



**TECHNICAL REPORT  
to the  
TOWN OF MADISON**

**OMNIPOINT COMMUNICATIONS, INC.  
(T-MOBILE)**

**PROPOSED MADISON  
MONOPOLE TOWER TELECOMMUNICATIONS FACILITY**

**7 ORCHARD PARK ROAD  
MADISON, CONNECTICUT**

*Omnipoint Communications, Inc.  
35 Griffin Road South  
Bloomfield, Connecticut 06002*

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## Introduction

Omnipoint Communications, Inc., a subsidiary of T-Mobile USA, Inc., d/b/a T-Mobile ("T-Mobile") hereby submits this Technical Report to the Town of Madison pursuant to Connecticut General Statutes § 16-50f. T-Mobile proposes to install a wireless telecommunications facility (the "Facility") on an approximately 3.5 acre parcel located at 7 Orchard Park Road and owned by 15 Orchard Park RD LLC ("Orchard Park Road Site" or "Site"). The Facility will consist of a 100 ft monopole structure (the "Tower") with antennas mounted at a centerline of approximately 100 ft AGL and related equipment at the base of the tower, on a concrete equipment pad within the proposed compound area. The Facility, if approved, would provide wireless communications service in this area of Madison.

The purpose of this Technical Report is to provide the Town of Madison with information concerning the need for the proposed Facility (Section 1), the site selection process (Section 2), the Facility design and any environmental effects associated with the proposed Facility (Section 3).

Correspondence and/or communications regarding this Technical Report should be addressed to the attorneys for the applicant:

Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604  
(203) 368-0211

Attention: Julie D. Kohler, Esq.  
Jesse A. Langer, Esq.

## SECTION 1

### Site Justification

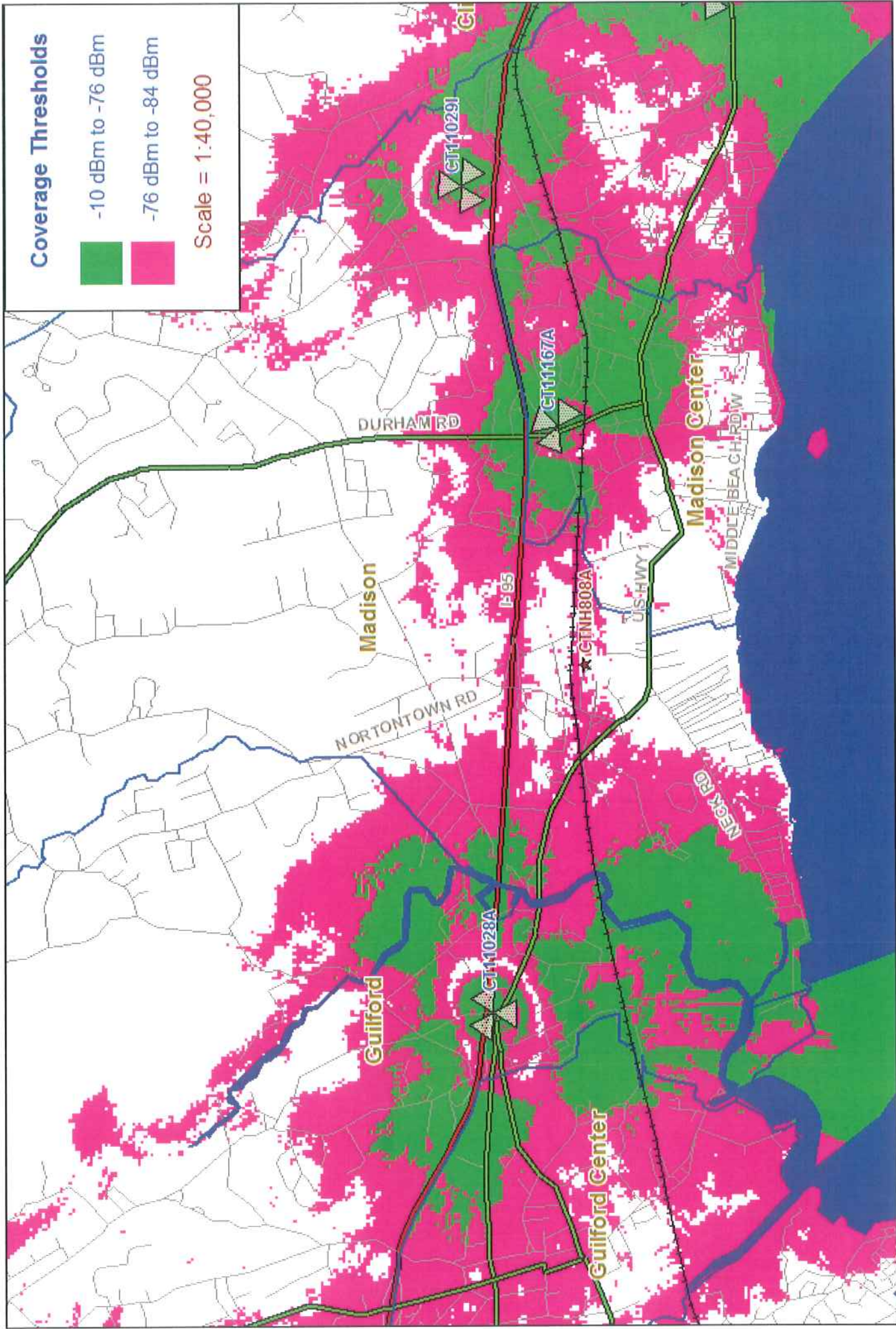
The proposed Orchard Park Road Site is necessary to enhance wireless service availability to existing and future T-Mobile wireless device users. Enhanced coverage provided by the Facility will allow T-Mobile subscribers to use voice and data services reliably as well as to connect to Emergency 911 services. The intended coverage area of the Facility includes Route 1, Neck Road, Mungertown Road and Interstate 95 in Madison as well as the Amtrak Rail Line that passes through this area. Additionally, the proposed Facility will provide capacity relief for the current sites that presently cover this area from outer lying areas.

Included herein are propagation plots prepared by T-Mobile that depict (1) coverage from existing and approved surrounding sites; (2) predicted coverage from the proposed Site with antennas mounted at a centerline of approximately 100 ft above grade level ("AGL"); and (3) coverage from the proposed Site with existing and approved sites.

Together, these propagation plots clearly demonstrate the need for a site in the area and the effectiveness of the proposed Site in meeting the need for wireless service in this area of Madison.

# **ATTACHMENT A**



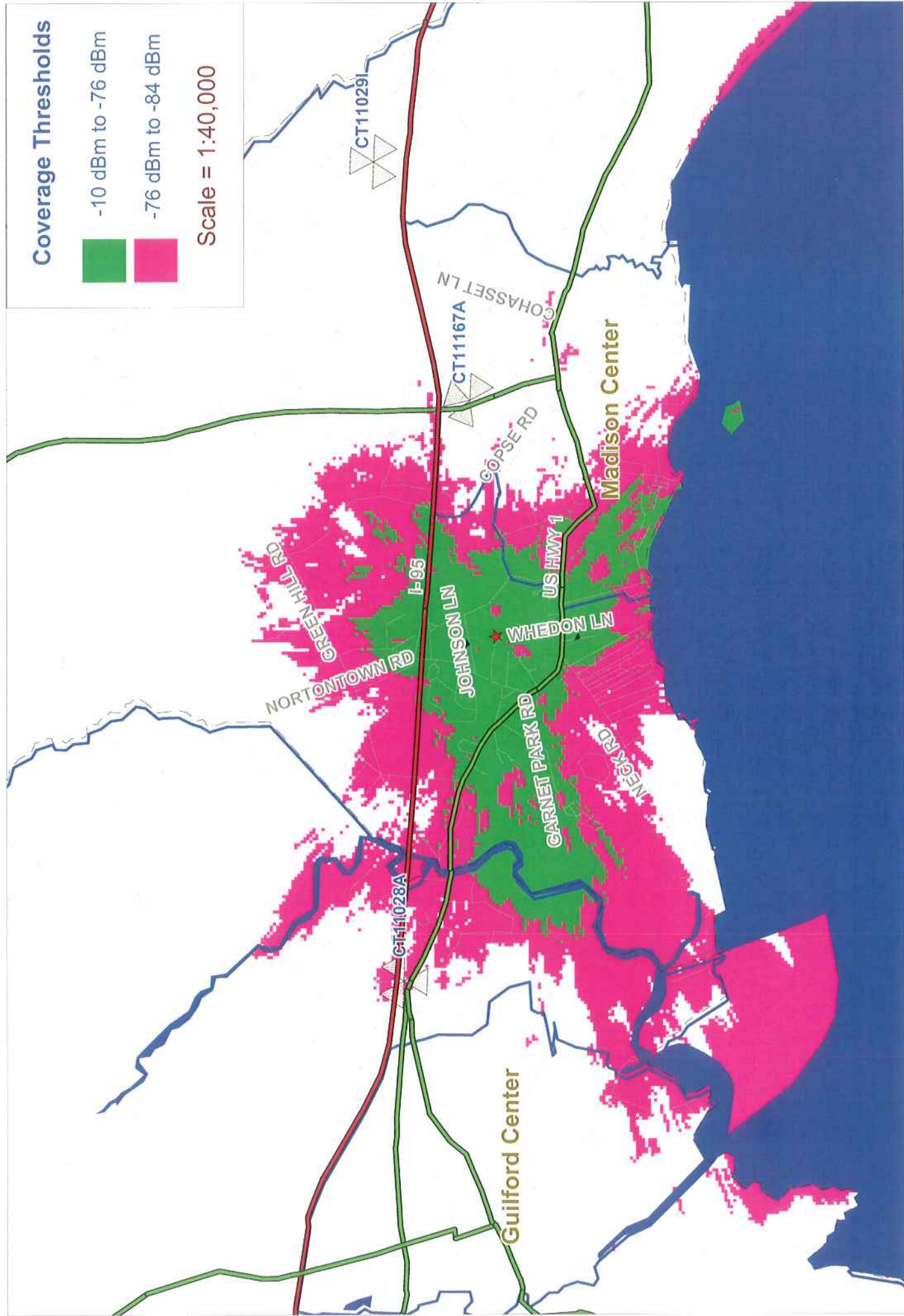


Existing T-Mobile On Air Coverage

- T-Mobile -



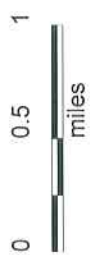




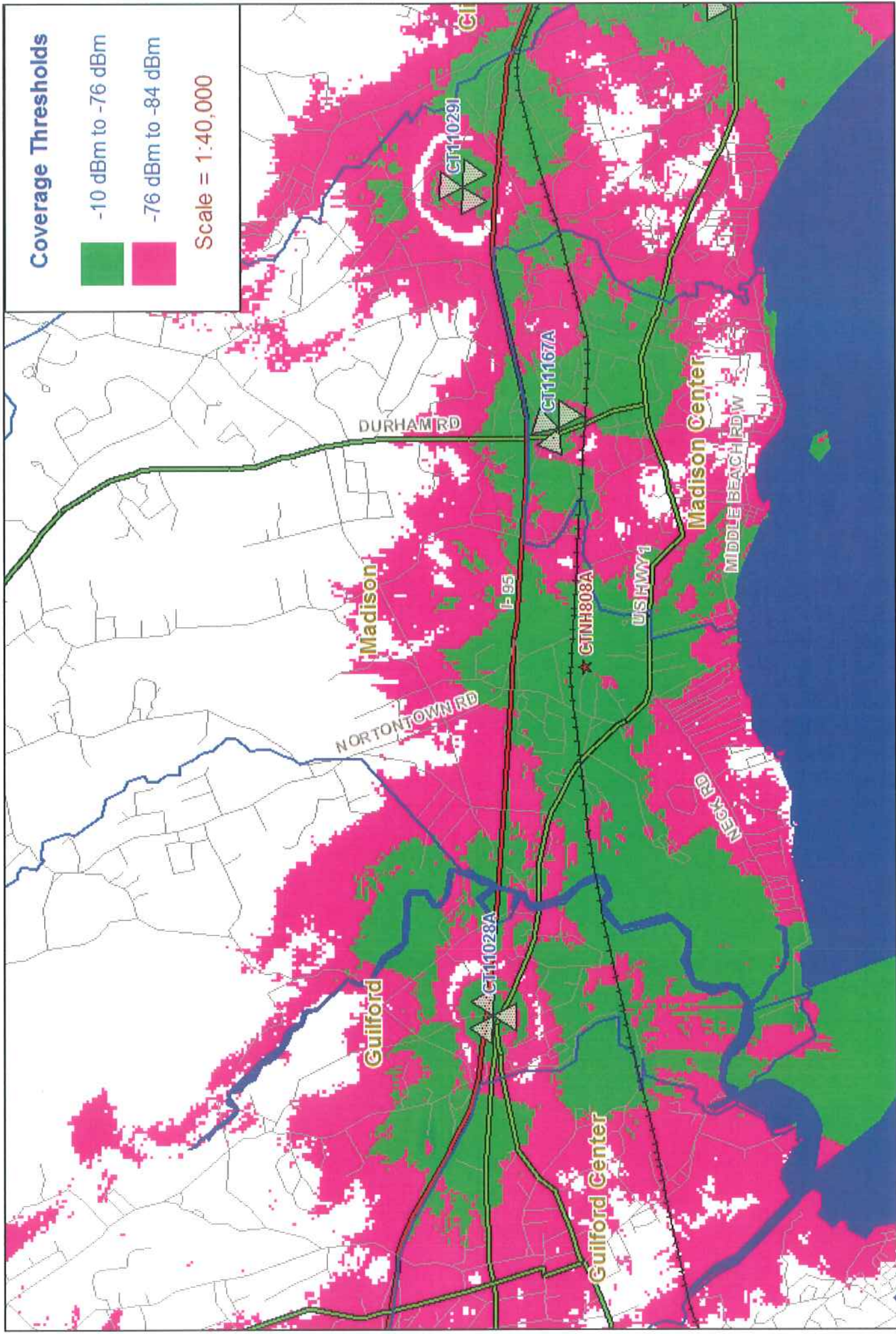
**Coverage Thresholds**

- 10 dBm to -76 dBm
- 76 dBm to -84 dBm

Scale = 1:40,000







Existing T-Mobile On Air Coverage  
With CTNH808A @ 100' AGL

- T-Mobile -





## SECTION 2

### Site Search Process and Selection

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the applicant to submit a statement that describes “the narrowing process by which other possible sites were considered and eliminated.” In accordance with this requirement, the description of the general site search process, the identification of the target search area and the alternative locations considered for development of the proposed Facility are provided below.

As an FCC licensed wireless carrier, T-Mobile decides to seek out a site in an area based upon the needs of its wireless infrastructure and extensive research of the subject area. T-Mobile chooses a target area central to the area in which it has identified coverage and/or capacity needs. The area targeted is the geographical location where the installation of a site would, based on general radio frequency engineering and system design standards, likely address the identified problem. T-Mobile’s goal is to locate sites that will remedy coverage or capacity issues, while resulting in the least environmental impact. In this case, T-Mobile has searched for a site in this area for several years, and has identified the Orchard Park Road Site as the best possible location for a wireless facility.

T-Mobile is sensitive to State and local desires to minimize the construction of new towers, and it does not pursue development of a new facility where an acceptable existing structure can be found. In general, T-Mobile’s site acquisition personnel first study the area in and near the search ring to determine whether any suitable structure exists. If T-Mobile cannot find a structure with appropriate height and structural capabilities, it turns to industrial/commercial areas or individual parcels that have appropriate environmental and land use characteristics. The list of potential locations is limited by the willingness of property owners to make their property available. Radio frequency engineers study potentially suitable and available locations to determine whether the locations will meet the technical requirements for a site in the area. Analysis of potential environmental effects and benefits may further narrow the alternatives. The weight given relevant factors varies for each search, depending on the nature of the area and the availability of potential sites.

In the area of Madison, which is the subject of this site search, there are no existing towers, transmission line structures or other suitable structures. Moreover, any existing towers are too far from the target area to provide coverage specifically to the target area. The nearest towers and suitable structures are already in use by T-Mobile. Finally, the Site abuts the Amtrak Rail Line, which is a component of the coverage goal.

The locations considered and the reasons locations other than the proposed Orchard Park Road Site were not selected are outlined below:

1. USI Company, 98 Fort Path Road. This site is approximately .5 miles to the east of the target area. The site hosts a three story commercial office building, which abuts the Amtrak Rail Line. The ground elevation is approximately 12' lower than the proposed site. T-Mobile radio frequency engineers reviewed this property and determined that the rooftop is too low to afford proper coverage.

2. 170 Fort Path Road. This site is approximately .25 miles to the east of the target area. There is a 20 foot commercial building on the site. T-Mobile radio frequency engineers reviewed site and determined that the rooftop was too low to afford adequate coverage. This site is also owned by 15 Orchard Park RD LLC. The owner, however, does not want a tower on this parcel.

3. 150 Mungertown Road. This site also hosts a 20 foot commercial building. T-Mobile radio frequency engineers reviewed site and determined that the rooftop was too low to afford adequate coverage. This site does not have adequate screening from existing trees. This site is also owned by 15 Orchard Park RD LLC. The owner, however, does not want a tower on this parcel.

Consequently, T-Mobile has determined that the property owned by 15 Orchard Park RD LLC at 7 Orchard Park Road (the "Property") is superior to other properties in the area. The Property is zoned as light industrial (LI) and is 3.51 acres. Access to the Property is across an existing paved parking lot. It is not necessary to remove any trees for the proposed Facility. The Property is set back approximately 1500 feet from Mungertown Road with excellent screening from mature trees. The Property is currently used as a storage facility and garage for truck trailers. It hosts multiple storage facilities and office buildings, the latter of which are approximately twenty feet tall.

**SECTION 3**

**PROPOSED SITE**

**7 Orchard Park Road  
Madison, Connecticut**

Land of  
15 Orchard Park Rd LLC

Assessor's Parcel ID  
Map 36/Lot 3  
3.51 Acres

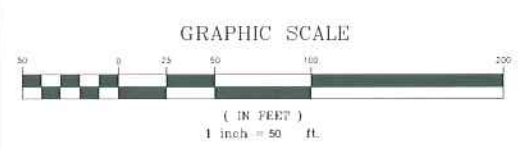
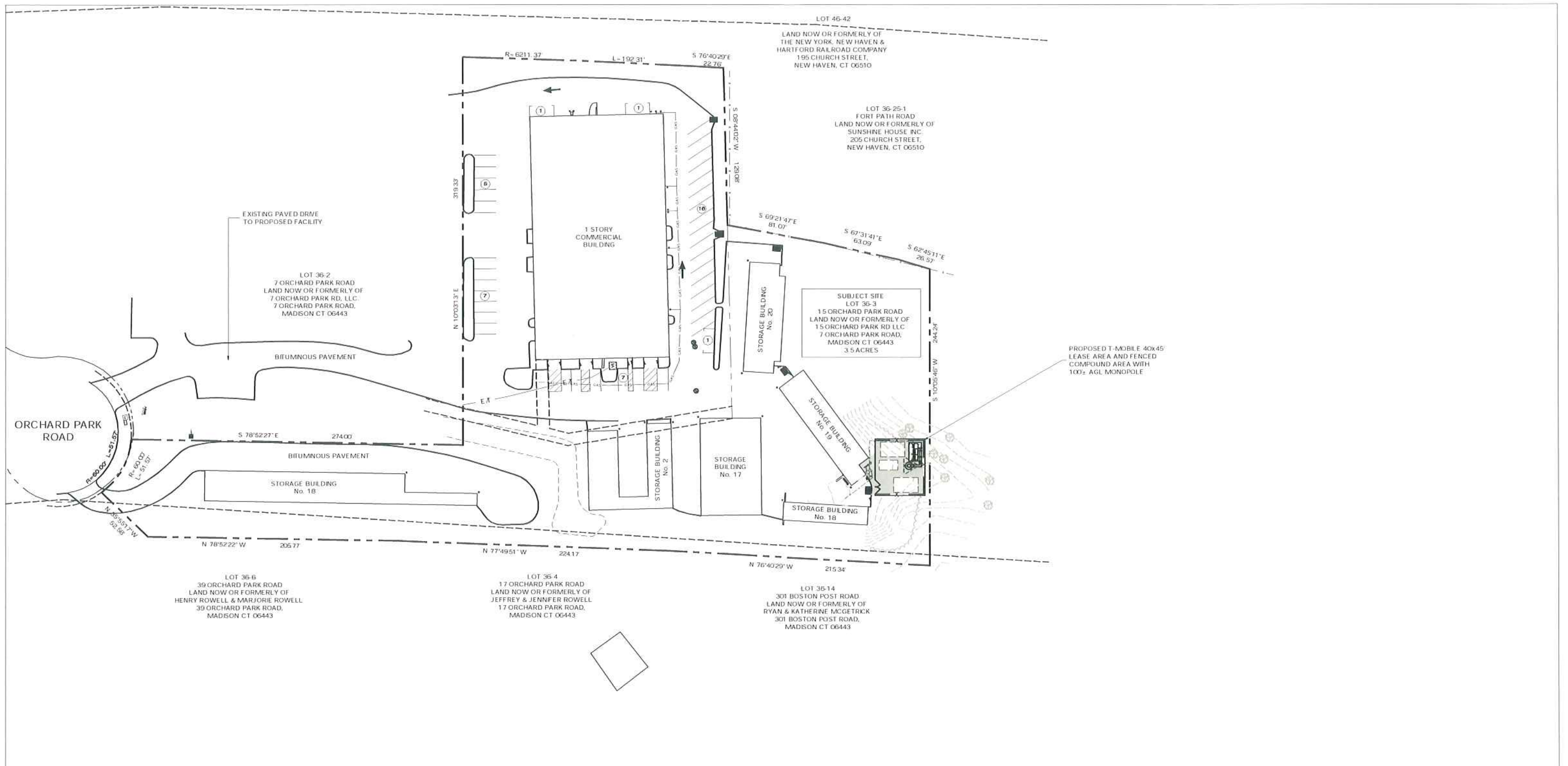


## GENERAL FACILITY DESCRIPTION

The proposed Orchard Park Road Site is an 1800 square foot leased area located in the south easterly portion of an approximately 3.5 acre parcel at 7 Orchard Park Road in Madison. The Property is used by the owner as a storage facility and location to store truck trailers. The Facility would consist of a 100 ft monopole structure with antennas mounted on standoff arms. The monopole would accommodate 3 additional sets of antennas.

Related equipment cabinets would be placed within the compound and would be surrounded by an 8 ft high chain link fence. Vehicle access to the Site would extend easterly across the Site via the existing paved parking lot. Underground utility connections would extend from existing service originating at Orchard Park Road.

# **ATTACHMENT B**



**ABUTTERS MAP**  
SCALE: 1" = 50'

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<b>T-MOBILE SITE NUMBER:</b> CTNH808A  <b>APT FILING NUMBER:</b> CT-255T-340   <b>35 GRIFFIN ROAD</b> <b>BLOOMFIELD, CT 06002</b> <b>OFFICE: (860)-692-7100</b>	<b>PERMITTING DOCUMENTS</b>  <b>AMTRAK MADISON</b> <b>7 ORCHARD PARK ROAD</b> <b>MADISON, CT 06443-2273</b>	<b>ABUTTERS MAP</b>  APT FILING NUMBER: CT-255T-340 APT DRAWING NUMBER: CTNH808 A-1.DWG DRAWN BY: RCB CHECKED BY: SMC
	<b>DESIGN TYPE:</b>  <b>RAW LAND</b>	
<b>ALL-POINTS TECHNOLOGY CORPORATION, P.C.</b> 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419 PHONE: (860)-663-1697 FAX: (860)-663-0935	<b>REVISIONS:</b> REV.0: 05/15/09: FOR REVIEW: SMC REV.1: 05/20/09: FOR REVIEW: SMC REV.2: 05/26/09: FINAL REV.3: REV.4:	SHEET NUMBER:  <b>A-1</b>



**NOTES**

1. THIS MAP AND SURVEY HAVE BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT, AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE TYPE OF SURVEY PERFORMED AND THE MAPPED FEATURES DEPICTED HEREON ARE IN ACCORDANCE WITH THE REQUIREMENTS OF A PROPERTY SURVEY.

BOUNDARY DETERMINATION CATEGORY: DEPENDENT RESURVEY OF REFERENCE MAP 'A', LOT 3 AND REFERENCE MAP 'B'.

HORIZONTAL ACCURACY CLASS: A-2

2. VERTICAL ACCURACY CLASS: T-2. ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM 1929. TOPOGRAPHIC INFORMATION IS DEPICTED ONLY FOR A PORTION OF THE PROPERTY.

3. LOT AREA = ± 152,710 SQUARE FEET OR 3.5057 ACRES.

4. ALL MONUMENTATION FOUND OR SET ON THE SUBJECT PREMISES IS DEPICTED HEREON.

5. NORTH REFERS TO REFERENCE MAPS A & B.

6. TREES HAVING A DIAMETER OF 10 INCHES AND LARGER DEPICTED ONLY ON A PORTION OF THE PROPERTY.

7. PARCEL OWNER OF RECORD: 15 ORCHARD PARK RD, LLC  
7 ORCHARD PARK ROAD  
MADISON, CT 06443

8. WETLAND FLAGS SET BY: VANASSE, HANGEN, BRUSTLIN, INC.

**NOTES CONTINUED**

9. REFERENCE MAPS

A) LINE REVISION, LOT 3 - ORCHARD PARK & OTHER LAND OF MLANO, ORCHARD PARK ROAD, MADISON, CONN. SCALE 1"=50', DATED MARCH 7, 1983, PREPARED BY ERIC G. ANDERSON, AND FILED AS MAP NO. 2747 WITH THE MADISON TOWN CLERK.

B) PROPERTY SURVEY, PROPERTY TO BE ANNEXED TO LOT 3 - ORCHARD PARK, EAST OF ORCHARD PARK ROAD, MADISON, CONN. SCALE 1"=50', DATED JANUARY 24, 2002, PREPARED BY ANDERSON ENGINEERING & SURVEYING ASSOCIATES, AND FILED AS MAP NO. 4603 WITH THE MADISON TOWN CLERK.

C) FINAL PLAN, ORCHARD PARK, MADISON, CONNECTICUT, SCALE 1"=50', LAST REVISED 05/19/00, PREPARED BY ERIC G. ANDERSON, AND FILED AS MAP NO. 2614 WITH THE MADISON TOWN CLERK.

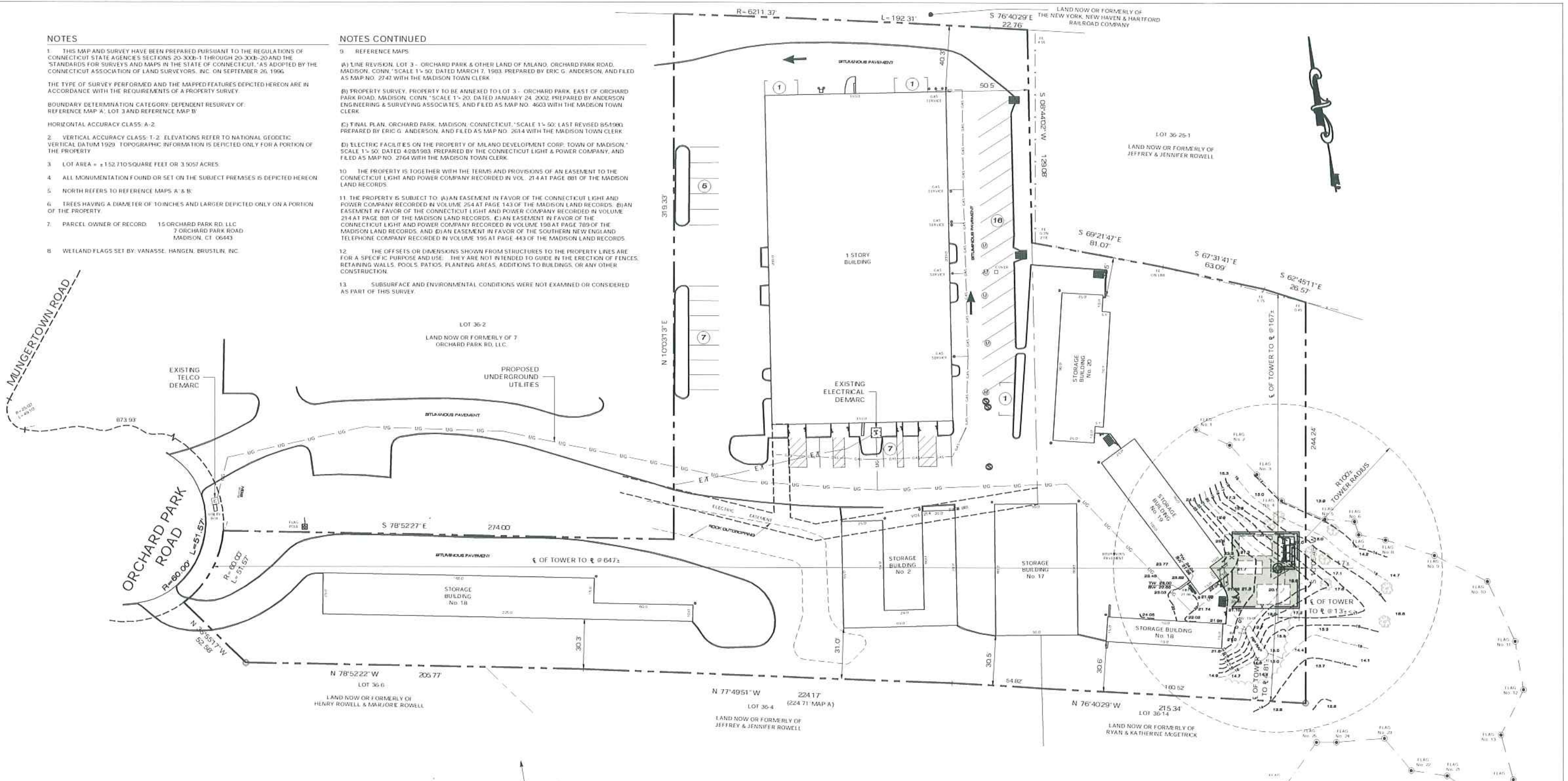
D) ELECTRIC FACILITIES ON THE PROPERTY OF MLANO DEVELOPMENT CORP., TOWN OF MADISON, SCALE 1"=50', DATED 4/28/983, PREPARED BY THE CONNECTICUT LIGHT & POWER COMPANY, AND FILED AS MAP NO. 2764 WITH THE MADISON TOWN CLERK.

10. THE PROPERTY IS TOGETHER WITH THE TERMS AND PROVISIONS OF AN EASEMENT TO THE CONNECTICUT LIGHT AND POWER COMPANY RECORDED IN VOL. 214 AT PAGE 881 OF THE MADISON LAND RECORDS.

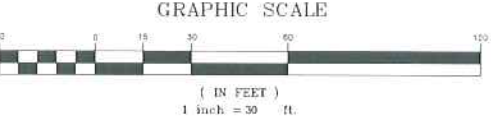
11. THE PROPERTY IS SUBJECT TO: A) AN EASEMENT IN FAVOR OF THE CONNECTICUT LIGHT AND POWER COMPANY RECORDED IN VOLUME 254 AT PAGE 143 OF THE MADISON LAND RECORDS; B) AN EASEMENT IN FAVOR OF THE CONNECTICUT LIGHT AND POWER COMPANY RECORDED IN VOLUME 214 AT PAGE 881 OF THE MADISON LAND RECORDS; C) AN EASEMENT IN FAVOR OF THE CONNECTICUT LIGHT AND POWER COMPANY RECORDED IN VOLUME 198 AT PAGE 789 OF THE MADISON LAND RECORDS; AND D) AN EASEMENT IN FAVOR OF THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY RECORDED IN VOLUME 195 AT PAGE 443 OF THE MADISON LAND RECORDS.

12. THE OFFSETS OR DIMENSIONS SHOWN FROM STRUCTURES TO THE PROPERTY LINES ARE FOR A SPECIFIC PURPOSE AND USE. THEY ARE NOT INTENDED TO GUIDE IN THE ERECTION OF FENCES, RETAINING WALLS, POOLS, PATIOS, PLANTING AREAS, ADDITIONS TO BUILDINGS, OR ANY OTHER CONSTRUCTION.

13. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY.



**SITE PLAN**  
SCALE: 1" = 30'



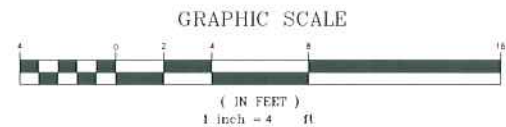
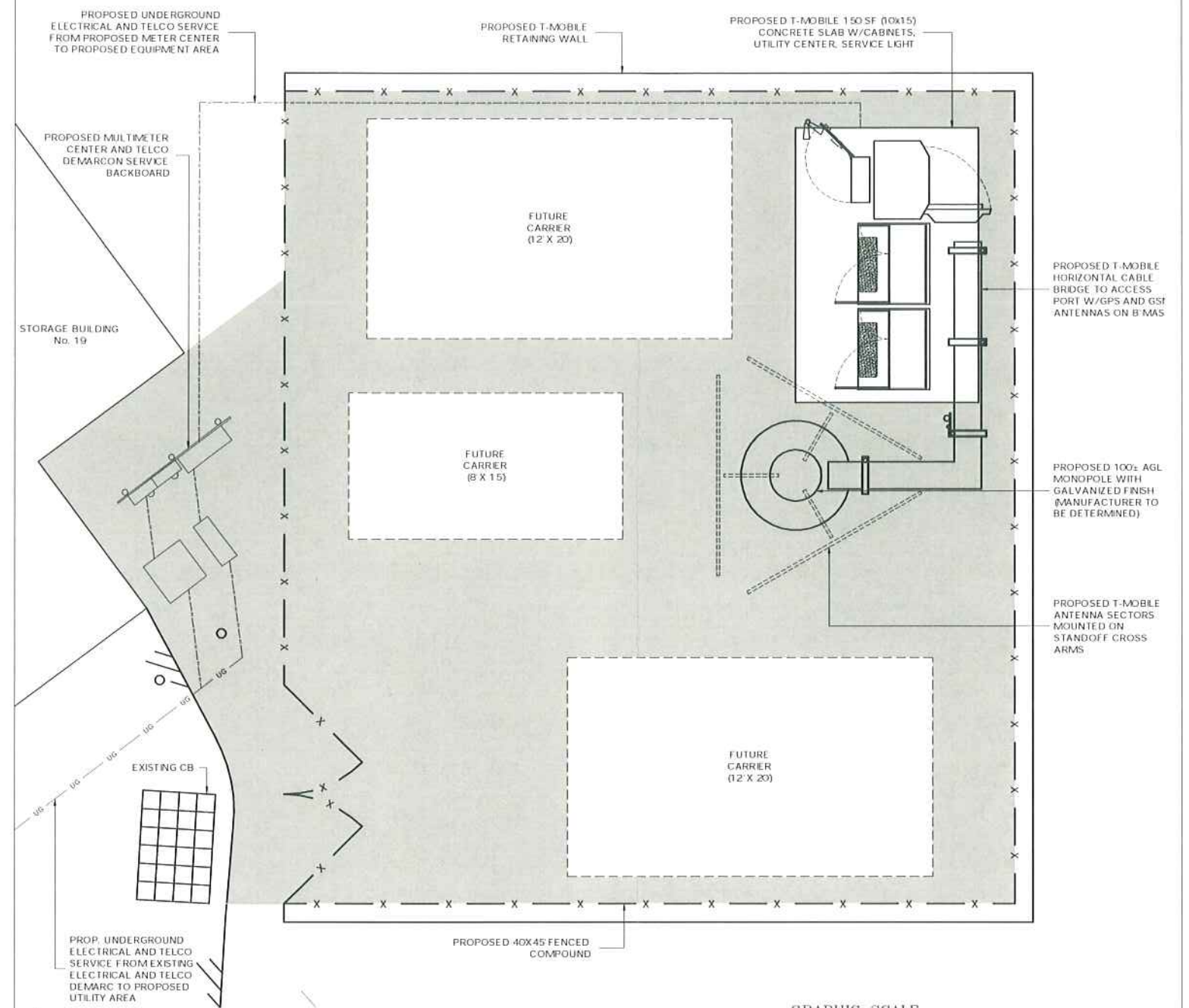
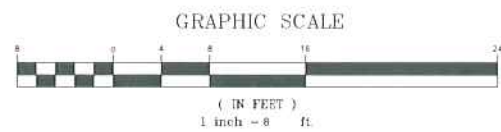
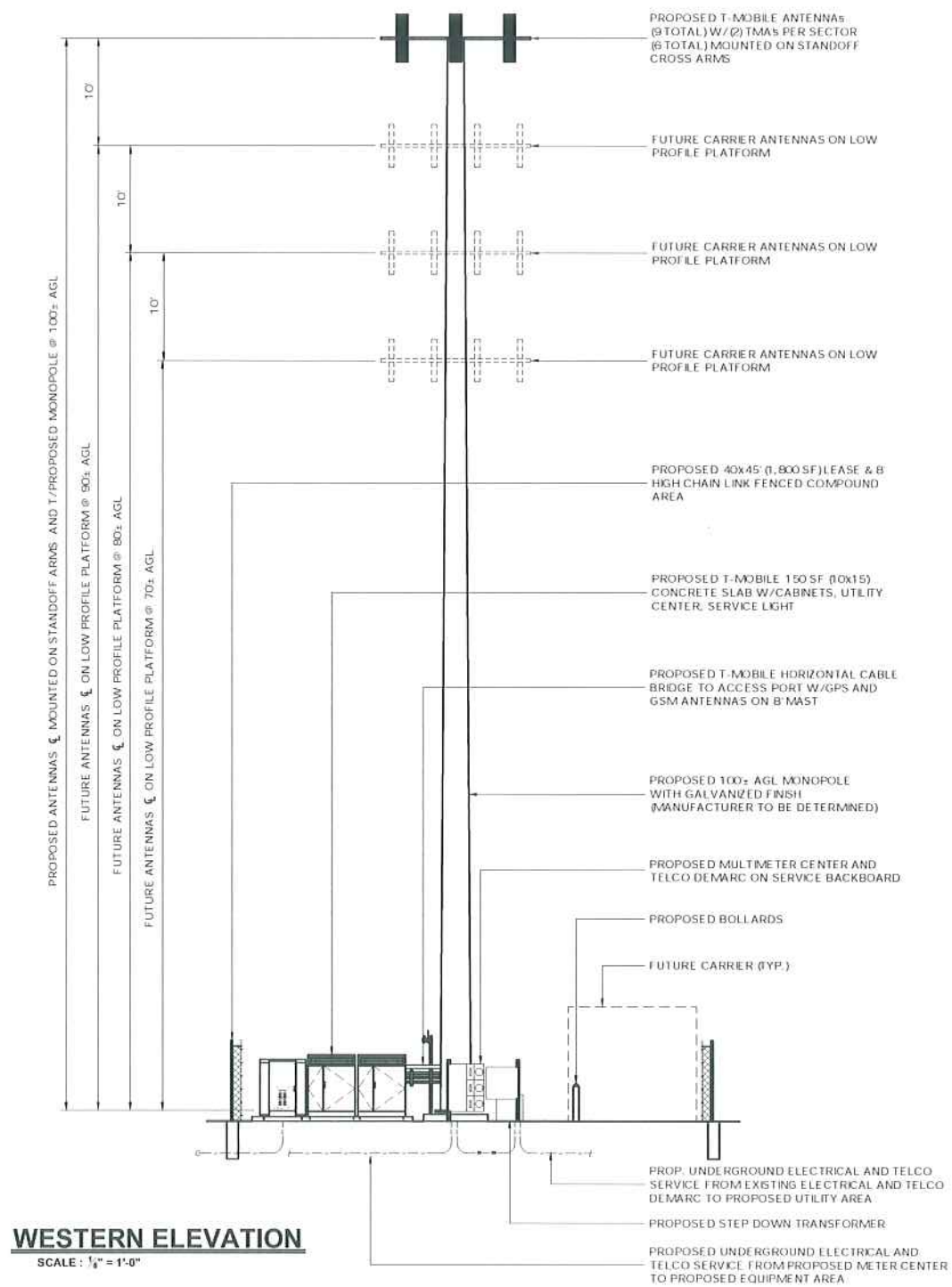
LEGEND	
	CURB
	DROP CURB
	WALL
	STONE WALL
	EDGE OF PAVEMENT
	OVERHEAD WIRES
	STRUCTURE - MANHOLE
	GAS VALVE
	WATER VALVE
	HANDICAP PARKING
	PARKING STALL COUNT
	DRAINAGE INLET / STRUCTURE
	CATCH BASIN
	SIGN
	LIGHT POLE
	UTILITY POLE
	STOCKADE FENCE
	CONTOURS
	TOP/BOTTOM OF CURB
	SPOT ELEVATION
	CONCRETE
	GUY WIRE

NO TREES TO BE REMOVED FOR PROPOSED FACILITY

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<p>T-MOBILE SITE NUMBER: <b>CTNH808A</b></p> <p>APT FILING NUMBER: <b>CT-255T-340</b></p> <p><b>T-Mobile</b></p> <p>35 GRIFFIN ROAD BLOOMFIELD, CT 06002 OFFICE: (860)-692-7100</p> <p><b>ALL-POINTS TECHNOLOGY CORPORATION, P.C.</b> 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419 PHONE: (860)-663-1697 FAX: (860)-663-0935</p>	<p>PERMITTING DOCUMENTS</p> <p><b>AMTRAK MADISON</b> 7 ORCHARD PARK ROAD MADISON, CT 06443-2273</p> <p>DESIGN TYPE: <b>RAW LAND</b></p> <p>REVISIONS:</p> <p>REV. 0: 05/15/09: FOR REVIEW: SMC REV. 1: 05/20/09: FOR REVIEW: SMC REV. 2: 05/26/09: FINAL REV. 3: REV. 4:</p>	<p><b>SITE PLAN</b></p> <p>APT FILING NUMBER: CT-255T-340 APT DRAWING NUMBER: CTNH808 SP-1 DRAWN BY: RCB CHECKED BY: SMC</p> <p>SCALE: AS NOTED DATE: 04/27/09</p> <p>SHEET NUMBER: <b>SP-1</b></p> <p>STATE OF CONNECTICUT REGISTERED PROFESSIONAL ENGINEER</p>
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	<b>DESIGN TYPE:</b> <b>RAW LAND</b>	<b>APT FILING NUMBER:</b> CT-255T-340 <b>APT DRAWING NUMBER:</b> CTNH808 SP-1 DWG <b>DRAWN BY:</b> AAJ <b>CHECKED BY:</b> SMC
<b>ALL-POINTS TECHNOLOGY CORPORATION, P.C.</b> <b>3 SADDLEBROOK DRIVE</b> <b>KILLINGWORTH, CT 06419</b> <b>PHONE: (860)-663-1697</b> <b>FAX: (860)-663-0935</b>	<b>REVISIONS:</b> REV. 0: 05/15/09: FOR REVIEW: SMC REV. 1: 05/20/09: FOR REVIEW: SMC REV. 2: 05/26/09: FINAL REV. 3: REV. 4:	<b>SHEET NUMBER:</b> <b>SP-2</b>



## SITE EVALUATION REPORT

### I. LOCATION

- A. COORDINATES: 41°16'59.10" N  
72°37'23.07" W
- B. GROUND ELEVATION: 21'± AMSL
- C. USGS MAP: USGS 7.5 quadrangle for Guilford (1984) and Clinton (1984)
- D. SITE ADDRESS: 7 Orchard Park Road  
Madison, CT 06443
- E. ZONING WITHIN ¼ MILE OF SITE: The area is zoned residential to the north, light industrial and residential to the south, light industrial to the east and light industrial and commercial to the west.

### II. DESCRIPTION

- A. SITE SIZE: 40' x 45'
- B. TOWER TYPE/HEIGHT: 100' Monopole
- C. SITE TOPOGRAPHY AND SURFACE: Subject site is located adjacent to an existing bituminous parking area for a self storage facility in a grassed/wooded area. Topography slopes from east to west (from elevation 23 AMSL to elevation 17 AMSL).
- D. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: Existing terrain is a grassed/wooded area adjacent to a bituminous parking area and a vacant wooded area. There is an existing wetland area located approximately 12 ft northeast of the proposed Facility.
- E. LAND USE WITHIN ¼ MILE OF SITE: Amtrak right of way and single family residential to the north. Single family residential and vacant land to the south. Commercial and vacant land to the east. Light industrial and residential to the west.



III. FACILITIES

- A. POWER COMPANY: CL&P
- B. POWER PROXIMITY TO SITE: 285'±
- C. TELEPHONE COMPANY: AT&T
- D. PHONE SERVICE PROXIMITY: 680'±
- E. VEHICLE ACCESS TO SITE: Existing bituminous driveway and parking area.
- F. OBSTRUCTION: N/A
- G. CLEARING AND FILL REQUIRED:

Total area of disturbance: 6,000 sf.  
No trees will need to be removed. The Site is balanced with approx. 10 cubic yards of cut and 130 cubic yards of fill.  
Approximately 125 linear feet of retaining wall is required along the perimeter of the compound.

IV. LEGAL

- A. PURCHASE [ ] LEASE [X]
- B. OWNER: 15 Orchard Park Road, LLC
- C. ADDRESS: 7 Orchard Park Road  
Madison, CT 06443
- D. DEED ON FILE AT: Book 1576, Page 52

## FACILITIES AND EQUIPMENT SPECIFICATION (TOWER & EQUIPMENT)

### I. TOWER SPECIFICATIONS:

- A. MANUFACTURER: TBD
- B. TYPE: Monopole
- C. HEIGHT: 100' DIMENSIONS: Approx 36" outer diameter at bottom x 21" outer diameter at top

### II. TOWER LOADING:

- A. T-MOBILE
  - 1. ANTENNAS: 3 panel antenna per sector; 3 sectors
  - 2. POSITION ON TOWER: 100' Rad Center
  - 3. TRANSMISSION LINES: 18 lines
- B. FUTURE CARRIERS – 3 additional carriers; TBD

### III. ENGINEERING ANALYSIS AND CERTIFICATION:

In accordance with the 2005 Connecticut State Building Code and the Electronic Industries Association Standard EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures" for New Haven County, the tower would be designed to withstand pressures equivalent to a maximum 115 MPH wind. The foundation design would be based on soil conditions at the site.

## ENVIRONMENTAL ASSESSMENT STATEMENT

### I. PHYSICAL IMPACT

#### A. WATER FLOW AND QUALITY

No water flow and/or water quality changes are anticipated as a result of the construction or operation of the Facility. The proposed Facility is located in the cleared and disturbed area approximately 12 feet from the nearest wetland resource located to the northeast. Additional wetlands are located nearby to the east and south. Although work is proposed in proximity to nearby wetland resources, no direct impact to wetlands will occur. The area proposed for development is within a cleared area and immediately adjacent to existing developed and disturbed areas associated with the self storage facility. See Wetlands Compliance Statement attached hereto. Best Management Practices will be implemented during construction to control storm water and erosion.

#### B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at this Facility would emit no air pollutants of any kind. For limited periods during power outages, a portable generator might be utilized.

#### C. LAND

The Site is developed and will not require any tree removal or relocation. It will require minimal fill and some grading (6000 square feet).

#### D. NOISE

The equipment to be in operation at the proposed Site after construction would emit no noise other than from cooling fans within the equipment cabinets. A portable generator might be employed during power outages. Some noise is anticipated during Facility construction, which is expected to take approximately four to six weeks.



E. POWER DENSITY

The worst-case calculation of power density for operation of T-Mobile's antennas at the facility would be approximately 10.622% of the applicable FCC/ANSI standards.

F. VISIBILITY

The potential visibility of the proposed monopole was assessed using a viewshed map (attached) with an approximate two-mile radius. As shown, the primary areas of visibility would be immediately to the southwest of the proposed site and/or over open water on Long Island Sound located to the south. Year-round visibility from these areas accounts for the majority of the anticipated potential visibility. Other areas of potential year-round visibility are located within the general vicinity of the proposed Facility.

II. SCENIC, NATURAL, HISTORIC & RECREATIONAL VALUES

The NEPA report for this site is pending and will be filed with the Certificate application. As is evident from the attached Low Potential Impact Letter, however, EBI has concluded that the proposed installation will not implicate any of the criteria as outlined in NEPA 1.1307(a) items (1) through (8) and preparation of an Environmental Assessment (EA) is not required (tribal consultation is pending). Further, based on EBI's archaeological review, it appears that development during the recent past has likely impacted the local soil deposits within this area, and they have concluded no further archeological investigation is warranted.

# **ATTACHMENT C**



*Vanasse Hangen Brustlin, Inc.*

54 Tuttle Place  
Middletown, Connecticut 06457  
860 632-1500  
FAX 860 632-7879

**Memorandum**

To: Mr. Scott Chasse  
All-Points Technology Corp., P.C.  
3 Saddlebrook Drive  
Killingworth, CT 06419

Date: May 26, 2009

Project No.: 40505.10

From: Dean Gustafson  
Professional Soil Scientist

Re: Wetland Compliance  
T-Mobile Site No. CTNH808A  
15 Orchard Park Road  
Madison, Connecticut

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Vanasse Hangen Brustlin, Inc. (VHB) previously completed on-site investigations to determine if wetlands and/or watercourses are located on the above-referenced Site.

The Site was inspected on April 22, 2009. The property is improved with a commercial building, several self storage buildings and associated paved parking areas. Based on a review of plans prepared by All-Points Technology Corporation, P.C. (latest revised date 05/15/09) VHB understands that T-Mobile proposes to construct a wireless communications facility in the eastern end of the subject property just east of two self storage buildings in an existing cleared area. The proposed facility is located in the cleared and disturbed area approximately 12 feet from the nearest wetland resource located to the northeast. Additional wetlands are located nearby to the east and south.

Although work is proposed in proximity to nearby wetland resources, no direct impact to wetlands will occur. The area proposed for development is within a cleared area and immediately adjacent to existing developed and disturbed areas associated with the self storage facility. Silt fence will be installed and maintained during construction activities to avoid any temporary impacts to nearby wetland areas. Therefore, no likely adverse impact to wetlands will occur as a result of the proposed T-Mobile development due to the existing disturbance, the small area of development and the unmanned nature of the development.

VHB recommends that any exposed soils surrounding the proposed facility be permanently stabilized by loam and seeding with a New England Conservation/Wildlife seed mix (New England Wetland Plants, Inc., or approve equivalent). The New England Conservation/Wildlife seed mix provides a permanent cover of grasses, forbs, wildflowers, legumes and grasses to provide both good erosion control and wildlife habitat value. This mix is designed to be a no maintenance seeding, and it is appropriate for cut and fill slopes and disturbed areas.



## Connecticut Market



### Worst Case Power Density

**Site:** CTNH808A  
**Site Address:** 70 Orchard Park Road  
**Town:** Madison  
**Tower Height:** 100 ft.  
**Facility Style:** Monopole

GSM Data		UMTS Data	
Base Station TX output	20 W	Base Station TX output	40 W
Number of channels	8	Number of channels	2
Antenna Model	APX16DWV-16DWV	Antenna Model	APX16DWV-16DWV
Cable Size	7/8 in.	Cable Size	7/8 in.
Cable Length	150 ft.	Cable Length	150 ft.
Antenna Height	100.0 ft.	Antenna Height	100.0 ft.
Ground Reflection	1.6	Ground Reflection	1.6
Frequency	1945.0 MHz	Frequency	2.1 GHz
Jumper & Connector loss	4.50 dB	Jumper & Connector loss	1.50 dB
Antenna Gain	18.0 dBi	Antenna Gain	18.0 dBi
Cable Loss per foot	0.0186 dB	Cable Loss per foot	0.0116 dB
Total Cable Loss	2.7900 dB	Total Cable Loss	1.7400 dB
Total Attenuation	7.2900 dB	Total Attenuation	3.2400 dB
Total EIRP per Channel (In Watts)	53.72 dBm 235.52 W	Total EIRP per Channel (In Watts)	60.78 dBm 1196.91 W
Total EIRP per Sector (In Watts)	62.75 dBm 1884.17 W	Total EIRP per Sector (In Watts)	63.79 dBm 2393.81 W
nsg	10.7100	nsg	14.7600
Power Density (S) = 0.046783 mW/cm <sup>2</sup>		Power Density (S) = 0.059437 mW/cm <sup>2</sup>	
T-Mobile Worst Case % MPE =		10.6219%	

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power)^{10} (nsg^{10})}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

### Co-Location Total

Carrier	% of Standard
Verizon	0.0000 %
Cingular	0.0000 %
Sprint	0.0000 %
AT&T Wireless	0.0000 %
Nextel	0.0000 %
MetroPCS	
Other Antenna Systems	0.0000 %
<b>Total Excluding T-Mobile</b>	<b>0.0000 %</b>
T-Mobile	10.6219
<b>Total % MPE for Site</b>	<b>10.6219%</b>



*Preliminary Viewshed Analysis*  
*Proposed T-Mobile Wireless*  
*Telecommunications Facility*  
**CTNH808A**  
**15 Orchard Park Road**  
**Madison, Connecticut**

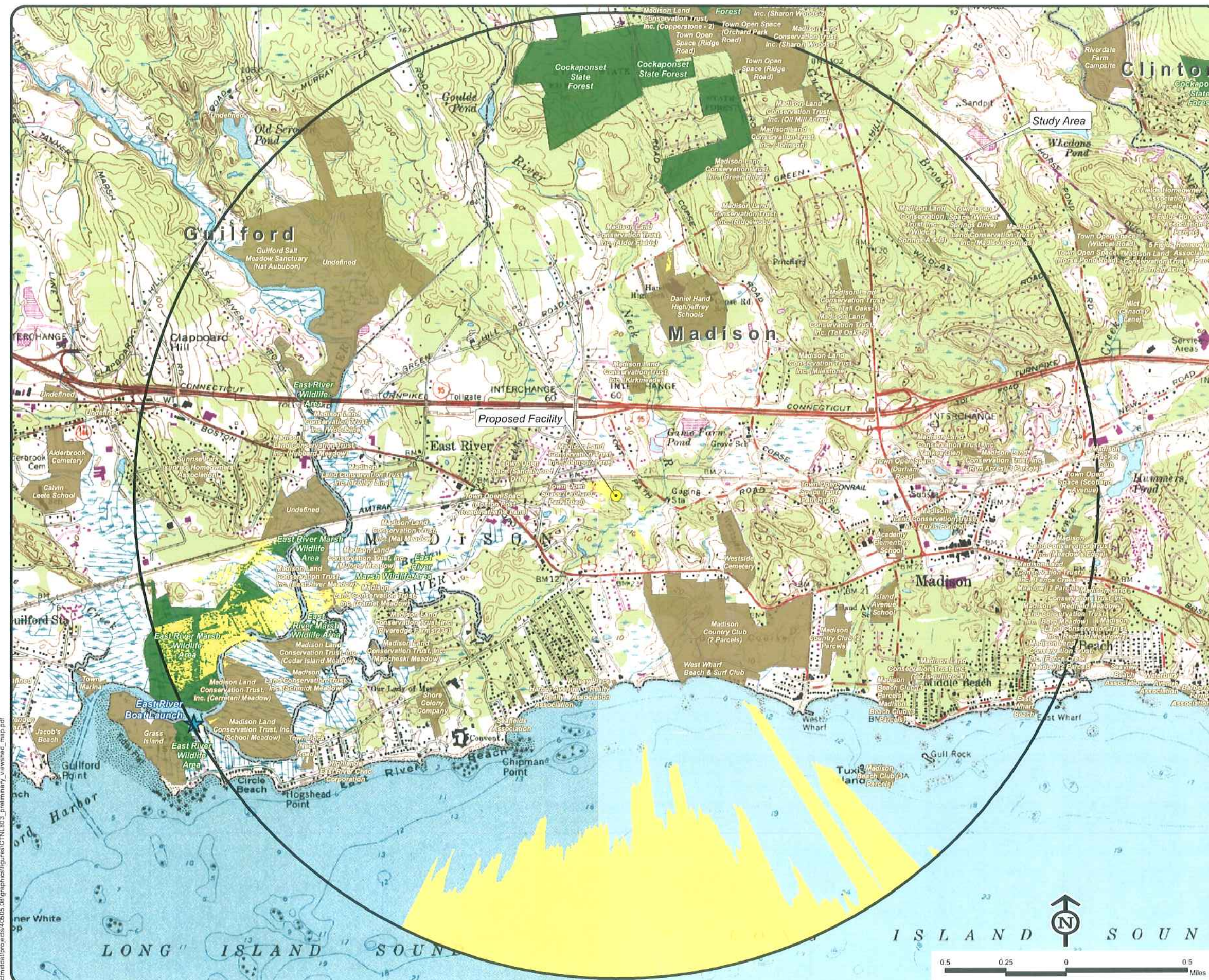
**NOTE:**  
 - Viewshed analysis conducted using ESRI's Spatial Analyst.  
 - Proposed Facility height is 100 feet.  
 - Existing tree canopy height estimated at 50 feet.  
 - Study Area is comprised of a two-mile radius surrounding the proposed facility and includes 8,042 acres of land.

**DATA SOURCES:**  
 - Digital elevation model (DEM) derived from Connecticut LiDAR-based Digital Elevation Data (collected in 2000) with a 10-foot spatial resolution produced by the University of Connecticut and the Center for Land Use Education and Research (CLEAR); 2007  
 - Forest areas derived from 2006 digital orthophotos with 1-foot pixel resolution; digitized by VHB, 2009  
 - Base map comprised of Guilford (1984) and Clinton (1984) USGS Quadrangle Maps  
 - Protected municipal and private open space properties and federal protected properties and data layers provided by CT DEP, 1997  
 - Protected CT DEP properties data layer provided by CTDEP, May 2007  
 - CT DEP boat launches data layer provided by CT DEP, 1994  
 - Scenic Roads layer derived from available State and Local listings.

Map Compiled May, 2009

**Legend**

-  Tower Location
-  Year-Round Visibility (Approximately 711 acres)
-  Protected Municipal and Private Open Space Properties (1997)
-  Recreation
-  CT DEP Boat Launches (1994)
-  Scenic Road (State and Local)
-  Town Line
-  CT DEP Protected Properties (2007)
-  State Forest
-  State Park
-  DEP Owned Waterbody
-  State Park Scenic Reserve
-  Historic Preserve
-  Natural Area Preserve
-  Fish Hatchery
-  Flood Control
-  Other
-  State Park Trail
-  Water Access
-  Wildlife Area
-  Wildlife Sanctuary
-  Federal Protected Properties (1997)
-  CT DEP Boat Launches (1994)
-  Scenic Road (State and Local)
-  Town Line



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May 20, 2009

Ms. Jamie Ford  
Project Coordinator  
HPC Development, LLC  
53 Lake Ave Ext.  
Danbury, CT 06811

Subject: National Environmental Policy Act (NEPA) - Letter of Low Potential Impact  
Amtrak Madison / CTNH808A  
7 Orchard Park Road, Madison, CT 06442  
EBI Project #61087296

Dear Ms. Ford:

Attached please find our *National Environmental Policy Act (NEPA)* Letter of Low Potential Impact for the proposed telecommunications installation at the address noted above (the Subject Property). The purpose of this *letter* is to evaluate the above-referenced property for potential environmental and historical concerns specified by the Federal Communications Commission (FCC) in 47 CFR 1.1307.


As of the date of this *Report*, T-Mobile, USA proposes to construct an un-manned telecommunications facility on the eastern portion of the parent parcel. The telecommunications facility will include a 100-foot monopole tower and equipment cabinets on a 10-foot by 15-foot concrete pad located within a fenced compound on a 40 x 45 foot lease area. T-Mobile, USA plans to collocate an array of 9 antennas on the monopole with two TMA's per sector (total of 6) mounted on standoff cross arms at a centerline height of approximately 100 feet above ground level (AGL). Coaxial cable will be routed from the support equipment across a proposed ice bridge, then up the tower to the antennas. Underground utilities will be routed from existing demarcs on the western portion of the Subject Property along an existing access drive to a proposed utility area adjacent to the tower compound.

Based upon the results of our preliminary NEPA screening, it appears that the proposed installation will not impact any of the criteria as outlined in 1.1307(a) items (1) through (8) and preparation of an Environmental Assessment (EA) is not required. However, our Native American Indian consultation required under Section 1.1307(a) (5) of the FCC Rules is incomplete. Although EBI has submitted 4 requests to the Narragansett Indian Tribe, the Narragansett Indian Tribe has not responded after their notification initiating consultation and review of cell tower site designated by TCNS # 46868. Of importance, based our archaeological review, it appears that development during the recent past has likely impacted the local soil deposits within the Area of Potential Effect to a substantial degree. As a result, it is unlikely that intact cultural deposits are situated within the proposed project area. Thus, no further archeological investigations is warranted.

Based on our preliminary review and archaeological assessment, even though tribal consultation is incomplete, there is a low potential that the proposed undertaking will impact Native American religious sites.

Thank you for the opportunity to prepare this *Report*, and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully Submitted,



Michael Chun  
Program Director  
Direct# (646) 789-9206