

ORIGINAL

DOCKET NO. 122 - AN APPLICATION OF METRO MOBILE CTS OF NEW HAVEN, INC., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF A CELLULAR TELEPHONE TOWER AND ASSOCIATED EQUIPMENT IN THE TOWN OF BRANFORD, CONNECTICUT. : Connecticut Siting Council February 15, 1990

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

1. Metro Mobile CTS of New Haven, Inc., 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 September 27, 1989, for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a telecommunications tower, associated equipment, and building to provide Domestic Public Cellular Radio Telecommunications Service (cellular service) in the New Haven, Connecticut, New England County Metropolitan Area ("New Haven NECMA"). (Record)
2. The application was accompanied by proof of service as required by section 16-50l of the CGS. (Record)
3. Affidavit of newspaper notice as required by section 16-50l of the CGS was supplied by the applicant. Newspaper notice of this application was published twice by the applicant in The New Haven Register. (Metro Mobile 1, pp.4-5, Exhibit 5)
4. The Council and its staff inspected the proposed and alternate sites in the Town of Branford, Connecticut, on December 7, 1989. (Record)
5. Pursuant to section 16-50m of the CGS, the Council, after giving due notice thereof, held a public hearing on this application on December 7, 1989, at 4:00 P.M., and 7:00 P.M., at the Branford Fire Headquarters, 45 North Main Street, Branford, Connecticut. (Record)
6. The parties to 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. The South Central Regional Council of Governments filed written comments on the application by letters dated October 17, 1989, and November 13, 1989. (Record)
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.5; Docket 107, Finding of Fact 10)
10. The FCC has pre-empted State regulation in determining that a public need currently exists for cellular service, setting technical standards for that service, and establishing a competitive market. (Metro Mobile 1, p.6; Docket 107, Finding of Fact 12)
11. The FCC has determined that the public interest requires two licenses for cellular service be made available in each market area or NECMA to provide competition. One license is awarded to a wireline company, the other to a non-wireline company. (Metro Mobile 1, pp.6, 9; Docket 107, Finding of Fact 11)
12. 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, p.5; Docket 107, Finding of Fact 9)
13. Cellular service consists of small, overlapping broadcast regions. These regions or cells are limited in coverage by the FCC's technical standards governing transmitting power. The system design provides frequency reuse and hand-off and would be capable of an orderly and compatible expansion. (Metro Mobile 1, p.13, Exhibit 11, p.7)
14. Cell site locations are limited by a basic need for a 10 percent to 20 percent overlap of coverage between cell sites. Location of cell sites is essential to provide for uninterrupted hand-off of calls in progress. (Metro Mobile 1, Exhibit 11, p.7)
15. Presently, the proposed cellular system represents state-of-the-art technology and Metro Mobile is aware of no viable alternatives. A mobile satellite service has been under consideration by the FCC and may become available in the distant future. (Metro Mobile 1, pp.17-18)

16. Metro Mobile expects digital cellular technology to be available in late 1993. The technology would increase by four-fold the capability of handling calls over present cellular technology. The two technologies would not be interchangeable. (Tr. 12/7/89, pp.65-66)
17. In selecting a site for the cell, Metro Mobile found no structures of adequate height or structural strength in or near the search area. (Metro Mobile 1, Exhibit 11, p.7 and Attachment "A"; Metro Mobile 7)
18. Five sites were considered by Metro Mobile within the search area. One site in a C1, Commerce Park District was rejected because the Town of Branford requested Metro Mobile search in an IG-1, General Industrial Zone. A second site was rejected by Metro Mobile due to the site having no natural screening to the south and its location near residences to the north. A third site was rejected by Metro Mobile due to a narrow lot length between Interstate 95 (I-95) and North Main Street (Route 1) and the resulting lack of space for cell site development, less natural screening, and less set-back from Route 1 as compared to the proposed and alternate cell sites. The fourth and fifth sites are the proposed and alternate sites. (Metro Mobile 1, Exhibit 11, p.7 and Attachment "A")
19. At the hearing, Mr. Laska, a party to the proceeding, brought attention to an existing 60-foot tower he owns on Brushy Hill Road, Branford, Connecticut, only approximately 600 feet north of Metro Mobile's search area radius boundary. The existing 60-foot tower is in a R-4, single family, residential zone, and is not structurally capable of supporting Metro Mobile's antennas. The existing tower supports four antennas including Mr. Laska's home television antenna and a low-band receptor antenna. The base of the existing tower is approximately 190 feet AMSL. A 70-foot tower would be needed by Metro Mobile at this site in order for signals to clear the trees in the area. Mr. Laska owns sufficient vacant land at this location to accommodate a new building and tower. (Metro Mobile 2, Q.3; Metro Mobile 7; Tr. 12/7/89, pp.75-76)
20. The Town of Branford's First Selectman supports the proposed site in preference to the alternate site because the tower and associated equipment would be less obtrusive than the alternate viewed from either I-95 or Route 1. (Metro Mobile 5)
21. Both the proposed and alternate sites would primarily provide additional cellular traffic handling capacity, as opposed to providing coverage to an area otherwise unserved. (Metro Mobile 1, p.9)

22. The proposed and alternate sites would also provide some additional coverage to areas of I-95, Route 1, and the shoreline communities which do not have an acceptable level of coverage in the Branford area. (Metro Mobile 1, pp.7, 9)
23. The proposed tower would primarily provide "off-loading" of calls from an existing site in Guilford, and, to a lesser degree, from an existing West Haven site. (Metro Mobile 1, pp.9-10, 15, Exhibit 8, Exhibit 11, p.10; Metro Mobile 2, Q.10)
24. The raising of either the West Haven or Guilford site towers, or both, could eliminate the coverage hole where call termination currently occurs on I-95 in the Branford area. The hole is approximately one and one-half miles in diameter with the hole on I-95 being approximately one mile long. (Metro Mobile 3, Q. 20; Tr. 12/7/89, pp.25-26)
25. The proposed Branford site would not only eliminate the coverage hole, but would provide extra call handling capacity in the Branford area. (Tr. 12/7/89, p.26)
26. Metro Mobile currently has cells in the coverage area near the proposed Branford site in West Haven, Hamden, North Branford, and Guilford. In addition, Metro One's system on Long Island has numerous cells along Long Island Sound which are in the area of the proposed Branford site from a radio coverage standpoint. (Metro Mobile 3, Q.21)
27. Metro One cellular service on Long Island, New York, currently covers all of I-95 in Metro Mobile's service area although the coverage is not of a high quality. (Tr. 12/7/89, pp.35-36)
28. The maximum call handling capacity of the existing Guilford and West Haven omnidirectional sites is approximately 1,200 calls per hour per site. The West Haven site would be sectorized in the near future. (Metro Mobile 2, Q.1, Q.14; Tr. 12/7/89, p.29)
29. The addition of the proposed Branford site would not necessitate lower power levels at the existing West Haven or Guilford sites. Potential interference problems would be limited by re-assignment of frequencies to the existing sites, recognizing their coverage areas and overlap. (Metro Mobile 2, Q.6)
30. The proposed Branford facility would be sectorized with six sectors each able to accommodate a maximum of 12 to 15 channels and approximately 600 calls during peak hours, for a total of 3,600 calls per hour per site if calls were evenly distributed among each sector. (Metro Mobile 2, Q.15; Tr. 12/7/89, pp.33-34, 51, 52)

31. The Guilford site currently handles approximately 200 calls during the peak hours and approximately 150 calls per hour averaged over a 12-hour business day from 7:00 a.m., to 7:00 p.m. The peak hour is during mid-afternoon on weekdays. Metro Mobile contends that the 200 call per hour peak is probably a seasonal low for the Guilford shoreline site. (Metro Mobile 2, Q.16; Tr. 12/7/89, p.40)
32. The West Haven site currently handles approximately 630 calls during the peak hours and approximately 450 calls per hour averaged over a 12-hour business day from 7:00 a.m., to 7:00 p.m., using October 1989 data. (Metro Mobile 2, Q.16; Tr. 12/7/89, p.49)
33. Both the Guilford and West Haven sites have the capacity to accommodate 45 channels but neither site is at its full complement because the current demand does not warrant full channelization. (Tr. 12/7/89, p.59)
34. The Guilford site, given its shoreline location, could only accommodate approximately 30 channels. The Metro One system, still being omnidirectional, would interfere with some channels of Guilford if all 45 channels were installed. (Tr. 12/7/89, pp.59-60)
35. Metro One is in the process of sectorization, which would reduce the potential for interference with Metro Mobile's system in the Branford area. (Tr. 12/7/89, p.37)
36. Through sectorization, Metro Mobile would have less interference from Metro One because of the ability to reassign interfering frequencies in sectors facing Long Island Sound. (Tr. 12/7/89, pp.36-37)
37. When West Haven becomes sectorized, the sectors that cover I-95 east of the site, as well as some sectors to the north along Interstate 91, would begin to reach their maximum during 1990. No call projection data was provided. (Tr. 12/7/89, p.52; Record)
38. Metro Mobile projections indicate that the Guilford site will begin to exceed its call handling capacity in late 1990. No call projection data was provided. (Metro Mobile 2, Q.17; Tr. 12/7/89, p.40; Record)
39. Metro Mobile expects call traffic growth to continue at a rate equal to or greater than a trend of zero subscribers in 1987 to an excess of 30,000 subscribers in late 1989. (Tr. 12/7/89, p.64)
40. Sectorization increases Metro Mobile's ability to assign and control the frequencies of a cell site, so that there is a better use of frequencies and reuse with limited interference. (Tr. 12/7/89, p.30)

41. Metro Mobile could sectorize both the West Haven and Guilford sites without developing the proposed Branford site, but its ability to reassign channels would be less than what could be achieved with development of the proposed Branford site. (Tr. 12/7/89, p.34)
42. If the Guilford site were to be sectorized, it would not exceed a total cell traffic load of 3,600 calls per hour, but would exceed call handling capacity on those sectors serving I-95. (Tr. 12/7/89, p.41)
43. Metro Mobile could develop a theoretical three sector hybrid site to maximize capacity, and has done this in different places to handle increased call traffic until the capacity limit is reached, but contends it is not a good application in the Branford area. (Tr. 12/7/89, pp.41, 54)
44. The proposed cellular site is a rectangular 30-foot by 64-foot parcel of land located along the eastern boundary of a larger lot at 180 North Main Street, Branford, Connecticut. The remainder of the lot is used for light industrial activities. The proposed tower would be located approximately eight feet west of an abutting property owned by Stanley and Helen Laska, which has two existing buildings used for light manufacturing and commercial activities; approximately 66 feet south of the I-95 right-of-way; approximately 245 feet east of property owned by Michael Brunt and Carol T. Brunt, which has an existing auto body shop; and approximately 150 feet north of North Main Street. (Metro Mobile 1, Exhibit 1, p.1; Metro Mobile 2, Q.4; Metro Mobile 4, Q.7; Tr. 12/7/89, p.70)
45. Immediately north of the proposed site is an approximate 30-foot bedrock ridge that separates the site from I-95. (Metro Mobile 2, Q.4)
46. Light industrial activities on the lessor's lot include a metal working shop and a shop that assembles small metal castings. These activities would not adversely affect the tower or its operation. (Metro Mobile 2, Q.8)
47. Access to the proposed site would be over an existing driveway on land of the lessor (Three M&M Limited Partnership). (Metro Mobile 1, p.8, Exhibit 1, p.1; Metro Mobile 2, Q.4; Metro Mobile 4, Q.2)

48. Metro Mobile proposes to construct a 110-foot self-supporting monopole tower to which two platforms, 13 and one-half feet on a side, would be attached. Two 15-foot omnidirectional, whip transmit antennas would be mounted at 108 feet on the corners of the platform with six 11 and one-half-foot transmit/receive antennas with reflectors mounted between the platforms at 101 feet. The total height of the tower with antennas would be 123 feet. (Metro Mobile 1, pp.7-8, Exhibit 1, p.8)
49. Metro Mobile has agreed to share tower and building equipment space with Branford's Fire Department should relocating their equipment improve the Department's communications. The Town's use of Metro Mobile's tower would allow the removal of all or most of the existing light duty tower now located on the roof of the Fire Department building on 45 North Main Street. As of November 17, 1989, Metro Mobile was still awaiting technical information from Town officials, including radio frequencies and power, planned antenna types, requested mounting heights, and other Town requirements. Although the exact size of space necessary to house the Town's communication equipment has not been determined, up to 80 square feet would be available within the on-site building. (Metro Mobile 1, Exhibit 11, p.12; Metro Mobile 2, Q.13; Metro Mobile 4, Q.4; Tr. 12/7/89, p.67)
50. A 20-foot by 30-foot single-story, prefabricated concrete building would be constructed on the proposed site. The building would house receiving, transmitting, switching, processing, performance monitoring, and climate control equipment. (Metro Mobile 1, p.8)
51. The proposed tower and building would not displace existing parking on the lot of the lessor, and would not interfere with existing on-site traffic circulation. (Metro Mobile 4, Q.1)
52. The alternate site is a trapezoidal 40-foot by 70-foot by 75-foot parcel of land located along the eastern boundary of a larger lot at 164 North Main Street, Branford, Connecticut, which abuts the lessor's lot of the proposed site on its eastern boundary. The remainder of the lessor's lot is used for construction equipment storage. The proposed tower would be approximately 15 feet west of the lessor's lot of the proposed site owned by Three M&M Limited Partnership which has an existing metal working shop; approximately 23 feet south of the I-95 right-of-way; approximately 260 feet east of property owned by Domely Corporation; approximately 44 feet north of land owned by Michael and Carol Brunt; and 245 feet north of Route 1. (Metro Mobile 1, Exhibit 2, p.1; Metro Mobile 2, Q.4; Metro Mobile 4, Q.7)

53. Access to the alternate site would be over an existing tarmac and gravel driveway on land of the lessor (Alice Cosgrove). (Metro Mobile 1, Exhibit 2, p.7; Metro Mobile 2, Q.4, Q.7; Metro Mobile 4, Q.2)
54. At the alternate site Metro Mobile would construct a 120-foot self-supporting monopole tower to which two platforms, 13 and one-half feet on a side, would be attached. Two 15-foot omnidirectional, whip transmit antennas would be mounted on the corners of the platform at 118 feet with six 11 and one-half-foot directional transmit/receive antennas with reflectors mounted between the platforms at 111 feet. The total height of the tower with antennas would be 133 feet. (Metro Mobile 1, pp.7-8, Exhibit 2, p.8)
55. The ground elevation of the alternate site ranges from approximately 53 to 54 feet rather than the 50 feet that was stated in the application, raising the height of the tower and accompanying equipment three to four feet. (Tr. 12/7/89, pp.16-18)
56. A 20-foot by 30-foot single story, prefabricated concrete building would be constructed on the alternate site. The building would house the same equipment as the proposed site, and Branford Fire Department equipment if installed. (Metro Mobile 1, p.8)
57. Placement of the towers at both the proposed and alternate sites was done at the lessors' direction. The placement of the towers is such that construction would not require any vegetation disturbance. (Tr. 12/7/89, p.24)
58. No site leveling or backfilling would be required at the proposed or alternate sites. (Metro Mobile 1, Exhibit 1, p.7, Exhibit 2, p.7)
59. Electrical and telephone utilities for the proposed site would be routed from North Main Street to the proposed cell site at the lessor's direction. The alternate site has a utility easement which extends from the proposed site to North Main Street. (Metro Mobile 1, Exhibit 1, p.1, Exhibit 2, p.1, Exhibit 9, pp.1, 9)
60. Metro Mobile would perform soil tests at either the proposed or alternate site prior to the installation of the tower. (Metro Mobile 4, Q.8)
61. No vegetative plantings were proposed by Metro Mobile for either the proposed or alternate sites. (Metro Mobile 4, Q.3)

62. The I-95 right-of-way and three commercial/light industrial buildings of which one building is owned by the lessor would be within the fall zone of the proposed site. The two other buildings on abutting land owned by Stanley Laska have the following businesses: In one building is Shoreline Performance which makes custom boating fabrications; in the other building is the Blue Ribbon Grooming Center; Olde Stuffe, an antique dealership; and Shoreline Bedding and Upholstery Co. The fall zone would not be totally within the lessor's property. (Metro Mobile 2, Q.4; Metro Mobile 4, Q.7; Tr. 12/7/89, pp.23, 24)
63. The I-95 right-of-way and one light industrial building, the Autocraft Auto Body Shop, which is owned by an abutting property owner of the lessor, would be within the fall zone of the alternate site. The fall zone would not be totally within the lessor's property. (Metro Mobile 2, Q.4; Metro Mobile 4, Q.7; Tr. 12/7/89, pp.23, 24)
64. The zoning of the proposed and alternate cellular sites is IG-1, General Industrial Zone. Certain telecommunications towers are a permitted use. (Metro Mobile 1, Exhibit 11, Attachment "A"; Metro Mobile 2, Q.3)
65. There are 42 mobile homes and approximately 35 other residences located within a 1,000-foot radius of the proposed cell site. There are approximately 52 mobile homes and 25 other residences located within a 1,000-foot radius of the alternate cell site. (Metro Mobile 1, Exhibit 9, pp.2, 10)
66. The electromagnetic radio frequency power density at the proposed and alternate sites, assuming all channels operating simultaneously at maximum allowable power and broadcasting from the lowest set of antennas would be less than 0.1240 milliwatts per square centimeter (mW/cm^2) at the proposed and alternate sites, and would be well below the American National Standards Institute standard of $2.92 \text{ mW}/\text{cm}^2$, as adopted by the State in CGS 22a-162. (Metro Mobile 1, p.11, Exhibit 9, pp.2, 10; DEP Comments of 10/31/89)
67. Both the proposed and alternate towers would be designed to withstand pressure equivalent to 90 mph wind with a one-half inch solid ice accumulation in accordance with Electronic Industries Association standard RS-222-D. (Metro Mobile 1, Exhibit 1, p.9, Exhibit 2, p.9)
68. The detailed propagation of the proposed cellular site was based on an original estimate of a 60-foot ground elevation with the top of the tower at 160 feet AMSL. (Metro Mobile 1, Exhibit 8; Metro Mobile 3, Q.19; Metro Mobile 6; Tr. 12/7/89, p.19)

69. The project 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 10)

70. There are no known extant populations of Connecticut 'Species of Special Concern' or Federal Endangered and Threatened Species that occur at the site in question. (Metro Mobile 1, Exhibit 10)

71. The total estimated cost of construction for the proposed site is as follows:

Radio equipment	\$ 360,200
Tower and antennas	33,840
Power system	12,000
Building	68,300
Miscellaneous (Site preparation and installation)	138,400
TOTAL	\$ 612,740

(Metro Mobile 1, p.16, Exhibit 1, p.9)

72. The total estimated cost of construction for the alternate site is as follows:

Radio equipment	\$ 360,200
Tower and antennas	36,320
Power system	12,000
Building	68,300
Miscellaneous (Site preparation and installation)	138,400
TOTAL	\$ 615,220

(Metro Mobile 1, Exhibit 2, p.9)

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