

DOCKET NO. 157 - An application of the Department of Public Safety, Division of State Police for a Certificate of Environmental Compatibility and Public Need for the construction, operation, and maintenance of telecommunications facilities located west of Ekonk Hill Road, Sterling; northeast of Mt. Hill Road, Thompson; south of Westcott Road behind Troop D Barracks, Killingly; and east of Valentine Road/Wolf Den Road, Brooklyn, Connecticut.

: Connecticut  
 : Siting  
 : Council  
 : March 16, 1993

### FINDINGS OF FACT

#### Introduction

1. On September 24, 1992, the Connecticut Department of Public Safety, Division of State Police (CSP), pursuant to sections 16-50g to 16-50z of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, operation, and maintenance of telecommunications towers, associated equipment, and equipment buildings in the Towns of Killingly, Thompson, Sterling, and Brooklyn, Connecticut. (CSP I, pp. 2-6 and 5-1)
2. The proposed sites are within the Troop D service area which comprises of the following towns: Canterbury, Plainfield, Sterling, Scotland, Hampton, Brooklyn, Killingly, Eastford, Pomfret, Putnam, Thompson, and Woodstock. (CSP I, p. 2-9; CSP IV, Attachment B)
3. Pursuant to CGS section 16-50m, the Council, after giving due notice thereof, held a public hearing for the proposed facilities on December 15, 1992, beginning at 3:00 P.M. and reconvening at 7:00 P.M. for public comment in the Court Room of the Killingly Town Hall, 172 Main Street, Killingly, Connecticut. (Council Hearing Notice; Transcript, p. 1)
4. The Council and its staff inspected the proposed sites on December 15, 1992. (Council Hearing Notice)

#### Existing CSP Telecommunications System

5. The CSP currently use a low-band, two-way radio system that was originally placed in service in the 1940s to serve 290 personnel. Although the CSP force has grown to over 1,000 personnel, the basic architecture of the existing radio system has not correspondingly changed. (CSP I, pp. 2-1, 2-9, 5-2, 8-2, 8-3, and 9-3)

6. Point-to-point communications to link troop barracks and base stations are provided by leased telephone landlines, which are usually an above-ground, pole-to-pole design, subject to storm damage and human accidents. Specific problems with the existing wireline network includes:
  - o lack of capacity for system growth;
  - o inability for high speed transfer of digital data;
  - o inherent noise levels and circuit failures; and
  - o incompatibility with computer controlled technologies of a modern 800 MHz radio system.(CSP I, pp. 9-1 and 9-2)
  
7. Problems and design faults of the existing low-band, two-way radio system which provides field communications to State Police personnel are as follows:
  - o channel capacity varies from radio to radio;
  - o co-channel and skip interference;
  - o lack of frequency availability;
  - o areas of poor or no communication;
  - o voice encryption and mobile data terminals are not available; and
  - o physical plant is old and cannot support microwave equipment.(CSP I, pp. 2-2, 2-3, 2-9, 9-3, and 9-4)
  
8. There is no way to modify the current radio system to meet present or future demands. (CSP I, pp. 9-3 and 9-5)

Proposed CSP Telecommunications System

9. The CSP is proposing to replace the current wireline, point-to-point, communication service, and low-band radio system with a digital microwave, point-to-point, backbone network supporting and controlling an 800 megaHertz (MHz) trunked radio system. This digital microwave network would connect all CSP barracks and base stations providing for point-to-point data transfer, radio control, computer connection, and emergency telephone circuits in the event the conventional telephone network becomes overloaded or inoperative. (CSP I, pp. 2-10, 2-11, 5-2, and Tab 14)
  
10. The Federal Communications Commission (FCC) has issued a portion of the 800 MHz frequencies to public safety organizations nationwide. The CSP belong to the Tri-State and New England committees for Spectrum Utilization which are submitting applications for the necessary FCC licenses. (CSP I, pp. 2-12, 2-13, 11-3, and 12-11)

11. The digital microwave system would enable all base stations, (i.e. two-way radio antenna sites), to act as a single base station, otherwise known as SIMULCAST. The 800 MHz trunked radio system would have the ability to assign available channels on a demand basis. Both systems would improve the CSP's ability to use available channels in the most efficient manner possible. (CSP I, p. 12-12)
12. The proposed microwave and 800 MHz radio systems would provide for system growth, security, communications statewide with state and local agencies, voice encryption, mobile data terminals, and computer-aided dispatch. The system, named the Connecticut Telecommunications System (CTS), is designed to use digital electronics and redundant processors to provide uninterrupted operation and additional channel capacity, and to eliminate sources of system interference including atmospheric interference. (CSP I, p. 2-11 and Tab 10)
13. The Bell System Standard design objective for microwave system outages due to propagation failures is one hour per year. For the CTS, the average reliability design for each microwave path would be ten times more stringent than the Bell System Standard for microwave services; thus, the average outage time of each path should not exceed 5.5 minutes per year (99.999 percent reliability). The proposed 800 MHz two-way radio has been designed to provide radio coverage to 95 percent of an area 95 percent of the time for mobile units, and 90 percent coverage 90 percent of the time for portable units. (CSP I, pp. 12-8, 12-9, and 12-14)
14. The CSP have engaged in tower sharing agreements whenever possible; however, no existing towers within the Troop D jurisdictional area met site search criteria for dual microwave and 800 MHz communication needs without the need for modifying a tower. Potential tower sites must have a clear microwave path, provide proper radio coverage, and be either owned by the State or be available for sale or lease. (CSP I, p. 5-3; CSP IV, Q. 16)
15. The microwave backbone system at the proposed sites would become operational by the end of 1994. The 800 MHz two-way radio system is expected to be operating by the end of 1996 after the State legislature approves funding. (CSP I, Tab Q; Transcript p. 58)

### System Alternatives

16. The CSP considered the following alternatives to its proposed digital microwave network.

<u>Alternative</u>	<u>Reason for Rejection</u>
Copper Wire Landlines	<ul style="list-style-type: none"><li>o would not support the number of channels or transmission speeds required for digital data transmission</li><li>o would not support SIMULCAST</li><li>o would be susceptible to landline related outages</li></ul>
Satellites	<ul style="list-style-type: none"><li>o would be cost-prohibitive</li><li>o frequency spectrum not yet designated for satellite mobile radio</li><li>o are not yet in operation for public safety mobile radio needs</li></ul>
Fiber Optics	<ul style="list-style-type: none"><li>o would increase installation costs</li><li>o would be susceptible to landline related outages</li></ul>
Private Leased Network	<ul style="list-style-type: none"><li>o would increase the statewide system cost by 10 percent</li><li>o would cause loss of budgetary and managerial control</li></ul>
Analog Microwave	<ul style="list-style-type: none"><li>o would not provide high transmission speed</li><li>o would not allow for system expansion</li><li>o would not provide intelligent networking available with digital microwave technology</li></ul>

(CSP I, pp. 11-1 and 11-2; CSP V, Q. 23; Transcript p. 27)

### General Site Information

17. Self-supporting, lattice towers were selected over guyed-lattice towers because they require less maintenance, require less land thereby saving acquisition costs, are less vulnerable to damage, and are less likely to shift or twist under high wind conditions. Also, self-supporting, lattice towers were selected over self-supporting, monopole towers because they have more attachment points and expansion capability that is not readily allowed by monopoles and are two to three times less costly than a monopole with equivalent strength and rigidity. (CSP I, pp. 12-2 to 12-7; Transcript p. 41)

18. The tower design specifications of 90 mph winds with one half-inch of radial ice for the proposed towers is in accordance with the American National Standards Institute - Electronic Industries Association Standard 222-E. (CSP I, p. 12-4 and Tab 14; Transcript p. 41)
19. No proposed tower would be a hazard to air navigation. No tower would require obstruction marking and lighting by the Federal Aviation Administration (FAA). Although the existing Brooklyn guyed monopole tower has obstruction marking and lighting, the proposed tower would not be marked or lighted in accordance with the FAA. (CSP I, Tab 5 and Tab 13L; CSP IV, Q. 13; Transcript pp. 34-36)
20. A propane-fueled, emergency generator and a bank of batteries would provide power in the event of an electrical outage. A fuel tank, sized for a minimum of three days of operation at full load, and a generator would be housed on-site. The fuel and electrical output specifications are as follows:

<u>Site</u>	<u>Fuel Tank</u>	<u>Generator</u>
Ekonk Hill	1,000 gallons	60 kilowatts
Troop D	250 gallons	30 kilowatts
Brooklyn	1,000 gallons	49 kilowatts
Thompson	1,000 gallons	49 kilowatts

These generators would run once a week for 15 to 20 minutes for preventive maintenance. (CSP I, p. 12-3, Tab 13D, and Tab 14; CSP IV, Attachment E)

21. Unattenuated noise from on-site, emergency, propane-fueled generators would be approximately 80 decibels (dBA). At a distance of 60 feet, unattenuated noise would diminish to approximately 72 dBA. These noise levels would be attenuated since the emergency generators would be housed inside an equipment shelter. Noise created as a result of, or relating to, an emergency is exempt from State noise regulations. (CSP I, Tab 13T and Tab 14; CSP IV, Q. 21; Transcript p. 29; Regulations of Connecticut State Agencies, Title 22a Environmental Protection section 22a-69-1 through 22a-69-7.4, Control of Noise)
22. Prior to construction at the proposed sites, erosion and sedimentation controls would be installed and maintained to prevent erosion into the surrounding site areas. (CSP I, Tab 14)
23. Disturbed areas that lie within the proposed fence of each site would be covered with crushed stone. All other disturbed areas would be loamed and seeded to prevent erosion. (CSP I, Tab 14)

24. Each proposed site would be surrounded by an eight-foot high, chain-link fence topped with security wire. A variety of remote alarms installed at the site would indicate to a central dispatch facility the opening of shelter doors, smoke and high temperatures within the shelter, and propane leaks. (CSP I, p. 12-5 and Tab 14)
25. The proposed facilities would not affect historic, architectural, or archeological resources surrounding these facilities. (CSP I, Tab 14; CSP IV, Q. 7)
26. No federal or Connecticut endangered and threatened species or species of special concern to Connecticut occur at the proposed sites. (CSP I, Tab 14; CSP IV, Q. 7)
27. The CSP have complied with the Connecticut Environmental Policy Act by preparing environmental impact studies for the proposed sites. (CSP I, p. 2-12)

#### Proposed Brooklyn Site

28. The CSP propose to replace an existing 180-foot, guyed, monopole tower and small equipment shelter, which was initially placed in service in 1939, with an 180-foot, three-legged, lattice tower, equipment building, and fence at a site owned by the State of Connecticut off Valentine Road, Brooklyn, Connecticut. (CSP I, p. 2-8, Tab 13D, and Tab 14; CSP IV, Q. 11, and Attachment E)
29. The proposed tower base would be approximately 125 feet east of Valentine Road at an elevation of 532 feet above mean sea level (AMSL). The 70-foot by 100-foot site lies in a flat, grassy field bordered by trees. Minimal grading would be necessary to redefine the site and install a 12-foot wide, gravel-covered accessway. (CSP I, Tabs 13D, 13H, 13L, and Tab 14; CSP IV, Attachment E; Transcript p.20)
30. A proposed one-story, 18-foot by 41-foot equipment building would be constructed adjacent to the proposed telecommunications tower to house the necessary radio equipment and emergency generator. (CSP I, Tab 12, Tab 13D, and Tab 14; CSP IV, Attachment E)
31. The proposed Brooklyn facility is required for receiving and transmitting microwave signals with an Ekonk Hill facility in Sterling, 12.4 miles southeast of Brooklyn, and to provide low-band and/or 800 MHz radio coverage to the following towns or portions thereof: Norwich, Lisbon, Griswold, Preston, Voluntown, Sterling, Plainfield, Canterbury, Killingly, Brooklyn, North Stonington, Scotland, and Sprague. The 180-foot height of the proposed Brooklyn tower would be required to maintain the low-band radio coverage. However, when the 800 MHz radio

- system is funded and is developed, the height of the proposed tower could be reduced, but this height was not determined. The height of the CSP microwave dish on the proposed tower would be at 120 feet. (CSP I, Tab 13C and Tab 13J; CSP IV, Attachment B; Transcript pp. 70-71)
32. Twelve antennas would be mounted between the 80-foot and 180-foot levels with some antennas rising 14 feet above the top of the proposed tower. Seven antennas would be owned by the CSP, two antennas would belong to Quinebaug Valley Communications (QVC), two antennas would belong to Department of Education (DOE), and one antenna would be owned by the Connecticut Wing Civil Air Patrol. (CSP I, Tabs 13F, 13J and 13N)
  33. Electric and telephone services would be routed approximately 100 feet overhead to the northeast corner of the proposed site where it would be placed underground 70 feet to the equipment shelter. No water, gas, or sewer lines would serve the site. (CSP I, Tab 13G; CSP IV, Attachment E)
  34. The proposed Brooklyn site is zoned rural/residential. Surrounding land use is agricultural and residential. The nearest residence is approximately 250 feet west of the proposed tower base. (CSP I, Tab 13D and Tab 14; CSP IV, Q. 6; Transcript pp. 32 and 33)
  35. The proposed Brooklyn tower fall zone would extend from approximately 60 feet to 80 feet onto four abutting properties including a 270-foot portion of Valentine Road. The CSP equipment shelter would be the only building within the fall zone. (CSP I, Tab 13I; CSP IV, Attachments C and E)
  36. A wetland is 200 feet east of the proposed Brooklyn site. No construction activities would occur between the site and this wetland. (CSP I, Tab 14; Transcript p. 20)
  37. A 150-foot, guyed-lattice tower, owned by Telemedia Inc., located approximately 1,600 feet north of the existing CSP Brooklyn site, is not capable of supporting the combined needs of the CSP and Telemedia. In addition, the wetlands surrounding this site would be subjected to further development. (CSP I, Tab 14; CSP V, Q. 29; Transcript p. 41)
  38. The calculated, worst-case electromagnetic radio frequency power density of the proposed telecommunications facility, assuming all channels operating simultaneously at maximum allowable power, including both existing low-band and proposed 800 MHz radio systems, would be 0.8057 percent of the maximum permissible limits of field strength as prescribed by American National Standards Institute (ANSI) standard C95.1-1982, which was adopted by the State of Connecticut under CGS section 22a-162, as the State standard. (CSP I, Tabs 13N and 13Q; Transcript p.113)

39. The estimated costs for developing the proposed Brooklyn site are itemized as follows:

Radio Equipment	\$358,800
Tower and Antennas	153,100
Power Systems	34,900
Site, Road, Shelter	128,000
Miscellaneous	<u>58,300</u>
Total	\$733,100

(CSP I, Tab 13P)

Proposed Troop D Site

40. The CSP propose to replace an existing 60-foot, rooftop mounted, guyed tower with a 140-foot, self-supporting, lattice tower, equipment shelter, and fence behind the Troop D barracks off Westcott Road in Killingly, Connecticut. (CSP I, p. 2-8 and Tab 14; CSP IV, Attachment E)
41. The proposed tower base would be approximately 250 feet south of Westcott Road at an elevation of 275 feet AMSL. The proposed 20-foot by 30-foot site is adjacent to the east side of an existing garage and paved parking area. This property has an existing driveway and is owned by the State of Connecticut. (CSP I, Tabs 13D, 13H, 13L, and Tab 14; CSP IV, Attachment E; Transcript p. 19)
42. A proposed one-story, 18-foot by 28-foot equipment building would be constructed adjacent to the proposed telecommunications tower to house the necessary radio equipment and emergency generator. (CSP I, Tab 12, Tab 13D, and Tab 14; CSP IV, Attachment E)
43. The 140-foot height of the proposed Troop D facility is required for receiving and transmitting microwave signals with the proposed facility in Thompson, 12.4 miles north of Killingly, Connecticut. The proposed Troop D tower would not provide 800 MHz radio coverage. (CSP I, Tab 13C; Transcript pp. 30 and 73)
44. Eleven antennas would be mounted between the 60-foot and 140-foot levels with some antennas rising 18 feet above the top of the proposed tower. Seven antennas would be owned by QVC, three antennas would be owned by the CSP, and one antenna would belong to the Danielson Fire Department. All existing antennas on the roof of the Troop D barracks, except a scanner antenna, would be removed after construction and operation of the proposed tower and antennas. (CSP I, Tabs 13F, 13J, and 13N; CSP IV, Q. 10)



45. Electric and telephone services would be extended from the existing Troop D garage. No gas, water, or sewer lines would serve the site. (CSP I, Tab 13G; CSP IV, Attachment E)
46. The proposed Troop D site is on land zoned residential. Surrounding land use is a mix of residential and commercial development. The nearest residence is 250 feet north of the proposed tower base. (CSP I, Tab 13D and Tab 14; CSP IV, Q. 6)
47. The proposed Troop D tower fall zone would extend from approximately 5 feet to 25 feet onto portions of four abutting properties. The only buildings that would be within the tower fall zone would be the existing Troop D barracks and garage, and the proposed equipment shelter. (CSP I, Tab 13I; CSP IV, Attachment C and E)
48. No wetlands, watercourses, or aquifer areas are on or nearby the proposed Troop D site. (CSP I, Tab 14)
49. The calculated, worst-case electromagnetic radio frequency power density at the base of the proposed telecommunications facility, assuming all channels operating simultaneously at maximum allowable power, including the existing low-band system, would be 0.4259 percent of the maximum permissible limits of field strength as prescribed by ANSI standard C95.1-1982, which was adopted by the State of Connecticut under CGS section 22a-162, as the State standard. (CSP I, Tabs 13N and 13O)
50. The estimated costs for developing the proposed Troop D site are itemized as follows:

Radio Equipment	\$708,600
Tower and Antennas	108,100
Power systems	26,500
Site, Road, Shelter	90,300
Miscellaneous	<u>44,000</u>
Total	\$977,500

(CSP I, Tab 13P)

#### Proposed Ekonk Hill Site

51. The CSP propose to replace an existing 90-foot, four-sided, lattice tower and equipment shelter, operated by the Department of Environmental Protection, with a 140-foot, three-legged, lattice tower, equipment building, and fence at Ekonk Hill, Ekonk Hill Road, Sterling, Connecticut. (CSP I, p. 2-7, Tab 13L and Tab 14)

52. The proposed tower base would be approximately 700 feet west of Ekonk Hill Road at an elevation of 670 feet AMSL. The 100-foot by 70-foot site lies at the crest of a hill surrounded by agricultural fields. The existing grass-covered access road would be improved to a width of 12 feet and covered with gravel. This site is owned by the State of Connecticut. (CSP I, Tabs 13D, 13L, and Tab 14; CSP IV, Attachment E; Transcript p. 18)
53. A proposed one-story, 18-foot by 49-foot equipment building would be constructed adjacent to the proposed telecommunications tower to house the necessary radio equipment and emergency generator. (CSP I, Tab 12, Tab 13D, and Tab 14; CSP IV, Attachment E)
54. The 140-foot height of the proposed Ekonk Hill facility is required for receiving and transmitting microwave signals with Brooklyn 12.4 miles northwest of Sterling, Thompson 22.5 miles north of Sterling, and Vinegar Hill in Ledyard 19.6 miles southwest of Sterling. The proposed facility would provide 800 MHz radio coverage to the following towns or portions thereof: Norwich, Lisbon, Griswold, Preston, Voluntown, Sterling, Plainfield, Canterbury, Killingly, Brooklyn, North Stonington, Scotland, and Sprague. (CSP I, Tab 13C; CSP IV, Attachment B)
55. Thirty-two antennas would be mounted between the 48-foot and 140-foot levels with some antennas rising 14 feet above the top of the proposed tower. Northeast Utilities would own ten antennas on the proposed tower; the CSP would own nine antennas; the Department of Environmental Protection (DEP) would own six antennas; the Nuclear Emergency Communications System, DOE, and QVC would own two antennas each; and the Connecticut Amateur Radio Emergency Services would own one antenna. (CSP VII; Transcript p. 114)
56. The existing 90-foot tower currently being operated by the DEP would be dismantled and removed upon completion of the proposed facility. (CSP I, Tab 14)
57. Existing overhead telephone and electric service lines would be placed underground from Ekonk Hill Road along the access road to the site. No gas, water, or sewer lines would serve the site. (CSP I, Tab 13G; CSP IV, Attachment E)
58. The proposed Ekonk Hill Road site is on land zoned residential. Surrounding land use is primarily agricultural scattered with residences. The nearest residence is 450 feet east of the proposed tower base. In addition, another telecommunications tower is located approximately 875 feet southeast of the proposed tower. (CSP I, Tab 13D and Tab 14; CSP IV, Q. 6, and Attachment C)

59. The proposed Ekonk Hill tower fall zone would extend from approximately 60 feet to 80 feet onto two abutting properties, but the only building within the tower fall zone would be the proposed CSP equipment shelter. (CSP I, Tab 13I; CSP IV, Attachments C and E)
60. No wetlands, watercourses, or aquifer areas are on or nearby the proposed Ekonk Hill site. (CSP I, Tab 14)
61. The calculated, worst-case electromagnetic radio frequency power density of the proposed telecommunications facility, assuming all channels operating simultaneously at maximum allowable power would be 3.1315 percent of the maximum permissible limits of field strength as prescribed by ANSI standard C95.1-1982, which was adopted by the State of Connecticut under CGS section 22a-162, as the State standard. (CSP I, Tabs 13N and 13Q); CSP VII)
62. The estimated costs for developing the proposed Ekonk Hill site are itemized as follows:

Radio Equipment	\$	721,300
Tower and Antennas		211,900
Power Systems		44,500
Site, Road, Shelter		132,900
Miscellaneous		<u>63,700</u>
	Total	\$1,174,300

(CSP I, Tab 13P)

Proposed Thompson Site

63. The CSP propose to construct a new 180-foot, three-legged, lattice tower, equipment shelter, and fence at an undeveloped site owned by the State of Connecticut off Mountain Hill Road, Thompson, Connecticut. (CSP I, p. 2-8; CSP VI)
64. The proposed tower base would be approximately 655 feet northeast of Mountain Hill Road at an elevation of 540 feet AMSL. The 90-foot by 95-foot site is in a hilltop forest with mature white pine and a dense understory of white pine saplings. All vegetation would be removed from within the 90-foot by 95-foot site. The accessway is an existing dirt trail that would be upgraded to 12 feet in width and covered with gravel. On property adjacent to the CSP access easement there are remains of past lumbering and mill activities. (CSP I, Tabs 13D, 13L, and Tab 14; CSP IV, Q. 9 and Attachment E; CSP VI)
65. A proposed one-story, 18-foot by 41-foot equipment building would be constructed adjacent to the proposed telecommunications tower to house the necessary radio equipment and emergency generator. (CSP I, Tab 12, Tab 13D, and Tab 14; CSP IV, Attachment E)

66. The following three alternative sites were considered and rejected by the CSP because:
- A) a Thompson landfill site would require a 660-foot tower to provide point-to-point communications;
  - B) a Mountain Hill Road site would require upgrading over 5,280 feet of an existing dirt trail to access the site; and
  - C) a Bull Hill Road site would require upgrading of over 4,700 feet of an existing dirt trail to access the site.
- (CSP I, Tab 15; Transcript pp. 35, 37, and 47)
67. The proposed 180-foot Thompson facility is required for receiving and transmitting microwave signals with a planned Union facility 14.74 miles west of Thompson; the proposed Troop D facility 12.42 miles south of Thompson; and the proposed Ekonk Hill facility 22.53 miles south of Thompson. The proposed facility would provide 800 MHz radio coverage to the following towns or portions thereof: Thompson, Woodstock, Pomfret, Putnam, Killingly, and Brooklyn. (CSP I, Tab 13C; CSP IV, Attachment B)
68. The 180-foot height of the proposed Thompson tower would be needed for a clear microwave link to the planned facility in Union, which would be an integral site in the microwave network. If this microwave link were not developed, a tower height of 140 feet would be sufficient to maintain a clear microwave path to Ekonk Hill and Troop D as well as provide the necessary 800 MHz coverage. (CSP I, Tab 13C; Transcript pp. 74 and 75)
69. Nine antennas would be mounted between the 140-foot and 180-foot levels with some antennas rising 14 feet above the top of the proposed tower. The CSP would own seven of the antennas while the remaining two antennas would belong to QVC. (CSP I, Tab 13J and Tab 14)
70. Electric and telephone service would be brought in approximately 650 feet underground along side the accessway. No gas, water, or sewer lines would serve the site. (CSP I, Tab 13G and Tab 14; CSP IV, Attachment E)
71. The proposed site is on land zoned as rural/residential. Surrounding land use is residential development. The nearest residence would be 700 feet south of the proposed Thompson facility. (CSP I, Tab 13D and Tab 14; Transcript p. 32)
72. The proposed Thompson tower fall zone would extend from approximately 100 feet to 150 feet onto one abutting property owned by Arsene and Florence Duquette who sold a parcel of land and easement to the CSP. The only building within the fall zone would be the proposed CSP equipment shelter. (CSP I, Tab 13I; CSP IV, Attachments C and E; CSP VI)

73. No wetlands, watercourses, or aquifers are on or nearby the proposed Thompson site. (CSP I, Tab 14)
74. The calculated, worst-case electromagnetic radio frequency power density of the proposed telecommunications facility, assuming all channels operating simultaneously at maximum allowable power, would be 0.3226 percent of the maximum permissible limits of field strength as prescribed by ANSI standard C95.1-1982, which was adopted by the State of Connecticut under CGS section 22a-162, as the State standard. (CSP I, Tabs 13N, 13O, and Tab 14)

75. The estimated costs of developing the proposed Thompson site are itemized as follows:

Radio Equipment	\$486,400
Tower and Antennas	165,100
Power System	34,900
Site, Road, and Shelter	234,450
Miscellaneous	<u>54,000</u>
Total	\$974,850

(CSP I, Tab 13P)