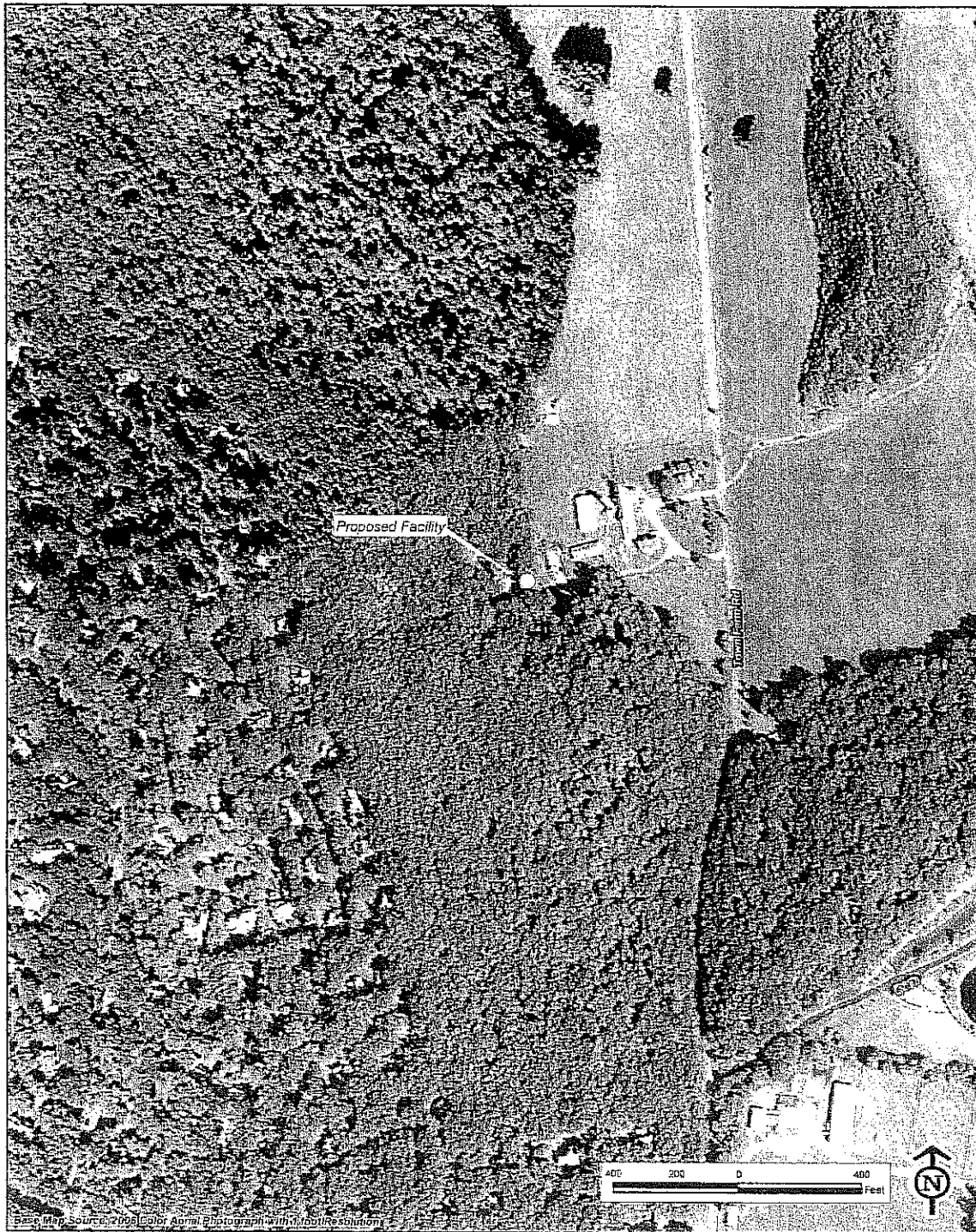
97. The lowest height at which Cellco could achieve its coverage objectives at the proposed location would be 110 feet. (Cellco 5, Response 5; Tr. 1, pp. 39-40)

Figure 1: Location Map



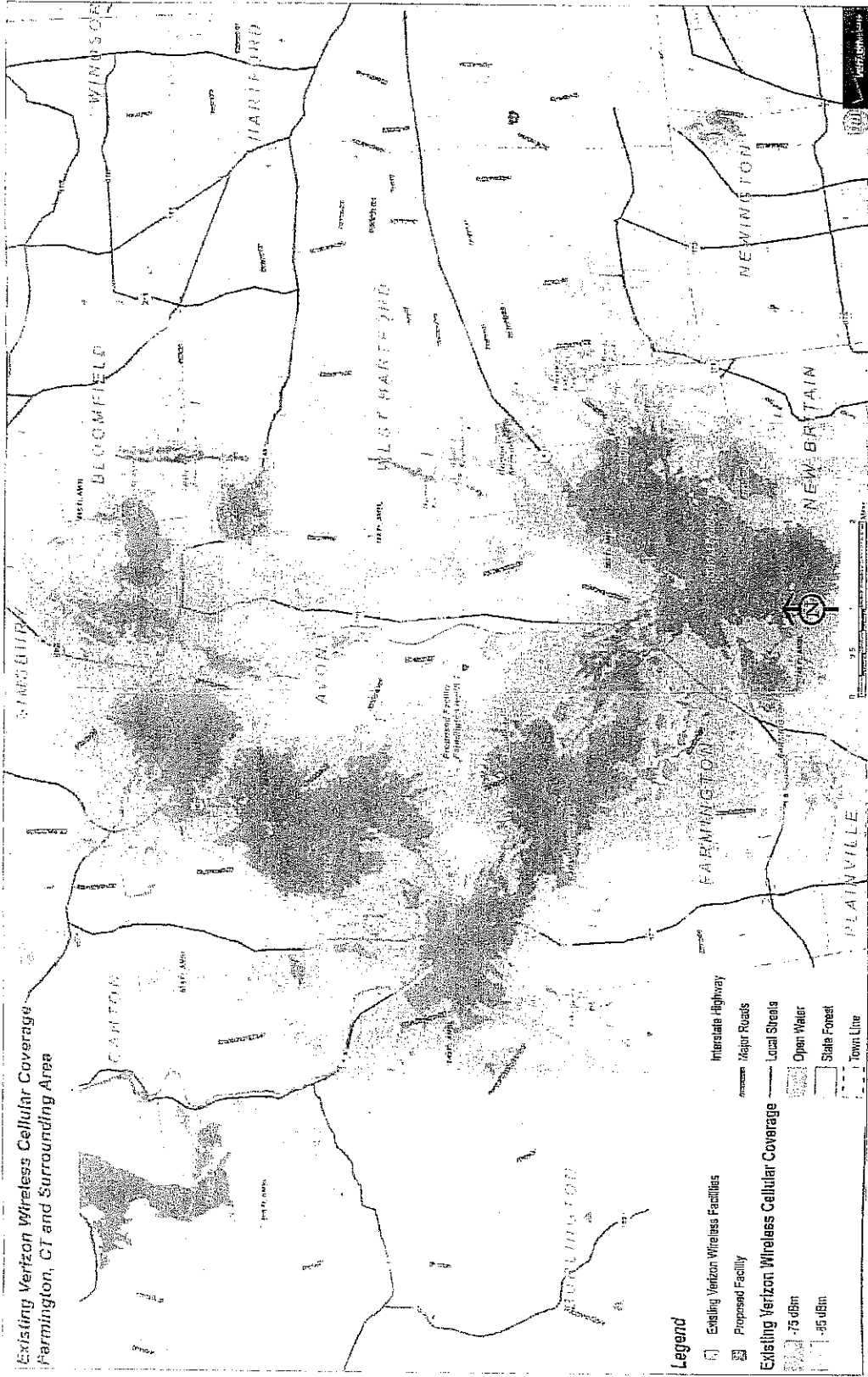
(Cellco 1, p. ii)

Figure 2: Aerial Photograph of Site



(Cellco 1, p. iii)

Figure 4: Celco's Existing Cellular Coverage



(Celco 1, Attachment 7)

Figure 5: Celco's Cellular Coverage with Proposed Site

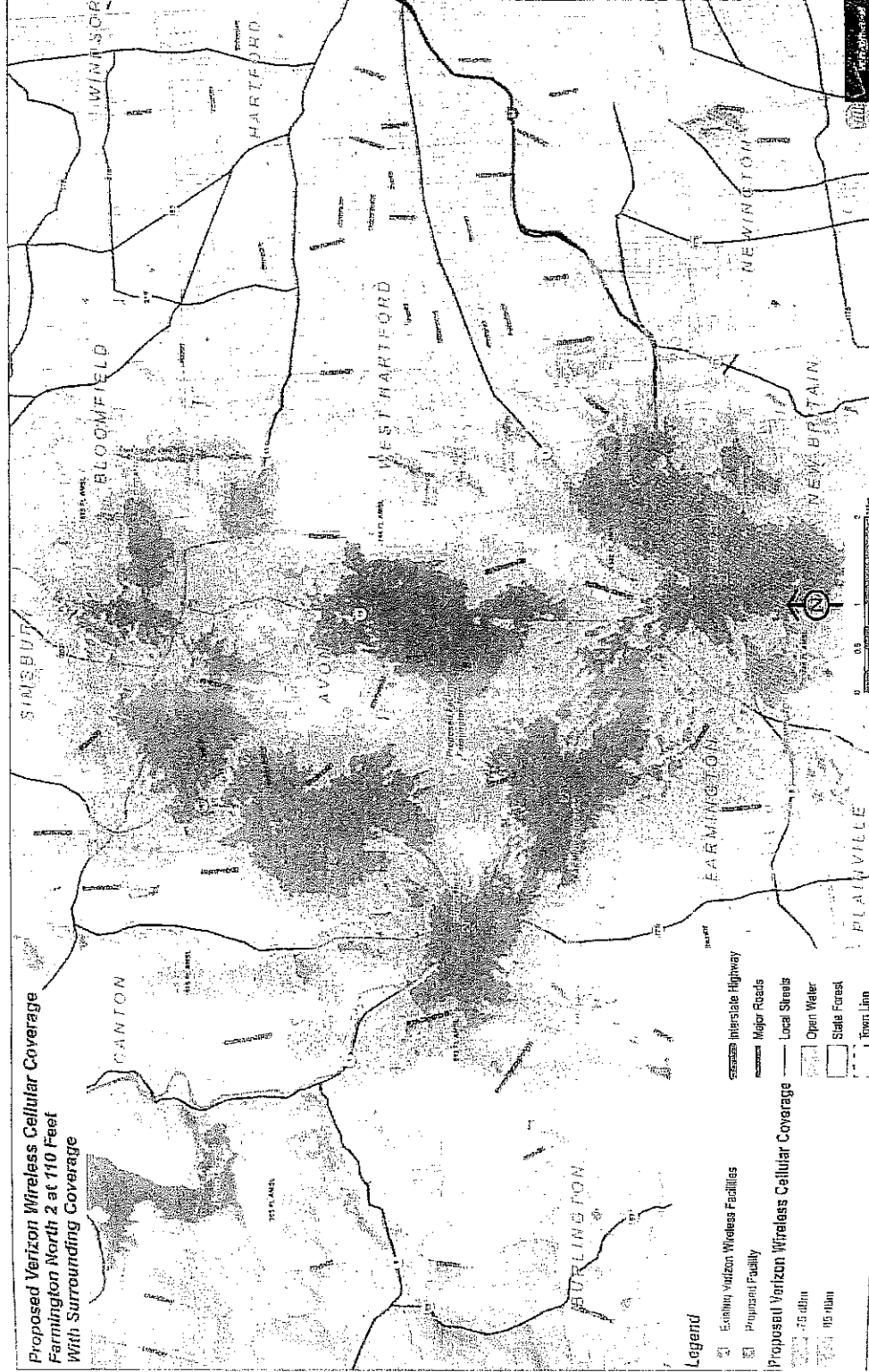
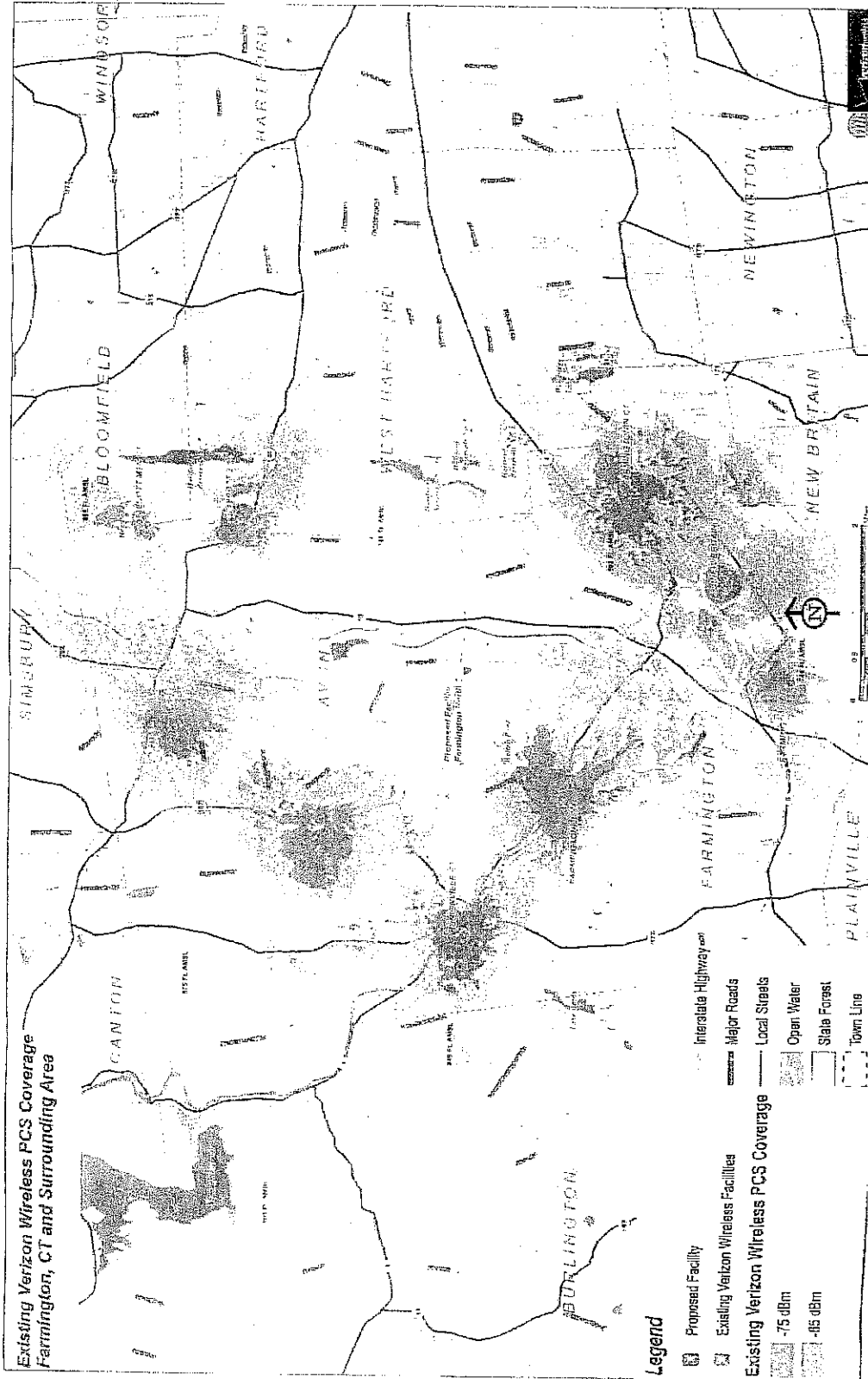
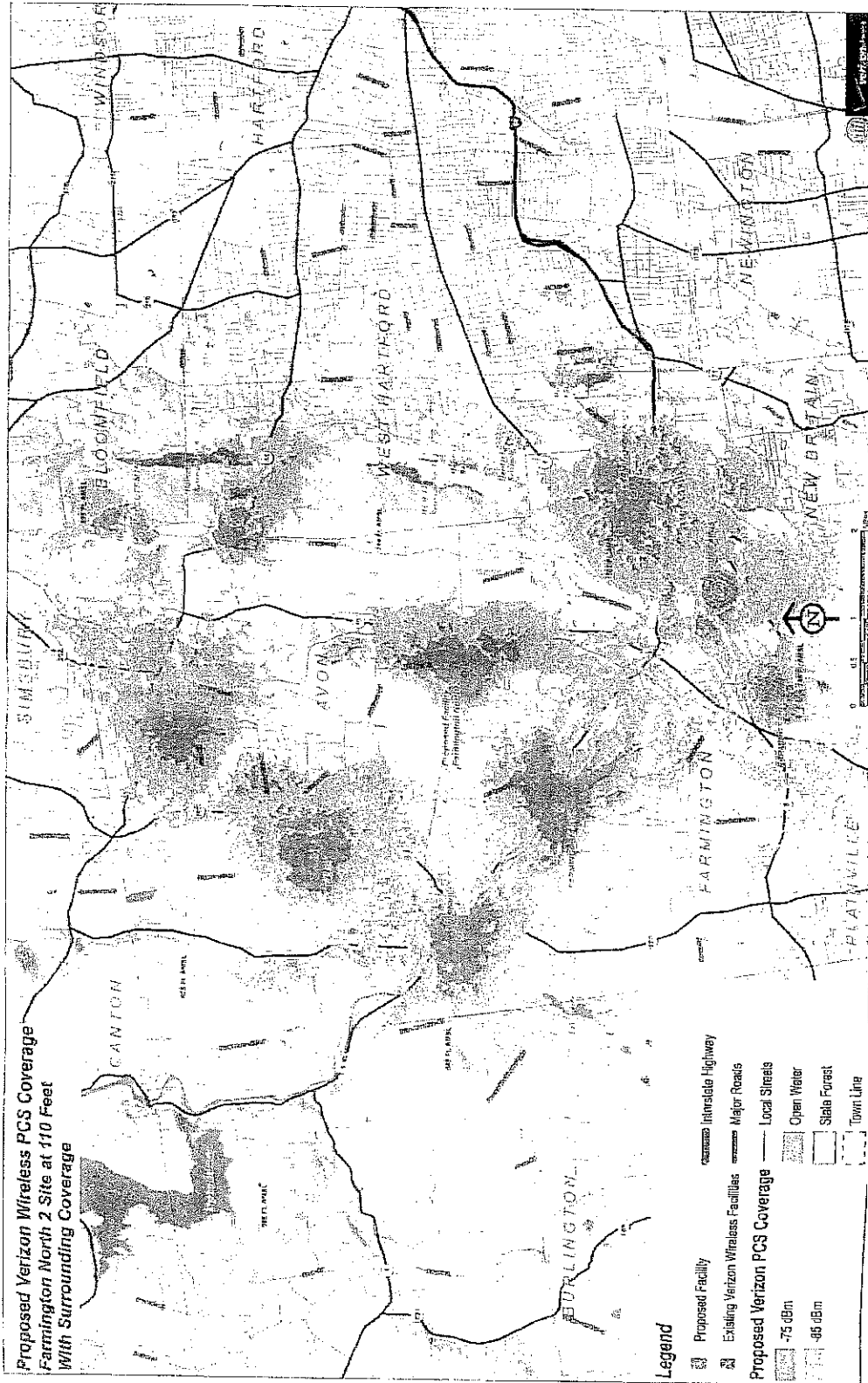


Figure 6: Celco's Existing PCS Coverage



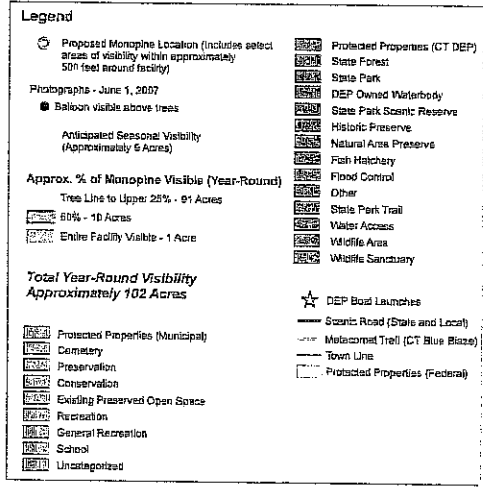
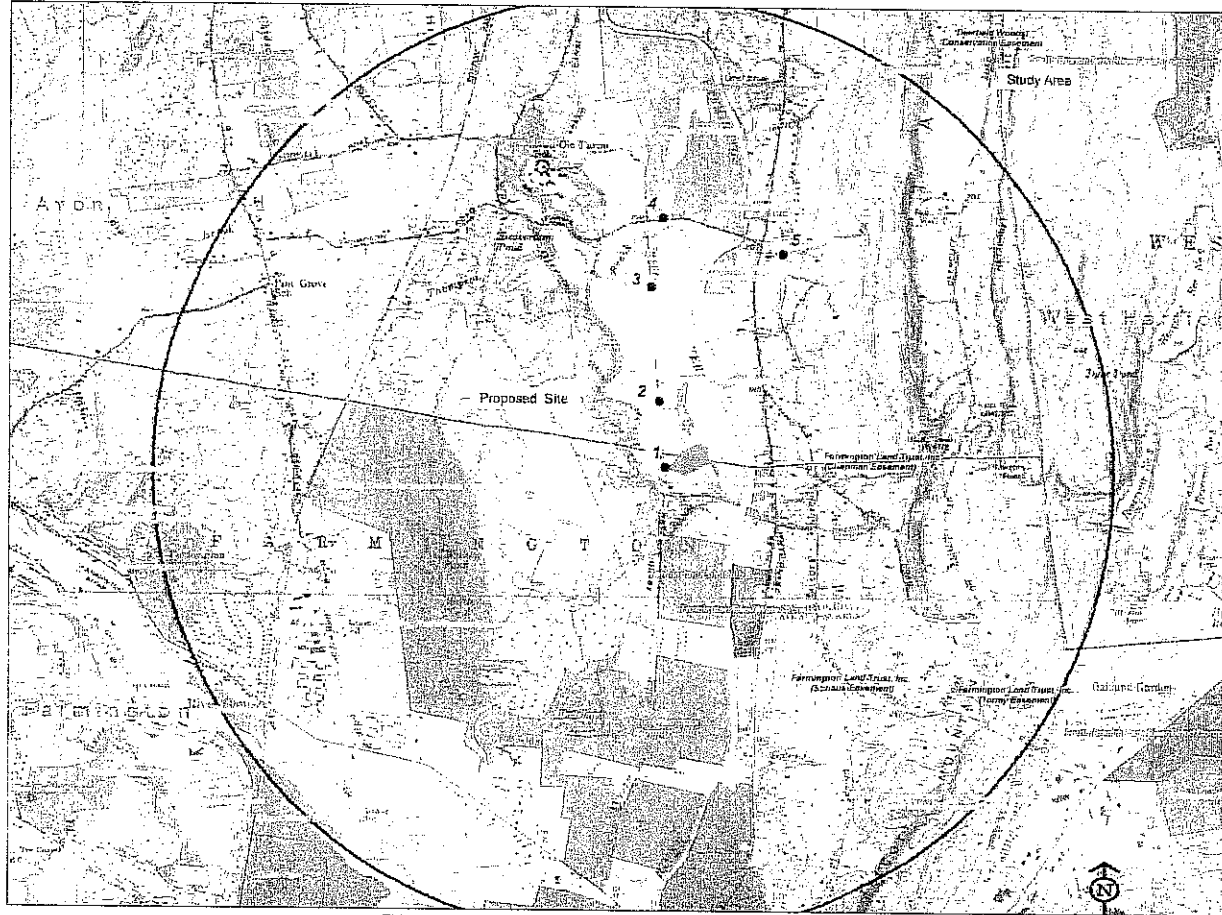
(Celco 1, Attachment 7)

Figure 7: Cellco's PCS Coverage with Proposed Site



(Cellco 1, Attachment 7)

Figure 8: Visual Analysis



(Cellco 1, Attachment 10)