DOCKET NO. 99 - AN APPLICATION OF METRO MOBILE CTS OF FAIRFIELD COUNTY, INC., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR CELLULAR TELEPHONE ANTENNAS AND ASSOCIATED EQUIPMENT IN THE CITY OF STAMFORD, CONNECTICUT.	:	CONNECTICUT SITING COUNCIL January 5, 1989

FINDINGS OF FACT

1. Metro Mobile CTS of Fairfield County, Inc. (Metro Mobile) in accordance with the provisions of Sections 16-50g to 16-50z of the Connecticut General Statutes (CGS) applied to the Connecticut Siting Council (Council) on July 25, 1988, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a telecommunications tower and associated equipment to provide domestic public cellular radio telecommunication service (cellular service) in the City of Stamford within the Bridgeport New England County Metropolitan Area (Bridgeport NECMA). (Record)

2. The fee as prescribed by Section 16-50v-1a of the Regulations of State Agencies (RSA) accompanied the application. (Record)

3. The Council and its staff made an inspection of the proposed Stamford site on October 3, 1988. This inspection was publicly noticed in the Stamford Advocate on August 29, 1988. During the field review Metro Mobile flew a balloon at the proposed site at a height representative of the proposed tower. (Glass Exhibit 3; Record)

4. Pursuant to Section 16-50m of the CGS, the Council, after giving due notice thereof, held public hearings on the proposed tower site on October 3, 1988, beginning at 3:00 P.M. and continuing at 6:30 P.M. to 10:00 P.M. the same date, in the Turn of River Junior High School in Stamford; in the Turn of River Junior High School on October 13, 1988, from 11:00 A.M to 7:00 P.M.(Glass Exhibit 5; Glass Exhibit 6)

5. After giving due notice thereof, the Council reopened the public hearing on this docket on November 10, 1988, at 11:00 A.M. in the Rippowam Center in Stamford, continuing until 5:00 P.M. (Record)

6. The parties in the proceeding are the applicant and those persons and organizations whose names are listed in the Decision and Order which accompanies these findings. (Record)

7. The Department of Environmental Protection (DEP) filed written comments with the Council pursuant to Section 16-50j of the CGS. (Record)

8. Conventional mobile telephone service has been limited by insufficient frequency availability, inefficient frequency use, and poor quality of service. These limitations have resulted in congestion, blocking of transmission, interference, lack of coverage, and high costs. (Metro Mobile 1, pp. 5-6)

9. In 1981 the Federal Communications Commission (FCC) recognized a national need for technical improvement, wide area coverage, high quality service, and competitive pricing in mobile telephone service. (Metro Mobile 1, p.6)

10. Cellular service consists of small, overlapping broadcast regions, two to ten miles in diameter, known as cells. Each cell is served by a transmitter limited by the FCC to no more than 100 watts effective radiated power per channel. Each cell is connected to a central switching point containing electronic apparatus uniting the cells into a system. Mobile units are limited by the FCC to a maximum of seven watts of effective radiated power. (Docket 94, Finding 7; Metro Mobile 1, Pre-filed testimony, pp. 3-8)

11. The FCC has determined that the public interest requires two licenses for cellular service be made available in each market area or NECMA. (Metro Mobile 1, p.6)

12. Applicants for FCC cellular system authorizations are not required to demonstrate a public need for the service, since the FCC has pre-empted this issue through the exercise of their primary jurisdiction. (Metro Mobile 1, p. 6)

13. The FCC has pre-empted state regulation of technical standards to assure technical integrity of systems and nationwide compatibility. (Metro Mobile 1, pp. 6-7)

14. The FCC exercises exclusive jurisdiction over cellular radio frequency interference, thus pre-empting state and local action in that area. (Metro Mobile 1, p.7)

15. On February 12, 1988, the FCC gave Metro Mobile the authorization to operate a cellular system using non-wireline frequencies in the Bridgeport NECMA. (Metro Mobile 1, p.7, Tr., 10/3/88, p. 151; Metro Mobile 1, Exhibit C, p. 1)

16. Cell site locations are limited by a basic need for a 10% to 20% overlap of coverage between cell sites. Cell sites must be located so that continuous coverage to vehicles is provided. A signal interruption of 10 seconds would cause a call in progress to be discontinued. (Metro Mobile 1, Exhibit 1, p.7; Metro Mobile Late File 9)

17. As part of Metro Mobile's overall system, the proposed site in Stamford is planned to overlap with the existing Banksville site in Greenwich, with an existing site on Tresser Boulevard in Stamford, and with a future site planned for New Canaan. (Tr., 10/3/88, p. 127; Metro Mobile 1, Exhibit 1, p. 27; Metro Mobile 1, Exhibit D)

18. Metro Mobile needs coverage in the North Stamford area. (Metro Mobile 1, Exhibit 1, p. 27; Metro Mobile 1, Exhibit D)

19. Without overlap with the existing Greenwich site and a site planned for New Canaan, the proposed Stamford site would still provide necessary coverage to the North Stamford area. (Metro Mobile 1, Exhibit 1, p. 27, 29; Metro Mobile 1, Exhibit D)

20. The coverage from the proposed tower site would include Route 123 and Route 124, and would expand coverage along the Merritt Parkway. Areas of north Stamford between New Canaan and Greenwich would receive coverage, as would a portion of Long Island Sound. (Metro Mobile 1, p.8; Metro Mobile 1, Exhibit 1, p. 29)

21. Metro Mobile considered and rejected 20 sites in the Stamford area in its site search. Generally, site selection is limited by service requirements, elevation, terrain, and surrounding land use. (Metro Mobile 1, Attachment 1, pp. 1-2; Metro Mobile 1, Exhibit 1, p. 9)

22. The 20 sites investigated were rejected by Metro Mobile for reasons including an unwillingness by the land owners to lease or sell property, structural insufficiency of existing towers, and inadequate coverage. Of the 20 sites, seven were rejected solely for inadequate coverage, nine for a combination of an unwillingness by owners to lease and inadequate coverage, one for a structurally insufficient existing tower, and three for a combination of a structurally insufficient existing tower and inadequate coverage. (Metro Mobile 1, Attachment 1, pp. 1-2; Stamford Neighbors, Exhibit 4; Glass Exhibit 10; Tr., 10/13/88, p. 222)

23. Metro Mobile raised the possibility of leasing space on the existing SNET Cellular Inc. (SNET) tower on the Low-Heywood Thomas School property in Stamford. Subsequently, Metro Mobile determined that the coverage using the existing 150-foot tower at this site would be inadequate. Additionally, Low Heywood Thomas School denied Metro Mobile space to construct an equipment building on their property. (Tr, 10/13/88, pp. 17-20; Metro Mobile 2, Q.6; Metro Mobile Late File 6 addition, letter of 2/4/88)

24. Metro Mobile has a lease option on the proposed site, a 60-foot by 60-foot area of land on property owned by the Stamford Water Company off of Lakeside Drive in Stamford. The coordinates of the proposed site are 41° 07' 58" latitude, and 73° 32' 11" longitude. Access to the proposed site would be provided by a new access road, 275 feet in length and 15 feet in width, which would extend from an existing access road to the Stamford Water Company filtration plant. (Metro Mobile 1, Exhibit, p.1, p.3, p. 14, p. 19; Tr., 11/10/88, p. 96)

25. The proposed site is zoned RA-3, a single family district with a minimum lot area of 130,680 square feet, designed to contain a circle 200 feet in diameter; 200 foot minimum frontage; 10 percent maximum building coverage; three story, not to exceed 35 foot maximum building height; and 60 foot front, 70 foot rear, and 35 foot side minimum yard distances. Although the proposed site is within the most restrictive zoning district in the City of Stamford, radio and television masts are permitted by Special Exception. (Tr., 10/13/88, p. 21; Stamford Zoning Regulations, pp. 26-27; Metro Mobile 1, Exhibit 1, p. 20)

26. The proposed site is surrounded by 159 acres of forested land owned by the Stamford Water Company. The North Stamford Reservoir lies 750 feet to the west of the proposed site. The two nearest dwellings are located approximately 900 feet to the southeast of the proposed site. The proposed site is located on a 24 acre parcel that lies within the 159 acre parcel and is used by the Stamford Water Company for a water filtration plant. The Stamford Water Company water treatment plant is approximately 275 feet to the north of the proposed site. The City of Stamford Zoning Board of Appeals granted the Stamford Water Company approval to construct this plant on October 12, 1977, by means of a Special Exception. (City of Stamford, Exhibit 4; Metro Mobile 1, Exhibit 1, p.4, pp. 19-21; Stamford Neighbors, Exhibit 3)

27. There are no building lots within a 1000-foot radius of the proposed tower site. (Metro Mobile 2, Q.2, Attachment, p.1; Stamford Neighbors, Exhibit 3)

28. The Stamford Water Company properties in the area of the proposed tower site are not open to the public for recreational purposes. (Metro Mobile 2, Q. 14; City of Stamford, Exhibit 7, p. 2)

29. The proposed site has an elevation of 270 feet above mean sea level. (Metro Mobile, Exhibit 1, p. 20; Stamford Neighbors, Exhibit 3)

30. The Stamford Water Company offered Metro Mobile use of the proposed site because, in their view, the proposed site would have minimal environmental impact and would cause no disruption to the surrounding watershed. The Stamford Water Company was unwilling to consider any location on their property other than the proposed site. (Tr. 10/13/88, p. 110, p.313)

31. Construction of the proposed site would require the removal of approximately 20 trees. Of these trees, three are 30 inches in diameter breast height (dbh), seven are 12 inches dbh, and ten are three to ten inches dbh. (Metro Mobile 2, Q. 3)

32. Access to the proposed site would be via the existing paved parking lot north of the proposed site. The new access road would require clearing for approximately 150 feet. Approximately twenty deciduous trees and five evergreens would be removed in the construction of the proposed access road. The deciduous trees are three to twelve inches dbh, and the evergreens are less than one inch dbh. Utilities would be brought into the proposed site underground. (Metro Mobile 1, Exhibit 1, p. 19, p. 21; Metro Mobile 2, Q. 3; Tr., 10/13/88, p. 194)

33. The proposed access road would be 75 feet from the nearest portion of the Stamford Water Company septic system. (Tr., 10/13/88, p. 309; Glass Exhibit 10)

34. There are no wetlands on the proposed site or proposed access road. The nearest wetlands are approximately 500 feet southeast of the proposed site. (Stamford Neighbors, Exhibit 5; Metro Mobile 2, Q. 2. Attachment, p. 1; Metro Mobile Late File 5; Tr., 10/13/88, p. 307)

35. The proposed tower would be a 160-foot monopole, to which two 13.5-foot wide platforms would be attached. Two 15-foot omnidirectional whip transmit antennas would be mounted on the platform at the 158-foot level of the tower. Six 11.5-foot transmit/receive antennas would be mounted between the platforms. The Stamford Water Company has reserved the right to mount up to two low-band antennas on the proposed tower, similar in appearance to the Metro Mobile antennas and mounted on a lower level on the proposed tower. (Metro Mobile 1, p. 8; Metro Mobile 1, Exhibit 1, pp. 16-18; Metro Mobile 2, Q. 9; Tr., 10/13/88, p. 186)

36. The tower would be designed to withstand a 90-mile per hour wind with one-half inch ice accumulation, thereby meeting Electronic Industries Association wind and ice loading structural standards for towers. The total overall height of the tower, including Metro Mobile's antennas, would be 173 feet above ground level. The Stamford Water Company antennas would be mounted at a level below the Metro Mobile antennas. (Metro Mobile 1, Exhibit 1, p. 16; Metro Mobile 1, p. 9; Tr., 10/13/88, p. 186)

37. The proposed unpainted steel tower would not be obstruction marked or lighted. (Tr., 10/13/88, p. 159; Tr., 10/3/88, pp. 199-200; Stamford Neighbors Late File 7, 47CFR, p. 514; Metro Mobile 1, Exhibit 1, p. 15)

38. Metro Mobile would construct a 22.5-foot by 21-foot one story equipment building at the base of the proposed tower to house electronic equipment, standby power equipment, intrusion alarms, and automatic climate control equipment. The building would contain no sanitary facilities. Parking space for one vehicle would be provided. The building and tower would be surrounded by an 8-foot security fence. Other than the equipment building, no structures would be within the fall zone of the proposed tower. (Metro Mobile 1, p. 9; Metro Mobile 1, Exhibit 1, p. 19; Tr., 10/13/88, pp. 183-184)

39. Due to dense vegetation and hilly topography, the proposed tower would not be visible from Quarry Road, Greenbrier Lane, New England Drive, or Cypress Drive. There would be little or no visibility of the proposed tower from High Ridge Road, Stamford Road, Cascade Road, Cascade Court, Blue Rock Drive, or Interlaken Road. The tower would be visible from the section of Lakeside Drive which crosses the North Stamford Reservoir. The tower would not pose a significant visual intrusion on the Bartlett Arboretum one-half mile to the east of the proposed site. (DEP Comments of 9/26/88; Metro Mobile 1, Exhibit 1, p. 4; Tr., 10/13/88, pp. 198-199; City of Stamford, Exhibit 5; Stamford Neighbors, Exhibit 3)

40. The worst case electromagnetic radio frequency power density (power density) levels would be as follows: at 275 feet from the base of the proposed tower, 0.0128 mW/cm^2 for 90 channels operating at 100 watts per channel; at 1000 feet from the base of the proposed tower, 0.00124 mW/cm^2 for 90 channels operating at 100 watts per channel. The power density at the base of the proposed tower would be 0.0555 mW/cm^2, which is approximately 53 times below the American National Standards Institute (ANSI) safety standard of 2.92 mW/cm^2 for the 870 mHz radio frequency used by Metro Mobile. (ANSI Standard, City of Stamford Exhibit 2 Metro Mobile Late File 10, letter of 9/23/88, pp. 2-3; Metro Mobile 1, Exhibit 1, p. 3; Metro Mobile Late File 11; Tr., 11/10/88, p. 27)

41. The General Assembly has directed that the Commissioner of DEP shall by regulation adopt the standards recommended by the ANSI with respect to human exposure to radio frequency electromagnetic fields. (CGS 22a-162(a))

42. The FCC mandates that the level of 100 watts per channel not be exceeded. Overpowering the system would create congestion and cause channel interference. The power per channel is monitored to ensure that the power limitations are not exceeded. (Tr., 11/10/88, pp. 31-33)

43. According to radio frequency protection guide levels described in the FCC Office of Science and Technology (OST) Bulletin, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," the power density levels from the proposed antennas would be well below the Connecticut safety standard for the proposed frequency ranges. (Metro Mobile 1, p. 12; FCC OST Bulletin 65, p. 34)

44. Other than the standby power equipment and climate control equipment, the proposed tower and equipment building would not be a source of noise. (Metro Mobile 1, Exhibit 1, p. 3; Tr., 10/3/88, pp. 199-200)

45. There are no existing records of federally endangered or threatened species or Connecticut species of special concern occurring at the proposed tower site. (Metro Mobile 1, Exhibit E, p.3)

46. Construction of the proposed tower and associated equipment building would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (Metro Mobile 1, Exhibit E, p. 6)

47. Facility costs at the proposed Stamford tower site are estimated as follows:

Radio equipment	$339,200.00
Tower and antennas	47,200.00
Power systems	12,000.00
Building	68,300.00
Miscellaneous (including site preparation and installation)	157,800.00
Total Cost	$624,500.00

(Metro Mobile 1, Exhibit 1, p. 17)

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