Martin Brogie, Inc.
ENVIRONMENTAL SERVICES

• Environmental Site Investigations
• Building Contaminant Surveys
• Wetlands Consulting
• Remediation Contract Management

June 20, 2024

Ray Vergati
Regional Manager
Homeland Towers, LLC
9 Harmony Street, 2nd Floor
Danbury, CT 06810

RE: Wetlands Delineation Report
Wireless Telecommunications Facility (CT056B East Haddam)
196 Haddam-Colchester Turnpike
East Haddam, Connecticut

Dear Mr. Vergati:

Martin Brogie, Inc. (MBI) is pleased to submit the following information regarding a wetland delineation performed for the above referenced property on May 1, 2024. The work was completed to evaluate the presence and extent of wetlands on the property for purposes of assessing the feasibility and layout of a proposed communications tower and associated facilities.

Site Description

The subject property consists of an undeveloped 2.09-acre undeveloped property extending southeast from Haddam-Colchester Turnpike. The site is located in a rural area approximately 1800 northwest of Bashan Lake and Moodus Reservoir. Some single-family residential development is located across the road to the northwest and southeast.

The site is generally flag-shaped with an unpaved driveway entrance extending approximately 300 feet from the road and then opening up to an approximate rectangular shape approximately 400-455 feet long

28 Arbor Lane
Madison, CT 06443

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and 130 to 250 feet wide. Recent clearing has occurred along the central portion of the driveway and to the northeast although the site consists primarily of a mature Oak and Beech forest. Site topography is undulating as a result of shallow bedrock. Rock outcroppings were observed in the central portion of the site and offsite to the south.

A site location map is provided as Figure 1. An aerial view of the property depicting the approximate wetland delineations is provided as Figure 2. Photographs of the wetland areas are provided as Attachment A.

Wetland Delineation

On May 1, 2024, MBI's Soil Scientist Martin Brogie, LEP reported to the site to assess the presence of wetlands and watercourses/intermittent watercourses in accordance with the definitions provided in Connecticut General Statutes Section 22a-38 definitions (15) and (16) including: soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey; and, rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent. In addition, intermittent watercourses defined as having a permanent channel and bank and the occurrence of two or more of the following characteristics: evidence of scour or deposits of recent alluvium or detritus; the presence of standing or flowing water for a duration longer than a storm incident; and/or the presence of hydrophytic vegetation were delineated.

MBI accessed the property via the unpaved driveway extending from the adjacent roadway and completed several transects across the site locating three, apparent wetland areas. The delineations commenced at the central wetland area which was found to contain poorly-drained wetland soils exhibiting a low chroma matrix within 12 inches of the surface. Several organic, very-poorly-drained soil areas were also identified within this area. The area was delineated using wetland flags WF#1 through WF#17 including a break at the northern property boundary between WF#9 and WF#10 where the wetland line exited the property along a shallow discharge swale. The wetland area contained a dense stand of Sweet Pepperbush (*Clethra alnifolia*). Highbush Blueberry (*Vaccinium corymbosum*) and Spicebush (*Lindera benzoin*) were also noted on the wetland perimeters. An area of shallow, standing water (approximately 800 square feet) was noted in the southern portion of the wetland. The area was approximately 6-8 inches deep and located within a shallow depression covered with leaf litter. Based on water marks (staining) and adjacent micro-topography the ponded area does not collect water to a greater depth. The area was closely examined for evidence of amphibian life including remnants of Wood Frog egg masses and Spotted Salamander spermatophores. No such evidence was noted which is consistent with the limited hydrology of the area which appears to be largely storm-dependent and unsuitable for consistent amphibian breeding habitat.

The western tip of a wetland area extends on to the northeastern corner of the property within a hillside crease dominated by Mountain Laurel (*Kalmia latifolia).* Poorly drained soil exhibiting a low chroma matrix within 8-12 inches was identified in this area and delineated with Wetland Flags WF#100 through WF#106 terminating on the northern and eastern property boundaries, respectively. No standing water was present.

A third wetland area is located adjacent to the north of the driveway entrance area and along the edge of the roadway fill. The area contained very-poorly drained (organic) wetland soils. It was delineated along the edge of driveway fill, sloping land to the east and north and along the fill of the adjacent roadway shoulder using Wetland Flags WF#200 through WF#210 and WF#200A and WF#200B. The area contained Sensitive Fern (*Onoclea sensibilis*), Sweet Pepperbush, Red Maple (*Acer rubrum*), Sweet Birch (*Betula lenta*), Multiflora Rose (*Rosa multiflora*), Asiatic Bittersweet (*Celastrus orbiculatus*), and Common Greenbriar (*Smilax rotundifolia*). The area exhibits an overflow discharge to the north at the northwest corner, along the roadway. No standing water was present.

The Natural Resource Conservation Service (NRCS) identifies the Charlton-Chatfield Soil complex on the site. This is consistent with site observations of bedrock outcropping. No wetland soils are mapped. NRCS soil mapping and descriptions are provided as Attachment B.

The Connecticut Department of Energy and Environmental Protection (CTDEEP) Natural Diversity Database does not indicate that the property contains any listed state or federal species or habitats. Listed habitats are shown near the site extending from Bashan Pond and the Moodus Reservoir along perennial streams that feed these waterbodies. Site resources are not hydrologically connected to these offsite watercourses. A copy of the map segment showing the subject property is provided in Attachment C.

Project Description

MBI reviewed preliminary project design plans that depicted a 75 by 70-foot lease area containing a 50 by 60-foot fenced compound. The compound will contain a 155 foot monopole and ancillary equipment. Utilities will extend from the roadway, along the existing drive to the west side of the compound. The compound is located on a relatively level area just beyond the terminus of the existing entrance drive minimizing site construction-related disturbances.

Conclusions and Recommendations

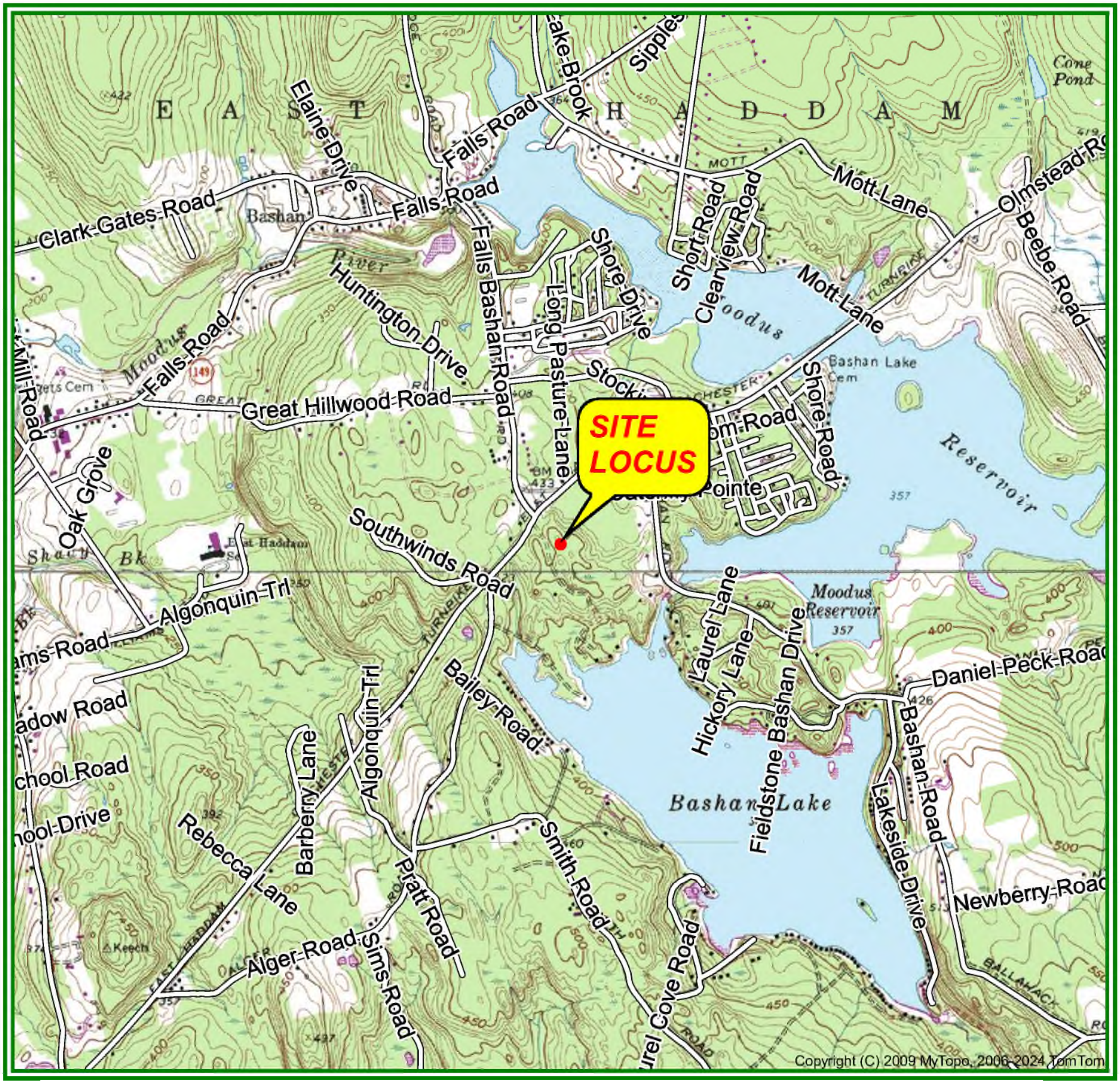
The project involves minimal ground disturbances and will utilize appropriate erosion control measures until the area is healed. No direct impacts to wetlands are proposed while some temporary impacts in the regulated area will occur during construction. The built facility and routine equipment maintenance/installations are not expected to result in any effect on the site wetland resources due to the small size/disturbed nature of the small wetland area by the roadway and the distance from the remaining two rear wetlands. Site wetland functions and values also appear to be limited due to their size, hydrology, and remoteness relative to other resources.

Please contact the undersigned at 860-208-0360 if you have any questions or require further information. Thank you for the opportunity to be of service.

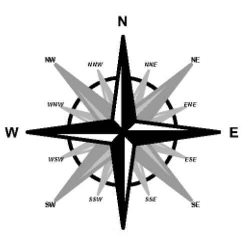
Sincerely,

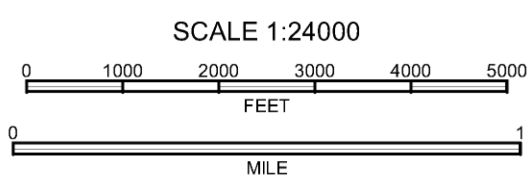
Martin Brogie, LEP
Soil Scientist

w/Attachments



MOODUS Topographic 1967 41072-E4-TF-024 National Geodetic Vertical Datum 1929





Site Coordinates:
041° 30' 04.01" N, 072° 25' 19.60" W

Project:
196
East Haddam-Colchester Turnpike

Site Location:
196 E. Haddam-Colchester Turnpike,
Middlesex County,

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Figure 1
Site Locus Map

SCALE

0 150 300

APPROXIMATE SCALE IN FEET

LEGEND

APPROXIMATE DELINEATED WETLAND LINES

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Figure 2 - Aerial Site Plan

196 East Haddam - Colchester Turnpike
East Haddam, Middlesex County, Connecticut

Project:	196 East Haddam–Colchester Turnpike
Drawn by:	K. Hazel
Date:	6/5/24
Scale:	AS SHOWN

ATTACHEMENT A

PHOTOGRAPHS

View of cleared area north of entrance drive

View along east end of entrance drive looking east.
Compound is to be located to the left.

View of shallow standing water in central wetland area.

View of west end of eastern wetland area looking east.

Interior view of eastern wetland.

View along north side of driveway showing log stockpile. East end of western wetland (by roadway) shown located along the driveway shoulder to left.

View of western wetland along north side of driveway. Roadway in rear of photo.

ATTACHEMENT B

SOIL SURVEY MAPPING

Soil Map—State of Connecticut, Eastern Part
(EAST HADDAM)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut, Eastern Part
Survey Area Data: Version 1, Sep 15, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

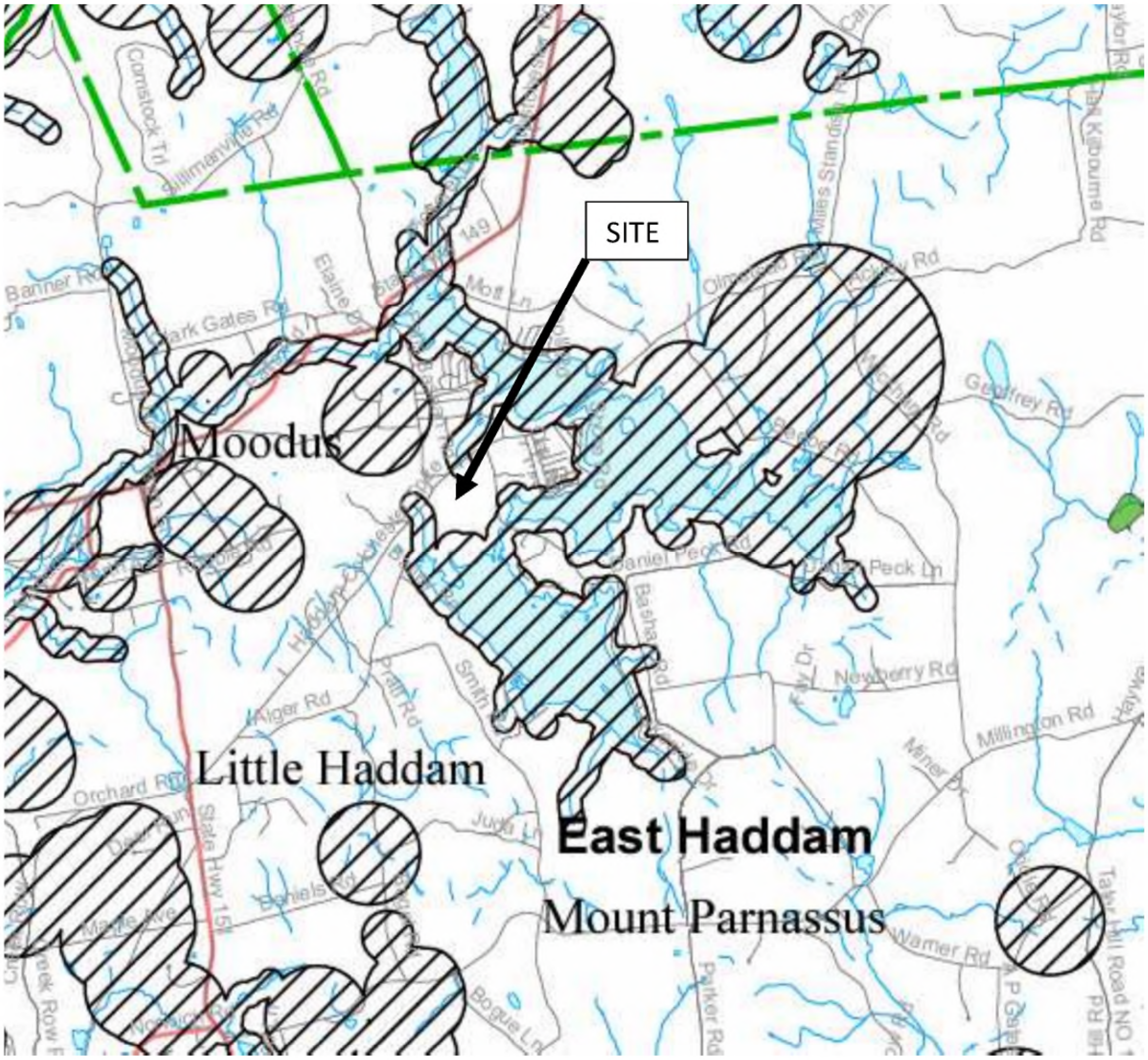
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	15.8	8.2%
4	Leicester fine sandy loam	0.8	0.4%
12	Raypol silt loam, 0 to 3 percent slopes	2.0	1.1%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	14.7	7.6%
18	Catden and Freetown soils, 0 to 2 percent slopes	1.2	0.6%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	0.2	0.1%
51B	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	2.8	1.5%
57B	Gloucester gravelly sandy loam, 3 to 8 percent slopes	7.0	3.6%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	14.4	7.4%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	9.0	4.6%
72E	Nipmuck-Brookfield complex, 15 to 45 percent slopes, very rocky	2.2	1.1%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	104.9	54.1%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	1.0	0.5%
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	7.3	3.8%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	8.0	4.1%
W	Water	2.4	1.3%
Totals for Area of Interest		**193.8**	**100.0%**

ATTACHEMENT C

CTDEEP NDDB MAP SEGMENT



Natural Diversity Data Base Areas

East Haddam, CT

June 2024

Connecticut Department of Energy and Environmental Protection