



Martin Brogie, Inc.
ENVIRONMENTAL SERVICES

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

May 4, 2021

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

RE: Wetlands Delineation Report
Wireless Telecommunications Facility (CT021 North Branford)
222 Clintonville Road
Northford, 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 March 8, 2021. 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 including an access drive.

Site Description

The subject property consists of a 7.86-acre residential property located along the north side of Clintonville Road (Route 22). It is occupied by two residential structures and a garage. The central portion of the property contains the structures, grassed lawn and the paved site access driveway. Wooded land occupies the western and eastern portions of the property. The eastern portion of the property slopes upward to the east along the surface of bedrock. Bedrock outcroppings were noted at the top of the slope in this area of the site. A man-made pond, approximately ¼ acre in size is located in the central east portion of the property. The pond is spring fed and drains southward along the southeastern property line. The drainage exits the property at a headwall and culvert in the southeastern corner of the property and is directed southward below the adjacent roadway.

28 Arbor Lane
Madison, CT 06443

martinbrogieinc@gmail.com
860-208-0360

The property is located in a primarily residential area with single-family homes abutting to the north, northeast and east. Single family residences are also located across adjacent streets to the northwest and southwest. An ACES Autism Center is located east of the property.

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 March 8, 2021, 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 will be delineated.

MBI accessed the property via the paved driveway extending north from Clintonville Road. A narrow band of saturated soil was noted east of the driveway and extended north to south. This area was explored using a hand auger and revealed the presence of poorly drained soil (exhibiting a low chroma matrix within 20 inches) as well as some mucky, very poorly drained, pockets. Several areas of standing water were noted throughout the delineated area. The delineation extended from south to north terminating along the eastern property boundary at wetland flag WF-14. The northern end of the delineated area was located at the base of the embankment which impounds the nearby, upslope pond. An iron pipe was observed in the bottom of the embankment and served as a high water drain for the pond. The delineated area included Spicebush (*Lindera benzoin*), American Hornbeam (*Carpinus Caroliniana*), Red Maple (*Acer rubra*), Multiflora Rose (*Rosa Multiflora*), Oriental Bittersweet (*Celastrus orbiculatus*), and Raspberry (*Rubus spp.*).

The pond area was delineated next using wetland flags WF#1-1 through WF#1-15. The edge of high water was determined to be the wetland boundary along the majority of the pond. An apparent shallow well was observed within a seep at the northern end of the pond. Poorly drained soils associated with the seep were delineated and encompassed the well. The western edge of the pond contained Phragmites (*Phragmites australis*). Other bordering plant species included Highbush Blueberry (*Vaccinium corymbosum*), Spicebush (*Lindera benzoin*), American Hornbeam (*Carpinus Caroliniana*), Red Maple (*Acer rubra*), Multiflora Rose (*Rosa Multiflora*), Oriental Bittersweet (*Celastrus orbiculatus*), and Greenbrier (*Smilax spp.*). Several large Cottonwoods (*Populus deltoides*) were also noted in the vicinity

of the pond. The pond was frozen so an assessment of depth or biological activity could not be performed.

The property slopes up sharply to the east from the pond and then levels off to the eastern boundary where topography drops quickly along bedrock outcroppings. Remnants of a possible small stone foundation and an abandoned ground-driven cultivator were noted in the wooded area in the eastern portion of the property.

The Natural Resource Conservation Service (NRCS) identifies Cheshire Fine Sandy Loam on the subject property. 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. 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 the proposed improvements along with proposed grading and stormwater management facilities. The access road utilizes approximately 150 feet of the existing driveway before turning east and then northward passed the farm pond. As the access road bends eastward north of the pond, an 18" High-Density Polyethylene Pipe (HDPE) pipe is proposed to allow drainage from the north side of the road to pass below the road to the pond. The pipe will have a flared end and be embedded 6 inches. A grassed swale is proposed along the south side of the access road as it climbs to the tower site. The swale contains three stone check dams and terminates in a flared, rip-rap splash pad adjacent to the northeast perimeter of the pond. Fill slopes along the access road will be stabilized with a grass seed mix.

In order to keep the access drive slopes under 10%, it is a proposed cut project with 2330 +/- cubic yards of cut and 460 +/- cubic yards of fill for a net excess of 1,870 +/- cubic yards which will be exported.

Conclusions and Recommendations

The site wetland resources consist of a man-made farm pond fed by a small hillside seep and a narrow wetland corridor originating at the base of the pond impoundment and extending along the eastern property boundary to the adjacent roadway. The pond is bordered by a mature forest to the east, north and northwest. Mowed lawn abuts the pond to the southwest and borders the southern wetland to the west. Offsite residences are located nearby to the east of the wetlands and nearby to the north of the pond. Overall, the site vicinity is moderately developed with residential and commercial properties.

Wetlands Delineation Report
222 Clintonville Road - Northford, CT
May 4, 2021

The proposed project requires the placement of an access road northwest of the southern wetland area and west and north of the pond. Minor clearing and filling, to provide for the roadway, are required west of the wetland resources. As the access road turns east and continues upslope toward the tower site, fill placement is required to make the appropriate road grade. Drainage management accommodations including a pipe beneath the roadway and a grassed swale with check dams are needed to maintain the existing wetland watershed and mitigate concern for erosion.

Given the nature of the onsite wetland resources which consist of disturbed/altered, post-agricultural features located in a well-developed area and, the proposed design which accounts for watershed management and post-construction erosion control, no long-term physical impacts to the wetlands are anticipated. This conclusion is further supported by the short-term, temporary "uses" of the site (maintenance and installations) and the gravel access drive, both of which mitigate the presence of typical roadway run-off contaminants.

Considering the sloping land north and northeast of the pond, and the requirements for construction in this area, installation and maintenance of erosion control measures during and after construction will be important to maintaining wetland resource conditions. Such measures should be routinely inspected and maintained as detailed on final construction plans and specifications.

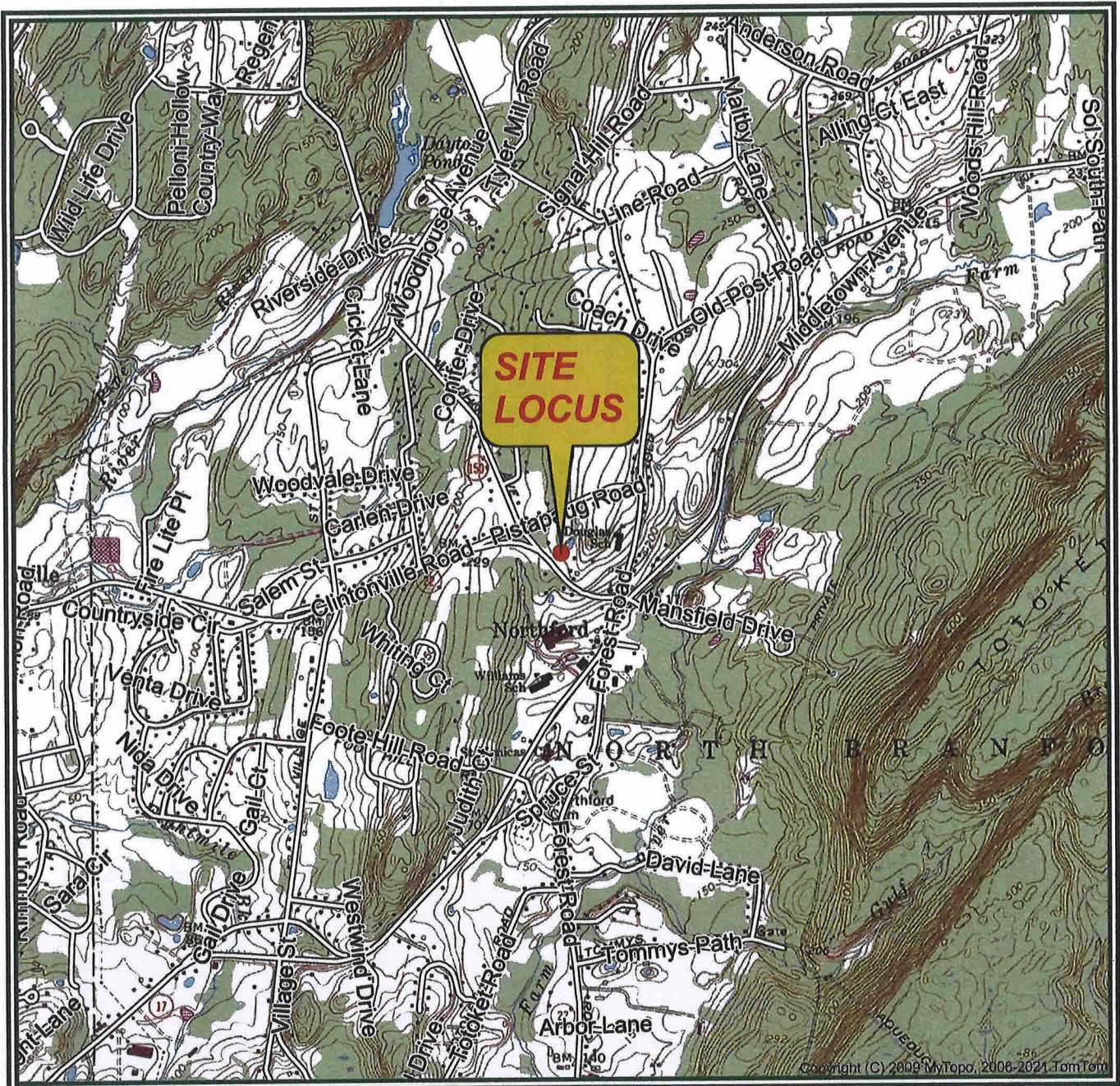
Tree removals required for the project should be kept to a minimum and damage to trees that will remain should be avoided. Consideration should be given to the installation of supplemental plantings on the fill slopes including native, wild-life friendly shrubs and herbs.

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.

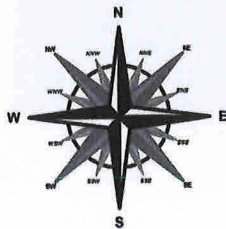
Sincerely,



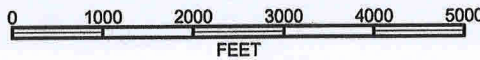
Martin Brogie, LEP
Soil Scientist



WALLINGFORD Topographic 1967 41072-D7-TF-024 National Geodetic Vertical Datum 1929



SCALE 1:24000



Site Coordinates:
041° 23' 43.37" N,
072° 47' 41.48" W

Project:
222 Clintonville Rd.

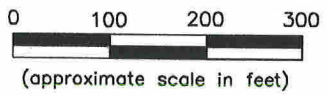
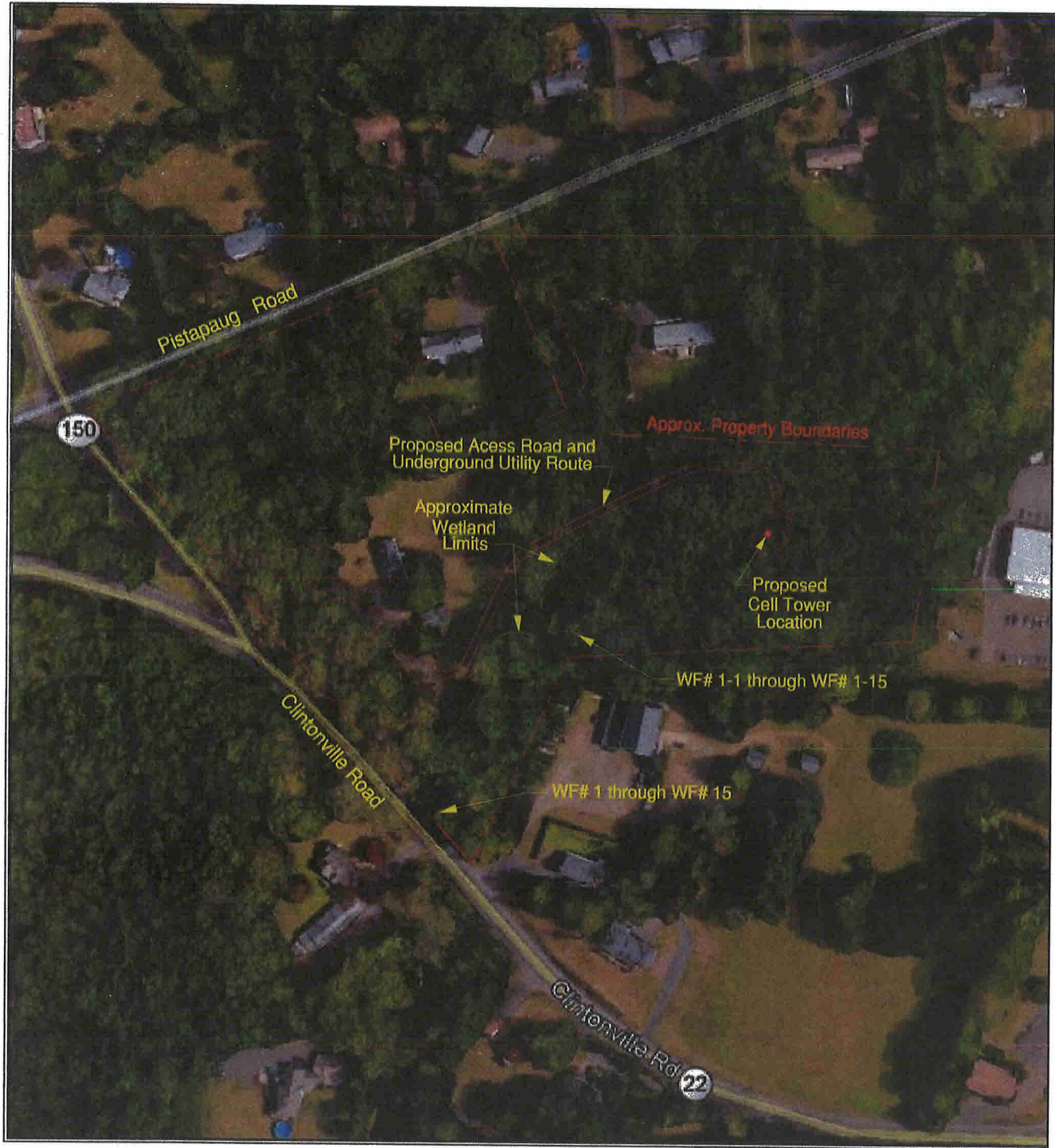
Site Location:
222 Clintonville Road
New Haven County,
Northford, Connecticut



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Figure 1 - Site Locus Map



 **Martin Brogie, Inc.**
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Figure 2 - Aerial Site Plan

222 Clintonville Road
 Northford, New Haven County, Connecticut

Project:	222 Clintonville Rd
Drawn by:	HC
Date:	5/4/21
Scale:	AS SHOWN



SOUTHERN PORTION OF SOUTHERN WETLAND LOOKING EAST ALONG ROUTE 22



**CENTRAL PORTION OF SOUTHERN WETLAND LOOKING NORTH.
OFFSITE RESIDENCE STRUCTURES IN UPPER RIGHT OF PHOTO**

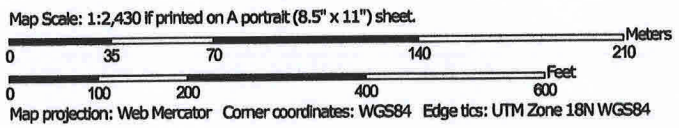


AREA OF STANDING WATER IN NORTH END OF SOUTHERN WETLAND AT BASE OF POND IMPOUNDMENT.
.LOOKING EAST ON TO ADJACENT PROPERTY.



VIEW ACROSS POND LOOKING NORTH

Soil Map—State of Connecticut
(NRCS Soils)



MAP LEGEND

Area of Interest (AOI)	Spoil Area
Area of Interest (AOI)	Stony Spot
Soils	Very Stony Spot
Soil Map Unit Polygons	Wet Spot
Soil Map Unit Lines	Other
Soil Map Unit Points	Special Line Features
Special Point Features	Water Features
Blowout	Streams and Canals
Borrow Pit	Transportation
Clay Spot	Rails
Closed Depression	Interstate Highways
Gravel Pit	US Routes
Gravelly Spot	Major Roads
Landfill	Local Roads
Lava Flow	Background
Marsh or swamp	Aerial Photography
Mine or Quarry	
Miscellaneous Water	
Perennial Water	
Rock Outcrop	
Saline Spot	
Sandy Spot	
Severely Eroded Spot	
Sinkhole	
Slide or Slip	
Sodic Spot	

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
Survey Area Data: Version 20, Jun 9, 2020

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

Date(s) aerial images were photographed: Dec 31, 2009—Oct 30, 2017

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
5	Wilbraham silt loam, 0 to 3 percent slopes	3.5	14.2%
63B	Cheshire fine sandy loam, 3 to 8 percent slopes	6.0	24.4%
63C	Cheshire fine sandy loam, 8 to 15 percent slopes	8.3	33.6%
63D	Cheshire fine sandy loam, 15 to 25 percent slopes	0.3	1.2%
64B	Cheshire fine sandy loam, 3 to 8 percent slopes, very stony	6.6	26.6%
Totals for Area of Interest		24.8	100.0%



NATURAL DIVERSITY DATA BASE AREAS NORTH BRANFORD, CT

December 2020