

DOCKET NO. 44

AN APPLICATION SUBMITTED BY THE SOUTHERN : CONNECTICUT SITING
NEW ENGLAND TELEPHONE COMPANY FOR A :
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY : COUNCIL
AND PUBLIC NEED FOR THE CONSTRUCTION,
MAINTENANCE, AND OPERATION OF FACILITIES TO
PROVIDE CELLULAR SERVICE IN NEW HAVEN COUNTY : July 24, 1984

F I N D I N G S O F F A C T

1. Southern New England Telephone Company, (SNET), in accordance with provisions of sections 16-50g to 16-50z of the Connecticut General Statutes (CGS), applied to the Connecticut Siting Council (Council) on February 24, 1984, for a certificate of environmental compatibility and public need (certificate) for the construction, maintenance, and operation of six telecommunications towers (masts) and associated equipment buildings in the towns of Branford, Guilford, Hamden, Milford, Waterbury, and Woodbridge, Connecticut, to provide Domestic Public Cellular Radio Telecommunication Service (cellular service). (Record)
2. The fee as prescribed by section 16-50v-1 of the Regulations of Connecticut State Agencies (RSA) accompanied the application. (Record)
3. Affidavits of newspaper notice as required by statute and section 16-501-1 of the RSA were also filed with the application. (Record)
4. On April 13, 1984, members of the Council and its staff made an inspection of the proposed sites in Hamden and Woodbridge, and the proposed and alternate sites in Milford, Branford, and Guilford. (Record)
5. On May 31, 1984, SNET amended its application, deleting the proposed Hamden site, and adding a proposed site in the Town of North Haven. (SNET 6, p. 5)

6. On June 11, 1984, members of the Council and its staff made an inspection of the proposed and alternate sites in Waterbury, and the proposed site in North Haven. (Record)
7. Pursuant to section 16-50m of the CGS, the Council, after giving due notice thereof, held public hearings in the Waterbury City Hall at 2:30 P.M. on June 11, 1984, and at 7:00 P.M. in the Hamden Town Hall on the same date. (Record)
8. The parties to the proceeding are the applicant, SNET, and those persons and organizations whose names are listed in the Decision and Order which accompanies these findings. (Record)
9. The following state agencies filed written comments with the Council pursuant to section 16-50j of the CGS: the Department of Economic Development (DED), the Department of Transportation, (DOT) and the Department of Environmental Protection (DEP). (Record)
10. The Council took administrative notice of its record in Docket 35 and Docket 40. (Record)
11. Cellular service consists of small overlapping broadcast regions, 2-10 miles in diameter, known as cells. Each cell is served by a transmitter limited by the Federal Communications Commission (FCC) to no more than 100 watts effective radiated power per channel. Each cell has a central switching point containing electronic apparatus uniting the cells into a system. Mobile units are limited to a maximum of seven watts of transmitted power by the FCC. In the proposed system each cell would have a maximum of 45 channels. (Docket 35, Exhibit 1-II, pp. 5-8; Docket 40, Tr. 4/21/84, p. 53)

12. Each proposed cell site would have approximately the same equipment. A single-story masonry structure measuring 20'x24' would house electronic equipment on each site. Each building would have one door and no windows. The equipment would operate automatically, so no personnel would be stationed on-site. (Docket 35, Exhibit 1-V, pp. 1-2)
13. Sites would each have a driveway and space for one vehicle, with no parking lots. Shrubs would be planted around each site to reduce the buildings' visibility. Fences would be constructed around the tower site with security and fire alarms inside. (Docket 35, Exhibit 1-V, pp. 1-2)
14. Each tower would be a self-supporting, hollow steel pole. Towers would measure 36" in diameter at the base, tapering to 14" at the top. The towers would range from 75 to 150 feet. The masts would be 12-sided and would be painted blue-gray to blend in with the sky. (Docket 35, Exhibit 1-V, pp. 1-4)
15. Each mast would support a 10' wide triangular platform at the top, which would hold a minimum of four and a maximum of six whip-type omnidirectional antennas. (Docket 35, Exhibit 1-V, pp. 1-4)
16. Each triangular platform would have two functions: support of the transmit and receive antennas; and support of directional antennas in the future, if and when such antennas were required to subdivide the cells. (Docket 35, Tr. 9/30/83, pp. 42-43)
17. The omnidirectional antennas would be 12' long and 3" in diameter. These antennas and the support platform would add 17' to the overall tower structure heights. (Docket 35, Exhibit 1-V, pp. 1-4)

18. The Federal Aviation Administration (FAA) has determined that none of the tower structures would present a hazard to air navigation. Therefore, no lights would be necessary on any of the proposed towers. (Docket 35, Exhibit 1-V, p. 4)
19. The antenna tower structures would have a wind loading design of 40 lbs. per square foot, which would withstand a basic wind speed of 125 mph. This design includes the additional load which would be created by a 2" radial ice build-up on the structure. (Docket 35, Exhibit 3, Q. 6)
20. SNET has no plans to place equipment not related to cellular communications, such as microwave dishes, on the towers. (Docket 35, Tr. 9/29/83, p. 73)
21. Transmitters at the tower sites would broadcast in the frequency band of 880-890 MHz. (Docket 35, Exhibit 1-IV, p. 3)
22. For the purposes of cellular service construction permit applications, the FCC has defined a New England County Metropolitan Area (NECMA) consisting of New Haven County. This New Haven NECMA is part of SNET's planned Cellular Geographic Service Area (CGSA) in Connecticut, which includes three NECMAs. Fairfield County and Hartford County constitute the other NECMAs within SNET's planned Connecticut CGSA. The Connecticut CGSA would include 17 cell sites as an integrated network. (Docket 35, Exhibit 1-III, pp. 2-3; Docket 35, CSC Exhibit 3; Docket 35, Tr. 9/29/83, p. 95; SNET 1, p. 1)
23. SNET received FCC construction permits for the New Haven NECMA on December 8, 1983. (SNET 1-I, p. 5)

24. The planned system contains the smallest number towers and cells possible for adequate coverage of the Connecticut CGSA. (Docket 35, Tr. 9/30/83, p. 23)
25. The FCC requires that a licensee serve at least 75% of its licensed service area within three years of obtaining an operating license or risk losing the license. (Docket 35, Exhibit 1-VI(g), p. 2; Docket 35, CSC Exhibit 3; Docket 35, 9/30/83, pp. 30-34)
26. Cellular service would be an improved mobile telephone service. To date, mobile telephone service has been regulated by the Connecticut Department of Public Utility Control (DPUC). Eventually, cellular service could replace the existing simplex mobile service. Cellular service has been classified by the FCC as a form of basic local exchange service, which would also be subject to DPUC regulation. (Docket 35, Exhibit 2, Q. 4; Docket 35, Tr. 9/29/83, p. 58; Docket 35, Tr. 9/30/83, pp. 4, 84)
27. SNET has informed the FCC that it will seek DPUC direction regarding state franchise and/or other applicable state or local authorizations to implement and maintain a cellular service. (Docket 35, CSC Exhibit 3)
28. In the United States, cellular service is now provided in the cities of Chicago; Washington, D.C.; Baltimore; and Indianapolis. (Docket 40 Tr. 3/21/84, p. 18)
29. Nationally, a public need exists to improve the present mobile telephone service, due to the current system's limited capacity, long waiting lists nationally, and poor quality service, which

have created congested channels and long waiting times. (Docket 35, Exhibit 1-I, pp. 3-4; Docket 35, Exhibit 1-II, pp. 2-3; Docket 40, DOT Comments of 3/22/84)

30. SNET has 675 mobile customers who are being served by only five radio channels in the present simplex system in Connecticut. There are no customers waiting to obtain the present simplex mobile system service in the State of Connecticut. (Docket 35, Tr. 9/30/83, pp. 62-63)
31. The proposed coverage for all three Connecticut NECMA's would encompass approximately 77% of all Connecticut residences and approximately 82% of all Connecticut businesses located within the three NECMAs. (Docket 40, SNET 1-IV, p. 12; Docket 35, CSC Exhibit 3)
32. Monthly service costs could range from \$100 to \$130 in the three Connecticut NECMAs. Average monthly charges would be approximately \$150.00, including the leasing of mobile unit equipment. (Docket 35, CSC Exhibit 3, Docket 35 Exhibit 3, Q. 33; SNET 1, Section IV, p. 14)
33. List prices for the mobile cellular automobile radio units generally range from \$2500 - \$3800 per unit. (Docket 40, Tr. 3/22/84, p. 162)
34. The greatest initial potential use of the cellular mobile system is in the business community. (Docket 35, Tr. 9/30/83, p. 60)
35. SNET has no plans to expand its system statewide but intends to apply to the FCC to expand into the Danbury and New London NECMAs when they become available. Future expansion of the system would depend on demand. (Docket 35, Tr. 9/30/83, p. 57)

36. The FCC has established the technical standards for cellular service to insure the efficient use of the allotted frequency spectrum and to insure nationwide compatibility. (Docket 35, Exhibit 1-I, p. 4)
37. The FCC has preempted the states' regulation of cellular service in three major areas: technical standards, market structure, and state certification prior to federal application for a construction permit. (Docket 35, Exhibit 1-III, p. 4)
38. The FCC has reserved to the states jurisdiction with respect to charges, classifications, practices, services, facilities, and regulation of service by licensed carriers. (Docket 40, SNET 1-III, p. 8)
39. According to FCC rules, there will be two licenses awarded in each NECMA to provide competition. One will be awarded to a wireline company, the other to a non-wireline applicant. (Docket 40, SNET 1-I, p. 4)
40. The FCC defines a Reliable Service Contour as an area having a signal quality greater than or equal to 39 dbu as determined by the Carey method. This is the required method of estimating coverage for FCC permit applications. (Docket 35, Tr. 9/29/83, pp. 96-97)
41. Cell-splitting is a technique for accommodating the future growth of demand for cellular mobile service. It consists of adding a cell between existing cells, thus increasing the number of calls which can be handled in an area. Cell-splitting can be achieved

by the addition of cell sites containing lower power omnidirectional antennas, the conversion to directional antennas, or both. (Docket 35, Exhibit 1-II, p. 8)

42. Each new cell achieved by cell-splitting would require additional towers and/or associated equipment. (Docket 35, Exhibit 3, Q. 7)
43. An omnidirectional antenna is designed to radiate in 360 degrees, but may be blocked by part of the tower itself, thus causing an effect on its radio pattern known as shadowing. Terrain and buildings can also cause shadowing. (Docket 35, Tr. 9/30/83, pp. 14-18)
44. Shadowing in urban areas can be reduced by overlapping coverage from two cell sites. Such overlapping of coverage fills in holes from shadowing and increases the possible number of simultaneous conversations. (Docket 35, Tr. 9/30/83, pp. 18-19)
45. The potential for intermodulation interference and shadowing may be significant when antennas are located on the same tower. (Docket 35, Exhibit 1-IV, p. 7)
46. SNET investigated the possibility of mounting antennas on existing towers which were not identified. Such existing towers were deemed not suitable, generally because they were of insufficient height. SNET investigated roof tops as antenna sites. If other antennas are already on a roof top, antenna spacing and intermodulation interference are major concerns. (Docket 35, Exhibit 1-IV, pp. 6, 11; Docket 35, Tr. 9/29/83, pp. 74-75)
47. SNET is willing to consider sharing of the proposed facilities, on a case by case basis, with public or private entities including

- competing cellular companies. (Docket 35, Tr. 9/30/83, pp. 59, 106; Docket 40 Tr. 3/22/84, p. 173)
48. If for some reason cellular mobile service is not provided or ceases, SNET would assume the responsibility of dismantling the proposed towers. (Docket 35, Tr. 9/30/83, p. 92)
 49. In order for the cellular mobile system to work, there must be a close inter-relationship between the cell sites. (Docket 35, Tr. 9/29/83, p. 67)
 50. As the first step in the site selection process, SNET considered the state as a whole and determined where within the state cellular coverage was needed, where the population centers were located, and where cellular service should be offered first. The next step was the identification of locations for sites, given the restriction of the inter-relationships between sites. This resulted in a grid. (Docket 35, Tr. 9/29/83, pp. 91-92)
 51. The cellular grid forms the foundation for the entire design of SNET's system. This design would also allow for an orderly expansion of the system in the future. SNET next identified areas which would be compatible with the grid design. (Docket 35, Exhibit 1-IV, p.4; Docket 35, Tr. 9/30/83, p. 92)
 52. A search area was created around individual grid points. Within each search area SNET first looked for areas of higher terrain which would require the lowest antenna heights. The environmental considerations for each tower site included local housing; population density; land use; and proximity of historic, scenic, and recreational areas. Other factors considered in site selection were the impact of construction on the environment, the number of

trees to be cut, how much fill would be required, and degree of screening by trees. SNET's final determination was whether land was available at reasonable cost. (Docket 35, Tr. 9/29/83, pp. 92-93; Docket 35, Tr. 9/30/83, pp. 12-13)

53. Computer modeling was used by SNET to predict cell site coverages. Modeling was also used to establish the antenna mast heights necessary at each site. Tower heights shorter than those proposed would degrade the performance of the system. (Docket 35, Exhibit 1-IV, p. 5)
54. SNET could not eliminate a cell and still maintain its desired level of performance. (Docket 35, Tr. 9/30/83, p. 24)
55. The location of each of the 17 cells in the planned system affects the position of other sites on the grid. Although the search areas allow some flexibility, any relocation of a site may cause deficiencies which may require adjustment in adjacent cells. (Docket 35, Exhibit 1-IV, p. 3; Docket 35, Tr. 9/29/83, pp. 65, 92-95; Docket 35, Metromedia A. p. 4; Docket 35, Exhibit 3, Q. 20)
56. Use of an alternate site which did not substantially affect the proposed coverage area would not require SNET to file a major application with the FCC. (Docket 35, Exhibit 3, Q. 28)
57. The deletion of a tower from a proposed service area system could have an effect not only upon the system for which a license is sought, but also on other adjacent systems because of technical characteristics of cellular development. (Docket 35, Metromedia A, pp. 4-5)
58. The State Historic Preservation Officer concluded that the sites in this application would have no effect on the state's historic,

- architectural, or archaeological resources. (SNET 9)
59. The construction of the proposed facilities would not contribute any significant air, water, or noise pollution. (Docket 40, SNET 1-VI, pp. 7-9)
 60. For the frequency range to be used by these proposed facilities, the American National Standards Institute (ANSI) advisory guideline for radiofrequency electromagnetic radiation (RFER) exposure is approximately 3 milliwatts per square centimeter. The exact standard is determined in this frequency range by dividing the frequency by 300. (Docket 35, CSC Exhibit 2; Docket 35, Tr. 9/30/83, pp. 76-77)
 61. The future addition of directional antennas would not change the expected levels of electromagnetic power densities. (Docket 35, Tr. 9/30/83, p. 78)
 62. The power densities at these tower sites would be approximately 100 times lower than the present American National Standards Institute (ANSI) standard. Figures calculated by SNET for power densities were the worst-case, and such conditions are expected only intermittently, if at all. (Docket 35, Tr. 9/30/83, pp. 76-77; Docket 35, DEP Comments of 9/15/83)
 63. None of the proposed or alternate sites in this application appear to be the preferred habitat of any rare and/or endangered species, according to the DEP. (SNET 8)
 64. Cell site construction would take place during normal daytime working hours. (Docket 40, Tr. 3/22/84)
 65. The proposed Branford tower site is located on Brushy Plain Road and owned by Marsha Jasudowich, 405 Brushy Plain Road, Branford,

Connecticut. This proposed site is a 120'x100' parcel of land located in a Residential (R-4) zoning district. (SNET 1-VI, pp. 1-14)

66. The nearest residence to the proposed Branford site is over 550' away. Large properties in the vicinity are owned by the New Haven Water Company, SNET, and Yale University. (SNET 1-VI, pp. 12, 22)
67. The elevation of the proposed Branford site is 232' above mean sea level (AMSL) and the height of the proposed tower structure is 167'. (SNET 1-VI, p. 28)
68. Based on calculations using conservative assumptions, the radio frequency electromagnetic radiation (RFER) power density for the proposed Branford site would be .01488 mW/cm² or less at the antenna mast base. (SNET 1-VI, p. 23)
69. The proposed Branford tower would be visible from two residences on Hilltop Drive and from the owner's residence on Brushy Plain Road. It would not be visible from the remainder of Brushy Plain Road, or from Fairview Road, Victor Hill Drive along Brookwood Drive, the proposed tower may be visible through the transmission line right-of-way. (SNET 1-VI, p. 20; DEP Comments, 6/25/84)
70. Construction of the proposed Branford tower would not involve any regulated activity in an inland wetland. (SNET 10)
71. SNET proposed an alternate location, also on Brushy Hill Road, on property owned by SNET. This proposed site is directly to the west of the original proposed site, which is on the opposite side of Brushy Hill Road. (SNET 1-VI, pp. 1-5)
72. The nearest residence to the alternate Branford site is 800' away. (SNET 1-VI, p. 40)

73. The elevation of the alternate Branford site is 231' AMSL, and the height of the proposed tower structure is 167'. (SNET 1-VI, p. 37)
74. Based on calculations using conservative assumptions, the RFER power density for the alternate Branford site would be .01488 mW/cm² or less at the antenna mast base. (SNET 1-VI, p. 37)
75. Visibility of the alternate Branford tower would be greater than the original. The proposed tower would be visible from Lidyhites Pond, Side Hill Road, and Brookwood Drive. (DEP Comments of 6/25/84)
76. The alternate Branford site is preferred by SNET over the original site in that it is located on property already owned by SNET and abuts undeveloped land owned by the New Haven Water Company. (SNET 1-VI, p. 40)
77. Access to the alternate Branford site would be via a new 12' wide stone surface driveway off of Brushy Plain Road. An 8' high chain link fence would be constructed around the tower and equipment building. (SNET 1-VI, p. 34)
78. The proposed Guilford tower site is located on Tanner Marsh Road on property owned by Vernon F. Dudley of 142 Tanner Marsh Road. This proposed site is 100'x100' in size, is presently used as farmland, and located within a residential (R-5) zoning district. (SNET 1-VII, pp. 1-16)
79. The nearest residence to the proposed Guilford tower is 290' away. (SNET 1-VII, p. 24)
80. The elevation of the proposed Guilford tower site is 88' AMSL, and the height of the proposed tower structure is 167'. (SNET 1-VII, p. 25)

81. Based on calculations using conservative assumptions, the RFER power density for the proposed Guilford site would be .01488 mW/cm² or less at the antenna mast base. (SNET 1-VII, p. 25)
82. The proposed Guilford tower would be directly visible to several homes on the west side of Tanner Marsh Road. It would also be visible along Routes 1 and I-95. It would be intermittently visible on Clapboard Hill Road, East River Road, Trailwood Drive, and Horseshoe Drive. (SNET 1-VII, p. 21; DEP Comments of 6/25/84)
83. On May 31, 1984, SNET proposed an alternate Guilford tower site on Tanner Marsh Road. This property is owned by the Town of Guilford, measures 40'x67' in size, and is flanked by a 70' water storage tank and an 80' cable antenna tower. (SNET 6-VII, p. 42)
84. The alternate Guilford tower is located within an industrial (I-1) zoning district. In the vicinity of the alternate site are several businesses and light industries. (SNET 6-VII, p. 42)
85. The nearest residence to the alternate Guilford tower is 500' away. (SNET 6-VII, p. 50)
86. The elevation of the alternate Guilford site is 82' AMSL, and the height of the proposed tower structure is 167'. (SNET 6-VII, p. 51)
87. Based on calculations using conservative assumptions, the RFER power density for the alternate Guilford site would be .01488 mW/cm² or less at the antenna mast base. (SNET 6-VII, p. 51)
88. The alternate Guilford tower would be visible from the same roads as the proposed tower. However, the alternate tower would be screened to some degree by the existing water tower to the south

and the existing cable television tower to the north. (SNET 6-VII, pp. 46-47)

89. Access to the alternate Guilford site would be via a new 12' wide stone surface driveway off of Tanner Marsh Road. An 8' high chain link fence would be constructed around the tower and equipment building. (SNET 6-VII, p. 39)
90. The Guilford Conservation Commission supports the alternate tower site location. (Guilford Conservation Commission letter, 4/16/84)
91. The proposed Milford site is located on Milford Point Road on property owned by George J. Jaser, 69 Broad Street, Milford, Connecticut. The proposed site is a 37'x110' parcel in a Residential (R-7.5) zoning district. (SNET 1-IX, pp. 14-16)
92. The nearest residence to the proposed Milford site is 20' from the base of the antenna mast. (SNET 5, Q. 9)
93. The elevation of the proposed Milford site is 100' AMSL, and the height of the proposed tower structure is 117'. (SNET 1-IX, p. 25)
94. Based on calculations using conservative assumptions, the RFER power density for the proposed Milford site would be .03112 mW/cm² or less at the antenna mast base. (SNET 1-IX, p. 25)
95. The proposed Milford tower would be visible to many residences on Naugatuck Avenue and Milford Point Road, and intermittently visible to homes on Lincoln Avenue, Holbrook Road, Wheeler Avenue, Janet Street, and Bismark Road. (SNET 1-IX, p. 21; DEP Comments of 6/25/84)
96. SNET's concerns regarding the narrow width of the proposed site and its close proximity to a nearby home prompted the company to propose an alternate Milford site, located on Route 1, behind the

- Devon Motel. (SNET 1-IX, pp. 4, 38)
97. The alternate Milford site is within a Business (GB) zoning district and borders the Connecticut Turnpike. This 50'x50' parcel is owned by Mrs. Henry Charchenko, 438 Bridgeport Avenue, Milford, Connecticut. (SNET 1-IX, pp. 38-39)
 98. The alternate Milford tower would be approximately 50' from the nearest portion of the Devon Motel. (SNET 5, Q. 8)
 99. The elevation of the alternate Milford site is 75' AMSL, and the height of the proposed tower structure is 117'. (SNET 1-IX, p. 47)
 100. Based on calculations using conservative assumptions, the RFER power density for the alternate Milford site would be .03112 mW/cm² or less at the antenna mast base. (SNET 1-IX, p. 47)
 101. The woodland and several motel buildings surrounding the alternate Milford site would shield this tower from all but intermittent views along Bridgeport Avenue and Oldroyds Avenue, and near Exit 34 of the Connecticut Turnpike. Unlike the original site, the alternate site would not be visible to any nearby residences. (SNET 1-IX, pp. 43, 52; DEP Comments of 6/25/84)
 102. The proposed Waterbury tower site is located on Long Hill and is owned by Marie Quagliaro, c/o Mark D. Capuano, 49 Leavenworth Street, Waterbury, Connecticut. The proposed site measures approximately four acres in size and is within a Rural Residence (R-L) zoning district. (SNET 1-X, pp. 1, 14, 15)
 103. The proposed Waterbury site is adjacent to an existing SNET parcel containing an 80' microwave tower. In the immediate vicinity are four other antenna structures and a water tank. The nearest residence is 500' away. (SNET 1-X, p. 23; SNET 5, Q. 13)

104. The elevation of the proposed Waterbury tower site is 822' AMSL, and the height of the proposed tower structure is 167'. (SNET 1-X, p. 24)
105. Based on calculations using conservative assumptions, the estimated RFER power density for the proposed Waterbury site would be 0.1488 mW/cm² or less at the antenna mast base. (SNET 1-X, p. 24)
106. The proposed Waterbury tower would be visible to residences on Garden Circle, Lamont Street, and Delford Road, and to the southern ends of Sierra Street, Gilman Street, and Erdman Street. In addition this tower would be visible at a distance from points in various surrounding towns. The alternate tower's visibility would be similar. (SNET 1-X, p. 20; DEP Comments 6/25/84)
107. Access to the proposed Waterbury tower site would be via a 12' wide gravel driveway off of Farmdale Drive. An 8' high chain link fence would be constructed around the tower and equipment building. (SNET 1-X, p. 12)
108. SNET has proposed an alternate tower site on company property adjacent to the proposed Waterbury site. An existing 80' tower would be utilized, and no new tower would be necessary. This tower is strong enough to support the proposed cellular equipment. (SNET 1-X, p. 1; SNET 5, Q. 13)
109. Use of the alternate tower site would result in substantially less cellular coverage than the proposed Waterbury tower site. (SNET 1-X, pp. 1, 42; SNET 4, Q. 1)
110. The elevation of the alternate Waterbury site is 819' AMSL, and the height of the proposed tower structure would be 97.5'. (SNET 1-X, p. 39)

111. Based on calculations using conservative assumptions, the RFER power density for the alternate Waterbury site would be .03256 mW/cm² or less at the antenna mast base. (SNET 1-X, p. 39)
112. Access to the alternate Waterbury site would be via Farmdale Drive. A new 14' wide gravel drive would be constructed and an existing fence relocated. (SNET 1-X, p. 35)
113. The proposed Woodbridge tower site is located on Pease Road and owned by Ken and Joan Johnson, 77 Pease Road, Woodbridge, Connecticut. The proposed site is a 110'x220' parcel located within a Residential (R-4) zoning district. (SNET 1-XI, pp. 15-16)
114. The proposed Woodbridge site has no nearby homes. A power transmission line is within 100' of this site, as is an established hiking trail. (SNET 1-XI, p. 16; SNET 5, Q. 12)
115. The elevation of the proposed Woodbridge site is 324' AMSL, and the height of the proposed tower structure is 167'. (SNET 1-XI, p. 24)
116. Based on calculations using conservative assumptions, the RFER power density for the proposed Woodbridge site would be .01488 mW/cm² or less at the antenna mast base. (SNET 1-XI, p. 24)
117. The proposed Woodbridge tower would be visible from the owner's residence and one residence to the south. The proposed tower would not be visible along Pease Road, Johnson Road, or Shady Lane. (SNET 1-XI, p. 20; Tr. 6/11/84, p. 36)
118. There are no designated regulated inland wetlands on the Woodbridge site or the access road to it. (Tr. 6/11/84, p. 35; SNET LF 1)

119. Access to the proposed Woodbridge site would be via an existing transmission line right-of-way. A new 12' wide access drive would be constructed along this right-of-way. A new 8' high chain link fence would be constructed around the proposed tower and equipment building. (SNET 1-XI, pp. 12, 13, 19)
120. The proposed North Haven tower site is within the Wharton Brook Industrial Center, off of Dwight Street. The 40'x60' parcel is owned by V.J.C. Realty Company, Middletown Avenue, North Branford, Connecticut. (SNET 6-VIII, pp. 14-15)
121. The proposed North Haven site is within a Light Industrial (IL-80) zoning district. The proposed site is approximately 125' from the border of the Quinnipiac River State Park. (SNET 6-VIII, p. 15; SNET 7, Q. 2)
122. The elevation of the proposed North Haven site is 22' AMSL, and the height of the proposed tower structure is 167'. (SNET 6-VIII, p. 22)
123. Based on calculations using conservative assumptions, the RFER power density for the proposed North Haven site would be .01488 mW/cm² or less at the antenna mast base. (SNET 6-VIII, p. 22)
124. The proposed North Haven site is outside of the state channel encroachment line of the Quinnipiac River, beyond the 100 year flood boundary, and within the 500 year flood boundary. (SNET 6-VIII, pp. 20-21)
125. The proposed North Haven tower would be visible from Wharton Brook State Park and intermittently visible in the area where Route I-91 crosses Route 5. (Tr. 6/11/84, pp. 34-35; DEP Comments 6/25/84)

126. Electric service to all original and alternate locations would be provided by underground facilities from the nearest existing utility pole. (SNET Exhibit 5, Q. 16)

127. The number of potential cellular mobile radio telephone service subscribers in the New Haven NECMA ranges from 12,265 to 17,009. (SNET 1, Section IV, p. 14)

128. The estimated site acquisition and construction costs for the Branford original site totals \$576,300, including engineering, material, installation building, and land acquisition, as follows:

Radio equipment	\$ 38,200;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	205,100; and
Miscellaneous	400.

(SNET 1, Section VI, p. 24)

129. The estimated site acquisition and construction costs for the alternate Branford site total \$557,300, including engineering, material, installation, building, and land acquisition, as follows:

Radio equipment	\$ 38,200;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	186,100; and
Miscellaneous	400.

(SNET 1, Section VI, p. 38)

130. The estimated site acquisition and construction costs for the original Guilford site total \$557,700, including engineering, material, installation, building, and land acquisition, as follows:

Radio equipment	\$ 34,700;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	190,000; and
Miscellaneous	400.

(SNET 1, Section VII, p. 26)

131. The estimated site acquisition and construction costs for the alternate Guilford site total \$557,700, including engineering, material, installation building, and land acquisition, as follows:

Radio equipment	\$ 34,700;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	190,000; and
Miscellaneous	400.

(SNET 6, Section VII, p. 52)

132. The estimated site acquisition and construction costs for the North Haven alternative to the original Hamden site total \$565,500, including engineering, material, installation, building, and land acquisition including first year lease amount, as follows:

Radio equipment	\$ 34,700;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	197,800; and
Miscellaneous	400.

(SNET 6, Section VIII, p. 23)

133. The estimated site acquisition and construction costs for the Milford original site total \$568,600, including engineering, material, installation, building, and land acquisition, as follows:

Radio equipment	\$ 55,500;
Antenna equipment	11,000;
Power & common equipment	318,900;

Land, building, mast	182,900; and
Miscellaneous	300.

(SNET 1, Section IX, p. 26)

134. The estimated site acquisition and construction costs for the alternate Milford site total \$567,600, including engineering, material, installation, building, and land acquisition, as follows:

Radio equipment	\$ 55,500;
Antenna equipment	11,000;
Power & common equipment	318,900;
Land, building, mast	181,900; and
Miscellaneous	300.

(SNET 1, Section IX, p. 48)

135. The estimated site acquisition and construction costs for the Waterbury original site total \$597,000, including engineering, material, installation, building, and land acquisition, as follows:

Radio equipment	\$ 59,000;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	205,100; and
Miscellaneous	300.

(SNET 1, Section X, p. 25)

136. The estimated site acquisition and construction costs for the alternate Waterbury site total \$566,500, including engineering, material, installation, building, and land acquisition, as follows:

Radio equipment	\$ 59,000;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	174,600; and
Miscellaneous	300.

(SNET 1, Section X, p. 40)

137. The estimated site acquisition and construction costs for the Woodbridge site total \$577,800, including engineering, material, installation, building, and land acquisition are as follows:

Radio equipment	\$ 34,700;
Antenna equipment	13,700;
Power & common equipment	318,900;
Land, building, mast	210,100; and
Miscellaneous	400.

(SNET 1, Section XI, p. 25)

138. All facilities are proposed to have utilities provided via undergrounding lines from the nearest existing utility pole to the facility building. No cost comparisons for aerial versus undergrounding utility lines were provided. (Tr. 6/11/84, pp. 11-12; SNET 5, Q. 16, 17)

139. AT&T sold its twenty-four (24) percent ownership of SNET stock in May, 1984, and no longer holds any interest in SNET stock. (Tr. 6/11/84, p. 16)