

## **SECTION 3.0 PROJECT DESCRIPTION**

---

The proposed Project consists of a 250 megawatt (“MW”) / 500 megawatt-hour (“MWh”) standalone battery energy storage system (“BESS”) and a new 345kV/34.5kV electric substation (“the Project Substation”) on approximately 10.6 acres of land off Milford Street (Route 109) in Medway, Massachusetts. The Project also includes the construction of a new, approximately 1,325-foot long underground 345 kV transmission line interconnection from the proposed Project Substation to Eversource Energy’s existing West Medway Substation (“the Eversource Substation”) to the south. Other Project features include a stormwater management system, retaining walls, security fencing, sound attenuation barriers, access roads, and landscaping. The proposed layout for the BESS, the proposed Project Substation, and the proposed Transmission Interconnection plan set are included as Attachment A. The following sections provide details related to all components of the Project.

### **3.1. BATTERY ENERGY STORAGE SYSTEM**

The BESS will consist of 140 Tesla Megapack (“Megapack”) enclosed units located on the westernmost portion of the Project Site. The Megapack is a standalone modular system with integrated lithium-ion batteries, a bi-directional inverter, a thermal management system, and a Tesla Site Controller with intelligent controls software. Each Megapack is approximately 30 feet long (359 in.), 5.5 feet wide (65 ¼ in.) and 9 feet tall (110 ¼ in.) and will be shipped to the site pre-assembled with a maximum weight of 84,000 pounds. The Megapacks will be arranged throughout the site in a back-to-back orientation and spaced in compliance with the manufacturer’s installation requirements. The coupled Megapacks are placed immediately adjacent to a medium voltage transformer. The site will have 70 medium voltage transformers. Each Megapack and the medium voltage transformers will be supported on concrete slabs and pier foundations and surrounded by crushed stone and/or gravel. The energy stored or discharged from each Megapack will pass through the medium voltage transformer and travel to the Project Substation via a series of underground conduits. From this point the energy will be

delivered to the Eversource Substation via the proposed Transmission Interconnection.

The Megapack architecture consists of battery cells aggregated into 24 modules. They are thermally managed by an integrated liquid cooling and heating system for thermal safety. The Megapack architecture also includes sensors supporting embedded monitoring and controls as well as electrical interface equipment including an industry standard breaker for AC protection.

### **3.1.1 Battery Energy Storage System (Augmentation)**

To mitigate the typical battery degradation associated with lithium-ion batteries and to maintain the Project's proposed net energy storage rating of 500MWh, the Project will augment individual batteries or cabinets, as needed, throughout the life of the Project. Augmentation will not change the total energy storage rating of 500 MWh. No additional inverters will be added and the Project's real power rating of 250MW will remain unchanged. To show the maximum possible development footprint of the Project over its life, the Project layout plan (Attachment A) shows "augmentation areas" where these additional cabinets may be added in the future should the need arise.

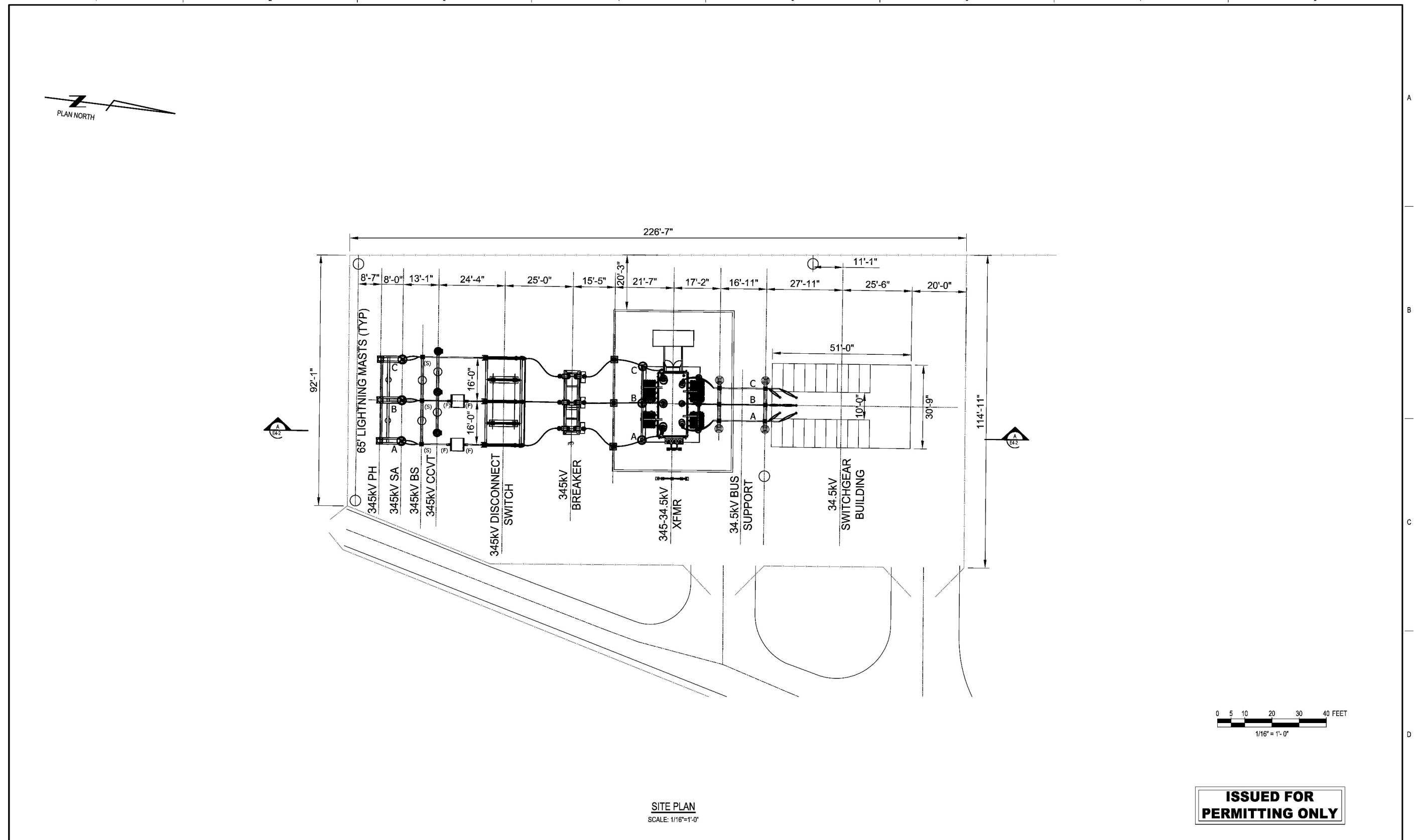
## **3.2 PROPOSED PROJECT SUBSTATION**

The proposed Project Substation is an ancillary structure to the BESS and will include; the new substation equipment, graveled yard area, and surrounding security fencing. The Project Substation will be located entirely on the Project Site to the south of the BESS and includes equipment such as a 345kV/34.5 kV main power transformer, switchgear, circuit breakers, disconnect switches, low and high buses, and will be up to 65 feet high at its tallest point (static mast). The function of this substation is to take the routed power output from the BESS to a 34.5kV collection switchgear and step it up to a transmission voltage of 345kV to allow the power from the BESS to be connected to the Eversource Substation via the proposed Transmission Interconnection. During charging, the proposed Transmission Interconnection will carry electricity from the Eversource Substation back to the Proposed Project Substation where

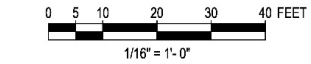
it will step-down to 34.5kV. At this voltage it can then be routed to the BESS for storage.

Figures 3-1 and 3-2 below present the Proposed Project Substation layout and cross section, respectively.

Figure 3-1 Project Substation Layout



SITE PLAN  
SCALE: 1/16"=1'-0"



**ISSUED FOR PERMITTING ONLY**

E4-1.DWG  
THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT. TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT, REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION IS GRANTED FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.

INTER-DISCIPLINE REVIEW							
DISC	ARCH	CIVIL	ELECT	I&C	MECH	STRUCT	
DATE	*	*	*	*	*	*	
INIT	*	*	*	*	*	*	

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
B	UPDATED FOR UG 345KV LINE	01/07/22	PD	PD	*	*	

DSGN	PD	08/10/21
DRN	PD	08/10/21
CKD	RA	08/10/21
SCALE: 1/16" = 1'-0"		
FOR 22x34 DWG ONLY		



MEDWAY GRID, LLC	JOB NUMBER	REV
MEDWAY BESS	171930	B
345KV SUBSTATION GENERAL ARRANGEMENT	DRAWING NUMBER	E4-1

JOB NUMBER	REV
171930	B
DRAWING NUMBER	E4-1

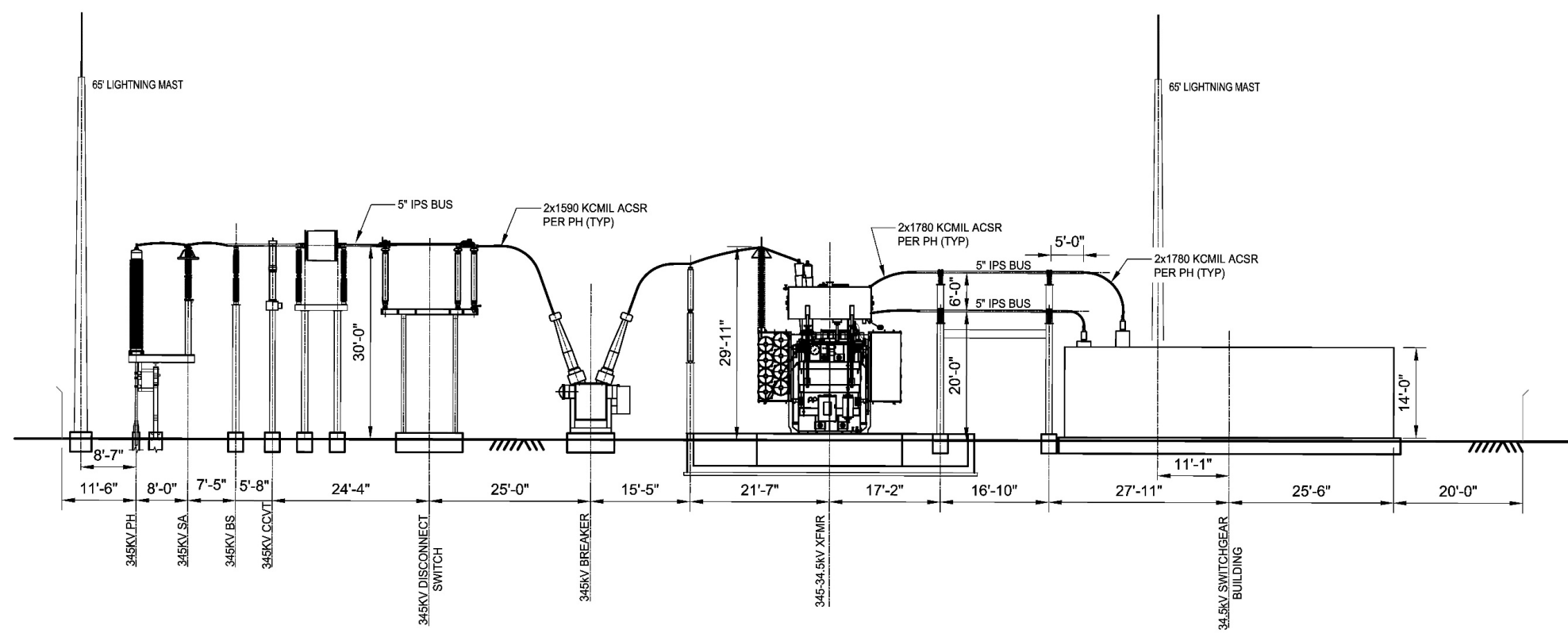
Medway Grid Energy Storage Project Medway, Massachusetts



Figure 3-1  
Project Substation Layout

Figure 3-2 Project Substation Cross-Section

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8



SECTION A  
SCALE 3/32" = 1'-0"  
E4-1

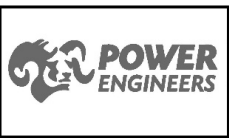
**ISSUED FOR PERMITTING ONLY**

E4-2.DWG  
THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT. TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT, RELEASE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.

INTER-DISCIPLINE REVIEW							
DISC	ARCH	CIVIL	ELECT	I&C	MECH	STRUCT	
DATE	*	*	*	*	*	*	
INIT	*	*	*	*	*	*	

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
B	UPDATED FOR UG 345KV	01/07/22	PD	PD	*	*	

DSGN	PD	08/10/2021
DRN	PD	08/10/2021
CKD	RA	08/10/2021
SCALE: 3/32" = 1'-0"		
FOR 22034 DWG ONLY		



MEDWAY GRID, LLC	JOB NUMBER	REV
MEDWAY BESS	171930	B
345KV SUBSTATION CROSS SECTION	DRAWING NUMBER	E4-2

JOB NUMBER	REV
171930	B
DRAWING NUMBER	E4-2

Medway Grid Energy Storage Project Medway, Massachusetts



Figure 3-2  
Project Substation Cross-Section

### **3.3 PROPOSED TRANSMISSION INTERCONNECTION**

Electricity will be transported from the Project Substation to the Eversource Substation via a 345 kV underground transmission line, owned by Medway Grid, which will cross from Medway Grid-owned land to land owned and/or controlled by Eversource. The Transmission Interconnection will consist of three, 8-inch 345 kV solid dielectric cables within a duct bank conduit system. These cables will be installed in a single duct bank that will be approximately 4-feet wide by 5-feet deep, with the cables buried a minimum of 3-feet below the existing ground surface. At the Proposed Project Substation, the Transmission Interconnection will terminate above ground within the walled substation yard. The proposed underground transmission line will require the clearing of vegetation up to 25-foot-wide along its 1,325-foot corridor (0.76 acres). An approximately 12-foot-wide gravel roadway will be installed over the underground transmission line within this 25-foot-wide corridor to provide permanent access to the Transmission Interconnection. The remaining areas within the 25-foot-wide corridor will be allowed to revegetate with low growing vegetation. Areas along the edge of the 12-foot-wide gravel access road would be mowed on a routine basis with the goal of preventing roots from trees to grow deep enough to interfere with the safe and efficient operation of the transmission line. Attachment A includes the proposed Transmission Interconnection Plans.

### **3.4 PROPOSED EVERSOURCE UPGRADES**

The Project will include some upgrades to existing Eversource interconnection facilities, undertaken by Eversource, in order for the Project to be interconnected at the West Medway Grid substation. These interconnection upgrades will include the installation of a new 345kV breaker, 345kV breaker disconnects, a 345kV line terminal disconnect, a line terminal structure, CCVT's, lightning arresters, as well as associated civil work and wiring and protection and control equipment. These interconnection upgrades will take place within the walls of the existing substation.

In addition to this work within the substation, some additional upgrades are required for Medway Grid's power to be fully deliverable in the Southeastern Massachusetts capacity zone. These include increasing clearances on line 325 (to increase the line's LTE operating temperature) in order to achieve the required LTE rating on the line. This work will require increasing the height of several structures along the length of the line and/or reducing the sag of the lines carried by those structures. Upgrade work may also include the replacement of a disconnect switch associated with the 389 line which will raise its LTE rating to approximately 1938MVA.

### **3.5 ANTICIPATED PROJECT SCHEDULE AND CONSTRUCTION HOURS**

The Project is contractually committed to meeting the capacity needs of Southeast Massachusetts as determined by ISO-New England, Inc. ("ISO-NE") by June 1, 2024. To meet this goal, the Company anticipates commencing construction in March 2023. Active construction of all the Project components would extend through January 2024, a planned duration of 11 months. Upon the completion of construction there will be a testing period (January 2024 to June 2024) to ensure that the Project fully operational in June 2024.

As per the most current Town of Medway Zoning Bylaw regarding construction noise; construction work hours for the Project could be proposed to be from 7:00 a.m. to 7:00 p.m. Monday through Saturday; no construction will take place on Sundays, federal holidays, or state legal holidays without the advance written approval of the Town of Medway Building Commissioner.

### **3.6 PROJECT PERMITTING OVERVIEW**

To meet the necessary start of construction date identified above, the Company is targeting to have all permits in hand in February 2023. On January 28, 2022, an Expanded Environmental Notification Form ("EENF") was submitted to the Massachusetts Environmental Policy Act Office ("MEPA") (see Attachment D). The EENF included a request for the MEPA office to review and issue a Certificate for the Project through a Single Environmental Impact

Report. Relatively few remaining permits or regulatory reviews are needed for the development of the Project. The timeline for the remaining anticipated permits / approvals is presented below in Table 3-1.



**Table 3-1: List of Permits/Regulatory Reviews Required**

Regulatory Authority	Permit/Review/Approval	Status and Anticipated Timeframe
<b>FEDERAL</b>		
Environmental Protection Agency	NPDES General Permit for Discharges from Construction Activities	Anticipate filing Notice of Intent in December 2023
<b>STATE</b>		
Massachusetts Energy Facilities Siting Board	Medway Grid, LLC, Pursuant to G.L. c. 164, § 69J ¼ for Approval to Construct a 250-MW BESS	Filed on February 25, 2022
Massachusetts Energy Facilities Siting Board	Medway Grid, LLC, Pursuant to G.L. c. 164 § 72 for Approval to Construct a new 345kV Transmission Line	Filed on February 25, 2022
Massachusetts Department of Public Utilities	Medway Grid, LLC, Pursuant to G.L. Chapter 40A§ 3 for Comprehensive Zoning Exemption	Filed on February 25, 2022
Massachusetts Environmental Policy Act (MEPA) Office	Expanded Environmental Notification Form (EENF) and Environmental Impact Report pursuant to 309 CMR 11.03(7)(1)	Filed EENF on January 28, 2022
Massachusetts Historic Commission	Project Notification Form	MHC Review in Process (since Dec. 3, 2021)
<b>LOCAL</b>		
Medway Conservation Commission	Wetlands Protection Act Order of Conditions Local Wetland Bylaw Order of Conditions Land Disturbance Permit	Anticipate filing Notice of Intent by September 2022
Medway Inspectional Services Department	Building Permit Electrical Permit Mechanical Permit Demolition Permit	Anticipate applications to be submitted by December 2022
Medway Fire Department	Above Ground Storage Tank Removal Permit	Anticipate filing December 2022
Medway DPW	Street Opening Permit	Anticipate filing December 2022

G.L. c. 164 § 69J ¼ requires the Siting Board to determine whether the plans for construction of the Project minimize the environmental impacts of the proposed Project consistent with minimization of costs associated with the mitigation, control, and reduction of the environmental impacts of the Project. To make this determination, the Siting Board assesses the impacts of the Project in eight areas prescribed by G.L. c. 164, § 69J ¼, including air quality, water resources, wetlands, solid waste, visual impacts, noise, local and regional land use, and health. For purposes of completeness, the Company addresses each potential environmental impact below and demonstrates how it is not applicable to the Project or, alternatively, how the Project's environmental impact is minimal and presents the proposed mitigation techniques for these minimal impacts.

#### **4.1 AIR QUALITY/EMISSIONS**

G.L. c. 164, § 69J ¼ requires that a Petition include “either (a) evidence that the expected emissions from the Facility meet the technology performance standard in effect at the time of filing, or (b) a description of the environmental impacts, costs, and reliability of other fossil fuel generating technologies, and an explanation of why the proposed technology was chosen [over these alternatives].” As explained in further detail in Section 69J ¼, the purpose of the technology performance standards is to “streamline the [Siting Board's] review of petitions to construct generating facilities that have state of the art environmental performance characteristics.” A petition for approval must include an analysis of the proposed facility's expected emissions of the criteria and non-criteria pollutants listed in 980 CMR 12.03. If the expected emissions from a proposed generating facility meet the technology performance standards, the Petition does not need to include information regarding other fossil fuel technologies. Furthermore, applicants proposing the use of fuel types that do not contain pollutants specified in the technology performance standards and do not result in pollutants

specified in the technology performance standards when burned, will not be required to provide modelling, or testing results, guarantees, work papers or other similar documents with respect to those pollutants.

#### **4.1.1 Technology Performance Standards**

During operation, the Project has no combustion or chemical processes that emit pollutants that degrade air quality, harm human health or the environment, or contribute to greenhouse gas. Criteria pollutants such as nitrogen dioxide, sulfur dioxide, volatile organic compounds, carbon monoxide, and fine particulate matter are regulated by the U.S. EPA (“EPA”) and the Massachusetts Department of Environmental Protection (“MassDEP”) because they can harm public health and the environment, and cause property damage. Sulfur dioxide emissions contribute to acid rain, and nitrogen oxides and volatile organic compounds are precursors to ground level ozone (smog). Carbon dioxide and methane are greenhouse gases (“GHGs”) that drive global climate change. Each of these pollutants is emitted by fossil-fuel fired electric generating units; none of these pollutants is emitted by battery energy storage systems.

#### **4.1.2 Air Emissions/Quality Mitigation Measures During Construction**

The following best management practices (“BMPs”) will be implemented related to dust control and air quality during construction of the Project.

To minimize the potential for airborne dust from earth disturbing activities, the Company will require its contractors to place water trucks with misters in or near the work areas during construction activities and utilize them as appropriate when conditions require. In addition, if it is necessary to stockpile excavated soil on the site, they will be covered with plastic sheeting or a similar barrier to minimize the potential for the release of dust and for soil migration from the work area. There also will be installation of anti-tracking pads at construction entrances and regular sweeping of the pavement of adjacent roadway surfaces during the construction period to minimize the potential for construction traffic to kick up dust and particulate matter.

To minimize air emissions from construction equipment, the Company will comply with state law (G.L. c. 90, § 16A) and MassDEP regulations (310 CMR 7. 11 (1)(b)), which limit vehicle idling to no more than five minutes except for vehicles being serviced, vehicles making deliveries that need to keep their engines running, and vehicles that need to run their engines to operate accessories. In addition, the Proponent will encourage the contractor to use United States Environmental Protection Agency (“USEPA”) Tier 4 standards or retrofitted equipment to minimize emissions from construction equipment.

#### **4.2 WATER RESOURCES/SUPPLY**

The Siting Board has historically based its determination regarding water supply upon a demonstration by the applicant of (1) an agreement for, or documentation of, an adequate water supply for the operational needs of the facility; (2) that the required water supply infrastructure exists or can be constructed with minimal environmental impacts; and (3) that historical and projected water withdrawals are within the permitted limits for the water supply source. While typical generation requires water for steam generation, cooling ponds or outfalls, and wash ponds, a BESS does not require a source of onsite water for its safe and efficient operation. The Project does not generate any process-related wastewater and will not require any sanitary sewer connection to the Town’s existing sewer system. The Project is not located in a MassDEP Approved Zone I or Interim Wellhead Protection Area (Zone II) and it is not located in any locally mapped Groundwater Protection Districts (“GPDs”). The Project has no potential to impact any public water supply sources or other water resources. For firefighting activities and in compliance with NFPA 855, the Project will be connected to public water for fire protection with the installation of 5 hydrants.

#### **4.3 WETLANDS**

The Siting Board examines direct wetlands alteration, disturbance of wetland buffer zones or coastal wetland resource areas. Specifically, whether, and if so, how much of the Project footprint or site access would be located in or disturb wetlands. The Massachusetts

Wetlands Protection Act (“WPA”), G.L. c. 131 § 40, protects water-related lands such as wetlands, rivers and streams, floodplains, ponds, estuaries, and others and establishes performance standards by which work is conducted in these resource areas. The implementation of the WPA wetlands regulations is delegated, in part, to local Conservation Commissions. Any proposed activity that will remove, fill, dredge, alter, or build upon a protected area or within 100 feet of a protected area (the Buffer Zone), requires the filing of a Notice of Intent. Many Massachusetts communities have local wetlands protection non-zoning bylaws or ordinances that give a municipality the authority to regulate activities in or near wetlands or waterbodies by imposing stronger protective measures than the state WPA. These local laws are administered and enforced by the local Conservation Commission. Each local bylaw or ordinance specifies wetland areas subject to protection and identifies proposed activities that require the filing of a Notice of Intent. The Town of Medway has a local wetlands protection bylaw with associated regulations. The Medway Conservation Commission will review the Notice of Intent, which will be filed under both the WPA and the local bylaw/ordinance (if applicable) and will issue a permit in the form of an Order of Conditions. An Order of Conditions ensures that the proposed Project will contribute to the protection of the interests of the WPA and includes conditions under which work will be carried out to minimize impacts to wetland resource areas and may include conditions for long-term operation and maintenance of the stormwater management system that will continue after the work is done.

The wetland resource area boundaries on the Project Site and along/adjacent to the proposed Transmission Interconnection have been verified and approved by the Medway Conservation Commission through an Order of Resource Area Delineation (“ORAD”), issued on February 27, 2020. State and local wetland resource areas located on or near the Project Area include; Bordering Vegetated Wetland (“BVW”), Riverfront Area (“RFA”), and the 100-foot Buffer Zone (local bylaw wetland resource area only). The extent of wetland resource areas on the Project Site is presented in Figure 2-3 and the Project Plans in Attachment A.

The Project has been designed to comply with all applicable regulatory performance standards prescribed under the WPA and the Medway Wetlands Protection Bylaw and Regulations. The following paragraphs present details regarding how the Project will fully comply with the WPA and the Medway Bylaw/Regulations.

The Project has been sited and designed to completely avoid direct alteration of Bordering Vegetated Wetlands. In addition, the Project has been designed to maximize the use of previously developed and disturbed areas on the Project Site, including those within the RFA. The Project Site contains approximately 198,700 square feet of RFA and complies with applicable performance standards associated with Riverfront Area as follows; (1) the Project will alter less than 10% of the total RFA on the Project Site (6,996 square feet or 3.5%, with most of the work located entirely outside the RFA and only a portion located towards the outer edge of the RFA boundary), (2) the Project will maintain either a 100-foot-wide area of undisturbed vegetation or preserve existing vegetation if a 100-foot-wide area of undisturbed vegetation does not exist, and (3) stormwater will be managed according to the standards established by the Massachusetts Department of Environmental Protection in its Stormwater Policy.

The Town of Medway Wetlands Protection Bylaw and associated regulations require a 25-foot No Disturbance Setback from certain wetland resource areas (e.g., BVW). The Project has been designed to comply with this setback requirement. In addition, the Project only involves limited work in the remainder of the Buffer Zone (approximately 5,435 s.f. total).

#### **4.3.1 Proposed Wetland Mitigation Measures**

The Project qualifies for coverage under the USEPA Construction General Permit (“CGP”) for Stormwater Discharges from Construction Sites, which requires a proponent to develop and maintain a Stormwater Pollution Prevention Plan (“SWPPP”) for the Project that will identify controls to be implemented to mitigate the potential for erosion and sedimentation from soil disturbance during construction. Proposed work within the 100-foot Buffer Zone will include the use of BMP’s such as erosion control barriers to establish limits of work and to ensure that

there are no short or long-term impacts to adjacent wetland resource areas. In addition, all stockpiles (if necessary) will be located outside of the 100-foot Buffer Zone and refueling, or storage of equipment will not be permitted within 100-feet of vegetated wetland resource areas.

The SWPPP will include a construction personnel contact list, a description of the proposed work, stormwater controls and spill prevention measures, and inspection practices to be implemented for the management of construction-related storm water discharges from the Project. The SWPPP will be adhered to by the contractor during all phases of Project construction. The Company will require that the construction contractor designate a construction supervisor or equivalent to be responsible for coordinating regular inspections and compliance with CGP and Order of Conditions requirements. This person will be responsible for providing appropriate training and direction to the other members of the construction crew regarding work methods as they relate to permit compliance and construction mitigation commitments. Additionally, construction personnel will undergo pre-construction training on appropriate environmental protection and compliance obligations prior to the start of construction of the Project. Regular construction progress meetings will be held to reinforce contractor awareness of these mitigation measures. The SWPP will be prepared prior to the start of grading or other ground disturbance.

#### **4.4 STORMWATER**

The Siting Board examines whether an applicant has a comprehensive plan for minimizing impacts resulting from stormwater-related discharges, *i.e.*, runoff resulting from rainfall events and snow melt. The 10.6-acre Project Site contains approximately 0.85 acres of previously developed areas associated with three existing residences and an existing automotive repair facility. There are approximately 0.3 acres of existing impervious areas around the existing automotive repair facility. The Project will result in a total of 1.8 acres of impervious surfaces on the Project Site.

#### **4.4.1 MassDEP Stormwater Management Standards**

MassDEP has issued the Massachusetts Stormwater Handbook, as well as Stormwater Management Standards pursuant to the Wetlands Protection Act, G.L. c. 131 § 40, and the Massachusetts Clean Waters Act, G.L. c. 21, §§ 26-53, to promote increased stormwater recharge, the treatment of more runoff from polluting land uses, low impact development (“LID”) techniques, pollution prevention, the removal of illicit discharges to stormwater management systems, and improved operation and maintenance of stormwater Best Management Practices. The Company has completed a Stormwater Management Report for the Project. This report, included as Attachment B, presents the engineering calculations completed to design the stormwater management system for the Project, as well as provides a detailed description of the proposed system, and how it complies with all applicable standards of the MassDEP Stormwater Management Standards. In summary, the proposed stormwater management system for the Project will include LID techniques designed to capture, treat, and recharge stormwater runoff, including but not limited to:

- ◆ A network of perforated curtain drains to collect surface runoff.
- ◆ Deep sump catch basins to pretreat the water.
- ◆ Subsurface infiltration structure to recharge clean stormwater back into the ground.
- ◆ A dry detention basin to provide peak flow attenuation.
- ◆ Proprietary Vortex Units (or similar) to maximize total suspended solids (“TSS”) removal from stormwater after leaving the detention basin and prior to leaving the site.

It is expected that post-development stormwater will substantially infiltrate on-site because the BESS yard surface will be predominantly permeable (e.g., crushed stone and/or gravel). However, during substantial stormwater events, runoff will flow from crushed stone parking and driveways, roof tops, crushed stone yard areas, and any landscaped or grassed areas to likely pretreatment best management practices (BMPs) and then into the underground infiltration systems. Deep sump catch basins, Vortex units (or similar), underground infiltration



systems, and a dry detention basin will provide a treatment train that improves the quality of stormwater runoff, reduces the quantity of stormwater runoff, and provides infiltration and recharge to groundwater. These are considered BMPs by the MassDEP. Stormwater features are shown in the Project Plans in Attachment B.

#### **4.4.2 Resilient Massachusetts Action Team Climate Design Standards**

The Massachusetts Environmental Policy Act (“MEPA”) Interim Protocol on Climate Change Adaptation and Resiliency (“Climate and Resiliency Interim Protocol), effective October 1, 2021, complies with Governor Baker’s Executive Order 569, which directs the Executive Office of Energy and Environmental Affairs (“EEA”) and the Executive Office of Public Safety and Security (“EOPSS”) to coordinate efforts across the Commonwealth to strengthen the resilience of communities, prepare for the impacts of climate change, and proactively plan for and mitigate damage from extreme weather events. The Climate and Resiliency Interim Protocol prescribes that all new projects filing with the MEPA Office will be required to print the output report generated from the Resilient Massachusetts Action Team (“RMAT”) Climate Resilience Design Standards Tool and submit it as an attachment to an Environmental Notification Form (“ENF”) or Expanded Environmental Notification Form (“EENF”) submittal. A copy of the RMAT report generated for the Project is included in the EENF filed for the Project (see Attachment D).

The Climate and Resiliency Interim Protocol encourages, but does not require, project proponents to utilize the recommended design standards and associated methodologies associated with Tier 1, 2, or 3 classified projects. The Project has been sited and designed in consideration of the RMAT Climate Resilience Design Guidelines and utilizes methodologies outlined in the Climate Resilience Design Standards & Guidelines, dated April 1, 2021. Specifically, the Project’s proposed stormwater management system has been designed RMAT guidance to consider future storm intensity and frequency from climate change. A more detailed discussion regarding RMAT design considerations is presented in the Stormwater Management

Report provided as Attachment B.

#### **4.4.3 Town Of Medway Stormwater Management Bylaw**

Article XXVI of the Town of Medway Stormwater Management and Land Disturbance Bylaw regulate stormwater pollution at the Town’s Municipal Separate Storm Water System (MS4), defined as: “The Stormwater collection system which is made up of open water courses, swales, 71 ditches, culverts, canals, streams, catch basins and pipes through which the stormwater flows and the Town Public Ways over which it flows which is owned and operated by the Town for the purpose of collecting or conveying stormwater to a discharge point.”<sup>7</sup>

The Project does not require any “direct connections” to the MS4, defined as: “Any discernible, confined and discrete conveyance including but not limited to any pipe, drain, channel, conduit, tunnel, or swale whether above ground or below ground which directs water into the MS4.” However, the Project may have “indirect connections” to the MS4, defined as “natural drainage of Stormwater over or under the surface of the ground (whether instigated by human endeavor or not) via gravity into the MS4.” These indirect connections require sub-surface infiltration trenches to be used which comply with criteria established in the Town’s Subdivision Rules and Regulations. The Facility will comply with all requirements of the Stormwater Management and Land Disturbance Bylaw.

#### **4.5 SOLID AND HAZARDOUS WASTE**

The following sections describe the Company’s plans for addressing solid (non-hazardous) and hazardous wastes during construction and operation of the Project.

##### **4.5.1 Construction**

All wastes generated during demolition, site preparation, construction and operation of the Project will be transported offsite in accordance with local, state, and federal guidelines

---

7

[https://www.townofmedway.org/sites/g/files/vyhlf866/f/uploads/sw\\_bylaw\\_clean\\_voted\\_at\\_june\\_8\\_2020\\_tm\\_final\\_bjs.pdf](https://www.townofmedway.org/sites/g/files/vyhlf866/f/uploads/sw_bylaw_clean_voted_at_june_8_2020_tm_final_bjs.pdf)

and regulations.

During the demolition phase of the Project, solid waste such as metal, scrap wood, asphalt, brick, and concrete are anticipated. The Project will implement measures to minimize the generation of solid and other waste and will encourage recycling of debris to the extent possible. As necessary, separate containers will be provided for recyclable materials that will be picked up by a recycling contractor or the solid waste disposal contractor for proper processing and recycling. Any non-recyclable solid wastes will be transported to a licensed solid waste landfill.

Individual Phase I Environmental Site Assessments (“ESA”) were conducted or are underway for each parcel. These assessments revealed no evidence of RECs, CRECs, or HRECs in connection with the parcels. Stockpiled excess topsoil will be re-used during site restoration for site grading. It is unlikely that there will be excess soils during site preparation and some soil may need to be imported, but to the extent that there is excess soil that cannot be used onsite, it would be removed for off-site disposal at an appropriate receiving facility. Six above ground storage tanks were identified in the ESA for 53 Milford Street. These tanks contain oil and are in good condition with no signs of leakage. These tanks will be emptied and removed by a qualified and licensed vendor, in accordance with applicable regulations.

#### **4.5.2 Operations**

During operation of the BESS no solid or hazardous waste stream will be generated on a regular basis. However, because lithium-ion batteries currently have a useful life of approximately ten years it is assumed they will need to be replaced throughout project operation. Any used batteries will be removed from the site, transported, and managed in accordance with all local, state, and federal guidelines and regulations.

#### **4.6 VISUAL**

The Company has considered the potential visual impact of the Project to residential abutters across Milford Street (Route 109) to the north and along Little Tree Road to the east.

The greatest visual change from the Project will be along Milford Street (Route 109). There are four existing residences in this area that have a view into the Project Site. These views currently include either existing wooded areas or the existing automotive repair shop and residence. As shown in Figures 4-1a and 4-1b below, once the Project is constructed, the view from these residences along Milford Street (Route 109) will be of the proposed sound attenuation barrier and landscaping. The visual impact of the Project to the residences along Little Tree Road is minimal due to the location and orientation of the proposed BESS and Project Substation on the Project Site. As seen in Figure 4-2 below, the proposed limits of work on the Project Site are approximately 412 feet from the nearest residence (8 Little Tree Road) and the direct line of sight from this residence toward the development on the Project Site is shielded by forest. Residences along Little Tree Road may be able to partially see the static masts above the tree line year-round and may be able to see the sound attenuation barrier through forested areas during leaf-off conditions.

**Figure 4-1a Existing and Proposed View from Milford Street**

**VIEW #2L** Medway Grid  
Medway, MA



**EXISTING VIEW** Captured 5/28/2021



**PROPOSED VIEW** Generated 2/10/2022



**Medway Grid Energy Storage Project Medway, Massachusetts**



**Figure 4-1b Existing and Proposed View from Milford Street**

**VIEW #4L** Medway Grid  
Medway, MA



**EXISTING VIEW** Captured 5/28/2021



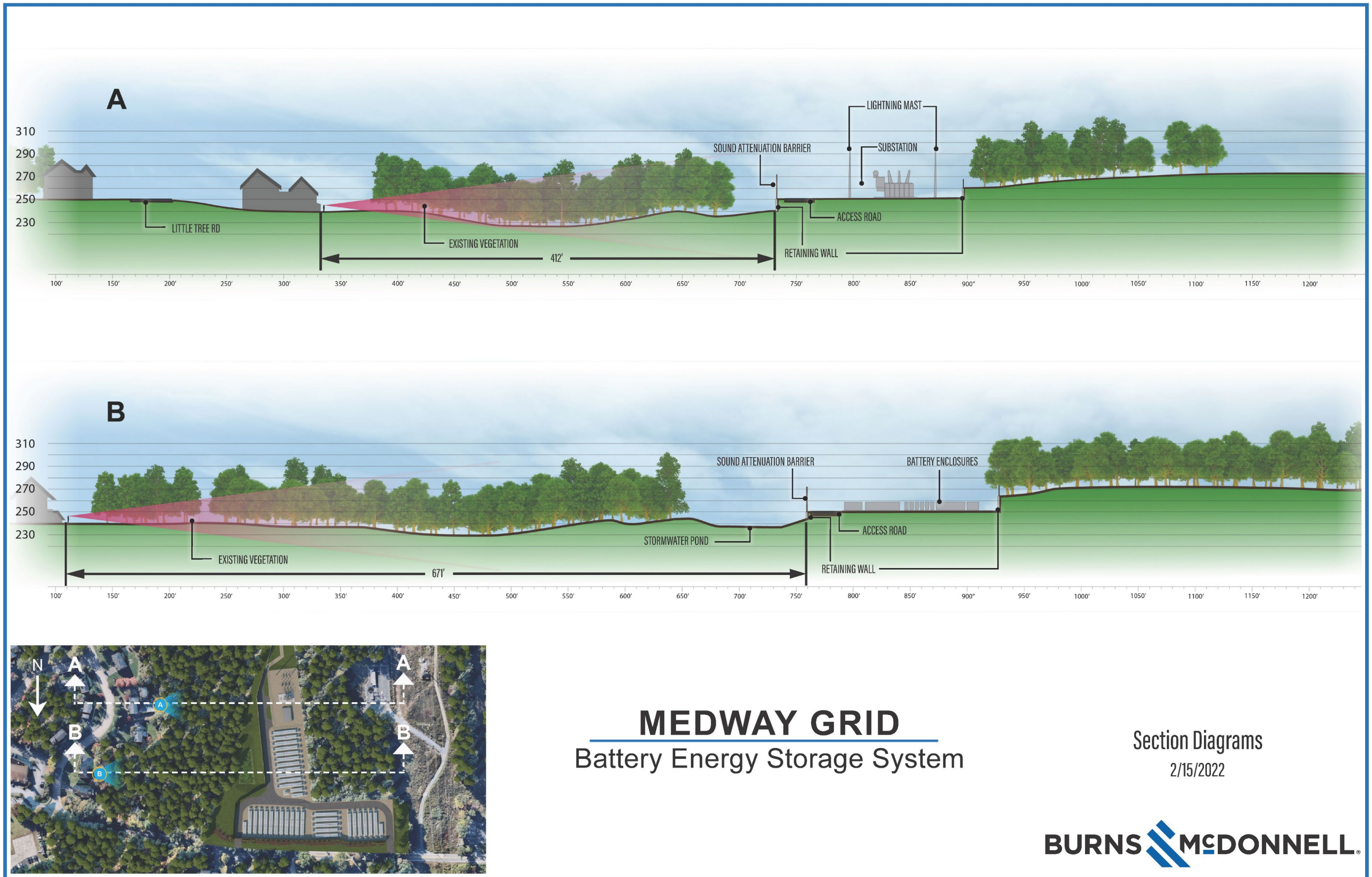
**PROPOSED VIEW** Generated 2/10/2022



**Medway Grid Energy Storage Project Medway, Massachusetts**



Figure 4-2 Line of Sight Profiles



Medway Grid Energy Storage Project Medway, Massachusetts

As for visual impacts that could result from lighting, the Town of Medway Zoning Bylaws limit construction work hours to daylight hours between 7:00 a.m. to 7:00 p.m. As such, temporary lighting is not anticipated. During operations, the Project will not be lit. There will be security lighting at the facility that complies with local lighting standards, but it will remain off unless lights need to be manually turned on for occasional maintenance visits.

#### **4.7 NOISE**

The Company has completed a Sound Level Assessment Report for the proposed Project, attached hereto as Attachment C. As explained in the Report, noise mitigation measures have been incorporated into the Project's design to minimize the potential for operational noise to impact the surrounding public. These mitigation measures include low noise equipment, a sound attenuation barrier, and operational restrictions. Results of a complete sound level assessment demonstrate that the noise level from the facility will comply with the requirements set forth in the MassDEP Noise Policy, as well as the recommended EPA noise guidelines. Similarly, work hours during construction will comply with the Town of Medway Zoning Bylaw.

#### **4.8 ELECTRIC AND MAGNETIC FIELDS**

The Company completed an analysis on the anticipated effect on electric and magnetic field ("EMF") levels from the development of the Project. In summary, post-development, sources of EMF within the Project Site will include direct current ("DC") magnetic fields from the battery banks and from the cables connecting the battery banks to the power inverters, as well as alternating current ("AC") fields from the power inverters, Project Substation equipment, and the 345-kV AC underground Transmission Interconnection.

The DC magnetic-field levels produced from the Project's BESS and related equipment are expected to be a small fraction of earth's natural static geomagnetic field and significantly lower than the International Commission on Non-ionizing Radiation Protection ("ICNIRP") standard. Therefore, the operation of these sources would not appreciably change the EMF



levels outside the Project Site. The highest levels of EMF outside the Project Site are expected to occur directly above the underground 345-kV Transmission Interconnection from the Project Substation to the existing Eversource West Medway Substation. However, there are no residences or other public facilities in close vicinity of this underground transmission line. At the northern boundary of the Project Site, the nearest residences on Milford Street are located approximately 600 feet or more from the Project Substation, the 345-kV Transmission Interconnection, and the existing transmission lines within the Eversource right-of-way. Similarly, residences to the east of the Project Site along Little Tree Road are more than 450 feet from these elements. These distances are sufficiently great such that the AC EMF levels from this equipment at residences would fall within the range of background values encountered in most communities and would be far below the exposure limits for the general public recommended by ICNIRP and International Committee on Electromagnetic Safety (“ICES”). Scientific and health organizations have been consistent in their overall conclusions that background values of EMF at the levels experienced in our everyday environment do not cause or contribute to adverse health effects in adults or children. The full report on electric and magnetic fields completed by Exponent for the Project is included as Attachment E.

#### **4.9 CULTURAL RESOURCES**

The Company completed a cultural resource sensitivity assessment and due diligence to identify historic architectural properties and archaeological sites on and in the vicinity of the Project. The cultural resources due diligence review encompassed the vicinity of the Project in Medway, Massachusetts. Properties were identified through a search of the Massachusetts Historical Commission’s (“MHC”) Inventory of the Historic and Archaeological Assets of the Commonwealth. In addition, the Project Site was assessed for archaeological sensitivity through field visits by a Principal Archaeologist. In summary, this assessment concluded that there are no historic or archaeological resources on the Project Site and the Project Site has “limited” archaeological sensitivity. To determine the effect of the Project on cultural resources,

the Company initiated formal consultation with MHC through the submission of a Project Notification Form (“PNF”), on December 3, 2021. MHC responded to the Company’s PNF submission on December 16, 2021, requesting additional information. The Company provided that information on January 6, 2022. In a letter dated February 1, 2022, MHC recommended that the Company conduct a locational archaeological study of the Project Site. The Company anticipates applying to MHC for the permit and conducting the survey as soon as field conditions allow. A copy of all correspondence with MHC is included as Attachment F.

#### **4.10 TRAFFIC**

Traffic impacts due to initial construction of the Project and occasional on-site maintenance visits during operations will all be minimal. No delays to local traffic should be experienced except where the delivery vehicles may need to travel on narrow roadways, or when there is an occasional oversized vehicle. In these scenarios, the Company will work with the Town to manage local traffic.

Construction personnel parking is anticipated to be established either in a designated area on the site with access/egress via Route 109 or at a remote location where workers can be shuttled to the Project Site. Any remote parking areas and/or contractor staging/laydown areas will be located within previously developed and disturbed areas in proximity to the Project Site. Once operational, the Project will be remotely monitored; any traffic to the Project Site will be limited to periodic site inspections and maintenance visits.

**5.1     SAFETY STANDARDS**

The proposed BESS was designed in strict conformance with all relevant codes and standards to ensure it is constructed and operated in a manner that remains safe to the public, emergency responders and operators. This includes a series of redundant safeguards built into the hardware and management systems of the BESS that mitigate the risk of fire and thermal events (both creation of and response to). In addition, the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary ESS will conform to National Fire Protection Association's NFPA 855, Standard for the Installation of Stationary Energy Storage Systems.

The BESS will adhere to international, national, and state safety requirements and standards, including but not limited to:

- UL 1973 Standard for Batteries for Use in Light Electric Rail (LER) Applications and Stationary Applications - These requirements cover battery systems as defined by this standard for use as energy storage for stationary applications such as for PV, wind turbine storage or for UPS, etc. applications. This standard evaluates the battery system's ability to safely withstand simulated abuse conditions. This standard evaluates the system based upon the manufacturer's specified charge and discharge parameters. Requires that an Energy Storage System (ESS) is not allowed to be an explosion hazard when exposed to an external fire source and that a single cell failure will not result in a cascading thermal runaway of cells.
- UL 9540 Standard for Energy Storage Systems and Equipment Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems. The requirement addresses the inherent design and performance, as well as the interface of the energy storage system with the infrastructure. Addresses

construction, performance, electrical, mechanical, environmental, manufacturing and markings.

- UL9540A: Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems – this test methodology evaluates the fire characteristics of a battery energy storage system that undergoes thermal runaway. The data generated can be used to determine the fire and explosion protection required for an installation of a battery energy storage system.
- IEC 62619 Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial application.
- Massachusetts Comprehensive Fire Safety Code (527 CMR 1.00) is based on the 2015 edition of NFPA 1 National Fire Code, with Massachusetts amendments.
- Chapter 52 of NFPA 1 (2015) addresses requirements for stationary storage battery systems (including lithium-ion battery systems).
- NFPA 855 Energy Storage Systems Standard. Standard for the Installation of Stationary Energy Storage Systems - establishes criteria for minimizing the hazards associated with ESS.

## **5.2 MITIGATION, HAZARD CONTROL AND LOCAL COORDINATION**

The Project will be controlled remotely and have internal sensors that continuously monitor system operation. If safety circuits detect a condition outside normal operating parameters, the energy supply and discharge are stopped, and individual system components are automatically shut down. The operator can also remotely initiate any emergency sequence. An emergency stop initiates an automatic shutdown sequence that puts the system into safe mode and causes it to stop exporting or importing power. Energy storage facility operators can assess different scenarios and take the necessary actions to

mitigate impacts on the batteries and accessory equipment during maintenance work, shutdowns or outages and enable them to come back online smoothly and efficiently when the disruption is completed. In addition, the Project team is working with the Medway Fire Department to develop an emergency response plan and safety training document. The Company has developed a Draft Emergency Response and Operations Plan for the Project, included herein as Attachment G. This plan will be finalized prior to operation of the facility in collaboration with the Fire Department, the battery supplier and the operations and maintenance team. The purpose of the plan is to provide guidance and documentation of the facility information, roles and responsibilities for safety and emergency response, identifies protocol for severe weather planning, identifies protocol for the preparation and planning for emergencies, and identifies emergency procedures and fire response plans.

**6.1        STANDARD OF REVIEW**

G.L. c. 164, § 69J ¼ requires the Siting Board to determine whether an applicant’s description of the site selection process used is accurate. An accurate description of an applicant’s site selection process includes a complete description of the environmental, reliability, regulatory, and other considerations that led to the applicant’s decision to pursue the project as proposed at the proposed site, as well as a description of other siting and design options that were considered as part of the site selection process.

As set forth herein, Medway Grid has fully complied with the Siting Board’s requirements relative to site selection by providing an accurate description of the process that led to selection of the proposed Project Site. The Company’s site selection process presented herein is governed by the fact that the Company has a successful interconnection agreement at the existing Eversource West Medway Substation and has been selected by ISO-NE to provide capacity to serve the Southeast New England (“SENE”) zone starting in 2024.

In the sections that follow, the Company (1) presents the key objectives and an overview of the Company’s site selection process; (2) provides background and information on the criteria used to evaluate and select the Project Site; and (3) presents the detailed evaluation completed for the three candidate sites identified.

**6.2        SITE SELECTION PROCESS**

Medway Grid employed the following locational considerations as part of its process of selecting its site:

- Proximity to Eversource’s West Medway Substation. Medway Grid favored sites within the immediate vicinity of the West Medway Substation to minimize the potential impacts and costs associated with the necessary electric transmission interconnection between the Project and the West Medway Substation (point of

interconnection to the regional electric system).

- Sufficient available acreage. Medway Grid considered only those sites that were greater than 5 acres in size.
- Medway Grid favored sites with existing access from a public roadway.
- Compatibility with surrounding land uses.

### **6.2.1 Environmental Criteria**

Medway Grid employed the following environmental considerations as part of its process of selecting its site:

- Ability to avoid or minimize wetlands impacts.
- Ability to utilize existing developed areas.
- Ability to avoid or minimize the clearing of existing forested areas.
- Ability to avoid or minimize impacts to certified or potential vernal pools.
- Ability to avoid or minimize impacts to Outstanding Resource Waters.
- Ability to avoid or minimize impacts to Areas of Critical Environmental Concern.

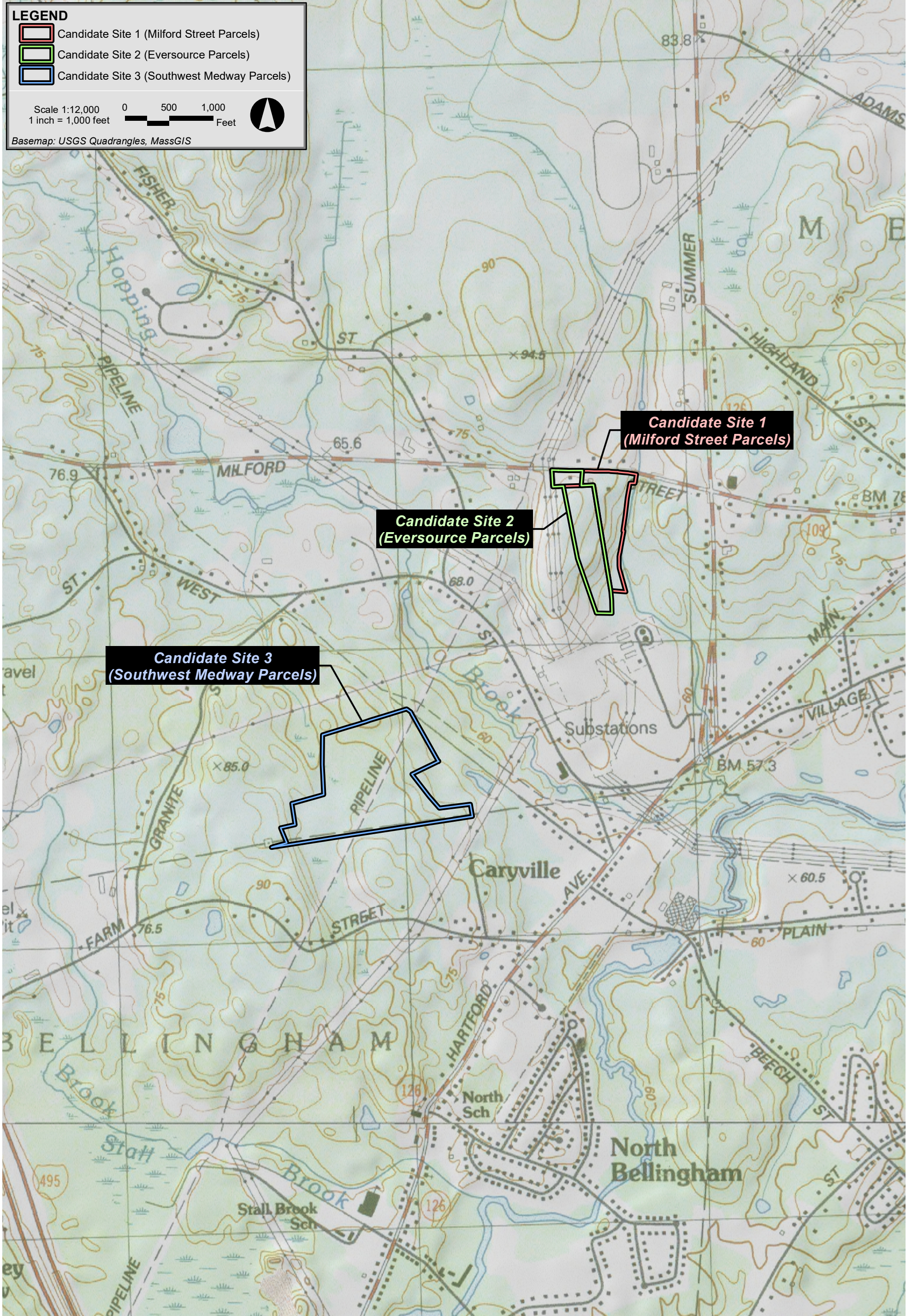
### **6.2.2 Candidate Site Overview**

The Company identified (3) candidate sites in the vicinity of Eversource's West Medway Substation that might be suitable for the Project. The following sections provide a description of each Candidate Site. Figure 6-1 below provides a map showing the location of each of the three Candidate Sites in relation to the West Medway Substation.

Figure 6-1 Overview of Candidate Sites

G:\Projects\2\MA\Medway\6221\2022\EFBS\IMXD\6-1\_Overview\_of\_Candidate\_Sites\_20220119.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services





None of the candidate sites considered contain the following environmental features; Outstanding Resource Waters (“ORWs”), Areas of Critical Environmental Concern (“ACECs”), mapped certified or potential vernal pools, or 100-year floodplain areas. Further, none of them are located within in a MassDEP Approved Zone I or Interim Wellhead Protection Area (Zone II). Lastly, according to Massachusetts Natural Heritage and Endangered Species Program (“NHESP”) Atlas (August 1, 2021, 15th Edition), none of the candidate sites are located within an area of Estimated Habitats of Rare Wildlife or an area of Priority Habitats of Rare Species.

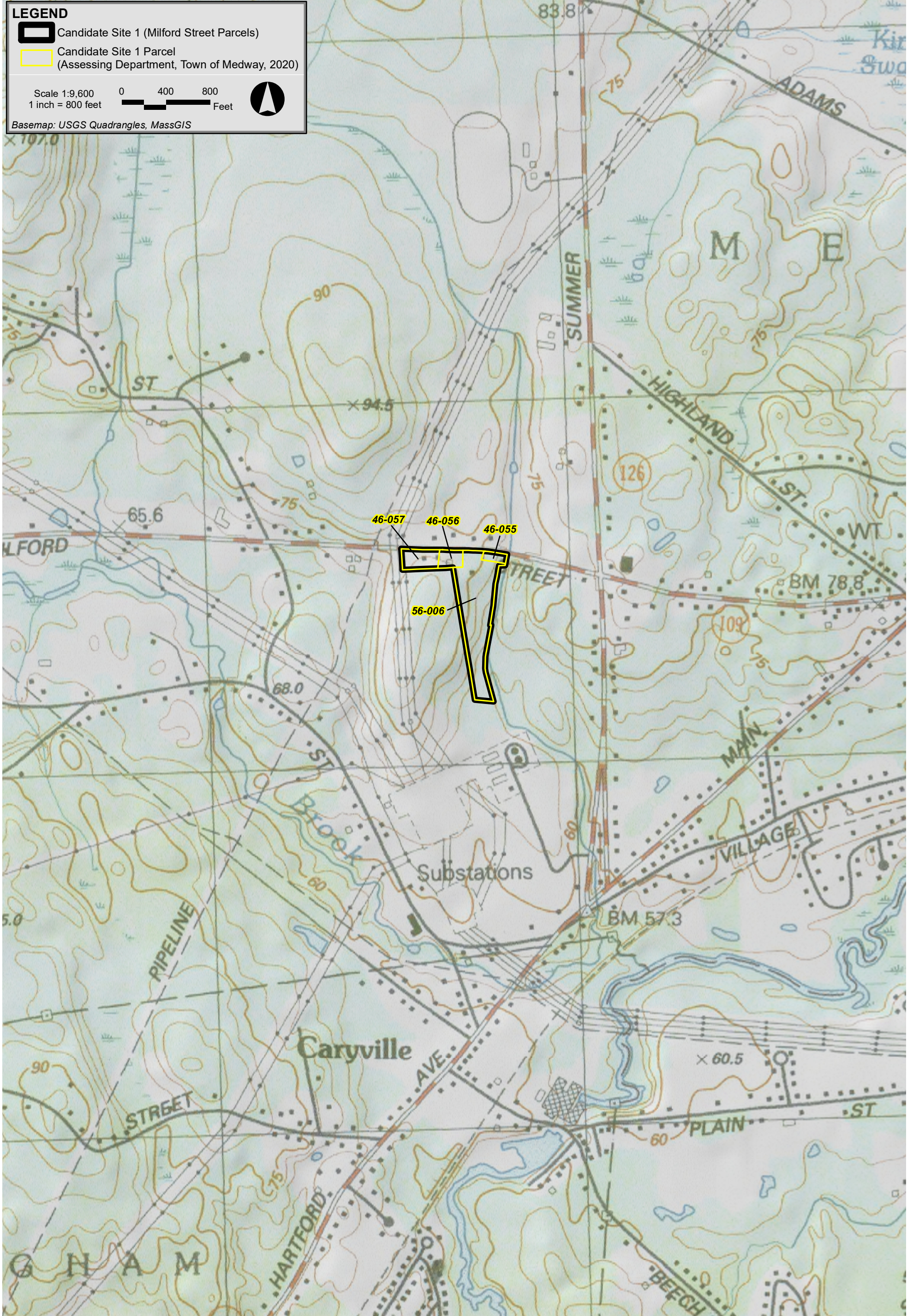
### **6.2.3 Candidate Site 1 (Milford Street Parcels)**

Candidate Site 1 is an approximately 10.6-acre site that consists of multiple existing parcels of land owned by multiple landowners. Figure 6-2a below provides a site locus map for Candidate Site 1.

Figure 6-2a Candidate Site 1 USGS Locus Map

G:\Projects\2\MA\Medway\6221\2022\EFSB\MXD\6-2a\_Candidate\_Site\_1\_20220112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

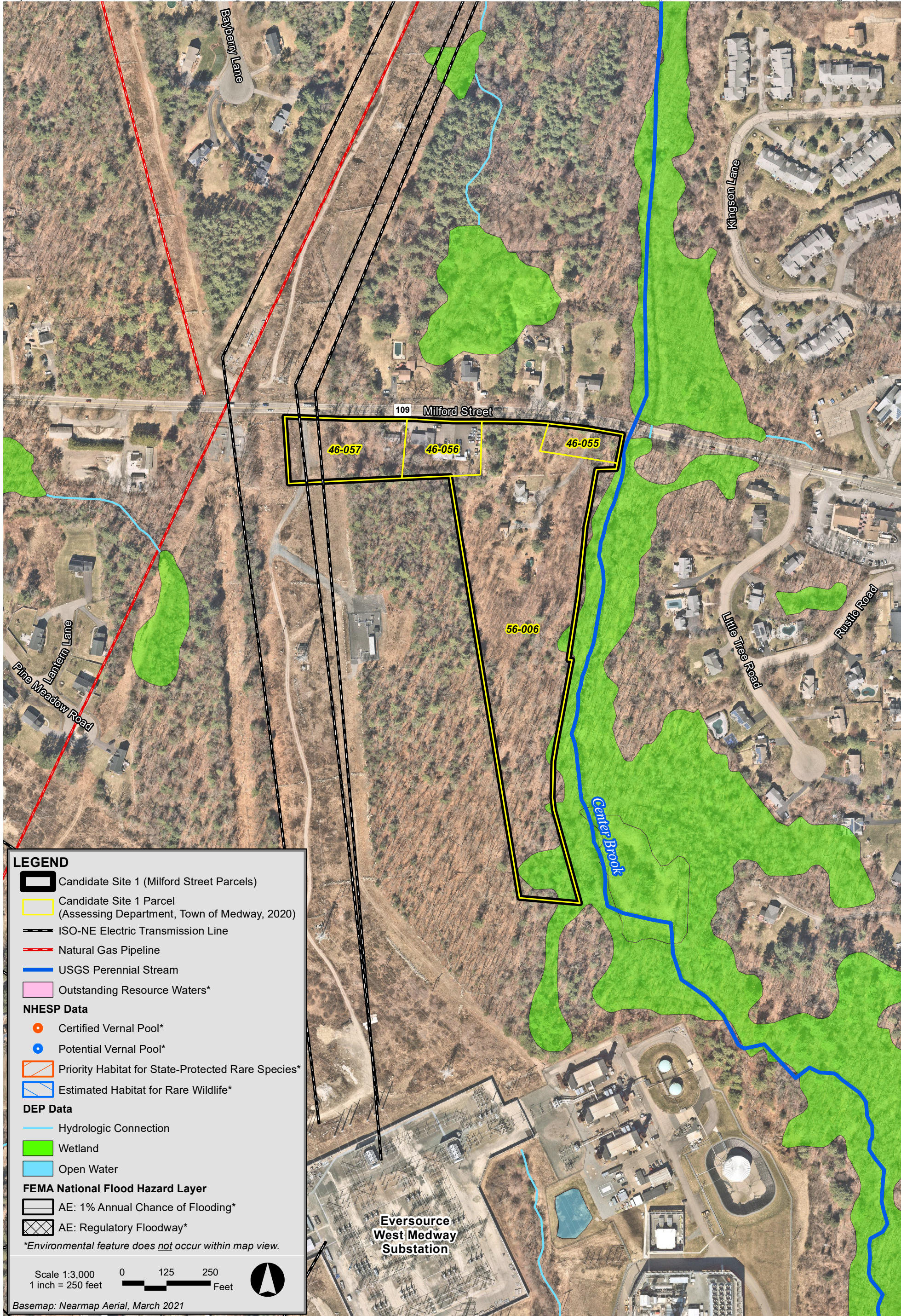


Candidate Site 1 is an approximately 10.6-acre site that contains approximately 0.85 acres of previously developed areas associated with three existing residences and an existing automotive facility, with the remaining approximately 9.76 acres predominantly forested upland and/or wetlands. Access to this Candidate Site 1 is available from Milford Street (Route 109), located at its northern boundary. There is an existing Eversource electric transmission corridor to the west along with an Eversource Energy's existing West Medway Substation and Exelon Power's West Medway Generating Station to the south, and a perennial stream (Center Brook) and residences off Little Tree Road and Summer Street to the east. The eastern portion of Candidate Site 1 contains vegetated wetlands associated with Center Brook, a perennial waterbody that flows from north to south. Figure 6-2b below shows the existing land uses surrounding this site as well as the environmental features on Candidate Site 1.

Figure 6-2b Candidate Site 1 Constraints

G:\Projects\2\MA\Medway\6221\2022\EFSB\MXD\6-2b\_Candidate\_Site\_1\_Constraints\_20220112.mxd

Data Source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services



**LEGEND**

- Candidate Site 1 (Milford Street Parcels)
- Candidate Site 1 Parcel (Assessing Department, Town of Medway, 2020)
- ISO-NE Electric Transmission Line
- Natural Gas Pipeline
- USGS Perennial Stream
- Outstanding Resource Waters\*

**NHESP Data**

- Certified Vernal Pool\*
- Potential Vernal Pool\*
- Priority Habitat for State-Protected Rare Species\*
- Estimated Habitat for Rare Wildlife\*

**DEP Data**

- Hydrologic Connection
- Wetland
- Open Water

**FEMA National Flood Hazard Layer**

- AE: 1% Annual Chance of Flooding\*
- AE: Regulatory Floodway\*

\*Environmental feature does *not* occur within map view.

Scale 1:3,000  
1 inch = 250 feet

0 125 250 Feet

Basemap: Nearmap Aerial, March 2021