STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

PETITION OF TOWERNORTH DEVELOPMENT, LLC AND NEW CINGULAR WIRELESS PCS, LLC TO THE CONNECTICUT SITING COUNCIL FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED TO REPLACE THE EXISTING COMMUNICATIONS TOWER FACILITY AT 13 POMEROY AVENUE IN MERIDEN, CONNECTICUT WITH A NEW WIRELESS TELECOMMUNICATIONS MONOPOLE	PETITION NO. 1590 November 9, 2023

RESPONSES OF TOWERNORTH DEVELOPMENT, LLC AND NEW CINGULAR WIRELESS PCS, LLC TO CONNECTICUT SITING COUNCIL INTERROGATORIES

Notice

Q1. Referencing Section V, p. 5 and Attachment 9 of the Petition, has the City of Meriden (City) and/or any abutting property owners provided comments to TowerNorth Development LLC (Tower North) or New Cingular Wireless PCS, LLC (AT&T) since the Petition filing? If so, please summarize the comments.

A1. No comments were received since the Petition filing.

Project Development

Q2. What is the estimated cost of the proposed project?

A2. The estimated cost of the project for TowerNorth and AT&T is included in the table below.

Requisite Component:	**Cost (USD)**
Tower & Foundation	$175,000.00
Site Development	$100,000.00
Utility Installation	$85,000.00
Facility Installation	$350,000.00
Subtotal Tower North Cost	**$710,000.00**
Antennas and Equipment	$130,000.00
Subtotal AT&T Cost	**$130,000.00**
Total Estimated Costs	**$840,000.00**

Q3. Is the project, or any portion of the project, proposed to be undertaken by state departments, institutions or agencies, or to be funded in whole or in part by the state through any contract or grant?

A3. No.

Existing Rooftop Non-Tower Antenna Array

Q4. When was AT&T's non-tower antenna array installed on the roof of the Comfort Inn & Suites at 900 East Main Street?

A4. AT&T's rooftop facility at the Comfort Inn & Suites at 900 East Main Street was installed in July 1999.

Q5. What is the centerline height of the AT&T antennas on the roof of 900 East Main Street?

A5. The centerline height of AT&T's alpha and beta sectors antennas is approximately 69' AGL, and the centerline height of AT&T's gamma sector antennas is approximately 50' AGL.

Q6. Who approved the AT&T installation on the roof of 900 East Main Street?

A6. AT&T's rooftop facility at 900 East Main Street was approved by the City of Meriden.

Q7. What equipment is installed and what services are provided from the rooftop site?

A7. AT&T's rooftop facility at 900 Main Street currently includes the following equipment:

(3) Powerwave 7770 Antennas

(1) KMW AM-X-CD-16-65-OOT-RET Antenna

(2) KMW AM-X-CD-14-65-OOT-RET Antenna

(3) Remote Radio Units ("RRUS")-11

(3) RRUS-12

(6) TMAs (Existing)

The services provided include:

LTE only (700MHz-BC/1900MHz-PCS/2300MHz-WCS.

Q8. What modifications has AT&T implemented at the rooftop site since it was approved?

A8. No modifications were implemented by AT&T since the existing rooftop facility was approved.

Q9. What structural modifications would be required if the property owner of 900 East Main Street was willing to complete them?

A9. The current sign structure on the roof of 900 East Main Street consists of two lattice frame systems which were originally designed for billboards. The north facing sign is comprised of three vertical truss frame elements and the south facing sign is comprised of seven vertical truss frame elements interconnected throughout with horizontal and diagonal truss leg members at the north facing sign together with additional horizontal members. The extensive, structural modifications include but are not limited to, replacing existing steel bracing with new L6x6x5/16 steel braces, adding (6) new steel L3x3x1/4 brace back to the adjacent structure, adding new (6) LL3x3x1/4 horizontal bracing, removing existing L2.5x2.5 angle and replacing it with new LL3x3x1/4 reinforced legs to support the structure, and replacing (12) L2.5x2.5x1/4 with (12) new HSS2.5x2.5x1/4 steel. All materials will need to be galvanized along with cold galvanizing for all drilled bolt holes.

Q10. Would AT&T's existing equipment at 900 East Main Street be removed immediately upon operation of the proposed facility?

A10. Yes. Once this replacement facility is on-air, AT&T will remove their equipment at 900 East Main Street.

Q11. Would a temporary tower facility be required to maintain AT&T and City of Meriden service during the cutover of equipment to the replacement facility?

A11. No, a temporary facility will not be required to maintain service.

Existing Municipal Tower Site

Q12. What is the height of the existing self-supporting lattice tower?

A12. The existing self-support lattice tower is approximately 60' AGL.

Q13. When was the existing tower constructed?

A13. The existing tower was constructed in 1968.

Q14. Provide photographs of the existing facility and the proposed replacement facility area. Use stakes to show the limits of the replacement facility area.

*A14. Please see the photos included in **Attachment 1**. The proposed facility area was staked with stakes outside of pavement areas and painted P-K nails within pavement limits.*

Q15. If the replacement facility were to be of the same lattice design as the existing tower, what height would be required for AT&T and the City of Meriden to meet service objectives and approximately how much would it cost?

A15. AT&T would require a minimum antenna centerline height of 141' AGL. The estimated cost for a lattice design is $150,000. However, it's not customary to build a lattice

design this short in height and the leased compound size is not designed to accommodate a lattice design which occupies a larger footprint.

Q16. When the existing tower is decommissioned and removed, will the existing tower foundation remain? Explain.

A16. The existing tower structure will be removed down to the foundation bolts. The foundation will remain to avoid any further land disturbance.

Q17. What is the nearest distance of the existing tower site to the wetland to the west?

A17. The face of the closest tower leg for the existing tower is approximately 7' away from the wetland line and the existing tower fenced compound is approximately 3' away from the wetland line.

Q18. Would the existing tower and compound be removed upon construction and operation of the proposed facility? When?

A18. Yes, the existing tower and compound will be removed during construction of the proposed facility.

Proposed Replacement Facility

Q19. Provide typical construction workdays and hours, and the anticipated duration of construction.

A19. Construction will take place between 8AM-5PM Monday through Friday. The anticipated duration of construction is a 60–90-day timeframe to build the tower and equipment compound. AT&T's installation will follow with the same workdays/hours and include an approximately 30-day build.

Q20. Will excavation and/or filling be required to accommodate the facility?

A20. Below grade fill/replacement is unlikely but unknown until a full geotechnical report is completed. This will depend upon the exact foundation design required. As is typical, any "fill" material observed below the tower foundation would need to be replaced as needed (not anticipated in this case). The proposed compound location is relatively flat, and filling is not required for construction.

Q21. Would the tower and foundation be designed to accommodate an increase in tower height?

A21. The tower and foundation are not currently designed to accommodate an increase in tower height, but it is possible if requested/required. The reason the facility is not currently designed for an increase in height is partially due to the close proximity of the wetlands of the site and the type of foundation chosen once the geotechnical analysis is completed. For example, if a "mat foundation" is required to accommodate a potential height increase due to soil conditions, the foundation mat footprint will be larger than anticipated.

Q22. What is the maximum number of tenants the tower can support?

A22. The proposed replacement tower is designed to support 4 carriers and municipal equipment.

Q23. Have any carriers expressed an interest in locating on the proposed facility?

A23. In addition to AT&T, Verizon has expressed interest. The Fire Department also expressed future interest in locating on the proposed replacement tower.

Q24. Referring to Petition page 2, the fenced equipment compound would be 1,684 square feet. According to Sheet Z-1 of the site plan provided in Petition Attachment 2, the fenced compound dimensions would be 24 feet by 50 feet (1,200 square feet). Sheet Z-2 provided in Petition Attachment 2 shows the fenced compound as a 25-foot by 50-foot (1,250 square feet) area. Please clarify.

A24. The lease area will be 25'x50' (1,250sft) and the fenced compound will be approximately 1,230sft as the compound fence is not rectangular. The drawings were updated to clarify this item. The updated drawings are included in ***Attachment 2.***

Q25. What type of antennas and equipment would be installed by the City? What would be the maximum height above ground level at the top of the City's antennas?

A25. The City is not proposing to install antennas and equipment at this time.

Q26. Would the City's ground equipment be located within the proposed fenced compound?

A26. The City is not proposing to install ground equipment within the proposed fenced compound at this time.

Q27. Referencing Petition page 2, would AT&T's collocation on the proposed replacement facility provide 5G service?

A27. Yes.

Q28. Referencing Petition Attachment 7, approximately how much larger is the coverage area of the replacement facility compared to the existing rooftop installation?

A28. Per the Radio Frequency Analysis Report dated April 3, 2023 included in Attachment 7 of the Petition, AT&T's coverage will increase by approximately .27 square miles at -83dbm and approximately .57 square miles at -93dbm.

Q29. Approximately when was the search ring established for the AT&T installation?

A29. The search ring was established in September of 2020.

Q30. Were other potential sites considered for the proposed AT&T installation? If so, please identify the other potential sites and why they were rejected.

A30. Yes, AT&T evaluated other sites/locations as follows:

RF Candidate Ltr	Lat	Long	Structure	Address	Elevation	Notes
A	41.527767	-72.772704	Rooftop	900 East Main Street, Meriden, CT 06450	315'	Existing rooftop site - LL will not accommodate structural modifications needed to upgrade facility - need to replace
B	41.5272	-72.769086	Rooftop	10 Bee Street, Meriden, CT 06450	274'	50' tall motel (Red Roof Inn). AT&T would need a 140' tower so they can remain at the same rad center (when you take into account ground elevation) when they relocate from Candidate A.
C	41.52737	-72.77221	Raw Land	934 East Main Street, Meriden, CT 06450	314'	** NO LONGER VIABLE ** Raw land managed by Capital Telecom (GET053). Capital Telecom was unsuccessful with locking into a ground lease.
D	41.525883	-72.767723	Flagpole	13 Pomeroy Ave, Meriden, CT 06450	300'	Fire House # 5. Potential flagpole replacement would require the flagpole to be taller and wider than a monopole and the proposed antennas cannot be installed inside the flagpole. Same property as candidate G
E	41.525946	-72.77208	Raw Land	965 East Main Street, Meriden, CT 06450	307'	** NO LONGER VIABLE ** Capital Partners was unsuccessful with the property owner.
F	41.534793	-72.767637	Raw Land	366 Bee Street, Meriden, CT 06450	270'	Vertical Bridge has landlord interest, but not for a 150' tower which is what AT&T would need to achieve the same coverage as candidate G.
G	41.525587	-72.767799	Lattice Tower to be replaced with monopole	13 Pomeroy Ave, Meriden, CT 06450	285'	Existing 100' lattice tower at Fire House # 5. TowerNorth has a ground lease in place for a 150' tower which is AT&T's primary candidate.

Q31. Referring to Petition Attachment 2, Sheet Z-1, a retaining wall is proposed along the edge of the parking lot east of the site. Would that retaining wall be constructed as part of this project? What is the proposed length of the retaining wall? What is the purpose of the retaining wall?

A31. Yes. The length will be approximately 100', and the intent is to expand the parking lot to allow for proper circulation of vehicles in that area.

Q32. How many parking spaces would be eliminated? Would additional parking spaces be installed on the parcel?

A32. Under the proposed conditions, 14 parking spaces will be provided within this lower parking area. The existing parking spaces are not well defined to provide an accurate count for existing conditions. However, it is estimated that if the existing parking lot was fully stripped, a loss of 5-6 parking spaces would result due to the proposed fenced compound.

Public Safety

Q33. Could the construction or operation of the proposed facility impact or interfere with any existing utilities or infrastructure within the project area? If so, identify any measures that would be employed to protect existing utilities or infrastructure from impact or interference.

A33. Prior to any excavation, Tower North will utilize the Call Before You Dig service to locate underground utilities and cables in the area of the proposed work site.

Q34. Identify the safety standards and/or codes by which equipment, machinery or technology that would be used or operated at the proposed facility.

A34. The facility would be constructed and maintained in accordance with the following standards and/or codes:

- *2021 International Building Code.*
- *2020 National Electric Code (NFPA 70).*
- *2021 International Mechanical Code.*
- *2022 Connecticut State Fire Prevention Code.*
- *2022 Connecticut State Fire Safety Code (NPFA 101).*
- *ANSI/TIA-222-H "Structural Standard for Antenna Supporting Structures Antennas and Small Wind Turbine Support Structures".*
- *Occupational Safety and Health Administration (OSHA).*

The structural design standards applicable to the proposed antenna mount are ANSI/TIA-222-H "Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures" and TIA-5053 "Mounting System Classification".

Q35. Would the proposed equipment installation be capable of supporting text-to-911 service and comply with federal E911 requirements and the Warning, Alert and Response Network of 2006?

A35 Yes.

Q36. What measures are proposed for the site to ensure security and deter vandalism? (Including alarms, gates, locks, etc.)

A36 The replacement facility and equipment compound will be enclosed by a 6' tall chain link security fence with locked gates. AT&T's equipment cabinets include alarms that will alert technicians regarding any unauthorized access.

Q37. Would any lighting be installed at the site? If so, what would it be used for? Would it be on all the time, have a motion sensor or work on a preset timer?

A37. No lighting is proposed by Tower North. AT&T will have a motion sensing light on their cabinet as required by OSHA. Future carriers may propose lights on their ground equipment to be used during maintenance and troubleshooting.

Q38. Provide a far-field radio frequency power density analysis that includes the City's antennas.

A38. The City is not proposing any antenna equipment to be installed at this time.

Q39. Would the facility comply with Department of Energy and Environmental Protection Noise Control Standards at the property boundaries?

A39. Given that the emergency generator is exempt from the DEEP Noise Control Standards and no other facility equipment emits any significant noise, it is anticipated that AT&T's facility will comply with the DEEP Noise Control Standards at the property boundaries.

Q40. Referring to Petition Attachment 5, a tower extending to a height of 154 feet above ground level was considered for the Federal Aviation Administration (FAA) determination. If the City's antennas exceed a height of 154 feet above ground level, would a new FAA determination be required?

A40. Yes, if the City proposes to install antennas in the future and they exceed 154' AGL a new FAA determination will be completed.

Q41. What is the distance from the proposed tower to the Interstate 91/Route 15 off ramp?

A41. The distance from the proposed replacement tower to the Interstate 91/Route 15 off ramp is approximately 80'. The distance from the existing tower is approximately 70'.

Q42. Would the proposed tower be constructed with a yield point to ensure the tower setback radius remains within the property boundaries? If so, at what height would the yield point be installed?

A42. Yes, the replacement tower can be designed with a yield point at 75' so that the tower setback remains within the property boundaries.

Q43. What is the distance from the proposed tower to the existing fire department building?

A43. The distance from the proposed replacement tower to the existing fire department building is approximately 68'.

Q44. Referring to Petition Attachment 2, Sheet Z-3, bollard detail is provided. Where would bollards be installed?

A44. A bollard is not proposed. The bollard detail was a typical detail which was removed from the revised drawings included in ***Attachment 2.***

Emergency Backup Power

Q45. Could AT&T install a propane-fueled emergency backup generator given the proximity to wetlands?

A45. Yes, but a propane-fueled generator requires additional ground space to adhere to any code enforced setbacks. Given that the proposed compound area is limited, additional space for a propane-fueled generator will limit space for future collocators.

Q46. AT&T's emergency backup power source is described as a 15kW diesel generator:

a. Would the backup generator run periodically for maintenance purposes? If so, at what frequency and duration? Would this be scheduled for daytime hours?
b. Would the backup generator have containment measures to protect against fluid leakage?
c. What would be the fuel tank capacity and how often would refueling be required?
d. How long would the generator be capable of powering the facility with the fuel tank at maximum capacity?

A46. a. The generator will be used only in the case of a prolonged outage (i.e., after exhaustion of the 3-hour battery backup) and will otherwise be run for roughly one-half hour each week during daylight hours for routine testing.

b. Yes. The fuel tank is a double wall UL 142 rated tank which includes a 5 gallon catch basin in the event of an unforeseen leak.

c. The fuel tank's capacity is 54 gallons. The refueling schedule depends on how often the generator is used. Fuel levels are monitored remotely. Typically, the generator only needs to be refueled every other month.

d. At full capacity, the generator can run for 50 to 60 hours before needing to be refueled.

Q47. Would battery backup power be installed? How long would a battery backup alone supply power to the facility?

A47. AT&T's batteries would allow operation for approximately 3 hours.

Environmental Effects and Mitigation Measures

Q48. What is the nearest distance of the proposed site/limits of disturbance to the wetland to the west? What type of wetland is located here? (e.g. stream, highway drainage)

A48. The face of the closest existing tower leg is approximately 7' away from the wetland line, and the existing tower fenced compound is approximately 3' away from the wetland line. Under the proposed conditions, the replacement tower will be approximately 20.5' away from the wetland, and the closest fence will be approximately 5' away from the wetland. The wetland is considered an "inland wetland" and the soils within the wetland include a combination of alluvial/floodplain and poorly drained, fill materials according to the Wetland and Soil Evaluaiton report dated 9/30/22 by EcoTec, Inc. included in ***Attachment 3.***

Q49. Provide a detailed site plan showing erosion and sediment control measures.

A49. Please see Sheet Z-3 of the revised drawings included in ***Attachment 2****.*

Q50. Could the proposed facility be moved to increase the distance to the adjacent wetland?

A50. While from an engineering/constructability perspective it is possible to relocate the tower and associated compound toward the roadway, it would impose greater restrictions/limitations on parking and internal circulation patterns for both vehicles and pedestrians and be more obtrusive to the fire department. The proposed location will not hinder access to the Fire Department bunker entrance and fire station and minimizes any additional ground disturbance.

Q51. Referring to Petition page 3, provide the best management practices that would be employed during construction.

A51. Proposed sedimentation and erosion controls will be designed, installed, and maintained during construction activities in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control which will minimize any temporary impacts. Please see the Erosion and Sediment Control Notes on Sheet Z-3 of the revised drawings included in ***Attachment 2.***

Q52. What is the total limit of disturbance for the proposed replacement facility and the decommissioning of the existing facility?

A52. Please see Sheet Z-3 of the revised drawings included in ***Attachment 2****.*

Q53. Referring to Petition page 3, no trees would be removed for the construction of the proposed facility. However, Sheet Z-1 shows an existing tree to be removed. Please clarify.

A53. One (1) existing tree is to be removed as part of the parking lot expansion required.

Q54. Referencing Attachment 4 of the Petition, Viewshed Map, describe the change in visibility, if any, of the proposed replacement facility versus the existing tower in the surrounding area.

*A54. Please reference Key Map of Visual Inspection Locations in **Attachment 4** for additional information. As shown in the Petition documents, the existing 60' tall self-support tower (top whip antenna extends to approximately 70' AGL) is proposed to be replaced with a 150' tall monopole tower. The resulting net increase in height (top of antennas/tower) would be approximately 80'. There will be an increase in visibility due to the taller structure primarily focused within 0.33 miles in either direction along E Main Street and 0.25 miles South on Pomeroy Avenue. Based upon the site walk inspection, it does not appear the proposed tower will have an increased visibility within the Paddock Ave residential neighborhood.*

Q55. What, if any, stealth tower design options would be feasible to employ at this site? Please provide costs related to each stealth tower design.

A55. No stealth design options were explored by TowerNorth given that any stealth option would increase visibility. AT&T did consider a flagpole designed facility but ruled it out given the several limitations of flagpole designs, including but not limited to:

- *Flagpole towers limit the number of carriers that can collocate.*
- *Flagpoles can only accommodate 3 antennas at a single RAD center elevation. If a carrier has more than three antennas, they would need to take another RAD center which would limit the amount of additional space for future carriers. For this tower in particular, AT&T has 9 antennas which means they would require three RAD centers. This would limit the number of additional carriers and may require a taller flagpole.*
- *The width of the flagpole would have to be quite large to accommodate all the additional cabling. In this case, AT&T would require 48 lines of coax.*
- *Certain antennas cannot be installed inside flagpoles because they overheat.*
- *RRH's cannot go inside flagpoles because they would not fit and there is no airflow so they would also overheat.*
- *Municipal whips, if proposed in the future, cannot be installed inside a flagpole.*

Q56. Would visibility of the proposed replacement tower be reduced if it was painted? If so, what colors are available that may reduce visibility? Would Petitioners be willing to paint the replacement tower and wireless carrier panel antennas/mounting equipment?

A56. While painting the tower is feasible, TowerNorth believes that it would cause the tower to be more visible with varying weather conditions. The typical galvanized steel grey color associated with telecommunication towers, as well as other electrical distribution towers, blends in as well as possible to the varying sky colors.

Q57. Identify the nearest "Important Bird Area" as designated by the National Audubon Society?

A57. The closest Important Bird Area as recorded by the Audubon Society is approximately 8.5 miles northeast of the project site. Due to the small footprint of the project, there is no anticipated impact to bird species.

Q58. Would the proposed replacement tower comply with the USFWS Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance and Decommissioning? (available at https://www.fws.gov/sites/default/files/documents/usfws-communication-towerguidance.pdf

*A58. Yes. As per the Natural Resources Review dated April 18, 2023 included in **Attachment 5**, the proposed tower will be a 154-foot self-supported (i.e. no guyed wires) with no lighting. As such, it meets the USFWS's tower siting and design recommendations and is therefore not anticipated to adversely affect migratory birds. The area of the subject property on which the installation is proposed currently consists of a paved parking area void of any natural vegetative communities, and suitable habitats capable of supporting the listed threatened and endangered species were not noted at the proposed communications facility location, and the proposed installation is anticipated to have no effect on listed species. The USFWS online Critical Habitat Portal mapping tool determined that the proposed Facility location is not within a designated critical habitat. Additionally, the development of the communications facility is not anticipated to impact wetlands and will not require the significant removal of trees, therefore, no significant changes to surface features are anticipated.*

CERTIFICATE OF SERVICE

I hereby certify that on this day, one original and fifteen (15) hard copies of the foregoing were sent via overnight Federal Express and electronically to the Connecticut Siting Council.

November 9, 2023

Lucia Chiocchio, Esq.
Daniel Patrick, Esq.
Cuddy & Feder LLP
445 Hamilton Ave, 14th Floor
White Plains, NY 10601
(914)-761-1300
Attorneys for the Applicant

cc: TowerNorth Development, LLC
New Cingular Wireless PCS, LLC

ATTACHMENT 1

ATTACHMENT 2

MERIDEN FIRE DEPT

13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.

2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.

3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.

4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.

5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.

7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC/ETERA DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.

15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.

16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.

17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455

18. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.

19. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.

20. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

21. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

22. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

23. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS CORONTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.

24. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

25. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

26. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

27. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR LEASE AREA SHALL BE RESTORED TO ORIGINAL CONDITION.

28. GRAVEL SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES.

29. DURING CONSTRUCTION, PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS.

30. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

31. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

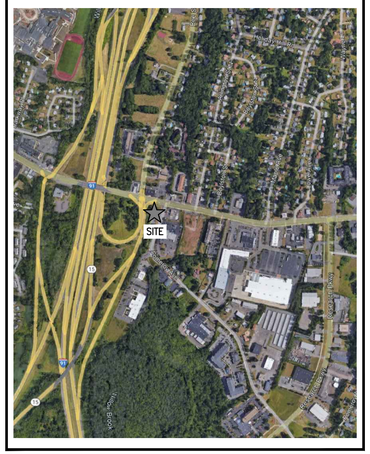
FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:

2015 INTERNATIONAL BUILDING CODE
2018 CT STATE BUILDING CODE (CSBC)
ELECTRICAL CODE: NEC 2017
NFPA 780 2014

VICINITY MAP



NORTH

VICINITY MAP
SCALE: NTS

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	4
C-1	RADIUS PLAN	4
C-2	EXISTING SITE PLAN	4
C-3	EXISTING CONDITION SITE PLAN	4
Z-1	SITE PLAN	4
Z-2	COMPOUND PLAN & ELEVATION	4
Z-3	EROSION CONTROL PLAN	4
Z-4	DETAILS	4

PROJECT SUMMARY

SITE NUMBER:	CT-0005
SITE NAME:	MERIDEN FIRE DEPT
SITE ADDRESS:	13 POMEROY AVENUE MERIDEN, CT 06450
ASSESSOR'S PARCEL NO.:	
CONSTRUCTION TYPE:	NSB
PROPERTY OWNER: (BOTH PARCELS)	CITY OF MERIDEN FIRE STATION 13 POMPEROY AVENUE MERIDEN, CT 06451
APPLICANT,	TOWER NORTH, LLC 750 W CENTER ST #301, WEST BRIDGEWATER, MA 02379
TOWER TYPE:	MONOPOLE
TOWER HEIGHT:	150 FEET

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
16381
LICENSED
PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

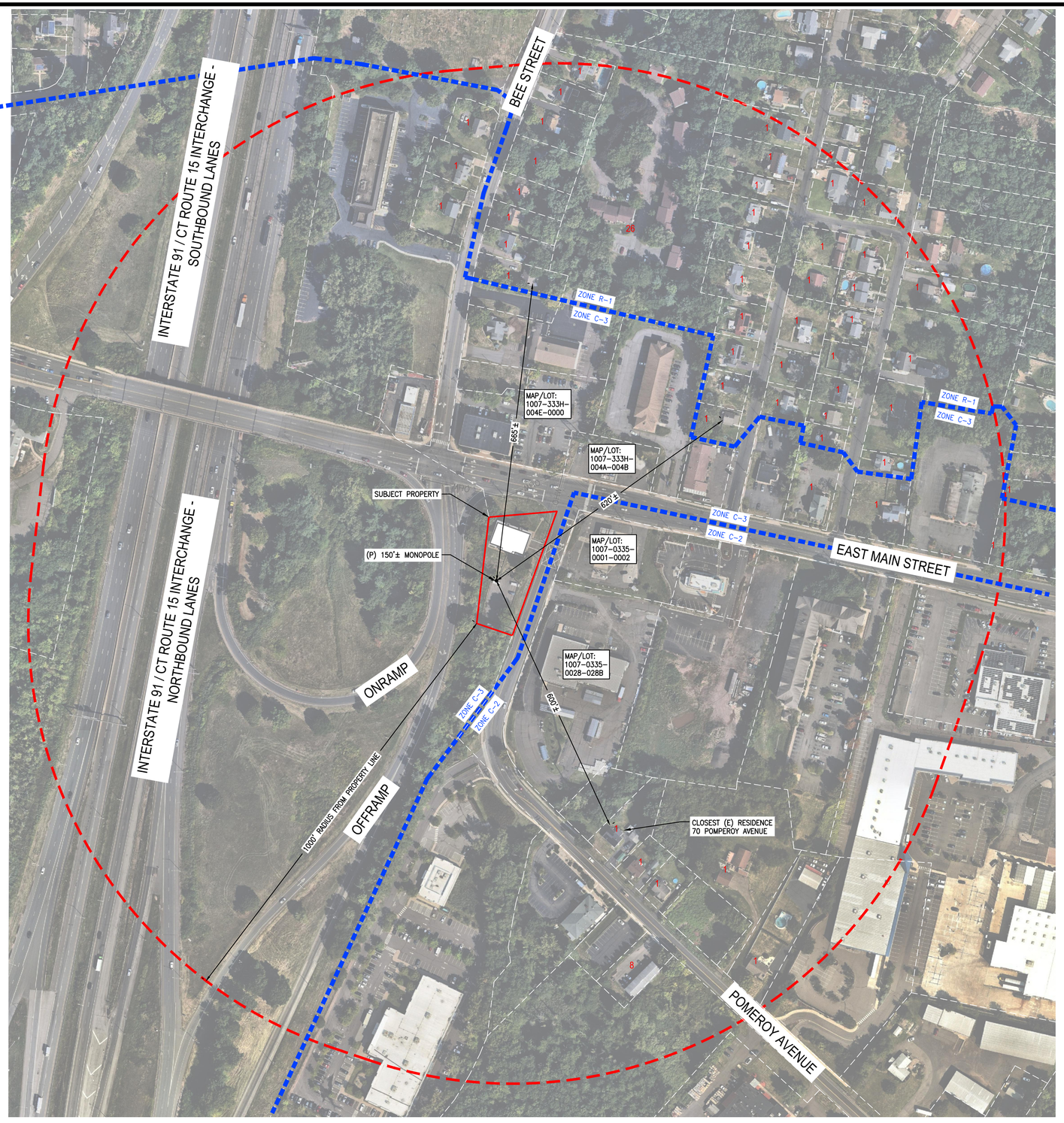
13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



NORTH

1 C-1 1000' RADIUS PLAN

SCALE: 1" =120'

0 120' 240' 360'

SURVEY NOTES

1. FIELD SURVEY DATE: 08/29/2022
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
3. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83)
4. CENTER OF (P) TOWER: LAT: 41.525594° LONG: 72.767803° ELEV.:
5. PROPERTY OWNER: CITY OF MERIDEN FIRE STATION 13 POMPEROY AVENUE MERIDEN, CT 06451
6. SITE ADDRESS: 13 POMEROY AVENUE MERIDEN, CT 06451
7. APPLICANT: TOWER NORTH DEVELOPMENT 750 WEST CENTER STREET, SUITE 301 WEST BRIDGEWATER, MA 02379
8. JURISDICTION: CITY OF MERIDEN
9. TAX ID: 1007-0322-0001-0000
10. DEED REFERENCE: BOOK 480 PAGE 621
11. PLAN REFERENCES: HIGHWAY PLAN 2867 DATED JAN 1966
12. ZONING JURISDICTION: COMMERCIAL HIGHWAY (C-3)
13. TOTAL LAND AREA 0.66001 ACRES
14. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY:
DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233
CALL BEFORE YOU DIG (CT): 1-800-922-4455
15. PROPERTY LINE INFORMATION IS COMPILED FROM A PARTIAL FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.
16. THE PURPOSE OF THIS SURVEY IS TO SUPPORT THE DESIGN AND CONSTRUCTION OF A TELECOMMUNICATION FACILITY. USE OF THIS SURVEY BY ANYONE OTHER THAN VERTEX TOWER ASSETS, LLC AND USE OF THIS SURVEY FOR ANY PURPOSE NOT RELATED TO THE DESIGN OF THE INTENDED FACILITY IS STRICTLY PROHIBITED.
17. BEARING SYSTEM OF THIS PLAN IS BASED ON TRUE NORTH. TRUE NORTH WAS ESTABLISHED FROM GPS READINGS ON 12/03/20.
18. WETLANDS WERE OBSERVED WITHIN 100' OF THE LIMIT OF WORK AND ARE SHOWN ON THE PLAN. SITE WAS WALKED BY ECOTEC INC ON 09/09/2022.
19. IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY, ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
20. THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

LEGEND

- PROPERTY LINE
- ABUTTING PROPERTY LINE
- EXIST. ZONING BOUNDARY
- PROPERTY OFFSET

ZONING INFORMATION:

- HOUSE COUNT:
84 TOTAL DWELLING UNITS WITHIN 1000' RADIUS OF SUBJECT PROPERTY
- CLOSEST STRUCTURE/RESIDENCE:
70 POMPEROY AVENUE 600'+/- FROM CENTER OF PROPOSED TOWER
- NEARBY SCHOOLS AND CHILD DAY CARE CENTERS:
STORK CLUB: 1,750 FT
MALONEY HIGH SCHOOL 2,350 FT
THOMAS HOOKER ELEMENTARY 4,180 FT

ABUTTERS' INFORMATION

- MAP/LOT: 1007-333H-004E-0000
OWNER NAME: WS CLOVERLEAF LLC
PROPERTY ADDRESS: 1064 EAST MAIN ST
OWNER ADDRESS:
PO BOX 447
GUILFORD, CT 06437
- MAP/LOT: 1007-333H-004A-004B
OWNER NAME: BIRDSEY JOY & BIRDSEY LINDA & LANGE JEFFREY P 1/3 INT E/A DANBY'S
PROPERTY ADDRESS: 1088 EAST MAIN ST
OWNER ADDRESS:
1100 EAST MAIN ST
MERIDEN, CT 06450
- MAP/LOT: 1007-0335-0001-0002
OWNER NAME: GETTY CT LEASING
PROPERTY ADDRESS: 1101 EAST MAIN ST
OWNER ADDRESS:
292 MADISON AVE 9TH FLR
NEW YORK, NY 10017-6318
- MAP/LOT: 1007-0335-0028-028B
OWNER NAME: MEAN MR MUSTARD LLC 55% & F W WEBB CO 45%
PROPERTY ADDRESS: 30 POMEROY AVE
OWNER ADDRESS:
160 MIDDLESEX TURNPIKE
BEDFORD, MA 01730
- INTERSTATE 91 OFF RAMP
MAP/LOT: N/A
OWNER NAME: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION
PROPERTY ADDRESS: N/A
OWNER ADDRESS:
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

1. METES AND BOUNDS BASED ON HIGHWAY PLAN 2867 BY HOWARD S IVES DATED JANUARY 25, 1966 A METES AND BOUNDS SURVEY WAS NOT CONDUCTED BY ADVANCED ENGINEERING GROUP, PC.
2. SETBACKS ARE TAKEN FROM THE CENTER OF PROPOSED TOWER TO PROPERTY LINES.

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

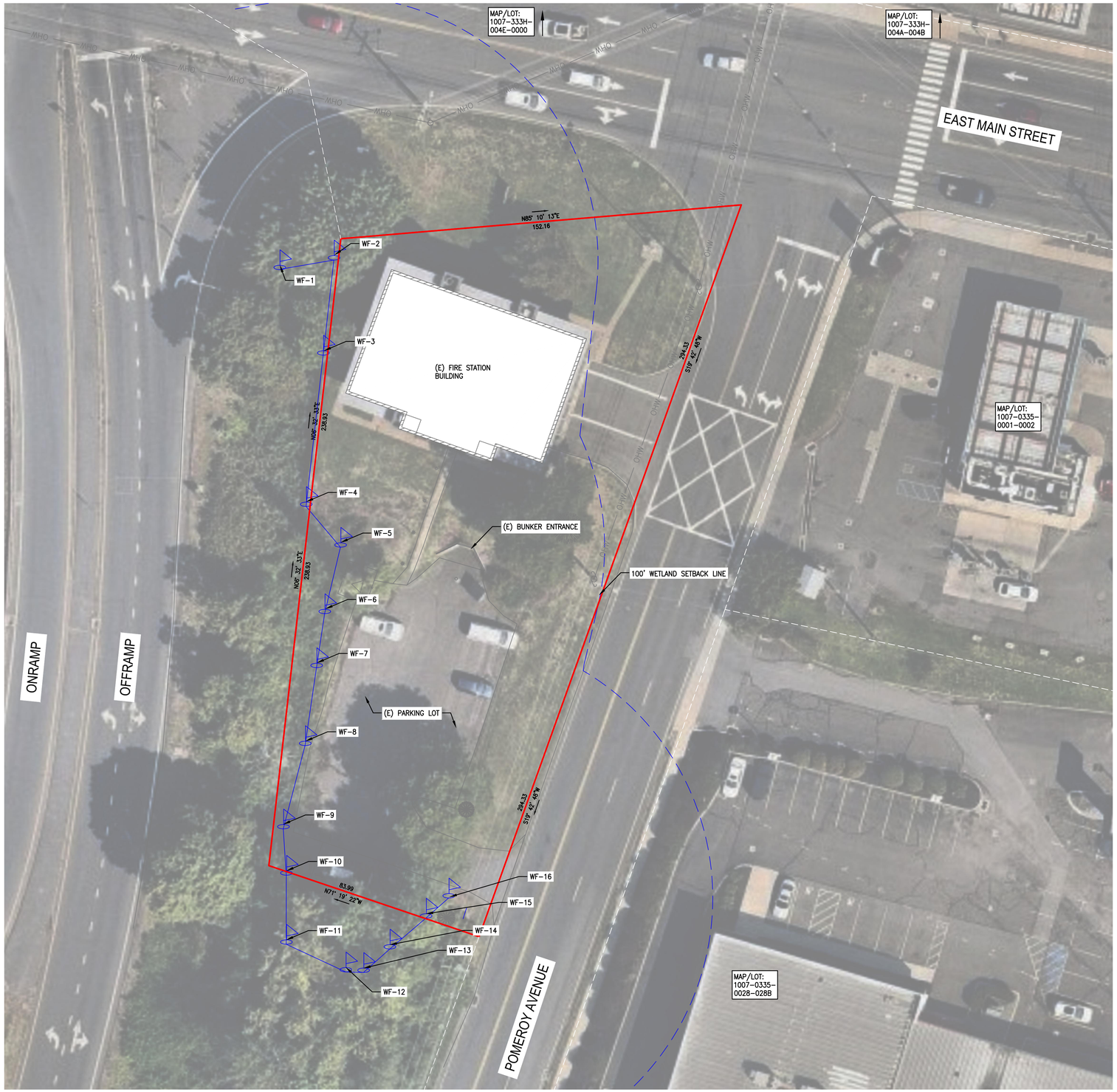
13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

EXISTING CONDITION & 300' RADIUS PLOT PLAN

SHEET NUMBER

C-1



NORTH

1 / C-2 EXISTING CONDITIONS ORTHO PLAN

SCALE: 1" =20'

0 20' 40' 60'

SURVEY NOTES

1. FIELD SURVEY DATE: 08/29/2022
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
3. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83)
4. CENTER OF (P) TOWER: LAT: 41.525594° LONG: 72.767803°
   ELEV.:
5. PROPERTY OWNER: CITY OF MERIDEN FIRE STATION
   13 POMPEROY AVENUE
   MERIDEN, CT 06451
6. SITE ADDRESS: 13 POMEROY AVENUE
   MERIDEN, CT 06451
7. APPLICANT: TOWER NORTH DEVELOPMENT
   750 WEST CENTER STREET, SUITE 301
   WEST BRIDGEWATER, MA 02379
8. JURISDICTION: CITY OF MERIDEN
9. TAX ID: 1007-0322-0001-0000
10. DEED REFERENCE: BOOK 480 PAGE 621
11. PLAN REFERENCES: HIGHWAY PLAN 2867 DATED JAN 1966
12. ZONING JURISDICTION: COMMERCIAL HIGHWAY (C-3)
13. TOTAL LAND AREA 0.66001 ACRES
14. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY:
    DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233
    CALL BEFORE YOU DIG (CT): 1-800-922-4455
15. PROPERTY LINE INFORMATION IS COMPILED FROM A PARTIAL FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.
16. THE PURPOSE OF THIS SURVEY IS TO SUPPORT THE DESIGN AND CONSTRUCTION OF A TELECOMMUNICATION FACILITY. USE OF THIS SURVEY BY ANYONE OTHER THAN VERTEX TOWER ASSETS, LLC AND USE OF THIS SURVEY FOR ANY PURPOSE NOT RELATED TO THE DESIGN OF THE INTENDED FACILITY IS STRICTLY PROHIBITED.
17. BEARING SYSTEM OF THIS PLAN IS BASED ON TRUE NORTH. TRUE NORTH WAS ESTABLISHED FROM GPS READINGS ON 12/03/20.
18. WETLANDS WERE OBSERVED WITHIN 100' OF THE LIMIT OF WORK AND ARE SHOWN ON THE PLAN. SITE WAS WALKED BY ECOTEC INC ON 09/09/2022.
19. IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY, ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
20. THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

LEGEND

- PROPERTY LINE
- ABUTTING PROPERTY LINE
- EXIST. ZONING BOUNDARY
- PROPERTY OFFSET
- WETLAND BOUNDARY & FLAG

1. METES AND BOUNDS BASED ON HIGHWAY PLAN 2867 BY HOWARD S IVES DATED JANUARY 25, 1966 A METES AND BOUNDS SURVEY WAS NOT CONDUCTED BY ADVANCED ENGINEERING GROUP, PC.
2. SETBACKS ARE TAKEN FROM THE CENTER OF PROPOSED TOWER TO PROPERTY LINES.

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED
PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

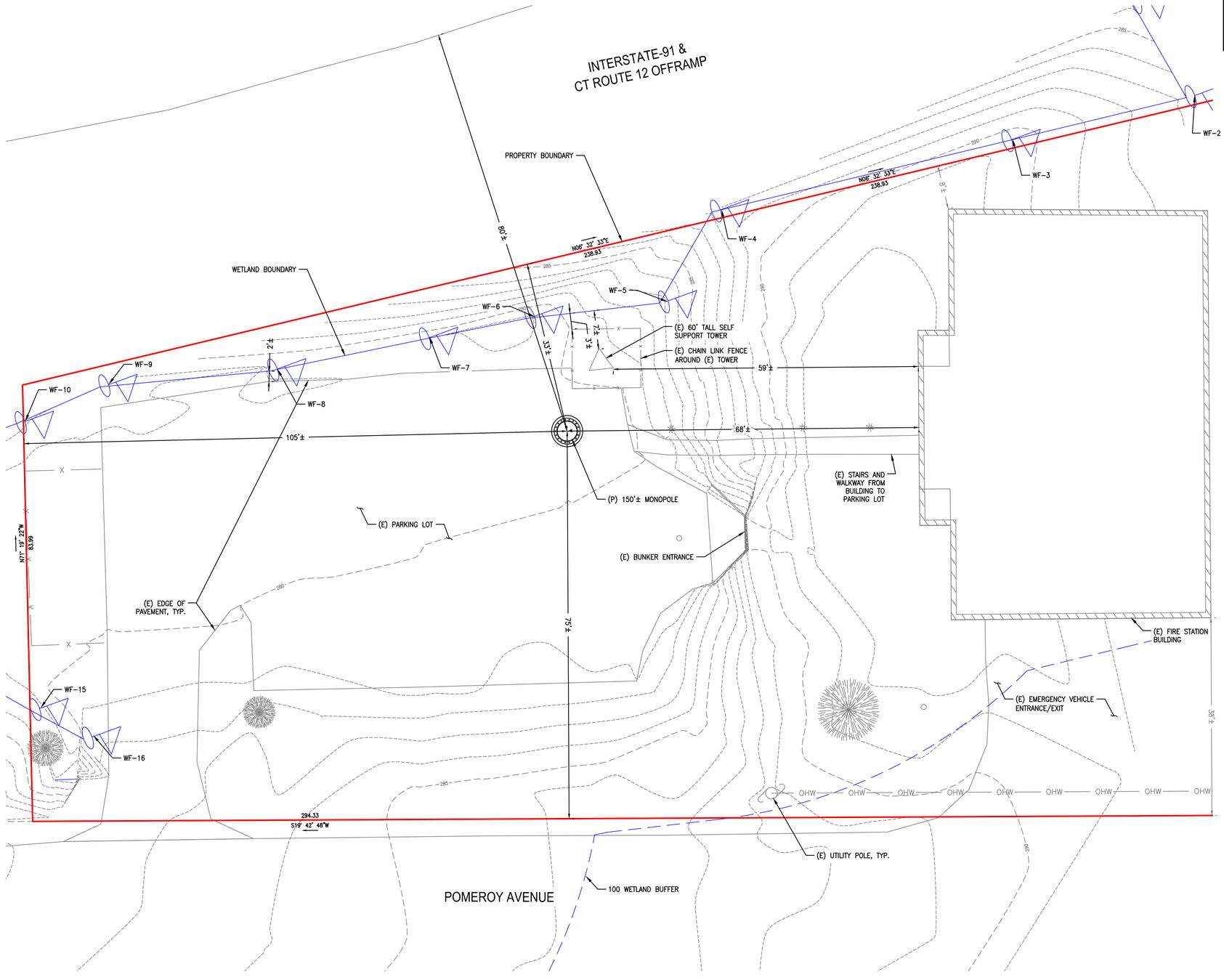
13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

EXISTING CONDITION ORTHO PLAN

SHEET NUMBER

C-2



NORTH

1 / C-3 EXISTING CONDITION SITE PLAN

SCALE: 1" =10'

0 10' 20' 30'

1. PLOT PLAN BASED ON TAX ASSESSOR'S MAPS FROM THE CITY GIS, DEEP, DIGITAL PARCEL DATA, AND RECORD PLANS NOTED. A METES AND BOUNDS SURVEY WAS NOT CONDUCTED BY ADVANCED ENGINEERING GROUP, PC.
2. SETBACKS ARE TAKEN FROM THE CENTER OF PROPOSED TOWER TO PROPERTY LINES.

LEGEND

- PROPERTY LINE
- ABUTTING PROPERTY LINE
- WETLAND BOUNDARY & FLAG
- (E) MAJOR CONTOUR
- (E) MINOR CONTOUR
- (E) OVERHEAD UTILITY WIRES

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED
PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

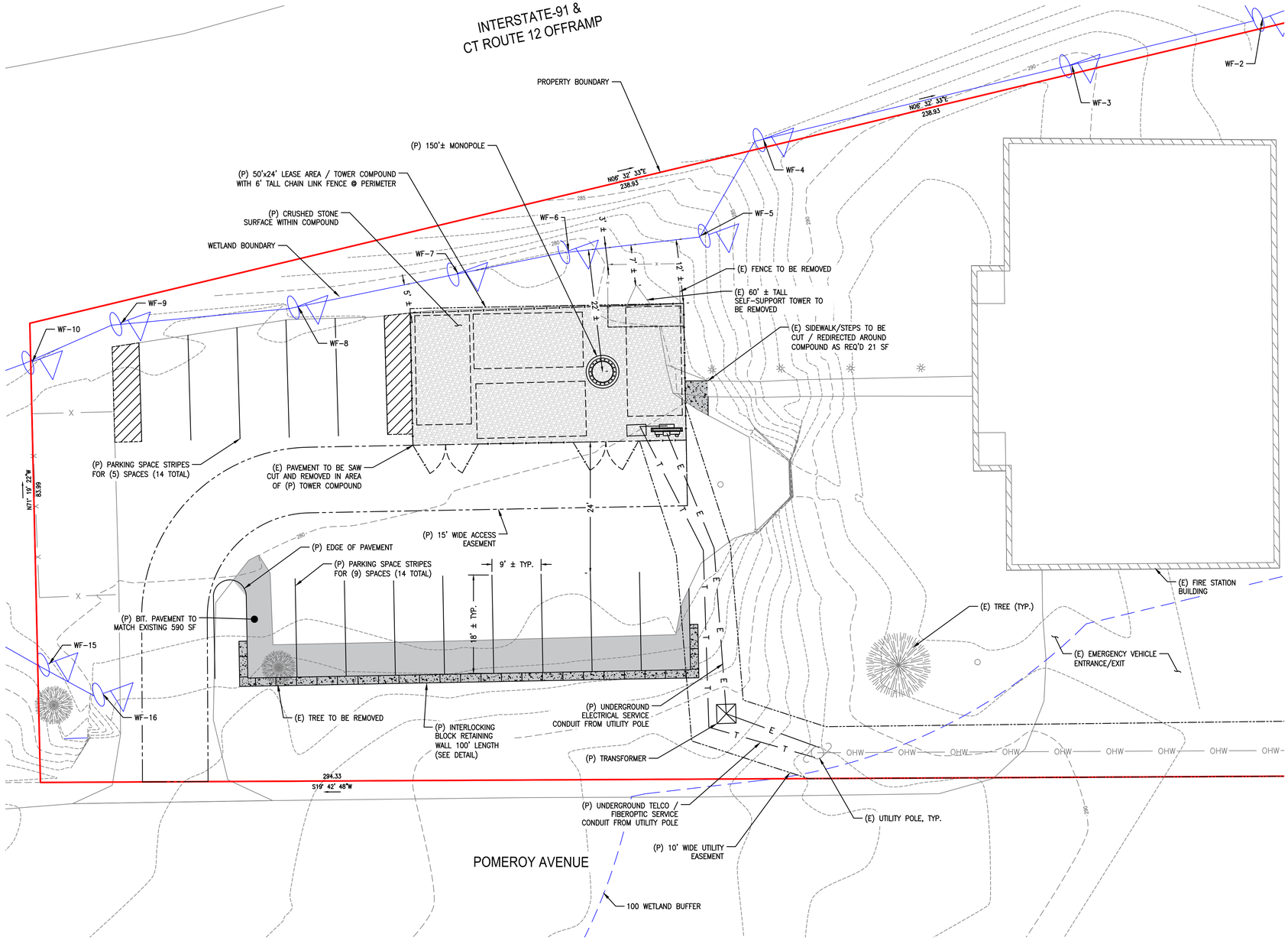
SHEET TITLE

EXISTING CONDITION
SITE PLAN

SHEET NUMBER

C-3

IMPERVIOUS SURFACE AREAS:	
IMPERVIOUS AREA ADDED	611± SQ. FT.
IMPERVIOUS AREA REMOVED	1,175± SQ. FT.
REDUCED IMPERVIOUS AREA	564± SQ. FT.



1 Z-1 PROPOSED SITE PLAN

SCALE: 1" =10'

0 10' 20' 30'

ENGINEERING NOTES

1. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND POSITIONS OF ALL PROJECT OWNER'S EQUIPMENT ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.
2. THE PROJECT OWNER'S PCS FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. THE PROJECT OWNER'S BASE TRANSMISSION STATION (BTS) CABINET IS A VANDAL RESISTANT STEEL CABINET CONTAINING RECTIFIERS, AMPLIFIERS, RADIOS, AND OTHER INTEGRATED ELECTRONIC CONTROL EQUIPMENT. BATTERY BACKUP FOR EMERGENCY STANDBY POWER IS CONTAINED WITHIN A SEPARATE BATTERY RACK CONTAINING 12-VOLT, CLOSED-CELL DC BATTERIES. THE BATTERIES ARE LEAD-ACID RECHARGEABLE STANDBY INDUSTRIAL POWER CELLS MANUFACTURED TO MEET ENVIRONMENTAL QUALITY AND RUGGEDNESS STANDARDS OF THE INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA). THE BATTERY CHARGING SYSTEM IS COMPUTER-CONTROLLED AND THE EQUIPMENT CABINET IS REMOTELY MONITORED AT PROJECT OWNER'S NETWORK OPERATIONS CONTROL CENTER 24-HOURS A DAY, 7 DAYS A WEEK FOR FAULTS AND ALARMS.
4. THE DESIGN OF THE ANTENNA MOUNTING HARDWARE AND STRUCTURAL REINFORCEMENT OF EXISTING BUILDING ROOF/FLOOR (IF NECESSARY) TO SUPPORT THE BTS EQUIPMENT CABINETS WILL MEET THE ANSI/EIA/TIA-222-G STANDARDS FOR STRUCTURAL STEEL ANTENNA SUPPORTING STRUCTURES AND STATE BUILDING CODE REQUIREMENTS. DETAILED CONSTRUCTION DRAWINGS AND STRUCTURAL CALCULATIONS WILL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED WITH A BUILDING PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE LOCAL BUILDING CODE ENFORCEMENT OFFICIAL.
5. ONCE THE FACILITY BECOMES FULLY OPERATIONAL, NORMAL AND ROUTINE MAINTENANCE BY PROJECT OWNER'S TECHNICIANS WILL BE PERFORMED ON A MONTHLY BASIS. THEREFORE, THE ESTIMATED VEHICLE TRIP GENERATION RATE IS 2 TRIPS PER MONTH. THE AVERAGE DAILY TRIP GENERATION RATE (ADT) IS 0.07.
6. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.
7. APPLICANT: TOWER NORTH DEVELOPMENT
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379
8. OWNER: CITY OF MERIDEN FIRE STATION
13 POMPEROY AVENUE
MERIDEN, CT 06451
9. ZONING DISTRICT: COMMERCIAL HIGHWAY (C-3)
10. JURISDICTION: CITY OF MERIDEN
11. TAX ID: 1007-0322-0001-0000
12. ALL MEASUREMENTS ARE SHOWN IN FEET ± UNLESS OTHERWISE NOTED.
13. PLOT PLAN MEASUREMENTS ARE APPROXIMATE AND BASED ON SCALED ASSESSORS MAPS AND OTHER AVAILABLE INFORMATION.
14. ALL SETBACKS SHOWN FROM PROPOSED ANTENNAS TO THE EDGE OF THE ROOF ARE APPROXIMATE AND SHOULD BE USED FOR REFERENCE ONLY.

LEGEND

- PROPERTY LINE
- ABUTTING PROPERTY LINE
- WETLAND BOUNDARY & FLAG
- (E) MAJOR CONTOUR
- (E) MINOR CONTOUR
- (P) CONTOUR
- (P) EASEMENT
- (P) ELECTRICAL SERVICE CONDUIT
- (P) TELCO/FIBER SERVICE CONDUIT
- (E) OVERHEAD UTILITY WIRES

1. PLOT PLAN BASED ON TAX ASSESSOR'S MAPS FROM THE CITY GIS, DEEP, DIGITAL PARCEL DATA, AND RECORD PLANS NOTED. A METES AND BOUNDS SURVEY WAS NOT CONDUCTED BY ADVANCED ENGINEERING GROUP, PC.
2. SETBACKS ARE TAKEN FROM THE CENTER OF PROPOSED TOWER TO PROPERTY LINES.

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED
PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

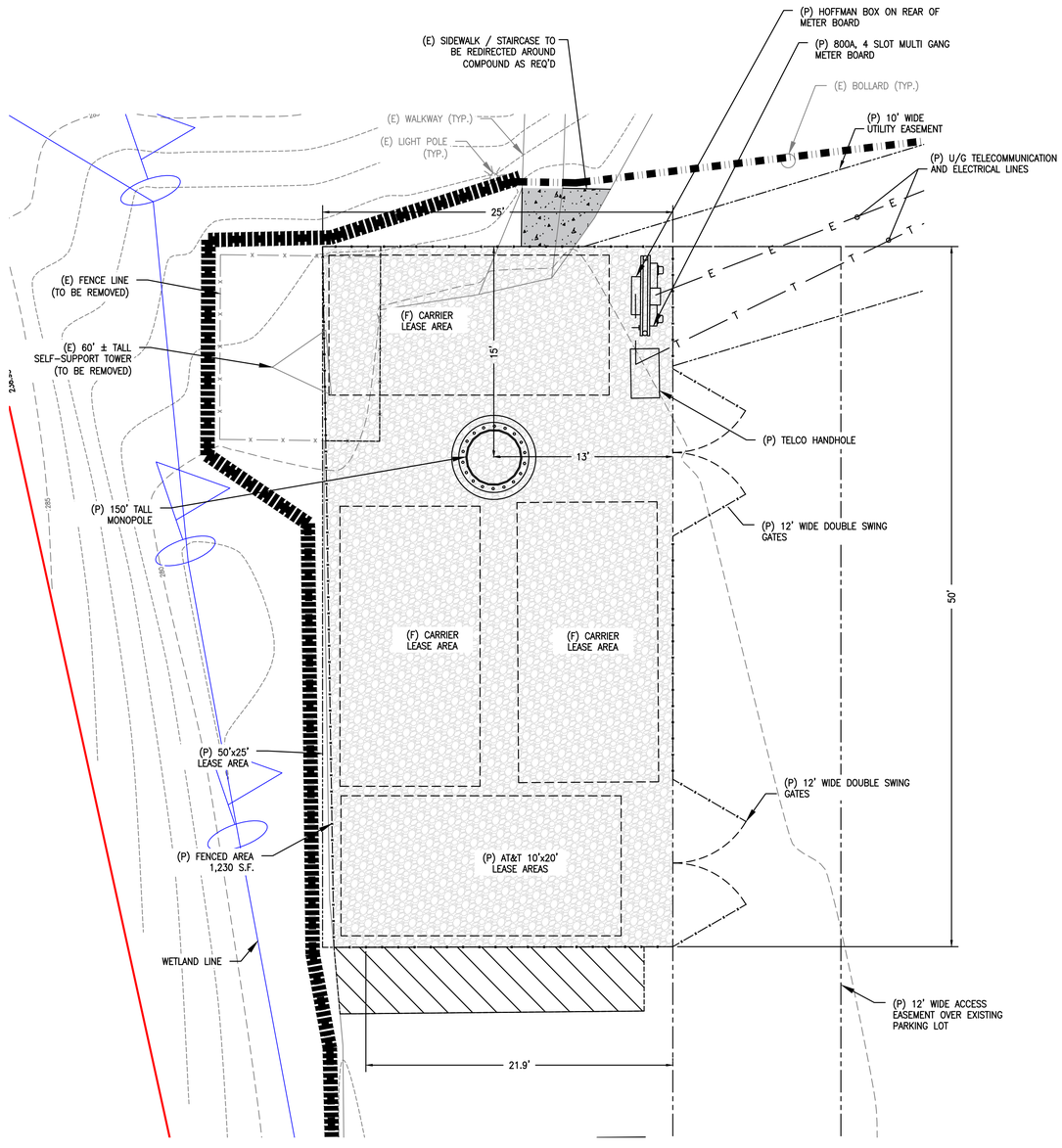
13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

PROPOSED SITE PLAN

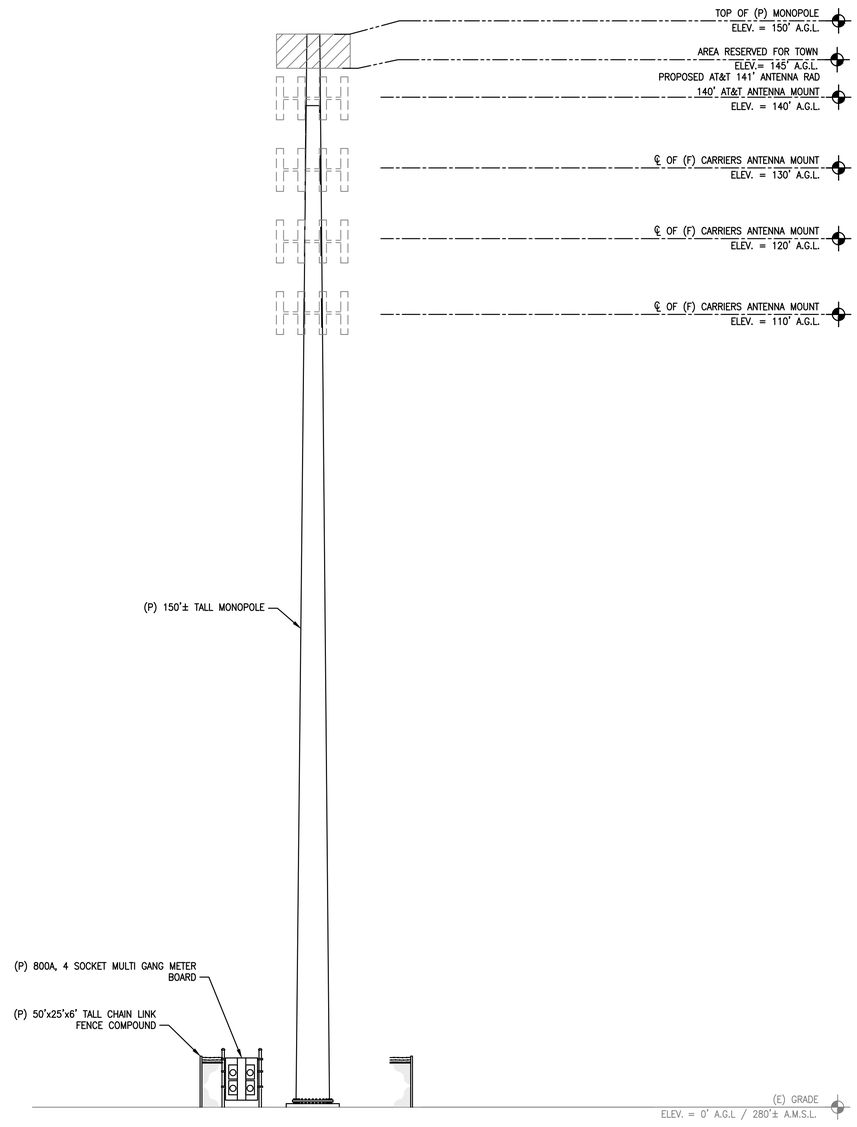
SHEET NUMBER

Z-1



1 Z-2 COMPOUND PLAN
SCALE: 1"= 5'

0 5' 10' 15'



2 Z-2 ELEVATION
SCALE: 1"=10'

0 10' 20' 30'

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

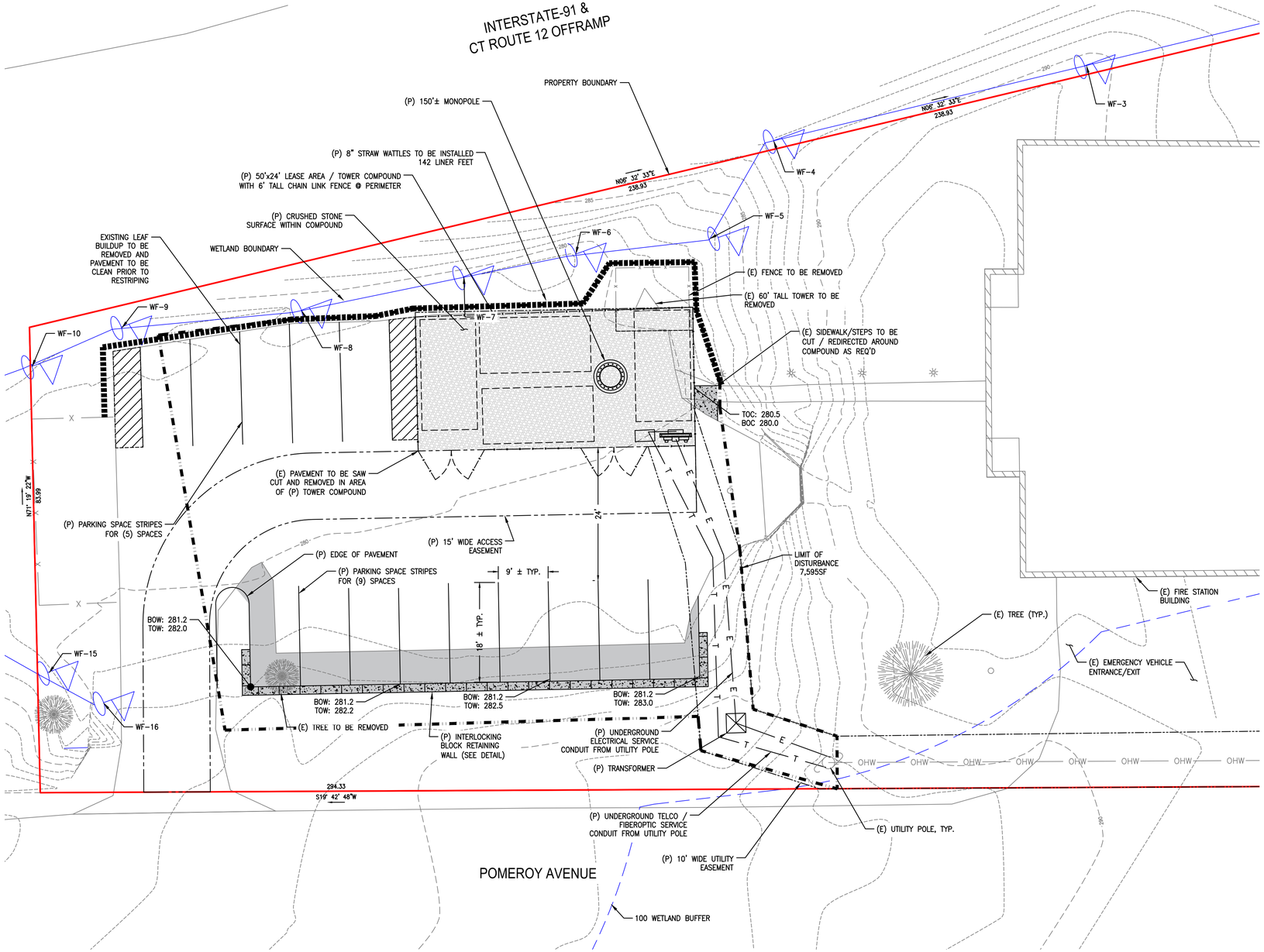
13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

COMPOUND PLAN
& ELEVATION

SHEET NUMBER

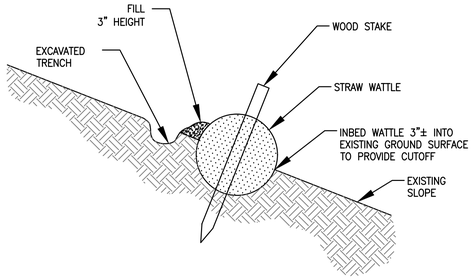
Z-2

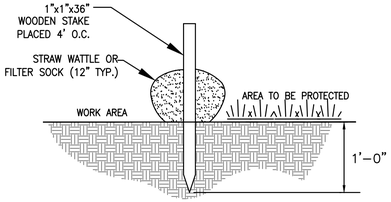


1 / Z-3 EROSION CONTROL & GRADING PLAN

SCALE: 1" =10'

0 10' 20' 30'





2 / Z-3 EROSION CONTROL BARRIER DETAIL

SCALE: NTS

EROSION AND SEDIMENT CONTROL NOTES:

1. PRIOR TO STARTING ANY WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONRTOL MEASURES, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE SYSTEM.

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED
PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

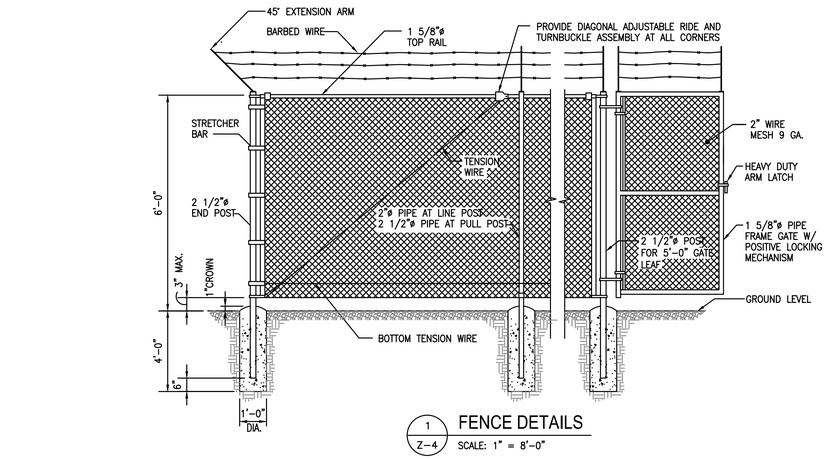
13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

EROSION CONTROL
PLAN

SHEET NUMBER

Z-3

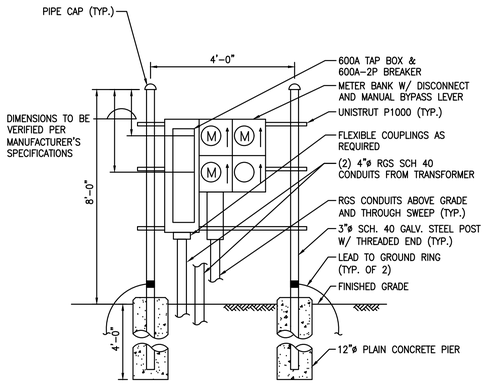


1 / Z-4 FENCE DETAILS

SCALE: 1" = 8'-0"

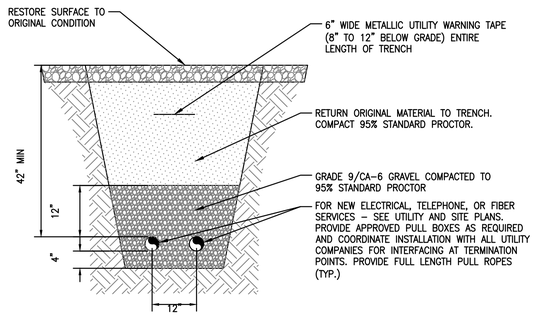
FENCE NOTES:

1. INSTALL FENCING PER ASTM F-567, SWING GATE PER ASTM F-900.
2. ALL END POSTS, LINE POSTS, PULL POSTS, POSTS FOR GATE LEAF, PIPES FOR GATE FRAME AND TOP RAILS SHALL BE SCHEDULE 40 PIPE PER ASTM F-1083.
3. FABRIC SHALL BE 12 GA. CORE WIRE SIZE 2" MESH CONFORMING TO ASTM A-392.
4. TENSION WIRE SHALL BE 7 GA. GALV. STEEL.
5. TIE WIRE SHALL BE 11 GA. GALV. STEEL (MIN.) AT POSTS AND RAILS. A SINGLE WRAP FABRIC TIE AT TENSION WIRE BY HOG RINGS SPACED MAX. OF 24" INTERVALS
6. BARBED WIRE SHALL BE DOUBLE STRAND 12 1/2" O.D. TWISTED WIRE TO MATCH W/FABRIC 14 GA., 4 PT. BARBS SPACES AT APPROXIMATELY 5" O.C.
7. COMPLY WITH LOCAL ORDINANCES OF BARBED WIRE PERMIT REQUIREMENTS, IF REQUIRED.
8. STEEL FENCE SYSTEM SHALL INCLUDE THE FENCE POSTS, FABRIC, GATE SYSTEM AND ALL NECESSARY ERECTION ACCESSORIES, FITTINGS AND FASTENINGS. ALL FENCE SYSTEM COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. GATES SHALL BE SWING GATES WITH 5'-0" LEAFS. REFER TO TYPICAL FENCE DETAIL FOR ADDITIONAL INFORMATION. INSTALL FENCE AFTER CONCRETE HAS ATTAINED 75% OF 28 DAY DESIGN STRENGTH.
9. SCREENING SLATS SHALL BE INSTALLED ON PROPOSED FENCING (COLOR: GREEN OR AS DET'S BY PROJECT OWNER)



2 / Z-4 METER BOARD DETAIL

SCALE: N.T.S.

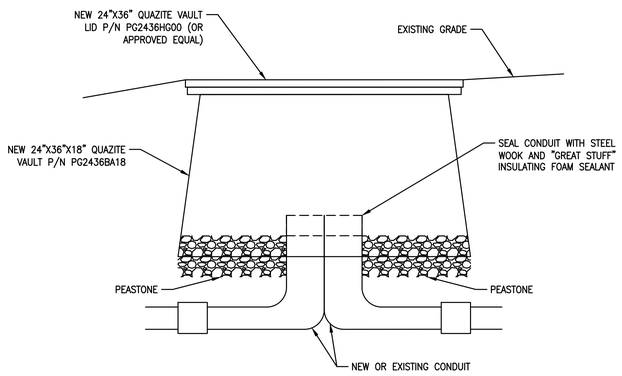


3 / Z-4 TRENCH DETAIL AT ACCESS CROSSING

SCALE: N.T.S.

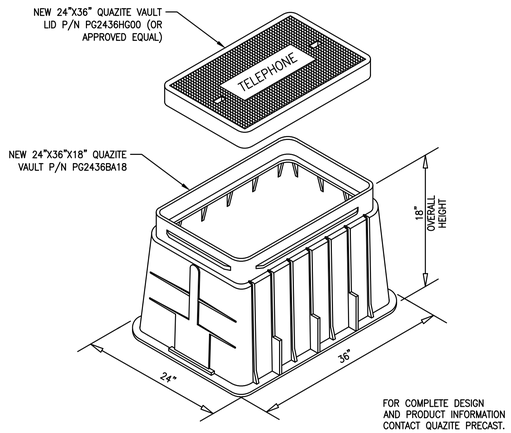
4 / Z-4 GRAVEL COMPOUND DETAIL

SCALE: N.T.S.



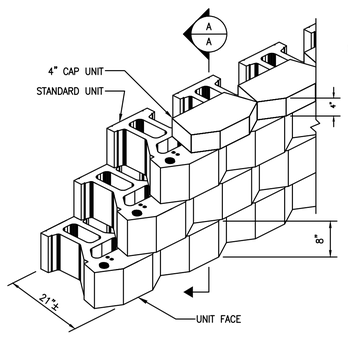
5 / Z-4 TELCO HANDHOLE WITH LID DETAIL

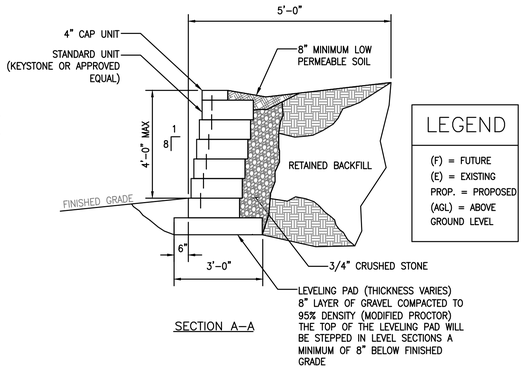
SCALE: N.T.S.



6 / Z-4 TELCO HANDHOLE ISOMETRIC

SCALE: N.T.S.





SECTION A-A

LEGEND

(F) = FUTURE
(E) = EXISTING
PROP. = PROPOSED
(AGL) = ABOVE GROUND LEVEL

7 / Z-4 RETAINING WALL DETAIL

SCALE: N.T.S.

TowerNorth
750 WEST CENTER STREET, SUITE 301
WEST BRIDGEWATER, MA 02379

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development
Surveying - Telecommunications
500 North Broadway
East Providence, RI 02914
Tel: (401) 354-2403
Fax: (401) 633-6354

STATE OF CONNECTICUT
SCOTT N. ADAMS
36381
LICENSED PROFESSIONAL ENGINEER

AEG PROJECT #: 2019-0027

DRAWN BY: MER

CHECKED BY: SNA

SUBMITTALS

REV#	DATE	DESCRIPTION
0	03/16/23	ISSUED FOR REVIEW
1	08/15/23	REVISED
2	08/16/23	REVISED
3	11/1/23	REVISED
4	11/06/23	REVISED

MERIDEN FIRE DEPT

13 POMEROY AVENUE
MERIDEN, CT 06450
NEW HAVEN COUNTY

SHEET TITLE

DETAILS

SHEET NUMBER

Z-4

ATTACHMENT 3

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES
102 Grove Street
Worcester, MA 01605-2629
508-752-9666 / Fax: 508-752-9494

September 30, 2022

Scott N. Adams, PE
Advanced Engineering Group, PC
500 North Broadway
East Providence, RI 02914

Re: 1075 East Main Street, Meriden, CT

Subject: Wetland & Soil Evaluation Report

Dear Scott:

Per your request, on September 9, 2022, I, Arthur Allen of EcoTec was present on the above-referenced property. The purpose of this inspection was to evaluate the vicinity of a proposed, replacement communications tower (a.k.a.; the "Site") with regard to the presence of Wetlands and Watercourses, as defined by the Connecticut Inland Wetlands and Watercourses Act of 1972, the Federal Clean Water Act (Section 404), the Inland Wetland and Watercourse Regulations of Meriden, CT and the Wetland Commissioners Handbook of 1994. The attached USGS Topographic Map, NRCS Web Soil Survey map, FIRMette, NDDB maps and site photos display the project site location. Following is a description of the project site, delineation procedures and Wetlands and Watercourses present.

Project Description:

The project site consists of an existing fire department station house and associated infrastructure including a metal, steel lattice-type communications tower (see attached photos). Wetlands on the Site are associated with Willow Brook and tributaries. The Willow Brook Watercourse appears on the USGS Topographic Map. The delineation of wetlands on this site was based on the presence or absence of poorly and very poorly drained, alluvial and floodplain soils as defined by the National Cooperative Soil Survey of the Natural Resources Conservation Service of the United States Department of Agriculture. During the course of the evaluation, reference was made to the most recent USDA – NRCS Web Soil Survey Report (see attached); the 1987 "Corps of Engineers Wetlands Delineation Manual" (Department of the Army, Technical Report Y-87-1); the January, 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0); the "Field Indicators for Identifying Hydric Soils in New England" (New England Hydric Soils Technical Committee, 2017. 4th ed., New England Interstate Water Pollution Control Commission, Lowell, MA); and the National Flood Insurance Program FIRMette map (see attached). Representative soil descriptions were completed along one transect associated with the wetlands delineated. Sample plots TP-U and TP-W (marked with pink flags), are located in the vicinity of wetland flag A-6. Soil and vegetation descriptions, recorded at sampling transects, can be found on the US Army Corps of Engineers Wetland Determination Data Sheets (see attached).

In the table below you will find the flag series numbers, types and locations, as established, to delineate Wetland Resource Areas on this site.

Flag Numbers	Flag Type	Wetland Types and Locations
A-1 to A-16	Blue Flags	Boundary of Inland Wetlands and Watercourses located on the west and south sides of the site.

Wetlands & Watercourses:

Following are descriptions of the Wetlands and Watercourses identified and delineated within 100 feet of the project area:

- Wetland flag series "A" delineates an Inland Wetland associated with Willow Brook and two tributary streams/swales. A portion of the site falls within FEMA/FIRM mapped AE flood zone (see attached FIRMETTE). The wetland is a wooded swamp dominated by Red and Boxelder Maple trees over Silky Dogwood shrubs with Common Reed and Jewelweed ground cover. Soils within the wetlands are a combination of alluvial/floodplain and poorly drained, fill materials. Mapped soils in the vicinity of the wetland consist of Udorthents [Map Unit No. 306, historically filled and graded, granular fill (i.e., Urban Land)].

Rare Species:

Based upon a review of the June, 2022 *Natural Diversity Database Areas* map for Meriden, CT there are no State and Federal Listed Species areas on or near the site (see attached).

Summary:

It is my opinion that the areas described above and field delineated are a complete and accurate representation of the Wetlands and Watercourses delineated in the project area. This opinion is based upon observations made of existing conditions on the dates noted above. The reader should be aware that regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. I have attached a brief description of my experience and qualifications. Please do not hesitate to contact me if you have any questions concerning this or other matters.

Sincerely,

Arthur Allen, CPSS, CWS, CESSWI
Senior Soil & Environmental Scientist

enclosures

Arthur Allen, CPSS, CWS, CESSWI
Vice President
Soil & Wetland Scientist

Arthur Allen is the Vice President of EcoTec, Inc. and has been a senior environmental scientist there since 1995. His work with EcoTec has involved wetland delineation, wildlife habitat evaluation, environmental permitting (federal, state and local), environmental monitoring, expert testimony, peer reviews, contaminated site assessment and the description, mapping and interpretation of soils. His clients have included private landowners, developers, major corporations and regulatory agencies. Prior to joining EcoTec, Mr. Allen mapped and interpreted soils in Franklin County, MA for the U.S.D.A. Natural Resources Conservation Service (formerly Soil Conservation Service) and was a research soil scientist at Harvard University's Harvard Forest. Since 1994, Mr. Allen has assisted the Massachusetts Department of Environmental Protection and the Massachusetts Association of Conservation Commissions as an instructor in the interpretation of soils for wetland delineation and for the Title V Soil Evaluator program.

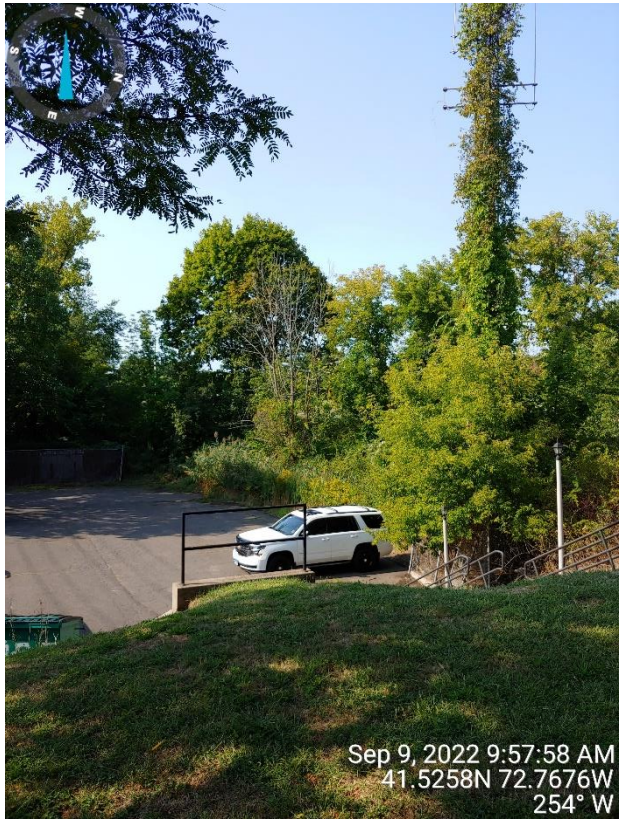
Mr. Allen has a civil service rating as a soil scientist, an undergraduate degree in Natural Resource Studies and a graduate certificate in Soil Studies. His work on the Franklin County soil survey involved interpretation of landscape-soil-water relationships, classifying soils and drainage, and determining use and limitation of the soil units that he delineated. As a soil scientist at the Harvard Forest, Mr. Allen was involved in identifying the legacies of historical land-use in modern soil and vegetation at a number of study sites across southern New England. He has a working knowledge of the chemical and physical properties of soil and water and how these properties interact with the plants that grow on a given site. While at Harvard Forest he authored and presented several papers describing his research results which were later published. In addition to his aforementioned experience, Mr. Allen was previously employed by the Trustees of Reservations as a land manager and by the Town of North Andover, MA as a conservation commission intern.

Education:
1993-Graduate Certificate in Soil Studies, University of New Hampshire
1982-Bachelor of Science in Natural Resource Studies, University of Massachusetts

Professional Affiliations:
Certified Professional Soil Scientist (ARCPACS CPSS #22529)
New Hampshire Certified Wetland Scientist (#19)
Registered Professional Soil Scientist – Society of Soil Scientists of SNE [Board Member (2000-2006)]
Certified Erosion, Sediment & Stormwater Inspector (#965)
Massachusetts Arborists Association-Certified Arborist (1982 – 1998)
New England Hydric Soils Technical Committee member
Massachusetts Association of Conservation Commissions member
Society of Wetland Scientists member

Refereed Publications:
Soil Science and Survey at Harvard Forest. A.Allen. *In*: Soil Survey Horizons. Vol. 36, No. 4, 1995, pp. 133-142.
Controlling Site to Evaluate History: Vegetation Patterns of a New England Sand Plain. G.Motzkin, D.Foster, A.Allen, J.Harrod, & R.Boone. *In*: Ecological Monographs 66(3), 1996, pp. 345-365.
Vegetation Patterns in Heterogeneous Landscapes: The Importance of History and Environment. G.Motzkin, P.Wilson, D.R.Foster & A.Allen. In: Journal of Vegetation Science 10, 1999, pp. 903-920.

ECOTEC INSPECTION PHOTOS FROM 1075 EAST MAIN ST., MERIDEN, CT



1. Fire Station Parking Lot and wetland (facing away from station building) with vine-covered communications tower

2. Fire Station Parking Lot and wetland (facing towards station building) with vine-covered communications tower

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 1075 East Main Street City/County: Meriden Sampling Date: 9/9/2022

Applicant/Owner: State: CT Sampling Point: TPU@A6

Investigator(s): Arthur Allen, EcoTec, Inc. Section, Township, Range:

Landform (hillside, terrace, etc.): shoulder fill slope Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 41.525807 Long: -72.767636 Datum: WGS 84

Soil Map Unit Name: Udorthents NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The site was historically altered by filling, grading and channelization of surface water. This being said, site conditions have equilabrated over approximately 30 years and are currently considered to be normal or naturalized.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL

Sampling Point: TPU@A6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 3/2	100					Loamy/Clayey	Rubbly
6-15	5YR 4/6	100					Loamy/Clayey	Rubbly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Well drained fill (Udorthents)

VEGETATION – Use scientific names of plants.

Sampling Point: TPU@A6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhus typhina*	20	Yes	UPL
2. *Rosa multiflora*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	60 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Solidago altissima*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1. *Celastrus orbiculata*	10	Yes	UPL
2.			
3.			
4.			
	10 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	30	x 5 =	150
Column Totals:	80 (A)		350 (B

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 1075 East Main Street City/County: Meriden Sampling Date: 9/9/2022

Applicant/Owner: State: CT Sampling Point: TPW@A6

Investigator(s): Arthur Allen, EcoTec, Inc. Section, Township, Range:

Landform (hillside, terrace, etc.): shoulder fill slope Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 41.525807 Long: -72.767636 Datum: WGS 84

Soil Map Unit Name: Udorthents NWI classification: PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The site was historically altered by filling, grading and channelization of surface water. This being said, site conditions have equilabrated over approximately 30 years and are currently considered to be normal or naturalized.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL

Sampling Point: TPW@A6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/2	100					Mucky Loam/Clay	
10-15	5YR 4/3	90	5YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)
X Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Red Parent Material (F21) **(outside MLRA 145)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Poorly drained fill (Udorthents)

VEGETATION – Use scientific names of plants.

Sampling Point: TPW@A6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus amomum*	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	30 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	80	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		220 (B

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

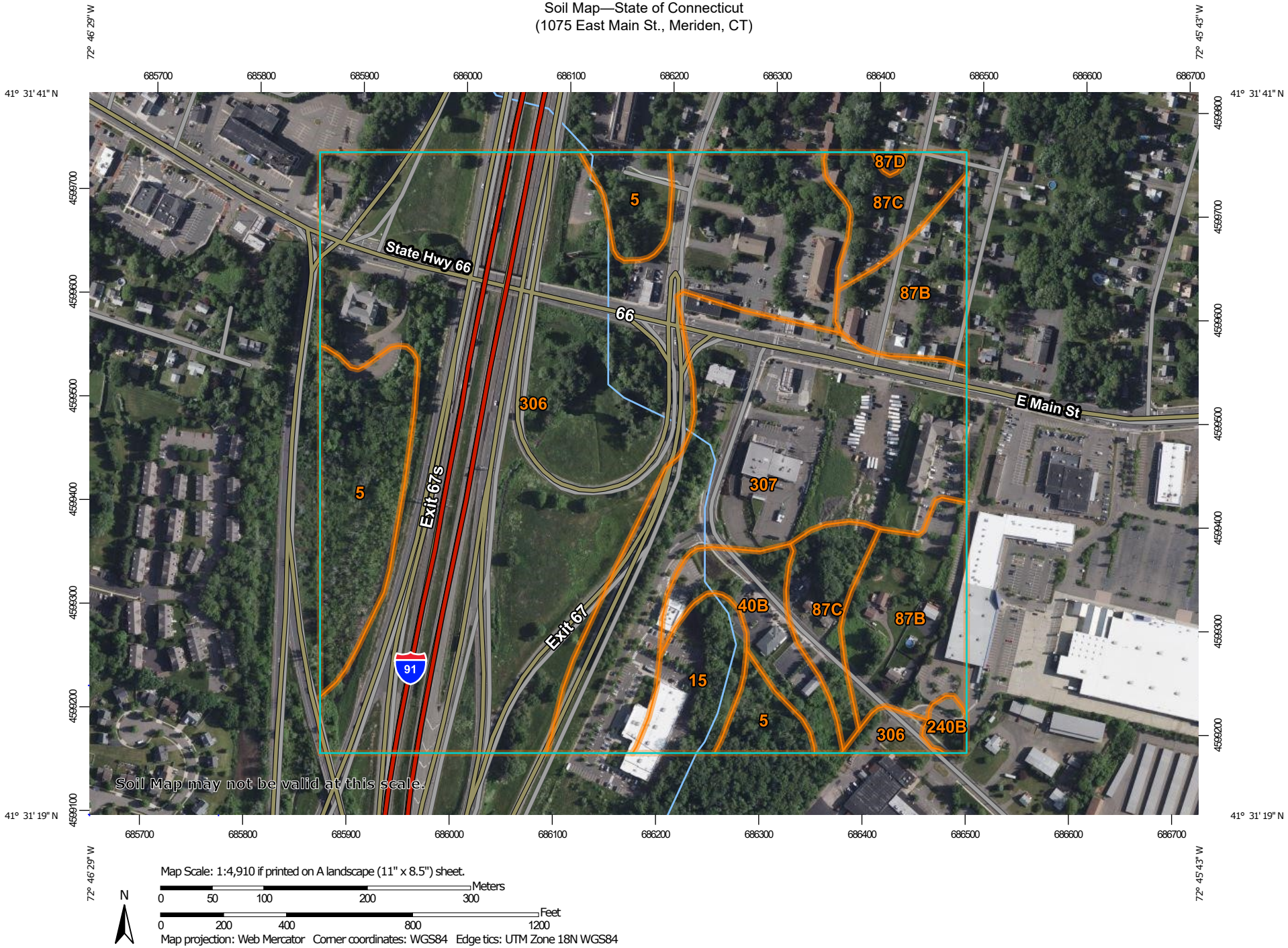
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

Soil Map—State of Connecticut
(1075 East Main St., Meriden, CT)



Map Scale: 1:4,910 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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
Survey Area Data: Version 21, Sep 7, 2021

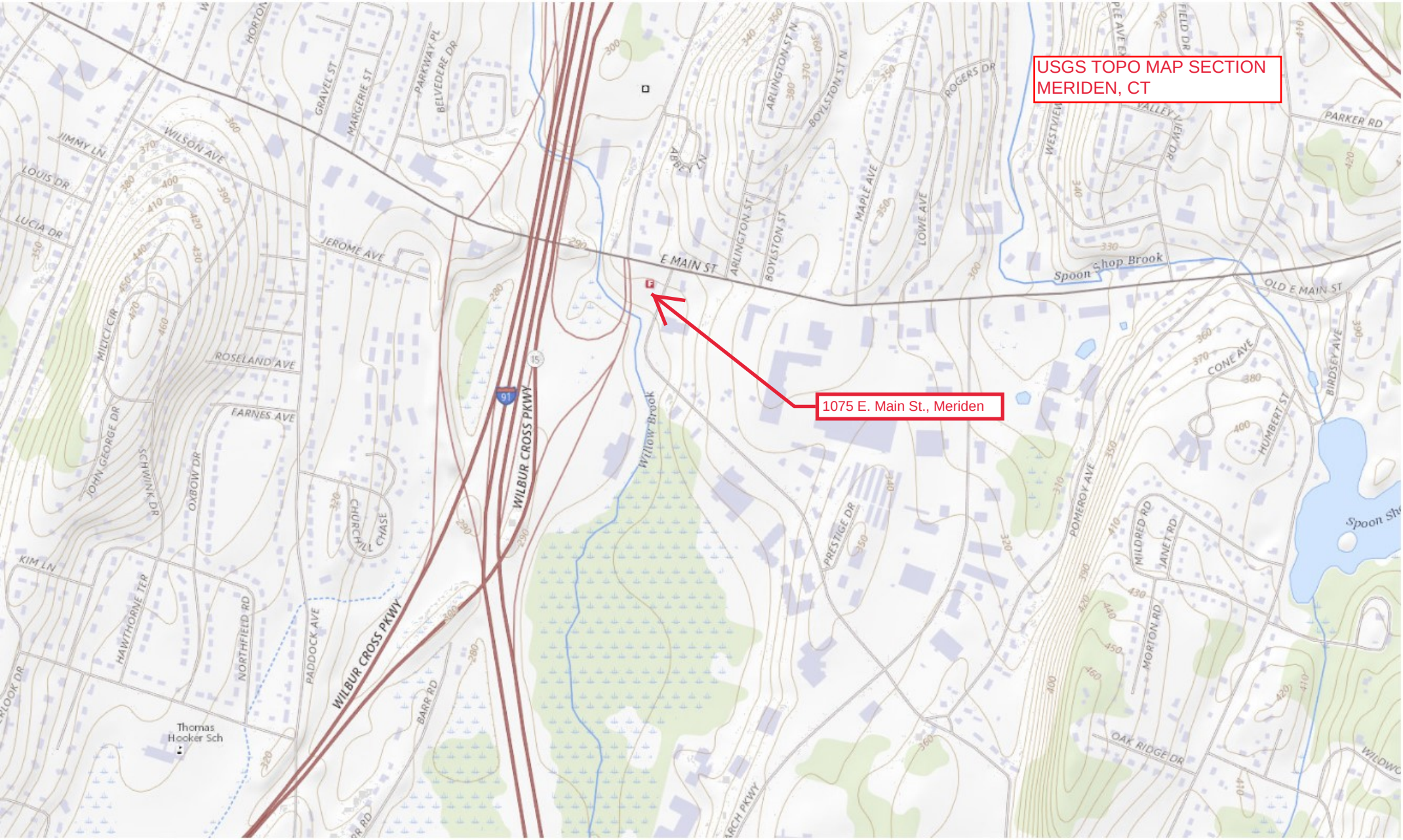
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 8, 2020—Jun 12, 2020

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

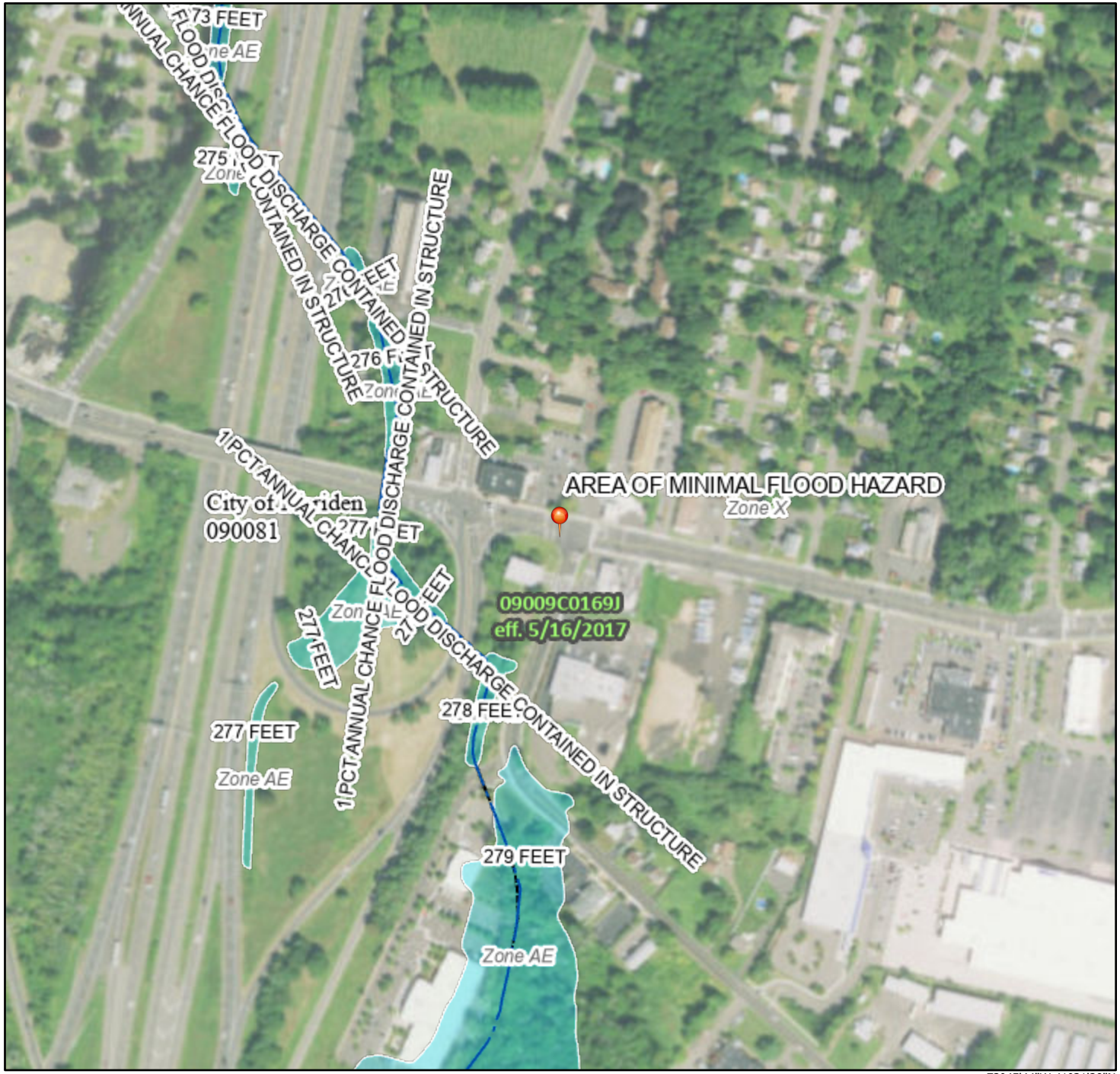
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Wilbraham silt loam, 0 to 3 percent slopes	8.4	9.3%
15	Scarboro muck, 0 to 3 percent slopes	2.8	3.1%
40B	Ludlow silt loam, 3 to 8 percent slopes	3.1	3.4%
87B	Wethersfield loam, 3 to 8 percent slopes	8.4	9.3%
87C	Wethersfield loam, 8 to 15 percent slopes	4.9	5.4%
87D	Wethersfield loam, 15 to 25 percent slopes	0.1	0.1%
240B	Ludlow-Urban land complex, 0 to 8 percent slopes	0.5	0.5%
306	Udorthents-Urban land complex	44.5	49.4%
307	Urban land	17.5	19.5%
Totals for Area of Interest		**90.1**	**100.0%**


USGS TOPO MAP SECTION
MERIDEN, CT
1075 E. Main St., Meriden
E MAIN ST
OLD E MAIN ST
WILBUR CROSS PKWY
Willow Brook
Spoon Shop Brook
JEROME AVE
WILSON AVE
ROSELAND AVE
FARNES AVE
PARKER RD
CONE AVE
ROGERS DR
MAPLE AVE
LOWE AVE
ARLINGTON ST
BOYLSTON ST
PRESTIGE DR
POMEROY AVE
MORTON RD
OAK RIDGE DR
Thomas Hooker Sch

National Flood Hazard Layer FIRMette

FEMA

72°46'21"W 41°31'47"N



72°45'44"W 41°31'20"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/7/2022 at 12:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Natural Diversity Data Base Areas

MERIDEN, CT

June 2022

State and Federal Listed Species

Critical Habitat

Town Boundary

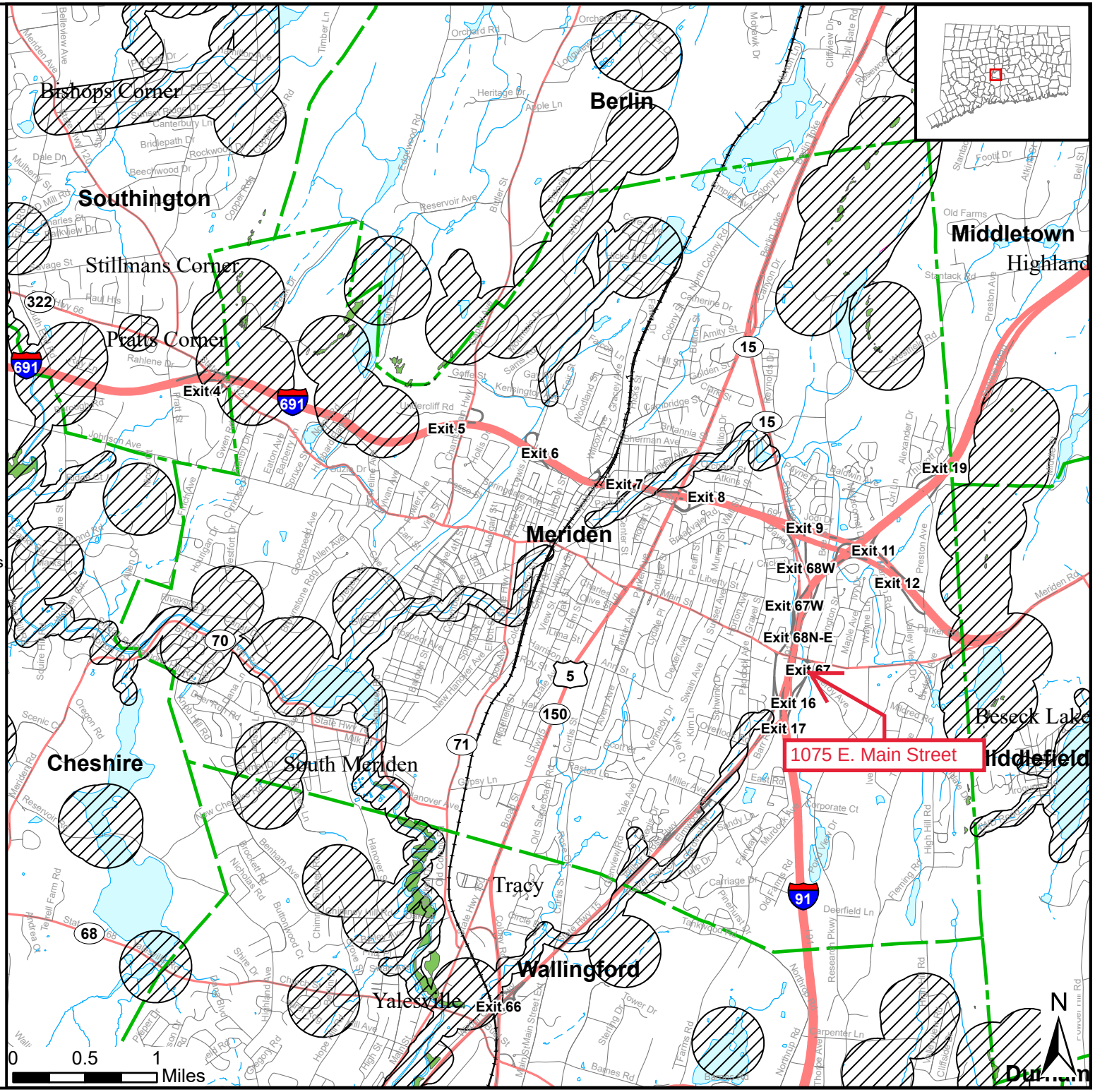
NOTE: This map shows general locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a variety of data sources . Exact locations of species have been buffered to produce the generalized locations.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas If the project is within a hatched area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.
https://portal.ct.gov/deep-nddbrequest

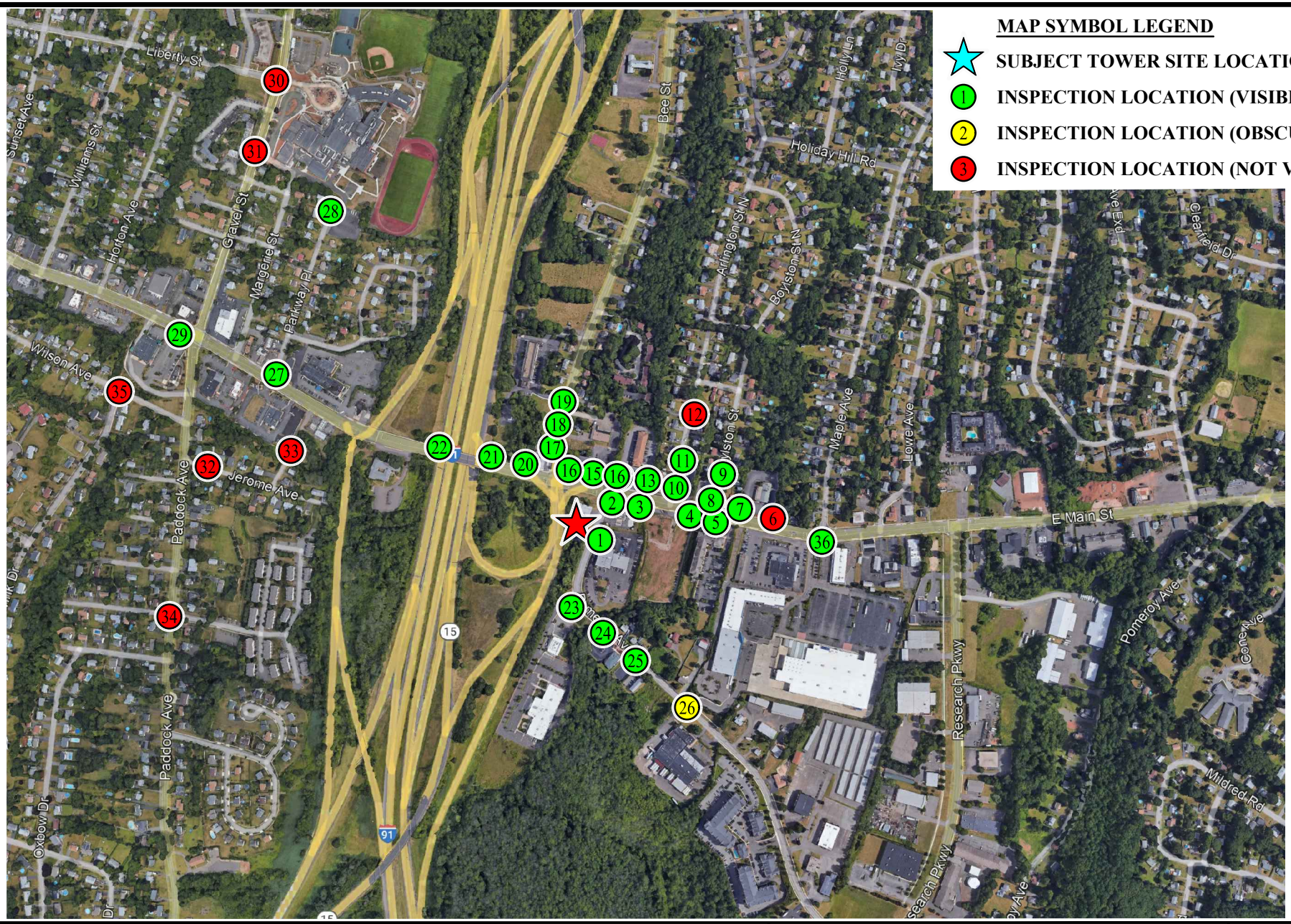
Use the CTECO Interactive Map Viewers at http://cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



ATTACHMENT 4



PREPARED FOR: TowerNorth, 750 WEST CENTER STREET, SUITE 301, WEST BRIDGEWATER, MA 02379	PREPARED BY: ADVANCED ENGINEERING GROUP, P.C. Civil Engineering - Site Development Surveying - Telecommunications 500 NORTH BROADWAY EAST PROVIDENCE, 02914 PH: (401) 354-2403 FAX: (401) 633-6354	SITE NUMBER: CT-0005-A SITE NAME: MERIDEN FIRE DEPTARTMENT ADDRESS: 13 POMEROY AVENUE MERIDEN, CT 06450	KEY MAP OF INSPECTION	PAGE: MAP-ALL DATE: 08/09/2023 DRAWN BY: MR REVISION: 0

ATTACHMENT 5

Natural Resources Review

CT0005-A / Meriden Fire Department

13 Pomeroy Avenue
Meriden, New Haven County, Connecticut 06450

EBI Project No. 6123002126

April 18, 2023

Prepared for:

TowerNorth Development, LLC
750 W Center St, STE 301
West Bridgewater, MA 02379

Prepared by:

EBI Consulting
environmental | engineering | due diligence

EBI Consulting
environmental | engineering | due diligence

21 B Street
Burlington, MA 01803
Tel: (781) 273-2500
Fax: (781) 273-3311
www.ebiconsulting.com

April 18, 2023

Subject: **Natural Resources Review for a Proposed Wireless Communications Facility**
CT0005-A / Meriden Fire Department
13 Pomeroy Avenue, Meriden, New Haven County, Connecticut 06450
41° 31' 31.96" N / 72° 46' 03.86" W
EBI Project No. 6123002126

OVERVIEW

EBI Consulting (EBI) has prepared this Natural Resource Review (*NR Review*) for the above-referenced proposed wireless communications facility (herein, the Facility). This *NR Review* supports a National Environmental Policy Act (NEPA) review of the proposed Facility, completed in accordance with Federal Communications Commission (FCC) NEPA implementing procedures set forth in 47 CFR 1.1301-1.1320.

The purpose of this *NR Review* is to determine whether further environmental review may be required in accordance with 47 CFR 1.1307(a)(1), (2), (3), (6), and (7) of FCC NEPA Rules. Specifically, this *NR Review* focuses on evaluating whether the proposed Facility will result in potential significant impacts to federal lands, federal-listed species, flood zones, or other significant changes to surface features.

EBI prepared this *NR Review* using readily available online resources and visual observations made during EBI's field survey. This *NR Review* is designed to provide a baseline evaluation of the potential for the proposed Facility to significantly affect the above-referenced natural resources (including federal-listed species) and to determine if additional review, specialized on-site surveys, or consultation is required.

PROJECT SUMMARY

As of the date of this *NR Review*, the proposed project consists of the construction of a new communications facility. Specifically, the proposed installation will consist of installing a new 154' tall tower in a parking lot within a 25' by 50' lease area. Power and telco will be routed underground approximately 70' in length and 10' in width and runs from an existing overhead utility easement to the proposed lease area. Access will be gained via the existing paved driveway and parking lot from Pomeroy Avenue and will not require ground disturbing activities. The total area of ground to be disturbed is approximately 1,950 square feet. Please see the attached site drawings for complete details.

PROPERTY AND VICINITY DESCRIPTION

The property on which the Facility is proposed (herein, the Subject Property), is an approximately 0.66 -acre parcel, improved by an existing fire station, paved parking lot, and grassy area.

The area of the Subject Property on which the installation is proposed (herein, the Project Site), currently consists of a paved parking area void of any natural vegetative communities. Land immediately surrounding the Project Site consists of the same improved with landscaped grass and a building.

FEDERAL LANDS REVIEW

EBI reviewed available online mapping resources to determine if the proposed Facility location is inside the boundaries of, or within one mile of certain classifications of federal land. Applicable data is depicted on EBI's 'Land Resources Map' (see attached). The following table summarizes EBI's review.

FEDERALLY-PROTECTED LAND Jurisdictional Agency / Resource	*Within Boundary*	*Within 1-mile*	*Not Within 1-mile*
Wilderness Area [47 CFR §1.1307(a)(1)] National Wilderness Preservation System (NWPS) National Park Service (NPS); U.S. Forest Service (USFS); U.S. Fish and Wildlife Service (USFWS); Bureau of Land Management (BLM) https://www.arcgis.com/apps/webappviewer/index.html?id=a415bca07f0a4bee9f0e894b0db5c3b6	☐	☐	☒
Wildlife Preserve [47 CFR §1.1307(a)(2)] National Wildlife Refuge System (NWRS) NPS; USFS; USFWS; BLM http://www.fws.gov/refuges	☐	☐	☒
Wild & Scenic Rivers NPS; USFS; USFWS; BLM http://www.rivers.gov	☐	☐	☒
National Scenic Trails NPS and Managing Systems and Trails Organization (MSTO) https://www.nps.gov/subjects/nationaltrailssystem/national-scenic-trails.htm	☐	☐	☒

Based on a review of the above-referenced resources, the proposed facility is not located within the boundaries of, or within one mile of any of the above-referenced federal lands.

PROTECTED SPECIES REVIEW

Federally Listed Species and Critical Habitats

EBI utilized the USFWS Information for Planning and Consultation[1] (IPaC) online project review tool to identify species that are federally listed or proposed for listing under the Endangered Species Act (ESA), and that are known to occur within the project vicinity. Based on EBI's research of online files maintained by the USFWS, one such federal-listed (i.e. endangered or threatened) species are known to occur within the project vicinity. Further, EBI's review identified one federal-candidate species within the project vicinity.

Additionally, EBI utilized the USFWS online Critical Habitat Portal[2] online mapping tool and determined that the proposed Facility location is not within a designated critical habitat.

State Protected Species

EBI also reviewed online resources maintained by the Connecticut Department of Energy & Environmental Protection (Connecticut Endangered Species Maps in PDF Format) to identify any state-listed species that are known to occur within proximity of the proposed Project Site. Based on EBI's review of these online resources, no state-listed species are known to occur within the immediate proximity of the proposed Project Site.

[1] USFWS Information and Consultation URL: http://ecos.fws.gov/ipac
[2] USFWS Critical Habitat Portal URL: http://criticalhabitat.fws.gov

Please note however, although federal threatened and endangered species were identified as being potentially present within the vicinity of the proposed communications facility, the location of the proposed facility is currently developed by a building, asphalt-paved parking areas and drives, and landscaped areas. Further, the Facility itself is situated on an asphalt-paved surface. As such, suitable habitats capable of supporting the listed threatened and endangered species were not noted at the proposed communications facility location, and the proposed installation is anticipated to have 'No Effect' on listed species. Per the guidelines set forth in Section 7 of the Endangered Species Act (http://www.fws.gov/endangered/what-we-do/faq.html), no further consultation with the USFWS is required.

Migratory Bird Treaty Act

Consideration should also be given to the potential impacts of the construction and ongoing operation of the proposed Facility, on species protected under the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703-712). The USFWS issued "*Recommended Best Practices for Communications Tower Design, Siting, Construction, Operation, Maintenance and Decommissioning*"[3] to provide avoidance and minimization measures to reduce the risk of avian mortality as a result of communications towers.

The proposed tower will be a 154-foot self-supported (i.e. no guyed wires) with no lighting. As such, it meets most of the USFWS's tower siting and design recommendations and is therefore not anticipated to adversely affect migratory birds.

Bald & Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA; 16 U.S.C. 668-668d) prohibits the "taking" of bald and golden eagles in the absence of a permit issued by the Secretary of the Interior. Based on EBI's on-site observations, assessment of habitat, and review of publicly available occurrence data, the proposed installation is not anticipated to result in the "take" of any Bald or Golden Eagles. No further review is required.

FEMA FLOOD ZONE

Based on EBI's review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (www.fema.gov; Map# 09009C0169J, dated 5/16/2017), the proposed facility is located within an area identified as Zone X, and therefore is not located within a 100-year floodplain. As such, in accordance with §1.1307(a)(6) of FCC NEPA Rules, an Environmental Assessment is **not** required.

In accordance with §1.1307(a)(6) of FCC NEPA Rules, an Environmental Assessment is required if a proposed facility is to be located within a 100-year flood zone and will not be elevated at least one-foot above the BFE.

SIGNIFICANT CHANGES TO SURFACE FEATURES

Wetlands

EBI observed readily identifiable wetlands or wetland characteristics (e.g. standing water, hydrophytic vegetation, soil saturation and inundation, drainage patterns and sediment deposition, watermarks and drift lines on trees and vegetation, or water stained leaves) Specifically, a wetland delineation was completed and the edge of the inland wetland associated with Willow Brook and two tributary streams/swales was flagged within 100-feet of the Project Site. A review of the USFWS National Wetlands Inventory (NWI) map (see attached) identified wetlands in the immediate vicinity of the Project Site. Specifically, the NWI map depicts a riverine system approximately 25 feet south of the proposed access easement, a freshwater emergent wetland approximately 250 feet southwest of the proposed Project Site and a freshwater forested/shrub wetland approximately 520 feet northwest from the proposed Project Site. **No direct effects are anticipated. However, best management practices (BMPs) (i.e. silt fencing, wattles, erosion controls, etc.) should be employed during construction to ensure stormwater runoff does not carry construction related debris into the nearby wetland features.**

[3] https://www.fws.gov/migratorybirds/pdf/management/usfwscommtowerguidance.pdf

EBI also reviewed the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) for the Project Site and immediate vicinity. According to EBI's review, soils at the Project Site consist of Urban Land. This land is unranked on the hydric soil rating list by the NRCS (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/).

Based on EBI's review as summarized above, the proposed communications facility installation is not anticipated to impact identified wetlands, as long as best management practices are implemented.

FINDINGS AND CONCLUSIONS

Based on the results of EBI's review as summarized herein, the proposed communications facility is:

- Anticipated to have 'no effect' on listed species or associated critical habitats;
- Not within the boundaries of, or within one mile of federal lands (i.e. wildlife preserves, wilderness areas, etc.);
- Not within the boundaries of a FEMA-designated 100-year flood zone; and
- Not anticipated to result in a significant change to surface features, **as long as best management practices are implemented**.

As such, EBI recommends no further review with regard to the potential for impacts on the natural resources evaluated in this report.

EBI is an independent contractor, not an employee of either the property owner or the project proponent, and its compensation was not based on the findings or recommendations made in this *Review* or on the closing of any business transaction.

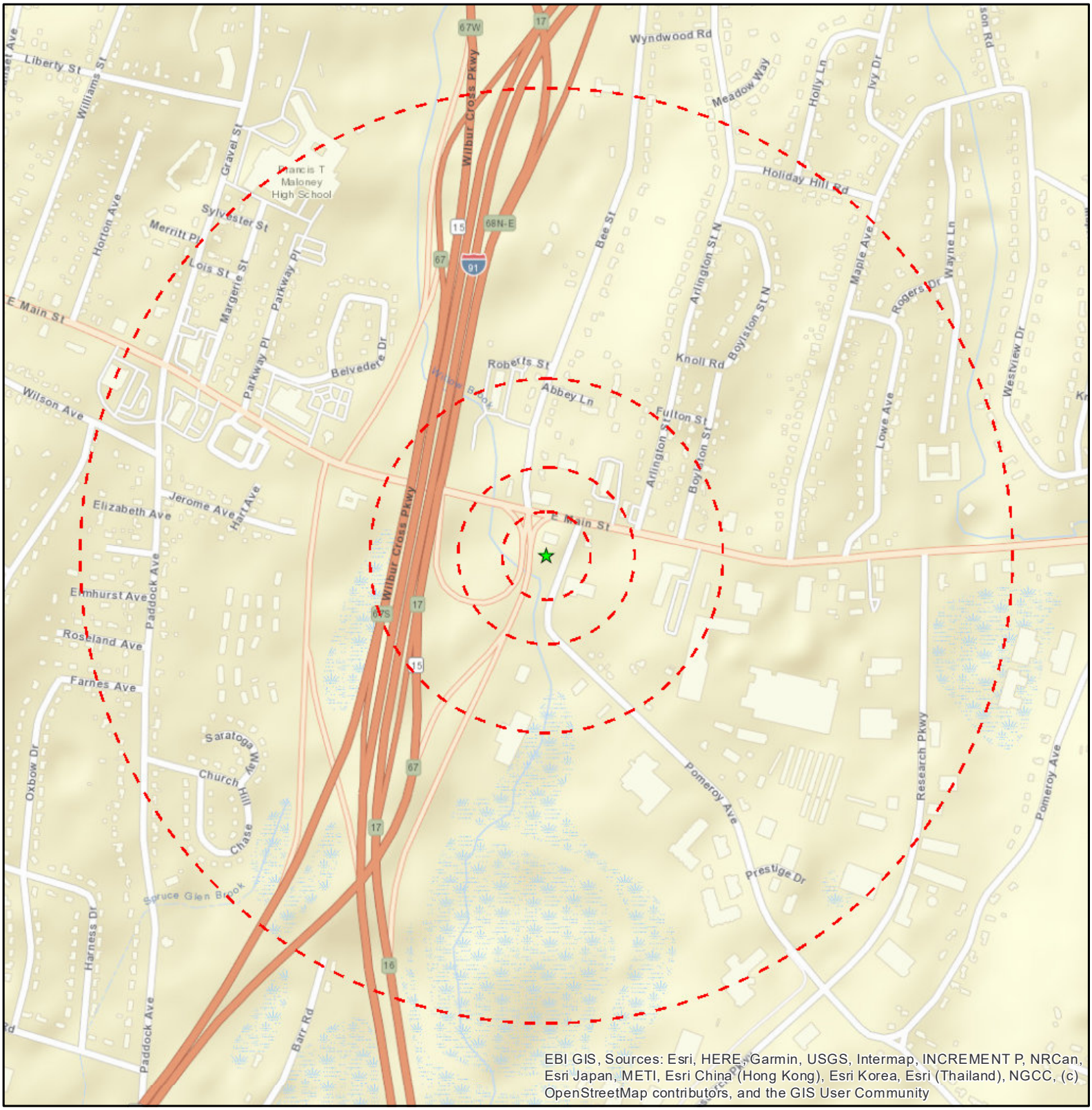
Sincerely,

Ms. Claire Saleh
Project Scientist

Mr. Jason Stayer
Senior Biologist
Direct# (512) 914-8615

Attachments:
Figures & Drawings
Photographs
Species Review Documentation
Supporting Documentation
Qualifications

FIGURES & DRAWINGS



Legend

★ Project Site

Site Radius at 250', 500', 1000' and ½ mile

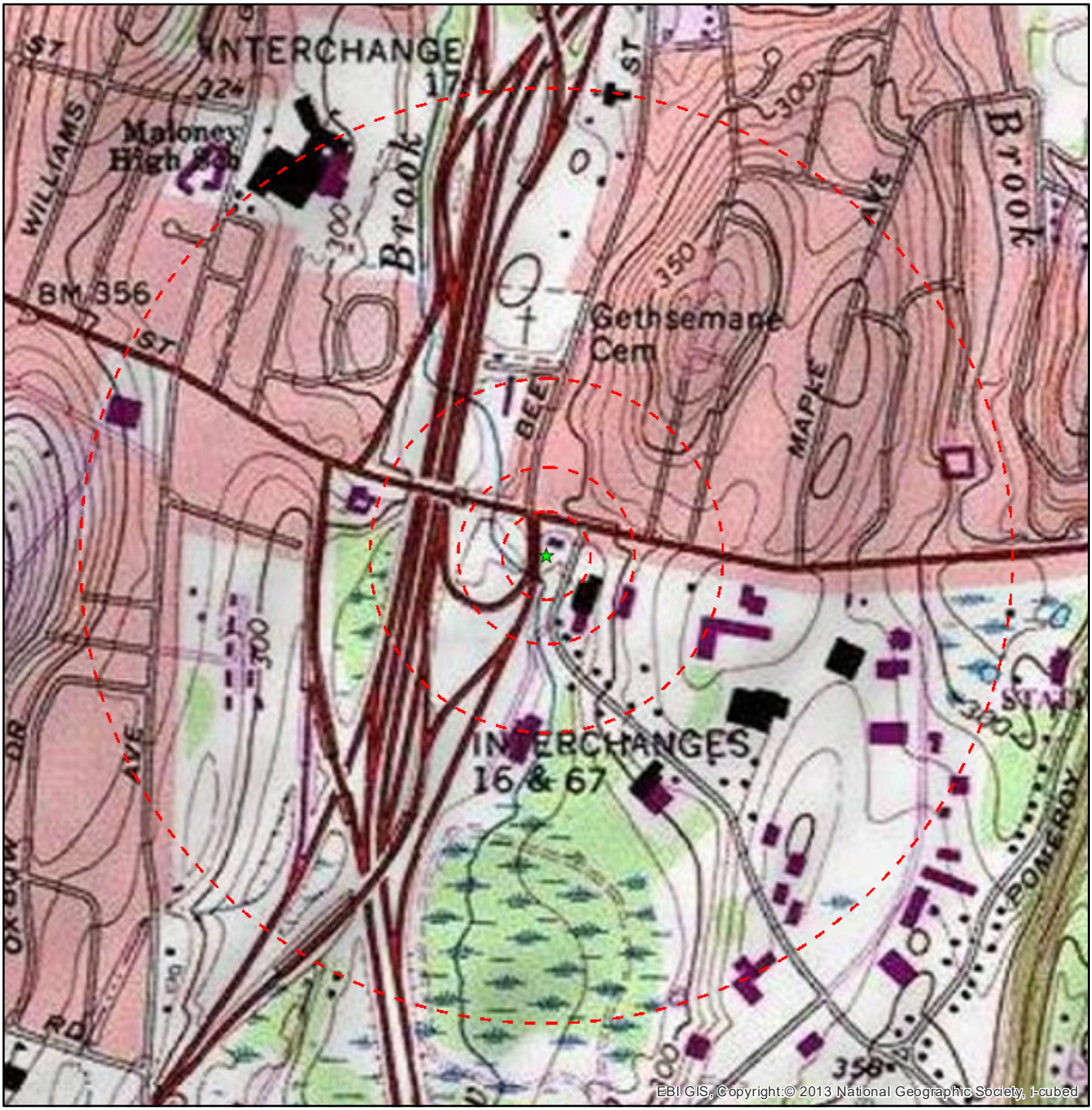
Date: 3/21/2023

Figure 1: Site Location Map

CT0005-A MERIDEN FIRE DEPARTMENT
13 POMEROY AVENUE
MERIDEN, CT 06450

PN: 6123002126

EBI Consulting
environmental | engineering | design



Legend

★ Project Site

Site Radius at 250', 500', 1000' and ½ mile

USGS 24K Quad: Meriden, CT 1985

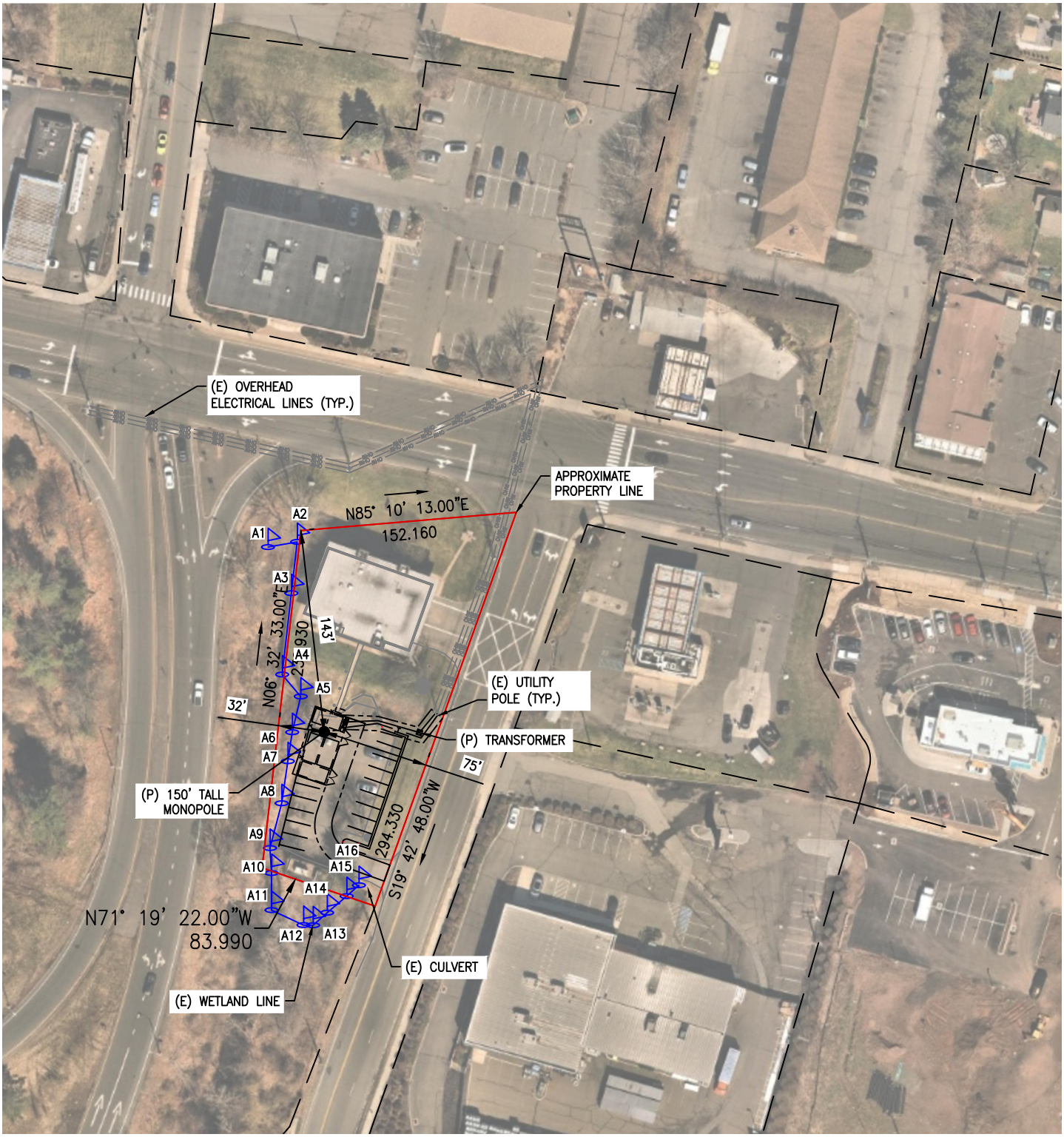
Date: 3/21/2023

Figure 2 - Topographic Map

CT0005-A MERIDEN FIRE DEPARTMENT
13 POMEROY AVENUE
MERIDEN, CT 06450

PN: 6123002126

EBI Consulting
environmental | engineering | design



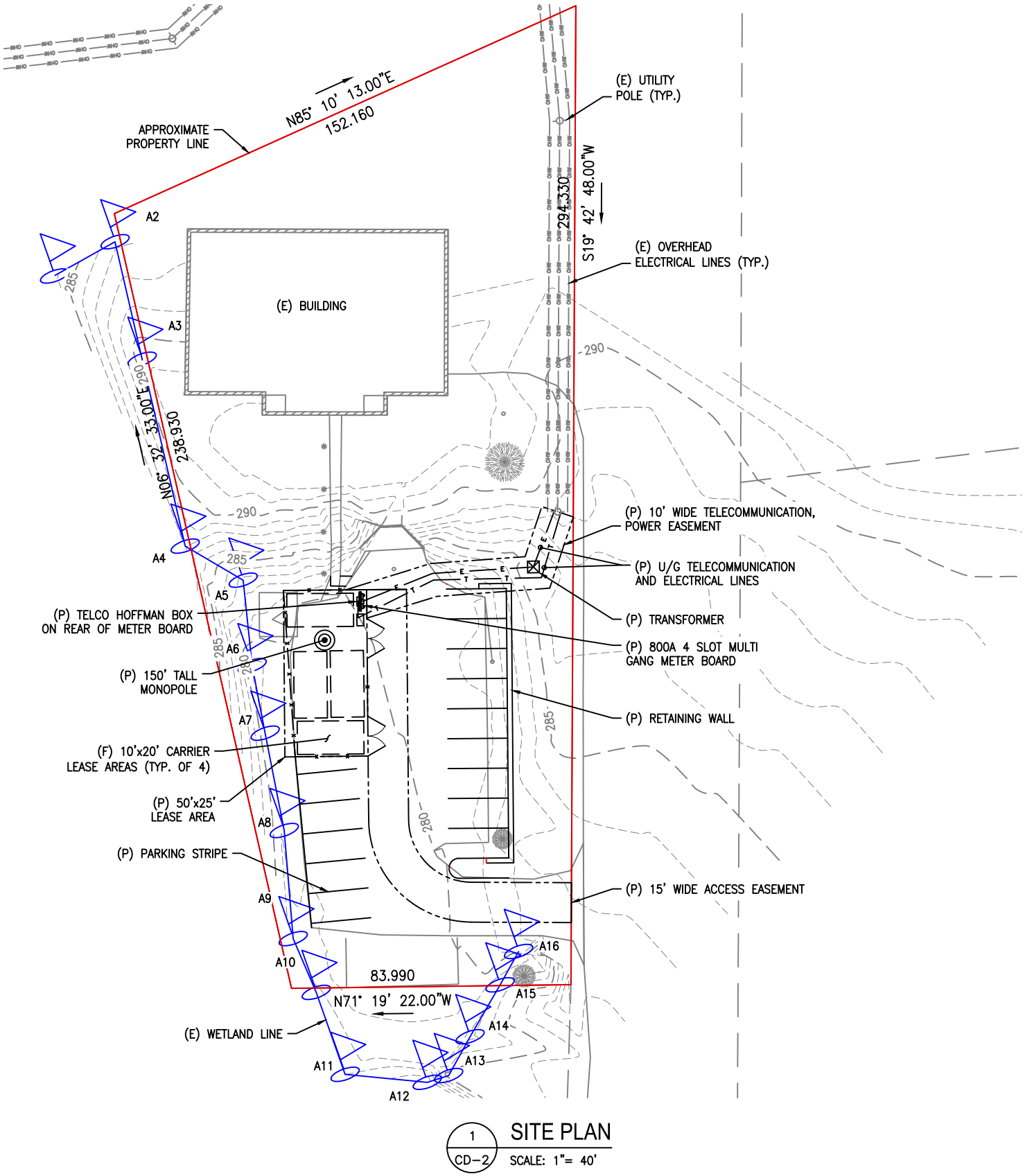
1 / CD-1 OTHRO PLAN

SCALE: 1"= 100'

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 NORTH BROADWAY
EAST PROVIDENCE, RI 02914
TEL: (401) 354-2403
FAX: (401) 633-6354

TITLE:	LEASE EXHIBIT
SITE NO:	CT-0005
SITE NAME:	MERIDEN FIRE DEPT
ADDRESS:	13 POMEROY AVE MERIDEN, CT 06450

DATE:	02/16/23
DRAWN BY:	JWH
REVISION:	3
SCALE:	NOTED
SHEET:	CD-1

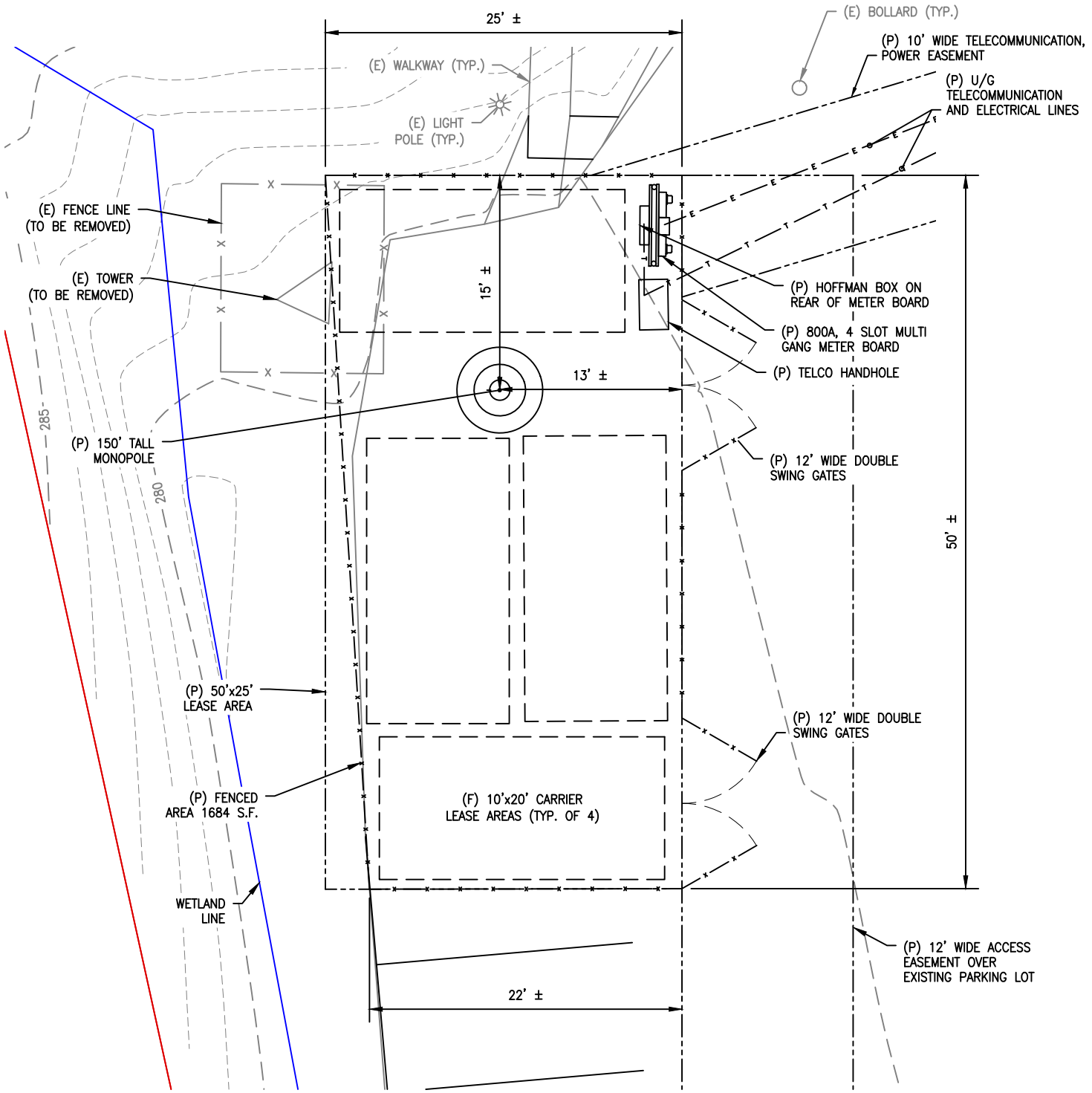


1 CD-2 SITE PLAN
SCALE: 1"= 40'

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 NORTH BROADWAY
EAST PROVIDENCE, RI 02914
TEL: (401) 354-2403
FAX: (401) 633-6354

TITLE:	LEASE EXHIBIT
SITE NO:	CT-0005
SITE NAME:	MERIDEN FIRE DEPT
ADDRESS:	13 POMEROY AVE MERIDEN, CT 06450

DATE:	02/16/23
DRAWN BY:	JWH
REVISION:	3
SCALE:	NOTED
SHEET:	CD-2



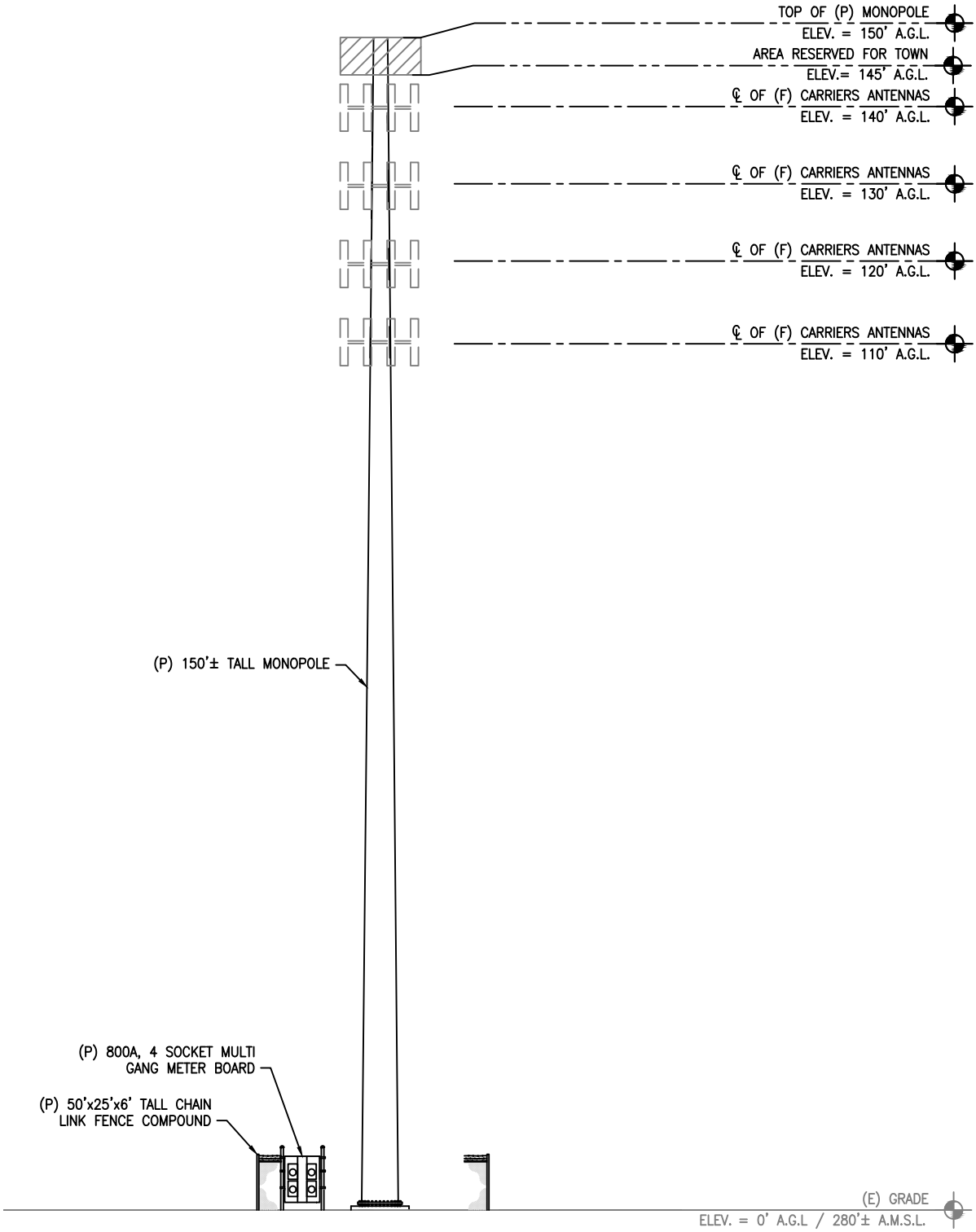
1 / CD-3 COMPOUND PLAN

SCALE: 1"= 10'

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 NORTH BROADWAY
EAST PROVIDENCE, RI 02914
TEL: (401) 354-2403
FAX: (401) 633-6354

TITLE:	LEASE EXHIBIT
SITE NO:	CT-0005
SITE NAME:	MERIDEN FIRE DEPT
ADDRESS:	13 POMEROY AVE MERIDEN, CT 06450

DATE:	02/16/23
DRAWN BY:	JWH
REVISION:	3
SCALE:	NOTED
SHEET:	CD-3



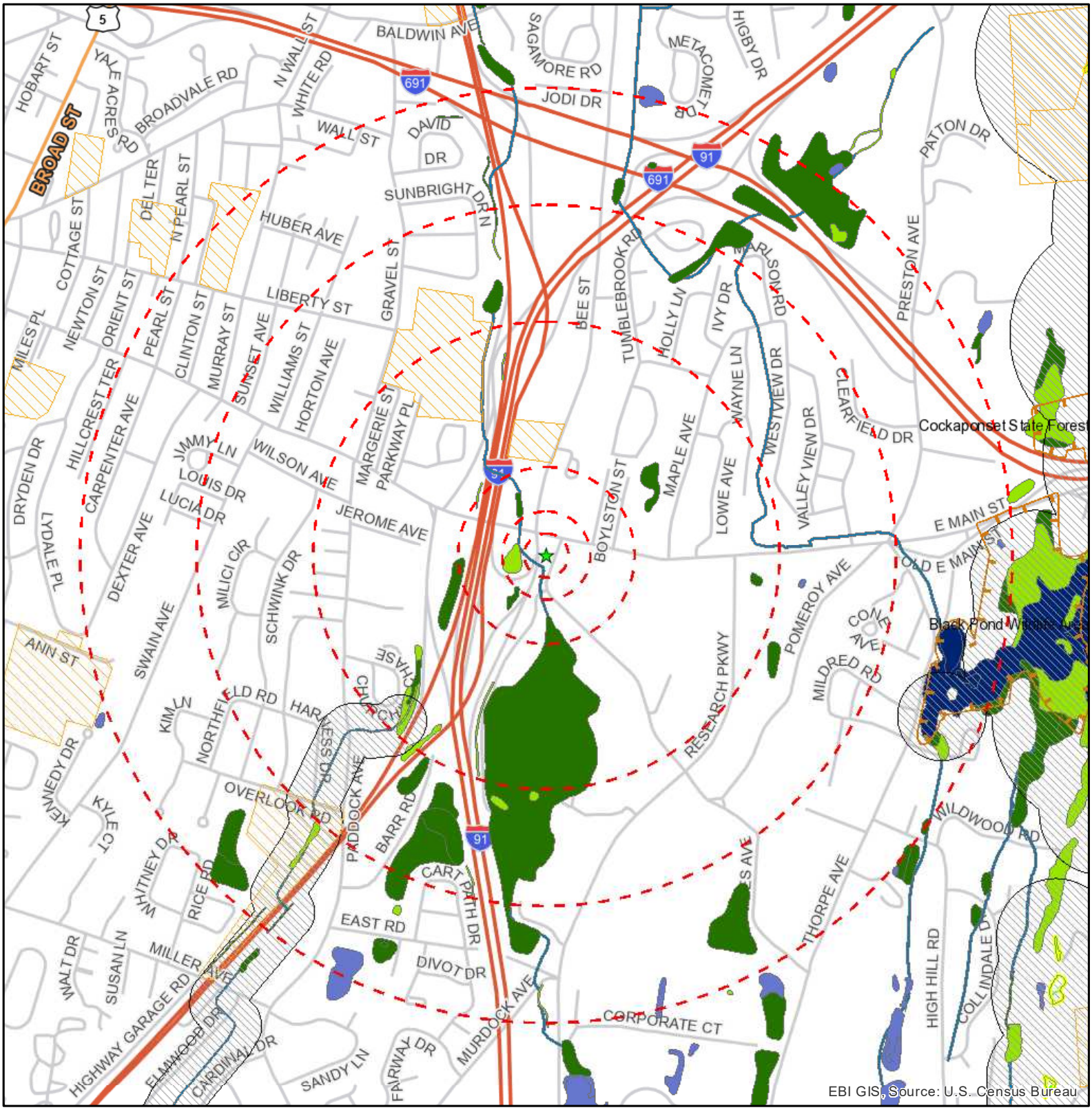
1 / CD-4 ELEVATION

SCALE: 1"=20'

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
500 NORTH BROADWAY
EAST PROVIDENCE, RI 02914
TEL: (401) 354-2403
FAX: (401) 633-6354

TITLE:	LEASE EXHIBIT
SITE NO:	CT-0005
SITE NAME:	MERIDEN FIRE DEPT
ADDRESS:	13 POMEROY AVE MERIDEN, CT 06450

DATE:	02/16/23
DRAWN BY:	JWH
REVISION:	3
SCALE:	NOTED
SHEET:	CD-4



Legend

* See associated map legend for additional source information.

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Date: 4/7/2023

Land Resources Map

CT0005-A MERIDEN FIRE DEPARTMENT
13 POMEROY AVENUE
MERIDEN, CONNECTICUT 06450

PN: 6123002126

N

EBI Consulting
environmental | engineering | design

Land Resources Legend

Scenic Parkways, Rivers & Trails

- National Scenic Parkway
- National Park Service Trail / Appalachian Trail
- AZ - BLM Historic Trail
- CT - DEP Trail
- MT- Lewis & Clark Trail
- NY - Trails
- NY - Scenic Landmark Area
- NY - Statewide Area of Scenic Significance
- National Wild, Scenic River
- CA, MT, PA - Wild or Scenic River

Sources: National Park Service http://www.nps.gov/gis/data_info/ ; Bureau of land management http://www.blm.gov/wo/st/en.html ; CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20 ; NY GIS Clearinghouse http://gis.ny.gov/ ; National W & S Rivers http://www.rivers.gov/rivers/mapping-gis.php ; Montana GIS http://nris.mt.gov/gis ; California Atlas http://atlas.ca.gov/

State Conservation, Lands & Wildlife Areas

- CT - DEP Property
- CO - Public Access Wildlife Area
- FL - Wildlife Management Area
- MT - National Wildlife Refuge
- NH - WMNF Management Area
- ME - Conservation Land
- TN - Wildlife Resource Land
- TX - State Park or Wildlife Mgt Area
- TX - Audubon Sanctuary
- CT - DEP Municipal and Open Space
- NH - Conservation Land
- NY - DEC State Lands
- NY - Agricultural District

Sources: CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20 CO Wildlife Space http://ndis.nrel.colostate.edu/ftp/ftp_response.asp ; Florida Fish and Wildlife www.MyFWC.com ; Montana GIS http://nris.mt.gov/gis ; NH GRANIT ttp://www.granit.unh.edu/data/downloadfreedata ; ME GIS http://megis.maine.gov/catalog ; TN GIS http://www.state.tn.us/environment/parks/gis/data/ ; TX GIS http://www.glo.state.tx.us/nri/data/index.html ; NY GIS Clearinghouse http://gis.ny.gov/

US FWS NWI Wetland Type

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

State Endangered Threatened & Protected Species

- AZ - Areas of Environmental Concern
- CA - Spotted Owl Territory
- CA - NDDB T & E Species
- CT - NDDB Area Feature
- CT - DEP Critical Habitat
- MA - NHESP Estimated Habitats of Rare Wildlife
- TX - Protected Species
- MA - NHESP Priority Habitats of Rare Species
- FL - Conservation Species
- MA - NHESP Certified Vernal Pool
- ME - Candidate Vernal Pool
- NY - Important Bird Area
- TX - Ecologically Unique Rivers Streams

Sources: AZ BLM Page http://www.blm.gov/az/st/en/prog/maps/gis_files.html ; CNDDB http://www.dfg.ca.gov/biogeodata/cnddb/ ; CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20 ; MAGIS http://www.mass.gov/mgis/laylist.htm ; TX GIS http://www.glo.state.tx.us/nri/data/index.html ; Florida Fish and Wildlife www.MyFWC.com; NY GIS Clearinghouse http://gis.ny.gov/

Federal & National Coverage Data Layers

- USFWS Critical Habitat
- USFWS Critical Habitat Area
- National Park Service
- National Wildlife Area or Refuge
- Federally Owned Land
- National Wilderness Areas
- National Park Service Site

FEMA Q3 Flood Zone 2006

- 500-year inundation area.
- 100-year inundation area.
- 100-year inundation area with velocity hazard.
- Undetermined but possible flood hazard area.
- Floodway area, including watercourse extent.

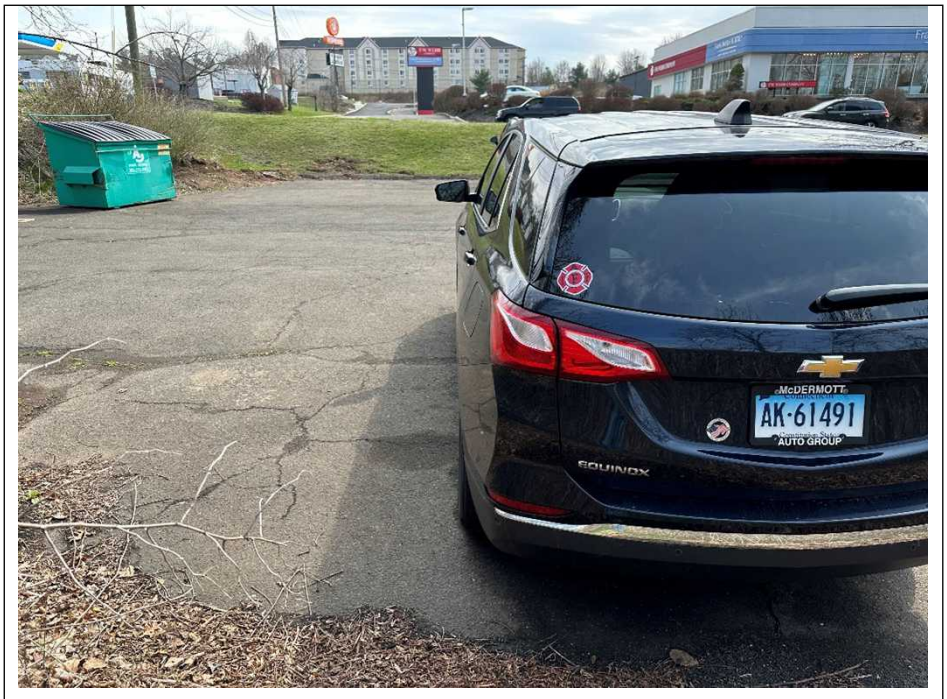
No Flood Data No Flood Data Available

Sources: National Park Service http://www.nps.gov/gis/data_info/ ; USFWS http://crithab.fws.gov/ ; National Park Service http://science.nature.nps.gov/nrdata/index.cfm ; The National Map http://nationalmap.gov/ ; Wilderness.net http://www.wilderness.net/ ; FEMA - Q3 Flood Data https://msc.fema.gov

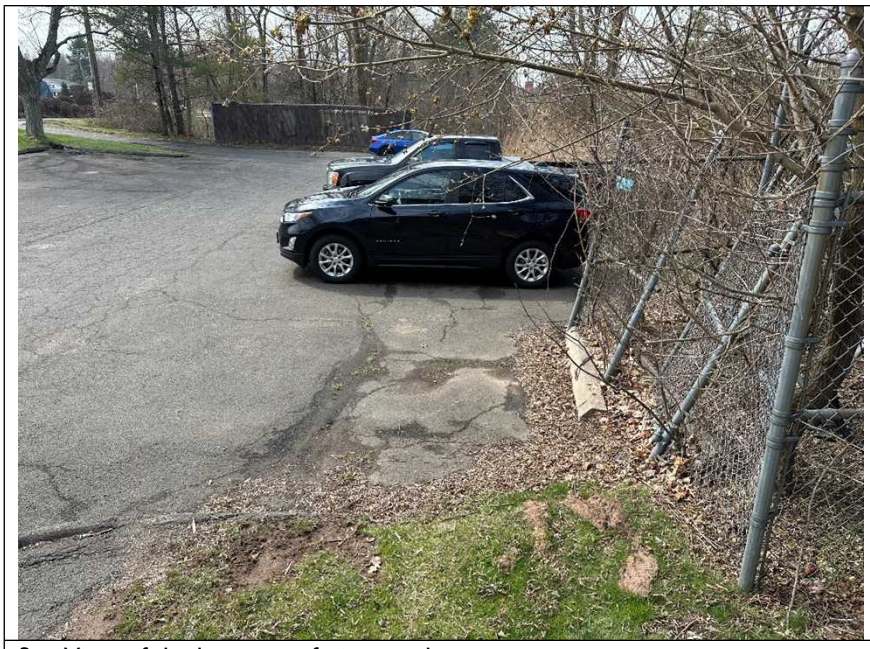
EBI Consulting
environmental | engineering | due diligence

PHOTOGRAPHS

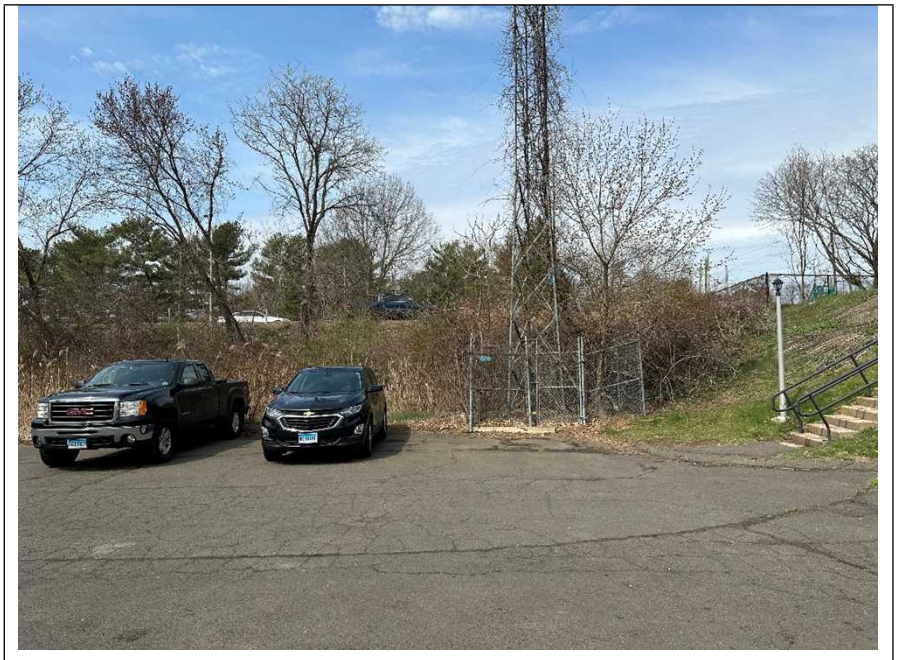
1. View of the lease area facing north. Proposed pole location marked with arrow.



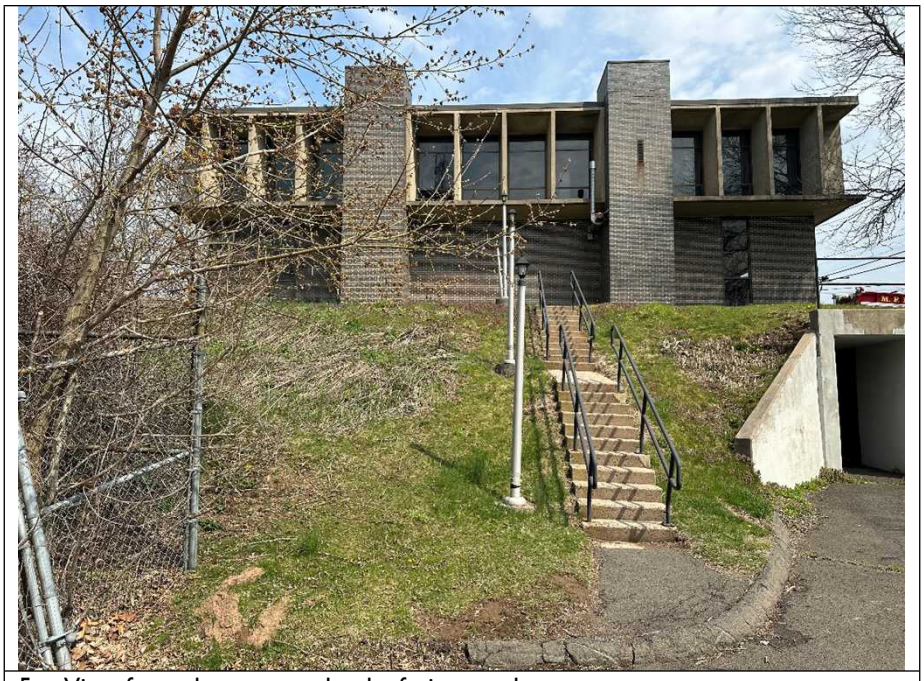
2. View of the lease area facing east.



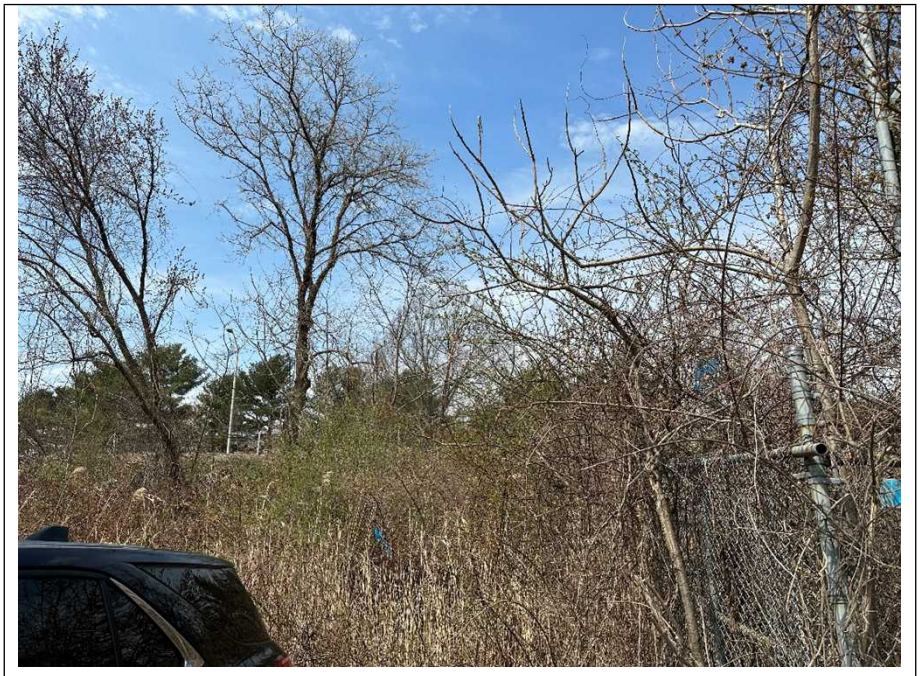
3. View of the lease area facing south.



4. View of the lease area facing west.



5. View from the proposed pole, facing north.



6. View from the proposed pole, facing west.

7. Utility route (marked), facing northeast.

8. Access route, facing southeast.

SPECIES REVIEW DOCUMENTATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project Code: 2023-0058561
Project Name: 6123002126

April 07, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 3/8/2023 - *Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.*

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 3/8/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule will go into effect on **March 31, 2023**. After that date, the current 4(d) rule for NLEB will be invalid, and the 4(d) determination key will no longer be available. New compliance tools will be available in March 2023, and information will be posted in this section on our website and on the northern long-eared bat species page, so please check this site often for updates.

Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project may result in incidental take of NLEB after the new listing goes into effect, this will need to be addressed in an updated consultation that includes an Incidental Take Statement. Many of these situations will be addressed through the new compliance tools. If your project may require re-initiation of consultation, please wait for information on the new tools to appear on this site or contact our office for additional guidance.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2023-0058561
Project Name: 6123002126
Project Type: Communication Tower New Construction
Project Description: Install a new monopole telecommunications pole.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.5255775,-72.76772954810711,14z

Counties: New Haven County, Connecticut

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPAC USER CONTACT INFORMATION

Agency: Verizon Wireless
Name: Claire Saleh
Address: 21 B Street
City: Burlington
State: MA
Zip: 01803
Email csaleh@ebiconsulting.com
Phone: 7857605938

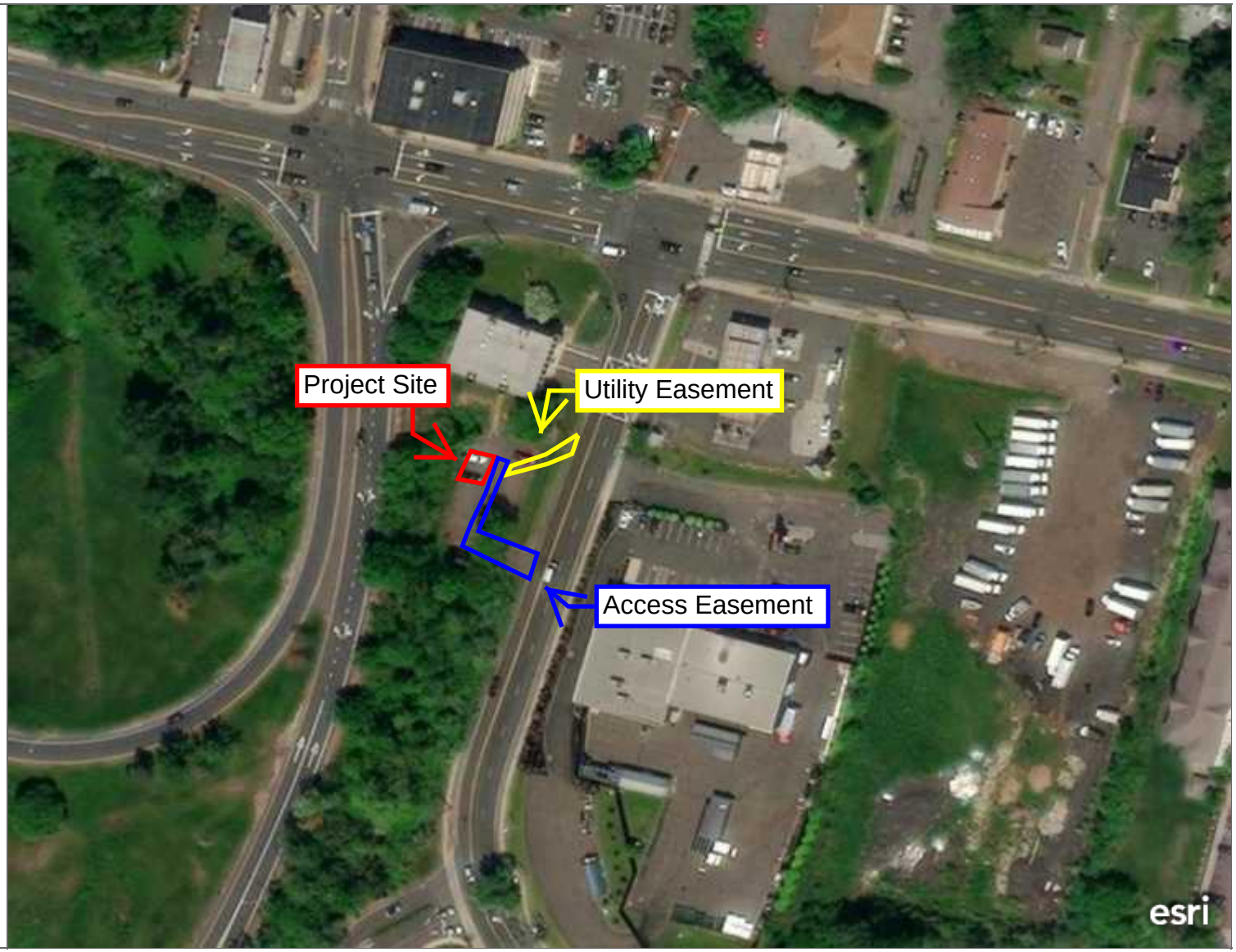
Critical Habitat for Threatened & Endangered Species [USFWS]

Final Polygon Features

Final Linear Features

Proposed Polygon Features

Proposed Linear Features



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Maxar, Microsoft

Natural Diversity Data Base Areas

MERIDEN, CT

December 2022

State and Federal Listed Species

Critical Habitat

Town Boundary

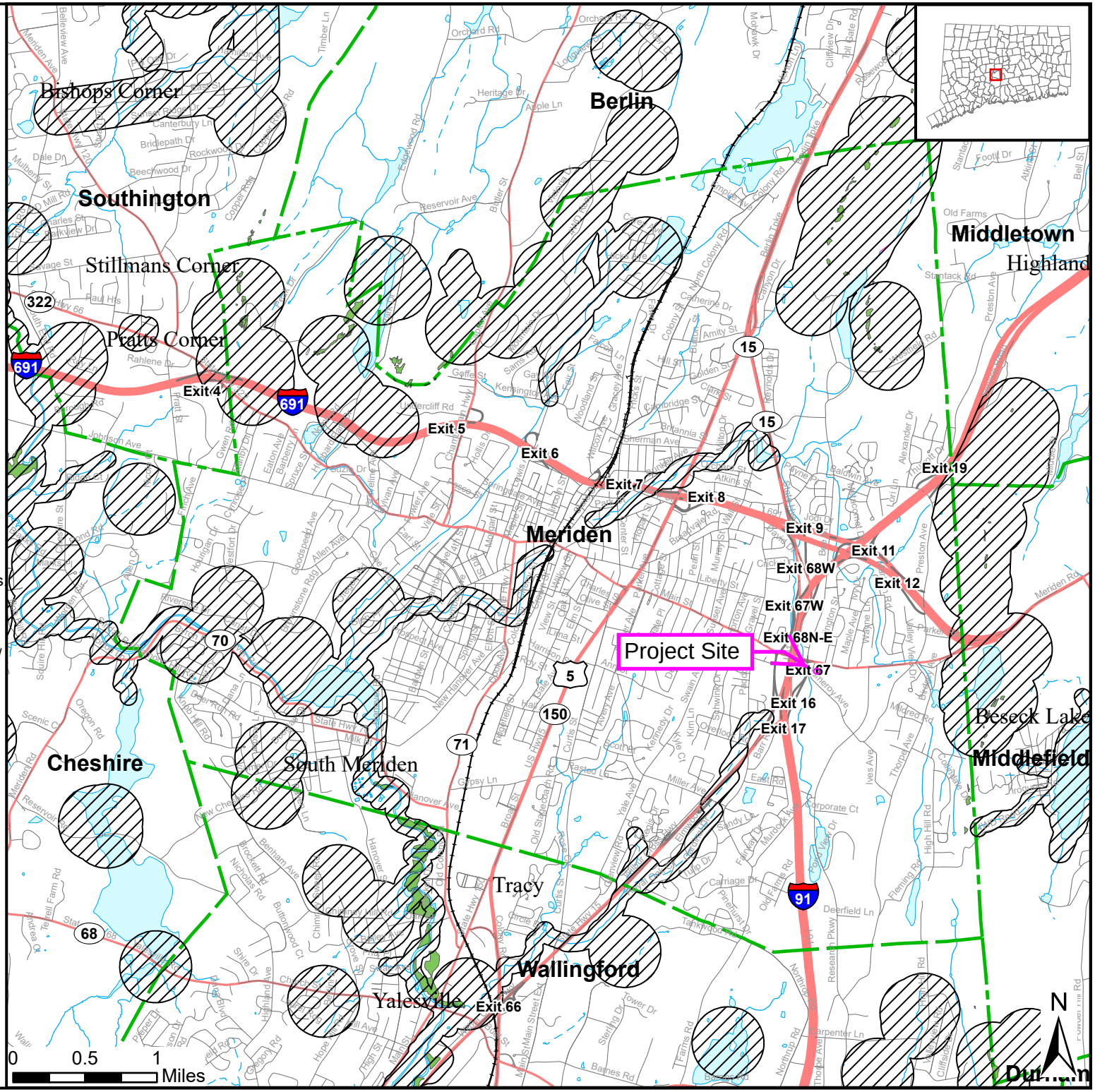
NOTE: This map shows known locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a variety of data sources . Exact locations of species have been buffered to produce the generalized locations.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas If the project is within a hatched area there may be a potential conflict with a listed species. For more information, use DEEP ezFile https://filings.deep.ct.gov/DEEPPortal/ to submit a Request for Natural Diversity Data Base State Listed Species Review or Site Assessment. More detailed instructions are provided along with the request form on our website. https://portal.ct.gov/deep-nddbrequest

Use the CTECO Interactive Map Viewers at http://cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division

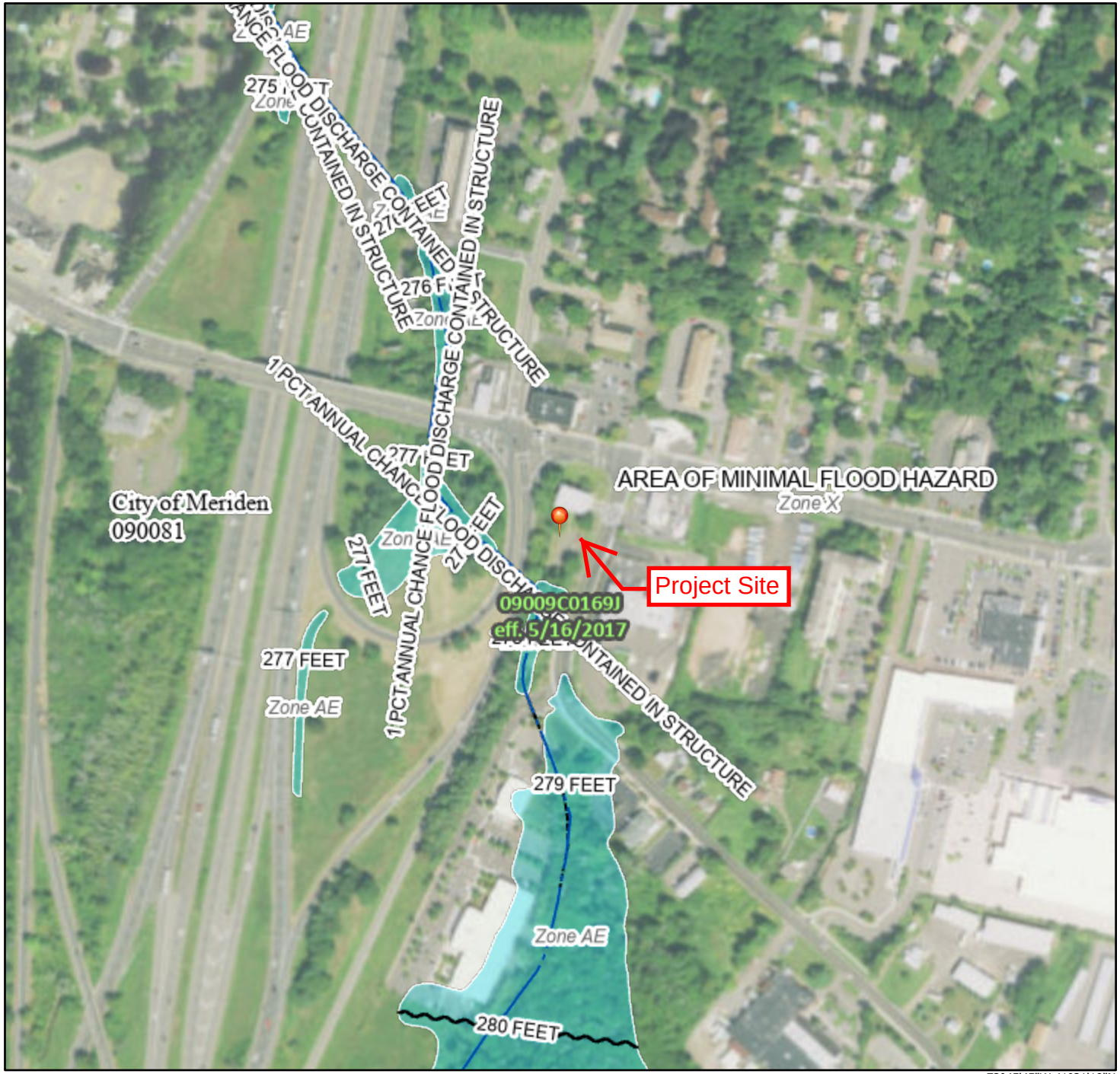


SUPPORTING DOCUMENTATION

National Flood Hazard Layer FIRMette

FEMA

72°46'23"W 41°31'45"N



72°45'45"W 41°31'19"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

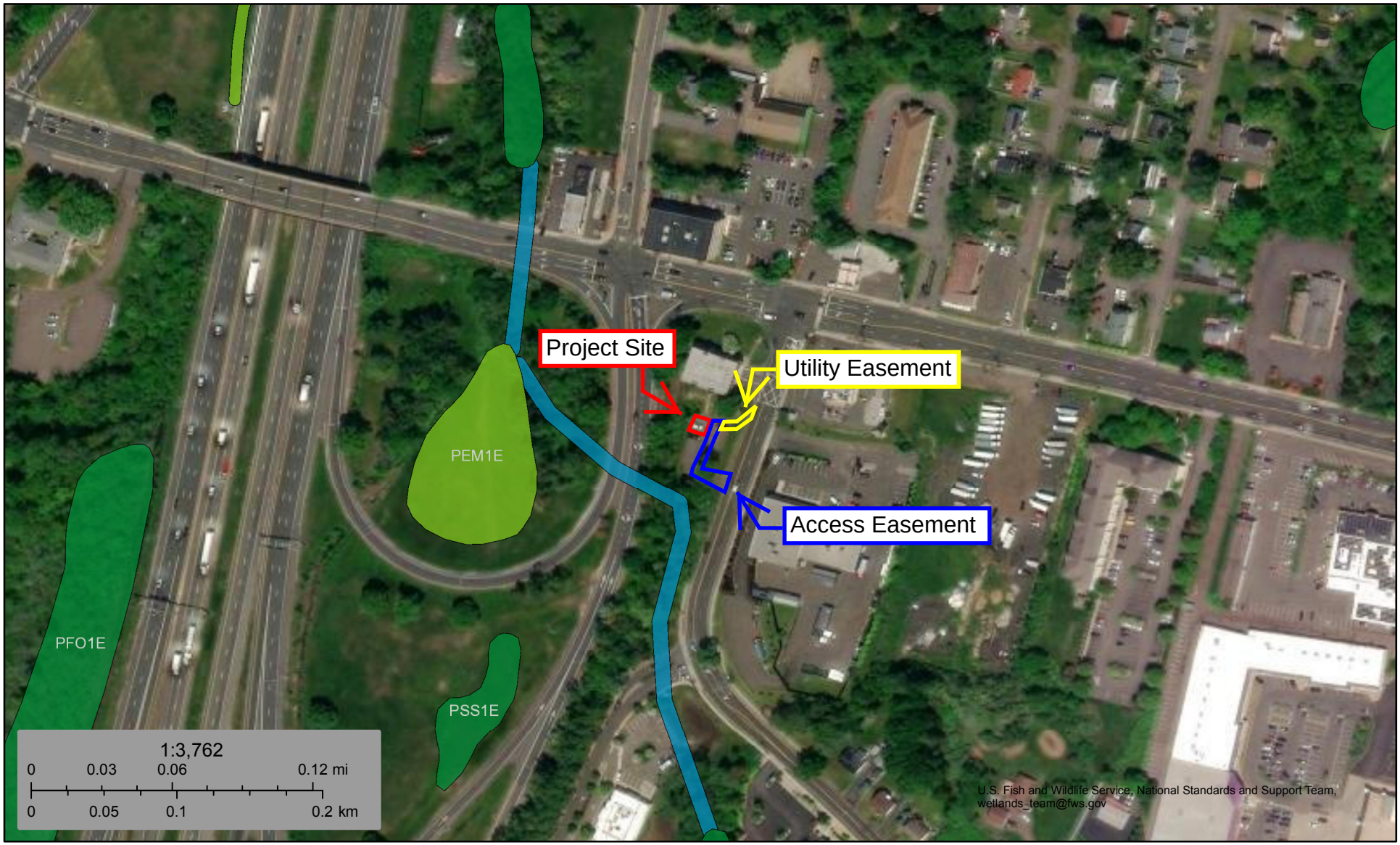
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/7/2023 at 10:33 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

U.S. Fish and Wildlife Service
National Wetlands Inventory

6123002126 NWI Map



April 7, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Connecticut

April 7, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....11
Map Unit Descriptions.....11
State of Connecticut.....13
307—Urban land.....13
References.....14

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

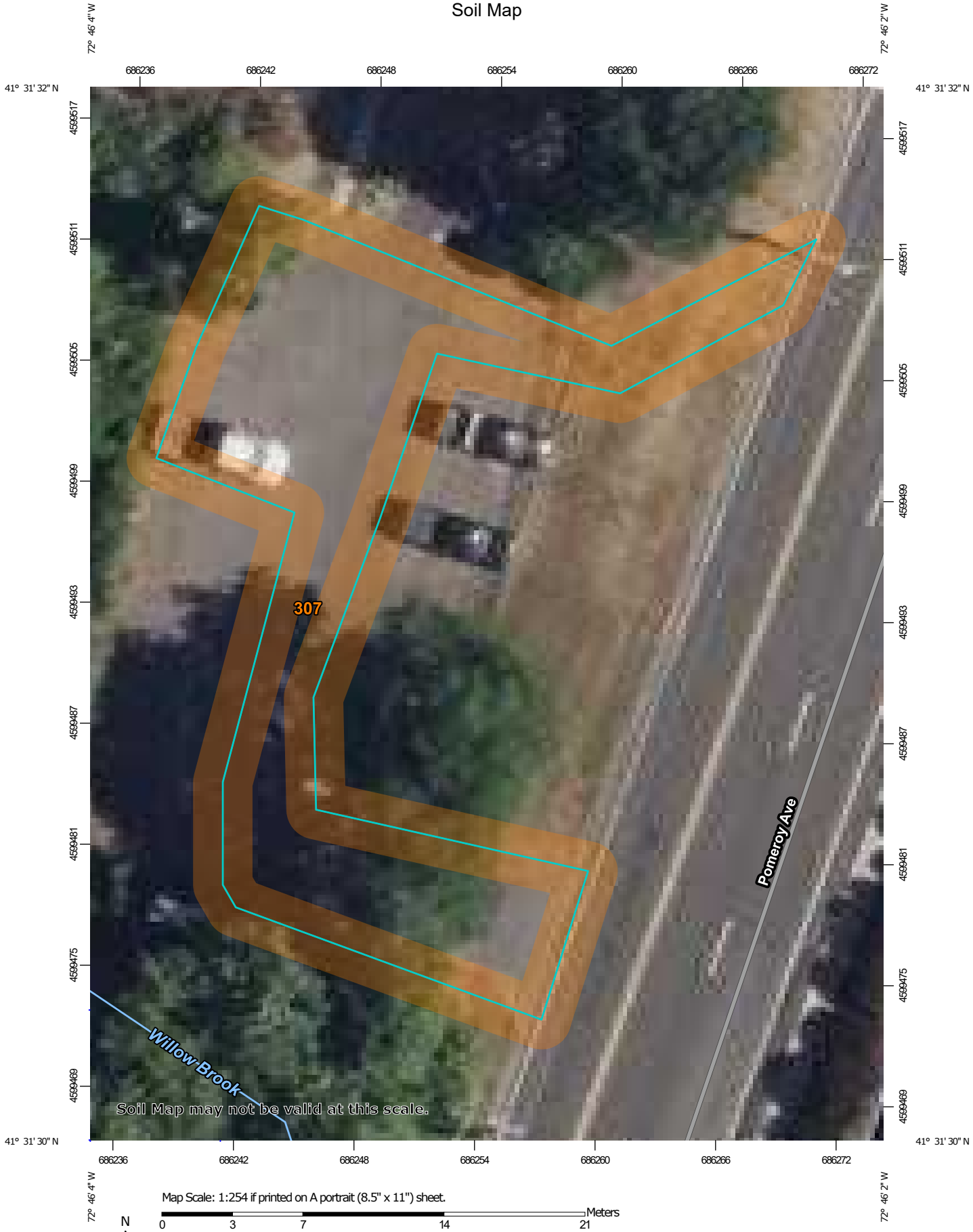
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:254 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 3 7 14 21

Feet: 0 10 20 40 60

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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
Survey Area Data: Version 22, Sep 12, 2022

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
307	Urban land	0.1	100.0%
Totals for Area of Interest		**0.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

307—Urban land

Map Unit Setting

National map unit symbol: 9lmh
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Udorthents, wet substratum

Percent of map unit: 10 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 10 percent
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES
102 Grove Street
Worcester, MA 01605-2629
508-752-9666 / Fax: 508-752-9494

September 30, 2022

Scott N. Adams, PE
Advanced Engineering Group, PC
500 North Broadway
East Providence, RI 02914

Re: 1075 East Main Street, Meriden, CT

Subject: Wetland & Soil Evaluation Report

Dear Scott:

Per your request, on September 9, 2022, I, Arthur Allen of EcoTec was present on the above-referenced property. The purpose of this inspection was to evaluate the vicinity of a proposed, replacement communications tower (a.k.a.; the "Site") with regard to the presence of Wetlands and Watercourses, as defined by the Connecticut Inland Wetlands and Watercourses Act of 1972, the Federal Clean Water Act (Section 404), the Inland Wetland and Watercourse Regulations of Meriden, CT and the Wetland Commissioners Handbook of 1994. The attached USGS Topographic Map, NRCS Web Soil Survey map, FIRMette, NDDB maps and site photos display the project site location. Following is a description of the project site, delineation procedures and Wetlands and Watercourses present.

Project Description:

The project site consists of an existing fire department station house and associated infrastructure including a metal, steel lattice-type communications tower (see attached photos). Wetlands on the Site are associated with Willow Brook and tributaries. The Willow Brook Watercourse appears on the USGS Topographic Map. The delineation of wetlands on this site was based on the presence or absence of poorly and very poorly drained, alluvial and floodplain soils as defined by the National Cooperative Soil Survey of the Natural Resources Conservation Service of the United States Department of Agriculture. During the course of the evaluation, reference was made to the most recent USDA – NRCS Web Soil Survey Report (see attached); the 1987 "Corps of Engineers Wetlands Delineation Manual" (Department of the Army, Technical Report Y-87-1); the January, 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0); the "Field Indicators for Identifying Hydric Soils in New England" (New England Hydric Soils Technical Committee, 2017. 4th ed., New England Interstate Water Pollution Control Commission, Lowell, MA); and the National Flood Insurance Program FIRMette map (see attached). Representative soil descriptions were completed along one transect associated with the wetlands delineated. Sample plots TP-U and TP-W (marked with pink flags), are located in the vicinity of wetland flag A-6. Soil and vegetation descriptions, recorded at sampling transects, can be found on the US Army Corps of Engineers Wetland Determination Data Sheets (see attached).

In the table below you will find the flag series numbers, types and locations, as established, to delineate Wetland Resource Areas on this site.

Flag Numbers	Flag Type	Wetland Types and Locations
A-1 to A-16	Blue Flags	Boundary of Inland Wetlands and Watercourses located on the west and south sides of the site.

Wetlands & Watercourses:

Following are descriptions of the Wetlands and Watercourses identified and delineated within 100 feet of the project area:

- Wetland flag series "A" delineates an Inland Wetland associated with Willow Brook and two tributary streams/swales. A portion of the site falls within FEMA/FIRM mapped AE flood zone (see attached FIRMETTE). The wetland is a wooded swamp dominated by Red and Boxelder Maple trees over Silky Dogwood shrubs with Common Reed and Jewelweed ground cover. Soils within the wetlands are a combination of alluvial/floodplain and poorly drained, fill materials. Mapped soils in the vicinity of the wetland consist of Udorthents [Map Unit No. 306, historically filled and graded, granular fill (i.e., Urban Land)].

Rare Species:

Based upon a review of the June, 2022 *Natural Diversity Database Areas* map for Meriden, CT there are no State and Federal Listed Species areas on or near the site (see attached).

Summary:

It is my opinion that the areas described above and field delineated are a complete and accurate representation of the Wetlands and Watercourses delineated in the project area. This opinion is based upon observations made of existing conditions on the dates noted above. The reader should be aware that regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. I have attached a brief description of my experience and qualifications. Please do not hesitate to contact me if you have any questions concerning this or other matters.

Sincerely,

Arthur Allen, CPSS, CWS, CESSWI
Senior Soil & Environmental Scientist

enclosures

Arthur Allen, CPSS, CWS, CESSWI
Vice President
Soil & Wetland Scientist

Arthur Allen is the Vice President of EcoTec, Inc. and has been a senior environmental scientist there since 1995. His work with EcoTec has involved wetland delineation, wildlife habitat evaluation, environmental permitting (federal, state and local), environmental monitoring, expert testimony, peer reviews, contaminated site assessment and the description, mapping and interpretation of soils. His clients have included private landowners, developers, major corporations and regulatory agencies. Prior to joining EcoTec, Mr. Allen mapped and interpreted soils in Franklin County, MA for the U.S.D.A. Natural Resources Conservation Service (formerly Soil Conservation Service) and was a research soil scientist at Harvard University's Harvard Forest. Since 1994, Mr. Allen has assisted the Massachusetts Department of Environmental Protection and the Massachusetts Association of Conservation Commissions as an instructor in the interpretation of soils for wetland delineation and for the Title V Soil Evaluator program.

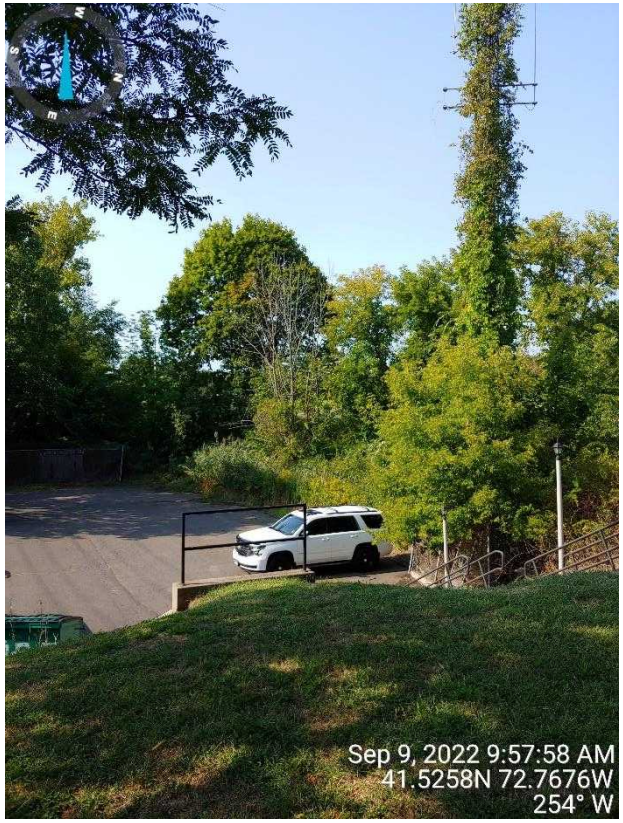
Mr. Allen has a civil service rating as a soil scientist, an undergraduate degree in Natural Resource Studies and a graduate certificate in Soil Studies. His work on the Franklin County soil survey involved interpretation of landscape-soil-water relationships, classifying soils and drainage, and determining use and limitation of the soil units that he delineated. As a soil scientist at the Harvard Forest, Mr. Allen was involved in identifying the legacies of historical land-use in modern soil and vegetation at a number of study sites across southern New England. He has a working knowledge of the chemical and physical properties of soil and water and how these properties interact with the plants that grow on a given site. While at Harvard Forest he authored and presented several papers describing his research results which were later published. In addition to his aforementioned experience, Mr. Allen was previously employed by the Trustees of Reservations as a land manager and by the Town of North Andover, MA as a conservation commission intern.

Education:
1993-Graduate Certificate in Soil Studies, University of New Hampshire
1982-Bachelor of Science in Natural Resource Studies, University of Massachusetts

Professional Affiliations:
Certified Professional Soil Scientist (ARCPACS CPSS #22529)
New Hampshire Certified Wetland Scientist (#19)
Registered Professional Soil Scientist – Society of Soil Scientists of SNE [Board Member (2000-2006)]
Certified Erosion, Sediment & Stormwater Inspector (#965)
Massachusetts Arborists Association-Certified Arborist (1982 – 1998)
New England Hydric Soils Technical Committee member
Massachusetts Association of Conservation Commissions member
Society of Wetland Scientists member

Refereed Publications:
Soil Science and Survey at Harvard Forest. A.Allen. *In*: Soil Survey Horizons. Vol. 36, No. 4, 1995, pp. 133-142.
Controlling Site to Evaluate History: Vegetation Patterns of a New England Sand Plain. G.Motzkin, D.Foster, A.Allen, J.Harrod, & R.Boone. *In*: Ecological Monographs 66(3), 1996, pp. 345-365.
Vegetation Patterns in Heterogeneous Landscapes: The Importance of History and Environment. G.Motzkin, P.Wilson, D.R.Foster & A.Allen. In: Journal of Vegetation Science 10, 1999, pp. 903-920.

ECOTEC INSPECTION PHOTOS FROM 1075 EAST MAIN ST., MERIDEN, CT



1. Fire Station Parking Lot and wetland (facing away from station building) with vine-covered communications tower

2. Fire Station Parking Lot and wetland (facing towards station building) with vine-covered communications tower

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 1075 East Main Street City/County: Meriden Sampling Date: 9/9/2022

Applicant/Owner: State: CT Sampling Point: TPU@A6

Investigator(s): Arthur Allen, EcoTec, Inc. Section, Township, Range:

Landform (hillside, terrace, etc.): shoulder fill slope Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 41.525807 Long: -72.767636 Datum: WGS 84

Soil Map Unit Name: Udorthents NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The site was historically altered by filling, grading and channelization of surface water. This being said, site conditions have equilabrated over approximately 30 years and are currently considered to be normal or naturalized.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL

Sampling Point: TPU@A6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 3/2	100					Loamy/Clayey	Rubbly
6-15	5YR 4/6	100					Loamy/Clayey	Rubbly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Well drained fill (Udorthents)

VEGETATION – Use scientific names of plants.

Sampling Point: TPU@A6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhus typhina*	20	Yes	UPL
2. *Rosa multiflora*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	60 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Solidago altissima*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1. *Celastrus orbiculata*	10	Yes	UPL
2.			
3.			
4.			
	10 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	30	x 5 =	150
Column Totals:	80 (A)		350 (B

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: 1075 East Main Street City/County: Meriden Sampling Date: 9/9/2022

Applicant/Owner: State: CT Sampling Point: TPW@A6

Investigator(s): Arthur Allen, EcoTec, Inc. Section, Township, Range:

Landform (hillside, terrace, etc.): shoulder fill slope Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 41.525807 Long: -72.767636 Datum: WGS 84

Soil Map Unit Name: Udorthents NWI classification: PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
The site was historically altered by filling, grading and channelization of surface water. This being said, site conditions have equilabrated over approximately 30 years and are currently considered to be normal or naturalized.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL

Sampling Point: TPW@A6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/2	100					Mucky Loam/Clay	
10-15	5YR 4/3	90	5YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)
X Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Red Parent Material (F21) **(outside MLRA 145)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Poorly drained fill (Udorthents)

VEGETATION – Use scientific names of plants.

Sampling Point: TPW@A6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus amomum*	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	30 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phragmites australis*	80	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		220 (B

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

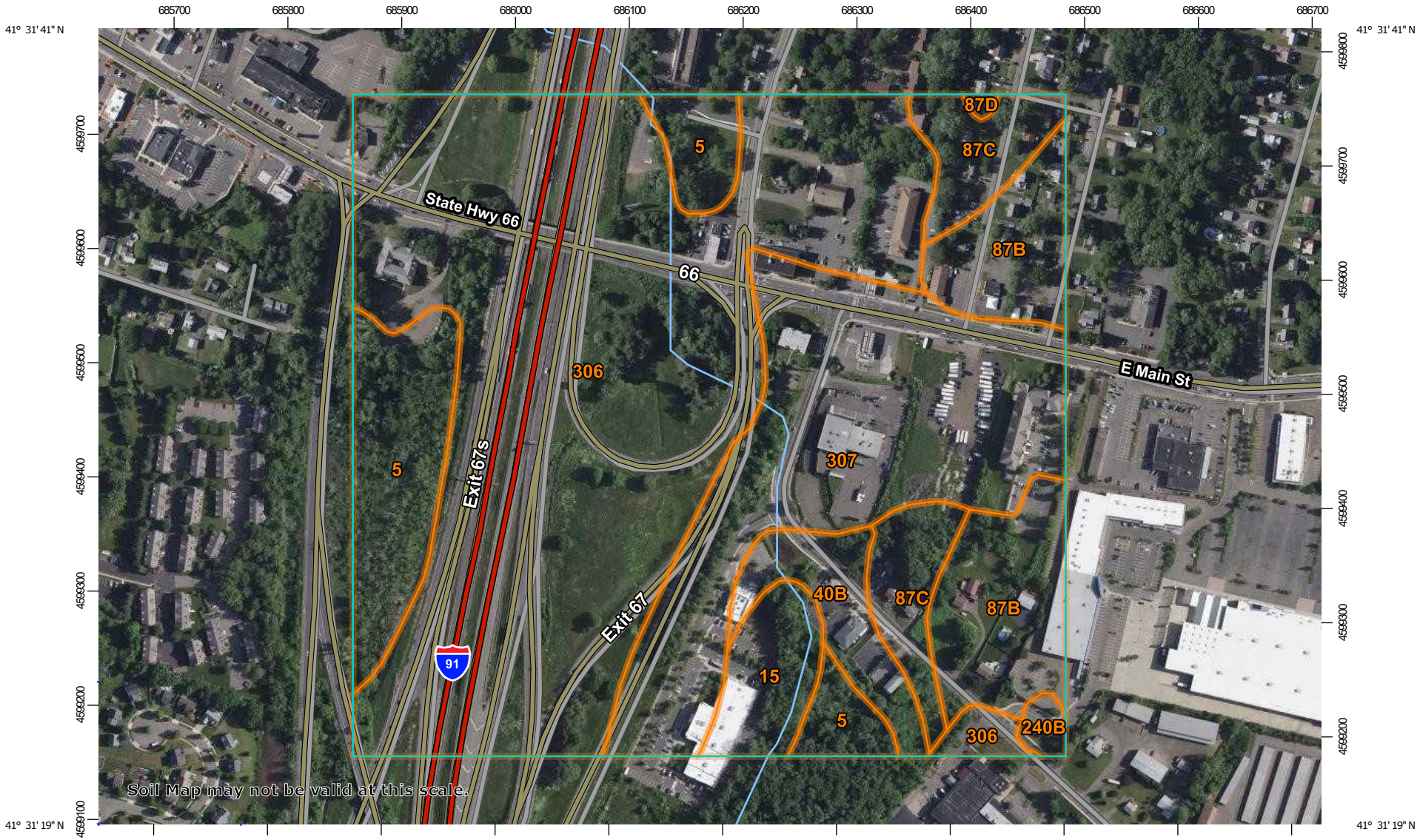
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

Soil Map—State of Connecticut
(1075 East Main St., Meriden, CT)



Map Scale: 1:4,910 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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
Survey Area Data: Version 21, Sep 7, 2021

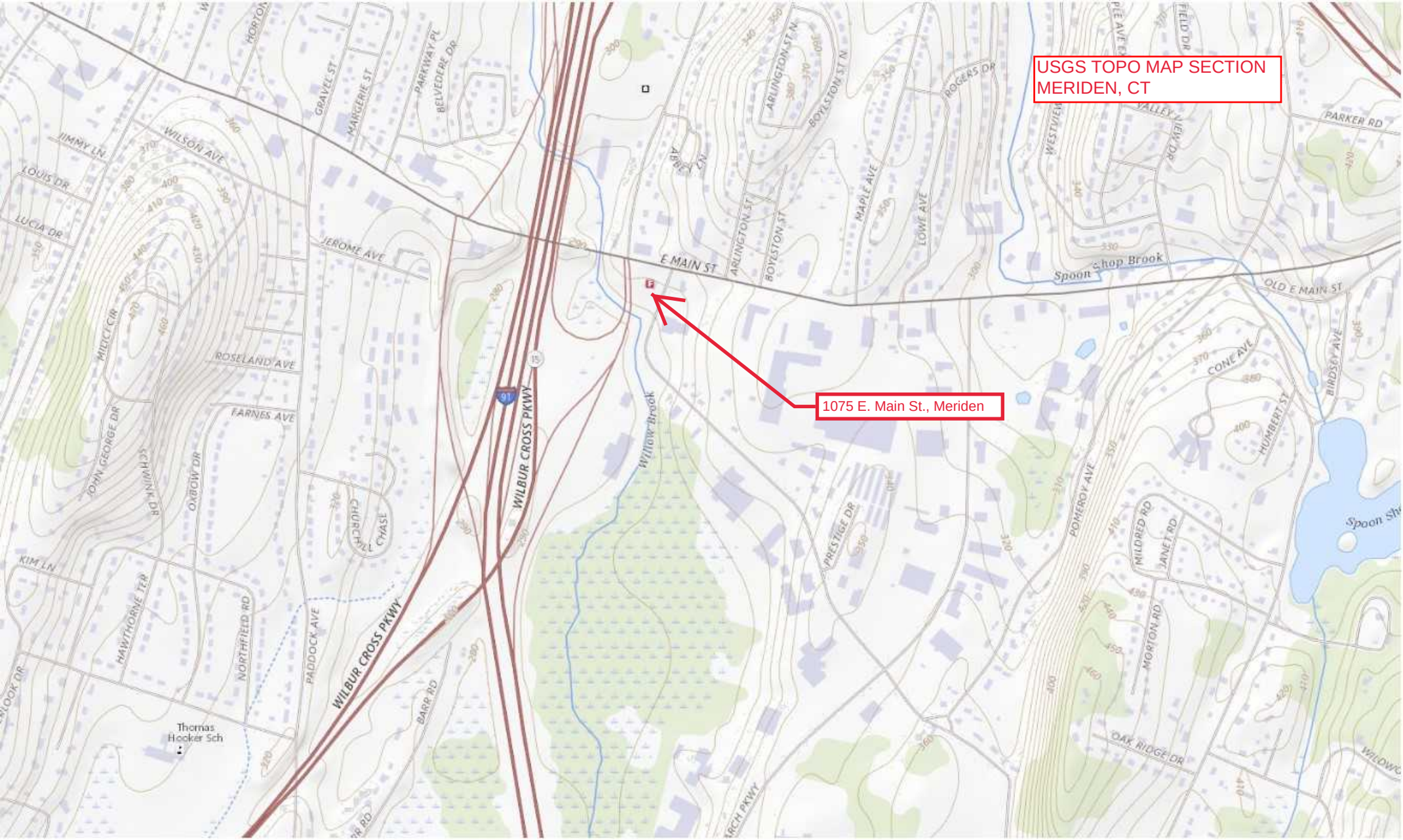
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 8, 2020—Jun 12, 2020

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

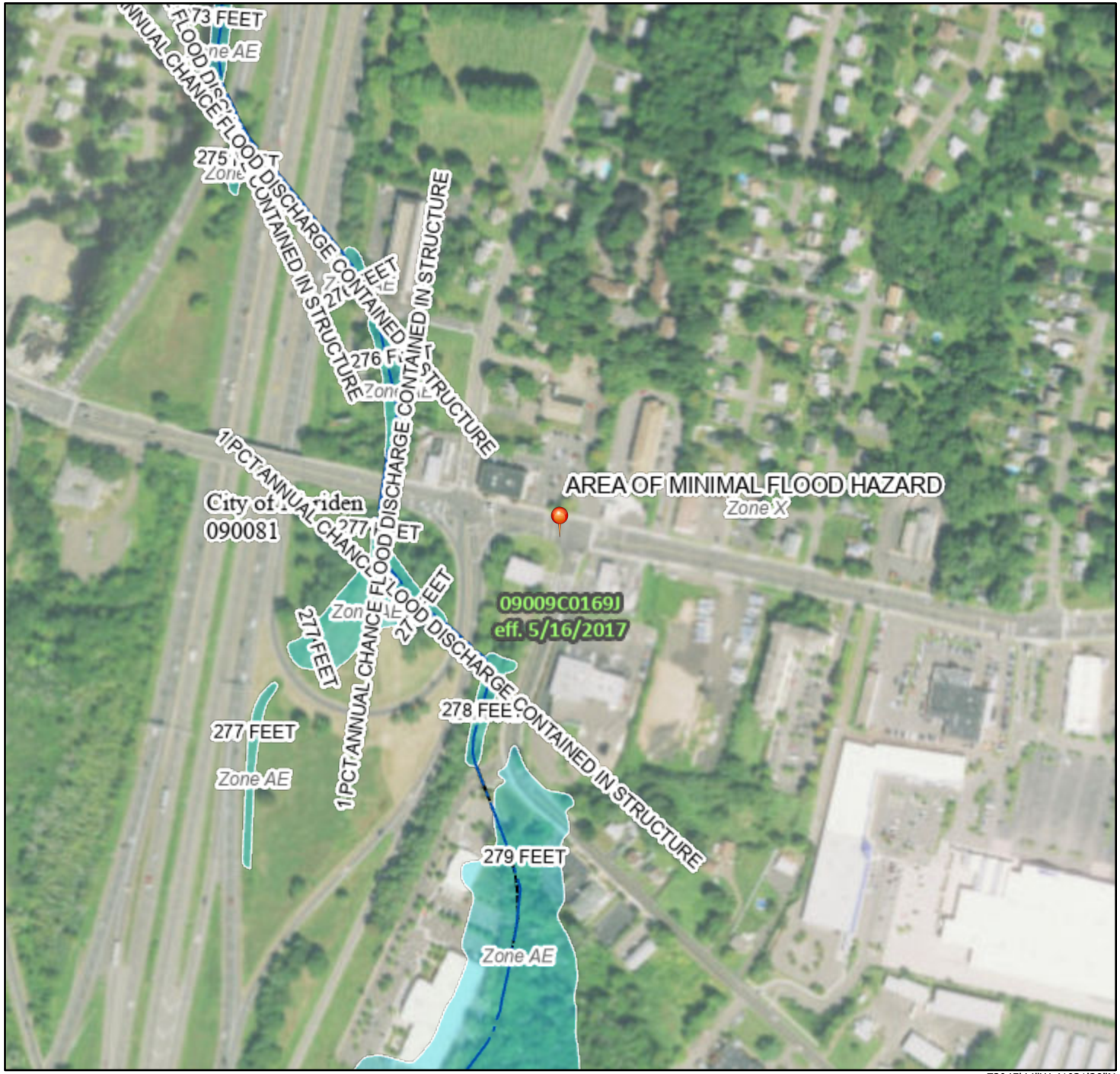
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Wilbraham silt loam, 0 to 3 percent slopes	8.4	9.3%
15	Scarboro muck, 0 to 3 percent slopes	2.8	3.1%
40B	Ludlow silt loam, 3 to 8 percent slopes	3.1	3.4%
87B	Wethersfield loam, 3 to 8 percent slopes	8.4	9.3%
87C	Wethersfield loam, 8 to 15 percent slopes	4.9	5.4%
87D	Wethersfield loam, 15 to 25 percent slopes	0.1	0.1%
240B	Ludlow-Urban land complex, 0 to 8 percent slopes	0.5	0.5%
306	Udorthents-Urban land complex	44.5	49.4%
307	Urban land	17.5	19.5%
Totals for Area of Interest		**90.1**	**100.0%**


USGS TOPO MAP SECTION
MERIDEN, CT
1075 E. Main St., Meriden
E MAIN ST
OLD E MAIN ST
WILBUR CROSS PKWY
Willow Brook
Spoon Shop Brook
PARKER RD
WILSON AVE
JEROME AVE
ROSELAND AVE
FARNES AVE
KIM LN
OAK RIDGE DR
Thomas Hooker Sch

National Flood Hazard Layer FIRMette

FEMA

72°46'21"W 41°31'47"N



72°45'44"W 41°31'20"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/7/2022 at 12:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Natural Diversity Data Base Areas

MERIDEN, CT

June 2022

State and Federal Listed Species

Critical Habitat

Town Boundary

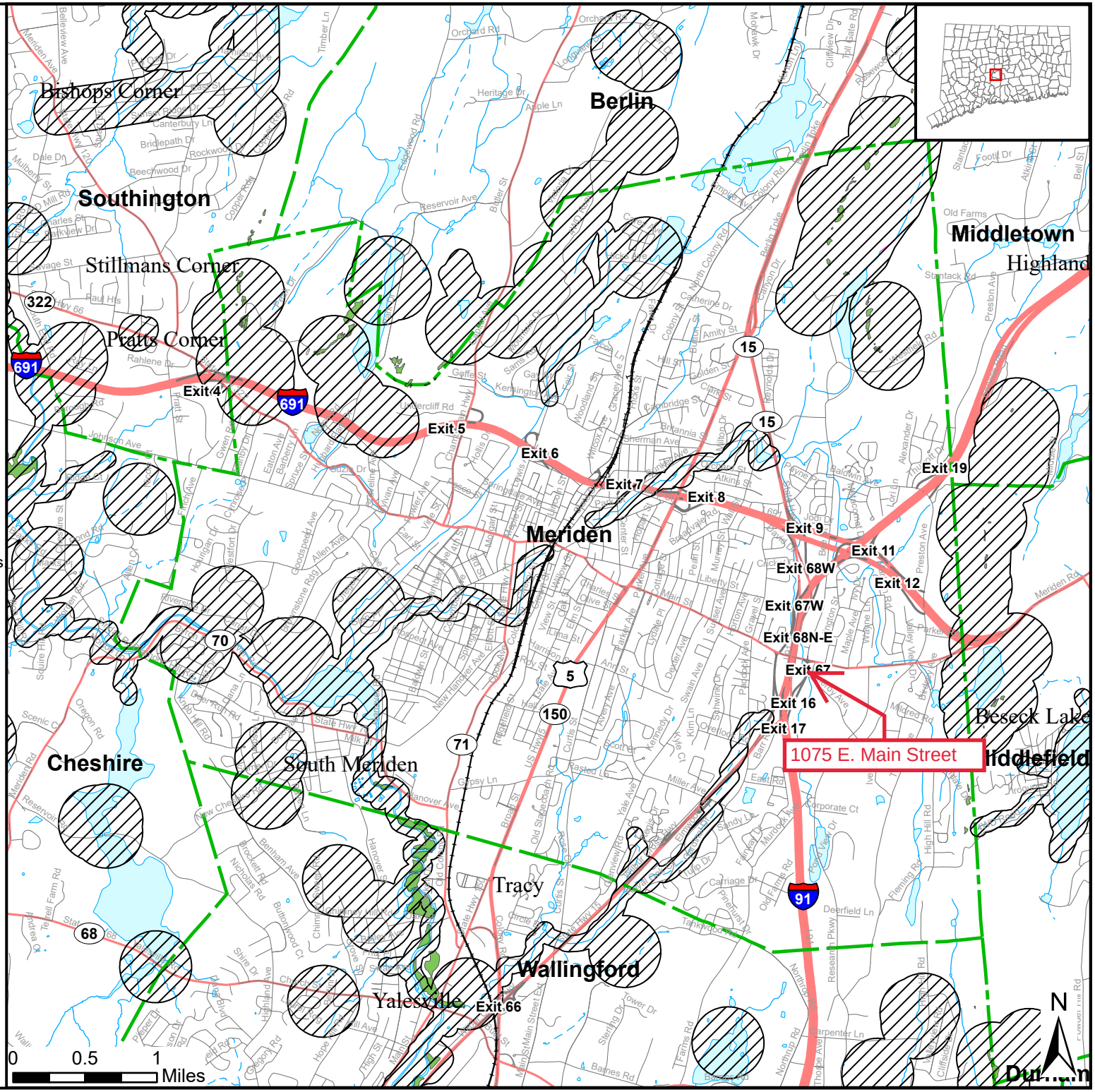
NOTE: This map shows general locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a variety of data sources . Exact locations of species have been buffered to produce the generalized locations.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas If the project is within a hatched area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.
https://portal.ct.gov/deep-nddbrequest

Use the CTECO Interactive Map Viewers at http://cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



QUALIFICATIONS

Claire Saleh

Project Scientist I

Experience: Employed at EBI since 2022, in the industry since 2015
Education: MS Global Change Ecology: Ecosystem Science and Environemtal Policy, University College Dublin
BS Biology, Butler University

Claire Saleh is a project scientist I, concentrating in National Environmental Policy Act (NEPA) and Phase I Environmental Site Assessments (ESA) for the telecommunications group in the southeast region. Claire has experience in conducting environmental and biological surveys since 2015 and regionally in the southeast since 2019.

Relevant project experience:

NEPA Screening, Various project, Nationwide
Claire has education in conducting NEPA Compliance Reviews from her master's studies. NEPA Compliance Reviews include an analysis of historical properties, wetlands, endangered species habitat, floodplains and other areas of environmental concern for proposed telecommunications installations. The summary of the research is compiled into a site-specific report.

Public Notice and Invitation to Consult (ITC) letter, Various locations
For telecommunications projects that do not meet a FCC exclusion, Claire completes Section 106 consultation by preparing public notices and ITC letters to allow the public and any interested parties the opportunity to comment on the effect the project may have on historic places in the area.

EBI Consulting
environmental | engineering | due diligence

Jason Stayer
Biologist II
11445 East Via Linda, Suite 2#472
Scottsdale, AZ 85259
480-661-0051
jstayer@ebiconsulting.com

SUMMARY OF EXPERIENCE

Mr. Stayer received his BS in the Management of Information Systems from the University of Texas at Arlington with an emphasis in database managment. Mr. Stayer also received a MS in Wildlife Ecology from Texas State University with an emphasis on avian species, specifically a Master's Thesis on raptor species. He has spent 5 years working for the U.S. Fish and Wildlife Service (USFWS) responsible for conducting numerous wildlife and habitat assessments, understanding and implementing all sections of the Endangered Species Act (ESA), responsible for reviewing National Environmental Policy Act (NEPA) documents, writing and reviewing grant proposals, writing and reviewing biological reports, and publication of numerous documents related to the Endangered Species Act.

RELEVANT PROJECT EXPERIENCE

Mr. Stayer has worked with EBI Consulting as a Biologist II since January of 2014. Prior to working with EBI, Mr. Stayer worked as a wildlife biologist for the USFWS Carlsbad Field Office. Mr. Stayer worked closely with the U.S. Navy and National Park Service to establish a habitat monitoring program for the Federally threatened island night lizard. He has also worked with numerous water districts to assess project impacts, develop project alternatives, and propose mitigation for numerous Federally listed threatened and endangered species in complice with the ESA and NEPA. As a USFWS fish and wildlife biologist Jason has conducted numerous species and habitat assessments and developed ESA Section 4 documents for the Cocachella Valley Fringe-toed Lizard, Island Night Lizard, Coastal California Gnatcatcher, Santa Ana Sucker, and Southwestern Willow Flycatcher. Jason has also drafted Section 7 Consultation documents for 30 different state and federally listed species.

EDUCATION

Bachelor of Science, Management of Information Systems, December 2002
University of Texas at Arlington, Arlington, TX

Master of Science, Wildlife Ecology, August 2008
Texas State University, San Marcos, TX

PROFESSIONAL REGISTRATIONS

Seabird Assessment Oil Spill Response, March 2009
Carlsbad Fish and Wildlife Office, Carlsbad, CA

Listing and Candidate Assessment (Section 4 - ESA), March 2010
Lakewood Fish and Wildlife Office, Lakewood, CO

Habitat Conservation Plan Development (Section 10 - ESA), March 2011
Carlsbad Fish and Wildlife Office, Carlsbad, CA

Recovery Planning Implementation (Section 4 - ESA), April 2011
National Convention Training Center, Shepherdstown, WV

EBI Consulting
environmental | engineering | due diligence

Jason Stayer
Biologist II
11445 East Via Linda, Suite 2#472
Scottsdale, AZ 85259
480-661-0051
jstayer@ebiconsulting.com

Interagency Consultation (Section 7 - ESA), April 2012
Carlsbad Fish and Wildlife Office, Carlsbad, CA

Critical Writing and Critical Thinking, June 2012
National Convention Training Center, Shepherdstown, WV

24 hour HAZWOPER Certification, March 2013
Carlsbad Fish and Wildlife Office, Carlsbad, CA

PUBLICATIONS

USFWS Publication	5-year review on the Coachella Valley fringe-toed lizard (August 10, 2010)
Federal Register	Proposed revised critical habitat for the southwestern willow flycatcher – assist Arizona Fish and Wildlife Office (Carlsbad Field Office lead) (August 15, 2011)
Federal Register	90-day finding on the coastal California gnatcatcher (October 26, 2011)
USFWS Publication	5-year review on the island night lizard (October 10, 2012)
Federal Register	Final revised critical habitat for the southwestern willow flycatcher – assist Arizona Fish and Wildlife Office (Carlsbad Field Office lead) (January 03, 2013)
Federal Register	Island night lizard proposed delisting rule (February 04, 2013)
Federal Register	Draft post-delisting monitoring plan for the night lizard (February 04, 2013)
Federal Register	Island night lizard final delisting rule (April, 01 2014)
Federal Register	Final post-delisting monitoring plan for the night lizard (April, 01 2014)