

TECHNICAL REPORT to the TOWN OF BRANFORD

OMNIPOINT COMMUNCIATIONS, INC. (T-MOBILE)

PROPOSED BRANFORD MONOPOLE TOWER TELECOMMUNICATIONS FACILITY

123 PINE ORCHARD ROAD BRANFORD, CONNECTICUT

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

Table of Contents

<u>Page</u>
ntroduction3
Section 1
Site Justification4 Attachment: Propagation Plots
Section 2
Site Search Process and Selection5
Section 3: Site Details
General Facility Description
Site Evaluation Report9
Facilities and Equipment Specification11
Environmental Assessment Statement

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 Branford pursuant to Connecticut General Statutes § 16-50/. T-Mobile proposes to install a wireless telecommunications facility (the "Facility") on an approximately 4.15 acre parcel located at 123 Pine Orchard Road and owned by Malavasi Investments LLC ("Pine Orchard Road Site" or "Site"). The Facility will consist of a 125 ft monopole structure (the "Tower") with antennas mounted at a centerline of approximately 122 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 Branford.

The purpose of this Technical Report is to provide the Town of Branford 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

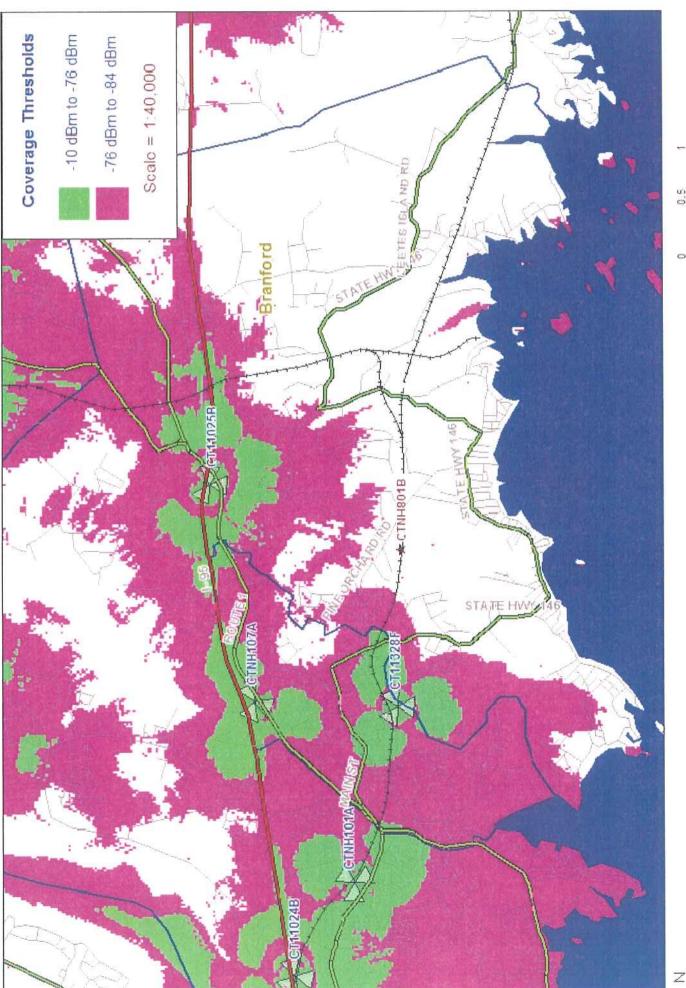
Site Justification

The proposed Pine Orchard 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 Pine Orchard Road, Route 146, Damascus Road and Meadowood Road just south of Interstate 95 and Route 1 in Branford, as well as the Amtrak Rail Line that passes through this area. Additionally, the Facility will provide capacity relief for the current sites that presently cover this area from outer lying areas.

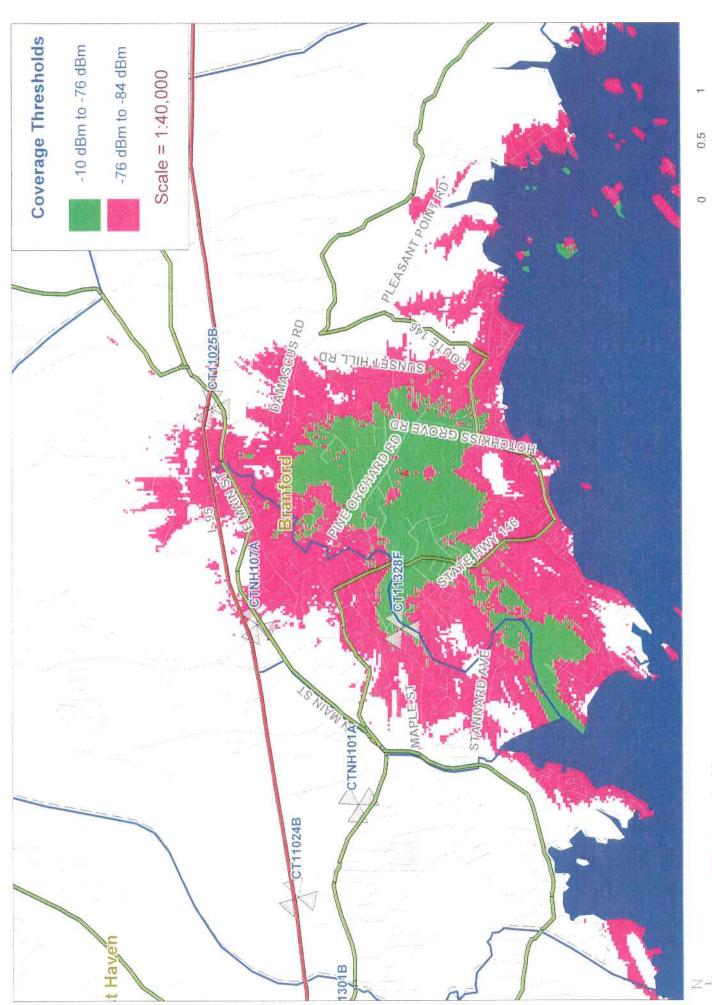
Included herein are propagation plots prepared by T-Mobile that depict (1) coverage from existing and approved surrounding sites; (2) predicted coverage from the proposed Site with antennas mounted at an approximate centerline of 122 ft above grade level ("AGL"); and (3) coverage from the proposed Site 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 Branford.

ATTACHMENT A

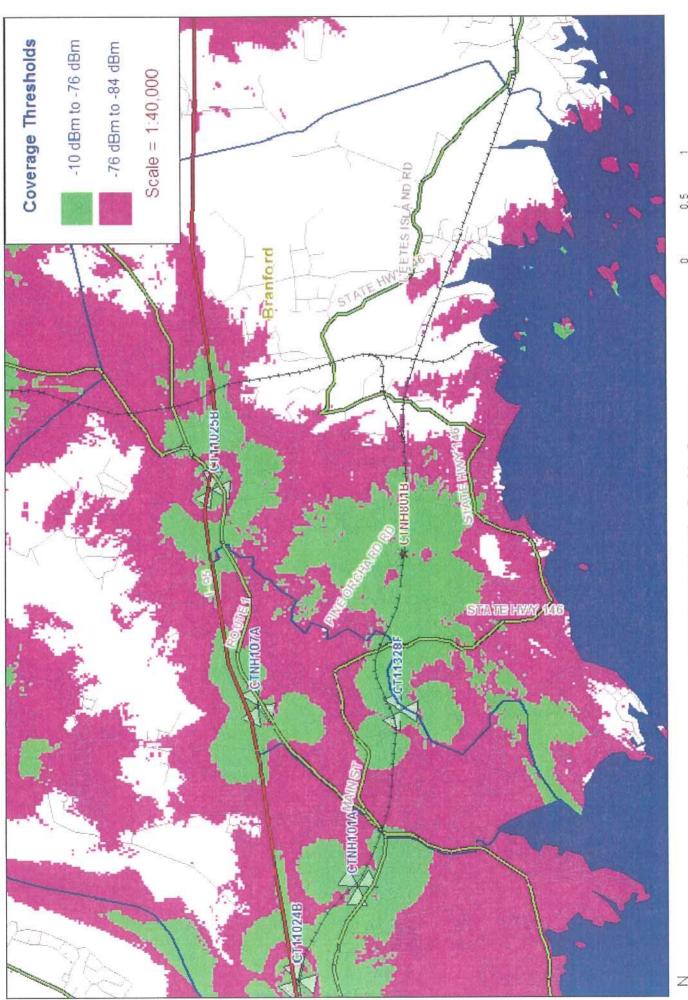


Existing T-Mobile On Air Coverage



T-Mobile Proposed CTNH801B Facility @ 122'

-T-Mobile



T-Mobile--

Existing T-Mobile On Air Coverage With CTNH801B @ 122' AGL

7-

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 Pine Orchard 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 Branford, 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. There are no large areas of commercial or industrial use in or near the target area. 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 Pine Orchard Road Site were not selected are outlined below:

- 1. <u>Pine Orchard Firehouse, 180 Pine Orchard Road</u>. This is a small commercial property (1.08 acres) with a one story volunteer firehouse located on it. The property is leased from the Town of Branford by the Volunteer Fire Department Association. The Association is unwilling to enter into a lease agreement with T-Mobile. Even if the Association was amenable to such an agreement, this site would also require a new tower since there are no suitable existing structures on the property.
- 2. <u>Shoreline Pet Lodge, 157 Pine Orchard</u>. This site contains no suitable existing structures; therefore, T-Mobile would have to construct a new tower on this property. After reviewing this proposed site, T-Mobile determined that the Pine Orchard Road Site would be preferable from a technical standpoint, as the proposed Site provides better RF coverage to the Amtrak Rail Line.
- 3. <u>Tabor Property (Town-owned parcel)</u>. This property is a large parcel located just south of the Amtrak Rail Line. T-Mobile met with representatives of the Town of Branford and learned that the Town is interested in developing this parcel in the future. Possible development could include recreational facilities (such as baseball fields) or a police station. The land is currently vacant and the Town's development timeline puts development several years into the future. Accordingly, this parcel is not a viable alternative for T-Mobile to locate a new tower facility.

As a result, T-Mobile has determined that the property owned by Malavasi Investments LLC at 123 Pine Orchard Road (the "Property") is superior to other properties in the area. The Property is zoned R3 and is 4.15 acres. Access to the Site is across an existing driveway on the Property, and through an existing gravel parking lot on 121 Pine Orchard Road, an adjacent property owned by Malavasi Investments LLC. The Property is currently used as a storage facility and garage for truck trailers. As the property is developed, only one tree would need to be removed to site the Facility. It is also set back approximately 600' from Pine Orchard Road, with excellent screening from mature trees. AT&T Wireless has expressed an interest to co-locate on the proposed Facility.

SECTION 3

PROPOSED SITE

123 Pine Orchard Road Branford, Connecticut

Land of Malavasi Investments LLC

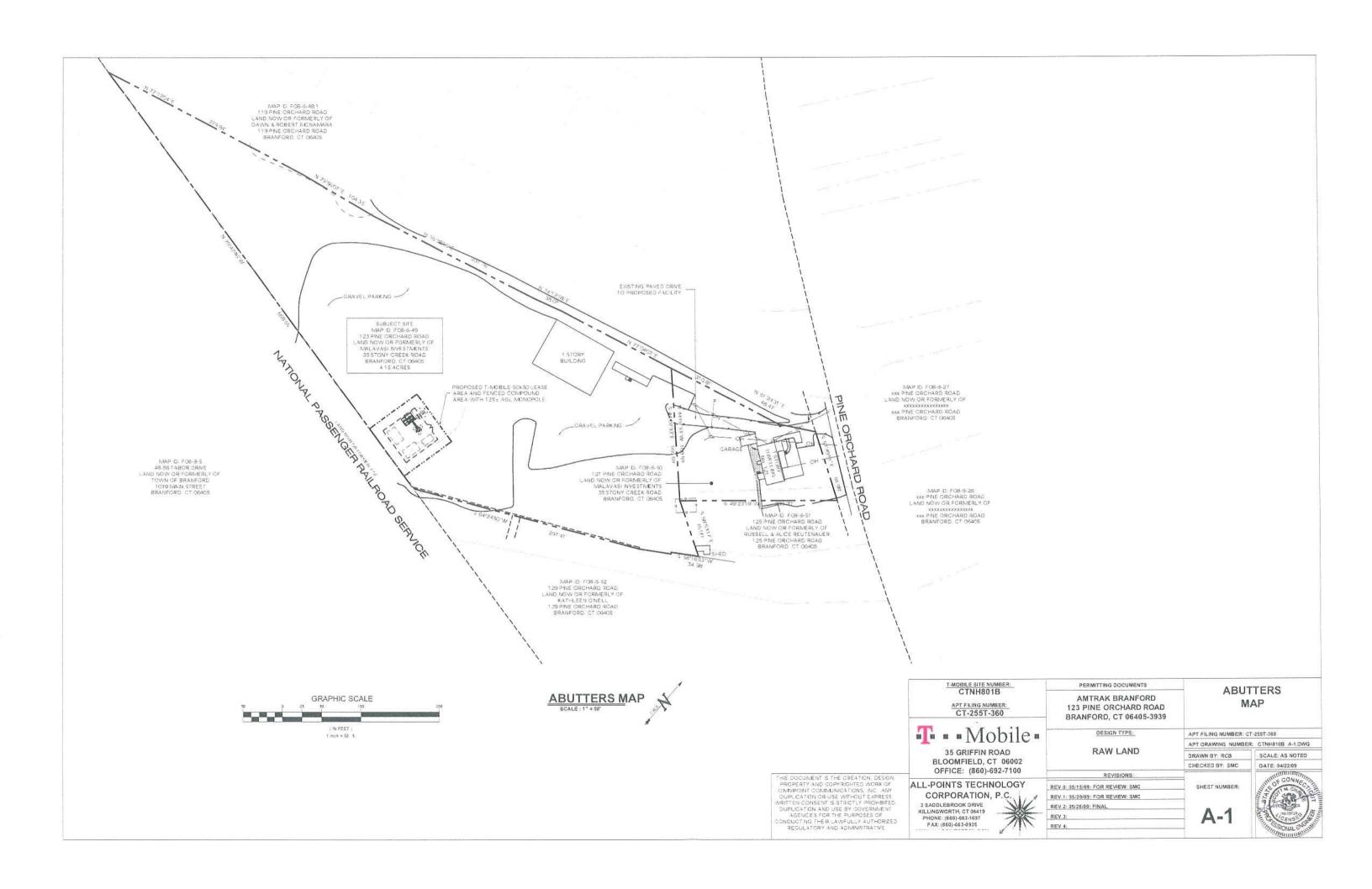
Assessor's Parcel ID Map 8/Block 6/Block 49 4.15 Acres

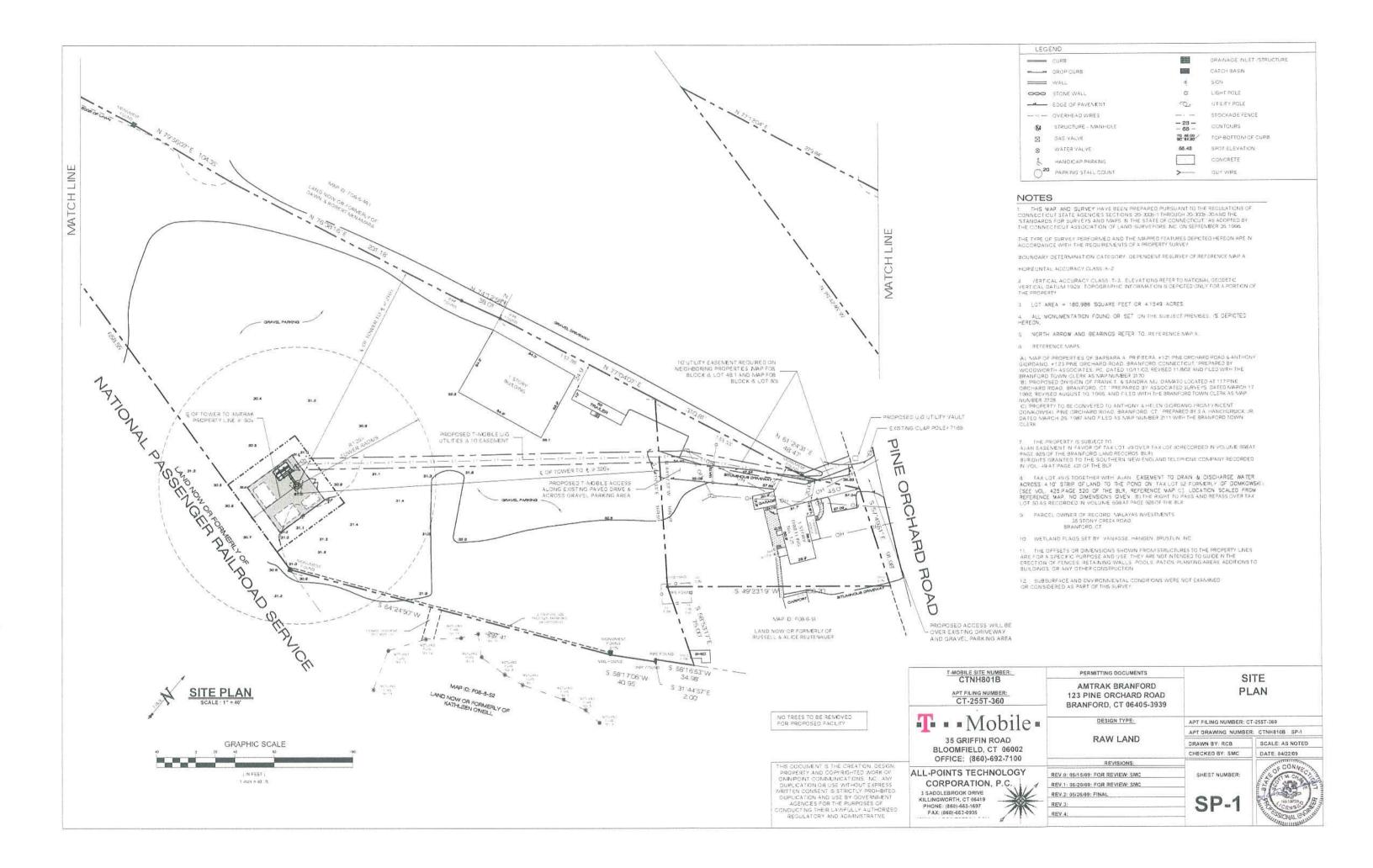
GENERAL FACILITY DESCRIPTION

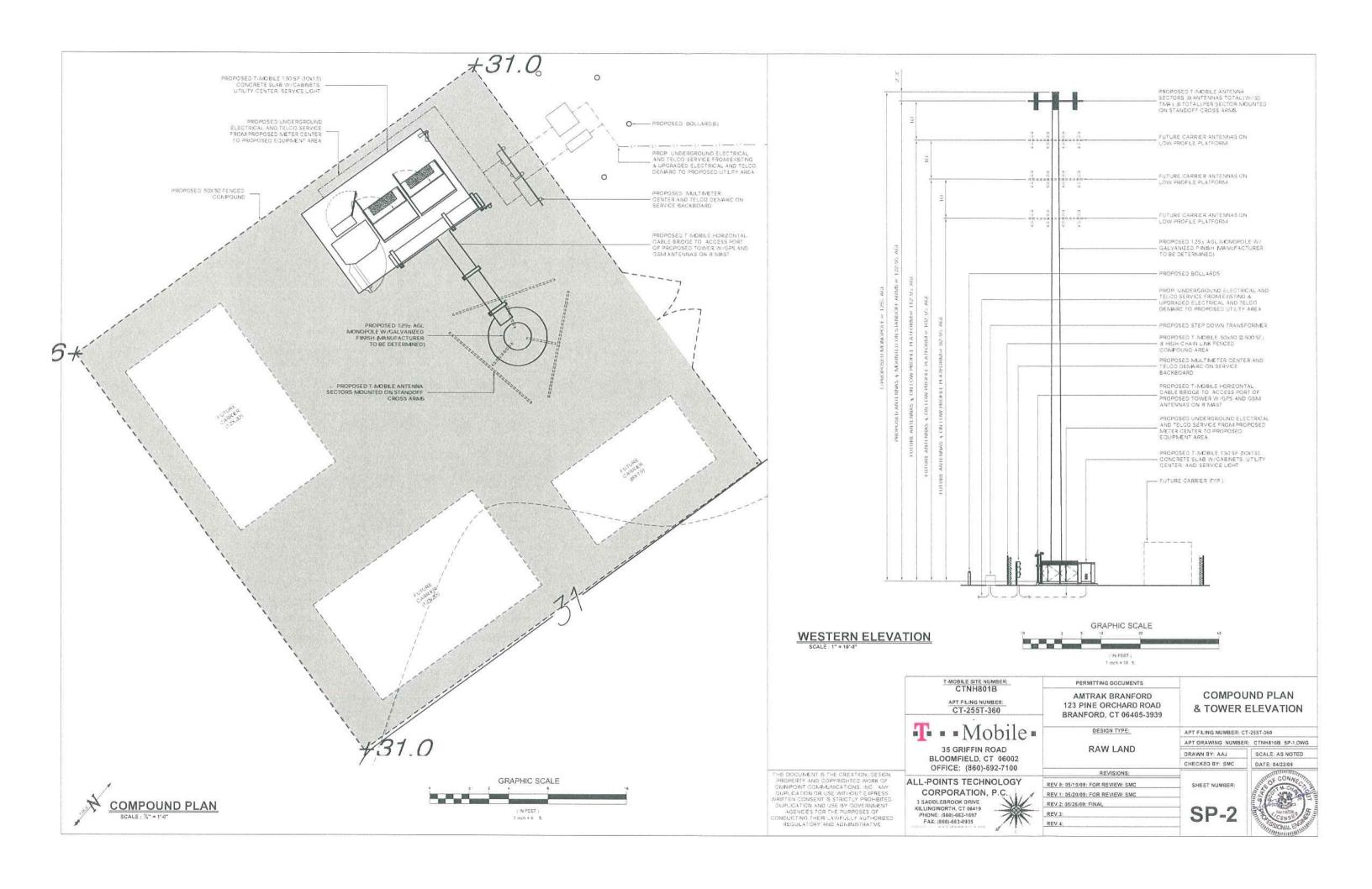
The proposed Pine Orchard Road Site is a 2,500 square foot leased area located in the south easterly portion of an approximately 4.15 acre parcel at 123 Pine Orchard Road in Branford. The Property is used by the owner as a storage facility and garage for truck trailers. The Facility would consist of a 125 ft monopole structure with antennas mounted on standoff arms. The monopole would accommodate 4 sets of antennas.

Related equipment cabinets would be placed within the compound in the center of the leased area. The equipment would be surrounded by an 8 ft high chain link fence. Vehicle access to the Site would extend westerly across the Property via an existing driveway, and through an existing gravel parking lot on 121 Pine Orchard Road, an adjacent property owned by Malavasi Investments LLC. Underground utility connections would extend from existing service originating at Pine Orchard Road.

ATTACHMENT B







SITE EVALUATION REPORT

LOCATION

A. <u>COORDINATES:</u> 41°16'29.50" N

72°47'35.08" W

B. GROUND ELEVATION: 31'± AMSL

C. <u>USGS MAP:</u> USGS 7.5 quadrangle for Branford (1984)

D. SITE ADDRESS: 123 Pine Orchard Road

Branford, CT 06405

E. ZONING WITHIN ¼ MILE OF SITE: Property to the north, east and west is zoned residential and property to the south is zoned general industrial.

II. DESCRIPTION

A. <u>SITE SIZE</u>: 50' x 50'

B. TOWER TYPE/HEIGHT: 125' Monopole

- C. <u>SITE TOPOGRAPHY AND SURFACE</u>: Subject site is located in an existing gravel parking lot for a trucking company. Topography is generally flat, sloping slightly from east to west.
- D. <u>SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER</u>: Existing terrain is a gravel parking area abutting the Amtrak right of way. There is an existing wetland area located approximately 170' east of the proposed Facility.
- E. <u>LAND USE WITHIN ¼ MILE OF SITE</u>: Single family residential to the north, east and west. Amtrak right of way and vacant land to the south.

III. FACILITIES

- A. POWER COMPANY: CL&P
- B. POWER PROXIMITY TO SITE: 525'±
- C. TELEPHONE COMPANY: AT&T
- D. PHONE SERVICE PROXIMITY: 525'±
- E. <u>VEHICLE ACCESS TO SITE</u>: Existing bituminous driveway and gravel parking area.
- F. OBSTRUCTION: N/A
- G. <u>CLEARING AND FILL REQUIRED</u>: Total area of disturbance = 8,225 sf. One tree will need to be removed. The site is balanced with approx. 50 cubic yards cut and 50 cubic yards of fill.

IV. LEGAL

- A. PURCHASE [] LEASE [X]
- B. OWNER: Malavasi Investments, LLC (d/b/a Ace Trucking)
- C. ADDRESS: 35 Stony Creek Road Branford, CT
- D. DEED ON FILE AT: Book 802, Page 624

FACILITIES AND EQUIPMENT SPECIFICATION (TOWER & EQUIPMENT)

I. TOWER SPECIFICATIONS:

- A. MANUFACTURER: TBD
- B. TYPE: Monopole
- C. HEIGHT: 125'
- D. DIMENSIONS: Approx 36" outer diameter at bottom x 21" outer diameter at top

II. TOWER LOADING:

- A. T-MOBILE
 - 1. ANTENNAS: Antenna array consists of three sectors, with 3 antennas per sector
 - 2. POSITION ON TOWER: 122'-9" Rad Center
 - 3. TRANSMISSION LINES: 18 lines
- B. FUTURE CARRIERS 3 additional carriers; equipment 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. No wetlands or watercourses were identified on the subject property in proximity to the proposed T-Mobile facility. The nearest wetland area consists of a man-made pond located approximately 150 feet from the proposed T-Mobile development on the adjoining parcel. No likely adverse impact to wetlands will result from the proposed development because of the significant distance separating the proposed T-Mobile facility from the nearest wetland area, the proposed Facility is located within an existing developed area and no mature vegetation will be disturbed. See attached Wetlands Compliance Letter. Finally, 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

Minimal clearing and grading would be required for development of the proposed Site. One tree on the adjacent parcel will be will need to be removed or relocated to construct the tower and equipment area (proposed electric service). The remainder of the Property would remain unchanged by the construction and operation of the Site.

D. NOISE

The equipment to be in operation at the proposed Site after construction would emit no noise other than the installed heating, air conditioning and ventilation systems. 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 6.975% of the applicable FCC/ANSI standards.

F. VISIBILITY

The potential visibility of the proposed Facility was assessed using a viewshed map (attached) with an approximate two-mile radius. As shown, the primary areas of visibility would occur over open water on Long Island Sound located to the south. The viewshed map indicates potential year-round views along select portions of Route 146, a state-designated scenic roadway, located roughly 0.60-mile to the southwest of the proposed Site. Other areas of anticipated visibility are located within the immediate vicinity of the proposed Site with additional areas located to the southwest, north and northeast.

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 preliminary review and archaeological assessment, even though tribal consultation is incomplete and SHPO concurrence has yet to be granted, there is a low potential that the proposed undertaking will impact Native American religious sites and historic resources.

ATTACHMENT C

Transportation Land Development Environmental Services



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

Memorandum

To: Mr. Scott Chasse

Date: May 26, 2009

All-Points Technology Corp., P.C.

3 Saddlebrook Drive Killingworth, CT 06419

Project No.: 40505.07

From: Dean Gustafson

Professional Soil Scientist

Re: Wetland Compliance

T-Mobile Site No. CTNH801B 123 Pine Orchard Drive Branford, Connecticut

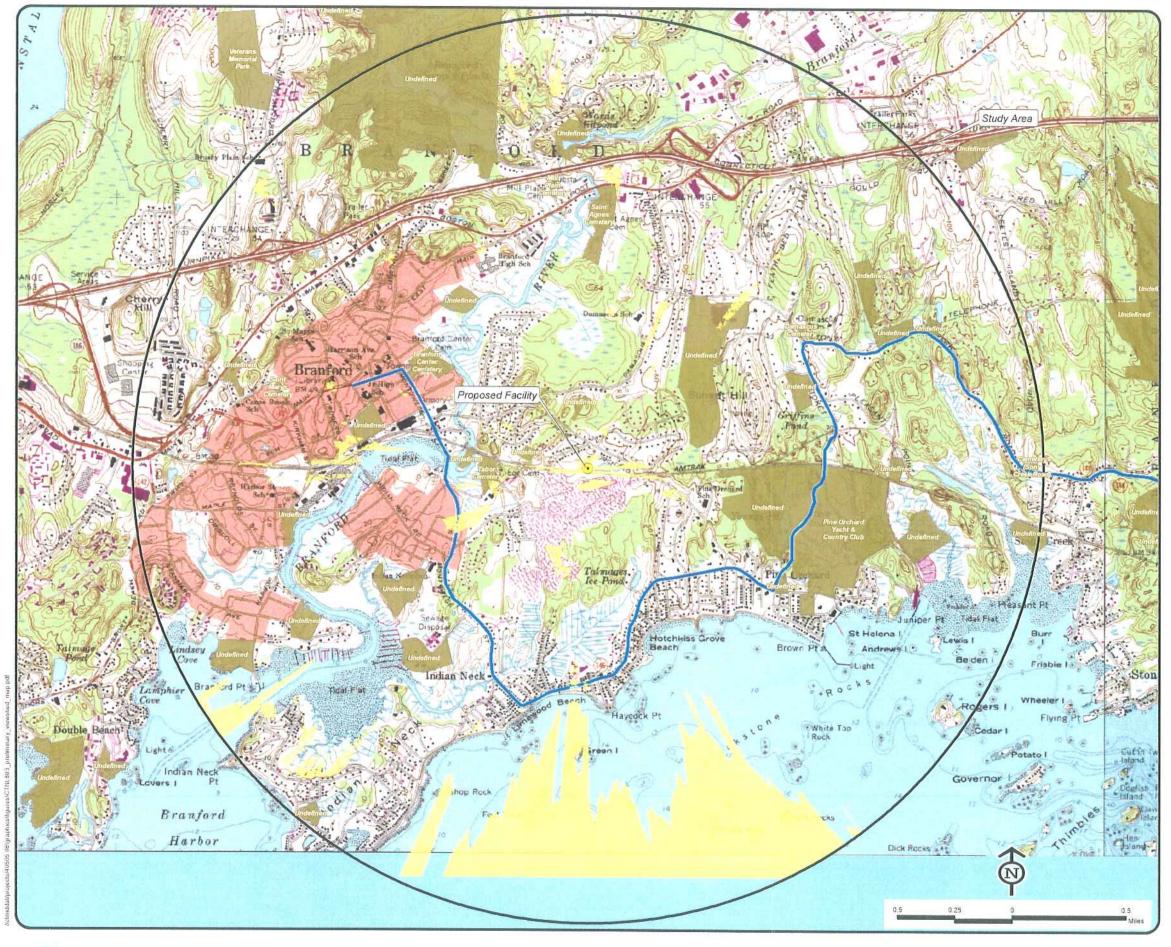
Vanasse Hangen Brustlin, Inc. (VHB) previously completed on-site investigations to determine if wetlands and/or watercourses are located on the above-referenced Site.

The Site was inspected on April 22, 2009. The property is improved by a trailer storage company (ACE Trailer Leasing, Inc.) consisting of a trailer office building, maintenance building and large gravel parking lot occupied by numerous trailer storage units. 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 southeast corner of the subject property within an existing gravel parking lot. No wetlands or watercourses were identified on the subject property in proximity to the proposed T-Mobile facility. The nearest wetland resource area consists of a man-made pond identified by flag numbers WF 1 through 14 located approximately 150 feet from proposed T-Mobile development on the adjoining parcel. Due to the significant distance separating the proposed T-Mobile facility from the nearest wetland resource area, the proposed facility is located within an existing developed area and no mature vegetation will be disturbed, no likely adverse impact to wetlands will result from the proposed development.

T - Mobile **Connecticut Market Worst Case Power Density** Site: CTNH801B Site Address: 123 Pine Orchard Road Town: Branford **Tower Height:** 125 ft. Facility Style: Monopole **GSM** Data **UMTS Data** 20 W Base Station TX output Base Station TX output 40 W Number of channels Number of channels 8 APX16DWV-16DWV Antenna Model APX16DWV-16DWV Antenna Model in. Cable Size Cable Size 7/8 7/8 ~ Cable Length 150 ft. Cable Length 150 ft. Antenna Height 122.0 ft. Antenna Height 122.0 ft. **Ground Reflection Ground Reflection** 1.6 1.6 1945.0 MHz 2.1 GHz Frequency Frequency 4.50 dB Jumper & Connector loss 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 53.72 dBm Total EIRP per Channel 60.78 dBm (In Watts) 235.52 W (In Watts) 1196.91 W Total EIRP per Sector Total EIRP per Sector 62.75 dBm 63.79 dBm (In Watts) 2393.81 W 1884.17 W (In Watts) 10.7100 14.7600 nsg nsg Power Density (S) = 0.039030 mW/cm^2 Power Density (S) = 0.030720 mW/cm^2 T-Mobile Worst Case % MPE = 6.9750% Equation Used (1000)(grf)2(Power)10 (nsg10) $4\pi(R)^2$

Co-Location Total		
Carrier	% of Standard	77.7
Verizon	0.0000 %	
Cingular	0.0000 %	
Sprint	0.0000 %	
AT&T Wireless	0.0000 %	
Nextel	0.0000 %	
MetroPCS		
Other Antenna Systems	0.0000 %	
Total Excluding T-Mobile	0.0000 %	
T-Mobile	6.9750	
Total % MPE for Site	6.9750%	

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



Preliminary Viewshed Analysis Proposed T-Mobile Wireless Telecommunications Facility CTNH801B 123 Pine Orchard Road Branford, Connecticut

- 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.

- 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 Branford (1984) and Guilford (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







May 21, 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 Branford/ CTNH801B

123 Pine Orchard Road, Branford, CT

EBI Project #61087701

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 a 125-foot monopole-style telecommunications tower and to collocate 9 antennas at a centerline height of 122 feet-9 inches above ground level on the proposed tower. T-Mobile USA also proposes to place equipment cabinets on a 10-foot by 15-foot concrete slab within the 50-foot by 50-foot fenced compound within a 75-foot by 75-foot leased area. T-Mobile USA will run utility conduits underground commencing from the Subject Property paved parking lot traversing south toward the Project Site.

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 # 47195. Of importance, based our historic 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.

In addition, the Connecticut Historic Preservation Office has yet to grant concurrence that the proposed undertaking will have no adverse effect on historic resources. Of importance, based on a review of the files available at the University of Connecticut's Dodd Research Center conducted by Heritage Consultants, Inc., on January 5, 2009, no historic properties were identified within the APE for visual effects.

Based on our preliminary review and archaeological assessment, even though tribal consultation is incomplete and SHPO concurrence has yet to be granted, there is a low potential that the proposed undertaking will impact Native American religious sites and historic resources.

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