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STATE OF CONNECTICUT

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March 10, 2010

TO: Parties and Intervenors

FROM: S. Derek Phelps, Executive Director

RE: **DOCKET NO. 390** – T-Mobile Northeast LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility at 15 Orchard Park Road, Madison, Connecticut.

As stated at the hearing in Madison on January 5, 2010, after the Council issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Connecticut Siting Council on the Draft Findings of Fact issued on this docket by March 22, 2010.

SDP/CDM/laf

Enclosure

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	<input checked="" type="checkbox"/> U.S. Mail	T-Mobile Northeast, LLC	Julie D. Kohler, Esq. Monte E. Frank, Esq. Jesse A. Langer, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 (203) 368-0211 (203) 394-9901 fax jkohler@cohenandwolf.com mfrank@cohenandwolf.com jlanger@cohenandwolf.com
Party (granted on 01/05/2010)	<input checked="" type="checkbox"/> U.S. Mail	Town of Madison	Marilyn Ozols Planning and Zoning Administrator Town of Madison 8 Campus Drive Madison, CT 06443 (203) 245-5632 (203) 245-5613 fax ozolsmm@madisonct.org

DOCKET NO. 390 – T-Mobile Northeast LLC application for a } Connecticut
Certificate of Environmental Compatibility and Public Need for }
the construction, maintenance and operation of a } Siting
telecommunications facility at 15 Orchard Park Road, Madison, }
Connecticut. } Council

February 22, 2010

DRAFT

Findings of Fact

Introduction

1. Pursuant to Chapter 277a, Sections 16-50g et seq. of the Connecticut General Statutes (CGS), as amended, and Section 16-50j-1 et. seq. of the Regulations of Connecticut State Agencies (RCSA), T-Mobile Northeast, LLC (T-Mobile) applied to the Connecticut Siting Council (Council) on October 8, 2009 for the construction, operation, and maintenance of a telecommunications facility, which would include a 100-foot tall monopole tower, to be located at 15 Orchard Park Road in the Town of Madison, Connecticut. (See Figures 1, 2, and 3) (T-Mobile 1, p. 1)
2. T-Mobile is a limited liability company, organized under the laws of Delaware, with a Connecticut office at 35 Griffin Road South, Bloomfield, Connecticut. The company and its affiliated entities are licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless services system in Connecticut. (T-Mobile 1, p. 2)
3. The parties in this proceeding are T-Mobile and the Town of Madison. (Transcript, January 5, 2010, 3:00 p.m. [Tr. 1], pp. 6-7)
4. The proposed facility is one of a series of facilities T-Mobile is proposing to fill coverage gaps along the Amtrak rail line in Connecticut. The facility would also provide coverage to Route 1, Neck Road, Mungertown Road, I-95, and residential areas in the vicinity of the proposed site. (T-Mobile 1, p. 1)
5. Pursuant to CGS § 16-50(b), notice of the applicant's intent to submit this application was published on August 13 and August 15, 2009 in the New Haven Register. (T-Mobile 1, pp. 3-4; Exhibit F)
6. Pursuant to CGS § 16-50(b), T-Mobile sent notice of its intent to file an application with the Council to each person appearing of record as owner of property abutting the property on which the site is located. (T-Mobile 1, p. 4; Exhibit G)
7. T-Mobile received return receipts from all but two of the abutting property owners to whom it sent notice. T-Mobile sent a second notice to the abutters from whom it did not receive return receipts. Both of the second notices T-Mobile sent to these two abutters were returned unclaimed. (T-Mobile 3, A1)

8. Pursuant to CGS § 16-507 (b), T-Mobile provided a copy of its application to all federal, state, regional, and local officials and agencies listed therein. (T-Mobile 1, p. 3, Exhibit E)
9. On December 14, 2009, T-Mobile posted a sign on the host property informing the public of its pending application. Information on the sign included the time and date of the Council's scheduled public hearing on this application and contact information for the Council. (T-Mobile 5: Pre-filed testimony of Raymond Vergati)
10. Pursuant to CGS § 16-50m, the Council held a public hearing on January 5, 2010, beginning at 3:00 p.m. and continuing at 7:00 p.m. in the Memorial Town Hall, 8 Meetinghouse Lane, Madison, Connecticut. (Tr. 1, p. 3 ff.)
11. The Council and its staff conducted an inspection of the proposed site on January 5, 2010 beginning at 2:00 p.m. On the day of the field inspection, T-Mobile flew a balloon from approximately 7:30 a.m. to 4:30 p.m. to simulate the height of the proposed tower. Periodic winds ranging in speed up to 30 miles per hour made it difficult to keep the balloon at the height of the proposed tower. (Tr. 1, pp. 38-39; T-Mobile 9 – Affidavit Regarding Balloon Float)

State Agency Comments

12. Pursuant to CGS § 16-507, the Council solicited comments on this application on November 30, 2009 and January 6, 2010 from the following state departments and agencies: Department of Agriculture, Department of Environmental Protection (DEP), Department of Public Health, Council on Environmental Quality, Department of Public Utility Control, Office of Policy and Management, Department of Economic and Community Development, and the Department of Transportation. (CSC Hearing Package dated November 30, 2009; Letter to State Department Heads dated January 6, 2010)
13. The Connecticut Department of Transportation (ConnDOT) responded to the Council's solicitation with no comments. (ConnDOT letter dated December 4, 2009)
14. The Connecticut Department of Public Health (DPH) responded to the Council's solicitation with the comment that, because the proposed site is within the source water areas of public water system Orchard Park Ind Area-50 Mungertown (CT0769123), it recommends that the following Best Management Practices are followed to ensure the safety of the drinking water supply:
 - Refueling of vehicles or machinery and storage of any fuel or hazardous material should take place on an impervious pad with secondary containment designed to contain fuels;
 - A fuel spill remediation kit should be stored on-site so that any spills may be contained and cleaned quickly; and
 - Orchard Park Ind Area-50 Mungertown should be contacted prior to starting this project to review the scope of the project.

(Memorandum from DPH, dated January 14, 2010)

15. T-Mobile would follow DPH's recommended Best Management Practices at the proposed facility. (Applicant's Letter dated February 3, 2010)
16. Other than ConnDOT and the DPH, the Council did not receive comments from any of the other state agencies from which comments were solicited. (Record)

Municipal Consultation

17. On May 28, 2009, T-Mobile submitted a technical report with specific information about its proposed facility to Madison's First Selectman. (T-Mobile 1, p. 18)
18. On July 27, 2009, T-Mobile met with the Madison Conservation Commission and provided the Commission with materials relating to its proposed facility, including a visual resources evaluation report and viewshed analysis. (T-Mobile 1, pp. 8, 18)
19. On August 3, 2009, the Madison Conservation Commission issued a letter recommending two conditions intended to protect a wetlands system near the proposed facility. The two conditions were: that the facility compound be graded to drain southward, away from the adjacent wetland; and that extra soil erosion and sedimentation measures such as double silt fencing be installed prior to construction the sedimentation of soil into the wetland. (T-Mobile 1, p. 9; Exhibit Q)
20. T-Mobile would incorporate the Conservation Commission's conditions into its development plans for its proposed facility. (T-Mobile 1, p. 9; Exhibit Q)
21. On August 6, 2009, T-Mobile met with Madison's Planning and Zoning Commission about its proposed facility. (T-Mobile 1, p. 9; Exhibit Q)
22. The Town of Madison's Land Use Office submitted a letter to the Council in which it expressed the following concerns:
 - a. that coverage information for T-Mobile's antennas approved for a tower at 258 Ridge Road was not included in T-Mobile's application;
 - b. that, at 100 feet, the proposed tower may be too low for other carriers to effectively co-locate on the tower;
 - c. that the application's visual analysis was based on a 100-foot tall tower although a taller tower may be necessary to allow for feasible co-location;
 - d. that no visual analysis under leaf-off conditions or from Johnson Lane, the nearest residential street, was provided;
 - e. that the proposed tower may not be able to allow three additional carriers to effectively co-locate on the tower; and
 - f. that the visual analysis provided is insufficient to determine the proposed tower's full visual impact.

(Letter from Town of Madison Land Use Office, dated November 19, 2009)

23. T-Mobile conducted two balloon flights at the site of its proposed tower prior to the Council's field review. The first flight was conducted on July 7, 2009 in connection with a visual resource evaluation. The second flight was conducted at the request of the town and held on July 11, 2009. The second flight was publicly noticed to give concerned citizens an opportunity to attend and ask questions. (T-Mobile 1, p. 9; Exhibit Q)
24. T-Mobile performed an additional balloon flight on December 14, 2009 to determine the potential visibility of a tower at the respective heights of 100, 120 and 140 feet above grade level. (T-Mobile 4, A1; Tr. 1, p. 40)
25. T-Mobile would provide space for municipal public safety antennas on its proposed tower free of charge. (T-Mobile 1, p. 10)

Federal Designation for Public Need

26. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 7 - Telecommunications Act of 1996; T-Mobile 1, p. 4)
27. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. (Council Administrative Notice Item No. 7 - Telecommunications Act of 1996)
28. The Telecommunications Act of 1996 prohibits local and state bodies from discriminating among providers of functionally equivalent services. (Council Administrative Notice No. 7 - Telecommunications Act of 1996)
29. The Telecommunications Act of 1996 prohibits any state or local agency from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice No. 7 - Telecommunications Act of 1996; T-Mobile 1, p. 4)
30. Congress enacted the Wireless Communications and Public Safety Act of 1999 (the 911 Act) in order to promote public safety through the deployment of a seamless, nationwide emergency communications infrastructure that includes wireless communications services. (T-Mobile 1, p. 6)
31. As an outgrowth of the 911 Act, the Federal Communications Commission has mandated that wireless carriers provide enhanced 911 services (E911) as part of their communications networks. (T-Mobile 1, p. 6)
32. T-Mobile's proposed facility would comply with E911 requirements. (T-Mobile 1, p. 6)

Applicant's Existing and Proposed Wireless Coverage

33. Within in the New Haven Basic Trading Area, which includes Madison, T-Mobile is licensed to operate on the following frequencies:

Global System for Mobile Communications (GSM)

Upper 2/3 PCS A Band

Transmit: 1935.000 MHz to 1945.000 MHz

Receive: 1855.000 MHz to 1865.000 MHz

PCS C4 Band

Transmit: 1980.200 MHz to 2145.000 MHz

Receive: 1900.200 MHz to 1904.800 MHz

Universal Mobile Telecommunications System (UMTS)

Transmit 1: 2140.000 MHz to 2145.000 MHz

Receive 1: 1740.000 MHz to 1745.000 MHz

Transmit 2: 2110.000 MHz to 2120.000 MHz

Receive 2: 1710.000 MHz to 1720.000 MHz

(T-Mobile 3, A10)

34. T-Mobile's minimum signal strength design thresholds are -84 dBm for In-Vehicle coverage and -76 dBm for In-Building coverage. (T-Mobile 3, A11)
35. T-Mobile's existing signal strength in the area that would be covered by the proposed facility ranges from approximately -80 dBm to levels below -110 dBm. (T-Mobile 3, A12)
36. T-Mobile's dropped call percentage in the vicinity of the proposed facility is approximately 1.9 percent. (Applicant's Late File Exhibits Letter dated February 3, 2010)
37. T-Mobile experiences the following coverage gaps on the main arteries in the vicinity of the proposed facility:

Amtrak rail line: 0.5 mile

Interstate 95: 0.75 mile

Route 1: 1.77 miles

Mungertown Road: 1.17 miles — 0.35 mile south of I-95 and 0.82 mile north of I-95

(T-Mobile 3, A13)

38. T-Mobile's proposed facility would cover a distance of:

- 3.13 miles along the Amtrak rail line
- 1.8 miles along Interstate 95
- 2.68 miles along Route 1
- 0.72 miles along Neck Road
- 1.15 miles along Mungertown Road

(T-Mobile 3, A14)

39. T-Mobile's proposed facility would cover a total area of 10.48 square miles. (See Figure 5)
 (T-Mobile 3, A15)

40. T-Mobile's site at 258 Ridge Road (approved under Docket 363) cannot provide service to the proposed facility's coverage objective due to distance and intervening terrain obstructions. (See Figure 4) (Tr. 1, p. 27)

41. From the proposed facility, T-Mobile's antennas would hand off signals to the facilities identified in the table below

Site Address	Facility Type	Structure Height	T-Mobile Antenna Height	Status
8 Old Route 79, Madison	Monopole	150 feet	120 feet	On air
135 New Road, Madison	Guyed tower	180 feet	162 feet	On air
119 Tanner Marsh Road, Guilford	Monopole	150 feet	163 feet	On air
17 Cottage Street, Madison	Monopole	120 feet	117 feet	On air
1919 Boston Post Road, Guilford	Monopole	150 feet	147 feet	On air
131 Manor Road, Guilford	Monopole	150 feet	128 feet	On air
258 Ridge Road, Madison	Monopole	150 feet	147 feet	On air

(T-Mobile 3, A16)

42. T-Mobile's signal strength would deteriorate at heights below 100 feet, which is the height at which T-Mobile can best achieve its coverage goals in this vicinity. (T-Mobile 3, A17)

43. With its antennas at 90 feet, T-Mobile would experience a coverage gap along the Route 1 corridor due to the effects of the tree canopy and topography. (Tr. 1, pp. 28-29)

44. T-Mobile's proposed facility would be an integral component of its wireless network in the Town of Madison. (T-Mobile 1, p. 5)

45. T-Mobile has a master license agreement with Amtrak that would allow the carrier to use Amtrak's right-of-ways on which to locate facilities. (Tr. 1, p. 19)

46. T-Mobile has a corporate initiative to locate facilities that would provide better service to Amtrak passengers throughout the northeast corridor from Washington, D.C. to Boston. (Tr. 1, p. 23)

47. T-Mobile has received consistent feedback from customers about the need for improved service in the area that would be covered by the proposed facility. (Tr. 1, p. 24)
48. Even if the Amtrak line was not located nearby, T-Mobile would still have a need for its proposed facility. (Transcript, January 5, 2010, 7:00 p.m. [Tr. 2], p. 58)

Site Selection

49. T-Mobile initiated its search for a site in this area of Madison on or about August 28, 2006. (T-Mobile 3, A6)
50. T-Mobile's search area was centered in an area between Johnson Lane and Orchard Park Road, off of Mungertown Road. The radius of the search area was 0.5 miles. The objective of the site search was to find a location that would provide coverage to the Amtrak rail line, Route 1, Interstate 95, and secondary roadways around Mungertown Road in this area of Madison. (T-Mobile 3, A6)
51. T-Mobile investigated the possibility of installing antennas on the catenaries along the rail line, but Amtrak policy does not permit such installations. (Tr. 1, p. 19)
52. In the Madison area, T-Mobile did not find an area within Amtrak's right-of-way that would be large enough to accommodate a wireless facility. (Tr. 1, p. 21)
53. T-Mobile did not aggressively investigate the possibility of locating antennas on nearby transmission line poles because the power lines would have to be shut down to allow T-Mobile to do maintenance work or modify its antennas. (Tr. 1, p. 97)
54. T-Mobile identified 5 communications towers within approximately four miles of its proposed site. None of these towers was found to be adequate or located close enough to the target area for its coverage purposes. The towers are listed in the table below.

Tower Location	Height and Type Of Tower	Tower Owner	Approx. Distance and Direction
Tanner Marsh Road & Route One, Guilford	150' monopole	SNET/AT&T	1.83 miles to W
Tanner Marsh Road & Route One, Guilford	90' lattice tower	TCI/Sprint	1.84 miles to W
135 New Road, Madison	180' guyed lattice	CL&P	2.49 miles to E
8 Old Route 79, Madison	150' monopole	Spectrasite	1.18 miles to E
39 Ciro Road, North Branford	170' monopole	SBA	3.46 miles to N

(T-Mobile 1, Exhibits I and J)

55. There is an additional telecommunications tower located at 258 Ridge Road in Madison, approximately 1.88 miles to the northeast of the proposed tower. The tower was approved under Docket 363 and is owned by Crown Communications. T-Mobile has antennas at a centerline height of 147 feet on this tower. (Madison Land Use Office letter dated November 19, 2009; Tr. 1, p. 26)
56. T-Mobile investigated a number of different properties in the area of its proposed site. Properties that were investigated include:
- a. USI Company, 98 Fort Path Road: This site is approximately 0.5 miles to the east of the target area. It is the location of a three story commercial office building that abuts the Amtrak rail line. The ground elevation of this property is 12 feet lower than the property on which the proposed facility would be located. T-Mobile's radio frequency engineers determined that antennas on the roof of the building on this property would be too low to achieve the coverage objectives.
 - b. 170 Fort Path Road: This property is approximately 0.25 miles to the east of the proposed facility. There is a 20-foot tall commercial building on this property. T-Mobile engineers determined that antennas on the roof of this building would be too low to achieve the coverage objectives. The owner of the property does not want a tower on this property.
 - c. 150 Mungertown Road: There is a 20-foot tall commercial building on this property, but T-Mobile engineers determined that antennas on the roof of this building would be too low to achieve the coverage objectives. This property is owned by the same entity as the property at 170 Fort Path Road. The owner does not want a tower on the property.
- (T-Mobile 1, Exhibit J)
57. Following its meeting with the Madison Planning and Zoning Commission on August 6, 2009, T-Mobile investigated three additional sites suggested by the commission: property owned by the Sunshine House on Fort Path Road, property owned by the town on Nathan Lane, and a Bus Fueling Yard off of Fort Path Road. The results of T-Mobile's investigations were: the board of Sunshine House decided not to pursue a lease with T-Mobile; the Nathan Lane property was too far to the west to achieve T-Mobile's coverage objectives; and the Bus Yard was too close to an existing T-Mobile site on Old Route 79 in Madison and would result in redundant coverage. (T-Mobile 1, Exhibits J and Q)
58. Repeaters, microcell transmitters, distributed antenna systems and other types of transmitting technologies are not a practicable or feasible means to provide service within the coverage area that T-Mobile is seeking to serve due to significant terrain variations and tree cover in the area, as well as other practical considerations. (T-Mobile 1, p. 7)

Facility Description

59. The proposed facility would be located at 15 Orchard Park Road on a 3.51 acre parcel owned by 15 Orchard Park Road LLC. The property is used for a multi-unit self storage facility and a garage for truck trailers. It abuts the Amtrak rail line on its northerly boundary. (T-Mobile 1, pp. 8, 10; Exhibits B and M)
60. The property at 15 Orchard Park Road is located within a Light Industrial zoning district. Madison's zoning regulations do not directly address wireless telecommunications towers. (T-Mobile 1, p. 11; Bulk Filing – Town of Madison Zoning Regulations)
61. The height limit for towers in Light Industrial zoning districts is 150 feet. (Applicant's Letter dated February 3, 2010 – Attachment A: Section 2.7 of the Madison Zoning Regulations)
62. T-Mobile's proposed facility would be located in the southeastern corner of the host property. (T-Mobile 1, Exhibit B, Drawings A-1 and SP-1)
63. The proposed facility would consist of a 100-foot tall steel monopole tower within a 40-foot by 45-foot (1,800 square feet) compound that would be enclosed by an eight-foot chain link fence. T-Mobile would lease a total area of 2,009 square feet; 209 square feet of which would be an irregularly shaped area where the telco service backboard and utility transformer would be located. (See Figure 3) (T-Mobile 1, p. 10; Exhibit B, Drawing SP-2)
64. The overall height of the proposed tower with antennas and other appurtenances would be approximately 102 feet. (Tr. 1, pp. 101-102)
65. The proposed facility would be built with a retaining wall on its north, east, and south faces. (Tr. 1, p. 37)
66. The proposed facility would be located at 41° 16' 59" north latitude and 72° 37' 27.6" west longitude. Its ground elevation would be 20 feet above mean sea level (amsl). (T-Mobile 1, Exhibit R; Exhibit B, Drawing SP-1)
67. The proposed tower would be designed in accordance with the specifications of the Electronic Industries Association Standard ANSI/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures" consistent with the International Building Code. The diameter of the tower would be between 18 and 24 inches at its top and between 36 and 48 inches at its base. The tower would be designed to accommodate the antennas of four wireless carriers and municipal public safety antennas. (T-Mobile 1, p. 10; T-Mobile 3, A2)
68. T-Mobile's general practice is to design its towers to be expandable by 10 to 20 percent. (Tr. 1, p. 36)
69. Soil conditions in the vicinity of the proposed facility are capable of supporting a tower up to a height of 160 feet. (Pre-filed testimony of Scott Chasse; T-Mobile 6 - Geotechnical Engineering Report)

70. T-Mobile would install nine antennas (three per sector) at a centerline height of 100 feet above ground level (agl). (T-Mobile 1, p. 10)
71. For back-up power, T-Mobile would utilize a self-contained 48 VDC system with sealed batteries rated at an approximate 4 to 12 hour duration. (T-Mobile 3, A7)
72. Development of the proposed facility would require 130 cubic yards of fill for the compound with 30 cubic yards of crushed stone for the surface of the facility. The facility would also require 65 cubic yards of cut for a retaining wall and 135 cubic yards of cut for the utility trench. (T-Mobile 3, A3)
73. Vehicular access to the proposed facility would extend from Orchard Park Road over an existing paved driveway and parking lot. (T-Mobile 1, p. 10)
74. Utilities for the proposed compound would be extended underground from an existing transformer near the entrance to the host property on Orchard Park Road. (T-Mobile 1, p. 10; Exhibit B, Drawing SP-1)
75. T-Mobile does not anticipate a need for any blasting to develop the proposed facility. Rock chipping and/or hoe ramming could be required for the utility trench. (T-Mobile 3, A4)
76. The edge of the proposed compound would be approximately five feet from the nearest property line to the east and approximately 55 feet from same adjacent property's boundary to the south. The adjacent property is owned by Ray and Katherine McGetrick. (T-Mobile 1, Exhibit, Drawing SP-1)
77. The proposed tower's setback radius would extend to the east and south onto an adjacent property. The setback radius would extend approximately 83 feet at its widest onto the adjacent property. (T-Mobile 1, Exhibit B, Drawing SP-1)
78. T-Mobile would design a yield point into the tower at about the 83-foot height. (Tr. 1, p. 35)
79. There are 32 single-family residences and 10 condominium units within 1,000 feet of the proposed facility. (T-Mobile 1, Exhibit L; T-Mobile 3, A8)
80. The nearest residence to the proposed facility is located 239 feet to the southwest. It is owned by Jeffrey and Jennifer Rowell. (T-Mobile 1, Exhibit L and Exhibit B, Drawing A-1)
81. Land use in the vicinity of the proposed facility consists of a mix of residential and commercial/light industrial development to the east and west, undeveloped woodlands to the north and south, and the Amtrak railroad corridor to the north of the host property. (T-Mobile 1, Exhibit M, p. 1; Exhibit B, Drawing SP-1)

82. The estimated cost of the proposed facility, not including antennas and related equipment, is:

Tower and foundation costs	\$ 71,000
Site development costs	68,000
<u>Utility installation costs</u>	<u>48,000</u>
Total estimated costs	\$ 187,000
(T-Mobile 1, p. 20)	

83. T-Mobile's antennas and related ground equipment would cost an estimated \$75,000. (T-Mobile 3, A9)

Environmental Considerations

84. The proposed facility would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. (T-Mobile 1, Exhibit N-Letter from Deputy State Historic Preservation Officer)
85. There are no State and Federal listed species or significant natural communities in the vicinity of the proposed facility. (T-Mobile 1, Exhibit N-DEP Natural Diversity Database Map for Madison)
86. The proposed facility would not affect any of the "listed" categories of the National Environmental Policy Act (NEPA): wilderness preserves; endangered or threatened species; critical habitats; National Register historic districts, sites, buildings, structures or objects; Indian religious sites; flood plains; or federal wetlands. (T-Mobile 1, p. 20; Exhibit P)
87. The proposed facility is located within the coastal boundary as defined by the Connecticut Coastal Management Act (CCMA). There are no coastal resources located on the host property. No federal or state regulated tidal wetlands or watercourses are on the host property. The proposed facility would be located outside the 100-year and 500-year flood plains. The nearest tidal wetlands are associated with Bailey Creek and are located approximately 2,000 feet to the southwest. (T-Mobile 1, Exhibit N – Coastal Consistency Analysis)
88. Vegetation in the vicinity of the proposed facility is mixed deciduous hardwood species, many of which are mature oaks, with an average height approaching 75 feet. (Tr. 1, p. 30)
89. No trees would be removed to construct the proposed facility. (T-Mobile 1, p. 8)
90. There is a forested wetland system approximately 12 feet from the proposed facility's northeast corner at its closest point. (T-Mobile 1, p. 17; Exhibit B, Drawing SP-1)
91. Drainage from the proposed facility would not adversely impact the nearby wetland. (Tr. 1, pp. 45-46)

92. T-Mobile would establish and maintain appropriate soil erosion and sedimentation control measures, in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control established by the Connecticut Council for Soil and Water Conservation, in cooperation with the Connecticut Department of Environmental Protection, throughout the construction period of the proposed facility. (T-Mobile 1, pp. 17-18)
93. T-Mobile would take measures during construction of the proposed facility to comply with the conditions requested by the Madison Conservation Commission in order to reduce any potential for impact to the nearby wetland system. (T-Mobile 1, p. 18)
94. T-Mobile would stabilize its proposed facility with loam and a New England Conservation/Wildlife seed mix, which would provide a permanent cover of forbs, wildflowers, legumes, and grasses. This mix would add wildlife habitat value and good erosion control. (T-Mobile 5 – Pre-filed testimony of Dean Gustafson, p. 3)
95. T-Mobile evaluated its proposed facility for aeronautical safety and found that it did not require notice to the Federal Aviation Administration or marking and lighting. (T-Mobile 1, Exhibit R)
96. The cumulative worst-case maximum power density from the radio frequency emissions of the proposed T-Mobile antennas is calculated to be 0.10622 mW/cm² or 10.62% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in areas around the tower. (T-Mobile 1, Exhibit O)

Visibility

97. T-Mobile's proposed tower would be at least partially visible year-round from approximately 712 acres in the surrounding vicinity. The majority of this acreage occurs over the Cedar Island/East River/Neck River tidal marshes located between approximately 0.75 miles to two miles southwest of the proposed facility and/or over open water on Long Island Sound located approximately one to two miles to the south. These areas account for approximately 690 of the 712 acres with visibility. (See Figure 7) (T-Mobile 1, Exhibit M, p. 4)
98. There would be some small areas of year-round visibility along select portions of US Route 1 and Stony Lane located approximately 0.36 and 0.31 miles to the southeast, respectively, of the proposed facility. (T-Mobile 1, Exhibit M, p. 4)

99. The visibility of the proposed tower from different vantage points in the surrounding vicinity is summarized in the table below.

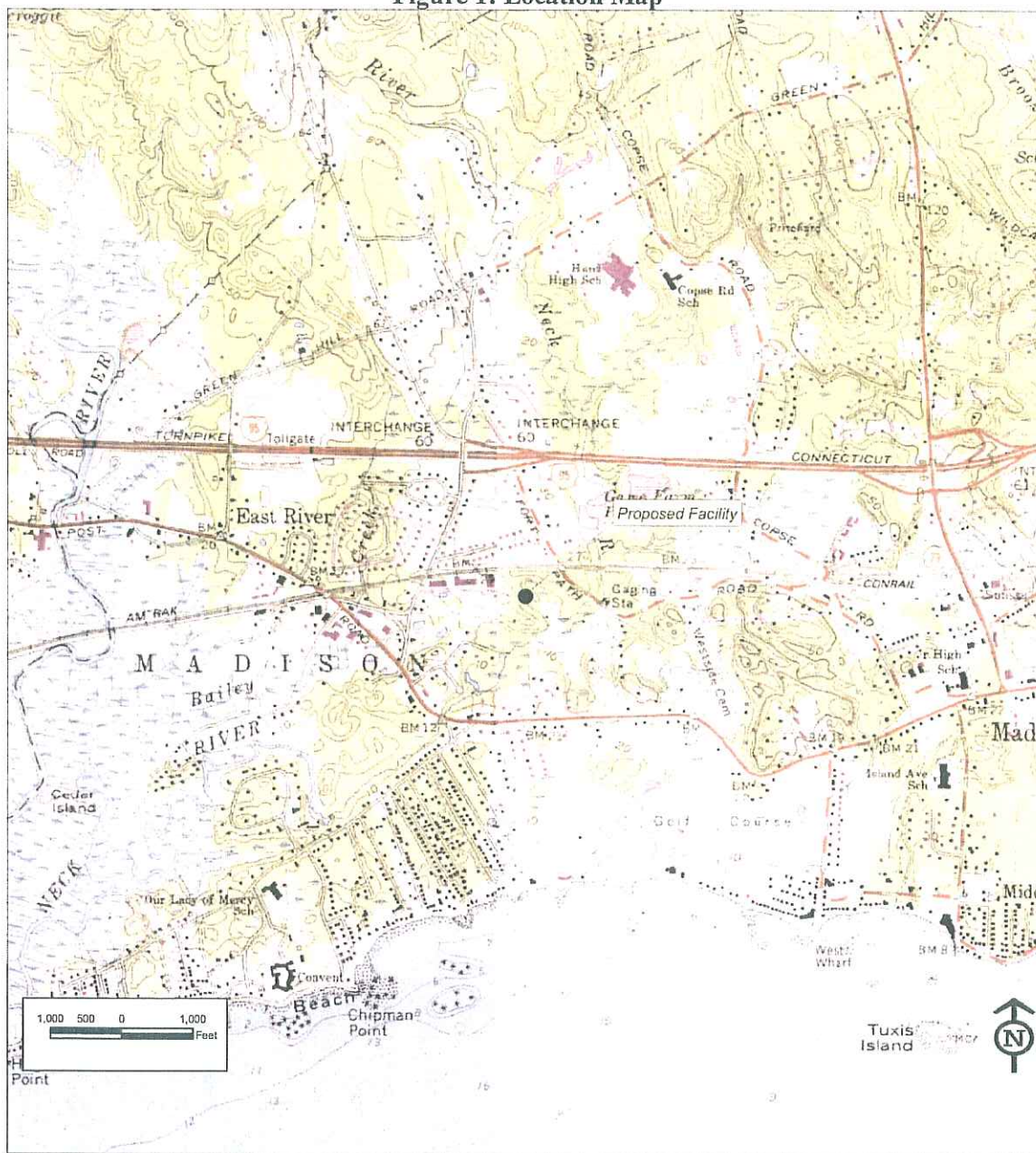
Location	Visible	Approx. Portion of (100') Tower Visible (ft.)	Approx. Distance and Direction to Tower
1 – US Route 1, west of Stony Lane	Yes	20'	1,900 feet; NW
2 – 26 Stony Lane	Yes	10'	1,600 feet; NW
3 – 25 Circle Beach Road	No	n/a	9,650 feet; NE
4 – Green Hill Road, @ High School	No	n/a	5,280 feet; SW
5 – US Route 1 @ Madison Town Center	No	n/a	7,400 feet; NW
6 – 57 West Wharf Road	No	n/a	5,500 feet; NW

(T-Mobile 1, Exhibit M: Visual Resource Evaluation Report – Photographic Documentation Views)

100. The proposed tower would be seasonally visible from approximately an additional 59 acres. These acres are generally limited to the general vicinity of the proposed facility, within approximately 0.35 miles of the site. (T-Mobile 1, Exhibit M, p. 5)
101. The proposed tower would not be visible from the Rockledge Drive vista, Tuxis Pond, or Tuxis Island. (T-Mobile 1, Exhibit M, p. 4)
102. The proposed tower would not be visible from the Madison Green Historic District. (T-Mobile 1, Exhibit Q, Letter to Madison Planning and Zoning Administrator, p. 3)
103. In mid-December of 2009, T-Mobile conducted another balloon flight to determine the potential visibility of a 120-foot and 140-foot tower. This balloon flight, which was conducted with leaf-off conditions, allowed T-Mobile to fine-tune its assessment of the proposed tower's visibility. (Tr. 1, pp. 39-40)
104. Based on the findings of the December balloon flight, three residences on Johnson Lane would have at least partial year-round views of the proposed 100-foot tower, and six residences would have seasonal views. The seasonal views would be through the existing trees between Johnson Lane and the proposed tower's location. (Tr. 1, p. 41)
105. One residential property on Route 1, south of the proposed site, would potentially have a year-round view of the proposed 100-foot tall tower. Two properties on Route 1, south of its intersection with Stony Lane, would have seasonal views from the front edge of the properties. (Tr. 1, p. 42)
106. Three residential properties on Stony Lane would have year-round views of the proposed 100-foot tower. Two residential properties on Stony Lane could have seasonal views. These views would be through vegetation and deciduous trees. (Tr. 1, pp. 42-43)
107. All three homes on Rowell Lane, which is accessed through the industrial park on Orchard Park Road, would have year-round views of the proposed tower. (Tr. 1, p. 43)

108. There are two homes on Fort Path Road which would have seasonal views of the proposed 100-foot tower through deciduous conifers. (Tr. 1, pp. 43-44)
109. The proposed 100-foot tower would not be visible from Mungertown Road, from Easterly Farms Road, or from Stonewall Lane. (Tr. 2, pp. 53-55)
110. A 120-foot tower at the proposed facility site would be visible year round from portions of Johnson Lane. Six residences on Johnson Lane would have seasonal views of a 120-foot tower. Most of these residences are located on the south side of Johnson Lane and have rear yards that have a line of sight to the facility. The views would be at or just above the tree canopy. (T-Mobile 4, A1)
111. A 140-foot tower at the proposed facility site would be visible year round from portions of Johnson Lane. Eight residences on Johnson Lane would have seasonal views of a 140-foot tower. Most of these residences are located on the south side of Johnson Lane and have rear yards that have a line of sight to the proposed facility. The views would extend at least 20 feet above the tree canopy. (T-Mobile 4, A1)
112. A 120-foot tower at the proposed facility site would be visible year round from approximately 1,091 acres. The majority of this acreage would be more than one mile away over open water on Long Island Sound and/or tidal marshes located to the southwest of the proposed facility. A tower at this height would also be visible year round from portions of Route 1, Stony Lane, Johnson Lane, Mungertown Road, Fort Path Road, and Green Hill Road. There could be some seasonal visibility from additional portions of Route 1, Johnson Lane, Stony Lane, Fort Path Road, and Stonewall lane. (T-Mobile 4, A2)
113. A 140-foot tower at the proposed facility site would be visible year round from approximately 1,371 acres. The majority of this acreage would be more than one mile away over open water on Long Island Sound and/or tidal marshes located to the southwest of the proposed facility. A tower at this height would also be visible year round from portions of Route 1, Stony Lane, Johnson Lane, Mungertown Road, Fort Path Road, and Green Hill Road. There could be some seasonal visibility from additional portions of Route 1, Johnson Lane, Stony Lane, Fort Path Road, and Stonewall lane. (T-Mobile 4, A2)

Figure 1: Location Map



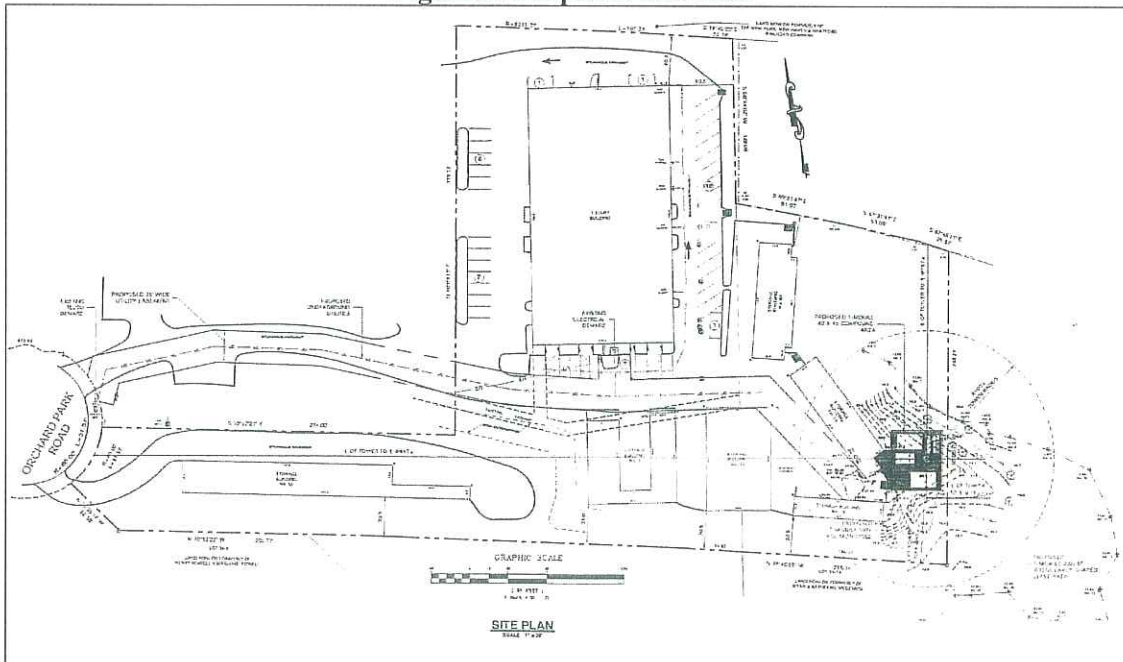
(T-Mobile 1, Exhibit C)

Figure 2: Aerial Photograph of Proposed Location



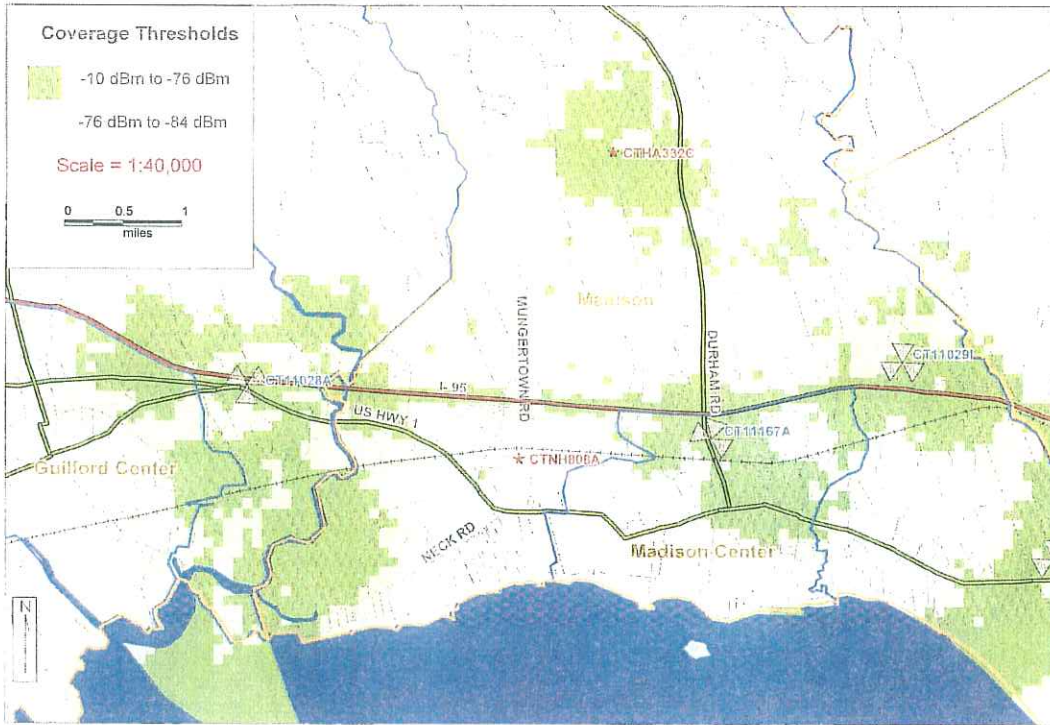
(T-Mobile 1, Exhibit B)

Figure 3: Proposed Site Plan



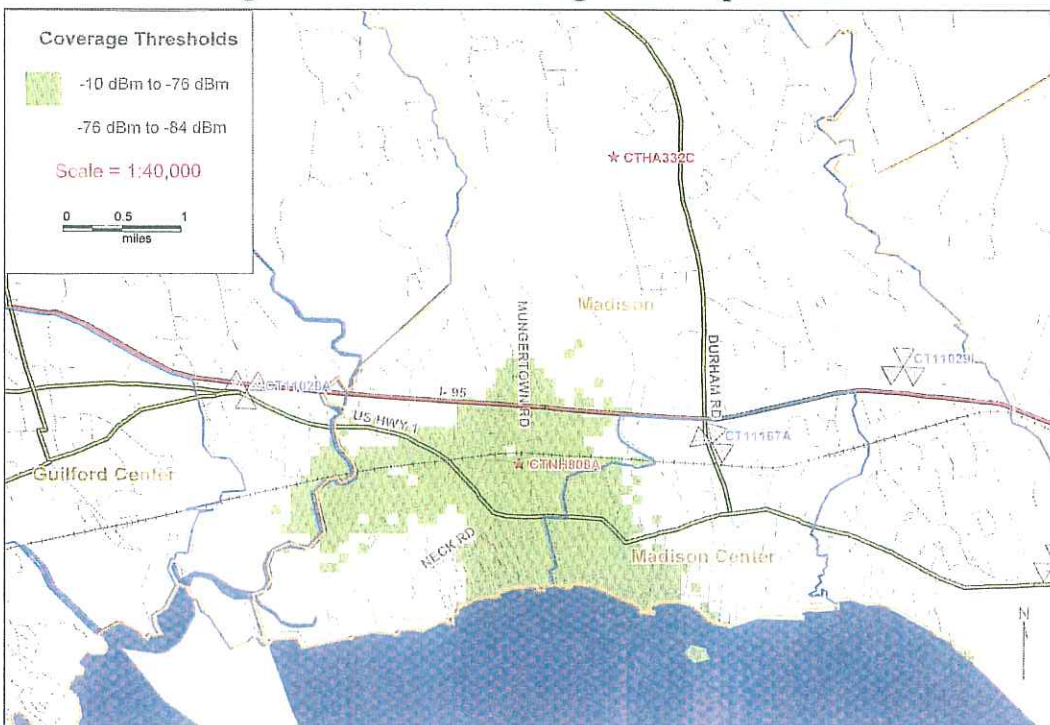
(T-Mobile 1, Exhibit B, Sheet SP-1)

Figure 4: T-Mobile's Existing Coverage (with Ridge Road Site)



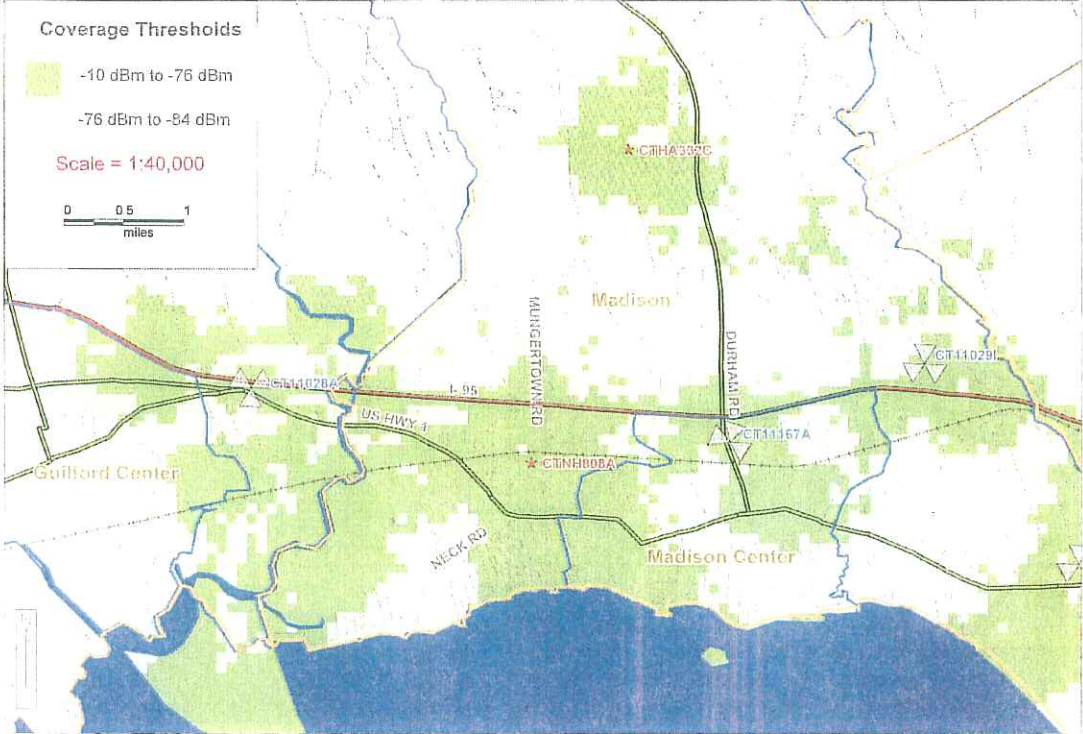
(T-Mobile 3, Attachment B)

Figure 5: T-Mobile's Coverage from Proposed Site



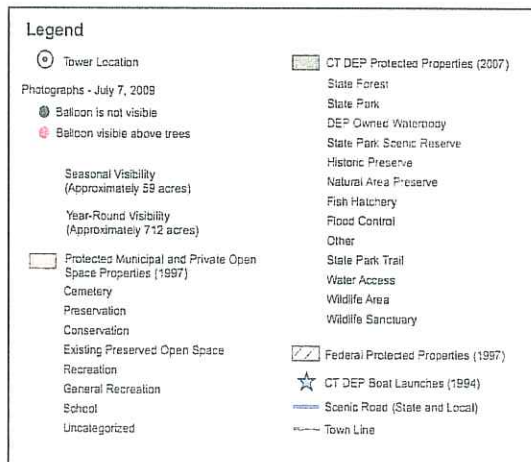
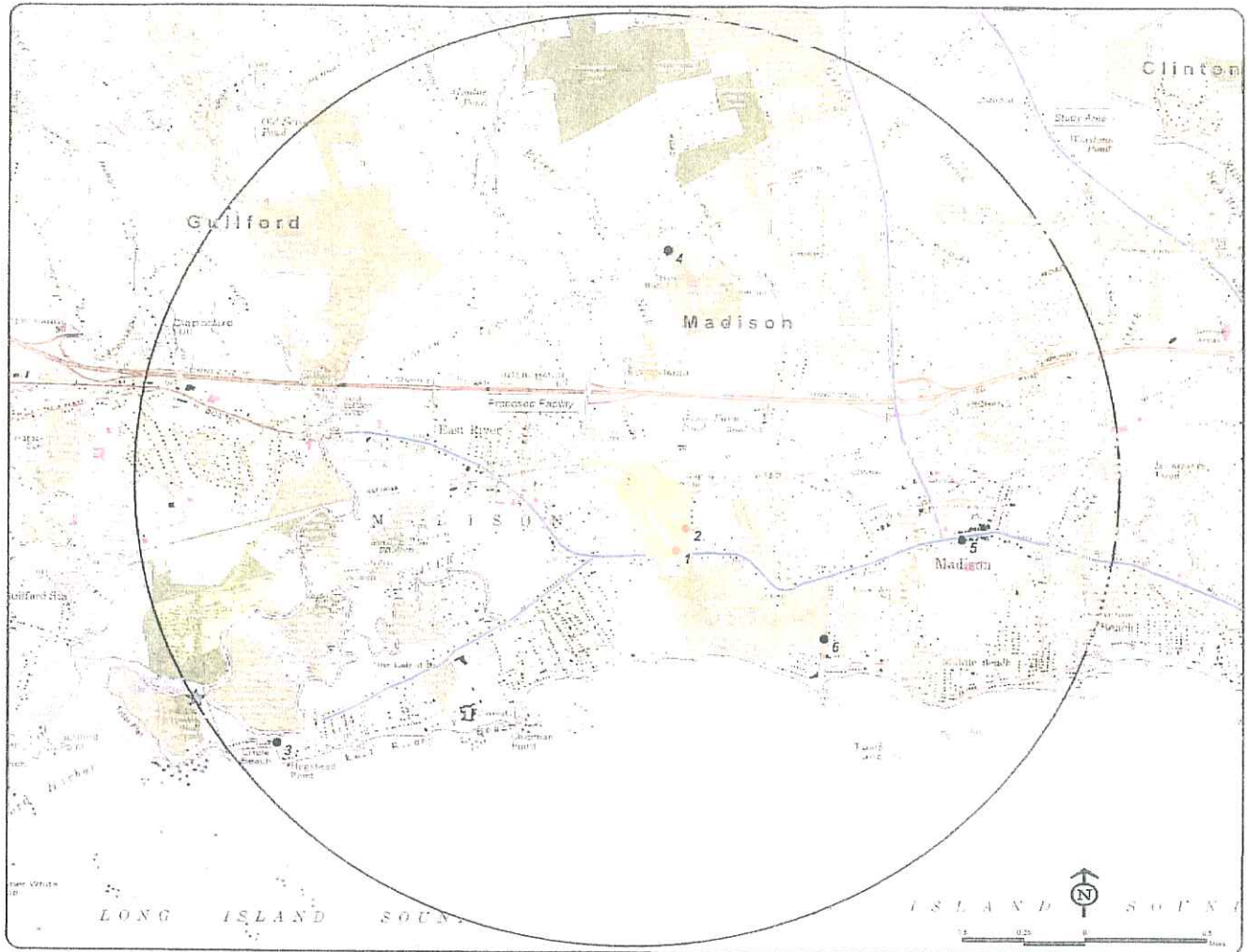
(T-Mobile 3, Attachment B)

Figure 6: Composite – T-Mobile’s Existing and Proposed Coverage



(T-Mobile 3, Attachment B)

Figure 7: Visual Analysis of Proposed 100-foot Tower



(T-Mobile 1, Exhibit M – Visual Resource Evaluation Report)