E131 Asset Condition Refurbishment Project
Adams, North Adams, Florida, and Monroe, Massachusetts

FINAL ENVIRONMENTAL IMPACT REPORT

New England Power Company (NEP)

March 2024

Tighe&Bond

N-5068105B-03
March 27, 2024

Secretary Rebecca Tepper
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: **Final Environmental Impact Report (FEIR)**
E131 Asset Condition Refurbishment (ACR) Project
Adams, North Adams, Florida, and Monroe, Massachusetts
EEA #16663

Dear Secretary Tepper:

On behalf of New England Power Company (NEP), Tighe & Bond is submitting this Final Environmental Impact Report (FEIR) for the E131 ACR Project (the Project), which spans four municipalities in Massachusetts: Adams, North Adams, Florida, and Monroe. The proposed project includes upgrades to the existing electrical utility infrastructure and construction of improved roadways by which the transmission line can be accessed. These access roads will facilitate the proposed infrastructure improvements, as well as future maintenance activities and access by emergency personnel. The proposed project has been designed to improve the resiliency and reliability of the infrastructure and minimize impacts to the existing environment.

NEP previously filed an Expanded Environmental Notification Form (EENF) with request for Single EIR for the project, which was noticed in the February 8, 2023 edition of the Environmental Monitor. A Certificate of the Secretary of Energy and Environmental Affairs for the EENF was issued on March 17, 2023 that denied the request for Single EIR and requested the filing of a Draft and Final EIR. A Draft Environmental Impact Report (DEIR) was prepared and submitted for notice in the November 8, 2023 edition of the Environmental Monitor. A Certificate for the DEIR was issued on December 15, 2023 requesting additional information in a Final EIR.

This FEIR has been developed following the Certificate on the DEIR to provide new and updated information on existing and proposed conditions developed in response to the Certificate, describe changes to the proposed project, identify potential impacts and mitigation measures, respond to comments received during the review period, and present draft Section 61 findings for each State Agency that will issue permits for the project. The proponent will continue to communicate with the regulators as requested in the DEIR, and as required permits are pursued.

Along with this submission, copies of the FEIR are being distributed concurrently to the attached Distribution List. The FEIR is being submitted for publication in the April 10, 2024, edition of the *Environmental Monitor*. Should you have any questions or require additional information, please contact me by phone at (413) 875-1305 or by email at KLWilkins@tighebond.com.

Very truly yours,

TIGHE & BOND, INC.

Katherine L. Wilkins
Project Manager

Enclosures
Copy: Michael Tyrrell, New England Power Company
Refer to the Distribution List

Table of Contents

Addressee	Email	No. of Copies
MEPA Office 100 Cambridge Street, Suite 900 Boston, MA 02114	MEPA@mass.gov	1[1]
MassDEP/Commissioner's Office One Winter Street Boston, MA 02108	helena.boccadoro@mass.gov	1[1]
DEP/Western Regional Office Attn: MEPA Coordinator State House West – 4th Floor 436 Dwight Street Springfield, MA 01103	catherine.skiba@mass.gov Sean.Gonsalves@mass.gov	1[1]
Massachusetts Dept. of Transportation Public/Private Development Unit 10 Park Plaza, Suite #4150 Boston, MA 02116	MassDOTPPDU@dot.state.ma.us	1[1]
Massachusetts Dept. of Transportation - District #1 Attn: MEPA Coordinator 270 Main Street Lenox, MA 02140	patrick.tierney@dot.state.ma.us kevin.whalen@dot.state.ma.us	1[1]
Massachusetts Historical Commission The MA Archives Building 220 Morrissey Boulevard Boston, MA 02125	--	1[2]
Berkshire Regional Planning Commission (BRPC)	mprovencher@berkshireplanning.org tmatuszko@berkshireplanning.org OfficeAssistant@berkshireplanning.org	1[1]
Franklin Regional Council of Governments (FRCoG) 12 Olive Street, Suite 2 Greenfield, MA 01301	KMacPhee@frcog.org JAtwood@fcrog.org PSloan@frcog.org	2[1,2]
Attn: Adams Board of Selectmen Adams Town Hall 8 Front Street 2nd Floor Adams, MA 01220	bhantman@town.adams.ma.us choyt@town.adams.ma.us	1[1]
Attn: Adams Planning Board Adams Town Hall 8 Front Street Adams, MA 01220	kbelanger@town.adams.ma.us ecoughlin@town.adams.ma.us	1[1]

Addressee	Email	No. of Copies
Attn: Adams Conservation Commission Adams Town Hall 8 Front Street Adams, MA 01220	kbelanger@town.adams.ma.us ecoughlin@town.adams.ma.us	1[1]
Attn: Adams Board of Health Adams Town Hall 8 Front Street Adams, MA 01220	smelito@town.adams.ma.us drhoads@town.adams.ma.us	1[1]
Attn: North Adams City Council 74 Cleveland Avenue North Adams, MA 01247	Lisa Hall Blackmer, Council President lblackmer@northadams-ma.gov	1[1]
Attn: North Adams Planning Board 10 Main Street North Adams, MA 01247	planningboard@northadams-ma.gov	1[1]
Attn: North Adams Conservation Commission 10 Main Street North Adams, MA 01247	conservationcommission@northadams-ma.gov	1[1]
Attn: North Adams Board of Health 10 Main Street North Adams, MA 01247	health@northadams-ma.gov	1[1]
Attn: Florida Selectboard 379 Mohawk Trail Drury, MA 01343	townhall.floridamass@gmail.com	1[1]
Attn: Florida Planning Board 379 Mohawk Trail Drury, MA 01343	townhall.floridamass@gmail.com	1[1]
Attn: Florida Conservation Commission 379 Mohawk Trail Drury, MA 01343	townhall.floridamass@gmail.com	1[1]
Attn: Florida Board of Health 379 Mohawk Trail Drury, MA 01343	townhall.floridamass@gmail.com	1[1]
Attn: Monroe Board of Selectmen Monroe Town Hall 3C School Street Monroe Bridge, MA 01350	monroe01350@yahoo.com	1[1]
Attn: Monroe Conservation Commission 3C School Street PO Box 59 Monroe, MA 01350	monroe01350@yahoo.com	1[1]
Attn: Monroe Board of Health 3C School Street PO Box 59 Monroe, MA 01351	monroe01350@yahoo.com	1[1]

Addressee	Email	No. of Copies
MEPA Office Attn: EEA EJ Director 100 Cambridge Street, Suite 900 Boston, MA 02144	EEA Environmental Justice Director MEPA-EJ@mass.gov	1[1]
Department of Agricultural Resources Attn: MEPA Coordinator 138 Memorial Avenue, Suite 42 West Springfield, MA 01089	barbara.hopson@mass.gov	1[1]
Natural Heritage and Endangered Species Program Massachusetts Division of Fisheries & Wildlife 1 Rabbit Hill Road Westborough, MA 01581	melany.cheeseman@mass.gov emily.holt@mass.gov	1[1]
Massachusetts Department of Conservation & Recreation Attn: MEPA Coordinator 251 Causeway St. Suite 600 Boston MA 02114	andy.backman@mass.gov	1[1]
Energy Facilities Siting Board Attn: MEPA Coordinator One South Station Boston, MA 02110	andrew.greene@mass.gov geneen.bartley@mass.gov	1[1]
Department of Energy Resources Attn: MEPA Coordinator 100 Cambridge Street, 10th floor Boston, MA 02114	paul.ormond@mass.gov	1[1]
Woodlands Partnership of Northwest Massachusetts	Richard Chandler ashfield@verizon.net	1[1]
Hoosic River Watershed Association	akawczak@yahoo.com	1[1]
Berkshire Environmental Action Team	team@thebeatnews.org	1[1]
Mass Audubon	E. Heidi Ricci, Director of Policy and Advocacy hricci@massaudubon.org	1[1]
Appalachian Mountain Club	Heather Clish, VP, Conservation and Recreation Advocacy hclish@outdoors.org	1[1]
Massachusetts Association of Conservation Commissions	Dorothy A. McGlincy, Executive Director dorothy.mcglincy@maccweb.org	1[1]

Addressee	Email	No. of Copies
Massachusetts Land Trust Coalition	Robb Johnson, Executive Director robb@massland.org	1[1]
The Nature Conservancy in Massachusetts	Steve Long, Director of Policy and Partnerships slong@TNC.ORG	1[1]
Sierra Club Massachusetts Chapter	Deb Pasternak, State Director deb.pasternak@sierraclub.org	1[1]
The Trustees of Reservations	Linda Orel, Policy Director lorel@thetrustees.org	1[1]
Friends of Mohawk Trail State Forest	Robert Leverett, President dbhguru@comcast.net	1[1]
Harvard Forest	David R. Foster, Director Emeritus drfoster@fas.harvard.edu	1[1]

[1] Copy of DEIR to be sent electronically.

[2] Hard copy of DEIR to be sent via mail.

This distribution list has been prepared in accordance with 301 CMR 11.16(3) and is based on the MEPA Distribution List (Revised: March 8, 2024).

Acronym	Description
ADT	Average Daily Trips
ACHP	Advisory Council on Historic Preservation
ACR	Asset Condition Refurbishment
Bank	Inland Bank
BLSF	Bordering Land Subject to Flooding
BMPs	Best Management Practices
BVW	Bordering Vegetated Wetland
CAP	Construction Access Permit
CFR	Coldwater Fisheries Resources
CGP	Construction General Permit
CMP	Conservation Management Plan
CMR	Common Massachusetts Regulation
CR	Conservation Restriction
CVP	Certified Vernal Pool
CWA	Clean Water Act
DCR	Massachusetts Department of Conservation and Recreation
DEIR	Draft Environmental Impact Report
DGA	Designated Geographic Area
DPH	Massachusetts Department of Health
DPU	Department of Public Utilities
EEA	Executive Office of Energy and Environmental Affairs
EENF	Expanded Environmental Notification Form
EFI	National Grid Environmental Field Issue
EG	Environmental Guidance
EIR	Environmental Impact Report
EJ	Environmental Justice
EPA	United States Environmental Protection Agency
ER Mapping	Environmental Resource Mapping
ESCs	Erosion and Sediment Controls
GHG	Greenhouse Gas
GIS	Geographical Information Systems
ILSF	Isolated Land Subject to Flooding
IVW	Isolated Vegetated Wetland
kV	Kilovolt
LUWW	Land Under Water Bodies and Waterways
MA WPA	Massachusetts Wetlands Protection Act
MassDEP	Massachusetts Department of Environmental Protection
MassDOT	Massachusetts Department of Transportation
MCCA	Massachusetts Climate Change Assessment

Acronym	Description
MEPA	Massachusetts Environmental Policy Act
MESA	Massachusetts Endangered Species Act
MHC	Massachusetts Historical Commission
NEP	New England Power Company d/b/a National Grid (also referred to as the Company)
NESC	National Electrical Safety Code
NHESP	Natural Heritage and Endangered Species
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OMP	Operations and Maintenance Plan
OOC	Order of Conditions
OPGW	Optical Ground Wires
PCN	Pre-Construction Notification
PEM	Palustrine Emergent
PFO	Palustrine Forested
PH	Priority Habitat
PSS	Palustrine Scrub Shrub
PVP	Potential Vernal Pool
RA	Riverfront Area
RMAT	Resilient Massachusetts Action Team
ROW	Right-of-Way
SHMCAP	Massachusetts State Hazard Mitigation and Climate Adaptation Plan
SWCA	SWCA Environmental Consultants
SWPPP	Stormwater Pollution Prevention Plan
TMP	Traffic Management Plan
TOY	Time-of-Year
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USFWS IPaC	United States Fish and Wildlife Service Information for Planning and Consultation
USGS	United States Geological Survey
VMP	Vegetation Management Plan
WQC	Water Quality Certificate

Section 1
Project Overview

1.1 Introduction

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, and Monroe, Massachusetts

Latitude, Longitude: 42.65417, -73.10516[1]

42.75788, -72.93021[2]

Project Proponent: New England Power Company (NEP)

Tighe & Bond has prepared this Final Environmental Impact Report (FEIR) on behalf of New England Power Company (NEP) in response to the December 15, 2023 Certificate of the Secretary of Energy and Environmental Affairs (Certificate) on the Draft Environmental Impact Report (DEIR) for the E131 Asset Condition Refurbishment Project (E131 ACR or Project) (EEA no. 16663). The FEIR addresses the Scope outlined in the Certificate, responds to comments within the Scope received during the DEIR review period as required per the Massachusetts Environmental Policy Act (MEPA) (M.G.L. c. 30 §§ 61-62I) and MEPA regulations (301 CMR 11.00), and was prepared in accordance with the general guidelines for outline and content found in Section 11.07 of the MEPA regulations. A copy of the Certificate is provided in Appendix A.

NEP is proposing the refurbishment of the existing 115 kilovolt (kV) E131 overhead electrical transmission line that extends from the Harriman #8 Substation in Readsboro, Vermont to the Adams #21 Substation in Adams, Massachusetts, crossing the Massachusetts municipalities of Monroe, Florida, North Adams, and Adams (as shown on the Environmental Resource Maps in Appendix B). The overall Project length is approximately 13 miles; of that, approximately 11.4 miles are within Massachusetts.

A glossary of acronyms and technical terms is located at the beginning of this document. Appendices A through E include relevant supplemental information, including figures and plans, the annotated response to comment letters, and the FEIR circulation list.

1.2 Project Description

The Project description and scope of work is unchanged from the DEIR. Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the E131 line structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between substations. As such, optical ground wire (OPGW) is proposed

[1] Location of the Adams Substation in Adams, Massachusetts.
[2] Location of the Harriman Substation in Readsboro, Vermont.

to replace the existing shield wire. Based on the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of 6 three-pole structures
- Replacement of three (3) existing steel lattice structures with new steel H-frame structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure from the transmission line alignment
- Installation of concrete caisson foundations at 24 of the structures in locations which require greater structural reinforcement
- Installation of micropile foundations at approximately one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor wire in four (4) sections

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions of the line are currently inaccessible except by foot or utility terrain vehicles. Improvements to the existing and the construction of new access routes are required to facilitate the Project.

1.3 Summary of Project Impacts

The E131 ROW is approximately 11.4 miles long within Massachusetts. The ROW easement varies in size from 200-400 feet wide. The E131 line runs parallel to two other transmission line circuits, the Q117 line and the J10 line, for short stretches of the alignment. Within the ROW easement there is a cleared and actively maintained portion of the ROW. The maintained portion of the E131 easement varies from 125-150 feet wide. The multi-circuit ROW is the reason for the varied maintained ROW widths, with more lines needing a wider area of clearance. Although work is taking place along 11.4 miles of ROW and at each of the existing transmission line structures, the overall disturbance and construction activities will not take up the entire area of the maintained ROW or easement. The E131 Project does not propose to clear the currently unmaintained portions of the easement to widen the existing ROW. The limited impact outside of the maintained limits of ROW are only for those necessary to facilitate access or the construction of work pads.

Impacts associated with the Project are outlined in Table 1-1.

TABLE 1-1
Summary of Project Impacts

Impact Area	Size[1]	Activity[2]
Land Alteration	62.5 Acres	Total land disturbance
	8.3 Acres	Existing access road maintenance
	28.6 Acres	New access road development[1]
	25.1 – work pad 0.4 – pull pad	Work pad and pull pad development
Tree Removal	11.3 Acres	Access roads and work pads
Vegetated Wetlands	599,115 sf	Temporary construction matting for access roads and work pads
	660 sf	Structure installation
Other Wetlands (Riverfront Area, BLSF, LUWW)	142,140 sf	Temporary construction matting for access roads and work pads
	6,245 sf	Permanent access road improvements
Rare Species	4.5 acres	Temporary construction matting for access roads and work pads

[1] Note that impacts are not additive within columns as activities may overlap.

[2] New access road development accounts for all grading and ground disturbance outside of roadway footprint.

1.4 Project Schedule

A summary of the major Project elements and their corresponding target milestone dates is provided in Table 1-2 below.

TABLE 1-2
Anticipated Project Schedule

Project Component	Estimated Start Date	Estimated End Date
Access Route Construction, Reestablishment, and Improvements	August 2024	December 2025
Rebuild Existing Line	January 2025	August 2027
ROW Restoration Where Required	June 2027	October 2027

1.5 MEPA History and Scope of FEIR

The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires one or more state agency action and meets or exceeds one or more review thresholds. Table 1-3 below outlines the threshold triggered by the Project pursuant to 301 CMR 11.03.

TABLE 1-3
MEPA Thresholds Triggered by the E131 ACR Project

MEPA EIR Thresholds	
301 CMR 11.03(1)(a)(1)	**Land:** *Direct alteration of 50 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
301 CMR 11.03(3)(a)(1)(a)	**Wetlands, Waterways, and Tidelands:** *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
301 CMR 11.06(7)(b)	**Environmental Justice:** *Any Project that is located within a Designated Geographic Area around an Environmental Justice Population*
MEPA ENF Thresholds	
301 CMR 11.03(1)(b)(1)	**Land:** *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
301 CMR 11.03(3)(b)(1)(d)	**Wetlands, Waterways and Tidelands:** *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
301 CMR 11.03(3)(b)(1)(f)	**Wetlands, Waterways and Tidelands:** *Alteration of one half or more acres of any other wetlands*

NEP submitted the EENF with request for Single EIR (in accordance with 301 CMR 11.06(8)) to MEPA on January 31, 2023, and it was publicly noticed in the February 8, 2023 publication of the Environmental Monitor.

The Secretary's Certificate was issued on March 17, 2023. The Certificate denied the request for Single EIR and requested the preparation of a Draft and Final EIR.

The Draft EIR was submitted to MEPA addressing the Scope outlined in the EENF Certificate and the requirements of 301 CMR 11.07. The DEIR was publicly noticed in the November 11, 2023 publication of the Environmental Monitor. The Secretary's Certificate was issued on December 15, 2023 outlining a scope for the Final EIR.

In accordance with the Secretary's Certificate and 301 CMR 11.16 of the MEPA regulations, the FEIR will be circulated to those who commented on the DEIR, state and local agencies from which permits or approvals will be required, and the public libraries in Adams, North Adams, Florida, and Monroe. Please refer to the FEIR Circulation List presented prior to the narrative.

1.6 Project Changes Since the DEIR

Planning and design of a utility project is a dynamic process involving a balance of environmental, regulatory, and engineering considerations. The Project's design standard parameters are unchanged since the DEIR, but reassessment of impact areas and coordination with regulatory agencies has been ongoing. This additional review and coordination has not resulted in changes to impact numbers or Project sequencing to this point.

NEP has designed the Project to avoid environmental impacts to the maximum extent practicable, and as the Project design has progressed, the extent of proposed tree removal has been minimized and the potential impacts to resource areas have been generally reduced. The Environmental Resource (ER) Map set, which is unchanged from that submitted with the DEIR, is provided in Appendix B.

Avoidance, minimization, and mitigation measures have been outlined in each section of the DEIR as well as summaries in Section 10, Table 10-1.

Section 2
Statutory and Regulatory Standards

The Secretary's Certificate on the DEIR notes that the FEIR should include a description and analysis of all applicable statutory and regulatory standards and how the project will meet those standards. The sections below outline the statutory and regulatory requirements, permits, and current status and schedule for the E131 ACR project.

2.1 Permit Requirements and Status

Table 2-1 contains a list of local, state, and federal agencies for which permits are required along with the current status of each for the Project.

TABLE 2-1
Permitting Status Updates Since DEIR Submission

Agency	Permit, Review, Approval	Status
Federal		
U.S. Army Corps of Engineers (Corps)	Section 404 Pre-Construction Notification (PCN), Section 106, Section 7	Filed July 2023; review and consultation in progress
U.S. Environmental Protection Agency (EPA)	National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP)	To be filed at least 14 days prior to start of construction
State		
Executive Office of Energy and Environmental Affairs (EEA)	MEPA Review/Certificate of the Secretary	Filed EENF January 2023 (EEA 16663), Certificate issued March 2023; Filed DEIR October 2023, Certificate issued December 2023
MassDEP	Individual Section 401 Water Quality Certificate	Filed June 2023, under review
NHESP	Massachusetts Endangered Species Act (MESA) Determination of Take, Conservation Management Permit (CMP)	Project Checklist filed April 2023, MESA Determination issued October 2023. CMP requested by NHESP, consultation with NHESP ongoing
MADCR	Construction Access Permit (CAP)	In progress – Consultation with DCR is ongoing
Massachusetts Historical Commission (MHC)	Project review under M.G.L. c. 9 in accordance with 950 CMR 70-71	Consultation with MHC is ongoing
MassDOT	Permit to Access State Highway/Non-Municipal Utility Permits for crossing over of state roads with utility lines	Coordination initiated in July 2023 with District 1 and is ongoing. Last

		Communication on 2/22/2024
Local		
Adams, North Adams, Florida, and Monroe Conservation Commissions	Orders of Conditions[1] per the Massachusetts Wetlands Protection Act (MA WPA)	Anticipate filing April/May 2024

[1] MA WPA Orders of Conditions are local permits, unless and until a superseding Order of Conditions is issued by MassDEP.

2.1.1 State Permits/Authorizations

2.1.1.1 Section 401 Water Quality Certification

A 401 Water Quality Certificate application to MassDEP was submitted in June 2023, for review and approval as a "major fill" activity. The application has been placed on administrative hold, pending issuance of a final MEPA Certificate.

The E131 ACR Project has been designed to comply with the Department's Water Quality Certification regulations at 314 CMR 9.00, and appropriate and practicable steps have been taken to avoid and minimize potential adverse impacts to jurisdictional resource areas. The Project impacts are almost all temporary and permanent impacts have been avoided to the extent practicable. The Project has worked to also avoid permanent conversion of forested wetlands, with no tree removals proposed in forested wetlands. The Project as designed fully complies with the applicable performance standards for the discharge of dredged or fill materials listed at 314 CMR 9.06. The following provides applicable Water Quality Certificate regulatory criteria (314 CMR 9.06) and the Project's compliance with each:

(1) No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

NEP completed alternatives analyses that included an evaluation of environmental and community impacts, engineering feasibility, and constructability analysis of Project alternatives. There is no practicable alternative to the proposed Project with less adverse impacts as discussed in Section 2 of the DEIR. The scope of the alternatives analysis is commensurate with the scale and purpose of the Project and considers the classification, designation, and existing uses of the affected wetlands and waterways. The alternatives consider site specific constraints, existing ROW conditions, and the magnitude of and significance of the benefits of the Project, avoidance and minimization of adverse impacts, and the utilization of Best Management Practices and proper construction sequencing.

(2) No discharge of dredge or fill material shall be permitted unless appropriate and practicable steps have been taken which will avoid and minimize potential adverse impacts to the bordering or isolated vegetated wetland. However, no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species.

(a) For discharges to bordering or isolated vegetated wetlands, such steps shall include a minimum of 1:1 restoration or replication.

Appropriate and practicable steps have been taken to avoid and minimize impacts to wetlands. Despite the extensive avoidance and minimization measures, construction of the Project will result in limited unavoidable impacts to wetlands and water resources within the Project ROW. These impacts are primarily limited to temporary impacts resulting from the placement of construction mats to create work pads and provide access in wetlands, as necessary for construction. Environmental resource areas temporarily disturbed by construction will be restored in accordance with applicable permit conditions. Additionally, the construction, operation and maintenance of the Project will have a minimal impact on waterbodies and water quality. The design of the existing overhead transmission lines avoids direct adverse impacts to resources. Unavoidable permanent impacts to vegetated wetlands will be mitigated at a 1:1 ratio, as described in Section 6.

NEP is actively coordinating with the NHESP regarding the protected species in the vicinity of the Project and will continue with this consultation in order to minimize or avoid potential adverse effects on rare species. NHESP has determined a Conservation and Management Permit will be required for the Take of one species.

(3) Except as otherwise provided in 314 CMR 9.06(3), no discharge of dredge or fill material shall be permitted to Outstanding Resource Waters. The discharge of dredged or fill material to an Outstanding Resource Water in association with any activity listed in 314 CMR 9.06(3)(a) through (k) may be permitted without requiring the applicant to obtain a variance in accordance with 314 CMR 9.08 provided the Department determines that the discharge of dredged or fill material may be permitted in accordance with 314 CMR 9.06(1), (2), (4), (5), and (7), and is not identified in 314 CMR 9.06(4) as a discharge of dredged or fill material that requires a variance.

No discharge of fill material to an Outstand Resource Water (ORW) is proposed per the criteria set forth at 314 CMR 9.06(3)(c)314 CMR 9.06(3)(f).

(4) The discharge of dredged or fill material into wetlands or waters of the Commonwealth within 400 feet of the high water mark of a Class A surface water (exclusive of tributaries) requires a variance issued by the Department pursuant to 314 CMR 9.08 unless the discharge of dredged or fill material is associated with an activity conducted by a public water system under 310 CMR 22.00: Drinking Water, or by a public agency or authority for the maintenance or repair of existing public roads or railways. The discharge of dredged or fill material to a vernal pool certified by the Division of Fisheries and Wildlife requires a variance pursuant to 314 CMR 9.08.

No discharge within 400 feet of the high water mark of a Class A surface Water is proposed.

(5) No discharge of dredged or fill material is permitted for the impoundment or detention of stormwater for purposes of controlling sedimentation or other pollutant attenuation. Discharge of dredged or fill material may be permitted to manage stormwater for flood control purposes only where there is no practicable alternative and provided that best management practices are implemented to prevent sedimentation or other pollution. No discharge of dredged or fill material is permitted for the impoundment or detention of stormwater in Outstanding Resource Waters for any purpose.

NEP is not proposing to place fill material in wetlands or waterways to impound or detain stormwater.

(*6) Except as otherwise provided in 314 CMR 9.06, stormwater discharges shall be provided with best management practices to attenuate pollutants and to provide a setback from the receiving water or wetlands in accordance with the following Stormwater Management Standards as further defined and specified in the Massachusetts Stormwater Handbook.*

The extent to which the Standards apply to the Project will be addressed as part of the WPA and 401 Water Quality permitting processes. NEP will submit an NOI and prepare a SWPPP for the Project in compliance with the EPA's NPDES program under the Stormwater CGP. During construction, NEP will use soil erosion and sediment control BMPs to manage stormwater and protect sensitive resource areas from stormwater run-off. Please also refer to Appendix E for a presentation of NEP's BMPs.

During construction of improved or new access, NEP will incorporate stormwater management features such as water bars, check dams, and swales to redivert stormwater flows from access into surrounding vegetation. NEP has designed these BMPs to reduce the potential for adverse impacts such as washouts and erosion due to concentrated stormwater flows.

(7) No discharge of dredge or fill material shall be permitted in the rare circumstances where the activity meets the criteria for evaluation but will result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters of the Commonwealth.

The Project has been designed to meet the criteria for evaluation through impact avoidance and minimization measures and the implementation of construction BMPs, including the use of temporary construction mats versus permanent fill in wetland. In addition, during the construction process, NEP will assign an environmental monitor to ensure and report on compliance with all federal, state and local permit requirements and relevant NEP company policies and procedures. As such, the Project is not expected to result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters of the Commonwealth.

2.1.1.2 Massachusetts Wetlands Protection Act (MAWPA)

The MAWPA and its regulations are administered by municipal Conservation Commissions and MassDEP. NEP will file permit applications (NOIs) with Conservation Commissions in Adams, North Adams, Monroe, and Florida. These NOIs will detail the proposed asset improvements, the short-term and long-term impacts, and the proposed avoidance, minimization, and mitigation measures for those impacts. The wetlands review process is focused on how the Project and the proposed mitigation conform to the performance standards for each affected MAWPA resource area.

A substantial portion of the work for the Project, including the proposed structure replacements, qualifies under the utility maintenance exemption (310 CMR 10.02(2)(a)(2)), which exempts work done to "*maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public.*" The elements of the Project that do not qualify as exempt, such as access road development and work pad construction will meet the requirements for a Limited Project.

Consistency with MAWPA Limited Project Provisions

The Project is eligible for "limited project" status, as defined in 310 CMR 10.53(3)(d) because it involves the "*construction, reconstruction, operation and maintenance of underground and overhead public utilities.*" Proposed Project refurbishment activities include the removal and replacement of existing electrical utility structures and overhead lines, and both the reconstruction of existing access and work areas, and the construction of new access along the ROW within upland resource areas. Maintaining ROW corridors with functional access and work areas is an integral part of the public overhead electrical utility facility access, and work areas are essential for the safe and reliable operation of the lines, performance of inspection and maintenance work, and performance of emergency repairs. As such, all components of the proposed Project meet the definition of "*operation, maintenance, and construction of public utilities*", because the ROW corridor, access, work areas, and structures are all integral to the overall public utility.

Under the Limited Project provisions, the issuing authority may approve a project that does not satisfy the performance standards for the affected resource areas, although no such project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species (as identified by procedures established under 310 CMR 10.59). Thus, Limited Projects may, under certain circumstances, be permitted without meeting the performance standards for jurisdictional resource areas. While the Project qualifies as a Limited Project, NEP's policy is to make reasonable efforts to meet applicable performance standards and minimize impacts, and the Project will meet the Limited Project general conditions specified in 310 CMR 10.53(3)(d), as described below.

The Project will meet the general conditions for a Limited Project as described below:

1. *The issuing authority may require a reasonable alternative route with fewer adverse effects for a local distribution or connecting line not reviewed by the Energy Facilities Siting Council;*

The Project is not a local distribution or connecting line and as such these evaluation criteria are not applicable.

2. *Best available measures shall be used to minimize adverse effects during construction;*

Throughout design and permitting, NEP has made extensive efforts to comprehensively assess constructability and minimize adverse effects, wherever practicable. Since the EENF, NEP revised designs to reduce wetlands impacts. Where impacts cannot be avoided or further minimized, NEP will implement appropriate mitigation. These efforts are referenced throughout this document, particularly in Table 10-1. Additionally, NEP performs construction and maintenance work in accordance with strict BMP practices and procedures serving to minimize adverse effects during construction, described in EG-303NE (Appendix E).

3. *The surface vegetation and contours of the area shall be substantially restored; and*

NEP will meet this standard for restoration by applying in situ restoration measures to areas disturbed by construction activities.

4. *All sewer lines shall be constructed to minimize inflow and leakage;*

This standard does not apply because no sewer lines are proposed.

In addition to meeting the general performance standards for a Limited Project, NEP has made efforts to conform with the wider performance standards of the MAWPA, wherever possible. Except for the total area of alterations within Riverfront Area, the Project generally meets the performance standards for proposed temporary and permanent alteration of resource areas.

2.2.1.3 Massachusetts Stormwater Standards

MassDEP applies the MA Stormwater Management Standards (the "Standards") pursuant to the Wetlands Regulations (310 CMR 10.00) and the Water Quality Regulations (314 CMR 9.00) relating to stormwater. The Standards define ten stormwater management performance standards for development and redevelopment projects. Generally, these standards have not been applied to similar cross-country utility maintenance projects, as the work does not have a substantial impact on watershed hydrology or drainage patterns. The extent to which the Standards apply to the Project will be addressed as part of the WPA and 401 Water Quality permitting processes. NEP will submit an NOI and prepare a SWPPP for the Project in compliance with the EPA's NPDES program under the Stormwater CGP.

NEP will employ BMPs for stormwater management including sediment and erosion controls. During the construction of the Project, stormwater will be managed through the use of additional stormwater management design features such as swales, water bars, plunge pools, and/or check dams.

2.1.1.4 MESA – Conservation Management Permit

Portions of the proposed Project are located within Priority and Estimated Habitats of Rare Species and Wildlife. Accordingly, a MESA Project Review Checklist was submitted to NHESP. A final determination from the MESA Checklist review was received on October 26, 2023 (NHESP File No 23-1106). Based on NHESP review of the proposed project it was determined the proposed Project will result in a Take of one of the three state-listed species due to the duration of construction matting. NEP is preparing a CMP for the proposed activities and continues to coordinate avoidance, minimization, and mitigation measures with NHESP. Additional discussion on compliance with the MESA performance standards is provided in Section 5.3.

2.1.1.5 MassDOT Access and Crossing Permits

NEP will obtain a MassDOT Permit to Access State Highway/Non-Municipal Utility Permits for crossing over Route 2 with utility lines for the Project. The Project's impacts relative to MassDOT are associated with the installation of a new overhead wire (the OPGW) across state roadways by a non-municipal utility, and construction/improvement of access routes leading from state highways into the ROW.

NEP will prepare and submit a Traffic Management Plan to MassDOT for its review and approval. The Project will comply fully with the performance standards specified in the permit to ensure a safe environment for traffic flow and construction crews in and around the roadways. No long-term roadway impacts are anticipated.

2.1.1.6 Surface Water Discharge Permit

Surface Water Discharge permitting is required for a Project proposing to discharge pollutants to surface waters of the Commonwealth, including from stormwater discharges per 314 CMR 3.04(2)(a). However, NEP will be exempt from the requirement per 314 CMR 3.05(2), as the Project will require NPDES CGP authorization under 3 U.S.C. 1251 § 404.

Due to earth disturbing activities of more than one (1) acre, this Project will require a federal NPDES CGP and associated coverage pursuant to the Surface Water Discharge regulations specifically at 314 CMR 3.06. The NPDES CGP requires filing an NOI that provides information on the site and identifies the site's general operator, and development of a SWPPP that includes appropriate BMPs to minimize pollutant discharges. The Project will comply with the requirements of the NPDES CGP.

2.1.1.7 Chapter 91

The E131 was built in 1925 and has not been substantially altered since that time. As such, the existing line is exempt from licensing under 310 CMR 9.05(3)(c) and (f). The proposed work at each of the crossings is maintenance work on an existing utility line that will not reduce the height of lowest electric cable, will not alter the alignment of the crossing or otherwise affect navigability or other Chapter 91 interests. As such, the work is exempt from further Chapter 91 approvals under the maintenance provisions of 910 CMR 9.05(3)(a) and 910 CMR 9.22(1), as outlined in Section 7.

2.1.1.8 Massachusetts Historical Commission

NEP's cultural resource consultant, PAL, has developed an Archaeological Site Avoidance and Protection Plan (ASAPP) and provided associated documentation to MHC, Native American Tribes, and DCR. The DCR Staff Archaeologist responded on 7/13/23, communicating that they had no substantive comments on the ASAPP, and requested that NEP continue to coordinate with DCR's Operations and Construction Access Permits staff within DCR managed portions of the Project. NEP continues to coordinate with the USACE regarding the Section 106 review of the Project and the USACE's consultation with the MHC and Native American Tribes regarding implementation of the ASAPP.

2.1.1.9 MA DCR Construction Access Permit

NEP is coordinating the Project with DCR and plans to submit an application for a construction and access permit. The provisions for construction and access permits are set forth at 302 CMR 11.08(4) and outlined below.

(a) Duration of Construction and Access Permits.

1. Construction. Construction of the proposed project, work, or activity within or on a DCR parkway or other DCR property under the terms of a construction and access permit must be completed within one year of the effective date, provided, however, that DCR may extend the construction and access permit by an additional one year upon written request of the applicant or permittee, provided said request is filed prior to the expiration of the original construction and access permit.

It is anticipated that construction on and access through DCR land will not be completed within one year. Additional time, longer than one year, will require NEP to provide a written request for an extended permit duration.

2. Use. Construction and access permits shall allow ingress and egress to and from the DCR Roadway or other DCR Property for an indefinite period, but a new construction and access permit shall be required when:

a. Constructing, reconstructing or expanding an existing facility on the property served, which results in a substantial increase in or impact on traffic on the DCR parkway or other DCR property;

It is not anticipated that the proposed Project will increase or otherwise impact traffic.

b. Constructing a new access or modifying an existing permitted access; or

The construction and access permit will address access to the extent necessary.

c. A construction and access permit would otherwise be required based on 302 CMR 11.00.

We do not anticipate that this is applicable.

(b) Any Construction and Access Permit issued under 302 CMR 11.00 shall include the following provisions:

1.Construction under a Construction and Access Permit. Construction under a duly issued construction and access permit may commence upon 72 hours written notice (which may be delivered by facsimile or electronic mail) or logged telephone notice by the permittee to the Department.

No construction activities will commence prior to 72 hours following official notice to the Department.

2. Prior to the commencement of any excavation work, the permittee must notify Dig Safe to obtain location of utilities. The permittee is charged with the responsibility of reviewing all applicable plans, site visits, and any other means available to ensure that the proposed excavation work will not adversely affect any subsurface utilities, equipment or structures, including trees and tree root systems.

NEP will coordinate with Dig Safe prior to commencing construction activities.

3. In the event an unanticipated site of archaeological or cultural significance is encountered during project implementation, project work shall be halted and DCR shall be notified.

NEP will halt activities and contact DCR should any such sites be encountered during construction.

4. If human remains are discovered during project implementation, the proponent shall halt work, secure the site, and notify the state police, the medical examiner, and the DCR staff archaeologist.

NEP will halt activities and contact the above referenced parties should human remains be encountered during construction.

5. The permittee must agree to indemnify and hold DCR and the Commonwealth of Massachusetts harmless for all injuries to persons or property resulting or arising from the issuance of a construction and access permit. The permittee must warrant that all restorative work remain in a safe and proper condition for a period of one year after work ceases, and agree that it shall indemnify and defend any suits arising from an unsafe or dangerous condition.

NEP will consent to the above terms.

(c) No action may be taken under a construction and access permit, unless such construction and access permit has been issued in writing.

NEP will not take any action under the construction and access permit until it has been issued in writing.

2.1.2 Federal Permits/Authorizations

2.1.2.1 Section 404 of the Clean Water Act

The proposed Project will involve work within Waters of the United States (WOTUS), including vegetated wetlands and over watercourses, subject to Section 404 of the Clean Water Act. Authorization under the Commonwealth of Massachusetts General Permits for Massachusetts, specifically 2 (maintenance), 6 (utility line activities), and 24 (temporary construction access and dewatering), is required for the proposed activities that will result in a temporary and permanent discharge of fill material to a WOTUS. Accordingly, a Pre-Construction Notification has been filed with the U.S. Army Corps of Engineers. As outlined in greater detail in Section 14.4.1 of the DEIR, NEP anticipates meeting all the of the application MA GP General Conditions compliance requirements.

2.1.2.2 Section 106 and the National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties (33 CFR 325 Appendix C and 36 CFR Part 800 and 33 CFR 325, Appendix C).

For the Project, the undertaking is the Section 404 Permit, and the responsible federal agency is the USACE. "Section 106 review" follows a specific process, which is guided by federal regulations (36 CFR 800 and 33 CFR 325, Appendix C). These regulations have created a series of steps by which federal agencies identify and evaluate historic properties that may be affected by their undertakings, assess adverse effects to those properties, and take prudent and feasible measures to avoid, minimize, or mitigate those effects and this review is underway.

2.1.2.3 EPA – Construction General Permit

NEP will submit an eNOI to the EPA to notify them of the intent to have construction stormwater discharges on the Project. As a component of the eNOI process, NEP will prepare a SWPPP for the Project in compliance with the EPA's NPDES program under the Stormwater CGP, as well as MassDEP Bureau of Water Resources Surface Water Discharge (NPDES) Permitting Program WM 15 permit application. Implementation of the SWPPP will include extensive use of erosion and sediment control measures designed to minimize site disturbance and prevent opportunities for sedimentation to occur off-site or toward wetland resource areas. The SWPPP will also have a component that consists of spill prevention, countermeasures and controls that address the accidental or unintended

release or spill of pollutants, such as fuel, hydraulic fluid, or lubricants. The SWPPP will also be a component of the Project's EFI and will be included in the environmental training that construction contractor personnel will receive.

2.1.2.4 Section 7 - US Fish & Wildlife Service

Under Section 7 of the Endangered Species Act ("ESA"), any action requiring one or more federal permits or licenses must also consult with the USFWS to ensure that proposed actions do not jeopardize listed species or destroy or adversely modify critical habitat. Accordingly, the USFWS Endangered Species Consultation Procedure available on their website was followed. As a result of the USFWS Endangered Species Consultation Procedure, it was determined that four federally listed species may be present within the Project area. The NLEB Determination Key (D-Key) indicated that the proposed actions would occur within areas where Northern Long-Eared Bats are reasonably certain to occur (refer the Consistency Letter (Project Code: 2023-0084707). As such, the proposed Project received a determination of "*may affect*" for the NLEB. NEP has conducted site-specific presence/probable absence surveys in accordance with the *Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines* to determine whether or not an incidental take is reasonably certain to occur. Survey results confirm presence of the Tricolored Bat within the Project Site but found no evidence of Northern Long-Eared Bat. NEP will continue to coordinate with the USFWS to avoid a "Take" of Tricolored Bat during construction.

2.2 Agency Interaction Since the DEIR

Coordination with the MEPA Office has been ongoing since NEP submitted the EENF with request for Single EIR in January 2023. Please refer to Table 2.1 for a detailed summary of Agency interactions surrounding the proposed Project.

TABLE 2-2
Agency Consultations Since DEIR

Agency	Date(s)	Notes
DCR	Ongoing	Email and phone consultation regarding a site visit to review off ROW access roads and Article 97 applicability.
NHESP	Ongoing	Correspondence and ongoing assessment of the proposed areas of "Take" and mitigation measures to avoid/minimize/mitigate impacts.
MassDEP Waterways	Ongoing	Correspondence discussing the exemptions for certain types of work and associated crossings

Section 3
Environmental Justice / Public Health

This section reviews the Project's potential impacts on Environmental Justice (EJ) communities pursuant to Section 58 of Chapter 8 of the Acts of 2021. Projects filed after January 1, 2022, must conform to the requirements set forth in the MEPA Public Involvement Protocol for Environmental Justice (EJ) Populations (the Public Involvement Protocol) and the MEPA Interim Protocol for Analysis of Project Impacts on EJ Populations (the Analysis of Project Impacts), both effective January 1, 2022. These protocols supplement proposed amendments to MEPA regulations at 301 CMR 11.00, promulgated on December 24, 2021.

As indicated in the EENF and DEIR, there are three Environmental Justice Populations within one mile of the Project, which is the Designated Geographic Area (DGA) for the Project.

The factors reviewed in the baseline assessment below appear to show that some of the EJ Populations within the DGA may be impacted by an existing unfair or inequitable environmental burden and related public health consequences experienced as compared to the general population. Based on the *MEPA Interim Protocol for Analysis of EJ Impacts*, any identified EJ population that is located in a municipality or census tract demonstrating "vulnerable health EJ criteria," or an EJ population immediately surrounding a project location that has a "High" risk rating in the RMAT tool for sea level rise/storm surge or extreme precipitation (urban or riverine flooding), is highly likely to be impacted by an existing unfair or inequitable environmental burden. However, the environmental and public health impact from the Project will not likely result in a disproportionate adverse effect on EJ Populations within the DGA and the potential impacts and consequences from the Project will not alter the effects of climate change on EJ Populations within the DGA.

The Project will provide residents with numerous benefits, including more reliable and safe electricity transmission. The operation and maintenance of the transmission line and its associated access roads are not sources of long-term environmental impacts and will not disproportionately impact resources at or near these communities. The E131 line is an existing transmission line that provides necessary power to users throughout the Berkshires; the proposed Project will ultimately provide a net benefit to these communities by increasing the reliability of the line.

3.1 Characteristics of Environmental Justice Population

In accordance with Section I(A) of the Public Involvement Protocol, figures depicting the location of the Project relative to EJ populations as depicted on the EEA Environmental Justice Maps Viewer (the EJ Maps Viewer) were provided in the EENF. Per Section I(A), as this is a linear project along a ROW, these distances were calculated based upon the edge of the ROW in all directions along the entire length of the Project.

Per the Massachusetts 2020 EJ Populations online mapping tool provided by MEPA, the ROW crosses through two EJ Populations:

- *Income (Block Group 1, Census Tract 9214, North Adams, Berkshire County)*

- *Income (Block Group 1, Census Tract 401, Monroe, Franklin County)*

The following EJ populations are located within one (1) mile of the Site:

- *Income (Block Group 2, Census Tract 9214, North Adams, Berkshire County)*
- *Income (Block Group 1, Census Tract 401, Rowe, Franklin County)*
- *Income (Block Group 4, Census Tract 9222, Adams, Berkshire County)*

The following EJ populations are located within five (5) miles of the Site:

- *Minority and Income (Block Group 2, Census Tract 9353, Berkshire County, Massachusetts)*
- *Income (Block Group 1, Census Tract 9353, Berkshire County, Massachusetts)*
- *Income (Block Group 2, Census Tract 9213, Berkshire County, Massachusetts)*
- *Income (Block Group 2, Census Tract 9215, Berkshire County, Massachusetts)*
- *Income (Block Group 1, Census Tract 9215, Berkshire County, Massachusetts)*
- *Income (Block Group 2, Census Tract 9221, Berkshire County, Massachusetts)*
- *Income (Block Group 3, Census Tract 9221, Berkshire County, Massachusetts)*
- *Income (Block Group 4, Census Tract 9221, Berkshire County, Massachusetts)*
- *Income (Block Group 1, Census Tract 9213, Berkshire County, Massachusetts)*
- *Income (Block Group 3, Census Tract 9213, Berkshire County, Massachusetts)*
- *Income (Block Group 3, Census Tract 9231, Berkshire County, Massachusetts)*
- *Income (Block Group 2, Census Tract 9223, Berkshire County, Massachusetts)*
- *Income (Block Group 4, Census Tract 9353, Berkshire County, Massachusetts)*
- *Income (Block Group 1, Census Tract 401, Franklin County, Massachusetts)*

According to the "Languages Spoken in Massachusetts" tab on the EJ Maps Viewer, there are no communities identified in which greater than 5 percent of the community speak a language other than English, or who do not identify as speaking English "very well."[3] During the MEPA Pre-Filing Consultation, MEPA Office staff concurred that, because of the results of the EJ Maps Viewer, language translation of Project materials is not necessary for this Project.

3.2 Public Involvement

This section summarizes the public involvement activities undertaken prior to filing this Final EIR. As described below, NEP will continue to take steps to meaningfully engage EJ Populations in decision-making for the Project during the remainder of the MEPA review process and continuing throughout subsequent permitting and during construction.

[3] Data for languages spoken was obtained from the American Community Survey 2011-2015 5-year estimates, Table B16001.

Initial Public Involvement (Pre-EENF Filing)

NEP conducted initial public involvement, which is documented in detail in the EENF. A summary of the public involvement activities conducted prior to filing the EENF are as follows:

- Environmental Justice Screening Form sent via electronic mail on June 21, 2022, by Tighe & Bond to all community-based organizations (CBOs) and tribes listed on the EJ Reference List.
- Environmental Justice Screening Form recirculated on December 13, 2022 to fulfill the advance notification requirements for a filing date of January 30, 2023.
- A public website was established for the Project. The website link (https://www.e131project.com) was provided on the EJ Screening Form. The site includes a contact form allowing website visitors to sign up for Project announcements and to contact NEP with any concerns or questions.
- NEP established a Project-specific toll-free phone number and email address. The EJ Screening Form indicated that community member questions and concerns may be directed to (877) 616-E131 (3131) or info@e131project.com.
- An additional copy of the Environmental Justice Screening Form and information pertaining to the scope of archeological surveys were provided to the Stockbridge-Munsee Band of Mohicans at their request.
- Repositories for hard copies of Project materials were established at public libraries within each of the four municipalities within Massachusetts to be updated as additional Project documents become available.
- NEP hosted a virtual public hearing on August 10, 2022. Information pertaining to this hearing was advertised in the Berkshire Eagle and The Greenfield Recorder and was also provided on the EJ Screening Form. No participants attended the hearing. A recording of the Virtual Public Meeting is available on the Project website.

NEP maintained a Distribution List of contacts from the EJ Reference List and any additional contacts that were identified during the virtual meetings and public engagement process.

Public Involvement After Filing the DEIR

The following public involvement activities were conducted after the EENF filing and prior to DEIR filing:

- A revised EJ Reference List was obtained for the Project in January 2024.
- The website was updated and will be maintained throughout the MEPA review process.
    - An electronic copy of the DEIR was uploaded to the website. A targeted notice of the DEIR filing was sent to all abutters and EJ Reference List

participants. The same will be conducted for the FEIR, once completed and filed.

- Visitors to the site can review frequently asked questions (FAQs) as well as download the EENF, the EENF Certificate, the DEIR, DEIR Certificate and watch a recording of the August 10, 2022, Virtual Public Meeting.
- The Project email address has been maintained and monitored throughout the MEPA review process.
- The Project hotline has been and will be maintained throughout the MEPA review process.

- On May 26, 2023, NEP distributed a Project Fact Sheet which provided a Project overview, location map, schedule, and contact information/ways to stay informed about the Project.
- On May 31, 2023, NEP distributed a mailer describing the E131 Project Wood Program.
- In October 2023, NEP distributed a mailer to Project neighbors and to the EJ Reference List, providing a Project update and information on how recipients could request a public meeting regarding the Project.

Planned Future Public Involvement

- Outreach to the public will be communicated in clear, understandable language and in a user-friendly format.
- NEP will post the FEIR on the project website and send notice on the posting to the EJ reference list.
- NEP will conduct additional meetings as requested:
  - NEP will evaluate and implement best communication practices to inform the public about any additional meetings.
  - If interpretation services are requested in advance of meeting dates, NEP will make its best efforts to translate the documents provided to EJ populations and provide any requested interpretation.
- There will be additional opportunities for public involvement and public input into Project design and timing during the subsequent permitting and local review processes, including additional abutter notification and opportunities to participate in public hearings.
- NEP will make best efforts to reach affected municipalities to see if they would share the Project website through their own websites and channels.
  - Additional outreach channels, such as Facebook pages/groups and apps like Next Door are being considered as part of this aligned information sharing effort.
- During the construction period, NEP will provide periodic construction updates via written notification and/or email to Project stakeholders, including to the EJ Reference List. Safety notices and signage will be posted regarding any

temporary restrictions associated with active construction on or in proximity to existing recreational trails. Updates will be periodically posted on the public website at the same time notifications are sent out.

Response from nearby communities to outreach and engagement opportunities, including EJ communities, has been limited. However, NEP has maintained, and will continue to maintain the same level of outreach and community engagement noted above during the remainder of the MEPA review process and throughout subsequent permitting and the construction period.

3.3 Truck Traffic Analysis

This section provides an updated impact analysis on EJ Populations in accordance with 301 CMR 11.07(6)(n)2 and the MEPA Interim Protocol for Analysis of EJ Impacts with respect to impacts from truck traffic. All other impacts are addressed in the DEIR.

Air Pollution Sources

The Project will not result in the creation of new sources of significant air pollution at any location, including near the EJ areas. Construction equipment will use on-road low sulfur diesel fuel and vehicle idling will be limited to the extent practicable.

Noise

Noise impacts are expected to be minimal, as the lands surrounding the E131 ROW are predominantly comprised of undeveloped forested lands. Few residences are within close proximity to the ROW; however, in the limited instances where in-ROW construction will occur adjacent to residences in Monroe and North Adams, NEP will notify landowners prior to the commencement of work. Noise-generating activities will be conducted in accordance with any local and state requirements. These construction impacts are temporary in nature, and the typical day-to-day operation of the line does not generate noise.

Traffic/Transportation

In its pre-application meeting with the MEPA Office on the Project, NEP discussed the potential diesel vehicle traffic generated by the project, and the MEPA Office concurred that due to the intermittent nature of the Project and that it would be constructed over a 13-mile area, it was not possible to calculate with precision the number of truck trips in specific areas over any given period of time, but that it was reasonable to conclude that the volumes would fall well below the threshold of 150 average daily trips (adt) of diesel vehicle traffic over the duration of a year. This was reflected in the EENF and the Designated Geographic Area (DGA) was not raised in EENF Certificate. However, in the DEIR Certificate, the Secretary has requested further clarification. As described below, NEP has re-confirmed that diesel vehicle traffic will remain well below the threshold of 150 adt of diesel vehicle traffic at any specific location over the duration of a year and that a one mile DGA remains appropriate for the Project.

For the proposed Project, there will be construction-related traffic during the proposed construction period for each phase. Access to the ROW for construction equipment will typically be gained from public roadways crossing the ROW in various locations along the route and adjacent existing off-ROW access roads. Because each of the construction tasks will occur at different times and locations over the course of construction, traffic will be intermittent at these entry roadways and areas along the ROW.

Construction of the Project will occur in phases over an approximately three-year period. The proposed work is outage dependent and will not occur at a singular location, but rather extend across approximately 13 miles and through numerous communities and municipalities. Accordingly, truck traffic will vary based on the location and phase of work, but will remain well below the threshold of 150 adt of truck traffic over the duration of a year or more at any specific location.

Traffic will consist of vehicles ranging from pick-up trucks to heavy construction equipment, to large trailers delivering materials. Traffic volume during construction will not significantly affect existing traffic volumes, adversely impact the ability of existing traffic to safely navigate the roadway, or result in any significant environmental or public health impacts or disproportionate impacts on EJ Communities.

NEP reaffirms the information provided in the EENF that new truck traffic for the proposed work will not exceed the threshold of 150 adt over a duration of one year or more.

3.3.1 Conclusion

The analysis concludes that while there *may be* an existing *unfair or inequitable burden* experienced by some of the EJ Populations within the DGA, the Project will not create any disproportionate adverse effect and will not materially exacerbate any existing unfair or inequitable environmental or public health burden impacting the EJ population nor any other residents within the DGA.

The FEIR reaffirms that the short-term environmental or public health impacts of the Project will be mitigated, and that there are no long-term environmental or public health impacts. The Project generally minimizes impacts on all populations by refurbishing an existing transmission line within an existing transmission line corridor. Because of this, the Project does not result in any significant long-term environmental or public health impacts for any populations, including EJ Populations. Temporary and permanent impacts from pre- and post- construction will be mitigated through best management practices. Therefore, construction period activities will not result in any adverse or public health impacts to any population.

The Project will provide residents with numerous benefits, including more reliable and safe electricity transmission.

Section 4
Land Alteration

This Section addresses comments in the Certificate Scope associated with land alteration within the Project Area. As noted in the DEIR, the Project is located within an active transmission line ROW easement that varies in size from 200-400 feet wide. The ROW supports one to three separate utility lines ranging from 69kV to 115 kV. The E131 line runs for approximately 11.4 miles within Massachusetts. Within the larger ROW easement, there is a cleared and actively maintained portion of the ROW. The maintained portion of the E131 ROW varies from 150-200 feet wide, depending on if there are multiple circuits running parallel or not within the single ROW. Although work is taking place along 11.4 miles of ROW and at each of the existing transmission line structures, the overall disturbance and construction activities will not take up the entire area of the maintained ROW or easement. Land alteration associated with the Project is associated with the development of access roads and works pads and the conversion of forested land along the edges of the ROW associated with this access and work pad development.

4.1 Summary of Land Alteration

Total land alteration for the proposed Project will be approximately 62.5 acres, which includes the development of access roads, work pads and pull pads. Table 4-1 provides a summary of land alteration impacts associated with the proposed Project.

TABLE 4-1
Summary of Proposed Land Alteration

Impact Type[1]	On ROW (ac)	Off ROW (ac)
Existing access road maintenance	4.22	4.07
New Access Road Development	25.34	0
Work pad and Pull Pad Development[2]	39.57	0
Tree Removal	8.41	2.9

[1] Note that impacts are not additive within columns as activities may overlap.

[2] Reflects total limit of disturbance for work/pull pad development and not permanent footprint of work and pull pads.

4.2 Land Alteration from Tree Removal

To provide a safe area for construction, future maintenance, and operation, and to ensure the reliability of the E131 line, NEP will remove trees in select locations along the edges of the existing ROW and off-ROW access routes to facilitate the development of access roads, work pads, and pull pads for the Project. No tree removal is specifically proposed to just widen the exiting maintained limited of the ROW.

In order to facilitate this development approximately 11.3 acres of trees will need to be removed over the 11.4 miles of ROW in Massachusetts. The areas of tree removal are

identified on the ER mapping provided in Appendix B. Areas of tree removal will be developed into gravel work pads, access routes, or graded areas. Areas of pull pads to be removed, approximately 0.4 acres, will be allowed to revegetate naturally providing beneficial edge/early successional habitat.

During the EENF review and issuance of the Certificate, it was brought to NEPs attention that there may be areas of old growth forest within the E131 easement, particularly in the area of the Monroe State Forest. NEP has coordinated with DCR to understand the locations of potential old growth forest, but due to the sensitive nature of the information DCR could not share the exact locations. Based on the general area of potential old growth forest and our proposed work areas we believe areas of potential old growth forest within the E131 area will not be impacted, as no tree removal outside of the maintained width of the ROW is proposed in these locations. NEP has provided all the mapping and shapefiles for the Project to the DCR forester for the area to evaluate the known locations of old growth forest with regard to the proposed work locations.

Removal of large diameter trees in the Monroe State Forest will be limited to the maximum extent practicable. The proposed tree removal areas are located within the limits of work only where removal is proposed, no matter if large or small diameter. NEP forestry professionals will take care in avoiding cutting large diameter trees within and along the edges of the proposed work areas where feasible. The health, proximity to the ROW, and proximity to proposed grading will be assessed to determine if the tree should stay or be removed.

As noted in the DEIR, NEP has reduced the estimated extent of tree removal from 17.6 acres to 11.3 acres. Re-assessment or tree removal areas, coupled with field reviews, allowed NEP to determine more precisely where tree removal would be required to ensure conformance with the appropriate vegetation management operating criteria within the ROWs, and where trimming, pruning, or other management techniques would be sufficient. During vegetation management activities, NEP will preserve lower growing shrubs along the ROW, and in areas not proposed to be developed for access or work pads. Where work areas and access are required in wetlands, NEP will not mow or trim herbaceous vegetation and preserve shrubs and woody vegetation, except in cases where more robust woody vegetation will impede matting placement. No tree removal is proposed within vegetated wetlands.

4.3 Land Alteration from Construction Activities

NEP requires safe and reliable access to each transmission structure for equipment and crews to clear and grade the work areas, create a stable work platform, install structures, and string the overhead wires. In order to achieve this, some new within-ROW and off-ROW permanent impacts are required, including the re-establishment/improvement of access, and creation of permanent work areas. The proposed project will primarily be located within previously disturbed areas (i.e., areas previously cut/graded/matted, etc.), and limited in areas that have not been previously disturbed. The only alternation to areas not previously disturbed will be in areas within the ROW requiring tree removal to create access routes, work pads, and pull pads.

Access Improvements within-ROW

Environmental and construction planning specialists with NEP have carefully evaluated access routes to ensure that necessary safety and accessibility factors are considered and

impacts to sensitive resources are avoided, where practicable, and minimized where impacts are unavoidable. NEP will establish the physical access required to construct, inspect, and maintain the E131 line through improvement of existing or historic accessways, temporary placement of construction mats, and construction of new access where necessary. Existing and proposed access routes are shown on the ER mapping in Appendix B.

Access routes are categorized as Type R and S existing access to be maintained, or designed Type 1-5 routes as shown on the ER mapping in Appendix B. Designed Roads range from relatively flat to steep, or challenging terrain where erosion of the constructed gravel access could be a risk. Designed Roads have been optimized to minimize cut/fill to the extent feasible and consider management of stormwater runoff, including construction of stormwater BMPs, as appropriate.

Where access currently exists, the travel lane is generally 8-feet wide (or less). Access for construction vehicles anticipated for the Project will generally require a 12 –foot wide travel lane, but the constructed footprint may be wider in some locations to accommodate side slopes and stormwater management features such as swales, stone check dams, water bars, or other BMP measures.

Off-ROW Access Improvements

Where access to structures cannot be obtained on ROW due to challenging terrain or avoidance of environmentally sensitive areas, select off-ROW access improvements are proposed. These off-ROW routes are all existing pathways ranging from 10-foot wide trails to 6-8 foot wide paths. Existing access routes will be utilized in ways that avoid or minimize disturbance to wetland resources to the extent feasible, to follow the existing contours of the land as closely as possible, and where practicable, to avoid severe slopes. Consistent with within-ROW access routes, off-ROW access routes will generally be 12-feet wide, but the extent of earthwork associated with access construction may be wider in some locations to accommodate grading and stormwater BMPs.

NEP plans to upgrade several existing off-ROW access routes, but is not planning to construct completely new off-ROW access routes to the ROW. While off-ROW access will be designed in coordination with the property owners, most will be constructed of gravel, construction mats, or a combination thereof depending on site specific conditions.

Construction of Work Areas and Staging/Laydown Areas

As stated in the DEIR, work pads will be placed at structures where work is proposed. Work pads are necessary to accommodate the removal of existing structures, installation of new or replacement structures, and their appurtenant features. Similarly, pull pads are being used to install select sections of new conductor, but primarily for OPGW. Pull pads are necessary to stage equipment being used to install new conductor and OPGW by pulling it from one structure to the next (see Appendix B: ER mapping).

Work pad development will depend upon site topography and existing conditions at each structure location. Where site topography and stability of existing ground allows, work areas will be overlain with gravel with minimal grading. Where topography is steeper or the ground surface is unstable, work areas will require grading and the placement of stone (gravel) to provide a stable work surface. Within BVW or IVW, no grading will be conducted, and temporary matting will be placed to create a stable and safe work surface. Where construction matting is placed in BVW, RA or BLSF, this will be removed once

construction is complete. Outside of sensitive wetland resource areas, work areas will remain in place to provide permanent work platforms for future maintenance/ emergency work.

Installation of Foundations and Structures

Rebuilding the existing E131 line requires replacing primarily wood H-frame structures, and some steel lattice towers, with engineered steel H-frame structures. The new structures will be self-supporting (direct embedded) or supported by concrete caisson foundations. Alternative foundation types such as helical piles, steel vibratory caisson foundations, or micro pile foundations may be utilized if warranted by site conditions or other factors.

4.4 Construction Best Management Practices

NEP has established procedures that employees accessing and performing construction and maintenance activities on distribution and transmission ROWs must follow. These are collectively referred to as BMPs and are discussed in EG documents such as EG-303 (Appendix E).

Construction BMPs involve the uniform application of practices and procedures to be implemented throughout the construction phase of the Project which avoid or minimize impacts to environmental resources. Per existing NEP Policy, an Environmental Field Issue (EFI) will be developed for the Project. The EFI provides a single, comprehensive document that outlines permit conditions and requirements for the Project. A copy of the EFI is kept on file at the NEP office and at the site trailer and/or site supervisor's vehicle. The EFI details the scope of the Project, approved access routes, permit deliverables, sensitive areas to be avoided, detailed soil erosion and sedimentation controls, notifications and expiration dates, a list of Project contacts, training requirements/documentation, a copy of EG-303 (see Appendix E), permit application plans, and copies of all permits.

Contractors and environmental monitors will be required to participate in EFI training before beginning work on site. In accordance with a schedule specified in the EFI, regular construction progress meetings will provide the opportunity to reinforce the contractor and crew awareness of these matters.

Section 5
Rare Species

5.1 Background

The Project ROW contains Priority/Estimated Habitats for seven NHESP state-listed species, consisting of five plants, one invertebrate, and one fish species. Of the five plant species, only three species are of concern based on the location of proposed activities and consultation with NHESP. NEP regularly maintains the upland portions of these Priority/Estimated Habitats within the ROW, per the approved NHESP VMP[4] and the OMP[5]. The three species of concern are all facultative wet to obligate species that are located in vegetated wetlands.

Temporary impacts are proposed within these areas of mapped Priority and Estimated Habitats. Approximately 4.5 acres of impacts (access routes, work pads, matting) are located within mapped habitat based on available NHESP data layers. Of that, 1.67 acres of proposed work will directly impact species, based on and identified through consultation with NHESP and botanical surveys within the proposed Project area. All anticipated impacts (1.65 acres) to species confirmed to be present within the Project area will result from the temporary placement of construction matting for the construction of temporary access roads and work pads as necessary to support construction. All work proposed within rare species habitat is located within the ROW.

5.2 Summary of NHESP Consultations

NEP initiated pre-consultation discussions with NHESP for the Project on February 9, 2022, and November 11, 2022, prior to submission of the EENF to the MEPA Office in January 2023. Since introducing the Project to NHESP, NEP has maintained ongoing discussions with the Agency regarding the type and extent of impacts that will occur in mapped Priority Habitats. NEP submitted a MESA Project Checklist to NHESP on April 17, 2023. NEP met again with NHESP post checklist submission to review potential mitigation measures for impacts around the Adams Substation. NEP coordinated internally and with NHESP to develop a phased matting plan for the area of concern, focusing impacts outside of the growing season. A final determination from the MESA Checklist review was received on October 26, 2023 (NHESP File No 23-1106). Based on NHESP review of the proposed project it was determined the proposed Project will result in a Take of one of the three

[4] NEP has historically cooperated with state Natural Heritage programs to protect known sites where Endangered, Threatened, and Special Concern species (state-listed species) are known to occur. NEP recognizes the importance of the MESA, M.G.L. c. 131A, and its significance to right-of-way vegetation management and complies with all applicable portions of this act and the regulations promulgated there under. 321 CMR 10.14, MESA regulations, Part II Exemptions and 333 CMR 11.04(3) (a-c) exempts utility rights-of-way vegetation management from the permit process provided that the management is carried out in accordance with a VMP approved in writing by the NHESP prior to the commencement of work. NEP and contract personnel follow the appropriate vegetation management treatment methods within these sensitive areas, taking all practical means and measures to modify right-of-way vegetation management procedures to avoid damage to state-listed species and their habitat.

[5] NEP implements an annual OMP, reviewed and approved by NHESP. NEP performs all maintenance work in accordance with the MESA regulations (321 CMR 10.14(7)), which exempts certain Projects and activities from review that include "routine operation and maintenance are part of an operation and maintenance plan approved by the Division of Fisheries and Wildlife."

state-listed species due to the duration of construction matting. NEP is preparing a CMP for the proposed activities and continues to coordinate avoidance, minimization, and mitigation measures with NHESP.

5.3 CMP Performance Standards

The Performance Standards for the issuance of a CMP are set forth at 321 CMR 10.23(2)(a) through (c) and are addressed below.

(a) The applicant has adequately assessed alternatives to both temporary and permanent impacts to State-listed Species;

As provided in the DEIR, a robust alternatives analysis has been conducted for the Project. As the proposed activities are being implemented specifically to upgrade existing utility lines in existing ROWs, there are no alternatives for relocating the Project. A no-build alternative would not serve the Project purpose for continuing reliability of the region's electric system. Therefore, avoidance and minimization has been achieved by considering access route alternatives within the ROW, size of work areas, use of temporary construction matting, time of year considerations, and construction methods used.

(b) An insignificant portion of the local population would be impacted by the Project or Activity;

Though the Project is expected to result in a "Take" due to work proposed during the growing season, the proposed project is not anticipated to result in a loss of suitable habitat. If necessary, either individual plant species will be transplanted to reduce impacts to the local population or seed collection will take place and replanted on site post construction.

(c) The applicant agrees to carry out a conservation and management plan that provides a long-term Net Benefit to the conservation of the State-listed Species that has been approved by the Director, as provided in 321 CMR 10.23(5), and shall be carried out by the applicant.

To provide a net benefit to the local population, at NEP's request, a state-approved botanist will conduct a survey of the population two growing seasons following the removal of construction matting from the Project site. Depending on the post-construction findings, NHESP may require mitigation in the form of transplantation, seed distribution, and/or additional surveys.

5.4 Impact Avoidance and Minimization Measures

The following factors were considered during the design phase while evaluating options to minimize impacts to state-listed species within the Project Area:

- Mature fruit season of state-listed sedges (i.e., time of year (TOY) restriction)
- Field-identification and mapping of state-listed species
- Location of state-listed species in relation to access road and work pads
- Reduction of limit of work footprint
- Implementation of BMPs to protect habitats and water quality

NEP initiated discussions with NHESP in 2022, and the Project team has and will continue to coordinate impact avoidance and minimization strategies for the Project with NHESP. To minimize impacts to rare plant species, temporary construction matting will be used to cross mapped wetlands and rare species habitat. Minimization measures include air bridging and removal of mats between activities on-site. NEP cannot commit to avoiding construction activities during the growing season because of the outage schedule and sequence of work. Identified populations of rare plant species will be reflagged prior to construction by an NHESP-approved botanist, and care will be taken to avoid these populations. Additionally, seed will be collected from existing Bailey's sedge populations prior to construction to be used in the case that mitigation is required. Rare species areas will be monitored post-construction, per suggestion of NHESP, to evaluate growth habits and work-related impacts.

5.4.1 Construction Timing and Restrictions

The following construction restrictions will be maintained within state-listed species habitat:

1. Per the OMP, construction mats must be used for equipment access for work activities occurring in wetland habitat where state-listed species are present.
2. Per coordination with NHESP, construction mats will only be placed at the Adams Substation between October 1 and April 1 outside of the growing season of rare plant species.
3. If work is required during the growing season, construction matting will only be in place for a four (4) week maximum timeframe.
4. Construction matting will be limited to 16 feet in width.

5.5 Mitigation/Monitoring

Post construction monitoring and plant surveys will be performed for two growing seasons following construction to evaluate the impacts and/or success of these species post mat removal. If, during the post construction monitoring events, it is determined there was a long-term detrimental impact to the species, then mitigation in the form of transplantation and additional surveys will be required. Coordination with NHESP to determine additional measures as well as the plan for post construction monitoring will be completed for the proposed Project.

5.6 Conclusion

NEP is currently consulting with NHESP to meet MESA permitting requirements. All proposed BMPs discussed in the above paragraphs have been approved by NHESP for prior, similar projects, and NEP anticipated that these BMPs will contribute to the Project's avoidance and minimization measures. Based on current discussion with NHESP, although impacts will be avoided and minimized to the maximum extent practicable, without compromising the safety of Project construction and future maintenance personnel, a "Take" is anticipated for one protected species. NEP will continue to work closely with NHESP throughout the MESA process, including continued coordination and the preparation of a CMP for the species that will experience a "Take".

Section 6
Wetlands and Waterways

This chapter addresses elements of the Scope related to wetlands, waterways, and other water resources.

6.1 Updated Wetland Impact Assessment

The majority of impacts to wetland resource areas are temporary alteration that will result from the placement of construction matting for access and work pads. Overall, NEP anticipates temporary alterations to wetland resource areas to be moderate during construction and insignificant over the long-term. Temporary alterations are anticipated within BVW, Isolated Vegetated Wetlands (IVW), inland Bank, and RA. Permanent impacts within BVW and IVW include fill associated with structure installation and removal. NEP is not proposing to construct permanent access or work pads within BVW, IVW, inland Bank and LUWW but is proposing some permanent alterations in RA, and Buffer Zone associated with proposed grading and other access improvements.

A detailed summary of impacts to state and locally jurisdictional resource areas is presented in Table 6-1. This is followed by a breakdown of these impacts by municipality in Table 6-2. Permanent impacts to BVW are detailed in Table 6-3. Details of NEP's efforts to provide avoidance, minimization, and mitigation measures are provided in the following sections.

TABLE 6-1

Detailed Summary of Resource Area Impacts

Activity[1]	**Impact Area (SF)[1]**							
	BVW/IVW		**BLSF**		**200-foot RA**		**100-ft Buffer Zone**	
	On ROW	**Off ROW**	**On ROW**	**Off ROW**	**On ROW**	**Off ROW**	**On ROW**	**Off ROW**
Access Roads (R/S)	0	0	0	0	6,245	0	91,960	29,260
Access Roads (1-5) LOD[2]	0	0	0	0	74,415	0	276,625	27,910
Work Pads[2]	0	0	0	0	44,635	0	276,140	0
Pole Installation	660	0	0	0	0	0	1,280	0

Matting (Temporary)	567,550	31,565	3,230	0	20,195	2,770	215,800	21,380
Total Temporary	599,115 sf (13.75 ac)		3,230 sf (0.07 ac)		139,370 sf (3.2 ac)		237,175 sf (5.44 ac)	
Total Permanent	660 sf (0.02 ac)		0		6,245 sf (0.14 ac)		703,180 (16.14 ac)	

[1] Impacts may overlap across resource areas.
[2] Access roads (1-5) and work pads will be restored to existing conditions within Riverfront Area.

TABLE 6-2
Cumulative Resource Impacts by Municipality

Municipality	BVW/IVW		BLSF		Riverfront Area		Buffer Zone	
	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm
Adams	125,075	85	3,230	0	3,005	0	41,820	211,525
North Adams	34,305	85	0	0	730	2,655	23,255	60,750
Florida	271,185	385	0	0	87,045	3,590	107,980	222,995
Monroe	168,550	105	0	0	51,365	0	64,120	207,910
Total sf[1]	**599,115**	**660**	**3,230**	**0**	**142,145**	**6,245**	**237,175**	**703,180**

[1] Impacts may overlap across resource areas.

TABLE 6-3
Summary of Proposed Permanent Fill Locations within Wetlands

STR #	Town	Map Page #	Impact Type	Size (SF)
24	Monroe	35	Replacement Pole located in wetland – direct embed (43" diameter x2)	20 sf
43	Monroe	30	Direct Embed pole located in wetland – transition to concrete caisson (6.4' diameter x2)	65 sf
60	Monroe	26	Replacement Pole located in wetland – direct embed (43" diameter x2)	20 sf
79A	Florida	22	Switch gear installation – permanent stone apron (10x30)	300 sf
80	Florida	22	Replacement Pole located in wetland – direct embed (43" diameter x2)	20 sf
145	Florida	8	Replacement pole located in wetland – concrete caisson (6.4' diameter x2)	65 sf

TABLE 6-3
Summary of Proposed Permanent Fill Locations within Wetlands

STR #	Town	Map Page #	Impact Type	Size (SF)
150	North Adams	7	Direct Embed pole located in wetland – transition to concrete caisson (6' diameter x2)	65 sf
151	North Adams	7	Replacement Pole located in wetland – direct embed (43" diameter x2)	20 sf
169	Adams	3	Replacement pole located in wetland – concrete caisson (6.4' diameter x2)	65 sf
172	Adams	2	Replacement Pole located in wetland – direct embed (43" diameter x2)	20 sf
Total				**660 sf**

6.1.1 Vernal Pools

On September 6, 2023, a Tighe & Bond Wetland Scientist visited the Site to evaluate and delineate each certified and potential Vernal Pool identified on MassGIS as well as those identified by Tighe & Bond during resource area delineations along the ROW. The jurisdictional status of these areas was evaluated relative to local, state, and federal criteria. Certified Vernal Pools were delineated in accordance with the definition set forth at 314 CMR 9.02. Potential Vernal Pools were evaluated in conformance with MassWildlife's "Guidelines for the Certification of Vernal Pool Habitat" and "Guidance on the Field Identification of Vernal Pools When Dry."

Two Certified and one Potential Vernal Pool were delineated and have been identified within the E131 Line easement. Detailed descriptions of existing conditions at each Vernal Pool at the time of evaluation will be provided to MassDEP as they review the Section 401 Water Quality Certification application. No direct impacts to Certified or Potential Vernal Pools are proposed, and no indirect impacts are anticipated as a result of the proposed Project.

6.2 Avoidance, Minimization, and Mitigation

Throughout the planning and preliminary design process, NEP has incorporated measures to avoid and minimize potential wetland impacts to the greatest extent possible. Whenever feasible, NEP sited proposed structures in proximity to the existing structures being removed or has relocated structures from wetlands into upland areas. NEP will use existing ROW access routes wherever possible and is proposing upgrades in upland portions of wetland resource areas (Riverfront Area, BLSF) only where required to meet the requirements of construction vehicles and equipment that will be used to construct the Project. Using delineation and survey data, NEP designed access and work areas to avoid the most sensitive wetland resource areas throughout the ROW wherever possible. Specifically, NEP has planned wetland crossings to take place within existing previously disturbed routes (previously matted or disturbed via ATV use) to reduce impacts to previously undisturbed wetlands and rare species habitat. As the Project design evolved, the engineering team coordinated with environmental and construction team members to refine construction techniques to further reduce impacts. Avoidance and mitigation

measures associated with Project work in wetland and waterway resources are detailed below.

6.2.1 Best Management Practices

Wetland Crossings

When crossing or working in wetland resource areas and the 100-Foot Buffer Zone, NEP will undertake the measures described below, as appropriate, to minimize wetland impacts:

- Install, inspect, and maintain temporary soil erosion and sediment (E&S) controls and other applicable construction BMPs around work in or adjacent to wetlands. E&S controls are installed to minimize the potential for erosion and sedimentation, mark the limits of wetlands, and restrict crew access, as appropriate.
- Install temporary construction matting for access across wetlands to reduce soil disturbance, vegetation loss, and protect water quality, where necessary.
- Restore wetlands, after refurbishment, to pre-construction configurations and contours to the extent practicable.
    - If the rutting from temporary construction matting is greater than approximately six inches deep, these areas will be restored to reestablish existing topography and maintain existing wetland hydrology.
- Comply with the conditions of local, state, and federal permit conditions related to wetlands.
- Avoid or minimize access through wetlands to the extent practicable. Where access must be improved or developed (such as in Riverfront Area, BLSF or the Buffer Zone), the access would be designed, where practical, so as not to interfere with surface water flow or the functions of the wetland.
- Refuel construction equipment (apart from equipment that cannot practically be moved) 100 feet or more from a wetland (e.g., a dewatering pump). If refueling must occur within a wetland, secondary containment will be provided.
- Store petroleum products over 100 feet from a wetland or waterway.
- Restore structure work sites in, and temporary access ways through wetlands following the completion of line installation activities.
- Prior to moving to other work locations, remove plant matter, soil, or other harmful material from equipment and construction matting when working at the sites containing invasive species.
- During structure replacement, any excavated material will be temporarily stockpiled next to the excavation; however, this material will not be placed directly into resource areas. If the stockpile is near wetlands, it will be enclosed by staked straw bales or other erosion controls. Additional controls, such as watertight mud boxes will be considered for saturated stockpile management in work areas in wetlands (i.e., placed on construction mats) where sediment-laden runoff would pose an issue for the surrounding wetland. Following the backfilling operations,

excess soil will be spread over unregulated upland areas or removed from the site in accordance with NEP policy.

Riverfront Area

When working within RA, NEP will implement appropriate BMPs, including sediment and erosion controls, to ensure that the adjacent and overlapping resource areas are protected. Sediment and erosion controls will be installed around work areas, or between work areas and adjacent vegetated wetland resource areas, to minimize the potential for run-off. Sediment and erosion controls will also perform the secondary function of marking the limit of work. Controls will be regularly inspected and maintained until the site has reached final stabilization.

If necessary, any areas where vegetation has been impacted will be seeded with an appropriate wetland seed mix (if natural regeneration is not sufficient to restore vegetation cover). Over time, RA will return to scrub-shrub habitat or another non-forested habitat and in the short term may also include active seeding with either an annual ryegrass or conservation seed mix and straw mulch.

6.2.2 In Situ Restoration of Temporary Wetland Impacts

NEP will provide mitigation for temporary wetland impacts via in-situ restoration. Restoration measures will include restoration of the soil surface (addressing rutting resulting from mat placement), post-mat-removal inspections, seeding and mulching, removal of erosion controls, invasive species control, and post-restoration inspections.

Construction Mat Removal

Once construction mats are removed, environmental monitors will inspect wetlands for buildup of soil or other materials that may have fallen through the construction matted access/work area. Environmental monitors will inspect wetland crossings carefully as mat removal is occurring to ensure any materials on top of the mats are properly removed and disposed of outside of wetland resource areas. The environmental monitor will conduct a follow up inspection within five business days of construction mat removal.

Restoration of Soil Surface

Although construction mats displace the weight of equipment, depressional grooves (i.e., rutting) in the wetland soil may still result. It is important to note that rutting is not the normal circumstance that results from the use of construction mats. The extent of this temporary impact is a direct function of many factors, including, but not limited to soil texture; soil saturation levels; and time of year. If the rutting is greater than approximately six inches deep, NEP will carefully re-grade or back-blade these areas to reestablish pre-existing topography and maintain existing wetland hydrology and seed bed.

Seeding and Mulching

Where root and seed stock are absent within disturbed sites, NEP will stabilize these areas by applying a regionally appropriate seed mix and mulching with straw to reduce erosion and visual impact as soon as possible following completion of work at the site. Seed mixes for RA or Buffer Zone would be different than seed mixes for vegetated wetlands. Wetland areas where adequate root and seed stock are absent will be seeded using a regionally approved wetland native seed mix. Seed mixes will meet NEP specifications for weed-free requirements.

Removal of Erosion Controls

Following restoration and stabilization of soil surfaces, NEP will remove erosion control barriers. NEP will remove and dispose of strings and stakes from straw bales. Crews will break up and lightly scatter straw bales as mulch. Siltation fencing, strings, and stakes will be removed and disposed of as ordinary waste. Wattles will be cut open, the mesh removed, and the wattle material spread as a soil stabilization measure. Where required based on grades and soil disturbance, NEP will leave erosion controls in place until suitable vegetation is established, as required by EG-303 and NPDES Construction General Permit, to prevent erosion into downgradient resource areas.

Post-Restoration Inspections

The environmental monitor will inspect restored areas within 90 calendar days following restoration, during the growing season, to ensure there are no noticeable adverse effects to the plant community, soil characteristics, and micro-topography. Environmental monitors will monitor for the presence of non-indigenous invasive species where the wetlands were not dominated by such invasive(s) prior to construction. Should the environmental monitor observe adverse effects, NEP will perform additional corrective actions, such as hand grading, seeding, or mulching. NEP will work with each community's Conservation Commission or authorized representative (i.e., Agent), as well as MassDEP and the USACE to ensure observed restoration complies with all performance standards in applicable wetlands regulations, permits, as well as each municipal Order of Conditions.

Invasive Species Control

During construction, construction mats will be certified clean of plant material prior to installation. Immediately upon removal of construction matting, and again following final restoration, the footprint of work areas within wetland resource areas will be inspected for the presence of non-indigenous invasive vegetation not previously observed within each wetland. During the 60-day post-restoration inspection period, should any such invasive vegetation be encountered during inspections, the following controls will be implemented by the environmental monitor, NEP, and/or their contractors:

- Young plants that may have become established during Project construction will be pulled by hand or dug up if the plant is not too big and the infestation is limited in areal coverage. Hand pulling or digging may be effective on small, very young plants or for a single specimen, but is not effective or practical once a stand becomes established. Crews will only remove vegetation by hand if the entire plant, including the root mass, can be easily removed with limited alteration to wetland soils.

Depending on the species, the extent of colonization, location, the presence of other non-invasive plants, the sensitivity of an area, and other factors, glyphosate or other appropriate herbicide applications may be sprayed or applied by a wicking device. Any herbicide application will be conducted by a Massachusetts licensed herbicide applicator in accordance with the applicable regulations.

6.2.3 Compensatory Mitigation for Permanent Wetland Loss

Wherever possible, NEP has attempted to avoid or minimize wetland impacts, in accordance with the MA Inland Wetland Replication Guidelines. Measures including minimizing the size of work areas within wetlands, moving work pads to reduce wetland impacts, and adjusting pole replacement locations to avoid wetland areas, were

implemented to reduce the area of wetland impacts as far as practicably possible. However, in some areas, wetland impacts are unavoidable.

To mitigate unavoidable loss of wetlands associated with structure and switch gear ground grid installation in BVW, NEP proposes to provide appropriate wetland mitigation in collaborative consultation with local, state, and federal resource agencies. To offset permanent wetland impacts (660 sf) a 700-sf wetland replication area was originally proposed within the E131 ROW along the perimeter of the wetland mapped between existing Structures 81 and 82, close to the proposed new switch structure 79A where the majority of the permanent wetland impacts are proposed. However, initial comments provided by MassDEP instructed that the replication area should be located outside of the maintained portion of the ROW. Accordingly, Tighe & Bond wetland scientists identified an alternate location along Main Road in Monroe near Structure 26, which is adjacent to Wetland 125 and situated within an unmaintained portion of the utility ROW.

The site was selected due to the well-established wetland characteristics (hydrology, vegetation, and soils) observed in Wetland 125, which are anticipated to contribute to the successful development of an adjacent replication area. Additionally, disturbance resulting from replication activities at this site will be minimal, as it will require little grading, no removal of mature trees, and can be accessed directly from the roadway. Activities proposed to restore the wetland replication area will include:

- Grading to match existing elevations within Wetland 125
- Addition of organic-rich topsoil, consisting of re-used hydric soils from disturbed Project areas or imported, weed-free soils.
- Application of a regionally appropriate wetland seed mix
- Planting of native shrubs and/or trees

Section 7
Chapter 91

7.1 Stream Crossings

NEP is proposing to span perennial and intermittent streams with temporary construction matting, or equivalent, where access is required across streams. Impacts to inland Bank associated with these spanned crossings will be minimal, if at all, as mats should span the limits of inland Bank. Please refer to NEP's BMP details in Appendix E for a depiction of typical construction mat placement, anchoring, and water spans. Mats will be removed as soon as construction is complete, and any disturbance (e.g., loss of vegetation due to shading, or ground disturbance from mat placement/recovery) will be restored and stabilized. If vegetation cover has been impacted, the area will be seeded with an appropriate wetland conservation seed mix and monitored until restored to pre-construction conditions.

As previously noted in Section 5 of the EENF, there are 11 perennial streams and one jurisdictional intermittent stream located within the E131 ROW. The channels are generally well defined with vegetated banks consisting primarily of shrubs and limited tree cover. Many of the streams are located within deep ravines along the ROW. The E131 line was built in 1925 and has not been substantially altered since that time. As such, the existing line is exempt from licensing under 310 CMR 9.05(3)(c) and (f). The proposed work (line and temporary crossing) at each of the crossings is maintenance work on an existing utility line that will not reduce the height of lowest electric cable, will not alter the alignment of the crossing or otherwise affect navigability or other Chapter 91 interests. The use of construction mats to span the streams is a best management practice employed to protect the stream and banks as part of the maintenance work. As such, the work is exempt from further Chapter 91 approvals under the maintenance provisions of 910 CMR 9.05(3)(a) and 910 CMR 9.22(1).

7.2 MassDEP Coordination

Based on comments received from MassDEP on the EENF (dated 3/10/23), NEP has consulted further with MassDEP on the applicable Chapter 91 requirements for the Project. NEP has contacted MassDEP concerning the Project and the use of construction matting to temporarily span the streams as a Best Management Practice (BMP) and will continue to coordinate with MassDEP as needed through the permitting stage of the Project.

Section 8
Open Space

8.1 DCR Parcels

The Project has been designed to utilize existing access wherever feasible, however, coordination with DCR (currently ongoing) will be required for improving existing access and constructing new access roads and routes within State Forest lands. This activity is within NEP's existing easement rights. As is discussed in more detail in Sections 4.2 and 4.3 due to the complex, steep, and rocky terrain, proposed access routes were selected based on constructability, feasibility, and safety. In many areas, the most reasonable access routes are existing two-track "trails". These "trails" largely consist of maintained snowmobile tracks, which are nearly as wide as a typical motor vehicle roadway in some areas, historic forestry/logging roads, and farm roads.

The Project design reflects NEP's significant efforts first to avoid, and then to minimize adverse impacts to the land surrounding the Project site within DCR parkland to the extent practicable.

Along with a review of the proposed access routes NEP refined its assessment of tree removal locations. Factors such as existing open access routes, width of tree removal needed, assessment of proposed removal between routes, and site visits to confirm tree density were all evaluated to reduce the overall tree removal to 11.3 acres throughout the 11 miles of utility ROW and access within the Massachusetts project area. Approximately 7.7 acres of the proposed tree removal are located within DCR property, which is a reduction of approximately 5 acres since the assessment presented in the EENF.

Table 8-1 outlines the location of the state land the E131 line traverses, the length of the line within the state property, and the approximate extent of proposed land alteration. The E131 line was established prior to the development of the state lands and therefore is primarily located within said property as private landowners and NEP transferred ownership to the state.

TABLE 8-1
Project Areas Within DCR-managed state forests

DCR Property	Parcel Number(s)	Municipality	ROW Segment	ROW Segment Length	Area of Impact (acres)
Monroe State Forest	017-001	Florida	Entire ROW from STR 67 to STR 75	0.58 miles	15.4
	190/401-0037	Monroe	Entire ROW from STR 52 to STR 62	0.78 miles	
Florida State Forest	024-002	Florida	Entire ROW from STR 107 to STR 119	0.68 miles	5.1

Savoy Mountain State Forest	027-012	Florida	Entire ROW from STR 134 to STR 146	0.86 miles	15.3
	16-0-1	North Adams	Entire ROW from STR 147 to STR 151	0.33 miles	
	004/241.0-0000-0001.0	Adams	Entire ROW from STR 152 to STR 162	0.59 miles	
Total area of impact within DCR Land					**35.8**

8.2 Proposed Impacts

Table 8-2 outlines the scope of proposed land alteration within DCR-managed state forests, and Table 8-3 provides a detailed quantification of proposed impacts within wetland resource areas. Road types R and S will involve refreshing existing access roads with new gravel and no grading or widening is proposed. In areas of access road types 1-5 there is varying level of grading and access improvement due to topography and needs for construction equipment. All access roads will have a final drivable width of 12-feet.

TABLE 8-2
Summary of Proposed Land Alteration within DCR Land by Activity

Activity[1]	On ROW (ac)	Off ROW (ac)
Existing access road maintenance	2.23	2.7
New Access Road Development	13.81	2.85
Work pad and Pull Pad Development[2]	14.15	0
Tree Removal	5.25	2.45

[1] Note that impacts are not additive within columns as activities may overlap.

[2] Reflects total limit of disturbance for work/pull pad development and not permanent footprint of work and pull pads.

TABLE 8-3
Detailed Summary of Resource Area Impacts Proposed within DCR Land

Activity[1]	Impact Area (SF)[1]							
	BVW/IVW		BLSF		200-foot RA		100-ft Buffer Zone	
	On ROW	Off ROW	On ROW	Off ROW	On ROW	Off ROW	On ROW	Off ROW
Access Roads (R/S)	0	0	0	0	5,725	0	59,370	20,760
Access Roads (1-5) LOD[2]	0	0	0	0	54,070	0	143,515	24,550
Work Pads[2]	0	0	0	0	25,125	0	108,660	0
Pole Installation	170	0	0	0	0	0	385	0
Matting (temporary)	187,765	5,845	0	0	13,970	0	62,985	13,300
Total Temporary	193,610 sf (4.44 ac)		0		93,205 sf (2.14 ac)		76,285 sf (1.75 ac)	
Total Permanent	170 sf (0.003 ac)		0		5,725 sf (0.13 ac)		357,240 sf (8.20 ac)	

[1] Activities may overlap across resource areas.
[2] Access roads (1-5) and work pads will be restored to existing conditions within Riverfront Area.

8.3 Easements

The Project design reflects NEP's significant efforts first to avoid and then to minimize adverse impacts to the land surrounding the Project site within DCR parkland to the extent practicable. The locations where significant work and access improvement needs to be performed, NEP enjoys a right to access its ROW pursuant to its existing easements. All proposed work is authorized under NEP's existing easements and no new easements are proposed or required for the Project.

8.4 DCR Coordination Since DEIR

The Company has continued its consultation with DCR, which remains ongoing. The Company's view is that, considering the existing rights of the Company to access the E131 line ROW, no change in use or other disposition is proposed that would trigger Article 97, EEA's Article 97 Policy or the Public Lands Preservation Act (PLPA). Rather, the Company

intends to seek construction and access permits from DCR, which do not implicate Article 97. DCR has actively participated and continues to actively participate in these consultations and has not yet finalized its view on this subject. Should DCR ultimately be unable to issue any required permits because of Article 97, the Company will submit a notice of project change addressing compliance with Article 97, the EEA Article 97 Policy and the PLPA before commencing construction within DCR-owned property.

8.5 Ongoing Maintenance Plans

NEP, per the EG303 manual, will perform annual monitoring of roads and repairs as needed to meet the company specifications. Along with this effort, ongoing cyclical vegetation management will take place per the procedure outlined in NEPs Vegetation Management Program (VMP). The infrastructure along NEP's ROW's is surveyed annually either on foot or via aerial inspections to identify degradation, damage, and overall conditions of the utility lines. There will be review and oversight on the conditions of the ROW post construction to help NEP maintain its infrastructure.

Section 9
Climate Change Adaptation and Resiliency

NEP is committed to improving the resiliency of its transmission line system to the impacts of climate change. The Project is aligned with priorities in the MA State Hazard Mitigation and Climate Adaptation Plan ("SHMCAP") and the MA Climate Change Assessment ("MCCA") to ensure that NEP continues to provide safe and reliable electricity to its customers. The narrative below provides additional information on Greenhouse Gas, carbon analysis and mitigation options, as well as Climate Change resiliency as outlined in the Scope of the DEIR Certificate.

9.1 Carbon Impact Analysis

NEP's plans to improve the E131 line will require a) the cutting of approximately 11.31 acres of trees located primarily in the existing easement to accommodate construction activities; and b) the conversion of approximately 51.64 acres of exposed soil/low-growing grass/shrub to a mix of exposed soil, low-growing grasses, and gravel to ensure access.

From a GHG accounting perspective, the Project is likely to bring about the following changes.

- Approximately 3,375 U.S. tons of CO2e currently sequestered in live biomass, forest soil, dead wood, and litter may be released due to vegetation removal and/or soil disturbance.
- The conversion of vegetated habitat will reduce the rate of future GHG sequestration within the affected footprint resulting in a Project-related reduction in future carbon sequestration equal to 50 U.S. tons of CO2e.
- More than 150 U.S. tons of GHG will likely not be emitted because of Project-related increases in reliability; Project-related increases in grid resiliency represent an unquantified GHG benefit.

Thus, the Project is expected to result in no more than a 3,275 U.S. ton increase in CO2e emission over its 30-year lifespan.

Table 9-1, below, compares SWCA estimates of carbon standing stocks, by carbon pool, to those included in EVALIDator.

TABLE 9-1
Comparison of SWCA and EVALIDator carbon pool estimates

Carbon Pool	SWCA	EVALIDator MA state Average	EVALIDator: 2 miles around 42.66532, -73.05601	EVALIDator: 2 miles around 42.70087, -72.98282
Live Above Ground	36.4	40.9	35.9	46.7
Live Below Ground	7.7	7.6	6.4	7.8

Soil Organic Content***	30.9	67.1	82.1	79.8
Litter	17.6	15.8	15.4	17.1

Setting aside soil organic content, the value estimates used by SWCA are similar to those reported by EVALIDator.

The existing text discusses soil organic content in footnote 13. That footnote notes that Thompson et al. (2020) reports an acre of generic forest soil in Massachusetts may contain 124.4 U.S. tons of soil organic carbon; this is considerably more than the USFS (2018a) reports for mature hardwood forests in New England. Indeed, on pages 54 and 55 of their report, Thompson et al. note that the 124.4 estimate "is much higher than most other forest estimates from the region." They go on to site studies at the Harvard Forest in central Massachusetts and at the Hubbard Brook experimental forest in New Hampshire where soil organic content was more in line with USFS reports. Thus, we consider the soil organic content estimates put forward in USFS (2018a) to be indicative of the best available information.

Further, it is noted that uncertainty related to baseline soil organic content does not impart a material amount of uncertainty on estimates of overall GHG emissions. This is because, as discussed in the existing text, activities that expose sub-surface soils to the air, such as tree cutting, may result in the release of some carbon that would otherwise remain sequestered in the soil. Thompson et al. (2020) report that tree cutting associated with commercial forestry does not likely release carbon from forest soil and that this conclusion is consistent with the observation that, when measured, the carbon content of soils in yards did not differ from the carbon content of soils in forests adjacent to those yards. However, on Page 55 of their report, Thompson et al. also note that, in assuming commercial tree removal does not cause any release of carbon stored in forest soils, they may have understated potential carbon releases. This concern was based on "a metanalysis of harvest impacts on soil carbon in temperate forests worldwide [which] found that, on average, harvesting reduced soil carbon stocks by 8%, though the impacts can be ephemeral." Thus, the existing report already conservatively (i.e. tending to overstate potential GHG impacts) assumes that 8 percent of the at-risk carbon currently stored in forest soils will be released to the air because of the Project.

As reported in the SWCA Report, we used Catanzaro and D'Amato (2019) who estimate an average annual net carbon sequestration rate for Massachusetts forests of 1.66 U.S. tons of CO2e per acre which is equivalent to 1.51 metric tons of CO2e per acre which is not materially different from the 1.54 tons of CO2e per acre per year associated with FIA data.

9.2 Mitigation/ Carbon Benefits

9.2.1 Tree Planting Initiative

In response to the Secretary's directive that that "The FEIR should propose mitigation for this carbon impact, including through potential tree replanting…" (see pg 23 of the DEIR Certificate), NEP will fund a planting program to offset the CO2e emissions related to the tree removals required to safely construct the E131 Project improvements. NEP will partner with the Connecticut River Conservancy (CRC) to plant an equivalent number of

saplings to offset the estimated 3,375 U.S. tons of C02e emissions over its 30-year lifespan associated with the 11.3 acres of tree removals.

The CRC is a non-profit organization dedicated to restoration and advocacy efforts across the watershed of the Connecticut River and its tributaries. In 2023, the CRC's planting projects resulted in nearly 10,500 native trees and shrubs being planted, restoring roughly 26 acres of riparian land along the Connecticut River and several tributary streams.

NEP estimates that funding a program equivalent to the planting of approximately 1,650 mixed hardwood/softwood saplings will achieve the desired no net loss of carbon for the E131 Project over its 30-year lifespan.

Carbon sequestration was evaluated based on the following resources.

- *Standard estimates of forest ecosystem carbon for forest types of the United States*[6]
- *Climate Action Reserve's Climate Forward Reforestation Communities Data File*[7]

These resources were used to estimate the amount of carbon sequestered in the 30 years after clearcut harvest in the Northeast and to calculate carbon sequestration credits associated with reforestation efforts in 10 regions of the U.S., one of which is the Northeast.

9.2.2 Tree Bank and Wood Re-Use

A detailed analysis relative to Greenhouse Gas Emissions and the assessment of tree removal is provided in Section 10.2 of the DEIR. To address comments and determine the actual change in carbon emissions brought about by Project-related forest disturbance, NEP evaluated how the trees felled as a result of the Project will be used. This analysis identifies four potential fates for these trees.

1. Thirty one percent of Project-related forest disturbance is assigned the fate "wood retained by landowners."
2. Wood not retained by landowners may be taken to sawmills (or other commercial wood users) at the discretion of National Grid's vegetation management contractors. However, because National Grid does not require its contractors to remove marketable wood to sawmills or other commercial wood users, this assessment conservatively assigns this fate to none of the wood felled as a result of the Project.
3. Twenty-five percent of the Project-related forest disturbance is assigned the fate "donated for use as firewood."

[6] USFS, 2021. Standard estimates of forest ecosystem carbon for forest types of the United States. Available at: https://www.fs.usda.gov/nrs/pubs/gtr/gtr_nrs202.pdf. Accessed March 5, 2024.

[7] Climate Action Reserve. 2022. Climate Forward Reforestation Communities Data File. Available at: https://climateforward.org/program/methodologies/reforestation/. Accessed March 5, 2024.

4. Because of NEP's efforts to assure that, to the maximum extant practical, Project-related wood is used in some productive enterprise, only 46 percent of the trees felled is assigned the fate "left in place."

9.3 Heat Effects

The tree removal designs were refined prior to the DEIR filing to reduce the total amount of tree removal; updated tree removals are estimated at approximately 11.3 acres compared to 17.6 acres at the time of EENF submission. The revised tree removal designs were analyzed for potential for significant adverse effects on any residents within the DGA, including EJ populations. No properties abutting the ROW are located directly adjacent to tree removal activities, and there are no locations along the ROW where all trees between the property and the ROW will be removed. Therefore, shade should be sustained by the trees that will remain. The analysis concluded that the amount of tree removal does not disproportionately impact EJ populations, nor will it generate any significant adverse effects due to the overall distribution and concentration of tree removal activities throughout the entire DGA. The possible temperature change impacts of tree removal will be minimal to none given the reduction in overall tree removal, and the substantial remaining canopy.

Additionally, an analysis was conducted where the ROW experiences "Hot Spots" - areas that register the 5% Highest Land Surface Temperature Index within their respective Regional Planning Authority regions – according to statewide data by the EEA and the Berkshire Regional Planning Commission. There are a small number of locations along the ROW in North Adams and Adams that are near or adjacent to both EJ populations and Hot Spots. Please refer to Appendix D, to review the proposed tree removal in EJ block groups and Hot Spots within the one-mile DGA utilized in the analysis.

- Portions of the ROW overlap with both a Hot Spot and an EJ population in Adams, Rowe and Monroe but no tree removal activities will be conducted at those locations.
- In Florida, there are no areas of proposed tree removal within both a Hot Spot and EJ Population.
- In Adams, one Hot Spot overlaps with one EJ population; no tree removal will occur in the existing Hot Spot and approximately 0.02 acres of trees will be removed within approximately 1,915 feet from the Hot Spot in forested areas within the ROW.
- There is one location in Adams with a Hot Spot along the ROW within about 100 feet of an EJ population, but no tree removal activities will be conducted there. The closest tree removal is approximately 3,618 feet away.
- In Monroe, a Hot Spot overlaps with one EJ Population; no tree removal will occur at that location, but approximately 0.06 acres of trees will be removed approximately 5,300 feet away in forested areas, and approximately 0.08 acres of trees will be removed approximately 7.150 feet away in forested areas.
- In Rowe, a Hot Spot overlaps with one EJ Population; no tree removal will occur at that location, but approximately 0.20 acres of trees will be removed approximately 4,300 feet away in forested areas (that are located in Florida).

The analysis demonstrated that tree removal activities that will occur near EJ populations will be as minimal as those occurring along the whole ROW, and that there will be no disproportionate impact to EJ populations.

Since much of the land adjacent to the ROW is forested, the tree removal design represents an overall negligible impact on canopy cover.

9.4 Climate Resiliency

This Project is part of NEP's efforts to ensure the long-term longevity and reliability of the region's electrical infrastructure in the face of growing demand for electricity and the changing climate. The Project will result in a more climate-ready and resilient transmission system that can withstand more extreme weather events; address existing system capacity shortages and increased demand.

9.4.1 Precipitation Resiliency

Consistent with the guidance from the RMAT Tool, the Project will improve resilience to riverine flooding from a 2070 50-year (2%) storm event through design and material selection of foundations and structures that can withstand the effects of flooding. First, the replacement of wooden and steel structures with engineered steel structures will harden the infrastructure, making it more resilient to water damage and decay. The installation of structures reinforced with caisson foundations will also increase infrastructure resiliency, particularly in wetland resource areas increasingly susceptible to inundation. This foundation type, designed for wet environments, coupled with engineered structures, eliminates the need to elevate foundations above any particular base flood elevation as they can withstand inundation.

As part of the planning process for this Project, NEP reviewed data from the Resilient MA Climate Change Clearing House for the Commonwealth. This mapping suggests that the projected changes to the precipitation events in the easternmost portions of Adams and North Adams are slightly less than other areas of the state over a 10 to 20-year timeframe. Conversely, the portions of E131 line within the municipalities of Florida and Monroe are within areas of the highest potential change in precipitation events in the State. Within the Hudson Basin (i.e., the easternmost portions of Adams and North Adams), the projected change in inches of total precipitation over the next 10 to 70 years ranges from 2.63 inches to 5.60 inches. Within the Deerfield Basin (i.e., Monroe and Florida), these estimates range from 3.31 to 6.37 inches.

Proposed tree removal is also intended to improve resiliency to future storm events. Trees pose an additional risk to the resiliency of the existing lines and taps. Trees that are not specifically evolved to withstand prolonged periods of flooding are more prone to weakened stability and decay due to extended root and trunk submersion. Weakened and decayed trees pose a significant risk to utility assets because fallen trees and branches cause power outages, fires, and restrict access. Removing trees located within and along the ROW improves storm resilience by reducing outage risk and improves storm restoration response times. The proposed improvements to the ROW access routes and work pads will create a safer, more reliable network of travel surfaces that can better withstand flooding.

As noted in Section 6, there are no permanent impacts to BLSF associated with this Project.

The proposed Project is not anticipated to impact flood hazards in the area. The scope of the Project includes the construction of gravel access and work areas which are considered pervious. Stormwater BMPs included in the design serve to control stormwater runoff to protect against erosion and washouts of the constructed access areas; however, the Project is not anticipated to significantly change the hydrology of the watersheds along the ROW. New impervious area is limited to the foundations of certain structures and is considered negligible compared to the overall area of the Project.

The installation of stormwater management features (e.g., stone check dams, water bars, or other similar measures) will be installed as necessary. Civil engineering evaluation and design of the access has been provided for the Project specifically to evaluate drainage patterns following construction of the proposed gravel access in order to reduce potential for erosion and washouts during future storm events, including the 2070 50-year (2%) storm event. Lastly, the refurbishment of the E131 line will reduce the frequency at which future maintenance work and transmission line upgrades are needed. By reducing the likelihood of repeated impacts to environmentally sensitive areas there will be less disturbance to vegetation and soil thereby decreasing the potential of erosion, soil will be able to retain more water, and impacts to banks and wetlands will be reduced due to the use of temporary matting.

9.4.2 Temperature Resiliency

According to the EEA's Climate Change and Adaptation Report (the Report), increasing temperatures could increase energy demands in Massachusetts by 40 percent in 2030. Additionally, the Report indicates that projected increases in temperature can challenge the ability of electric infrastructure to meet peak electricity demands. Repair and maintenance work may take extended lengths of time, as repair personnel may experience difficulty working in protective gear in extreme weather events.

NEP has established standards which consider and provide contingencies for extreme weather, such as heavy ice conditions or high temperatures. The Project has been designed to incorporate these standards, and replacement structures will be better equipped to withstand extreme weather. New steel structures are designed with longevity in mind and are minimally impacted by corrosive environments. Furthermore, the new OPGW will provide a high-speed fiber optic connection between the Harriman and Adams #21 Substations. The new connection will alleviate existing communication constraints, improve response time, and bolster system wide reliability.

9.4.3 Extreme Weather Resiliency

The Project's engineering design used structure loading criteria required by the NESC and National Grid Design Loads for Overhead Transmission Structures. The NESC load criteria require consideration of combined ice and wind district loading, extreme wind conditions, and extreme ice with concurrent wind conditions. NEP's standards also include consideration and contingency for heavy load imbalances and heavy ice conditions. By installing improved foundations, more robust structures with improved lightning protection, and OPGW, the proposed infrastructure will be better suited to withstand strong winds and storm events. The installation of OPGW will allow better communication between substations, resulting in improved response time during storm-related emergencies and outages, which will improve public safety.

Tree removal improves storm resilience by reducing outage risk and improving storm restoration response time. Access improvements drastically improve storm restoration

response times. It can take days to locate a single tree-caused outage, clear the tree off wires, and restore the line when there is not safe equipment access during an emergency – this is currently the case for most of the Project's existing lines. Adding gravel and widening access surfaces will provide greater support for maneuverability of utility equipment.

Section 10
Draft Section 61 Findings and Mitigation

10.1 Introduction

In accordance with M.G.L. c. 30, Section 61 and 301 CMR 11.12(5), any State Agency that takes Action on a Project for which the Secretary required an EIR shall determine whether the Project is likely, directly or indirectly, to cause Damage to the Environment and shall make a finding describing the Damage to the Environment and confirming that all feasible measures have been taken to avoid or minimize the Damage to the Environment.

The Proposed Section 61 Findings below, the FEIR narrative, and Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) incorporate consultations with various state agencies. While NEP will continue to consult with certain agencies concerning mitigation, this FEIR contains the most up-to-date information on the Project's mitigation measures, including those to which NEP has committed and those under discussions with agencies. Each Section 61 Finding is essentially a stand-alone document, so it does not incorporate previously defined acronyms.

10.2 Draft Section 61 Findings

MassDEP Wetlands / Waterways, 401 Water Quality Certification

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, Monroe

Project Proponent: New England Power Company ("NEP")

EEA Number: 16663

Agency Action: 401 Water Quality Certification

NEP will seek a 401 Water Quality Certification from the Department of Environmental Protection (MassDEP) for the proposed E131 Asset Condition Refurbishment Project pursuant to M.G.L. 314 CMR 9.00.

Project Description: Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the Line E131 structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between the substations. As such, fiber optic ground wire (OPGW) is proposed to replace the existing shield wire. Based on

the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of six (6) triple pole structures
- Replacement of three (3) existing steel lattice structures with new steel structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure
- Installation of approximately 24 structures requiring concrete caisson foundations at locations which require greater structural reinforcement
- Installation of micropile foundations at one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor in four (4) sections for constructability purposes

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions of the line are currently inaccessible except by foot or utility terrain vehicles. Improvements to existing and the construction of new access routes are required to facilitate the Project.

MEPA Jurisdiction: Pursuant to M.G.L. c. 30 §61- §62A-I, of the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations at 301 CMR 11.00, the Proponent (NEP) has prepared and submitted this DEIR to the MEPA office. The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires State Agency Action and meets or exceeds one or more review thresholds. The Project exceeds the following ENF review thresholds:

- Land: 301 CMR 11.03(1)(b)(1) - *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(d) - *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(f) - *Alteration of one half or more acres of any other wetlands*

The Project exceeds the following ENF review and Mandatory EIR thresholds:

- Land: 301 CMR 11.03(1)(a)(1) – *Direct alteration of 50 or more acres of land, unless the project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*

- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(a)(1)(a) - *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
- Environmental Justice: 301 CMR 11.06(7)(b) – *Any project that is located within a Designated Geographic Area around an Environmental Justice Population*

Additionally, the proposed Project requires state permits from the Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Fisheries and Wildlife (Natural Heritage and Endangered Species Program, NHESP), Massachusetts Department of Transportation, and the Massachusetts Department of Conservation and Recreation. Additional State Agency Actions include consistency with EEA protocols.

Project Impacts: The potential environmental impacts of the Project have been characterized and quantified in the EIR, which is incorporated by reference into this Section 61 Finding.

Project Mitigation: Mitigation was considered as a matter of course during the planning and design process as an overall approach to avoiding impacts whenever possible. In terms of mitigation during construction, NEP has established best management Practices ("BMPs") that are to be followed by NEP employees and its contractors for accessing sites and performing construction activities on transmission ROWs. These BMPs ensure that this Project will be completed in accordance with applicable environmental laws and regulations, as well as with NEP policies and compliance objectives. NEP completed field investigations and a constructability review along the Project route to determine access routes and construction techniques to be implemented during construction of the Project to provide an accurate impact assessment and to design work to avoid and minimize impacts within wetlands and other sensitive resources (e.g., cultural resources) to the greatest extent practicable. Accordingly, commitments listed in Section 6 are to be carried out by NEP, to ensure that proposed wetlands and waterways mitigation strategies will be implemented as the Project proceeds.

The Proponent recognizes that the identification of effective mitigation, and implementation of that mitigation throughout the life of the Project, is central to its responsibilities under MEPA. Accordingly, the Proponent has prepared Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) that describes the mitigation that the Proponent would provide. The Proponent provides clear commitments to implement the mitigation measures, and provides a schedule for their implementation based upon Project phasing.

Findings: After the draft findings herein have been reviewed by the Massachusetts Department of Environmental Protection, and revised by the Proponent, as appropriate, MassDEP will make a finding that the foregoing information adequately describes the environmental impacts associated with the Project, and that with the implementation of the mitigation measures described above, practicable means will have been taken to avoid or minimize adverse environmental impacts subject to MassDEP authority. Implementation of avoidance, minimization, and mitigation measures will occur in accordance with the terms and conditions set forth in the 401 Water Quality Certification.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY_____ DATE_____

MA Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP)

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, Monroe

Project Proponent: New England Power Company ("NEP")

EEA Number: 16663

Agency Action: Conservation and Management Permit

NEP will seek a Conservation and Management Permit under the Massachusetts Endangered Species Act (MESA; 321 CMR 10.23) from the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP) for the proposed E131 Asset Condition Refurbishment Project pursuant to 310 CMR 10.00.

Project Description: Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the Line E131 structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between substations. As such, fiber optic ground wire (OPGW) is proposed to replace the existing shield wire. Based on the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of six (6) triple pole structures
- Replacement of three (3) existing steel lattice structures with new steel structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure
- Installation of approximately 24 structures requiring concrete caisson foundations at locations which require greater structural reinforcement
- Installation of micropile foundations at one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor in four (4) sections for constructability purposes

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions of the line are currently inaccessible except by foot or utility terrain vehicles. Improvements to the existing and the construction of new access routes are required to facilitate the Project.

MEPA Jurisdiction: Pursuant to M.G.L. c. 30 §61- §62A-I, of the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations at 301 CMR 11.00, the Proponent (NEP) has prepared and submitted this DEIR to the MEPA office. The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires State Agency Action and meets or exceeds one or more review thresholds. The Project exceeds the following ENF review thresholds:

- Land: 301 CMR 11.03(1)(b)(1) - *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(d) - *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(f) - *Alteration of one half or more acres of any other wetlands*

The Project exceeds the following ENF review and Mandatory EIR thresholds:

- Land: 301 CMR 11.03(1)(a)(1) – *Direct alteration of 50 or more acres of land, unless the project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(a)(1)(a) - *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
- Environmental Justice: 301 CMR 11.06(7)(b) – *Any project that is located within a Designated Geographic Area around an Environmental Justice Population*

Additionally, the proposed Project requires state permits from the Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Fisheries and Wildlife (Natural Heritage and Endangered Species Program, NHESP), Massachusetts Department of Transportation, and the Massachusetts Department of Conservation and Recreation. Additional State Agency Actions include consistency with EEA protocols.

Project Impacts: The potential environmental impacts of the Project have been characterized and quantified in the Draft EIR, which is incorporated by reference into this Section 61 Finding.

Project Mitigation: Mitigation was considered as a matter of course during the planning and design process as an overall approach to avoiding impacts whenever possible. In terms of mitigation during construction, NEP has established best management Practices ("BMPs") that are to be followed by NEP employees and its contractors for accessing sites and performing construction activities on transmission ROWs. These BMPs ensure that this Project will be completed in accordance with applicable environmental laws and regulations, as well as with NEP policies and compliance objectives. NEP completed field investigations and a constructability review along the Project route to determine access

routes and construction techniques to be implemented during construction of the Project to provide an accurate impact assessment and to design work to avoid and minimize impacts within wetlands and other sensitive resources (e.g., cultural resources) to the greatest extent practicable.

The Proponent recognizes that the identification of effective mitigation, and implementation of that mitigation throughout the life of the Project, is central to its responsibilities under MEPA. Accordingly, the Proponet has prepared Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) that describes the mitigation that the Proponent would provide. The Proponent provides clear commitments to implement the mitigation measures, and provides a schedule for their implementation based upon Project phasing.

NEP is working closely with NHESP to develop mitigation measures for each species, and consultation is ongoing. The Project will implement the necessary actions to avoid, minimize, and mitigate Project-related impacts to comply with the Massachusetts Endangered Species Act ("MESA") permit issued for the Project. A detailed mitigation plan will be developed with NHESP as part of the Conservation and Management Permit review process.

Findings: After the draft findings herein have been reviewed by Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program, and revised by the Proponent, as appropriate, the Natural Heritage and Endangered Species Program will make a finding that the foregoing information adequately describes the environmental impacts associated with the Project, and that with the implementation of the mitigation measures described above, practicable means will have been taken to avoid or minimize adverse environmental impacts subject to NHESP authority.

MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE

NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM

BY_____ DATE_____

MA Department of Transportation

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, Monroe

Project Proponent: New England Power Company ("NEP")

EEA Number: 16663

Agency Action: Permit to Access State Highway

NEP will seek a Permit to Access State Highway (700 CMR 13.00) from the MA Department of Transportation (MassDOT) for the proposed E131 Asset Condition Refurbishment Project.

Project Description: Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the Line E131 structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between substations. As such, fiber optic ground wire (OPGW) is proposed to replace the existing shield wire. Based on the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of six (6) triple pole structures
- Replacement of three (3) existing steel lattice structures with new steel structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure
- Installation of approximately 24 structures requiring concrete caisson foundations at locations which require greater structural reinforcement
- Installation of micropile foundations at one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor in four (4) sections for constructability purposes

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions of the line are currently inaccessible except by foot or utility terrain vehicles.

Improvements to the existing and the construction of new access routes are required to facilitate the Project.

MEPA Jurisdiction: Pursuant to M.G.L. c. 30 §61- §62A-I, of the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations at 301 CMR 11.00, the Proponent (NEP) has prepared and submitted this DEIR to the MEPA office. The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires State Agency Action and meets or exceeds one or more review thresholds. The Project exceeds the following ENF review thresholds:

- Land: 301 CMR 11.03(1)(b)(1) - *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(d) - *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(f) - *Alteration of one half or more acres of any other wetlands*

The Project exceeds the following ENF review and Mandatory EIR thresholds:

- Land: 301 CMR 11.03(1)(a)(1) – *Direct alteration of 50 or more acres of land, unless the project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(a)(1)(a) - *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
- Environmental Justice: 301 CMR 11.06(7)(b) – *Any project that is located within a Designated Geographic Area around an Environmental Justice Population*

Additionally, the proposed Project requires state permits from the Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Fisheries and Wildlife (Natural Heritage and Endangered Species Program, NHESP), Massachusetts Department of Transportation, and the Massachusetts Department of Conservation and Recreation. Additional State Agency Actions include consistency with EEA protocols.

Project Impacts: The potential environmental impacts of the Project have been characterized and quantified in the Draft EIR, which is incorporated by reference into this Section 61 Finding.

Project Mitigation: Mitigation was considered as a matter of course during the planning and design process as an overall approach to avoiding impacts whenever possible. In terms of mitigation during construction, NEP has established best management Practices ("BMPs") that are to be followed by NEP employees and its contractors for accessing sites and performing construction activities on transmission ROWs. These BMPs ensure that this Project will be completed in accordance with applicable environmental laws and regulations, as well as with NEP policies and compliance objectives. NEP completed field investigations and a constructability review along the Project route to determine access routes and construction techniques to be implemented during construction of the Project to provide an accurate impact assessment and to design work to avoid and minimize

impacts within wetlands and other sensitive resources (e.g., cultural resources) to the greatest extent practicable.

The Proponent recognizes that the identification of effective mitigation, and implementation of that mitigation throughout the life of the Project, is central to its responsibilities under MEPA. Accordingly, the Proponet has prepared Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) that describes the mitigation that the Proponent would provide. The Proponent provides clear commitments to implement the mitigation measures, and provides a schedule for their implementation based upon Project phasing.

Consultation with MassDOT District 1 regarding anticipated Project activities within highway jurisdiction has been ongoing throughout the Project. With MassDOT input, a Traffic Management Plan ("TMP") will be developed and submitted for review and approval prior to the start of construction. Enforceable commitments in the TMP will be carried out by NEP to ensure that proposed traffic mitigation strategies will be implemented as the Project proceeds. Such strategies may include, as appropriate, traffic management procedures; construction time restrictions; signage; installation of track pads to minimize soil in roadways; and/or restoration of vegetation along soft shoulders after construction. All work will occur in accordance with NEP Policy for ROW Access, Maintenance and Construction Best Management Practices.

Findings: After the draft findings herein have been reviewed by Massachusetts Department of Transportation, and revised by the Proponent, as appropriate, the Massachusetts Department of Transportation will make a finding that the foregoing information adequately describes the traffic impacts associated with the Project, and that with the implementation of the mitigation measures described above, practicable means will have been taken to avoid or minimize adverse environmental impacts subject to Massachusetts Department of Transportation authority. Appropriate conditions consistent with this Section 61 Finding are included in the State Permit to Access State Highway issued by Massachusetts Department of Transportation to describe more fully and ensure implementation of said measures.

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

BY_____ DATE_____

MA Department of Conservation and Recreation, Construction Access Permit

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, Monroe

Project Proponent: New England Power Company ("NEP")

EEA Number: 16663

Agency Action: Construction Access Permit

NEP will seek a Construction Access Permit (CAP) (302 CMR 11.00) from the Department of Conservation and Recreation for the proposed E131 Asset Condition Refurbishment Project.

Project Description: Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the Line E131 structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between substations. As such, fiber optic ground wire (OPGW) is proposed to replace the existing shield wire. Based on the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of six (6) triple pole structures
- Replacement of three (3) existing steel lattice structures with new steel structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure
- Installation of approximately 24 structures requiring concrete caisson foundations at locations which require greater structural reinforcement
- Installation of micropile foundations at one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor in four (4) sections for constructability purposes

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions

of the line are currently inaccessible except by foot or utility terrain vehicles. Improvements to existing and the construction of new access routes are required to facilitate the Project.

MEPA Jurisdiction: Pursuant to M.G.L. c. 30 §61- §62A-I, of the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations at 301 CMR 11.00, the Proponent (NEP) has prepared and submitted this DEIR to the MEPA office. The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires State Agency Action and meets or exceeds one or more review thresholds. The Project exceeds the following ENF review thresholds:

- Land: 301 CMR 11.03(1)(b)(1) - *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(d) - *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(f) - *Alteration of one half or more acres of any other wetlands*

The Project exceeds the following ENF review and Mandatory EIR thresholds:

- Land: 301 CMR 11.03(1)(a)(1) – *Direct alteration of 50 or more acres of land, unless the project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(a)(1)(a) - *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
- Environmental Justice: 301 CMR 11.06(7)(b) – *Any project that is located within a Designated Geographic Area around an Environmental Justice Population*

Additionally, the proposed Project requires state permits from the Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Fisheries and Wildlife (Natural Heritage and Endangered Species Program, NHESP), Massachusetts Department of Transportation, and the Massachusetts Department of Conservation and Recreation. Additional State Agency Actions include consistency with EEA protocols.

Project Impacts: The potential environmental impacts of the Project have been characterized and quantified in the FEIR, which is incorporated by reference into this Section 61 Finding.

The Project includes on and off-ROW tree removal and construction activities within DCR properties of the Commonwealth under the care, custody, and control of the DCR under 302 CMR 11.00.

Project Mitigation: Mitigation was considered as a matter of course during the planning and design process as an overall approach to avoiding impacts whenever possible. In terms of mitigation during construction, NEP has established best management Practices ("BMPs") that are to be followed by NEP employees and its contractors for accessing sites and performing construction activities on transmission ROWs. These BMPs ensure that this Project will be completed in accordance with applicable environmental laws and regulations, as well as with NEP policies and compliance objectives. NEP completed field

investigations and a constructability review along the Project route to determine access routes and construction techniques to be implemented during construction of the Project to provide an accurate impact assessment and to design work to avoid and minimize impacts within wetlands and other sensitive resources (e.g., cultural resources) to the greatest extent practicable.

The Proponent recognizes that the identification of effective mitigation, and implementation of that mitigation throughout the life of the Project, is central to its responsibilities under MEPA. Accordingly, the Proponet has prepared Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) that describes the mitigation that the Proponent would provide. The Proponent provides clear commitments to implement the mitigation measures, and provides a schedule for their implementation based upon Project phasing.

At this time, proposed mitigation may include, but is not limited to, the following:

- Work will be conducted according to the CAP terms and conditions.
- Work will be performed in accordance with applicable statutes, regulations, codes, or standards.
- NEP will coordinate with the DCR Staff Archaeologist and Ecologist prior to the commencement of work.
- Appropriate mitigation and/or in-lieu fees will be provided for activities which result in disruption to DCR properties.

Coordination with DCR is ongoing.

Findings: After the draft findings herein have been reviewed by DCR, and revised by the Proponent, as appropriate, DCR will make a finding that the foregoing information adequately describes the environmental impacts associated with the Project, and that with the implementation of the mitigation measures described above, practicable means will have been taken to avoid or minimize adverse environmental impacts subject to DCR authority.

DEPARTMENT OF CONSERVATION AND RECREATION

BY_____ DATE_____

Executive Office of Energy and Environmental Affairs, Environmental Justice

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, Monroe

Project Proponent: New England Power Company ("NEP")

EEA Number: 16663

Agency Action: Executive Office of Energy and Environmental Affairs ("EEA") – Environmental Justice

These Findings are limited to the subject matter jurisdiction of the Executive Office of Energy and Environmental Affairs (EEA) Massachusetts Environmental Policy Act (MEPA) Interim Protocol for Analysis of Environmental Justice (EJ) Impacts, which implements requirements related to the content of MEPA Environmental Impact Reports (EIRs), as set forth in Section 58 of the Act.

Project Description: Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the Line E131 structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between substations. As such, fiber optic ground wire (OPGW) is proposed to replace the existing shield wire. Based on the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of six (6) triple pole structures
- Replacement of three (3) existing steel lattice structures with new steel structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure
- Installation of approximately 24 structures requiring concrete caisson foundations at locations which require greater structural reinforcement
- Installation of micropile foundations at one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor in four (4) sections for constructability purposes

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions of the line are currently inaccessible except by foot or utility terrain vehicles. Improvements to the existing and the construction of new access routes are required to facilitate the Project.

MEPA Jurisdiction: Pursuant to M.G.L. c. 30 §61- §62A-I, of the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations at 301 CMR 11.00, the Proponent (NEP) has prepared and submitted this DEIR to the MEPA office. The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires State Agency Action and meets or exceeds one or more review thresholds. The Project exceeds the following ENF review thresholds:

- Land: 301 CMR 11.03(1)(b)(1) - *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(d) - *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(f) - *Alteration of one half or more acres of any other wetlands*

The Project exceeds the following ENF review and Mandatory EIR thresholds:

- Land: 301 CMR 11.03(1)(a)(1) – *Direct alteration of 50 or more acres of land, unless the project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(a)(1)(a) - *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
- Environmental Justice: 301 CMR 11.06(7)(b) – *Any project that is located within a Designated Geographic Area around an Environmental Justice Population*

Additionally, the proposed Project requires state permits from the Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Fisheries and Wildlife (Natural Heritage and Endangered Species Program, NHESP), Massachusetts Department of Transportation, and the Massachusetts Department of Conservation and Recreation. Additional State Agency Actions include consistency with EEA protocols.

Project Impacts: The potential environmental impacts of the Project have been characterized and quantified in the FEIR, which is incorporated by reference into this Section 61 Finding.

Project Mitigation: The Proponent recognizes that the identification of effective mitigation, and implementation of that mitigation throughout the life of the Project, is central to its responsibilities under MEPA. Accordingly, the Proponet has prepared Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) that describes the mitigation that the Proponent would provide. The Proponent provides clear commitments to implement the mitigation measures, and provides a schedule for their implementation based upon Project phasing.

The Project will occur within the existing ROW, thereby minimizing adverse environmental impacts to the nature of the Project, outage constraints in the region, and NEP's efforts to reduce impacts to the natural and human environment. No long-term impacts on soil, bedrock, vegetation, surface water, groundwater, wetland resources or air quality will occur. Any potential sedimentation impacts, and other short-term construction impacts to wetlands and surface waters, will be mitigated through the use of soil erosion and sediment control best management practices ("BMPs") and temporary construction mats to protect wetland soils, vegetation root stock, and streams. As part of the Project, an environmental monitor will be part of the Project team to ensure compliance with regulatory programs and permit conditions, and to oversee the proper installation and maintenance of the soil erosion and sediment control BMPs. At this time, proposed mitigation includes, but is not limited to, the following:

Air Quality: Construction-period activities, such as grading, roadbuilding, vehicle travel, and other earth-disturbing work may result in a temporary increase in airborne dust. Impacts to air quality will be minimized by managing the control of dust movement with practices such as spreading wood mulch or straw and using water trucks to spray dried soil to keep it moist. The potential for dust generation is only anticipated during the construction period. Post construction, soil will be stabilized and re-vegetated.

In addition, diesel-powered equipment is required to use ultra-low sulfur diesel fuel. Any diesel-powered non-road construction equipment rated 50-horsepower or more that will be used on the Project for 30 days or more will be required to install emission control BMPs. The impacts from these emissions will be minimal and are not anticipated to cause impacts to public health. Additionally, idling times are limited to five minutes except when engine power is necessary for the delivery of materials or to operate accessories to the vehicle such as power lifts. Vehicle idling is to be minimized during construction activities and be in compliance with the Massachusetts Anti-idling Law, M.G.L. c. 90 § 16A, c. 111 §§ 142A – 142M, and 310 CMR 7.11.

Water Quality: The Project will incorporate protective and preventative measures to minimize and avoid impacts to water quality. To protect water quality and sensitive resource areas, temporary access will be constructed using construction mats. Construction mats are comprised of wooden beams, bolted together, and are typically 4 feet wide by 16 feet long. They are laid temporarily on top of the ground and vegetation. These mats allow heavy machines and vehicles to cross sensitive areas without damaging the soil or roots of vegetation and are also placed in a manner that does not affect the flow of water in streams. These mats will be removed when construction is completed, and the wetlands will be restored. In addition, BMPs, such as the use of straw wattles, silt fencing, stormwater management features, and other control measures will be used to prevent soil and other material from being transported into wetlands and streams. Using these BMPs, any impacts to water quality will be negligible and temporary and are not anticipated to cause impacts to public health.

Land Protection and Open Space: Access to Protected Land and Open Space within EJ Populations will not be impacted.

Noise: Noise impacts associated with construction-period activities are temporary in nature and expected to be minimal. Noise-generating activities will be conducted in accordance with any local and state requirements and are not anticipated to cause impacts to public health.

Traffic: Impacts on traffic during the construction of the Project will be minor and intermittent. The work areas will be accessed primarily from NEP-owned access routes or minor town roadways. Truck traffic will vary based on location and phase of work, but will not exceed an average of 150 trips per day. NEP will obtain the necessary permits from Massachusetts Department of Transportation for access. Once on-site, vehicle traffic will be limited to within or in proximity to the ROW. Since the ROW is an un-manned facility, there will be no permanent impacts to traffic patterns or use of existing roadways and no impacts to public health are anticipated from traffic.

Findings: After the draft findings herein have been reviewed by the EEA - EJ Program, and revised by the Proponent, as appropriate, the EEA - EJ Program will make a finding that the foregoing information adequately describes the environmental impacts to the EJ Populations associated with the proposed Project, and that with the implementation of the mitigation measures described above, feasible means will have been taken to avoid or minimize adverse environmental impacts subject to EEA's EJ authority.

DEPARTMENT OF EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

BY_____ DATE_____

Executive Office of Energy and Environmental Affairs, Climate Change Adaptation and Resiliency

Project Name: E131 Asset Condition Refurbishment (ACR) Project

Project Location: Adams, North Adams, Florida, Monroe

Project Proponent: New England Power Company ("NEP")

EEA Number: 16663

Agency Action: Executive Office of Energy and Environmental Affairs ("EEA") – Climate Change

These Findings are limited to the subject matter jurisdiction of the Executive Office of Energy and Environmental Affairs (EEA) Massachusetts Environmental Policy Act (MEPA) Interim Protocol on Climate Change Adaptation and Resiliency ("Interim Protocol") which complies with Executive Order 569.

Project Description: Comprehensive inspections have identified structures and wires in need of replacement due to asset condition and aging infrastructure, and lack of safe access for maintenance and emergency needs. Inspections over the past several years have identified deteriorated wood pole assets (woodpecker damage, thin/rotting pole tops, loss of cross-sectional area of the poles, deterioration of wood spar arms, etc.). The loadbreak switches on the Line E131 structures were also noted as poorly operational and in need of replacement. In addition to the refurbishment work, the existing circuits need to be adapted to provide high speed communications between substations. As such, fiber optic ground wire (OPGW) is proposed to replace the existing shield wire. Based on the age of the infrastructure, a full refurbishment of the line is proposed to bring the utility into compliance with modern standards.

From a safety and reliability perspective, and in order to extend asset life, the following activities are proposed in Massachusetts:

- Replacement of 151 H frame structures with new steel pole H-frame structures
- Replacement of six (6) triple pole structures
- Replacement of three (3) existing steel lattice structures with new steel structures
- Removal of four (4) existing H-frame structures and one (1) lattice structure
- Installation of approximately 24 structures requiring concrete caisson foundations at locations which require greater structural reinforcement
- Installation of micropile foundations at one (1) structure location which requires greater structural reinforcement
- Installation of three (3) new switch gear structures
- Replacement of existing shield wire with OPGW
- Replacement of all insulators and hardware
- Replacement of conductor in four (4) sections for constructability purposes

Due to the age of the line, the complex terrain through which it traverses, and lack of recent broad-scale upgrades, access to and along the ROW is limited, and many portions of the line are currently inaccessible except by foot or utility terrain vehicles. Improvements to the existing and the construction of new access routes are required to facilitate the Project.

MEPA Jurisdiction: Pursuant to M.G.L. c. 30 §61- §62A-I, of the Massachusetts Environmental Policy Act ("MEPA") and its implementing regulations at 301 CMR 11.00, the Proponent (NEP) has prepared and submitted this DEIR to the MEPA office. The Project is subject to environmental review pursuant to 301 CMR 11.01(2)(b) because the Project requires State Agency Action and meets or exceeds one or more review thresholds. The Project exceeds the following ENF review thresholds:

- Land: 301 CMR 11.03(1)(b)(1) - *Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(d) - *Alteration of 5,000 or more sf of bordering or isolated vegetated wetlands*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(b)(1)(f) - *Alteration of one half or more acres of any other wetlands*

The Project exceeds the following ENF review and Mandatory EIR thresholds:

- Land: 301 CMR 11.03(1)(a)(1) – *Direct alteration of 50 or more acres of land, unless the project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices*
- Wetlands, Waterways and Tidelands: 301 CMR 11.03(3)(a)(1)(a) - *Alteration of one or more acres of salt marsh or bordering vegetating wetlands*
- Environmental Justice: 301 CMR 11.06(7)(b) – *Any project that is located within a Designated Geographic Area around an Environmental Justice Population*

Additionally, the proposed Project requires state permits from the Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Division of Fisheries and Wildlife (Natural Heritage and Endangered Species Program, NHESP), Massachusetts Department of Transportation, and the Massachusetts Department of Conservation and Recreation. Additional State Agency Actions include consistency with EEA protocols.

Project Impacts: The potential environmental impacts of the Project have been characterized and quantified in the FEIR, which is incorporated by reference into this Section 61 Finding.

Risk factors identified for the Project area by the Resilient MA Action Team (RMAT) tool, include: High exposure to Extreme Precipitation - Urban Flooding; Extreme Precipitation - Riverine Flooding; and Extreme Heat. Based on an analysis of the Project purpose and associated impacts, the Project is not anticipated to result in adverse impacts in these areas and should instead provide substantial benefits over existing conditions.

Project Mitigation: The Proponent recognizes that the identification of effective mitigation, and implementation of that mitigation throughout the life of the Project, is

central to its responsibilities under MEPA. Accordingly, the Proponet has prepared Table 10-1 (Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix) that describes the mitigation that the Proponent would provide. The Proponent provides clear commitments to implement the mitigation measures, and provides a schedule for their implementation based upon Project phasing.

NEP has taken steps to promote climate change adaptation and resiliency in the design of the Project and continues to consider climate change and long-term infrastructure resiliency as an important goal in its long-term infrastructure planning. The Project will result in a more climate-ready and resilient transmission system that can withstand more extreme weather events and address existing system capacity shortages and increased demand. In addition, NEP's preferred solution uses substantial portions of the existing ROW, thereby minimizing alteration of new land resources to construct the Project. The purpose of the Project is to address existing asset conditions along the E131 line that pose a threat to electrical reliability.

Findings: After the draft findings herein have been reviewed by the EEA - Climate Change Program, and revised by the Proponent, as appropriate, the EEA - Climate Change Program will make a finding that the foregoing information adequately describes the environmental impacts to the climate associated with the proposed Project, and that with the implementation of the mitigation measures described above, feasible means will have been taken to avoid or minimize adverse climate impacts subject to the MEPA Interim Protocol on Climate Change Adaptation and Resiliency.

DEPARTMENT OF EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

BY_____ DATE_____

10.3 Summary of Mitigation Commitments

As requested in the FEIR a summary of avoidance and minimization measures and mitigation commitments is provided in Table 10-1. The table provides clear commitments to implementation, individual costs for each measure, parties responsible, schedule for implementation, and identifies agency Action/Permit for each measure.

Table 10-1: E131 Avoidance, Minimization and Mitigation Measures, BMPs and Schedule Matrix

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
General	An Environmental Field Issue (EFI) document will be developed for the Project and used for training contractors and environmental monitors. The EFI is a comprehensive document that outlines permit conditions, includes NEP BMPs and specifies the expectations and requirements that NEP will hold construction personnel responsible for compliance with. A copy of the EFI is kept on file at the NEP office, at the site trailer and/or site supervisor's vehicle. Contractor training will be an ongoing process, as needed, when new personnel arrive on site.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NEP, Tighe & Bond	Prior to construction activities	N/A
Land Alteration and Stormwater	Erosion and sediment controls will be installed and maintained. The SWPPP will be implemented to ensure that BMPs are utilized during construction to address potential impacts from erosion and stormwater runoff. Stormwater management and pollution prevention will be accomplished through stabilization and structural control BMPs, as well as good housekeeping practices. These measures will be enforced through regular construction monitoring. A component of the SWPPP will include requirements for spill control, clean up, and reporting.	☐ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		SWPPP preparation: NEP, Tighe & Bond Oversight: Environmental monitor Erosion and sediment controls: Contractor(s)	Prior to construction activities	• EPA / SWPPP
	Disturbed areas on the site will be stabilized using standard BMPs, which can include seeding and mulching, hydroseeding, water bars, slope breakers, amongst others, to be presented in the EFI document.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Contractor(s)	Rolling stabilization of work areas following completion of construction activities	• EPA / SWPPP
	Tree removal will be conducted using methods and equipment which minimize ground disturbance, such as feller bunchers or other tree handling equipment (where possible). To the extent feasible, NEP forestry crews will preserve understory scrub-shrub and herbaceous vegetation to avoid and minimize creating areas of bare soil surfaces.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		NEP Forestry Crews	During construction	• EPA / SWPPP
	Where tree removal and/or new access is proposed in areas of steep slopes or high erosive potential, additional precautions will be taken to ensure soil stability is maintained. These may include installation of water bars, plunge pools, diversion channels, and/or check dams, as appropriate to site specific conditions.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Design: BSC Implementation: Contractor(s)	During construction	• EPA / SWPPP
	Dust controls will be implemented as needed throughout the duration of the Project, on disturbed soils that are subject to surface dust movement and dust blowing.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Contractor(s)	During construction	• EPA/SWPPP
Tree removal	Where tree removal is proposed within the ROW (i.e., in areas which will be permanently maintained as low growing, herbaceous or scrub/shrub communities), appropriate conservation seed mixes will be applied in areas of bare soil surfaces in order to promote biodiversity, provide pollinator habitat, and replace lost forest habitats with alternative ecologically valuable community types. *NEP is a member of the Monarch CCAA and is currently undergoing a bio-audit to benchmark the habitat and ecosystem quality of the ROW. Further details of the on-going bio-audit are available here: https://bioaudit.acrt.com/national-grid/.*	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Contractor(s)	Following construction	
	Where conditions are suitable, a portion of the wood generated during tree removal activities might remain on-site as standing snags, brush piles, log piles, and decaying large woody debris. Optimal locations for these habitat features will be determined in coordination with NHESP (in the case of rare species habitat), and by professional ecologists and wildlife biologists, for areas outside of designated rare species habitat.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Contractor(s), as instructed by qualified experts	During/following construction	

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
	Tree removal reduced from 17.6 acres to 11.3 acres since EENF filing.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		NEP	Complete	
	Within NEP fee-owned parcels, wood collected during tree removal shall be committed to reuse in long-lived wood products or will be donated to affordable housing projects or wood banks in MA. *Outside of NEP fee-owned parcels, the trees within the ROW belong to the respective private landowners. As such, it will not be possible to provide a detailed break-down of how all wood is distributed/disposed of by parties other than NEP.*	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		NEP	During/following construction	
Wetlands and Waterways	Install, inspect, and maintain temporary erosion and sediment controls, and other applicable construction BMPs, around work sites in or near wetlands. These will minimize the potential for erosion and sedimentation, mark the limits of wetlands, and restrict crew access, as appropriate.	☐ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s) Oversight: Environmental monitor	Prior to and during construction	• EPA / SWPPP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Within jurisdictional resource areas, limit grading for access and work areas to the extent necessary to provide a safe workspace.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☒ ROW restoration		Design: BSC Implementation: Contractor(s)	During construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Avoid or minimize access through wetlands to the extent practicable. Where access must be improved or developed outside of vegetated wetlands, the access would be designed (where practical), so as not to interfere with surface water flow or the functions of the wetland.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Design: BSC Implementation: Contractor(s)	During construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	NEP will coordinate with the DCR Staff Archaeologist and Ecologist prior to the commencement of work	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		NEP	Prior to construction	• DCR CAP • MEPA / EIR
	Decommission, remove and restore four structure locations 101, 144, 153 and 180 (currently located within BVWs) from the alignment to eliminate the potential for repeated future impacts to the associated wetlands for maintenance.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☒ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		NEP Implementation: Contractor(s)	During construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Work pad size within Riverfront Area will be reduced to the extent feasible post-construction. Work pads and pull pads within RFA will be loamed, seeded and otherwise restored to 'natural' conditions, (i.e., existing ROW conditions).	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Following construction	• MEPA / EIR • Conservation Commissions / NOI

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
	In-Situ Wetland Restoration: Once construction is complete, restore wetlands to pre-construction configurations and contours, to the extent practicable. Conduct post-wetland restoration monitoring. Riverfront Area will be allowed to return to scrub shrub habitat or another non-forested habitat.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Following construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Ex-Situ Replication/Compensatory Mitigation: Construction of a 700-sf wetland replication area for the 660 sf of permanent vegetated wetland loss; post-construction monitoring and reporting.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction activities surrounding Structure 26	• Conservation Commissions / NOI
	Comply with the conditions of local, state, and federal permit conditions related to wetlands.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Before, during, and following construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Store petroleum products more than 100 feet from a wetland.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Before and during construction	• EPA / SWPPP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Proposed stream crossings will be temporary in nature and will be bridged using construction mats laid to not impact the hydrology or the bed of the stream. Native shrub species will revegetate the stream banks.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During and following construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Limit disturbance for structure foundations in wetlands to the amount necessary to perform the installations.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☐ ROW restoration		Implementation: Contractor(s)	During construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Do not pile cut woody wetland vegetation to block surface water flows or otherwise to adversely affect the integrity of the wetland.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		Implementation: Contractor(s)	During constructions	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Attempt to schedule activities located near waterways during low-flow periods, to the extent practicable. Some crossings may have to be installed outside of typical low-flow periods to adhere to Project construction schedules and to conform to any transmission line outage windows that must be coordinated to maintain the reliability of the transmission grid.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		Implementation: Contractor(s)	During construction	• DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Overhead crossings designed to avoid conflicts.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls		NEP	Complete	• DEP / 401 WQC • ACOE / PCN

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
		☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☒ Wire replacement ☐ ROW restoration				• MEPA / EIR • Conservation Commissions / NOI
Rare Species Contractor Education and Awareness	Contractors working in state-listed species habitat will be trained in species identification.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration			Prior to construction	• NHESP / CMP
	Contractors will be required to practice good housekeeping and securely dispose of food wrappers and waste to discourage any increase in the predator population.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s) Oversight: Environmental monitor	During construction	• NHESP / CMP
Construction Timing and Restrictions for Rare Species	Work at Adams substation in the vicinity of known rare plant species will be conducted outside of the growing season. Work will be conducted within previously disturbed areas to the extent feasible to avoid impacts to rare plants. If work is required during the growing season, construction matting will only be in place for a four-week maximum timeframe.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / CMP
	Per coordination with NHESP, construction mats will only be placed at the Adams Substation between October 1 and April 1 outside of the growing season of rare plant species.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / CMP
	Project activities will adhere to National Grid's approved Operation and Maintenance Plan (OMP), approved by the NHESP. Mitigation measures and BMPs to protect identified rare species will be implemented and maintained throughout the Project duration.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / OMP
	Identified populations of rare plant species will be flagged by an NHESP-approved botanist. Rare species areas will be monitored by professional wildlife scientists and/or botanists during construction and post-construction to evaluate growth habits and work-related impacts. Specific functions to be performed by these scientists will be defined during consultation with NHESP.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NHESP-approved Botanist Dr. Hickler Qualified expert(s)	During construction	• NHESP / CMP
	A MESA Conservation & Management Permit (CMP) will be issued for the rare plant species for which a "Take" is anticipated. Compliance with CMP performance standards includes implementing a conservation and management plan that provides a long-term net benefit to the conservation of the state-listed species. Specific measures will be discussed with NHESP and may consist of additional surveys, transplantation, and seed collection.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NHESP-approved Botanist and/or Qualified expert(s)	During and following construction	• NHESP / CMP
	Install STR 179 using direct embed techniques requiring no foundation and install STR 181 using micropile foundations to avoid permanent concrete foundations. Install new utility pole structures adjacent to existing structures, where feasible.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal		Implementation: Contractor(s)	During construction	• NHESP / CMP

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
		☒ Structure installation ☐ Wire replacement ☐ ROW restoration				
	Important habitat areas for the protected species will be delineated/identified on the project construction plans provided with the Environmental Field Issue (EFI). These features will also be flagged or demarcated in the field.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		ER Mapping: Tighe & Bond In field: NHESP-approved Botanist and/or Qualified expert(s)	Project drawings: complete In field: prior to construction	• NHESP / CMP
Monitoring for Rare Species	Per the OMP, NHESP will provide specific management requirements where cutting is required for maintenance activities in wetland resources areas located within mapped state-listed species habitat.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NHESP	Prior to construction	• NHESP / OMP
	Per the OMP, areas dominated by low-growing shrub species (lowbush blueberry, huckleberry, sheep laurel, New Jersey tea, sweet fern and scrub oak) should be encouraged and restored if disturbance is necessary for maintenance-related activities.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s) Oversight: Environmental monitor	During and following construction	• NHESP / OMP
Vegetation Management for Rare Species	NHESP mapped habitats within the ROW are subject to the special conditions established in NEP's VMP.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration	N/A	N/A	N/A	• NHESP / VMP
	Construction mats will be used for wetland access. This practice retains the root systems and seed stock and facilitates revegetation post-construction.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Prior to and during construction	• NHESP / CMP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Erosion and Sediment Controls will be installed and regularly maintained to protect water quality in wetland resource areas and other waterbodies.	☐ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Prior to and during construction	• NHESP / CMP • EPA / SWPPP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
BMPs for Rare Species	Use pre-existing trails and access routes to avoid impacting previously undisturbed areas.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Design: BSC Implementation: Contractor(s)	During construction	• NHESP / CMP
	Dewatering discharge will be pumped into a straw bale or silt fence settling basin to be located in an upland area (preferably well-vegetated whenever practicable).	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement		Implementation: Contractor(s)	During construction	• NHESP / CMP • EPA / SWPPP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
		☐ ROW restoration				• Conservation Commissions / NOI
	Per coordination with NHESP, the use of microfilament erosion controls will not be permitted.	☐ Vegetation removal/mowing ☒ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / CMP
	Foundation excavations will be covered when left unattended.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☐ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / CMP
	Per the OMP, materials will not be stockpiled in CVPs or wetland resource areas.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Design: BSC Implementation: Contractor(s)	During construction	• NHESP / OMP
	Parking of contractor vehicles will be limited or avoided, when practicable, in specified areas within the ROW.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / CMP
	Equipment will be monitored regularly for leaks and secondary containment will be used under equipment that will be parked in habitat areas during construction. Refueling will not occur within 100 feet of wetlands or waterways.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s) Oversight: Environmental monitor	During construction	• NHESP / CMP • EPA / SWPPP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI
	Where tree removal is proposed within NHESP habitat, NEP will coordinate with NHESP to provide a comprehensive mitigation plan for tree removal activities. This may include species-specific habitat enhancement and creation measures, both on and off-ROW.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		NEP/NHESP	Prior to construction	• NHESP / CMP
	Upon completion of the Project activities, work areas for maintenance activities will be restored to pre-existing condition. These areas will be allowed to progressively vegetate with typical regular management.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / CMP
	Native vegetation should be preserved in and adjacent to wetlands whenever practicable. Use of construction mats allows for the preservation of root stock by tamping down existing vegetation. Construction matting within wetlands in Priority/Estimated Habitat will be removed immediately after completion of work, to reduce impacts to emergent vegetation and facilitate revegetation.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During and following construction	• NHESP / CMP • DEP / 401 WQC • ACOE / PCN • MEPA / EIR • Conservation Commissions / NOI

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
	In compliance with the VMP and OMP, vegetation and maintenance activities will continue to be managed regularly in NHESP habitat using restrictions and measures that avoid adverse impacts to protected species.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• NHESP / OMP • NHESP / VMP
Invasive Species	Identification of the wetlands containing invasive species will be shown on Project plans provided to contractors.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		ER Mapping: Tighe & Bond	Prior to construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Environmental training of workers so that BMPs are implemented consistently.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration				• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Contractors will be required to check that construction equipment, vehicles, and materials (e.g., equipment mats) are clean and free of excess soil, debris, and vegetation before being mobilized to the Project ROWs.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s) Oversight: Environmental monitor	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Equipment used to work in or traverse a wetland containing invasive plant species will be cleaned prior to relocating to another work site. Cleaning of vehicles and other equipment (including the tracks and tires) will involve removal of visible dirt, debris and vegetation using brooms, shovels, and, if needed, compressed air.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s) Oversight: Environmental monitor	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Use of construction mats at wetland crossings so construction vehicles that frequently travel along on-ROW access routes, such as pickups carrying personnel or material delivery trucks, can avoid direct wetland interaction.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Use of straw, or alternative BMP erosion and sedimentation controls will be used in and near wetlands.	☐ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Mats used in wetlands containing invasive species will be cleaned prior relocation to other work areas or wetlands. Cleaning of matting will involve dropping mats one on top of another to loosen any sediment and debris. The matting will then be swept to remove loose soil and any plant material.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Construction equipment and excavated soil material will be contained within the approved limits of work areas within the ROW; these limits of work will be defined on Project plans.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls		Design: BSC	Design: Complete	• EPA / SWPPP

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
		☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Implementation: During construction	
	Soils excavated from wetlands or riparian areas containing a predominance of invasive plants will be stockpiled separately (to the extent that there is sufficient workspace) and contained within staked bales, silt fence or other approved erosion and sedimentation control BMPs to minimize the potential of spreading these soils elsewhere onto the ROW.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☐ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Final restoration of the ROW will be performed in accordance with National Grid's Environmental Guidance Document EG-303.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	Following construction	
	NEP field monitors will perform site inspections and oversee the contractors' compliance with applicable federal, state, and local permit conditions, Project plans (e.g., SWPPP), and NEP policies.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Environmental monitor	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Soil and vegetation disturbance will be minimized to the extent practicable.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		ER Mapping: Tighe & Bond Implementation: Contractor(s)	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
	Erosion and sedimentation controls will be installed and maintained, per the SWPPP.	☐ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP
	Prior to moving to other work areas, remove plant matter, soil, or other deleterious material from equipment and construction matting when working at the sites containing invasive species.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP • ACOE / PCN • NHESP / CMP • Conservation Commissions / NOI
Historic Resources	Mitigation will be determined in consultation with MHC, THPOs, DCR, any other consulting parties and Advisory Council on Historic Preservation ("ACHP"), as appropriate. If determined to be necessary, data collection activities will occur prior to any construction activities. If the site is to be protected in place, appropriate protective measures will be taken when earth-disturbing construction activities occur in the vicinity.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NEP, historical agencies Implementation: Contractor(s)	Before, during, and following construction	• MHC / ASAPP • THPOs / ASAPP • ACOE / ASAPP
	Tribal representative-identified stone walls will be avoided to the extent practicable. If avoidance is not feasible during access, the stone wall will be bridged using construction mats. The work pad at Structure 84 has been located to avoid historic stone structures. Comply with EG-303 NE regarding cultural avoidance and protection measures.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal		Implementation: Contractor(s)	During construction	• THPOs / ASAPP

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
		☒ Structure installation ☒ Wire replacement ☒ ROW restoration				
Hazardous Waste	Work will be completed in accordance with EG-303, EG-501, EG-502, and EG-1707 which describe NEP's procedures for managing hazardous waste and contaminated soils, and NEP's spill response and reporting procedures.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA /SWPPP
	If oil and/or hazardous material are identified during the implementation of this Project, notification will be made to MassDEP, per reporting requirements, and the necessary precautions outlined in NEPs BMPs and relevant permits will be followed.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP • DEP / 401 WQC
	Develop a spill prevention and response plan with procedures to be used during construction to minimize the potential for a fuel spill and, if a spill occurs, to control and minimize potential effects.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration			Prior to construction	• EPA / SWPPP
	If refueling and maintenance in the field are necessary, vehicles and equipment will be brought to an area greater than 100 feet away from sensitive environmental features, and Reasonable environmental precautions will be taken.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Contractor(s)	During construction	• EPA / SWPPP • Conservation Commissions / NOIs
General Decarbonization Benefits	Improved transmission system infrastructure will provide improved electric transmission reliability.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☐ ROW restoration	N/A	N/A	N/A	N/A
Climate Change Adaptation & Resiliency	**Precipitation Resiliency**: ▪ Replacement steel structures and caisson foundations are more resilient to weather extremes than the existing structures. ▪ Access improvements will better withstand flood conditions and will reduce the potential for erosion impacts during future maintenance. ▪ Improved line clearances (tree removal) will reduce the risk of outages due to trees falling on the lines, which is likely to become more frequent with climate change (due to both temperature stress and increased precipitation destabilizing upland trees). ▪ Mitigation measures for work within wetlands also facilitate precipitation resiliency.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☐ ROW restoration	N/A	N/A	N/A	
	Temperature Resiliency: Upgrades to infrastructure (e.g., insulators and conductors) will allow the system to handle greater electrical loads during heat waves.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☒ Wire replacement ☐ ROW restoration	N/A	N/A	N/A	

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
	Inland Flooding Resiliency: ▪ Replacement steel structures and caisson foundations are more resilient to inundation. ▪ Structures within the floodplain are not expected to restrict flows or cause an increase in flood stage or velocity. ▪ Impacts to peak runoff rates (from tree removal and increases in impervious surface area), will be mitigated through a combination of hard and soft engineering techniques.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☐ Access improvement ☐ Structure removal/disposal ☒ Structure installation ☐ Wire replacement ☒ ROW restoration		Design: BSC	Prior to construction	
Traffic	Consult with MassDOT to review proposed plans for overhead crossings (including the use of guard structures) and to review plans to access the NEP ROW via Route 2 (state highway); develop a Transportation Management Plan (TMP) to addresses impacts and MassDOT concerns to ensure a safe working environment and safe passage for highway traffic.	☐ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☒ Wire replacement ☐ ROW restoration			Prior to construction	• MassDOT / TMP
Emissions	Diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project construction will have USEPA-verified (or equivalent) emission control BMPs, such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine. Vehicle idling will be minimized in accordance with Massachusetts' Anti-idling law, M.G.L. c. 90, § 16A, c. 111, §§ 142A – 142M, and 310 CMR 7.11. NEP requires the use of ultra-low sulfur diesel fuel in its diesel-powered construction equipment and limits idling time to five minutes except when engine power is necessary for the delivery of materials or to operate accessories to the vehicle such as power lifts.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP
	Dust controls will be evaluated and implemented as needed throughout the duration of the Project on disturbed soils that are subject to surface dust movement and dust blowing.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		Implementation: Contractor(s)	During construction	• EPA / SWPPP
Environmental Justice/ Public Health	Additional outreach will be conducted in EJ communities to facilitate additional information and coordination, including: ▪ Additional direct mail, "leave behinds" (e.g., fliers, brochures) and posted signage ▪ Continue to update Project website ▪ Monitor the toll-free Project hotline and email inquiry address ▪ Email construction updates	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration			Prior to and during construction	• MEPA / EIR
	Construction-period measures such as dust and emissions controls, construction matting and BMPs will be utilized. NEPA will comply with local and state noise requirements, and the MassDOT Access Permit for construction-period access from Route 2.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration				• MEPA / EIR • MassDOT / Access Permit
Open Space (Construction Access Permit)	NEP will continue consultations with DCR regarding future CAP permitting. Work will be conducted according to the CAP terms and conditions.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NEP Contractors	Before, during, and following construction	• DCR / CAP
	Elimination of off-ROW access road within Monroe State Forest to Structures 67 and 68 resulted in reduction of 1.06 acres of land alteration.	☒ Vegetation removal/mowing ☐ Erosion/sediment controls ☒ Access improvement ☐ Structure removal/disposal ☐ Structure installation ☐ Wire replacement ☐ ROW restoration	N/A	N/A	N/A	N/A

Subject Matter	Avoidance, Minimization and Mitigation Measures and BMPs	Applicable Activities	Estimated Cost	Parties Responsible	Timeline	Associated Agency/Permit(s)
	NEP will coordinate with local park managers to implement mitigation measures to avoid impacts to recreation to the extent feasible. Signage will be implemented at trail heads and where trails cross the ROW, to notify hikers of construction activities.	☒ Vegetation removal/mowing ☒ Erosion/sediment controls ☒ Access improvement ☒ Structure removal/disposal ☒ Structure installation ☒ Wire replacement ☒ ROW restoration		NEP Contractors	Before and during construction	• DCR / CAP

Section 11
Response to Comments

As required by the Certificate on the DEIR, **"The FEIR should contain a copy of this Certificate and a copy of each comment letter received. It should include a comprehensive response to comments on the DEIR that specifically address each issue raised in the comment letter; references to a chapter or sections of the FEIR alone are not adequate and should only be used, with reference to specific page numbers, to support a direct response. This directive is not intended to, and shall not be construed to, enlarge the Scope of the FEIR beyond what has been expressly identified in this certificate."**

The following section provides a response to comments received on the DEIR. Each letter received has been assigned an abbreviation, listed below in Table 11-1. All comment letters received are included in Appendix A and specific comments within each letter are noted in the margin with an abbreviation and comment number. Below are the comments, transcribed verbatim, accompanied by a response to each.

Table 11-1
DEIR Commenter and Abbreviation

Commenter	Abbreviation
Certificate of the Secretary of Energy and Environmental Affairs on the Expanded Environmental Notification Form	MEPA
Massachusetts Department of Conservation and Recreation	DCR
Berkshire Regional Planning Commission	BRPC
Franklin Regional Council of Governments	FRCOG
Mass Audubon	AUD
Massachusetts Department of Environmental Protection, Western Regional Office	DEP WERO
Massachusetts Department of Environmental Protection, Waterways Regulation Program	DEP WRP
Massachusetts Department of Transportation	MassDOT
Massachusetts Natural Heritage and Endangered Species Program	NHESP

MEPA Certificate on EENF (MEPA)

MEPA 01: **The EENF indicated that less than 150 average daily trips (adt) of truck traffic are anticipated for the project but does not provide details on truck routing or locations for truck traffic. This should be clarified in the FEIR.**

Response: In its pre-application meeting with the MEPA Office on the Project, NEP discussed the potential diesel vehicle traffic generated by the project and the MEPA Office concurred that due to the intermittent nature of the Project and that it would be constructed over a 13-mile area, it was not possible to calculate with precision the number of truck trips in specific areas over any

given period of time, but that it was reasonable to conclude that the volumes would fall well below the threshold of 150 adt of diesel vehicle traffic over the duration of a year. This was reflected in the EENF and the Designated Geographic Area (DGA) was not raised in EENF Certificate. However, in the DEIR Certificate, the Secretary has requested further clarification. As described below, NEP has re-confirmed that diesel vehicle traffic at any specific location will remain well below the threshold of 150 adt of diesel vehicle traffic over the duration of a year and that a 1-mile DGA remains appropriate for the Project.

For the proposed Project, there will be construction-related traffic during the proposed construction period for each phase. Access to the ROW for construction equipment will typically be gained from public roadways crossing the ROW in various locations along the route and adjacent existing off-ROW access roads. Because each of the construction tasks will occur at different times and locations over the course of the construction, traffic will be intermittent at these entry roadways and areas along the ROW.

Construction of the Project will occur in phases over an approximately three year period. The proposed work is outage dependent and will not occur at a singular location, but rather extend across approximately 13 miles and through numerous communities and municipalities. Accordingly, truck traffic will vary substantially based on location and phase of work, but at any specific location will remain well below the threshold of 150 adt of truck traffic over the duration of a year or more.

Traffic will consist of vehicles ranging from pick-up trucks to heavy construction equipment to large trailers delivering materials. Traffic volume during construction will not significantly affect existing traffic volumes, adversely impact the ability of existing traffic to safely navigate the roadway, or result in any significant environmental or public health impacts or disproportionate impacts on EJ Communities.

NEP reaffirms its position as stated in the EENF that new truck traffic for the proposed work will not exceed the threshold of 150 adt over a duration of one year or more.

MEPA 02: Each certified and potential vernal pool identified on MassGIS was delineated in September 2023; however, the DEIR does not identify when other wetland resource areas were delineated.

Response: Other resource areas were delineated between November 2019 and April 2020 during the planning and design phase of the Project. Vegetated wetlands and streams were re-flagged in areas where soil boring work took place and areas where wetlands may have been re-evaluated per the request of regulatory agencies. Additional discussion on wetland resource areas within the Project Site is outlined in Section 6.

MEPA 03: The DEIR inconsistently identifies that the project will impact IVW and also that the project corridor does not contain IVW or Isolated Land Subject to Flooding (ILSF).

Response: Wetland resource areas have been identified and discussed in Section 6 of the FEIR. There are no areas of designated Isolated Land Subject to Flooding. Across the project site 46 IVWs were delineated. They are primarily located within the existing cleared limits of the ROW and vary in size, with most being less than a half an acre in size. The proposed project will result in approximately 43,048 sf of temporary impacts associated with the placement of construction matting and 320 sf of permanent impacts associated with the installation of Structure 79 and its associated ground grid. See Section 6 for information on wetland resource area impacts.

MEPA 04: The DEIR states that a substantial portion of proposed work including structure replacements will qualify under the Utility Maintenance Exemption ((c. 30, s. 62A) and WPA) which exempts work done "in the course of maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public." It further states that elements of the project that do not qualify as exempt will meet the requirements for a Limited Project. The DEIR does not clearly identify which elements qualify for the exemption and which do not.

Response: As stated in the DEIR the proposed structure replacement activities qualify as exempt utility maintenance activities. The activities that qualify for this exemption, based on previous discussions and direction from MassDEP, are the replacement of existing structures, improvements to existing access roads, and activities (i.e., matting and vegetation removal) directly associated with those maintenance activities. Work that is associated with new or substantially expanded permanent work pads, pull pads, and access roads are not covered under the exemption and thus additional permitting is required. These activities do qualify as a limited project under the MAWPA (310 CMR 10.53(3)(d)) which, if approved by the local Conservation Commission, allows for provisions to not meet certain performance standards if they cannot be met after avoiding, minimizing, and mitigating impacts. This information is also provided in Section 2.

MEPA 05: The DEIR identifies temporary impacts to 3,230 sf of BLSF that will not result in a loss of flood storage volume; it is unclear if this impact is associated with temporary timber matting or with repairs to an existing access road (Old Florida Road).

Response: The proposed 3,320 sf of impacts to BLSF are anticipated to be temporary in nature and will be due to the temporary placement of construction matting along Old Florida Road.

MEPA 06: The FEIR should provide the additional information requested in WRP comments to allow it to determine whether temporary structures/fill will be located within each waterway within c. 91 jurisdiction may be eligible for a c. 91 permit or if a license is required.

Response: The Project is exempt as maintenance work in accordance with 310 CMR 9.05(3)(c) and (f). The placement of construction matting that will temporarily span the streams is a Best Management Practice (BMP) that is

part of the maintenance work and will protect inland rivers and streams from construction equipment impacts.

MEPA 07: Work activities on DCR property outside of existing easements associated with the E131 line ROW, or requiring access across DCR property, will require a CAP. The CAP will include conditions to minimize impacts to trail access and ensure the safety of trail users. The Proponent will continue to consult with DCR regarding strategies to deter unauthorized trail use (i.e., increased Off-Highway Vehicle (OHV) access to the state forests potentially causing degradation of natural and cultural resources) and to identify specific plans to regulate and enforce rules on allowable and appropriate types of recreation.

Response: Noted. NEP will continue to coordinate with DCR regarding the development of a CAP and strategies to address OHV access concerns.

MEPA 08: The project route will intersect with state jurisdictional highway layout at multiple locations, including the Curran Memorial Highway in Adams and Mohawk Trail (Route 2) in Florida. Project-related construction in these locations will require a temporary Access Permit for construction activities and/or a Utility Access Permit from MassDOT. MassDOT comments note that additional permits will be required for temporary construction access, overhead wire crossings of the above listed state routes, and new access roadways proposed within the state highway ROW.

Response: Noted. NEP will continue to coordinate with MassDOT to obtain all necessary permits.

MEPA 09: The estimated carbon impact over 30 years to 2050 is estimated to be 3,425 U.S. tons of CO2e (including ±50 U.S. tons of CO2e due to conversion to scrub shrub). It is unclear whether these values include both one-time emissions from direct clearing and sequestration loss over time (or only the latter).

Response: As noted in Section 3, the Project is expected to result in no more than a 3,275 U.S. ton increase in CO2e emission over its 30-year lifespan, including emissions from direct removal and sequestration loss over time.

MEPA 10: The FEIR should clarify the methodology used to calculate carbon impacts as indicated below.

Response: As stated in Section 3, the Project-related changes in GHG emissions are estimated as a function of three processes. (1) Some carbon currently sequestered in live biomass, forest soil, dead wood, and litter may be released due to vegetation removal and/or soil disturbance along access roads. (2) The conversion of forest and/or exposed soil/low-growing grass/shrub habitat into exposed soil/low-growing grasses/gravel may reduce the rate of future GHG sequestration within the affected footprints. (3) Some GHG will not be emitted because reliability and resiliency of the electricity transmission grid is increased when the Project is implemented. The change in GHG associated with each process is reported in bullets 1, 2, and 3 of Section 3.

MEPA 11: The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. Recommendations provided in this Certificate may result in a modified design that would further avoid, minimize, and/or mitigate Damage to the Environment. The FEIR should identify measures the Proponent will include to further reduce the impacts of the project since the filing of the DEIR, or, if certain measures are infeasible, the FEIR should discuss why these measures will not be adopted.

Response: As included in the EENF and DEIR, the alternatives analysis has outlined all realistic and feasible options to reducing impacts to the environmental and surrounding landscape within the E131 project area. There have been no substantive changes to the proposed project since filing the DEIR. NEP continues to coordinate with federal, state, and local agencies to provide measures to facilitate the project moving forward while providing options to reduce impacts and concerns in specific locations.

MEPA 12: The FEIR should provide an updated description of the project and identify any changes and associated environmental impacts since the filing of the DEIR. It should include updated site plans for existing and post-development conditions. Plans should clearly identify any additional permanent and temporary easements that will be required to create access to the ROW. Plans and narrative provided in the FEIR should identify the extent of any off-ROW clearing required for access road construction, and whether permanent easements will need to be acquired to maintain those areas as utility corridors.

Response: The FEIR provides a description of the proposed project in Section 1. As noted in MEPA 12 response there have been no substantial changes in the scope and location of the work. All off-ROW access routes and work areas remain the same, including proposed area of ground disturbance and tree removal and those impact numbers are included in the impact tables (Tables 1-1 and 4-1). No permanent or temporary easement will be required for the proposed access routes and work areas as the existing utility easements provide all necessary rights for the proposed access routes. See Appendix B for the project plans.

MEPA 13: FEIR should provide a brief description and analysis of all applicable statutory and regulatory standards and requirements and describe how the project will meet those standards. It should include a list of required Agency Permits, Financial Assistance, or other state or local approvals and provide an update on the status of each. I expect that the FEIR will provide clear and direct responses to comments from Mass Audubon, Berkshire Regional Planning Commission, and Franklin Regional Council of Governments.

Response: A brief description and analysis of the applicable statutory and regulatory standards is provided in Section 2. The FEIR provides clear and direct responses to comments within Section 2 to the extent that they are within the Scope.

MEPA 14: **The information and analyses identified in this Scope should be addressed within the main body of the FEIR and not in appendices. In general, appendices should be used only to provide raw data, such as drainage calculations, traffic counts, capacity analyses and energy modelling, that is otherwise adequately summarized with text, tables and figures within the main body of the FEIR. Information provided in appendices should be indexed with page numbers and separated by tabs, or, if provided in electronic format, include links to individual sections. Any references in the FEIR to materials provided in an appendix should include specific page numbers to facilitate review.**

Response: Noted. Any documentation included as an attachment will be addressed in the main body of the FEIR.

MEPA 15: **The Proponent should continue to take steps, including undertaking additional measures, to meaningfully engage EJ populations in decision-making for the project. The FEIR should report on the results of such engagement efforts. As requested in the Scope on the DEIR, the Proponent should consider holding a public meeting to provide details of the project prior to filing the FEIR.**

Response: Notice of this FEIR as well as other Project updates will continue to be posted on the Project website and sent to the EJ distribution list and abutters as necessary. Community stakeholders have been encouraged to request additional public meetings if desired and provided with instructions for how to request them.

MEPA 16: **The DEIR did not specifically describe the extent of truck traffic that will result from refurbishment and tree clearing activities, including the number of truck trips required. The FEIR should clarify the number of truck trips per day and whether it exceeds the threshold for 150 new average daily trips (adt) of diesel vehicle traffic over a duration of 1 year or more at which EJ outreach and analysis are required over a 5-mile DGA under the MEPA EJ protocols. The FEIR should clarify whether these trips are anticipated at certain locations along the project corridor, or over the entire route. The FEIR should provide a description of truck routing and indicate whether trucks will travel adjacent to any EJ populations within the DGA around the site. If so, the project should indicate what measures will be taken to minimize impacts.**

Response: Please see the response to MEPA 1, above.

MEPA 17: **If diesel truck trips are over 150 adt, the FEIR should provide a supplemental EJ analysis by providing a revised baseline assessment of existing burdens over a 5-mile radius around the entire project site. If more than 150 average daily truck trips are anticipated to travel through EJ neighborhoods that are subject to elevated air-related environmental indicators (over 80th percentile) as noted in the EPA EJ Screen,14 specific mitigation should be proposed. The Proponent should circulate the FEIR to the**

EJ reference list prior to filing and, if a 5-mile DGA is implicated, should contact the MEPA Office for an updated list of all CBOs and tribes/indigenous organizations within 5 miles around the project site. The Proponent should expand outreach efforts to the entire 5-mile area within any EJ neighborhoods through which truck traffic will travel.

Response: See response to Comment MEPA 1: the Project will not exceed the threshold of 150 adt over a duration of a year or more.

MEPA 18: As requested by the Scope on the DEIR, the FEIR should:

- **estimate land alteration associated with access roadways on-ROW and off-ROW (new and improvements to existing) and tree clearing on-ROW and off-ROW in a tabular format**
    - Comment acknowledged. Table 4-1 provides an updated summary of impacts associated with new and existing access roads as well as tree removal on and off the ROW, including within DCR land.
- **clarify the location, type and amount of alteration in previously undisturbed areas**
    - Proposed areas of alteration are identified in the ER maps provided in Appendix B. The proposed project will primarily be located within previously disturbed areas (i.e., areas previously cut/graded/matted, etc.), and limited in areas that have not been previously disturbed. The only alteration of previously undisturbed areas will be in areas requiring tree removal to create access routes, work pads, and pull pads. Additional information on proposed land alteration is discussed in Section 4.
- **confirm that land alteration estimates include clearing required off-ROW to improve/widen existing access roads**
    - Reported land alteration and tree removal estimates include both on- and off-ROW impacts. Please see Table 4-1 for a detailed quantification of on- and off-ROW impacts.

MEPA 19: The FEIR should provide an updated summary and breakdown of all tree removal impacts in the ROW and off-ROW, including within DCR land.

Response: Comment acknowledged. Table 8-1 provides an updated summary of tree removal impacts on and off the ROW, including within DCR land.

MEPA 20: The Proponent should continue to work proactively with NHESP to address outstanding issues, including continuing to assess alternatives to further reduce permanent and temporary impacts to state-listed species and their habitats, and developing a robust conservation and management plan that provides a long-term net benefit to state-listed plants, with a focus on protection of individual plants and plant populations, additional surveys, seed collection, and management to enhance habitat quality in the immediate vicinity of the project site. The FEIR should summarize the results of consultations with NHESP and address these

outstanding issues. The FEIR should clearly identify the project's consistency with the performance standards for a CMP. It should provide an update on potential impacts to state-listed rare species habitat, including the acreage of Priority Habitat both on- and off-ROW impacted by the project. It should identify proposed measures to avoid, minimize and mitigate those impacts.

Response: NEP continues to coordinate with NHESP and is developing a Conservation and Management Permit for submission to NHESP once the MEPA review process is complete. Section 5 of the FEIR summarizes the results of the consultation with NHESP and details included in the CMP preparation as well as the projects consistency with the MESA performance standards. Along with time of year restrictions put in place for the areas at the Adams Substation, additional mitigation measures such as seed collection and development of additional habitat are being developed and coordinated in the CMP.

MEPA 21: the FEIR should confirm if the Proponent intends to wait to file Notices of Intent (NOIs) until the conclusion of MEPA review or, if the NOI is filed prior to the conclusion of MEPA review, that the Proponent will request that a decision is deferred until the final MEPA Certificate and WQC have been issued to ensure sufficient opportunities for public involvement and consistency with any requirements in the Certificate and conditions of the WQC.

Response: Notices of Intent will not be filed with Conservation Commissions until the conclusion of MEPA review.

MEPA 22: The FEIR should affirm that the Proponent will coordinate submittal of NOIs and outreach to affected municipalities due to the complexity and long, linear nature of the project.

Response: Notices of Intent will be filed with the Adams, North Adams, Florida, and Monroe Conservation Commissions for all activities proposed within wetland resource areas located within each Town.

MEPA 23: The FEIR should:

- **identify when delineations of BVW, Inland Bank, LUW, BLSF, RFA were conducted**
    - Resource areas were delineated between November 2019 and April 2020 during the planning and design phase of the project. Vegetated wetlands and streams were re-flagged in areas where soil boring work took place and areas where wetlands may have been re-evaluated per the request of regulatory agencies. Additional discussion on wetland resource areas within the project site is outlined in Section 6.
- **clearly identify permanent and temporary impacts to all resource areas and ensure that these estimates are consistent throughout the filing**
    - Impacts, both temporary and permanent, are outlined in Section 6 and Table 6-1 of the FEIR narrative.
- **describe if IVW and ILSF were observed and delineated**

  - As noted in the response to MEPA 3, there are no areas of designated Isolated Land Subject to Flooding. Across the project site 46 IVWs were delineated and primarily located within the existing cleared limits of the ROW. The proposed project will result in approximately 43,048 sf of temporary impacts associated with the placement of construction matting and 320 sf of permanent impacts associated with the installation of Structure 79 and its associated ground grid. See Section 6 for information on wetland resource area impacts.
- **confirm that estimates for impacts to wetland resource areas are conservative and account for all temporary and off-ROW impacts**
  - In order to conservatively estimate impacts to wetland resource areas, reported impacts reflect the expected limits of alteration plus an additional 5%. Thus, actual impacts are anticipated to be less than those reported. All temporary and permanent impacts resulting from the proposed activities are reported in Table 6-1.
- **clarify the impacts to other wetland resources areas (i.e., resolve differences between Tables 1-1 and 6-1 in the DEIR)**
  - Impact areas have been reviewed and outlined in Table 6-1 in Section 6 of the FEIR, which we hope resolves the difference between Tables 1-1 and 6-1 presented in the DEIR.
- **confirm that there are no impacts (permanent or temporary) to LUW**
  - The Project has been designed to avoid permanent stream crossings and minimize temporary crossings. Temporary crossings will span the full width of stream channels and result in no temporary or permanent impacts to LUW.
- **identify implementation sequencing**
  - The list below describes the sequencing of the proposed project. Conventional overhead electric transmission line construction techniques will be used to reconstruct the line. Based on similar projects, the proposed sequence will generally be completed as follows:
    1. Removal of vegetation and ROW mowing in advance of construction.
       - This includes tree removal and some construction mat placement.
    2. Installation of soil erosion and sediment controls.
    3. Construction of access routes and access route improvements.
    4. Construction of work pads and staging areas.
    5. Installation of foundations and structures.
    6. Installation of OPGW and conductor wire.
    7. Removal and disposal of existing transmission line components.
    8. Restoration and stabilization of the ROW.
       - Restoration will also include the construction of the proposed wetland replication area as well as in-situ restoration of wetland resource areas post construction and mat removal.
- **provide site-specific mitigation details**

- Mitigation for impacts to wetland resource areas will consist of a combination of in situ restoration for temporary impacts and wetland replication for permanent impacts to BVW. A description of site-specific mitigation details is provided in Section 6.

- **describe why structures 24, 60, 80, 151, 172 will be relocated from the 100-foot Buffer Zone to BVW and describe efforts to avoid, minimize, and mitigate impacts associated with these structures**
  - Structures 24, 60, 80, 151, and 172 are all moving from Buffer Zone to being installed in BVW due to the overall shifting of the structures throughout the transmission line. Electrical engineering generally dictates the locations of the new structures looking at the overall connections, span lengths, ground clearance due to land features, and the multiple factors impacting energy's ability to flow efficiently and safely through the lines. The proposed structure locations were determined by electrical engineering, reviewed by the NEP civil construction team and the environmental team to identify areas of concern and ways to mitigate impacts to the surrounding environment where possible. The wetland replication proposed for this project is sized to account for the proposed permanent impacts from the placement of new structures in BVW. The larger replication area provides more ecological benefit than creating several extremely small wetlands to mitigate unavoidable wetland loss.
    - STR 24 – Due to STR layout and alignments the STR needs to be located east of the current location. Additional sensitive areas are also present at this location where ground disturbance in uplands needs to be avoided.
    - STR 60 – Due to the slope of this area the STR needs to be moved downslope instead of upslope.
    - STR 80 – Due to additional structures being added and relocated to facilitate a better connection with the adjacent Bear Swamp Tap Line all within a small area, structures need to shift. Existing STR 80 was within proximity to and surrounded by vegetated wetlands and there were no other options to keep the STR out of the wetland.
    - STR151 – Multiple structures within this section of the alignment are being moved due to the removal of STR 153 from the alignment completely. This causes a "domino" effect shifting structures on either side to make up the spans.
    - STR 172 – Multiple structures are moving due to the removal of STR 168 from the alignment completely and shifting taking place further west. The structure is located adjacent to wetlands and movement either way would impact resources.

- **discuss how clearing of large diameter trees in the Monroe State Forest will be limited to the maximum extent practicable**
  - All tree removals are being limited to the maximum extent practical based on the minimum needs for the Project in terms of developing safe and

reliable access and work space. Care will be taken by the forestry professionals performing the work to avoid cutting large diameter trees within and along the edges of the proposed work areas where feasible.

- **clearly identify which elements of the project qualify for exemption under the Utility Maintenance Exemption (c. 30, s. 62A) and WPA, and which do not**
    - As discussed in Section 2.1, and in the response to MEPA 04, the replacement of existing structures and the refreshing of R-type access roads qualify as exempt under the Utility Maintenance Exemption, as do matting and tree removal directly associated with those activities.

- **confirm that all stormwater conveyances (e.g., swales, stone check dams, water bars, etc.) will include stormwater BMPs to attenuate pollutants and provide a setback from the receiving waters and wetlands as described in the Massachusetts Stormwater Handbook and in accordance with the provisions of 310 CMR 10.05(6)(k) through (q)**

Response: Access BMPs including swales, check dams, water bars, and plunge pools, are primarily to reduce the potential for washout of the gravel access. The project does not add impervious area, and is not anticipated to have a significant impact to hydrology along the ROW. By controlling the run-on to and runoff from the constructed access and workpads and allowing it to recharge to the ROW ground surface in a controlled manner, the project is meeting the intent of the Massachusetts Stormwater Handbook and the provisions of 310 CMR 10.05(6)(k) through (q).

MEPA 24: **The FEIR should provide a revised discussion of the project's consistency with performance standards of the WPA because the project will result in the Take of a state-listed plant species. It is my expectation that the FEIR will provide a mitigation plan that addresses impacts (permanent and temporary) in consultation with MassDEP, local Conservation Commissions and ACOE that demonstrates the project is offsetting the significant impacts to wetland resource areas.**

Response: Section 2 of the FEIR provides and revised discussion of the project's consistency with the performance standards of the MAWPA and MESA regulations. The proposed mitigation measures as outlined in Section 6 of the FEIR addresses impacts to wetland resources areas. NEP will continue to coordinate with MassDEP through the Section 401 review process, the ACOE through the Section 404 review process, and local Conservation Commission as the Notice of Intent applications are developed.

MEPA 25: **The FEIR should include plan and cross-sectional details that depict the temporary and permanent scopes of work and should indicate the proposed timing that temporary structures/fill will be located within each waterway within c. 91 jurisdiction to allow MassDEP to determine whether they may be eligible for a c. 91 permit or if a license is required. The Proponent should contact MassDEP prior to submission of the FEIR regarding any questions on MassDEP comments.**

Response: See response to MEPA 06**.**

MEPA 26: Additional information is needed to determine if new permanent easements are required which would require disposition of state-owned land protected by Article 97. If required, a disposition of a property interest over this land requires approval by a two-thirds vote of the legislature, and compliance with the Article 97 Policy and new M.G.L. c. 3, s. 5A (PLPA).

Response: See response to Comment MEPA 27, below.

MEPA 27: The Proponent is directed to continue consultation with DCR regarding the applicability of Article 97 prior to filing the DEIR. The FEIR must identify impacts (temporary and permanent) to Article 97 Land and proposed measures to avoid, minimize and mitigate impacts. If Article 97 is deemed applicable, the FEIR should address compliance with the EEA Article 97 Policy. The FEIR should provide an update on these consultations and identify specific protection and restoration measures to be taken for sensitive natural and cultural resources on public conservation lands.

Response: NEP has continued its consultation, which remains ongoing. NEP's view is that, considering the existing rights of NEP to access the E131 line ROW, no change in use or other disposition is proposed that would trigger Article 97, EEA's Article 97 Policy or the Public Lands Preservation Act (PLPA). Rather, NEP intends to seek construction and access permits from DCR, which do not implicate Article 97. DCR has actively participated and continues to actively participate in these consultations, and has not yet finalized its view on this subject. Should DCR ultimately be unable to issue any required permits because of Article 97, NEP will submit a notice of project change addressing compliance with Article 97, the EEA Article 97 Policy and the PLPA.

MEPA 28: The FEIR should clarify the precise extent of impacts on DCR property and off ROW in separate tables (i.e., total land alteration, tree clearing for access roads and for work/pull pads (separately estimated), and impacts to wetland resource areas such as BVW, IVW, RFA, etc.).

Response: Comment acknowledged. Table 8-2 shows a detailed quantification of impacts on and off the ROW for work both within and outside of DCR property, listed by activity. A separate table (Table 8-3) shows impacts to wetland resource areas.

MEPA 29: As required in the Scope on the DEIR, the FEIR should include maintenance plans (equipment, roadways, vegetation management, etc.) that will ensure ongoing impacts are minimized and describe how these plans will be modified or developed to avoid and minimize impacts to birds, nests, and young during the breeding season, and to reptiles and amphibians that may be vulnerable to operation of trucks or other equipment, especially on protected conservation lands.

Response: As discussed in Section 8 of the FEIR**,** NEP, per the EG303 manual, will perform annual monitoring of roads and repairs as needed to meet the company specifications. Along with this effort, ongoing cyclical vegetation management will take place per the procedure outlined in NEPs Vegetation Management Program (VMP). The infrastructure along NEP's ROW's is surveyed annually either on foot or via aerial inspections to identify degradation, damage, and overall conditions of the utility lines. There will be review and oversight on the conditions of the ROW post construction to help NEP maintain its infrastructure.

MEPA 30: The FEIR should clarify the methodology used to calculate the carbon impacts of tree clearing specifically, whether the calculations account for both one-time emissions of the clearing activity or only the carbon sequestration loss over time. To provide a comparison of values, the FEIR should make use of the U.S. Forestry Service's EVALIDator Tool by inputting project values (e.g. draw radius around representative locations along the project route) to calculate the one-time direct emissions on a per-acre basis associated with the clearing activity. The one-time emissions should include a calculation of above ground biomass, below ground biomass, soil disturbance and dead woody matters to match the categories presented in the DEIR. The FEIR should also provide a comparison of the proposed per-acre carbon sequestration rate used for the project to a statewide number using Forest Inventory Analysis (FIA) sources.

Response: Table 9-1 below, compares SWCA estimates of carbon standing stocks, by carbon pool, to those included in EVALIDator.

Table 9-1. Comparison of SWCA and EVALIDator carbon pool estimates

Carbon Pool	SWCA	EVALIDator MA state Average	EVALIDator: 2 miles around 42.66532, -73.05601	EVALIDator: 2 miles around 42.70087, -72.98282
Live Above Ground	36.4	40.9	35.9	46.7
Live Below Ground	7.7	7.6	6.4	7.8
Soil Organic Content***	30.9	67.1	82.1	79.8
Litter	17.6	15.8	15.4	17.1

Setting aside soil organic content, the value estimates used by SWCA are similar to those reported by EVALIDator.

The existing text discusses soil organic content in footnote 13. That footnote notes that Thompson et al. (2020) reports an acre of generic forest soil in Massachusetts may contain 124.4 U.S. tons of soil organic carbon; this is considerably more than the USFS (2018a) reports for mature hardwood forests in New England. Indeed, on pages 54 and 55 of their report,

Thompson et al. note that the 124.4 estimate "is much higher than most other forest estimates from the region." They go on to site studies at the Harvard Forest in central Massachusetts and at the Hubbard Brook experimental forest in New Hampshire where soil organic content was more in line with USFS reports. Thus, we consider the soil organic content estimates put forward in USFS (2018a) to be indicative of the best available information.

Further, it is noted that uncertainty related to baseline soil organic content does not impart a material amount of uncertainty on estimates of overall GHG emissions. This is because, as discussed in the existing text, activities that expose sub-surface soils to the air, such as tree cutting, may result in the release of some carbon that would otherwise remain sequestered in the soil. Thompson et al. (2020) report that tree cutting associated with commercial forestry does not likely release carbon from forest soil and that this conclusion is consistent with the observation that, when measured, the carbon content of soils in yards did not differ from the carbon content of soils in forests adjacent to those yards. However, on Page 55 of their report, Thompson et al. also note that, in assuming commercial tree removal does not cause any release of carbon stored in forest soils, they may have understated potential carbon releases. This concern was based on "a metanalysis of harvest impacts on soil carbon in temperate forests worldwide [which] found that, on average, harvesting reduced soil carbon stocks by 8%, though the impacts can be ephemeral." Thus, the existing report already conservatively (i.e. tending to overstate potential GHG impacts) assumes that 8 percent of the at-risk carbon currently stored in forest soils will be released to the air because of the Project.

As reported in Section 3.2, this report uses Catanzaro and D'Amato (2019) who estimate an average annual net carbon sequestration rate for Massachusetts forests of 1.66 U.S. tons of CO2e per acre which is equivalent to 1.51 metric tons of CO2e per acre which is not materially different from the 1.54 tons of CO2e per acre per year associated with FIA data.

MEPA 31: **The DEIR indicates that 3,275 U.S. tons of CO2e emissions is anticipated over its 30- year lifespan associated with tree clearing, even after deducting anticipated resiliency benefits from preventing outages and peak discharges. The FEIR should propose mitigation for this carbon impact, including through potential tree replanting or forest/land preservation efforts. For mitigation proposed, the FEIR should quantity the carbon benefits in terms of CO2e sequestration potential preserved over a 30-year period.**

Response: In response to the Secretary's directive that that "The FEIR should propose mitigation for this carbon impact, including through potential tree replanting…" (see pg 23 of the DEIR Certificate), NEP will fund a planting program to offset the CO2e emissions related to the tree removals required to safely construct the E131 Project improvements. NEP will partner with the Connecticut River Conservancy (CRC) to plant an equivalent number of saplings to offset the estimated 3,375 U.S. tons of C02e emissions over its 30-year lifespan associated with the 11.3 acres of tree removals.

The CRC is a non-profit organization dedicated to restoration and advocacy efforts across the watershed of the Connecticut River and its tributaries. In 2023, the CRC's planting projects resulted in nearly 10,500 native trees and shrubs being planted, restoring roughly 26 acres of riparian land along the Connecticut River and several tributary streams.

NEP estimates that funding a program equivalent to the planting of approximately 1,650 mixed hardwood/softwood saplings will achieve the desired no net loss of carbon for the E131 Project over its 30-year lifespan.

Carbon sequestration was evaluated based on the following resources.

- *Standard estimates of forest ecosystem carbon for forest types of the United States*[8]
- *Climate Action Reserve's Climate Forward Reforestation Communities Data File*[9]

These resources were used to estimate the amount of carbon sequestered in the 30 years after clearcut harvest in the Northeast and to calculate carbon sequestration credits associated with reforestation efforts in 10 regions of the U.S., one of which is the Northeast.

MEPA 32: The FEIR should provide an accounting of the variety of potential end uses for cleared trees, and how the Proponent will make decisions as to such end dispositions. It should provide additional information on how the Proponent is seeking to reuse cleared trees, and whether efforts are being made to reuse trees for long-lived wood products. Given that the majority of tree clearing will occur on DCR land, the FEIR should discuss whether mitigation could be provided to DCR for replanting efforts.

Response: Within NEP fee-owned parcels, wood collected during tree removal will be committed to reuse in long-lived wood products or will be donated to affordable housing projects or wood banks in MA. Outside of NEP fee-owned parcels, the trees within the ROW belong to the respective private landowners. As such, it will not be possible to provide a detailed break-down of how all wood is distributed/disposed of by parties other than NEP.

MEPA 33: The FEIR should discuss the extent to which existing electrical lines are exposed to riverine flooding, and what measures the Proponent is taking to improve asset resiliency over a longer-term horizon. The DEIR describes how the project will be designed to allow more electricity to flow during times of high usage such as extreme heat

[8] USFS, 2021. Standard estimates of forest ecosystem carbon for forest types of the United States. Available at: https://www.fs.usda.gov/nrs/pubs/gtr/gtr_nrs202.pdf. Accessed March 5, 2024.

[9] Climate Action Reserve. 2022. Climate Forward Reforestation Communities Data File. Available at: https://climateforward.org/program/methodologies/reforestation/. Accessed March 5, 2024.

events. However, the FEIR should address heat effects from land and tree clearing.

Response: As previously noted in Section 10.3 of the DEIR, the overall resilience of the E131 line is anticipated to increase due to the maintenance of the line and ability to access the ROW. Project is part of NEP's efforts to ensure the long-term longevity and reliability of the region's electrical infrastructure in the face of growing demand for electricity and the changing climate. The Project will result in a more climate-ready and resilient transmission system that can withstand more extreme weather events; address existing system capacity shortages and increased demand.

The installation of structures reinforced with caisson foundations will help to increase infrastructure resiliency, particularly in wetland resource areas increasingly susceptible to inundation. This foundation type, designed for wet environments, coupled with engineered structures, eliminates the need to elevate foundations above any particular base flood elevation as they can withstand inundation. As part of this Project, NEP is proposing to remove existing structures from current flood-prone wetland areas. Specifically, STR 144 (see Page 9 of the ER maps in Appendix B) is currently situated within an emergent wetland subject to flooding. This structure will be removed allowing the line to fully span the floodplain, thereby eliminating future impacts to this area from infrastructure work. STR 180 will also be removed as part of the Project. STR 179 will be installed using direct embed techniques requiring no foundation, and STR 181 will be installed using micropile foundations avoiding permanent concrete foundations. Based on the incorporation of these design measures, the proposed work will not adversely impact the flood storage capacity or attenuation of these areas. Other climate adaptation and resiliency strategies include storm resiliency and mitigation, and site stabilization and re-establishment of natural vegetation.

Section 9 of the FEIR outlines additional information on heat effects from land and tree removal activities. The updated RMAT Design Standards Tool Output Report as provided in Appendix D of the DEIR determined a "High" risk ratings for extreme precipitation (urban and riverine flooding). Pursuant to the MEPA protocol, we note that the "high" risk rating for the "extreme heat" parameter should not be used as a definitive indicator of elevated climate risks. NEP has concluded that the Project is unlikely to exacerbate any climate risks identified in the RMAT Tool Report in a manner that affects EJ Populations, including any potential for increased flooding risks. Additionally, the proposed Project is not anticipated to contribute any further GHG emissions, air pollutants, and heat island effects on the EJ Populations nor any other residents within the DGA.

MEPA 34: The DEIR included draft Section 61 Findings and proposed mitigation measures. The FEIR should include a separate chapter with an updated comprehensive list of all commitments made by the Proponent to avoid, minimize and mitigate the impacts of the project. It should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed

measure, identify the parties responsible for implementation, and contain a schedule for implementation. The list of commitments should be provided in a tabular format organized by subject matter (traffic, water/wastewater, GHG, EJ, etc.) and identify the Agency Action or Permit associated with each category of impact. Draft Section 61 Findings should be separately included for each Agency Action to be taken on the project.

Response: Comment acknowledged. Section 61 findings are included in Section 9. A comprehensive table summarizing all mitigation measures to which NEP has committed is provided in Section 10. Table 10-1.

MEPA 35: The FEIR should contain a copy of this Certificate and a copy of each comment letter received. It should include a comprehensive response to comments on the DEIR that specifically address each issue raised in the comment letter; references to a chapter or sections of the FEIR alone are not adequate and should only be used, with reference to specific page numbers, to support a direct response. This directive is not intended to, and shall not be construed to, enlarge the Scope of the FEIR beyond what has been expressly identified in this certificate.

Response: Comment acknowledged. A copy of the DEIR Certificate and each comment letter received are included as Appendix A. A comprehensive response to comments including references to page numbers (as needed) is provided as Section 11.

Massachusetts Department of Conservation and Recreation (DCR)

DCR 01: DCR is in consultation with the Proponent to gain more details on the proposed off ROW activities and their impacts to the natural and recreational resources within the state forest, and is in the process of determining whether the permanent impacts to off-ROW DCR property would amount to a change in use or control that will invoke the EEA Article 97 Land Disposition Policy and the requirements of the Public Lands Preservation Act, codified at M.G.L. c. 3, § 5A.

Response: NEP looks forward to continued coordination with DCR.

DCR 02: DCR requests that the Proponent continue to coordinate with DCR staff to minimize impacts to sensitive resources, minimize clearing to the extent possible, and identify mitigation opportunities should a loss or conversion of wetlands, rare species habitat or other forest or recreational resources result from Project work activities.

Response: Comment acknowledged. NEP looks forward to continued coordination with DCR.

DCR 03: Work activities on DCR property outside of existing easements associated with the NEP ROW, or requiring access across DCR property, will require a Construction and Access Permit ("CAP").

The CAP will include conditions to minimize impacts to trail access and ensure the safety of trail users.

Response: Comment acknowledged. NEP will continue to coordinate with DCR to obtain a CAP which will include measures to minimize impacts to trail access and ensure safety for trail users.

Berkshire Regional Planning Commission (BRPC)

BRPC 01: The DEIR is not consistent with the EENF in quantifying resource impacts. The Final EIR should provide greater clarity and/or consistency with regard to how impacts are quantified. Discrepancies should be corrected and changes to project impacts should be clearly identified.

Response: Comment acknowledged. Resource area impacts have been reported in updated formats to provide greater detail and clarity.

BRPC 02: According to the EENF, permanent impacts are associated with the replacement and relocation of five structures to BVW via direct embed methods. The EENF stated that these areas were closely evaluated for alternatives but designs that relocated structures outside of BVW were deemed infeasible. However, this detail is absent within the alternatives analysis. The DEIR refers to narrative Section 6 regarding reasons for relocation of the five structures to BVW and site constraints. Section 6 states "Whenever feasible, NEP sited proposed structures in proximity to the existing structures being removed or has relocated structures from wetlands into upland areas." It remains unclear why permanent impacts are associated with the replacement and relocation of five structures to BVW via direct embed methods or how these areas were evaluated for alternatives that relocated structures outside of BVW.

Response: Comment acknowledged. Please refer to Section 6 for a detailed explanation of constraints requiring the relocation of structures into wetlands.

BRPC 03: BRPC previously requested greater detail with regard to proposed mitigation measures including specific details related to wetland mitigation and replication. According to the DEIR proposed mitigation measures are described in narrative Section 4 and Table 15-1. Narrative Section 6 is referenced with regard to wetland restoration and mitigation. With regard to wetland mitigation, the DEIR states that "Specific details will be provided later to MassDEP pending further development of mitigation plan discussions with regulators." This detail should be provided within the Final EIR.

Response: Comment acknowledged. Details regarding the proposed wetland replication area have been provided in Section 6.2.3.

BRPC 04: The DEIR states that NEP plans to utilize tracked construction vehicles to the extent practicable to construct 12-foot-wide access roads. However, due to site constraints (including very steep slopes) and equipment required for the rebuild Project, additional

non-tracked equipment and vehicles will be required. Access road development is being completed to facilitate standard electric utility construction vehicles and equipment. However, there is no discussion with regard to minimizing impacts through the use of tracked vehicles where access for standard electric utility construction vehicles and equipment is not needed.

Response: As stated in the DEIR, Section 11 response to HooRWA 03, tracked equipment will be used as available and deemed necessary. Tracked equipment is a useful resource, for instance when the scope of work is limited in scale and access timeframes are limited. The extent and scale of the structure replacement work does not necessarily make it feasible or realistic to exclusively use tracked equipment. Furthermore, although tracked equipment provides temporary impact, they do impact ground conditions and are not effective at reducing impacts when the ground is soft causing ruts and disturbance.

BRPC 05: The Alternative Analysis describes existing site constraints, including very steep terrain, which would otherwise require multiple switchbacks and in most cases greater environmental impacts within the existing, maintained ROW rather than proposing permanent off-ROW access. The DEIR further states that permanent access roads will allow for both structure installation and required future maintenance. However, it is unclear why new permanent access roads are needed beyond those that currently exist or why temporary access roads are infeasible.

Response: As outlined in the EENF (Sections 3 and 7), DEIR (Sections 4 and 12), and FEIR (Section 4) the proposed site is challenging for safe and effective construction. Installation of permanent access roads to access structures will allow for the replacement of the structures, continued maintenance, and emergency response to the infrastructure. There are very limited access routes existing within the ROW and those that do exist need to be upgraded to facilitate the new structures and access using equipment necessary for the installation. To avoid continued development or installation of temporary access across 11 miles of ROW the installation of permanent access routes is the most effective and appropriate means for NEP to maintain the existing and permanent electrical infrastructure.

BRPC 06: The existing wooden structures installed in 1925 have withstood the test of time in standing for nearly 100 years. The DEIR states that NEP selected steel structures based on product standardization and lifespan maintenance requirements to support reliability. According to the DEIR, steel structures reduce the frequency of maintenance related to woodpecker damage and wood rot. The Final EIR should provide more detail with regard to the selection of steel structures for "lifespan maintenance requirements to support reliability" and the frequency and extent to which maintenance is required for wood structures due to woodpecker damage and wood rot.

Response: While the E131 Line was originally constructed in 1925, the structures were replaced as recently as the early 2000's due to woodpecker damage and

general deterioration. Due to the comparatively short design lifetime of wood poles, they are not included in NEP's current standard in preference for steel, which requires little maintenance. Replacing the existing wooden structures with steel poles will reduce the amount of maintenance required along the line, which is steep and difficult to access, and increase the lifespan of necessary infrastructure.

BRPC 07: The FEIR should address questions related to the capacity of the electrical grid in relation to the Commonwealth's electrification goals. Specifically, the FEIR should clarify whether the project will directly address the anticipated future demand or whether additional work would be needed in the future and clarify that the project is not segmented.

Response: Questions related to capacity of the electrical grid, the Commonwealth's electrification goals and anticipated future demand are not with the scope of MEPA for this Project. As explained in the Alternatives Analysis in the DEIR, the Project has been designed to address current and anticipated future needs for operating and maintaining a safe and reliable transmission line.

Franklin Regional Council of Governments:

FRCOG 01: According to Table 1-1, the project involves land alteration of 62.5 (unit not provided - acres?), 11.3 acres of tree removal, and 4.5 acres of rare species. We weren't able to assess the specific impacts in Monroe. According to Table 6-2, there will be permanent impact of 105 square feet of bordering vegetated wetland (BVW) in Monroe, and temporary impact of 168,550 square feet. We weren't able to determine impacts to riverfront areas in Monroe from reviewing the DEIR. FRCOG requests that resource impacts be listed by town in the final environmental impact report (FEIR).

Response: Noted. Table 6-2 has been updated to include resource area impacts within each municipality. Please see Section 6.1 of the narrative.

FRCOG 02: According to the MA DCR Monroe State Forest Trail Map (attached, and available online at https://www.mass.gov/doc/monroe-state forest-trail-map/download), this power line crosses several trails and comes in proximity to two camping shelters, one of which is in Monroe. The maps available in Appendix B do not appear to show any trails (the legend for the maps does not show trails). The text in the DEIR does not describe any short-term or long-term impacts to the trails, other than there may be access restrictions during the construction. Will there be tree removal along or near the trail? Will the experience of staying at one of the shelters be altered by a new or changed view of the powerline?

Response: Based on the MA DCR Monroe State Forest Trail Map, the Smith Hollow Trail crosses the E131 transmission line just south of Structure 69, and the Dunbar Brook Trail crosses the line between Structures 56 and 57. No tree removal is proposed at or immediately adjacent to these locations. Tree

removal associated with Structures 57, 69, and 70 will extend a maximum of approximately 25 feet beyond the existing cleared areas and may be visible at the crossings. Views from the Smith Hollow and Dunbar Brook Shelter will not be impacted by proposed tree removal. All tree removal within these areas is located within the E131 ROW.

FRCOG 03: Table 9-2 indicates that a new Type 1-5 access road in Monroe State Forest will be constructed, but it is not clear from the maps how close this access line comes to any existing trail. In Section 3.6, the DEIR mentions one of the project benefits is increased recreational access. Please provide details of the increased recreational access. Is the new Type 1-5 access road going to be developed as a new trail?

Response: Although increased recreational access is not the intended purpose of the new access roads it is anticipated that they will be used as such, based on public use of existing ROW access roads. The proposed new access roads will not be developed as official park trails.

FRCOG 04: Although we are glad that DCR will be in consultation with National Grid and their consultants, the DEIR doesn't offer enough details for other interested parties to evaluate recreational impacts or provide comments.

Response: Comment acknowledged. The proposed Project is subject to standard public comment processes as required by local, state, and federal regulations. Interested parties have had the opportunity to comment throughout the MEPA review process and will have additional opportunities through subsequent regulatory reviews. Parties concerned with impacts to recreation on public land are advised to contact their local DCR office directly.

Mass Audubon:

AUD 01: Our previous comments on the E131 project requested that MEPA consider working with the utilities to establish a programmatic approach to these projects. We reiterate that request here. Even if segments of these line improvements need to be reviewed independently to align with the utilities' capital improvement programs, there should be a programmatic approach that includes:

- **Tracking of multiple projects in the context of larger system planning at a level that is understandable to the public.**
- **Comprehensive tracking and availability of data on cumulative impacts to key resources including forests, wetlands, farmlands, rare species habitats, and Article 97 lands.**
- **Standardized approaches to avoidance and minimization of impacts.**
- **Mitigation for all unavoidable impacts and tracking of follow-through on mitigation commitments and results. The extent of Article 97 impacts and mitigation to comply with the Public Lands**

Protection Act are not entirely clear in these DEIRs. There are references to ongoing consultations with DCR as well as claims regarding the breadth of pre-existing easement rights including rights of access across lands beyond the limits of the actual easements. MassWildlife, municipal, and land trusts lands are also impacted. The Final EIRs should clarify these points and provide definitive commitments to mitigation for unavoidable Article 97 impacts, in addition to the other forms of mitigation already described (e.g. land protection for wetlands impacts and rare species habitat construction period conditions from the Natural Heritage and Endangered Species Program).

- **Best practices for ongoing maintenance to minimize impacts on habitat, water resources, and recreational uses. While there is already a system for reviewing Vegetation Management Plans in relation to use of pesticides, the standard best practices for these ROWs should be expanded to include these other important considerations. For example, tree clearing, brush hogging, and mowing generally should not occur during the bird nesting season. Expansion of scrub/shrub habitat for birds, pollinators, and other wildlife dependent on such habitats is an important goal of the state's Wildlife Action Plan and BioMap. To the extent these corridors can support such habitats, vegetation management practices should be optimized to achieve that. It is appropriate for the utilities to make such commitments throughout their ROW corridors, as mitigation for the ongoing impacts to Article 97 lands, forests, and wetland resources and as overall best practices for their land stewardship.**

Response: NEP welcomes continued coordination with the MEPA Office.

AUD 02: The DEIR for the A1/B2 project mentions existing problems with birds nesting on equipment and describes replacement of structures and wires with newer systems designed to deter bird nesting. This includes changing the shielding angle and raising the height of conductors. Updated designs that avoid and minimize potential conflicts between transmission infrastructure and wildlife including birds is an important consideration. It is unclear whether the designs for these projects will also eliminate or at least minimize potential for bird electrocutions. The Final EIRs should clarify this and there should be explicit commitments to utilizing designs that minimize the potential for avian harm and death. As this is an evolving area of science and best practice, the utilities should make commitments to continuing to advance and apply the best available designs and retrofitting techniques.

Response: The E131 ACR project has been designed using the latest standards for structure engineering and design. Unlike the A1/B2 project, the E131 project area has not seen issues of bird mortality due to structure configuration or design.

Massachusetts Department of Environmental Protection, Western Regional Office (DEP WERO)

DEP WERO 01: MassDEP notes that the Proponent filed a 401 Water Quality Certification (WQC) on June 16, 2023, prior to the Secretary determining that a final Environment Impact Report was adequate. MassDEP cannot take any action until the MEPA process is complete. MassDEP has notified the Proponent and the U.S. Army Corps of Engineers that MassDEP has extended indefinitely the time periods at 310 CMR 4.10(8)(j), and 314 CMR 9.05(2) of the "401 Water Quality Certification…" regulations until Agency Action can be taken.

Response: Comment acknowledged. NEP will continue to coordinate with MassDEP on the 401 WQC application and understands the review time periods are on hold until Agency Action has been taken.

DEP WERO 02: MassDEP cautions that when there is a delay in work the Proponent should revisit the searchable sites portal to ensure any new releases have been identified in the proposed work area.

Response: Recommendation noted.

DEP WERO 03: MassDEP finds the proposed Section 61 Finding, mitigation proposal to be acceptable, however; additional detail of site specific mitigation consistent with the requirements of regulation must be included as part of the permit application. MassDEP has the authority to ensure the Proponent avoid, minimize and mitigate through the permitting process and will include the final Section 61 Findings in the permit.

Response: Comment acknowledged. NEP will continue to coordinate with MassDEP to incorporate avoidance, minimization, and mitigation measures through the appropriate regulatory programs.

Massachusetts Department of Environmental Protection, Waterways Regulation Program (DEP WRP)

DEP WRP 01: The DEIR and ENF reference proposed work in or over non-tidal rivers and streams for construction access. Such work includes temporary construction mats and associated fill, work pads, etc. The FEIR should include plan and cross-sectional details that depict the temporary and permanent scopes of work and should indicate the proposed timing that temporary structures/fill will be located within each waterway within Chapter 91 jurisdiction in order for the Department to determine whether they may be eligible for a Chapter 91 permit or if a license is required.

Response: As noted in the DEIR and comments, standard Best Management Practices (BMPs) will be used to span stream channels located along access roads and where work pads are proposed. The construction matting will span the width of the channel avoiding placement within the channel and disturbance to the stream bank.

Massachusetts Department of Transportation (MassDOT)

MassDOT 01: The Project route will intersect with the state jurisdictional highway layout at multiple locations, including the Curran Memorial Highway in Adams and Mohawk Trail (Route 2) in Florida. Project-related construction in these locations will require a temporary access permit for construction activities and/or a utility access permit issued by MassDOT District 1. Further MassDOT permits will be required for temporary construction access, overhead wire crossings of the above-listed state routes, and new access roadways proposed within the state highway right-of-way.

Response: Comment acknowledged. NEP will continue to coordinate with MassDOT District 1 throughout the project and submit applications for a driveway access permit and an overhead crossing permit.

MassDOT 02: Once completed, the Project is not expected to result in additional vehicle trips on an average weekday, except for the occasional or yearly maintenance activities. MassDOT does not anticipate that these activities would significantly impact the transportation system and therefore recommends no further review for environmental impacts on the state transportation system. The Proponent should coordinate with MassDOT District 1 to minimize traffic disruption during Project construction and prevent impacts on state jurisdictional roadways.

Response: Comment acknowledged. NEP will continue to coordinate with MassDOT District 1 throughout the project.

Massachusetts Natural Heritage and Endangered Species Program (NHESP)

NHESP 01: Projects resulting in a Take of state-listed species may only be permitted if they meet the performance standards for a Conservation and Management Permit (CMP; 321 CMR 10.23).

Response: The proposed project meets the performance standards for a CMP, as outlined in Section 5 of the FEIR narrative.

NHESP 02: The Division recommends that the Proponent continue to work proactively with the Division to address several outstanding issues, including continuing to assess alternatives to further reduce permanent and temporary impacts to state-listed species and their habitats, and developing a robust conservation and management plan that provides a long-term net benefit to state-listed plants, with a focus on protection of individual plants and plant populations, additional botanical surveys, seed collection, and management to enhance habitat quality in the immediate vicinity of the Project site. The Division anticipates being able to address these issues through the MESA review process, and looks forward to continued consultation with the Proponent.

Response: Please refer to NHESP 01 response above. NEP looks forward to continued consultation with NHESP.

NHESP 03: The Division will not render a final decision until the MEPA review process and its associated public and agency comment period is completed, and until all required MESA filing materials are submitted to the Division. As the MESA review is ongoing, no work associated with the proposed Project shall occur until the MESA permitting process is complete.

Response: Comment acknowledged. NEP will continue to coordinate with NHESP and no work shall occur until the MESA permitting process is complete.

Tighe&Bond

APPENDIX A

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Maura T. Healey
GOVERNOR

Kimberley Driscoll
LIEUTENANT GOVERNOR

Rebecca L. Tepper
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
http://www.mass.gov/eea

December 15, 2023

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: E131 Asset Condition Refurbishment (ACR) Project
PROJECT MUNICIPALITY	: Adams, North Adams, Florida, and Monroe
PROJECT WATERSHED	: Hoosic and Deerfield
EEA NUMBER	: 16663
PROJECT PROPONENT	: New England Power Company (NEP)
DATE NOTICED IN MONITOR	: November 8, 2023

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Draft Environmental Impact Report (DEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. The Proponent may prepare and submit for review a Final Environmental Impact Report (FEIR) in accordance with the Scope included in this Certificate.

Project Description

As described in the DEIR, the project is part of a larger refurbishment effort that continues north of the Massachusetts border and ends at the Harriman Substation in Readsboro, Vermont. The E131 Transmission Line right-of-way (ROW) runs for ±11.4 miles in Massachusetts through Adams, North Adams, Florida, and Monroe. The project includes replacement of ±160 structures (H-frame, steel triple pole, steel lattice) with new steel structures (ranging in height between 60 and 100 feet based on location and terrain) and removal of five structures. Most structure replacements will be directly embedded into the ground; however, where soil or line conditions necessitate, concrete caisson foundations will be installed at 24 structure locations, a micropile foundation system will be installed at one structure location, and pad foundations will be installed at three structure locations. Additional work includes construction of new permanent access roads (±5 miles), improvement of existing access roads, replacement of insulators and hardware, replacement of existing shield wire with Optical Ground Wires

(OPGWs),[1] installation of three new switch structures,[2] and replacement of conductor in four sections. Vegetation removal within the proposed limits of disturbance will include routine mowing as well as trimming of low-growth vegetation; vegetation removal is also proposed both within the ROW and "off-ROW" areas where new access roads are proposed. Approximately 62.5 acres of vegetation impact is proposed project-wide including ±11.3 acres of tree removal associated with construction of on-ROW and off-ROW access roads. Once trees are removed, these access roads will continue to be maintained. The project does not propose to clear the currently unmaintained portions of the easement to widen the existing ROW. The impacts outside of the maintained limits of ROW are limited to those necessary to facilitate access or construct work pads. Project construction timeline is anticipated to be from mid-2024 to 2027.

Project Corridor

The project corridor consists of the Line E131 ROW, which includes a ±13-mile 115 kilovolt (kV) overhead electric transmission line supported by wooden H-frame structures (and access roads within and outside of the ROW) extending from the Harriman #8 Substation in Readsboro, Vermont to the Adams #21 Substation in Adams, Massachusetts. The portion of the ROW within Massachusetts is ±11.4 miles with a total limit of work of ±463 acres within the Towns of Adams, North Adams, Florida, and Monroe, of which ±9 acres are located beyond the existing ROW easement. The E131 line was constructed in 1925 and existing wooden H-frame transmission structures are from its original construction. In 1971, upgrades including reconductoring and shield wire installation were conducted throughout the line. Select replacement structures, replacement and upgraded insulators, and improved grounding were installed in 2004. Currently, the line is comprised primarily of wooden H-frame structures. Various inspections of the E131 line over the past several years have identified deteriorated wood pole assets and loadbreak switches on structures were also noted as poorly operational and in need of replacement.

This line is part of the interconnected New England transmission system; it carries network power flows and supplies distribution load-serving stations in Vermont and Massachusetts, including some Green Mountain Power feeders from the Harriman Substation. The project corridor includes portions of the adjacent J10 Line and Bear Swamp Tap Line. The J10 Line splits from Line E131 in Adams where it runs roughly parallel to the Line E131 ROW for ±3 miles before rejoining Line E131 in Florida. Approximately two miles northeast of the junction of Line E131 and the J10 Line, a second split occurs along the Line E131 ROW, forming the Bear Swamp Tap Line, which extends roughly perpendicular from Line E131 for ±0.20 miles. The E131 transmission line easement range between 200 and 400 feet wide, with the existing line at the approximate center of the easement. The DEIR clarifies that the current (periodically) maintained width ranges from ±125 to ±150 feet[3] and includes uplands, wetlands, perennial and intermittent streams, unimproved access routes, and improved gravel access roads. Approximately 3.82 miles of Line E131 pass through the Massachusetts Department of Conservation and Recreation (DCR) owned Monroe, Florida, and Savoy Mountain State Forests. Line E131 traverses through mountainous terrain with steep slopes, rocky outcrops, cliffs, and large boulders. Although it passes through some rural residential areas in Florida and Monroe, the ROW and

[1] OPGW will replace existing shield wire and will provide high-speed communication between substations.
[2] Switch structures are H-frame utility poles that support transmission line switches, which allow sections of the line to be isolated when maintenance is needed.
[3] The EENF indicated the maintained ROW width is between 100 and 150 feet.

surrounding areas are generally densely forested.

The ROW contains Bordering Vegetated Wetlands (BVW), Inland Bank, Land Under Water (LUW), Bordering Land Subject to Flooding (BLSF), Riverfront Area (RFA), and associated Buffer Zones. The EENF states that one vernal pool was observed within the ROW (between structures 85 and 86); one Certified Vernal Pool (CVP) is located within the ROW (near access road to structures 141-143) and one Potential Vernal Pool (PVP) is located within (or near) the ROW (near access road to structures 59-70). Additional PVPs may exist on the ROW. The project corridor includes areas that are inundated during a 100-year storm as mapped on the Federal Emergency Management Act (FEMA) Flood Insurance Rate Maps (FIRMs). The ROW crosses over Phelps Brook, which is a tributary to Phelps Brook Reservoir, an Outstanding Resource Water (ORW). The EENF identifies areas of Priority and Estimated Habitat as determined by the 15th Edition of the Massachusetts Natural Heritage Atlas for several rare species. The corridor contains several historic and archaeological sites previously recorded in the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

The ROW is within the Designated Geographic Area (DGA) of Environmental Justice (EJ) populations[4] located in whole or in part within 1 mile of the project site as stated in 301 CMR 11.02 (definition of "DGA"). The ROW crosses two EJ populations characterized by Income (North Adams and Monroe) and is located within 1 mile of an additional three EJ populations characterized by Income (one in North Adams, one in Adams, and one in Rowe). The ROW is within 5 miles of an additional 14 EJ populations characterized by Income, and Minority and Income.

Environmental Impacts and Mitigation

According to the DEIR, potential environmental impacts associated with the project include the alteration of ±62.5 acres of land for access roads and work pads; removal of 11.3 acres of trees (tree clearing overlaps with access and work pad areas); temporary alteration of 599,115 square feet (sf) of vegetated wetlands for construction matting and permanent alteration of 660 sf of BVW for the installation of structures; temporary alteration of a total of up to 163,100 sf[5] of other wetlands (RFA and BLSF); ±4.5 acres within mapped habitat of which 1.67 acres will be directly impacted. Since the EENF, the DEIR estimates a reduction in land alteration to 62.5 acres (although much of this reduction is attributable to clarification of land alteration impacts as discussed below) and tree removal from 17.6 acres to 11.3 acres. Greenhouse Gas (GHG) emissions and other air pollutants are associated with construction vehicles and tree clearing. Impacts to historical and archaeological areas are possible.

Measures to avoid, minimize, and mitigate project impacts include use of existing access roads from the adjacent J10 Line and within the E131 ROW to avoid new land disturbance, where feasible; use of temporary construction mats where crossing wetlands or water courses is unavoidable; spanning of streams to avoid impacts to bank; removing five structures from the ROW; use of erosion and sedimentation controls and other best management practices (BMPs) during construction; restoration of any disturbed areas to existing grades to allow for revegetation; restoration of temporarily impacted

[4] "Environmental Justice Population" is defined in M.G.L. c. 30, § 62 under four categories: Minority, Income, English Isolation, and a combined category of Minority and Income.

[5] This estimate is taken from Table 1-1 (Summary of Project Impacts) in the DEIR, which is higher than the cumulative estimate for other wetlands identified in Table 6-1 (Summary of Impacts to Resource Areas) in the DEIR.

wetland resources to pre-construction conditions; BVW replication for permanent impacts; and protection of identified rare species throughout construction. As discussed below, the FEIR should include a revised list of mitigation measures.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a mandatory EIR pursuant to 301 CMR 11.03(1)(a)(1)(a) and 11.03(3)(a)(1)(a) of the MEPA regulations because it requires Agency Actions and will result in the alteration of 50 or more acres of land and one or more acres of BVW. The project is also required to prepare an EIR pursuant to 301 CMR 11.06(7)(b) because it is located within a DGA (1 mile) around one or more EJ Populations. In addition, the project exceeds the Environmental Notification Form (ENF) threshold at 301 CMR 11.03(3)(b)(1)(f) for alteration of one-half or more acres of any other wetlands.[6] As discussed below, the project may exceed ENF thresholds at 301 CMR 11.03(1)(b)(3) for disposition or change in use of land or an interest in land subject to Article 97 of the Amendments to the Constitution of the Commonwealth (Article 97).[7] The project requires a 401 Water Quality Certification (WQC) from the Massachusetts Department of Environmental Protection (MassDEP), a Conservation and Management Permit (CMP) from the Natural Heritage and Endangered Species Program (NHESP), a Construction Access Permit (CAP) from the Massachusetts Department of Conservation and Recreation (DCR) and a temporary Access Permit for construction activities and/or a Utility Access Permit from the Massachusetts Department of Transportation (MassDOT). If an Article 97 disposition or change in use is implicated, the project must meet the requirements set forth in the Executive Office of Energy and Environmental Affairs' (EEA) Article 97 Land Disposition Policy and new M.G.L. c. 3, s. 5A. A transfer in ownership or interest in state conservation property would require legislative authorization by the General Court through a two-thirds supermajority roll call vote.

The project requires Orders of Conditions (OOC) from the Adams, North Adams, Florida, and Monroe Conservation Commissions (or in the case of an appeal, a Superseding Order of Conditions from MassDEP); a Section 404 Pre-Construction Notification (PCN) from the U.S. Army Corps of Engineers (ACOE); a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the U.S. Environmental Protection Agency (EPA); and review by MHC acting as the State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR 800) and M.G.L. c. 9, ss. 26-27C (950 CMR 71.00).

The project is not receiving Financial Assistance from the Commonwealth. Therefore, MEPA jurisdiction is limited to those aspects of the project that are within the subject matter of any required or potentially required Agency Actions and that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the DEIR

The DEIR provides an updated description of existing and proposed conditions; preliminary

[6] Although the project will result in a take of a state-listed rare species, it is estimated to impact less than 2 acres of mapped habitat; therefore, 301 CMR 11.03(2)(b)(2) (disturbance of greater than two acres of designated priority habitat that results in a take of a state-listed species) is not exceeded.
[7] The EENF did not identify the potential exceedance of this threshold.

project plans; a more detailed analysis of alternatives; an assessment of impacts; and a quantitative carbon analysis. It identifies measures to avoid, minimize and mitigate environmental impacts. The DEIR identifies changes to the project since the filing of the EENF. Consistent with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency, the EENF contained an output report from the Climate Resilience Design Standards Tool prepared by the Resilient Massachusetts Action Team (RMAT) (the "MA Resilience Design Tool"),[8] together with information on climate resilience strategies to be undertaken by the project. Updated site plans for existing and post-development conditions identify all major project components (structures, transmission lines, access roads, etc.); public areas; wetland resource areas; impervious areas; ownership of parcels including easements; and stormwater and utility infrastructure. The DEIR provides a brief description and analysis of all applicable statutory and regulatory standards and requirements and describes how the project will meet those standards. It includes a list of required Permits, Financial Assistance, and other state and local approvals and provides an update on the status of each.

The Proponent submitted supplemental information on December 13, 2023, to clarify overall impact estimates for the project. For purposes of clarity, all supplemental materials are included in references to the "DEIR" unless otherwise referenced.

Alternatives Analysis

The EENF did not clearly identify how the Preferred Alternative was designed to avoid and minimize land clearing and impacts to sensitive resource areas associated with the new access roads, work/pull pads, and replacement of poles. It did not clearly describe why permanent access roads are required in certain locations nor justify this is the minimum number required to refurbish the E131 Line. It also did not describe a Reduced Impact Alternative that provides less impacts and/or greater setback to on-site wetlands, less land clearing and land alteration, and less impacts to mapped habitat. MassDEP comments emphasized that the alternatives analysis provided in the EENF did not substitute for, nor serve as, the site-specific impact analysis required in 310 CMR 10.00 and 314 CMR 9.00.

In response to the Scope and comments from Agencies and stakeholders, the DEIR provides an expanded alternatives analysis to demonstrate the project is taking all feasible measures to avoid and minimize environmental impacts to wetland resource areas and mapped habitat, as well as tree clearing, which is consistent with requirements pursuant to all applicable regulations (i.e., WPA, WQC, MESA, M.G.L. c. 3, s. 5A, etc.). In addition to revisiting the No Build Alternative and Critical Asset Repair Alternative discussed in the EENF, the DEIR evaluates two Reduced Impact Alternatives. The DEIR provides a qualitative summary of the expanded alternatives considered (a quantitative analysis of environmental impacts is not provided nor are conceptual plans) and compares the environmental impacts with the Preferred Alternative with respect to land alteration/tree removal, wetland resource areas, vernal pools, rare species habitat, and archaeological resources, GHG emissions, climate resilience, constructability, permitting complexity and project need/goals in a tabular format (Table 2-2).

Two alternatives were evaluated to minimize new off-ROW access impacts: Off-ROW Access Road Elimination and Some Off-ROW Access. The Proponent considered eliminating off-ROW access roads to potentially reduce current tree removal locations. However, on-ROW access within this steep and challenging terrain would require clearing existing vegetation from edge to edge of the ROW in

[8] https://resilientma.org/rmat_home/designstandards/

numerous locations; additional tree removal outside of the maintained ROW; construction of extensive switchbacks within and outside the existing cleared limits of ROW; intense grading; additional stream crossings that are currently avoided by the Preferred Alternative; and longer construction duration. The analysis states that the grades required for safe vehicle travel would make this alternative infeasible from a construction and safety standpoint, and the challenging terrain within the ROW would require extensive construction work. Although working within the ROW reduces impacts to adjacent property and existing DCR access routes, it would not eliminate them given the ROW constraints. The analysis notes that this alternative would not reduce the overall impacts to land alteration, sensitive resource areas, open space land, or construction timelines. Prior to submission of the EENF, the Proponent evaluated existing off-ROW access routes to avoid constructing new off ROW access roads that would require extensive environmental impacts including tree removal, grading, and wetland matting. Based on this evaluation, it was determined that staying within the existing cleared limits of ROW was not safe or practicable in multiple instances due to the presence of ledge, which led to grading considerations, and the steep terrain, which led to safety and equipment access considerations.

The Proponent also considered choosing off-ROW access that minimizes impacts. The analysis notes there are a limited number of existing off-ROW access roads that are either the only feasible option or the option with the fewest environmental impacts. Feasibility was based on the overall grade of the slopes and presence of rock outcrops and/or ledge. The selected off-ROW access routes would be as narrow as feasible to allow the required equipment to access the structures and ensure they are viable long-term access roads that allow for stormwater BMPs. Table 2-1 of the DEIR outlines the proposed off-ROW access routes and alternative routes considered and the justification for dismissal of routes.

As further discussed in the Land Alteration section below, the reduction in tree clearing from 17.6 acres to 11.3 areas was based on a reassessment of proposed clearing widths along existing access routes and a reduction in the number of potential "islands" resulting from access route creation. According to the DEIR, this reassessment and field reviews allowed a more precise determination of where tree removal would be required to comply with appropriate vegetation management operating criteria within the ROWs, and where trimming, pruning, or other management techniques would suffice. The DEIR also discusses how the project is designed to avoid and minimize land alteration and preserve open space and tree cover including proposing new foundations to avoid impacts to sensitive resources; new structures in proximity to existing structures and where transmission wires span several resource areas; vegetation clearing only where necessary for safe operation; and existing/upland roadways will be used for construction purposes. Vegetation along the ROW, and particularly in sensitive areas, will be preserved to the extent feasible.

Environmental Justice

As noted previously, the ROW crosses two EJ populations characterized by Income (North Adams and Monroe) and is located within 1 mile of an additional three EJ populations characterized by Income (one in North Adams, one in Adams, and one in Rowe). The ROW is within 5 miles of an additional 14 EJ populations characterized by Income, and Minority and Income. There are no communities identified within the DGA in which greater than 5% of the community speak a language other than English, or who do not identify as speaking English "very well."

The DEIR describes public involvement activities undertaken prior to filing the DEIR. The

Proponent will provide a public website with project details, an interactive mapper and contact information (https://www.e131project.com); a project-specific toll-free phone number and email address; and project contact form to sign up for announcements or ask questions including translation of project materials, and more information on public involvement initiatives as well as project details, including the Wood Program[9], current activities, and construction schedule. The Proponent responded to a request from the Stockbridge-Munsee Band of Mohicans on December 13, 2022 for a copy of the EJ Screening Form and additional information pertaining to archeological surveys for the project. Relevant public libraries will include repositories for hard copies of project materials which will be updated regularly as additional project documents become available. The DEIR describes how public involvement efforts will continue throughout subsequent permitting and through the construction period for the project. The DEIR was uploaded to the project website and circulated to a list of community-based organizations and tribes/indigenous organizations (EJ Reference List). On May 31, 2023, a mailer was distributed describing the Wood Program. On May 26, 2023, a Project Fact Sheet was distributed which provided an overview, location map, schedule, and ways to stay informed. In October 2023, a mailer was distributed to project neighbors and the EJ Reference List to provide an update and information on how to request a public meeting. The DEIR describes planned future public involvement including holding additional meetings as requested (meeting notices will be published in local newspapers, materials will be translated and interpretation will be provided if requested); additional opportunities as part of local review processes, including the procedures for providing abutter notice and opportunities for public input into project design and timing; reaching out to affected municipalities to request they share the project website; and providing periodic construction updates via notices or emails including to the EJ Reference List.

The DEIR contains an updated baseline assessment of existing unfair or inequitable Environmental Burden and related public health consequences impacting EJ Populations in accordance with 301 CMR 11.07(6)(n)1 and the MEPA Interim Protocol for Analysis of EJ Impacts. The DEIR analyzes data available in the Massachusetts Department of Public Health (DPH) EJ Tool at the municipal and census tract level to characterize existing burdens. Within the project's DGA, the communities of Adams, North Adams, Monroe, and Rowe meet at least one of the four "vulnerable heath EJ criteria."[10] Table 3-1 in the DEIR identifies which municipalities within the DGA exceed 110% of the statewide rate for each criterion. Table 3-2 summarizes the specific census tracts within each municipality that are measured to be 110% above the statewide rate for each criterion. All four communities exceed vulnerable health criteria (heart attack, childhood asthma, childhood blood lead and low birth weight). Two census tracts in Adams and three census tracts in North Adams exceed the criterion for childhood blood lead levels. One census tract in Adams and one census tract in North Adams exceed the criterion for low birth weight. The factors reviewed in the baseline assessment appear to show that some of the EJ populations within the DGA may be impacted by an existing unfair or inequitable environmental burden and related public health consequences experienced as compared to the general population.

Of the four EJ census tracts within one mile of the ROW, two are crossed by the ROW (in North Adams (Block Group 1, Census Tract 9214) and Monroe (Block Group 1, Census Tract 401)). Near the

[9] According to the DEIR, wood cleared on private properties will be offered to individual landowners and excess wood will be distributed according to the Wood Program which will be finalized before construction

[10] See https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html. Four vulnerable health EJ criteria are tracked in the DPH EJ Viewer.

ROW, these census tracts are largely unpopulated (e.g., characterized by undeveloped forest). In the North Adams census tract, there is a residential community located ±750 feet north of the existing maintained ROW. In the Monroe census tract, there are ±2 residential dwellings located within 100 feet of the existing maintained ROW. No tree removal is proposed outside the existing maintained ROW within the distances indicated above in proximity to EJ residences. Construction activities near these neighborhoods will consist of work within the existing maintained ROW including installation of in-ROW access roads, work pads and pull pads, and replacement of existing structures; these activities will not encroach into existing unmaintained vegetated areas within the ROW.

The DEIR provides an updated assessment of the project's impacts that discusses GHG emissions, air pollutants, and heat effects that may be associated with large-scale forest clearing activities; loss of open space or recreational opportunities that may affect EJ populations lacking access to such resources; loss of shading or other impacts that may be anticipated for any properties located directly adjacent to tree clearing activities; and flooding risks that may be exacerbated for nearby EJ populations including under future climate conditions, and whether existing conditions would be worsened or improved by the project. The updated assessment concludes that the environmental and public health impacts from the project will not likely result in a disproportionate adverse effect on EJ populations within the DGA and the potential impacts and consequences from the project will not alter the effects of climate change on EJ populations nor any residents within the DGA.

As part of the assessment, an analysis was conducted where the ROW experiences "Hot Spots".[11] A small number of locations along the ROW in North Adams and Adams are near or adjacent to both EJ Populations and Hot Spots. The DEIR includes plans (Appendix E) that depict the location of proposed tree removal in EJ Population block groups and Hot Spots within the one-mile DGA used in the analysis. Portions of the ROW overlap with both a Hot Spot and an EJ population in Adams, Rowe and Monroe but no tree removal activities will be conducted at those locations (no areas of proposed tree removal within both a Hot Spot and EJ Population in Florida). Several Hot Spots overlap with one EJ population in Adams; no tree removal will occur in the existing Hot Spots; closest tree removal (±0.02 acres) is ±1,915 feet away. A Hot Spot adjacent to the ROW in Adams is within about 100 feet of an EJ Population, but no tree removal activities will be conducted there; closest tree removal is ±3,618 feet away. A Hot Spot overlaps with one EJ Population in Monroe; no tree removal will occur at that location with closest tree removal (±0.06 acres) ±5,300 feet away, and a second area of tree removal (±0.08 acres) ±7,150 feet away. A Hot Spot overlaps with one EJ Population in Rowe; no tree removal will occur at that location with closest tree removal (±0.20 acres) ±4,300 feet away. According to the analysis of hot spots, tree removal activities that will occur near EJ populations will be as minimal as those occurring along the whole ROW, and there will be no disproportionate impact to EJ Populations. The DEIR maintains that since much of the land adjacent to the ROW is forested, proposed tree removal represents an overall negligible impact on canopy cover.

The DEIR asserts that the project will benefit surrounding communities by increasing reliability of the overall transmission line through refurbishment of existing structures and wires on more robust structures. Additionally:

- Tree removal has been reduced from 17.6 acres to 11.3 acres; no properties abutting the

[11] Areas that register the 5% Highest Land Surface Temperature Index within their respective Regional Planning Authority regions – according to statewide data by the EEA and the Berkshire Regional Planning Commission.

ROW are located directly adjacent to tree clearing activities and there are no locations along the ROW where all trees between the property and the ROW will be removed so that shading is sustained by the trees that remain

- Tree removal will improve storm resilience by reducing outage risks and improvements in access routes will reduce storm restoration response times
- Analysis of "hot spots" along the ROW indicates that tree removal will not occur closer than ±1,915 feet from any identified "hot spots" that overlap with EJ populations
- The Proponent has reviewed opportunities to donate cleared trees (that abutters/residents do not wish to keep) for use as firewood and milled lumber in coordination with DCR and Massachusetts Community Wood Banks
- Access to recreational trails located in DCR-owned state forests which may be temporarily restricted during construction activities will not disproportionately affect EJ populations; new access roads may provide additional access for recreational opportunities at DCR's discretion
- Stormwater BMPs will control runoff to protect against erosion of access areas; new impervious area associated with structure foundations is negligible; temporary impacts to BLSF are minimal (3,230 sf); two structures (180 and 144) will be removed within flood prone BVW; and structures 179 and 181 will be installed to avoid foundations
- No new sources of air pollution will be created; construction equipment will use low sulfur diesel fuel and be fitted with emission control devices and vehicle idling will be limited
- Minimal noise impacts are anticipated as surrounding land are predominantly undeveloped forested land; in the limited instances where in-ROW construction will occur adjacent to residences in Monroe and North Adams, landowners will be notified prior to the commencement of work
- Impacts to traffic are not anticipated, as the ROW does not cross densely populated areas and only one high-use roadway (Route 2)
- The Proponent will minimize construction-phase impacts to air quality, water quality, and noise using BMPs

MEPA 1 The EENF indicated that less than 150 average daily trips (adt) of truck traffic are anticipated for the project but does not provide details on truck routing or locations for truck traffic. This should be clarified in the FEIR.

Land Alteration

According to the DEIR, overall disturbance and construction activities will not take up the entire area of the maintained ROW (125 to 150 feet) or easement (200 to 400 feet). Land alteration for the project is associated with the development of access roads and work/pull pads and the conversion of forested land along the edges of the ROW associated with this access and work/pull pad development. The DEIR clarifies previous discrepancies in land alteration estimates in the EENF. According to supplemental information, although the EENF noted there would be 245 acres of land disturbance, that number incorrectly accounted for the full width of the ROW and not the actual limit of disturbance of proposed work. Table 4-1 of the DEIR provides a summary of updated permanent land alteration impacts (it does not identify temporary land alteration impacts).

TABLE 4-1
Summary of Proposed Land Alteration

Impact Type	Size
Tree Clearing[1]	11.3 acres
Existing Access Roads (Type R & S)[2]	8.3 acres
New Access Roads (Type 1-5)	28.6 acres
Work Pads and Pull Pads	25.5 acres
Foundations and Structures[3]	0.07 acres

[1]Impact Area for tree clearing overlaps with areas of access and work pad development.
[2]Type R&S Roads – Type R = Existing stable subbase and no widening proposed.
Type S = Existing stable subbase, refresh with stone, and potential for widening.
[3] Impacts from structure installation overlaps in area for work pads

Supplemental information clarifies that a total of 62.5 acres of land will be impacted through construction of access roads, work pads and pull pads. The DEIR appears to indicate that permanent work pads are accounted for in the estimate of permanent land alteration.

Trees will be removed in select locations along the edges of the existing ROW and existing off-ROW access routes to facilitate development of access roads and work/pull pads; no tree removal is specifically proposed to widen the existing maintained limit of the ROW. Approximately 11.3 acres of trees will be removed on-ROW and off-ROW (reduced from 17.6 acres estimated in the EENF). Areas of tree removal are identified on the plans in the DEIR. Areas of tree removal will be developed into gravel work pads, access routes, or graded areas. Supplemental information clarifies that pull pad development is temporary (±0.4 acres) is temporary and will be restored after OPGW is installed. The reduction in tree clearing was based on a reassessment of proposed clearing widths along existing 10 to 12-foot access routes by decreasing the width from 10 feet on either side of the route to 5 feet on either side on the route. Proposed areas of tree removal were reviewed to address potential "islands" resulting from access route construction and reduce the number of areas originally proposed to be cleared. According to the DEIR, this reassessment and field reviews allowed a more precise determination of where tree removal would be required to comply with appropriate vegetation management operating criteria within the ROWs, and where trimming, pruning, or other management techniques would suffice. During vegetation management activities, lower growing shrubs will be preserved along the ROW and in areas not proposed for access or work pads. Where work areas and access are required in wetlands, the project will avoid mowing or trimming of herbaceous vegetation and preserve shrubs and woody vegetation, except where more robust woody vegetation will impede matting placement. No tree removal is proposed within vegetated wetlands.

The project will result in some new permanent impacts on-ROW and off-ROW including reestablishment/improvement of access and creation of permanent work areas to access structures, create work areas, install structures and string overhead wires. On-ROW access routes were evaluated to balance safety/accessibility with avoiding and minimizing impacts to sensitive resources. The project will modify existing access, place temporary construction mats, and construct new access where necessary. Existing and proposed access routes are shown on plans in the DEIR and categorized as Type R, S or 1-5 (Designed Roads) as identified in Table 4-1 above. Designed Roads range have been

optimized to minimize cut/fill to the extent feasible and consider management of stormwater runoff including construction of stormwater BMPs, as appropriate. The travel lane for existing on-ROW access is generally 8-feet wide (or less). Select off-ROW locations are proposed where access to structures cannot be obtained on ROW due to challenging terrain or avoidance of sensitive areas. Existing oof-ROW access routes will be used to avoid or minimize impacts to wetlands to the extent feasible, follow existing contours, and avoid severe slopes. On- and Off-ROW access routes will generally be 12-feet, but the constructed footprint may be wider in some locations to accommodate grading/side slopes and stormwater BMPs. Several existing off-ROW access routes will be upgraded; no completely new off-ROW access routes will be constructed to the ROW. Most off-ROW access will be constructed of gravel, construction mats, or a combination in coordination with property owners.

Work pads will be placed at structures where work is proposed to remove existing structures, and install new or replacement structures and their appurtenant features. Pull pads are being used to install select sections of new conductor, but primarily for OPGW, and will stage equipment being used to install new conductor and OPGW by pulling it from one structure to the next. Work areas will be overlain with gravel and minimal grading, or where topography is steeper or the ground surface is unstable, work areas will require grading and the placement of stone (gravel) to provide a stable work surface. No grading will be conducted in vegetated wetlands, and temporary matting will be placed to create a stable and safe work surface. Construction matting placed in BVW, RA or BLSF will be removed once construction is complete. Outside of wetland resource areas, work areas will remain in place to provide permanent work platforms for future maintenance/emergency work.

The DEIR notes that the 11.3 acres of tree removal is associated with the construction of access roads and work pads that need to extend outside the limits of the existing, maintained ROW. This tree removal is all beyond the scope of the current VMP and has been accounted for in the total permanent land alteration impacts. In addition, the DEIR does not include this acreage in the reported permanent land alteration impacts summary (62.5 acres). Project plans (Appendix A) identify where vegetation removal will need to be coordinated with private landowners (the DEIR does not include a narrative describing this coordination).

The DEIR provides a brief discussion of how the project is designed to avoid and minimize land alteration and preserve open space and tree cover. Where feasible, new foundations are proposed to avoid impacts to sensitive resources; new structures are proposed in proximity to existing structures; new structures are placed so that the transmission wires span several resource areas; vegetation clearing is proposed only where necessary for safe operation; and existing/upland roadways will be used for construction purposes. Vegetation along the ROW, and particularly in sensitive areas, will be preserved to the extent feasible. The DEIR identifies construction period BMPs such as dust suppression measures, crushed stone aprons/tracking pads at access entrances to public roadways, and stormwater BMPs, which include monitoring until disturbed areas of the site have been stabilized. The DEIR describes mitigation for impacts associated with land alteration including minimizing soil disturbance, retaining scrub/shrub understory and ground cover to help reduce soil erosion, mulching/seeding bare soils to reduce erosion, and reusing cleared trees for long-lived wood products. The DEIR clarifies that the approved Five-Year VMP is dated 2019-2023 and is available at the Massachusetts Department of Agricultural Resources website.

Rare Species

Portions of the project area are mapped as *Priority* and *Estimated Habitat* for seven state-listed species (five plants, one fish, and one insect) including Bailey's Sedge (Threatened plant). These species and their habitats are protected pursuant to the Massachusetts Endangered Species Act (MESA; M.G.L. c.131A) and its implementing regulations (321 CMR 10.00). According to the DEIR, based on the location of proposed activities and consultation with NHESP, three of the plant species are of concern. The Proponent regularly maintains the upland portions of these habitats within the ROW in accordance with the approved NHESP VMP and the Operation and Maintenance Plan (OMP). The DEIR states that ±4.5 acres of impacts (access routes, work pads, matting) are located within mapped habitat based on available NHESP data layers, of which 1.67 acres of proposed work (associated with temporary placement of construction matting for construction of temporary access roads and work pads) will directly impact species based on consultation with NHESP and botanical surveys within the proposed project area. It provides an update on proposed measures to avoid, minimize and mitigate impacts and a summary of consultations with NHESP, which is ongoing regarding the effects of project-impacts on rare species. The Proponent submitted a MESA Project Checklist to NHESP on April 17, 2023. Proposed impacts within the 1.67 acres of mapped habitat will also impact 1.67 acres of wetland resource areas (BVW) because the state-listed rare plants are wetland species.

NHESP comments note that the project will result in a Take (321 CMR 10.18 (2)(b)) of Bailey's Sedge due to the sharing and direct placement of timber matting over a portion of the population to access the ROW. A Take of state-listed species may only be permitted if the project meets the following performance standards for a CMP (321 CMR 10.23) to demonstrate that it has avoided, minimized and mitigated impacts to state-listed species: adequately assess alternatives to both temporary and permanent impacts to the state-listed species; demonstrate that an insignificant portion of the local population will be impacted; and develop and agree to carry out a conservation and management plan that provides a long-term net benefit to the conservation of the state-listed species. According to the DEIR, specific measures to comply with the performance standards will be discussed with NHESP and may consist of state-listed habitat management on the Proponent's property, Conservation Restriction, off-site mitigation, in-situ habitat restoration of temporarily disturbed areas, protective fencing and enclosures/exclusions, and/or other measures to achieve net benefit for each affected species.

Wetlands/Water Resources

According to the DEIR, the project is proposed to result in significant unavoidable temporary and permanent impacts to BVW, Inland Bank, LUW, BLSF, RFA, and associated buffer zones. The four local Conservation Commissions will review the project for its consistency with the Limited Project provisions of the Wetlands Protections Act (WPA), the Wetland Regulations (310 CMR 10.00), and associated performance standards. MassDEP will review the project for its consistency with the 401 WQC regulations (314 CMR 9.00). The DEIR indicates that certain structure replacement activities qualify for exemption under the Utility Maintenance Exemption (c. 30, s. 62A) and the WPA. Table 6-1 of the DEIR provides a summary of permanent and temporary impacts to wetland resource areas.

TABLE 6-1
Summary of Impacts to Resource Areas

Impact Type	Activity	Impact Area (SF)[1]					
		BVW	Bank	LUWW	BLSF	200-foot RA	100-ft Buffer Zone
Temporary Alteration	Construction Matting	599,115	0	0	3,230	22,970	237,175
Permanent Alteration	Access/Work pad Improvement & Structure Replacement	660	0	0	0	125,420	703,180

[1] Note these impacts are not additive within each column. Impact types vary by ROW and overlap in areas of the Project.

According to the DEIR, the project is not proposing to construct permanent access or work pads within BVW, Isolated Vegetated Wetlands (IVW), inland Bank and LUW, but some permanent alterations are proposed in RFA, and Buffer Zone associated with proposed grading and other access improvements. Each certified and potential vernal pool identified on MassGIS was delineated in September 2023; however, the DEIR does not identify when other wetland resource areas were delineated. The DEIR inconsistently identifies that the project will impact IVW and also that the project corridor does not contain IVW or Isolated Land Subject to Flooding (ILSF). The DEIR describes implementation of BMPs for stormwater management and sedimentation and erosion control to avoid and minimize impacts to resource areas and downstream reaches. It includes tree work details, potential time-of-year (TOY) restrictions for rare species, and locations of proposed construction mats. The DEIR confirms that the SWPPP will include clear provisions specific to the management and protection of the resource areas within the project area. The DEIR provides additional information regarding potential areas of Old Growth Forest in the project area as discussed further in the Article 97 section.

MEPA 2

MEPA 3

The DEIR identifies 10 streams in the vicinity of the project corridor that have been designated as significant Cold Water Fisheries Resources (CRFs). Proposed work is not anticipated to permanently alter the flow velocity, water depth or width, substrate characteristics or bank integrity of CFRs. At access crossings over streams where mat bridges will be installed, woody vegetation will be cut at the ground surface, and roots would be left in place. Following removal of mats, native shrub species are expected to revegetate stream banks. Most access crossings are narrow (±16 feet) resulting in a small length of stream that will be temporarily impacted from shading associated with shrub removal and mat placement. BMPs will be used in areas adjacent to CFRs to minimize potential sedimentation from erosion and dewatering activities and accidental spills of fuels and lubricants. Specific design requirements will ensure that bridge matting spans do not cause stream banks to collapse or destabilize, and that vegetation and disturbed soils are fully restored.

MEPA 4

The DEIR states that a substantial portion of proposed work including structure replacements will qualify under the Utility Maintenance Exemption ((c. 30, s. 62A) and WPA) which exempts work done "in the course of maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public." It further states

MEPA 4 (cont.)

that elements of the project that do not qualify as exempt will meet the requirements for a Limited Project. The DEIR does not clearly identify which elements qualify for the exemption and which do not. According to MassDEP comments on the EENF, portions of the project that do not qualify as exempt activities may be eligible for review under the Limited Project provisions pursuant to 310 CMR 10.53(3)(d) at the discretion of the local Conservation Commission and to the extent practicable, work must comply with General Performance Standards. The DEIR notes that all component of the proposed project would qualify for Limited Project status for "operation, maintenance, and construction of public utilities." It summarizes the project's compliance with the General Performance Standards of the WPA for BVW (310 CMR 10.55(4)), BLSF (310 CMR 10.57(4)), RFA (310 CMR 10.58(4).

MEPA 5

To offset permanent BVW impacts (660 sf), a 700-sf wetland replication area will be constructed within the E131 ROW adjacent to Wetland 125. All temporary impacts will be restored in place. The DEIR identifies temporary impacts to 3,230 sf of BLSF that will not result in a loss of flood storage volume; it is unclear if this impact is associated with temporary timber matting or with repairs to an existing access road (Old Florida Road). Approximately 148,330 sf of impacts are proposed within RFA across the project corridor including 22,970 sf of temporary impacts resulting from construction matting, and 125,420 sf of permanent impacts associated with access road repair, widening, and construction. Temporary impacts to RFA will be restored to previous conditions and impacts associated with the repair and widening of existing access roads will result in minimal alteration of habitat within the RFA. The DEIR maintains that construction of new access roads through RFA is unavoidable to provide safe and reliable access to the public utility infrastructure and has been minimized to the extent practicable, as discussed in the alternatives analysis. Certified and potential vernal pools within the vicinity of the project site have been delineated and will not be impaired by the project.

A 401 WQC application was submitted to MassDEP in June 2023. Based on Table 6-1 of the DEIR, it appears that cumulative impacts for review pursuant to the WQC regulations (314 CMR 9.00) total 599,755 sf of BVW; it remains unclear if the project will impact IVW. The DEIR maintains that reasonable alternatives to the proposed activity have been evaluated, adverse impacts have been minimized, and mitigation for unavoidable impacts (including temporary impacts) will be provided in accordance with the WPA and WQC regulations. No impacts to ORWs are anticipated from the project, specifically to Phelps Brook, which is a tributary to the Phelps Brook Reservoir, a Public Water Supply Watershed that is afforded ORW protection under the Massachusetts Surface Water Quality Standards at 314 CMR 4.00.

The DEIR notes that the two proposed permanent stream crossings described in the EENF have been removed from the project.

Chapter 91/Waterways

The DEIR identifies 11 perennial streams and one jurisdictional intermittent stream within the ROW. Comments from the MassDEP Waterways Regulatory Program (WRP) note that the E131 line crossing over the Hoosic River was previously authorized by an un-termed Chapter 91 (c. 91) License No. 6274 issued by the Massachusetts Department of Public Works on August 1, 1974. Provided the structures have been maintained in accordance with the specifications therein, the Hoosic River crossing may be maintained in accordance with the existing license pursuant to 310 CMR 9.05(1)(a) and 310 CMR 9.22(1). In addition, the existing overhead wire crossings over other jurisdictional waterways may

be maintained pursuant to those same provisions and do not require c. 91 authorization, provided the structures comply with 310 CMR 9.05(3)(c) or 310 CMR 9.05(3)(f). The DEIR includes a copy of the license (Appendix C) and confirms the license is valid and all structures have been maintained in accordance with the license specifications.

According to the DEIR, the Proponent coordinated with WRP as requested and the DEIR maintains that no further evaluation of jurisdiction is required because the existing line is exempt and proposed work qualifies as maintenance. The FEIR should provide the additional information requested in WRP comments to allow it to determine whether temporary structures/fill will be located within each waterway within c. 91 jurisdiction may be eligible for a c. 91 permit or if a license is required

MEPA 6

Article 97

As requested by DCR, the Proponent consulted and met in the field with DCR's Foresters regarding protection of Old Growth Forest, with DCR's Archaeologist regarding protection of cultural resources, with park staff regarding trail access and public safety, and with DCR's Senior Ecologist regarding stewardship of wetlands and rare species and minimizing tree removal. According to the DEIR, the Proponent coordinated with DCR to understand the locations of potential old growth forest (including the area of the Monroe State Forest), but DCR could not share the exact locations due to the sensitive nature of the information. Based on the general area of potential old growth forest and proposed work areas, the DEIR notes that areas of potential old growth forest within the E131 area will not be impacted as no tree clearing outside of the maintained width of the ROW is proposed in these locations. The Proponent provided (in April 2023) all the mapping and shapefiles for the project to the DCR forester for the area to evaluate the known locations of old growth forest to the proposed work locations.

Portions of the E131 line ROW passes through ±3.82 miles of DCR-owned land (Article 97) in the Monroe, Florida, and Savoy Mountain State Forests. The Proponent proposes to expand the existing maintained ROW in limited areas for the placement of structures and work pads. DCR comments notes that the project will use and improve roads in nine locations outside of the ROW to enable access through DCR forest land to get to the ROW for project activities. Proposed changes to the access roads and trails include tree clearing, widening, grading, and improving the corridors, which will result in permanent impacts to the state forests. Overall tree clearing was reduced from 17.6 acres to 11.3 acres throughout the project corridor. Proposed work will impact 35.8 acres of land within state forests, including ±6 acres of permanent impacts outside of the ROW. Approximately 7 acres of the proposed tree clearing will occur within DCR property. The DEIR provides a table (Table 9-2) which summarizes land alteration associated with access roads (Type R, S, and 1-5) and matting in each state forest.

DCR is in consultation with the Proponent to gain more details on the proposed off ROW activities and their impacts to the natural and recreational resources within the state forest, and is in the process of determining whether the permanent impacts to off ROW DCR property would amount to a change in use or control that would trigger the EEA Article 97 Land Disposition Policy (Article 97 Policy) and the requirements of the Public Lands Preservation Act (PLPA; M.G.L. c. 3, § SA). The DEIR indicates that the Proponent is actively consulting with DCR on this issue.

MEPA 7 Work activities on DCR property outside of existing easements associated with the E131 line ROW, or requiring access across DCR property, will require a CAP. The CAP will include conditions to minimize impacts to trail access and ensure the safety of trail users. The Proponent will continue to consult with DCR regarding strategies to deter unauthorized trail use (i.e., increased Off-Highway Vehicle (OHV) access to the state forests potentially causing degradation of natural and cultural resources) and to identify specific plans to regulate and enforce rules on allowable and appropriate types of recreation.

Transportation

MEPA 8 The project route will intersect with state jurisdictional highway layout at multiple locations, including the Curran Memorial Highway in Adams and Mohawk Trail (Route 2) in Florida. Project-related construction in these locations will require a temporary Access Permit for construction activities and/or a Utility Access Permit from MassDOT. MassDOT comments note that additional permits will be required for temporary construction access, overhead wire crossings of the above listed state routes, and new access roadways proposed within the state highway ROW. The Proponent will develop a Traffic Management Plan for review and approval by MassDOT and will establish traffic control plans for construction traffic on busy streets and will limit access to the ROW by installing signage and barriers (large stones) at access points from public roads. The Proponent will continue to work with MassDOT (District 1) to identify any traffic and construction management plans that may be required for temporary work within the state highway layout to minimize traffic disruption during construction.

Historic and Archaeological Resources

The DEIR provides an update on coordination with MHC, DCR, ACOE, and Native American Tribes regarding measures to avoid, minimize or mitigate adverse effects to historic and archaeological resources. Intensive (locational) archaeological surveys were conducted in 2021 (at structure replacement work pad locations) and 2022 (for access roads). An archaeological site avoidance and protection plan (ASAPP) was developed and provided to MHC, Native American Tribes, and DCR in July 2023. The DCR Staff Archaeologist responded (July 2023) that they had no substantive comments on the ASAPP and requested continued coordination with DCR's Operations and Construction Access Permits staff regarding proposed work within DCR managed portions of the project area. As part of the ASAPP, a technical proposal was submitted to MHC, ACOE, and Tribes to perform limited archaeological mitigation for proposed impact areas within significant archaeological sites. MHC amended the State Archaeologist's Permit in September 2023 to perform the limited archaeological mitigation. The DEIR anticipates the limited archaeological mitigation fieldwork will be performed in the second quarter of 2024 when ground conditions are suitable. The Proponent will continue to consult with Agencies to identify historic, archaeological, or cultural resources prior to construction and to avoid, minimize, or mitigate impacts to cultural and historic resources including ACOE regarding Section 106 review of the project and ACOE's consultation with MHC and Native American Tribes regarding implementation of the ASAPP. The ASAPP identifies measures including use of fencing, demarcation of sensitive areas on site maps/plans, on-site training of crews, restrictions on site grading, reporting requirements, and procedures to follow if human remains or burial sites are discovered.

Climate Change

Adaptation and Resiliency

While the EENF described the general resiliency benefits of the project achieved by updating aging infrastructure to current design standards, it did not address the design recommendations from the MA Resilience Design Tool to assess the climate risks of the project. Based on the revised output report attached to the DEIR, the project has a "High" exposure rating based on the project's location for extreme precipitation (urban and riverine flooding) and extreme heat. Project assets are rated high risk for the same climate parameters. Based on the ±50-year useful life identified and the self-assessed criticality of the project asset, the Tool recommends a planning horizon of 2070 and a return period associated with a 50-year (2% chance)[12] storm event (8.5 inches of precipitation) when designing the project for the extreme precipitation parameter. It also recommends planning for the 90th percentile for applicable extreme heat parameters.

The DEIR notes that the project will improve resilience to riverine flooding from a 2070 50-year (2%) storm event through design and material selection of foundations and structures that can withstand the effects of flooding. Replacement of wooden and steel structures with engineered steel structures will make the infrastructure more resilient to water damage and decay. Installation of structures reinforced with caisson foundations will also increase infrastructure resiliency, particularly in wetland resource areas increasingly susceptible to inundation. According to the DEIR, this foundation type, which is designed for wet environments, coupled with engineered structures, eliminates the need to elevate foundations above any particular base flood elevation as they can withstand inundation.

Proposed tree removal is also intended to improve resiliency to future storm events (i.e., reducing outage risks from fallen trees/branches and improving storm response times) as they pose an additional risk to the resiliency of the existing lines and taps. Proposed improvements to the ROW access routes and work pads will create a more reliable network of travel surfaces that can better withstand flooding. Three specific locations within the project site are mapped as 100-year flood zones; however, no permanent impacts to BLSF are proposed and temporary impacts (3,230 sf) are associated with matting only. Two of the four existing structures within flood prone BVW will be removed and the other two will be installed in a manner that will not require foundations. The project will include stormwater BMPs (e.g., stone check dams, water bars, or other similar measures) to control runoff and prevent erosion and washouts along access areas; however, the project is not anticipated to significantly change the hydrology of the watersheds along the ROW. New impervious area is limited to the foundations of certain structures. According to the DEIR, the design of gravel access roads includes evaluation of drainage patterns following construction to reduce the potential for future erosion and washouts including the 2070 50-year storm event. Additional strategies include site stabilization and re-establishment of natural vegetation. Where tree removal and/or new access is proposed in areas of steep slopes or high erosive potential, additional precautions will be taken to ensure soil stability is maintained including installation of water bars, plunge pools, diversion channels, and/or check dams, as appropriate.

[12] The output report in the EENF was created on February 4, 2022, prior to revisions to the Tool and recommended a 2070 100-year (1% chance) storm event.

Land Alteration

The project is subject to the MEPA GHG Policy because it exceeds thresholds for a mandatory EIR. The project will not widen the Line E131 ROW and nor change vegetation maintenance within the ROW. However, the project will cut ±11.31 acres of trees located primarily in the existing easement to accommodate construction activities and convert ±51.64 acres of exposed soil/low growing grass/shrub[13] to a mix of exposed soil, low growing grasses and gravel. The DEIR indicates that, due to a concept called "market leakage," the total acreage of land affected by clearing should be reduced to 8.14 acres. This reduction is due to the market effects that would result from the anticipated use of felled trees by landowners for firewood; namely, because the landowner would be able to source firewood from the project, s/he would not purchase more from the market, and thereby would indirectly avoid the additional cutting needed to supply the market for firewood. The DEIR cites to academic literature supporting the use of market leakage when estimating carbon impacts and indicates that this deduction is taken only for assumed use of wood for firewood and not resale of wood to sawmills for manufacturing of long-lived wood products.

The DEIR provides a quantitative carbon analysis of the above-listed activities that provides an accounting of anticipated CO2e impacts due to the project over 30 years. The DEIR describes the methodology and data used to develop the analysis and identifies associated impacts on GHG emissions.

The DEIR indicates the following: up to 3,375 U.S. tons of carbon dioxide equivalent (CO2e) may be released from live biomass, forest soils, dead wood and litter because of the project and an additional amount due to conversion of vegetated habitat to improve access. The estimated carbon impact over 30 years to 2050 is estimated to be 3,425 U.S. tons of CO2e (including ±50 U.S. tons of CO2e due to conversion to scrub shrub). It is unclear whether these values include both one-time emissions from direct clearing and sequestration loss over time (or only the latter). The DEIR also indicates that increased grid resiliency will reduce emissions by 150 U.S. tons of CO2e over the project's 30-year lifespan. After deducting this asserted benefit, the DEIR indicates that the project will result in no more than a 3,275 U.S. ton increase in CO2e emissions over its 30-year lifespan. The DEIR does not propose specific mitigation for the project's impact on the ROW's capacity to sequester and store carbon, other than to note the resiliency benefits of the project. The FEIR should clarify the methodology used to calculate carbon impacts as indicated below.

MEPA 9

MEPA 10

Construction Period

The DEIR confirms that the project will include a spills contingency plan that addresses prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities and that this plan will be presented to workers at the site and enforced. The plan will include but not be limited to, refueling of machinery, storage of fuels, and potential releases.

[13] According to the DEIR, this will occur primarily in existing, currently maintained ROW. The mix of exposed soil, low-growing grasses, and shrubs will be leveled as necessary and covered with gravel to facilitate equipment movement.

SCOPE

General

MEPA 11 The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. Recommendations provided in this Certificate may result in a modified design that would further avoid, minimize, and/or mitigate Damage to the Environment. The FEIR should identify measures the Proponent will include to further reduce the impacts of the project since the filing of the DEIR, or, if certain measures are infeasible, the FEIR should discuss why these measures will not be adopted.

Project Description and Permitting

MEPA 12 The FEIR should provide an updated description of the project and identify any changes and associated environmental impacts since the filing of the DEIR. It should include updated site plans for existing and post-development conditions. Plans should clearly identify any additional permanent and temporary easements that will be required to create access to the ROW. Plans and narrative provided in the FEIR should identify the extent of any off-ROW clearing required for access road construction, and whether permanent easements will need to be acquired to maintain those areas as utility corridors. The FEIR should provide a brief description and analysis of all applicable statutory and regulatory standards and requirements and describe how the project will meet those standards. It should include a list of required Agency Permits, Financial Assistance, or other state or local approvals and provide an update on the status of each. I expect that the FEIR will provide clear and direct responses to comments from Mass Audubon, Berkshire Regional Planning Commission, and Franklin Regional Council of Governments.

MEPA 13 The information and analyses identified in this Scope should be addressed within the main body of the FEIR and not in appendices. In general, appendices should be used only to provide raw data, such as drainage calculations, traffic counts, capacity analyses and energy modelling, that is otherwise adequately summarized with text, tables and figures within the main body of the FEIR. Information

MEPA 14 provided in appendices should be indexed with page numbers and separated by tabs, or, if provided in electronic format, include links to individual sections. Any references in the FEIR to materials provided in an appendix should include specific page numbers to facilitate review.

Environmental Justice

MEPA 15 The Proponent should continue to take steps, including undertaking additional measures, to meaningfully engage EJ populations in decision-making for the project. The FEIR should report on the results of such engagement efforts. As requested in the Scope on the DEIR, the Proponent should consider holding a public meeting to provide details of the project prior to filing the FEIR.

MEPA 16 The DEIR did not specifically describe the extent of truck traffic that will result from refurbishment and tree clearing activities, including the number of truck trips required. The FEIR should clarify the number of truck trips per day and whether it exceeds the threshold for 150 new average daily trips (adt) of diesel vehicle traffic over a duration of 1 year or more at which EJ outreach and analysis

MEPA 16 (cont.) are required over a 5-mile DGA under the MEPA EJ protocols. The FEIR should clarify whether these trips are anticipated at certain locations along the project corridor, or over the entire route. The FEIR should provide a description of truck routing and indicate whether trucks will travel adjacent to any EJ populations within the DGA around the site. If so, the project should indicate what measures will be taken to minimize impacts. If diesel truck trips are over 150 adt, the FEIR should provide a supplemental EJ analysis by providing a revised baseline assessment of existing burdens over a 5-mile radius around the entire project site. If more than 150 average daily truck trips are anticipated to travel through EJ neighborhoods that are subject to elevated air-related environmental indicators (over 80th percentile) as noted in the EPA EJ Screen,[14] specific mitigation should be proposed. The Proponent

MEPA 17 should circulate the FEIR to the EJ reference list prior to filing and, if a 5-mile DGA is implicated, should contact the MEPA Office for an updated list of all CBOs and tribes/indigenous organizations within 5 miles around the project site. The Proponent should expand outreach efforts to the entire 5-mile area within any EJ neighborhoods through which truck traffic will travel.

Land Alteration

As requested by the Scope on the DEIR, the FEIR should:

MEPA 18
- estimate land alteration associated with access roadways on-ROW and off-ROW (new and improvements to existing) and tree clearing on ROW and off-ROW in a tabular format
- clarify the location, type and amount of alteration in previously undisturbed areas
- confirm that land alteration estimates include clearing required off-ROW to improve/widen existing access roads

MEPA 19 The FEIR should provide an updated summary and breakdown of all tree removal impacts in the ROW and off-ROW, including within DCR land.

Rare Species

The Proponent should continue to work proactively with NHESP to address outstanding issues, including continuing to assess alternatives to further reduce permanent and temporary impacts to state-listed species and their habitats, and developing a robust conservation and management plan that provides a long-term net benefit to state-listed plants, with a focus on protection of individual plants and

MEPA 20 plant populations, additional surveys, seed collection, and management to enhance habitat quality in the immediate vicinity of the project site. The FEIR should summarize the results of consultations with NHESP and address these outstanding issues. The FEIR should clearly identify the project's consistency with the performance standards for a CMP. It should provide an update on potential impacts to state-listed rare species habitat, including the acreage of Priority Habitat both on- and off-ROW impacted by the project. It should identify proposed measures to avoid, minimize and mitigate those impacts.

Wetlands and Stormwater

MEPA 21 As recommended by MassDEP, the FEIR should confirm if the Proponent intends to wait to file Notices of Intent (NOIs) until the conclusion of MEPA review or, if the NOI is filed prior to the

[14] https://www.epa.gov/ejscreen

MEPA 21 (cont) conclusion of MEPA review, that the Proponent will request that a decision is deferred until the final MEPA Certificate and WQC have been issued to ensure sufficient opportunities for public involvement and consistency with any requirements in the Certificate and conditions of the WQC. The FEIR should

MEPA 22 affirm that the Proponent will coordinate submittal of NOIs and outreach to affected municipalities due to the complexity and long, linear nature of the project.

As required in the Scope on the DEIR, the FEIR should:

MEPA 23

- identify when delineations of BVW, Inland Bank, LUW, BLSF, RFA were conducted
- clearly identify permanent and temporary impacts to all resource areas and ensure that these estimates are consistent throughout the filing
- describe if IVW and ILSF were observed and delineated
- confirm that estimates for impacts to wetland resource areas are conservative and account for all temporary and off-ROW impacts
- clarify the impacts to other wetland resources areas (i.e., resolve differences between Tables 1-1 and 6-1 in the DEIR)
- confirm that there are no impacts (permanent or temporary) to LUW
- identify implementation sequencing
- provide site-specific mitigation details
- describe why structures 24, 60, 80, 151, 172 will be relocated from the 100-foot Buffer Zone to BVW and describe efforts to avoid, minimize, and mitigate impacts associated with these structures
- discuss how clearing of large diameter trees in the Monroe State Forest will be limited to the maximum extent practicable
- clearly identify which elements of the project qualify for exemption under the Utility Maintenance Exemption (c. 30, s. 62A) and WPA, and which do not
- confirm that all stormwater conveyances (e.g., swales, stone check dams, water bars, etc.) will include stormwater BMPs to attenuate pollutants and provide a setback from the receiving waters and wetlands as described in the *Massachusetts Stormwater Handbook* and in accordance with the provisions of 310 CMR 10.05(6)(k) through (q)

MEPA 24 The FEIR should provide a revised discussion of the project's consistency with performance standards of the WPA because the project will result in the Take of a state-listed plant species. It is my expectation that the FEIR will provide a mitigation plan that addresses impacts (permanent and temporary) in consultation with MassDEP, local Conservation Commissions and ACOE that demonstrates the project is offsetting the significant impacts to wetland resource areas.

Chapter 91

MEPA 25 The DEIR references proposed work in or over non-tidal rivers and streams for construction access. Such work includes temporary construction mats and associated fill, work pads, etc. The FEIR should include plan and cross-sectional details that depict the temporary and permanent scopes of work and should indicate the proposed timing that temporary structures/fill will be located within each waterway within c. 91 jurisdiction to allow MassDEP to determine whether they may be eligible for a c. 91 permit or if a license is required. The Proponent should contact MassDEP prior to submission of the FEIR regarding any questions on MassDEP comments.

Article 97

MEPA 26 Additional information is needed to determine if new permanent easements are required which would require disposition of state-owned land protected by Article 97. If required, a disposition of a property interest over this land requires approval by a two-thirds vote of the legislature, and compliance with the Article 97 Policy and new M.G.L. c. 3, s. 5A (PLPA). The Article 97 Policy was established to ensure No Net Loss of public conservation lands under the ownership and control of the Commonwealth. It provides for transfer of ownership or interests in Article 97 Land only under exceptional circumstances.

MEPA 27 The Proponent is directed to continue consultation with DCR regarding the applicability of Article 97 prior to filing the DEIR. The FEIR must identify impacts (temporary and permanent) to Article 97 Land and proposed measures to avoid, minimize and mitigate impacts. If Article 97 is deemed applicable, the FEIR should address compliance with the EEA Article 97 Policy. The Proponent should continue to coordinate with DCR staff to minimize impacts to sensitive resources, minimize clearing to the extent possible, and identify mitigation opportunities should a loss or conversion of wetlands, rare species habitat or other forest or recreational resources result from project work activities. The FEIR should provide an update on these consultations and identify specific protection and restoration measures to be taken for sensitive natural and cultural resources on public conservation lands.

MEPA 28 The FEIR should clarify the precise extent of impacts on DCR property and off ROW in separate tables (i.e., total land alteration, tree clearing for access roads and for work/pull pads (separately estimated), and impacts to wetland resource areas such as BVW, IVW, RFA, etc.).

MEPA 29 As required in the Scope on the DEIR, the FEIR should include maintenance plans (equipment, roadways, vegetation management, etc.) that will ensure ongoing impacts are minimized and describe how these plans will be modified or developed to avoid and minimize impacts to birds, nests, and young during the breeding season, and to reptiles and amphibians that may be vulnerable to operation of trucks or other equipment, especially on protected conservation lands.

Climate Change

MEPA 30 The FEIR should clarify the methodology used to calculate the carbon impacts of tree clearing, specifically, whether the calculations account for both one-time emissions of the clearing activity or only the carbon sequestration loss over time. To provide a comparison of values, the FEIR should make use of the U.S. Forestry Service's EVALIDator Tool by inputting project values (e.g., draw radius around representative locations along the project route) to calculate the one-time direct emissions on a per-acre basis associated with the clearing activity. The one-time emissions should include a calculation of above ground biomass, below ground biomass, soil disturbance and dead woody matters to match the categories presented in the DEIR. The FEIR should also provide a comparison of the proposed per-acre carbon sequestration rate used for the project to a statewide number using Forest Inventory Analysis (FIA) sources.[15] The DEIR indicates that 3,275 U.S. tons of CO2e emissions is anticipated over its 30-

MEPA 31

[15] Based on publicly available FIA data, this statewide value would be 1.54 MTCO2e/ac/yr, or 46.2 MTCO2e/ac over 30 years, if the 2020 estimate of MA forest ecosystem net CO2 flux were extrapolated through 2050.

MEPA 31 (cont.) year lifespan associated with tree clearing, even after deducting anticipated resiliency benefits from preventing outages and peak discharges. The FEIR should propose mitigation for this carbon impact, including through potential tree replanting or forest/land preservation efforts. For mitigation proposed, the FEIR should quantity the carbon benefits in terms of CO2e sequestration potential preserved over a 30-year period.

MEPA 32 The FEIR should provide an accounting of the variety of potential end uses for cleared trees, and how the Proponent will make decisions as to such end dispositions. It should provide additional information on how the Proponent is seeking to reuse cleared trees, and whether efforts are being made to reuse trees for long-lived wood products. Given that the majority of tree clearing will occur on DCR land, the FEIR should discuss whether mitigation could be provided to DCR for replanting efforts.

MEPA 33 The FEIR should discuss the extent to which existing electrical lines are exposed to riverine flooding, and what measures the Proponent is taking to improve asset resiliency over a longer-term horizon. The DEIR describes how the project will be designed to allow more electricity to flow during times of high usage such as extreme heat events. However, the FEIR should address heat effects from land and tree clearing.

Mitigation and Section 61 Findings

MEPA 34 The DEIR included draft Section 61 Findings and proposed mitigation measures. The FEIR should include a separate chapter with an updated comprehensive list of all commitments made by the Proponent to avoid, minimize and mitigate the impacts of the project. It should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation. The list of commitments should be provided in a tabular format organized by subject matter (traffic, water/wastewater, GHG, EJ, etc.) and identify the Agency Action or Permit associated with each category of impact. Draft Section 61 Findings should be separately included for each Agency Action to be taken on the project.

Responses to Comments

MEPA 35 The FEIR should contain a copy of this Certificate and a copy of each comment letter received. It should include a comprehensive response to comments on the DEIR that specifically address each issue raised in the comment letter; references to a chapter or sections of the FEIR alone are not adequate and should only be used, with reference to specific page numbers, to support a direct response. This directive is not intended to, and shall not be construed to, enlarge the Scope of the FEIR beyond what has been expressly identified in this certificate.

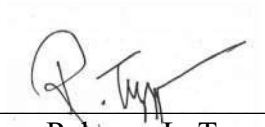
Circulation

In accordance with 301 CMR 11.16, the Proponent should circulate the FEIR to each Person or Agency who commented on the ENF and DEIR, each Agency from which the project will seek Permits,

See https://www.fs.usda.gov/rds/archive/catalog/RDS-2023-0020 (download zip file, and then divide MA total forest ecosystem net CO2 flux in 2020 (in the file "FRF_net_flux_by_State.csv") by MA statewide forest land remaining forest land area (the "FF" category in "LULUC_area_by_State.csv") in 2020, with appropriate unit conversions.

Land Transfers or Financial Assistance, and to any other Agency or Person identified in the Scope. Pursuant to 301 CMR 11.16(5), the Proponent may circulate copies of the FEIR to commenters in a digital format (e.g., CD-ROM, USB drive) or post to an online website. However, the Proponent should make available a reasonable number of hard copies to accommodate those without convenient access to a computer to be distributed upon request on a first come, first served basis. The Proponent should send correspondence accompanying the digital copy or identifying the web address of the online version of the FEIR indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. A copy of the FEIR should be made available for review in the Adams, North Adams, Florida, and Monroe Public Libraries.

December 15, 2023
Date



Rebecca L. Tepper

Comments received:

11/18/2023	Massachusetts Department of Environmental Protection (MassDEP) – Waterways Regulation Program (WRP)
12/08/2023	Massachusetts Department of Transportation (MassDOT)
12/08/2023	Berkshire Regional Planning Commission (BRPC)
12/08/2023	Franklin Regional Council of Governments (FRCOG)
12/08/2023	Mass Audubon
12/11/2023	Massachusetts Department of Conservation and Recreation (DCR)
12/11/2023	MassDEP, Western Regional Offices (WERO)
12/12/2023	Massachusetts Division of Fisheries and Wildlife (DFW) – Natural Heritage and Endangered Species Program (NHESP)

RLT/PPP/ppp

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

Memorandum

To: Purvi Patel, MEPA Unit

From: Waterways Regulation Program, MassDEP/Boston

cc: Daniel Padien, Program Chief, MassDEP/Boston

Re: E131 Asset Condition Refurbishment (ACR) Project, Draft Environmental Impact Report (DEIR) / Adams, North Adams, Florida, and Monroe EEA #16663
Chapter 91 Waterways Regulation Program Comments

Date: November 17, 2023

The Department of Environmental Protection Waterways Regulation Program (the "Department") has reviewed the above referenced DEIR (EEA #16663) submitted by the New England Power Company (the "Proponent") for proposed upgrades to an existing electrical utility infrastructure and construction of improved roadways by which the transmission line can be accessed, located in Adams, North Adams, Florida, and Monroe (the "Project").

As noted in the DEIR and the Department's comments on the EENF, the E131 crossing over the Hoosic River was previously authorized by Chapter 91 License No. 6274 issued by the Massachusetts Department of Public Works on August 1, 1974, an un-termed license. Provided the structures have been maintained in accordance with the specifications therein, the Hoosic River crossing may be maintained in accordance with the existing license pursuant to 310 CMR 9.05(1)(a) and 310 CMR 9.22(1). In addition, the existing overhead wire crossings over other jurisdictional waterways may be maintained pursuant to those same provisions and do not require Chapter 91 authorization, provided the structures comply with 310 CMR 9.05(3)(c) or 310 CMR 9.05(3)(f).

DEP WRP 1

The DEIR and ENF reference proposed work in or over non-tidal rivers and streams for construction access. Such work includes temporary construction mats and associated fill, work pads, etc. The FEIR should include plan and cross-sectional details that depict the temporary and permanent scopes of work and should indicate the proposed timing that temporary structures/fill will be located within each waterway within Chapter 91 jurisdiction in order for the Department to determine whether they may be eligible for a Chapter 91 permit or if a license is required.

The Proponent is encouraged to contact the Department at DEP.Waterways@mass.gov prior to submittal of the Final Environmental Impact Report if there are any questions on these comments.

December 7, 2023

Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
Attn: Purvi Patel
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: New England Power Company E131 Asset Condition Refurbishment Project, EEA# 16663

Dear Secretary Tepper:

The Berkshire Regional Planning Commission (BRPC) hereby submits comments on the Draft Environmental Impact Report (DEIR) for the New England Power Company (NEP) E131 Asset Condition Refurbishment Project (EEA# 16663). The proposed project spans four municipalities in Massachusetts: Adams, North Adams, Florida, and Monroe. The project's stated goals are to upgrade existing electrical utility infrastructure and construct improved roadways by which the transmission line can be accessed. These access roads will facilitate the proposed infrastructure improvements, as well as future maintenance activities and access by emergency personnel. The proposed project has met or exceeded MEPA review thresholds for a Mandatory Environmental Impact Report (EIR). On March 17, 2023, the request for Single EIR was denied requiring the preparation of a Draft and Final EIR.

The proposed project will have extensive impacts including permanently altered land, permanently altered Riverfront Area, and new steel structures 25ft higher than the current maximum height of 85ft. Impacts will primarily result from the replacement of structures, installation of new structures and the creation of both temporary and permanent access roads. The Project's design standard parameters are unchanged since the EENF, but reassessment of impact areas has resulted in changes to impact numbers and Project sequencing. According to the DEIR, the extent of proposed tree removal has been minimized and the potential impacts to resource areas have been generally reduced; however, these modifications and updates do not significantly alter the analyses and conclusions provided in the EENF.

BRPC continues to have significant concerns regarding the capacity of the electrical grid in relation to the Commonwealth's electrification goals. The EENF stated that in addition to the refurbishment work, the existing circuits will be adapted to provide high speed communications between substations by replacing existing shield wire with fiber optic ground wire (OPGW). The EENF further stated that a strong and reliable electrical transmission and distribution system is vital to the region's safety, security, and economic prosperity and that benefits of the project include a strengthened transmission system in western New England that offers greater reliability and safety for customers. BRPC's comment on the EENF included a comment stating that it was not clear whether the project will directly address the anticipated future demand or whether additional work would be needed in the future. The DEIR simply acknowledges this concern - mere acknowledgment isn't at all sufficient. NEPs failure to answer this question raises additional questions with regard for the potential for segmentation that should be addressed within the Final EIR.

BRPC offers the following comments intended for incorporation into the Final EIR to provide greater clarity and/or improve the planning and design of the Project.

1. The DEIR is not consistent with the EENF in quantifying resource impacts. The Final EIR should provide greater clarity and/or consistency with regard to how impacts are quantified. Discrepancies should be corrected and changes to project impacts should be clearly identified.

BRPC 1

BRPC 2

2. According to the EENF, permanent impacts are associated with the replacement and relocation of five structures to BVW via direct embed methods. The EENF stated that these areas were closely evaluated for alternatives but designs that relocated structures outside of BVW were deemed infeasible. However, this detail is absent within the alternatives analysis. The DEIR refers to narrative Section 6 regarding reasons for relocation of the five structures to BVW and site constraints. Section 6 states "Whenever feasible, NEP sited proposed structures in proximity to the existing structures being removed or has relocated structures from wetlands into upland areas." It remains unclear why permanent impacts are associated with the replacement and relocation of five structures to BVW via direct embed methods or how these areas were evaluated for alternatives that relocated structures outside of BVW.

BRPC 3

3. BRPC previously requested greater detail with regard to proposed mitigation measures including specific details related to wetland mitigation and replication. According to the DEIR proposed mitigation measures are described in narrative Section 4 and Table 15-1. Narrative Section 6 is referenced with regard to wetland restoration and mitigation. With regard to wetland mitigation, the DEIR states that "Specific details will be provided later to MassDEP pending further development of mitigation plan discussions with regulators." This detail should be provided within the Final EIR.

BRPC 4

4. The DEIR states that NEP plans to utilize tracked construction vehicles to the extent practicable to construct 12-foot-wide access roads. However, due to site constraints (including very steep slopes) and equipment required for the rebuild Project, additional non-tracked equipment and vehicles will be required. Access road development is being completed to facilitate standard electric utility construction vehicles and equipment. However, there is no discussion with regard to minimizing impacts through the use of tracked vehicles where access for standard electric utility construction vehicles and equipment is not needed.

BRPC 5

5. The Alternative Analysis describes existing site constraints, including very steep terrain, which would otherwise require multiple switchbacks and in most cases greater environmental impacts within the existing, maintained ROW rather than proposing permanent off-ROW access. The DEIR further states that permanent access roads will allow for both structure installation and required future maintenance. However, it is unclear why new permanent access roads are needed beyond those that currently exist or why temporary access roads are infeasible.

BRPC 6

6. The existing wooden structures installed in 1925 have withstood the test of time in standing for nearly 100 years. The DEIR states that NEP selected steel structures based on product standardization and lifespan maintenance requirements to support reliability. According to the DEIR, steel structures reduce the frequency of maintenance related to woodpecker damage and wood rot. The Final EIR should provide more detail with regard to the selection of steel structures for "lifespan maintenance requirements to support reliability" and the frequency and extent to which maintenance is required for wood structures due to woodpecker damage and wood rot.

BRPC 7

7. The FEIR should address questions related to the capacity of the electrical grid in relation to the Commonwealth's electrification goals. Specifically, the FEIR should clarify whether the project will directly address the anticipated future demand or whether additional work would be needed in the future and clarify that the project is not segmented.

The BRPC Executive Committee approved these comments at their meeting on December 7, 2023.

Sincerely,

Thomas Matuszko, AICP
Executive Director

Franklin Regional Council of Governments

December 8, 2023

Attn: MEPA Office, Purvi Patel
Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge St, Suite 900
Boston, MA 0211

Submitted by email to: purvi.patel@mass.gov

Re: **EEA Project 16663**
Draft Environmental Impact Report (DEIR) for the E131 Asset Condition Refurbishment Project (Monroe and towns outside of Franklin County)

Dear Ms. Tepper,

The Franklin Regional Council of Governments (FRCOG) hereby submits comments on the Draft Environmental Impact Report (DEIR) for EEA Project 16663. FRCOG is a regional service organization serving the 26 towns of Franklin County. We advocate on behalf of our communities and the county at the federal, state and regional levels. Our Planning Department serves as the Regional Planning Agency for the 26 communities in Franklin County. We provide planning technical assistance to our member towns for projects related to climate change resiliency, natural resource protection, land use, and transportation. This proposed project will go through the town of Monroe in Franklin County.

We did not submit comments on the Expanded Environmental Notification Form (EENF) when it was available for review in February of 2023. Our review of the DEIR focused primarily on reviewing the impacts on the Dunbar Brook trail, and environmental impacts within the town of Monroe.

New England Power Company d/b/a National Grid ("NEP") is proposing this refurbishment project along the E131 transmission line that runs for 11.4 miles between Adams, North Adams, Florida, and Monroe as part of a larger project that continues north and ends at the Harriman Substation in Readsboro, Vermont. The project includes replacing 160 deteriorating power line support structures; replacing hardware, wire, and switches; and upgrading or creating new access into the line.

FRCOG 1

According to Table 1-1, the project involves land alteration of 62.5 (unit not provided - acres?), 11.3 acres of tree removal, and 4.5 acres of rare species. We weren't able to assess the specific impacts in Monroe. According to Table 6-2, there will be permanent impact of 105 square feet of bordering vegetated wetland (BVW) in Monroe, and temporary impact of 168,550 square feet. We weren't able to determine impacts to riverfront areas in Monroe from reviewing the DEIR.

FRCOG requests that resource impacts be listed by town in the final environmental impact report (FEIR).

Impacts to Recreation in Monroe State Forest

As shown in Table 9-1, the project involves impacting 15.4 acres within Monroe State Forest; the DEIR states that no old growth trees are expected to be impacted. According to the MA DCR Monroe State Forest Trail Map (attached, and available online at https://www.mass.gov/doc/monroe-state-forest-trail-map/download), this power line crosses several trails and comes in proximity to two camping shelters, one of which is in Monroe.

FRCOG 2 The maps available in Appendix B to not appear to show any trails (the legend for the maps does not show trails). The text in the DEIR does not describe any short-term or long-term impacts to the trails, other than there may be access restrictions during the construction. Will there be tree removal along or near the trail? Will the experience of staying at one of the shelters be altered by a new or changed view of the powerline?

FRCOG 3 Table 9-2 indicates that a new Type 1-5 access road in Monroe State Forest will be constructed, but it is not clear from the maps how close this access line comes to any existing trail. In Section 3.6, the DEIR mentions one of the project benefits is *increased* recreational access. Please provide details of the increased recreational access. Is the new Type 1-5 access road going to be developed as a new trail?

FRCOG 4 Although we are glad that DCR will be in consultation with National Grid and their consultants, the DEIR doesn't offer enough details for other interested parties to evaluate recreational impacts or provide comments.

Thank you for the opportunity to comment on this DEIR. Please feel free to reach me at jatwood@frcog.org or 413-774-3167 x. 123, or contact Beth Giannini, Transportation Program Manager, at giannini@frcog.org or x.125

Sincerely,

Jessica Atwood
Director of Planning

dcr Massachusetts

Monroe State Forest

TRAIL MAP

LEGEND

- Monroe State Forest
- Paved Road
- Unpaved Road
- Hiking Trail
- Shelter
- P Parking
- Scenic Vista
- Power Line
- Town Boundary
- River, Brook
- Pond
- Contour Line (100' Interval)

TRAIL USE GUIDELINES
Stay on designated trails and roads
Observe all posted rules and regulations

Off- Road Vehicles Use prohibited

Be aware of hunting season, and wear blaze orange when appropriate.

Be alert for other trail users:

Hikers: Allow bicyclists and equestrians to pass.

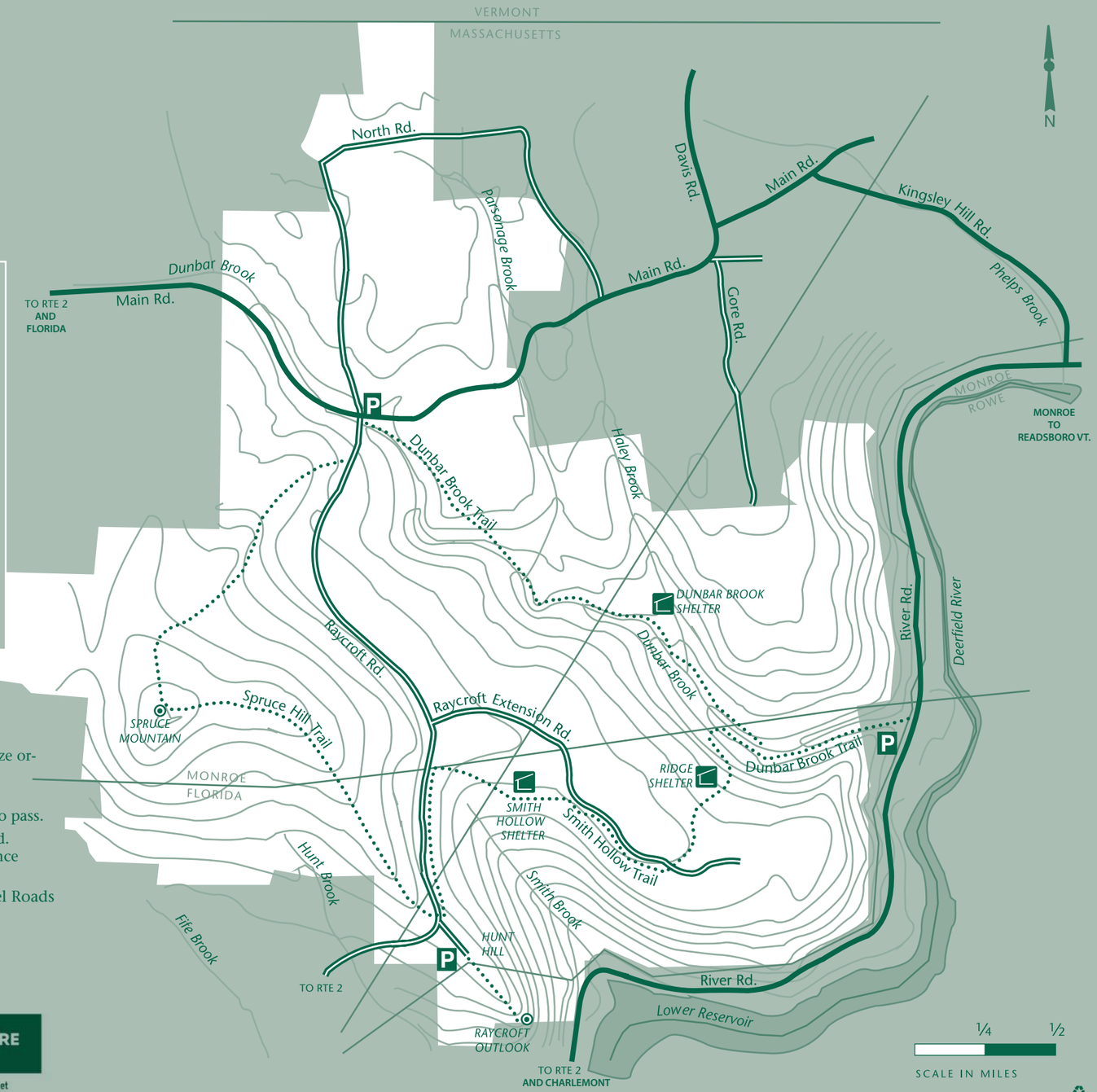
Bicyclists: Control your bike. Do not skid. Avoid Startling horses and hikers- announce yourself.

Equestrians: Control your horse. Gravel Roads including Raycroft Rd and Raycroft Ext. Rd are best suited for equestrian use.

Monroe State Forest
Tilda Hill Road
Monroe, MA

2019

MAILING ADDRESS:
Mohawk Trail State Forest
P.O. Box 7
Charlemont, MA 01339
413-339-5504



December 8, 2023

Secretary Rebecca Tepper
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Via email: Jennifer.Hughes@mass.gov; purvi.patel@mass.gov

Re: **EEA #16567 WT-02 Transmission Right-of-Way Reliability Project – Hancock, Lanesborough, Hinsdale, Cheshire, Dalton**
EEA #16607 A1/B2 Asset Condition Refurbishment (ACR) Project – Fitchburg, Gardner, Winchendon, Leominster, Sterling, Royalston, Warwick, Athol, Westminster
EEA #1663 E131 Asset Condition Refurbishment (ACR) Project – Florida, North Adams, Monroe, Adams

Dear Secretary Tepper:

On behalf of Mass Audubon, I submit the following comments on the Draft Environmental Impact Reports (DEIRs) for these transmission line refurbishment projects. Mass Audubon also commented with other organizations on the EENF for the E131 project.

While the specifics of these projects and their local impacts vary, these comments focus on high level points that apply generally to all projects of this type. These projects involve tree clearing; conversion of forested uplands and wetlands to open habitat types; impacts to permanently protected open spaces (Article 97 lands); temporary and permanent impacts to wetlands and rare species habitats; and permanent impacts including widening and upgrading access roads and replacement of poles and towers with new structures, some of which are in new locations. The cumulative impacts of these three projects have been reduced since the Expanded Environmental Notification Forms (EENFs) were filed, but are still substantial, in the range of 250+ acres of tree clearing, 50+ acres of vegetated wetlands alterations, and 78+ acres of impacts to Article 97 lands[1]. These projects also cross many public trails including the Appalachian Trail.

These projects are necessary for the electric system reliability, to update old equipment and structures, and to improve the efficiency and capacity of existing transmission rights-of-way (ROWs) (e.g. by replacing old shield wire with new optical ground wire (OPGW). As the state makes the essential transition to clean energy, maximizing the efficiency and reliability of existing transmission lines is an important step.

At the same time, the Commonwealth also has goals for the role of natural and working lands including forests, wetlands and farmland in the Clean Energy and Climate Plan, the Resilient Lands Initiative, ResilientMass Plan, Executive Order 618 on Biodiversity, the Healthy Soils Action Plan, the Farmland Action Plan, Forest Action Plan, State Wildlife Action Plan, BioMap, Forests as Climate Solutions, and other plans and initiatives. Maximizing the use of existing transmission corridors can help minimize the need for new ROWs to meet energy system needs. And applying management practices that maintain the natural habitat and other resource supporting capacities utility ROWs as much as possible will help harmonize the multiple competing goals for land across the Commonwealth.

AUD 1

Our previous comments on the E131 project requested that MEPA consider working with the utilities to establish a programmatic approach to these projects. We reiterate that request here. Even if segments of these line

[1] The exact numbers were difficult to compile from the documents, particularly for Article 97 impacts since it is not entirely clear how much of the work is new impacts to these lands.

AUD 1 (cont.)

improvements need to be reviewed independently to align with the utilities' capital improvement programs, there should be a programmatic approach that includes:

- **Tracking of multiple projects in the context of larger system planning** at a level that is understandable to the public.
- **Comprehensive tracking and availability of data on cumulative impacts to key resources including forests, wetlands, farmlands, rare species habitats, and Article 97 lands.**
- **Standardized approaches to avoidance and minimization of impacts.**
- **Mitigation for all unavoidable impacts and tracking of follow-through on mitigation commitments and results**. The extent of Article 97 impacts and mitigation to comply with the Public Lands Protection Act are not entirely clear in these DEIRs. There are references to ongoing consultations with DCR as well as claims regarding the breadth of pre-existing easement rights including rights of access across lands beyond the limits of the actual easements. MassWildlife, municipal, and land trusts lands are also impacted. The Final EIRs should clarify these points and provide definitive commitments to mitigation for unavoidable Article 97 impacts, in addition to the other forms of mitigation already described (e.g. land protection for wetlands impacts and rare species habitat construction period conditions from the Natural Heritage and Endangered Species Program).
- **Best practices for ongoing maintenance to minimize impacts on habitat, water resources, and recreational uses.** While there is already a system for reviewing Vegetation Management Plans in relation to use of pesticides, the standard best practices for these ROWs should be expanded to include these other important considerations. For example, tree clearing, brush hogging, and mowing generally should not occur during the bird nesting season. Expansion of scrub/shrub habitat for birds, pollinators, and other wildlife dependent on such habitats is an important goal of the state's Wildlife Action Plan and BioMap. To the extent these corridors can support such habitats, vegetation management practices should be optimized to achieve that. It is appropriate for the utilities to make such commitments throughout their ROW corridors, as mitigation for the ongoing impacts to Article 97 lands, forests, and wetland resources and as overall best practices for their land stewardship.

AUD 2

Minimizing Avian Electrocution Risks: The DEIR for the A1/B2 project mentions existing problems with birds nesting on equipment and describes replacement of structures and wires with newer systems designed to deter bird nesting. This includes changing the shielding angle and raising the height of conductors. Updated designs that avoid and minimize potential conflicts between transmission infrastructure and wildlife including birds is an important consideration. It is unclear whether the designs for these projects will also eliminate or at least minimize potential for bird electrocutions. The Final EIRs should clarify this and there should be explicit commitments to utilizing designs that minimize the potential for avian harm and death[2]. As this is an evolving area of science and best practice, the utilities should make commitments to continuing to advance and apply the best available designs and retrofitting techniques.

Thank you for considering these comments. We hope that the review of these maintenance and refurbishment projects can help set the stage for consistent, cumulative review and the avoidance, minimization and mitigation of impacts from both existing transmission lines and future system expansion projects.

Sincerely,

E. Heidi Ricci
Director of Policy and Advocacy

Cc: Eve Shluter, Assistant Director, MassWildlife
Rebecca Weismann, SWCA
Priyanka Shrestha, BSC Group
Katy Wilkins, Tighe and Bond

[2] https://www.fws.gov/story/incidental-take-beneficial-practices-power-lines; https://media.audubon.org/2023-08/BirdsAndTransmissionReport.pdf

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO

massDOT
Massachusetts Department of Transportation

December 8, 2023

Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Adams et. al. – E131 Asset Condition Refurbishment Project
(EEA #16663)

ATTN: MEPA Unit
Purvi Patel

Dear Secretary Tepper:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the Draft Environmental Impact Report filed for the proposed E131 asset condition refurbishment project starting in Adams and running through North Adams, Florida, and Monroe as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please contact J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

David J. Mohler
Executive Director
Office of Transportation Planning

DJM/jll

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

cc: Jonathan Gulliver, Administrator, Highway Division
Carrie Lavallee, P.E., Chief Engineer, Highway Division
James Danila, P.E., State Traffic Engineer
Francisca Heming, P.E., District 1 Highway Director
Berkshire Regional Planning Commission (BRPC)

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary & CEO

massDOT
Massachusetts Department of Transportation

MEMORANDUM

TO: David J. Mohler, Executive Director
Office of Transportation Planning

FROM: J. Lionel Lucien, P.E., Manager
Public/Private Development Unit

DATE: December 8, 2023

RE: Adams et. al. – E131 Asset Condition Refurbishment Project
(EEA #16663)

The Public/Private Development Unit (PPDU) has reviewed the Draft Environmental Impact Report (DEIR) for the E131 Asset Condition Refurbishment Project (the "Project") starting in Adams and running through North Adams, Florida, and Monroe. The DEIR is prepared by Tighe and Bond, Inc. on behalf of New England Power Company (the "Proponent"). The Project entails the refurbishment of existing overhead electrical utility lines, including the replacement of 157 existing electrical utility lattice structures with steel H-frame structures. The Project additionally includes the construction of new access drives in order to replace and maintain the electrical infrastructure. The overhead lines to be refurbished in this Project run from the #21 sub-station in Adams to the state line in Monroe and then on to the Harriman sub-station in Readsboro, Vermont.

The Project surpasses MEPA thresholds for review of an Environmental Notification Form (ENF) and an Environmental Impact Report (EIR) due to impacts on land per 301 CMR 11.03(1) and wetlands per 301 CMR 11.03(3). The Project also requires an Environmental Impact Report (EIR) per 301 CMR 11.06(7)(b) as the utility route intersects several Designated Geographic Areas surrounding Environmental Justice (EJ) Populations.

MassDOT 1

The Project route will intersect with the state jurisdictional highway layout at multiple locations, including the Curran Memorial Highway in Adams and Mohawk Trail (Route 2) in Florida. Project-related construction in these locations will require a temporary access permit for construction activities and/or a utility access permit issued by MassDOT District 1. Further MassDOT permits will be required for temporary construction access, overhead wire crossings of the above-listed state routes, and new access roadways proposed within the state highway right-of-way. As the utility line already exists in place, no additional impacts on the state jurisdictional right of way are anticipated after Project completion.

As previously stated in MassDOT comments on the Expanded Environmental Notification Form, the Project is not expected to result in additional vehicle trips on an average weekday, except for the occasional or yearly maintenance activities. MassDOT does not anticipate that these activities would significantly impact the transportation system and

MassDOT 2

therefore recommends no further review for environmental impacts on the state transportation system. The Proponent should coordinate with MassDOT District 1 to minimize traffic disruption during Project construction and prevent impacts on state jurisdictional roadways. If you have any questions regarding these comments, please contact *Lionel.Lucien@dot.state.ma.us*.

dcr
Massachusetts

December 8, 2023

Secretary Rebecca L. Tepper
Executive Office of Energy and Environmental Affairs
Attn: Purvi Patel, MEPA Office
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Re: EEA#16663 E131 Asset Condition Refurbishment Project DEIR

Dear Secretary Tepper:

The Department of Conservation and Recreation ("DCR" or "the Department") is pleased to submit the following comments in response to the Draft Environmental Impact Report ("DEIR") filed by New England Power Company ("NEP" or the "Proponent") for the proposed E131 Asset Condition Refurbishment Project (the "Project") in Adams, Savoy, Florida and Monroe.

NEP's E131 right-of-way ("ROW") ranges between 200 and 400 feet in width. The current maintained width ranges from approximately 100 to 150 feet. NEP proposes to expand the existing maintained ROW in limited areas as required for the safe placement of structures and work pads. Approximately 3.8 miles of ROW passes through Monroe, Florida and Savoy state forests. Tree clearing related to new permanent access roads is also proposed. The DEIR indicates the proposed work will impact approximately 35.8 acres of land within the state forests, including approximately 2.8 acres of permanent impacts outside of the ROW.

Article 97

The proposed Project includes the ongoing use and "improvement" of woods roads in 9 locations outside of the ROW to enable access through DCR forest land to get to the NEP ROW for Project activities. Proposed changes to the access roads and trails include tree clearing, widening, grading, and improving the corridors, which will result in permanent impacts to the state forests. DCR is in consultation with the Proponent to gain more details on the proposed off ROW activities and their impacts to the natural and recreational resources within the state forest, and is in the process of determining whether the permanent impacts to off-ROW DCR property would amount to a change in use or control that will invoke the EEA Article 97 Land Disposition Policy and the requirements of the Public Lands Preservation Act, codified at M.G.L. c. 3, § 5A.

DCR 1

Natural, Cultural and Recreational Resources

NEP consulted and met in the field with DCR's Foresters related to the protection of Old Growth, with DCR's Archaeologist related to the protection of cultural resources, with park staff related to trail access and public safety, and with the DCR Senior Ecologist related to stewardship of wetlands and rare species and minimizing tree removal. DCR requests that the Proponent continue to coordinate with DCR staff to minimize impacts to sensitive resources, minimize clearing to the extent possible, and identify mitigation opportunities should a loss

DCR 2

Department of Conservation and Recreation
State Transportation Building
10 Park Plaza, Suite 6620
Boston, MA 02116-3978
617-626-1250 617-626-1351 Fax
www.mass.gov/dcr

Maura T. Healey
Governor

Kimberley Driscoll
Lt. Governor

Rebecca L. Tepper, Secretary
Executive Office of Energy & Environmental Affairs

Brian Arrigo, Commissioner
Department of Conservation & Recreation

DCR 2 (cont.)

or conversion of wetlands, rare species habitat or other forest or recreational resources result from Project work activities.

DCR 3

Work activities on DCR property outside of existing easements associated with the NEP ROW, or requiring access across DCR property, will require a Construction and Access Permit ("CAP"). The CAP will include conditions to minimize impacts to trail access and ensure the safety of trail users.

Thank you for the opportunity to comment on the DEIR. Please contact DCR's Director of Land Protection Jennifer Howard, jennifer.howard@mass.gov related to the Article 97 process. If you have any additional questions regarding these comments, or to request information and coordination with DCR, please contact Andy Backman, andy.backman@mass.gov.

Sincerely,

Brian Arrigo,
Commissioner

cc: Nancy Putnam, Jonathan Patton, Sean Grant, Katherine Preissler, Peter Church, Tom Brule, Bill VanDoren, Priscilla Geigis, Patrice Kish, Peter Mulcahy, Jennifer Howard

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

December 11, 2023

Rebecca L. Tepper, Secretary
Executive Office of Energy & Environmental Affairs
Massachusetts Environmental Policy Act Office
Purvi Patel, EEA No. 16663
100 Cambridge Street, 9th Floor
Boston, MA 02114-2524

Re: New England Power - E131 Asset Condition Refurbishment Project – Adams, North Adams, Florida, Monroe - DEIR

Dear Secretary Tepper,

The Massachusetts Department of Environmental Protection (MassDEP), Western Regional Office (WERO) appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) submitted for the proposed New England Power Company (NEP) E131 Asset Condition Refurbishment Project in Adams, North Adams, Florida and Monroe (EEA #16663).

The applicable MassDEP regulatory and permitting considerations regarding wetlands, air pollution, solid waste and waste site cleanup are discussed.

I. Project Description

The Proponent, New England Power Company (NEP) is proposing to upgrade the existing electric grid system over approximately 11.4 circuit miles within the E131 line Right of Way in Adams, North Adams, Florida and Monroe. NEP anticipates project construction timeline will be mid-2024 to 2027. The existing width of the line easement rights is between 200-400 feet, contains the overhead 115 kV transmission line E131 and includes a portion of the adjacent J10 Line and the Bear Swamp Tap Line. Approximately six miles of the project passes through Massachusetts Department of Conservation and Recreation (DCR) properties. The project includes replacement of 157 Wooden H-frame, six steel triple pole structures, three existing steel lattice structures, and removal of four existing H-frame structures and one lattice structure. Approximately twenty-four structures to be installed will require concrete caisson foundations and one structure will require a micropile foundation.

Additional proposed upgrades include installation of three new switch gear structures, replacement of existing shield wire, replacement of conductors in four sections and replacement of all insulators and hardware, construction of new access roads and improvements to existing access roads. The road work includes grading and tree removal within the NEP Right-of-Way.

Temporary impacts are proposed within mapped Priority and Estimated Habitat of seven state-listed species that have been identified by Natural Heritage Endangered Species Program (NHESP). The Proponent is coordinating with NHESP on the project.

Environmental Justice populations are identified within one and five-mile radii of the project site (income criteria). The Proponent posits the project will have neither short-term nor long-term environmental or public health impacts effecting Environmental Justice Populations.

Environmental Impacts proposed changes since the EENF was filed:

- New acres of land altered – Decreased 1.06 acres
- New other wetland alteration – eliminated proposed culverts near Structure 165 – use of swamp mats proposed limiting impacts to:
  - Bank
  - Land Under Waterbodies and Waterways
- Reviewing NHESP impacts and will propose a Conservation Management Plan if a "take" is anticipated.

II. Required Mass DEP Permits and/or Applicable Regulations

Wetlands
310 CMR 10.000
Water Quality Certificate
314 CMR 9.00
Water Quality Standards
314 CMR 4.00
Air Pollution
310 CMR 7.00
Solid Waste
310 CMR 16.00
Hazardous Waste
310 CMR 30.00
Bureau of Waste Site Cleanup
310 CMR 40.000

III. Permit Discussion

Bureau of Water Resources

Wetlands Protection Act
MassDEP's has no additional comments; previous comments remain valid.

401 Water Quality Certification

DEP WERO 1

MassDEP notes that the Proponent filed a 401 Water Quality Certification (WQC) on June 16, 2023, prior to the Secretary determining that a final Environment Impact Report was adequate. MassDEP cannot take any action until the MEPA process is complete. MassDEP has notified the Proponent and the U.S. Army Corps of Engineers that MassDEP has extended indefinitely the time periods at 310 CMR 4.10(8)(j), and 314 CMR 9.05(2) of the "401 Water Quality Certification…" regulations until Agency Action can be taken.

Chapter 91
MassDEP's has no additional comments; previous comments remain valid.

Bureau of Air and Waste

MassDEP's has no additional comments; previous comments remain valid.

Bureau of Waste Site Cleanup

DEP WERO 2

MassDEP cautions that when there is a delay in work the Proponent should revisit the searchable sites portal to ensure any new releases have been identified in the proposed work area.

IV. Other Comments/Guidance

The Proponent has requested the Secretary allow the submittal of a Single Environmental Impact Report (SEIR). MassDEP has no objection should the Secretary approve submittal of an SEIR.

Greenhouse Gas (GHG) Emissions
The Proponent indicates that GHG emissions from the project will be minimal during the construction phase of the project, with no long-term impacts and requests a de minimis exemption.

Section 61 Findings

DEP WERO 2

MassDEP finds the proposed Section 61 Finding, mitigation proposal to be acceptable, however; additional detail of site specific mitigation consistent with the requirements of regulation must be included as part of the permit a[application. MassDEP has the authority to ensure the Proponent avoid, minimize and mitigate through the permitting process and will include the final Section 61 Findings in the permit.

MassDEP staff is available for discussions as the project progresses. If you have any questions regarding this comment letter, please do not hesitate to contact me at (413) 335-7514.

Sincerely,

Catherine V. Skiba, P.G. for
Michael Gorski
Regional Director

cc: MEPA File

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

December 8, 2023

Rebecca Tepper, Secretary
Executive Office of Environmental Affairs
Attention: MEPA Office
Purvi Patel, EEA No. 16663
100 Cambridge St.
Boston, Massachusetts 02114

Project Name:	*E131 Asset Condition Refurbishment Project*
Proponent:	*New England Power Company d/b/a National Grid*
Location:	*Adams, North Adams, Florida, and Monroe, MA*
Document Reviewed:	*Draft Environmental Notification Form (DEIR)*
Project Description:	*Complete refurbishment of existing transmission line infrastructure, including access roadway improvements*
EEA No.:	*16663*
NHESP Tracking No.	*23-1106 (previously 22-40756)*

Dear Secretary Tepper:

The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife (Division) has reviewed the *Draft Environmental Notification Form* (DEIR) for the E131 Asset Condition Refurbishment Project (the Project) and would like to offer the following comments regarding state-listed species and their habitats.

According to information in the DEIR, portions of the proposed Project are located within Priority Habitat for a suite of state-listed state species, including Bailey's Sedge (*Carex baileyii*, Threatened). This species and its habitats are protected pursuant to the Massachusetts Endangered Species Act (MGL c.131A) and its implementing regulations (MESA; 321 CMR 10.00). A Fact Sheet for this species can be found on our website, www.mass.gov/nhesp.

All projects or activities proposed within Priority Habitat, which are not otherwise exempt pursuant to 321 CMR 10.14, require review through a direct filing with the Division for compliance with the MESA (321 CMR 10.18). Based on a review of information submitted to the Division and the information currently contained in our database, the Division has determined (letter dated August 18, 2021) that **the Project, as proposed, will result in a Take (321 CMR 10.18 (2)(b)) of Bailey's Sedge** due to the shading and direct placement of timber matting placed over a portion of the population associated in order to access the project from the J10 ROW. As identified in our previous comments (dated March 10, 2023) on the Expanded Environmental Notification Form (ENF), the Proponent has engaged the Division in consultations to discuss potential impacts associated with the Project.

NHESP 1

Projects resulting in a Take of state-listed species may only be permitted if they meet the performance standards for a Conservation and Management Permit (CMP; 321 CMR 10.23). In order for a project to qualify for a CMP, the applicant must demonstrate that the project has avoided, minimized and mitigated impacts to state-listed species consistent with the following performance standards: (a) adequately assess alternatives to both temporary and permanent impacts to the state-listed species, (b) demonstrate that an insignificant portion of the local population will be impacted, and (c) develop and agree to carry out a conservation and management plan that provides a long-term net benefit to the conservation of the state-listed species.

NHESP 2

The Division recommends that the Proponent continue to work proactively with the Division to address several outstanding issues, including continuing to assess alternatives to further reduce permanent and temporary impacts to state-listed species and their habitats, and developing a robust conservation and management plan that provides a long-term net benefit to state-listed plants, with a focus on protection of individual plants and plant populations, additional botanical surveys, seed collection, and management to enhance habitat quality in the immediate vicinity of the Project site. The Division anticipates being able to address these issues through the MESA review process, and looks forward to continued consultation with the Proponent.

NHESP 3

The Division will not render a final decision until the MEPA review process and its associated public and agency comment period is completed, and until all required MESA filing materials are submitted to the Division. As the MESA review is ongoing, no work associated with the proposed Project shall occur until the MESA permitting process is complete. If you have any questions or need additional information, please contact Lauren Glorioso, Endangered Species Review Biologist, at (508)389-6361 or lauren.glorioso@mass.gov. We appreciate the opportunity to comment on the proposed Project.

Sincerely,

Everose Schlüter, Ph.D.
Assistant Director

cc: Michael Tyrrell, National Grid
Katherine Wilkins, Tighe & Bond
MassDEP Western Regional Office, Wetlands & Waterways
Town of North Adams Board of Selectmen
Town of North Adams Planning Board
Town of North Adams Conservation Commission
Town of Adams Board of Selectmen
Town of Adams Planning Board
Town of Adams Conservation Commission

Town of Florida Board of Selectmen
Town of Florida Planning Board
Town of Florida Conservation Commission
Town of Monroe Board of Selectmen
Town of Monroe Planning Board
Town of Monroe Conservation Commission

Tighe&Bond

APPENDIX B

File Location: V:\Projects\N\N1191\Line_E131\MXD\LineE131_StructureReplacementProject_Index.mxd
Date Saved: 10/26/2023 2:02:15 PM

E131 - ASSET CONDITION REFURBISHMENT PROJECT

USGS Site Location Map
Adams, North Adams, Florida, Monroe, Massachusetts
Readsboro, Vermont

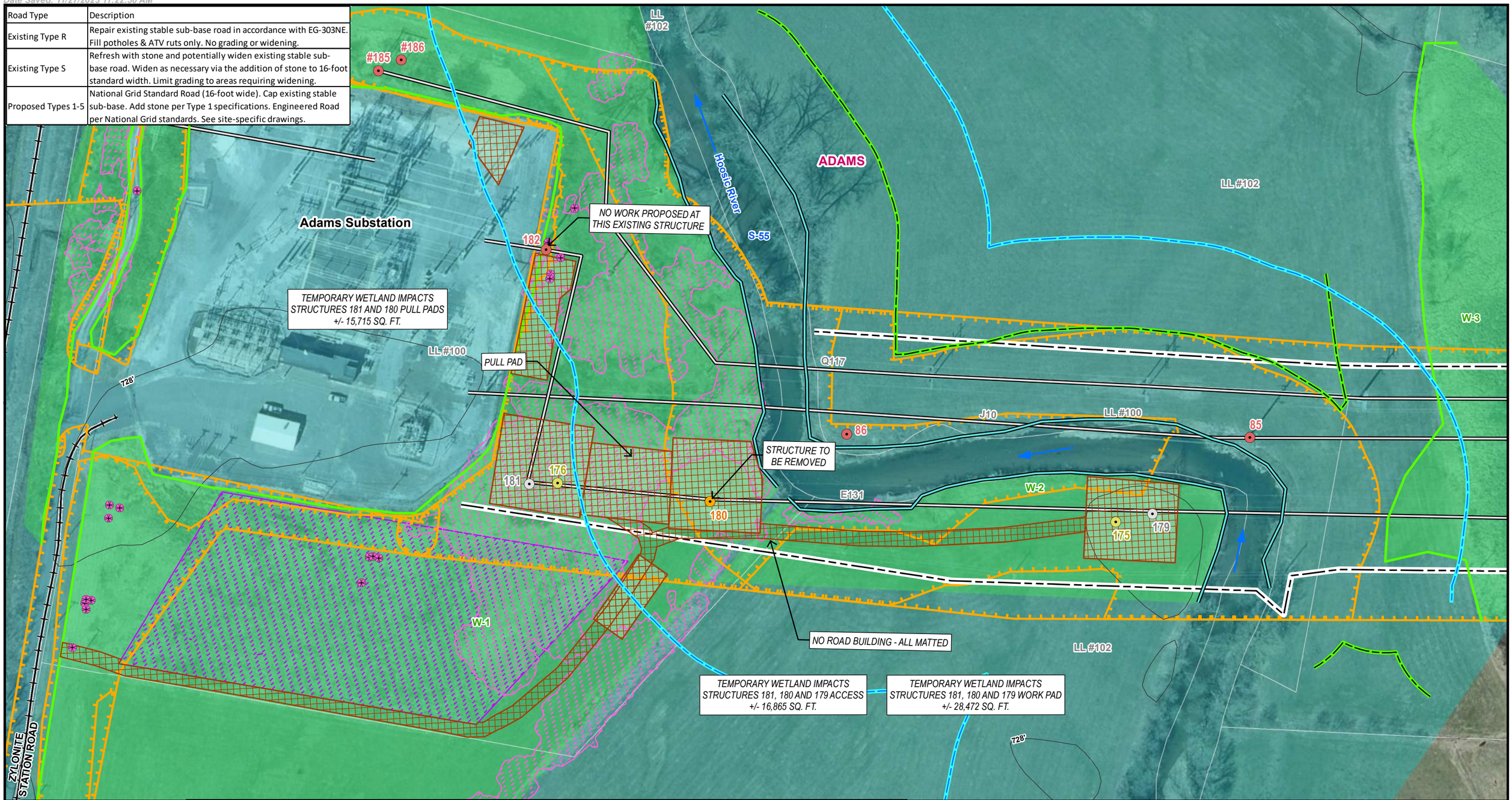
Scale:
1 inch = 5,000 feet
0 2,500 5,000
Feet
(Page Size 11 x 17)

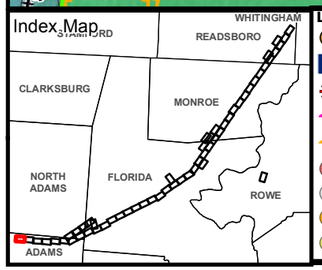
nationalgrid
Tighe&Bond

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE

DRAFT

Road Type	Description
Existing Type R	Repair existing stable sub-base road in accordance with EG-303NE. Fill potholes & ATV ruts only. No grading or widening.
Existing Type S	Refresh with stone and potentially widen existing stable sub-base road. Widen as necessary via the addition of stone to 16-foot standard width. Limit grading to areas requiring widening.
Proposed Types 1-5	National Grid Standard Road (16-foot wide). Cap existing stable sub-base. Add stone per Type 1 specifications. Engineered Road per National Grid standards. See site-specific drawings.





Legend

- Culvert
- Gate
- Delineated Vernal Pool
- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- Existing Structure
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- Delineated Wetland Area*
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- Approximate Parcel Boundary
- Municipal Boundary
- Limits of Disturbance*

*Indicates Layers Set to Transparency

N

1 inch = 100 feet

0 50 100

Feet

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Adams, Massachusetts
Page 1 of 56

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs, Vermont Center for Geographic Information

Parcels downloaded from MassGIS: Adams (FY20), North Adams (FY18), Florida (FY18), and Monroe (FY18).

The information/data provided in this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation or parcel level analysis. The maps should not be used for construction purposes.

nationalgrid
Tighe&Bond

DRAFT

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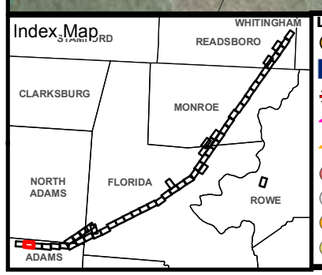

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*Indicates Layers Set to Transparency

N

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0 50 100

Feet

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Adams, Massachusetts

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Vermont Center for Geographic Information

Parcels downloaded from MassGIS:
Adams (FY20), North Adams (FY18), Florida (FY18), and Monroe (FY18).

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nationalgrid
Tighe&Bond

DRAFT

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ADAMS

TEMPORARY WETLAND IMPACTS
STRUCTURE 172 ACCESS
+/- 578 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 172 WORK PAD
+/- 4,642 SQ. FT.

Q117

J10

E131

81 80 79

171 175 170 174 169 173 172 168

S-1

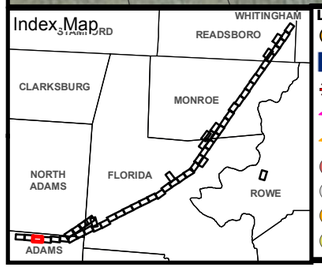
W-4

ACCESS FROM EAST ROAD

NOTE: THIS WATERCOURSE WILL BE SPANNED USING APPROPRIATE WATERCOURSE CROSSING TECHNIQUES IN ACCORDANCE WITH THE NATIONAL GRID ACCESS, MAINTENANCE AND CONSTRUCTION BMP DOCUMENT - EG303NE. THE WATERCOURSE IS APPROXIMATELY 6 FEET WIDE AT THE PROPOSED CROSSING LOCATION AS MEASURED ACROSS THE TOP OF OPPOSING BANKS.

LL #105

Index Map



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E131 - ASSET CONDITION REFURBISHMENT PROJECT

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nationalgrid
Tighe&Bond

DRAFT

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ADAMS

W-7

W-8

S-6

S-5

S-2

S-4

TEMPORARY WETLAND IMPACTS
STRUCTURE 169 ACCESS
+/- 9,738 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 171 WORK PAD
+/- 1,730 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 169 WORK PAD
+/- 13,287 SQ. FT.

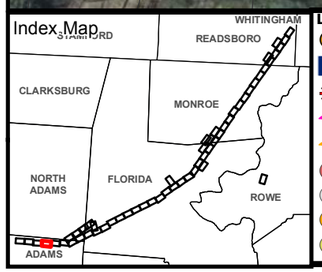
NOTE: THESE WATERCOURSES WILL BE SPANNED USING APPROPRIATE WATERCOURSE CROSSING TECHNIQUES IN ACCORDANCE WITH THE NATIONAL GRID ACCESS, MAINTENANCE AND CONSTRUCTION BMP DOCUMENT - EG303NE. THE WATERCOURSES ARE APPROXIMATELY 4 TO 6 FEET WIDE AT THE PROPOSED CROSSING LOCATIONS AS MEASURED ACROSS THE TOP OF OPPOSING BANKS.

J10

E131

LL #105

Savoy Mountain State Forest



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- Gate
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N

1 inch = 100 feet

0 50 100

Feet

Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Adams, Massachusetts

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Vermont Center for Geographic Information

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nationalgrid
Tighe&Bond

DRAFT

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Proposed Types 1-5	National Grid Standard Road (16-foot wide). Cap existing stable sub-base. Add stone per Type 1 specifications. Engineered Road per National Grid standards. See site-specific drawings.

LL #105

ADAMS

VERY STEEP ROCKY SLOPE

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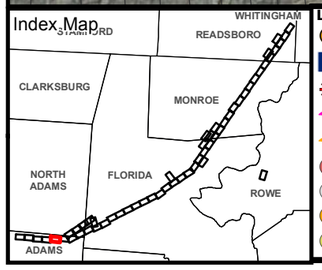
STRUCTURE TO BE REMOVED

TEMPORARY WETLAND IMPACTS STRUCTURE 164 WORK PAD +/- 1,478 SQ. FT.

CULVERT INSTALLATION



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DRAFT

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TEMPORARY WETLAND IMPACTS
STRUCTURE 71 ACCESS
+/- 2,196 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 162 WORK PAD
+/- 625 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 162 ACCESS
+/- 729 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 161 ACCESS
+/- 1,338 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 161 WORK PAD
+/- 3,286 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 157 WORK PAD
+/- 221 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 158 WORK PAD
+/- 127 SQ. FT.

ACCESS TO
STRUCTURE 146-160

PULL PAD

Savoy Mountain State Forest

ADAMS

LL #105

LL #101

E131

J10

W-57 W-12 W-11 W-13 W-14

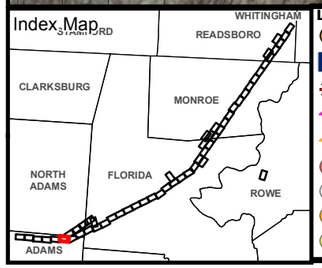
69 70 71 72 73

S-7 S-8 S-9

146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163

2352' 2342' 2332' 2322' 2312' 2303' 2293' 2283' 2273' 2263' 2253' 2244' 2234' 2224' 2214' 2204' 2194' 2185' 2175' 2165' 2155' 2145' 2106' 2096' 2086' 2116' 2125' 2135' 1929' 1938' 2293'

Index Map



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Feet

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Tighe&Bond

DRAFT

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NORTH ADAMS
ADAMS
LL #107
LL #101
Savoy Mountain State Forest
E131
W-15
W-16
W-17
W-18
W-19
S-10
S-11
S-12
S-13
S-14
TEMPORARY WETLAND IMPACTS STRUCTURE 155 WORK PAD +/- 1,781 SQ. FT.
TEMPORARY WETLAND IMPACTS STRUCTURE 154 ACCESS +/- 115 SQ. FT.
TEMPORARY WETLAND IMPACTS STRUCTURE 153 ACCESS +/- 1,501 SQ. FT.
TEMPORARY WETLAND IMPACTS STRUCTURE 152 ACCESS +/- 1,304 SQ. FT.
STRUCTURE TO BE REMOVED
PROPOSED TREE CLEARING AREA
PULL PAD
TEMPORARY WETLAND IMPACTS STRUCTURE 154 WORK PAD +/- 2,312 SQ. FT.
TEMPORARY WETLAND IMPACTS STRUCTURE 153 WORK PAD +/- 1,069 SQ. FT.
TEMPORARY WETLAND IMPACTS STRUCTURE 152 WORK PAD +/- 7,823 SQ. FT.

Index Map
WHITINGHAM
WILLIAMSTOWN
READSBORO
CLARKSBURG
MONROE
NORTH ADAMS
FLORIDA
ROWE
ADAMS

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E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Adams/North Adams, Massachusetts
Page 7 of 56

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Savoy Mountain State Forest

NORTH ADAMS

LL #107

S-15

E131

W-19

W-20

W-21

W-22

W-23

W-24

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148

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146

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TEMPORARY WETLAND IMPACTS
STRUCTURE 151 ACCESS
+/- 3,717 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 150 ACCESS
+/- 4,535 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 149 ACCESS
+/- 3,241 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 151 WORK PAD
+/- 6,646 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 150 WORK PAD
+/- 6,897 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 149 WORK PAD
+/- 839 SQ. FT.

TEMPORARY WETLAND IMPACTS
STRUCTURE 147 WORK PAD
+/- 732 SQ. FT.

STEEP SLOPE COVERED IN BOULDERS AND EXPOSED BEDROCK. NO SUITABLE ACCESS IDENTIFIED.

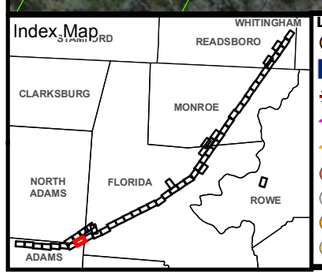
LL #101

LL #103

ADAMS

FLORIDA

Index Map



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STEEP SLOPE COVERED IN BOULDERS AND EXPOSED BEDROCK. NO SUITABLE ACCESS IDENTIFIED.

TEMPORARY WETLAND IMPACTS STRUCTURE 145 ACCESS +/- 1,215 SQ. FT.

TEMPORARY WETLAND IMPACTS STRUCTURE 142 WORK PAD +/- 6,960 SQ. FT.

STRUCTURE TO BE REMOVED

PULL PAD

TEMPORARY WETLAND IMPACTS STRUCTURE 145 PULL PADS +/- 2,726 SQ. FT.

TEMPORARY WETLAND IMPACTS STRUCTURE 145 AND 144 WORK PADS +/- 18,318 SQ. FT.

TEMPORARY WETLAND IMPACTS STRUCTURE 144 ACCESS +/- 3,109 SQ. FT.

TEMPORARY WETLAND IMPACTS STRUCTURE 143 ACCESS +/- 588 SQ. FT.

FLORIDA

Savoy Mountain State Forest

LL #107

LL #103

OLD FLORIDA ROAD

E131

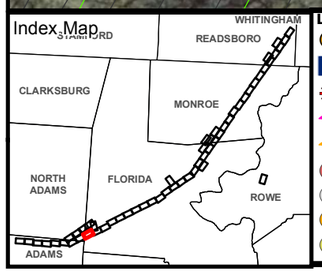
W-25 W-26 W-27 W-28 W-29 W-30

S-16 S-17 S-18 S-59

144 146 145 143 144 142 143

2086' 2076' 2066' 2057' 2047' 2037' 2027' 2017' 2007' 1998' 1988' 1978' 1968' 1958' 1948' 1938' 1928' 1919' 1909' 1899' 1889' 1879' 1870' 1929' 1936'

Index Map



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Feet

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E131 - ASSET CONDITION REFURBISHMENT PROJECT

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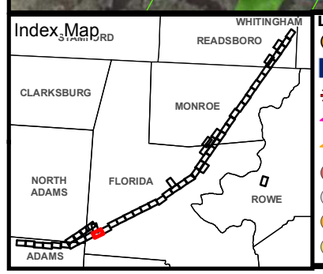

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E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Florida, Massachusetts

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Vermont Center for Geographic Information

Parcels downloaded from MassGIS:
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File Location: V:\Projects\N\N1191\Line_E131\MXD\LineE131_StructureReplacementProject_FullSet.mxd
Date Saved: 11/27/2023 11:22:50 AM

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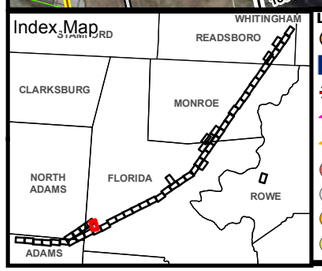
Index Map


Legend

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- Gate
- Delineated Vernal Pool
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- NHESP Potential Vernal Pools
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- Existing Structure to be Replaced
- Existing Structure to be Removed
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*Indicates Layers Set to Transparency

N

1 inch = 100 feet

0 50 100

Feet

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Savoy Mountain State Forest

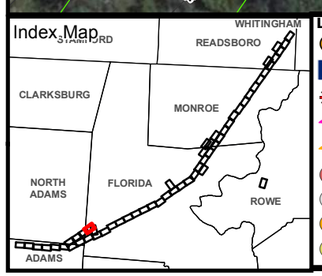
LL #103

W-46 W-45 58 W-44 57 J10 56 W-43

TEMPORARY WETLAND IMPACT
STRUCTURE 59 ACCESS
+/- 740 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 59 ACCESS
+/- 3,821 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 58 ACCESS
+/- 7,602 SQ. FT.



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NORTH ADAMS

FLORIDA

LL #107

Savoy Mountain State Forest

LL #103

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TEMPORARY WETLAND IMPACT STRUCTURE 63 ACCESS +/- 593 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 60 ACCESS +/- 3,148 SQ. FT.

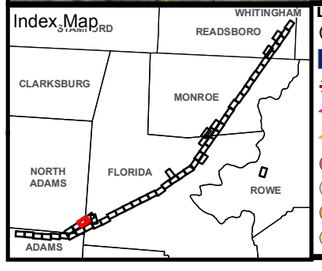
TEMPORARY WETLAND IMPACT STRUCTURE 59 ACCESS +/- 740 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 59 ACCESS +/- 2,879 SQ. FT.

W-50 W-49 W-48 J10 W-47 W-46 W-45

60 59

Index Map



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DRAFT

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NORTH ADAMS

Savoy Mountain State Forest

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STRUCTURE 65 ACCESS
+/- 1,347 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 63 ACCESS
+/- 2,837 SQ. FT.

W-56 · 64 · S-19 · 63 · W-55 · W-54 · J10 · 62 · W-53 · W-52 · LL #107 · W-51

Index Map
STAMFORD · WHITINGHAM · READSBORO · CLARKSBURG · MONROE · NORTH ADAMS · FLORIDA · ROWE · ADAMS

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NORTH ADAMS

ADAMS

Savoy Mountain State Forest

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LL #107

LL #101

69 68 67 66 65 64

W-57 W-56 S-20 S-19 J10

TEMPORARY WETLAND IMPACT STRUCTURE 69 ACCESS +/- 280 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 65 ACCESS +/- 1,347 SQ. FT.

ACCESS TO STRUCTURE 146-160

2322' 2322' 2421' 2411' 2401' 2391' 2381' 2372' 2362' 2352' 2342' 2332' 2322' 2312' 2303' 2293' 2283' 2273' 2263' 2253' 2244' 2234' 2224' 2214' 2273' 2244' 2234' 2224' 2214' 2204' 2194' 2253'

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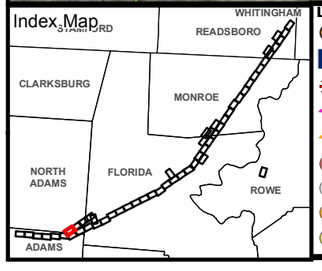

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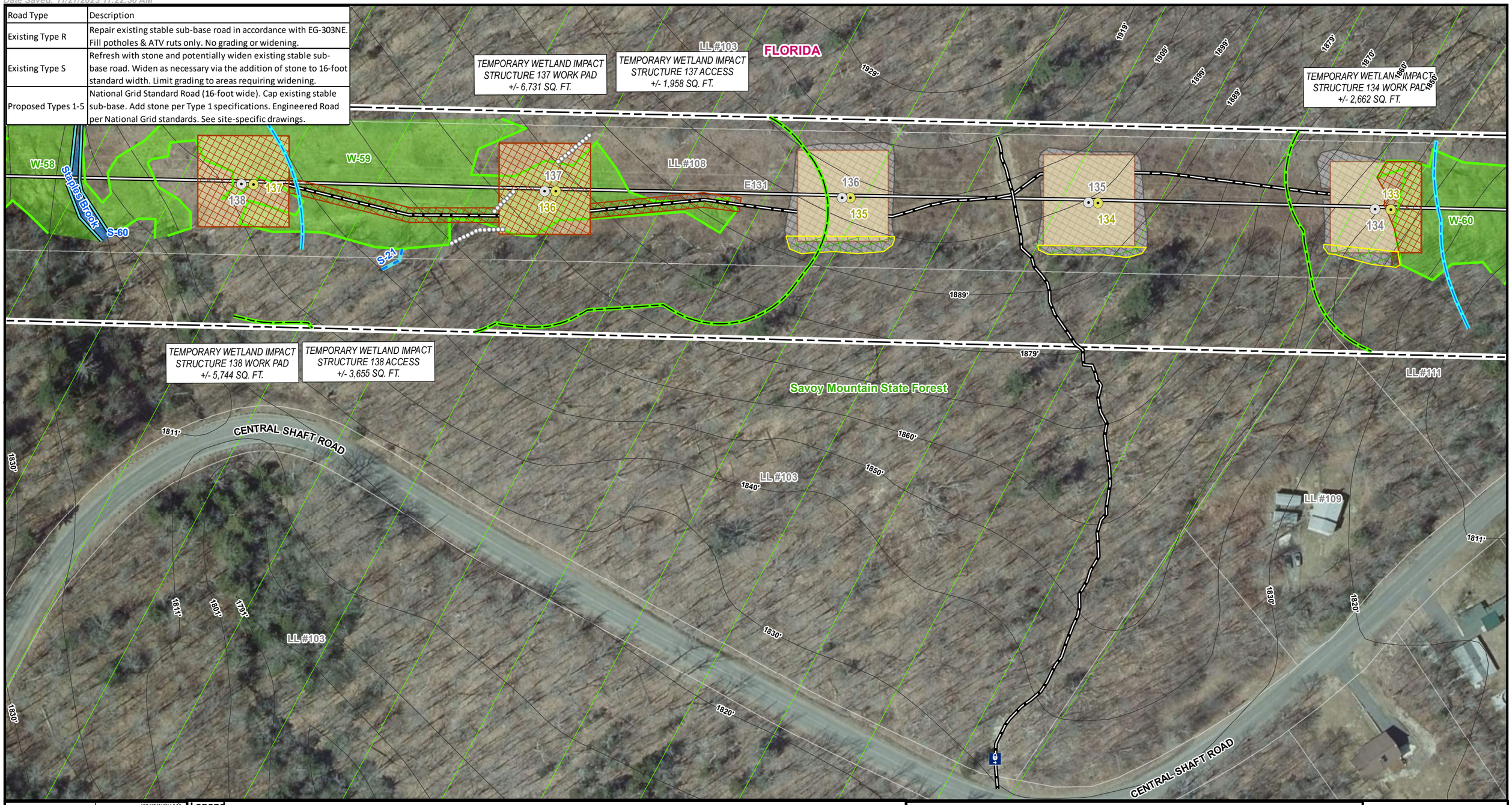
TEMPORARY WETLAND IMPACT STRUCTURE 137 ACCESS +/- 1,958 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 134 WORK PAD +/- 2,662 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 138 WORK PAD +/- 5,744 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 138 ACCESS +/- 3,655 SQ. FT.



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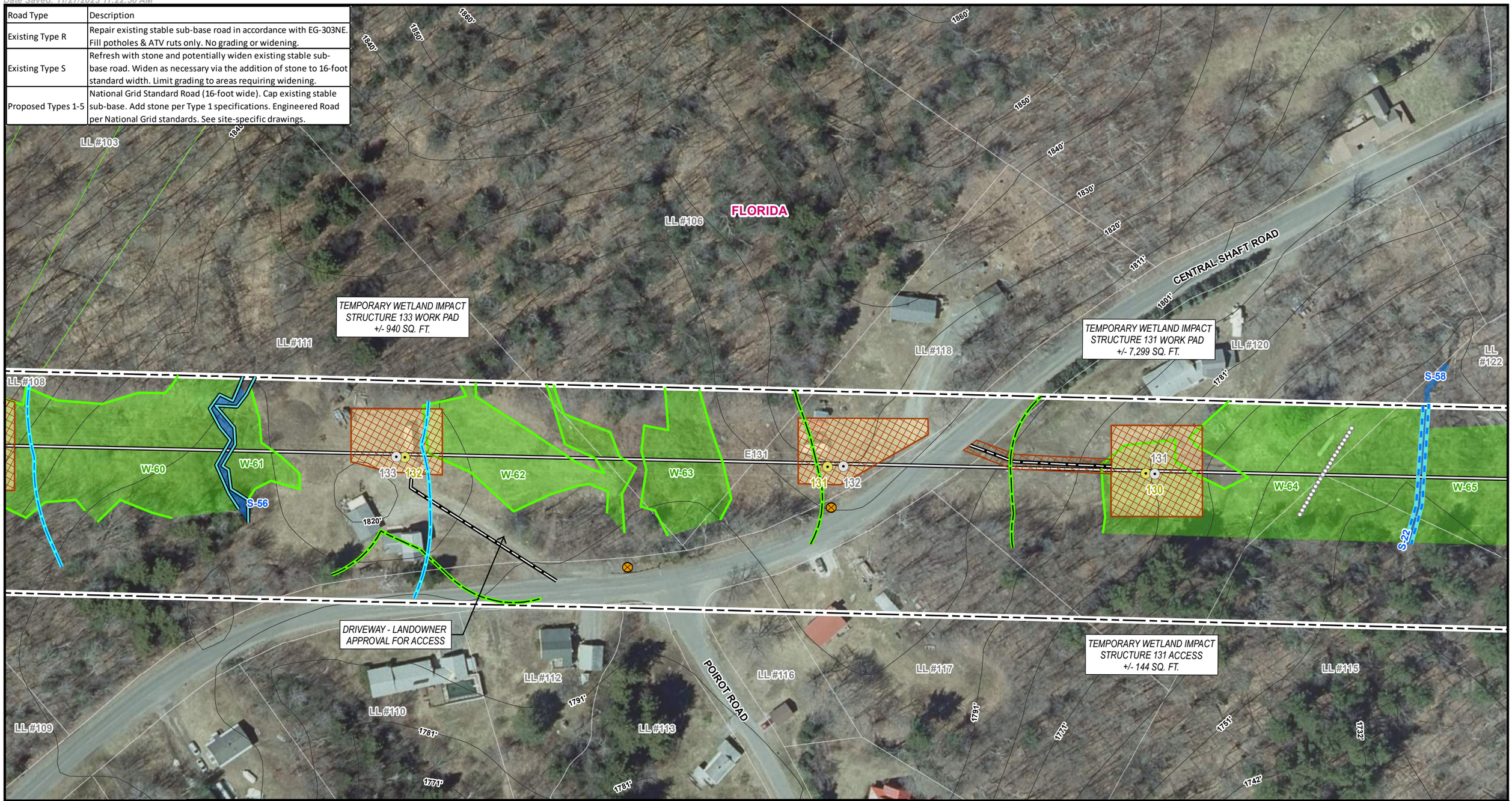

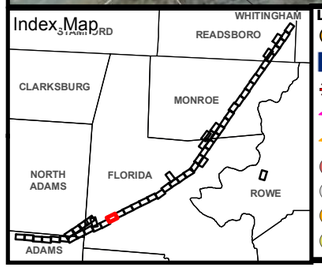

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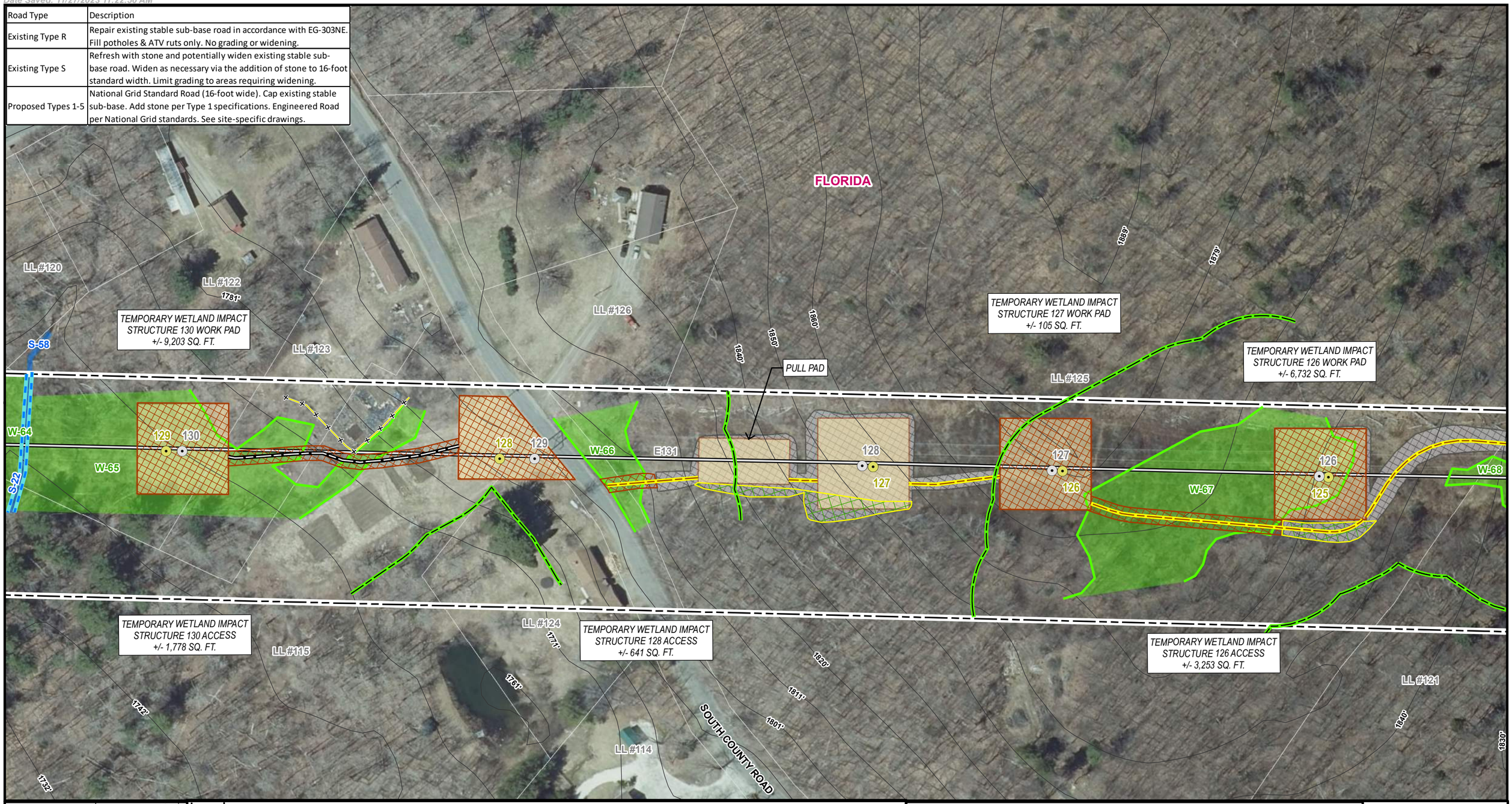

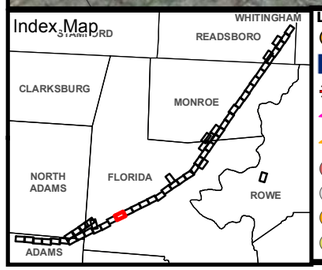

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Feet

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E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

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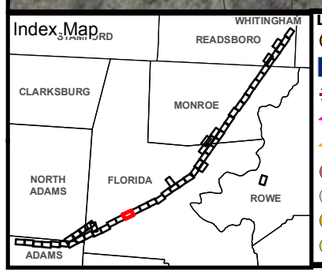

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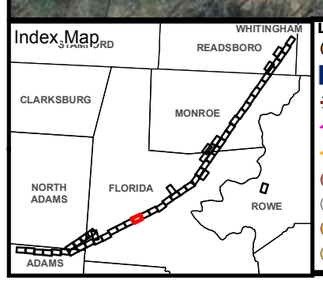

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FLORIDA

W-73

39

38

J10

LL #129

1781'
1791'
1801'
1811'
1820'
1830'

TEMPORARY WETLAND IMPACT STRUCTURE 117 WORK PAD +/- 10,032 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 116 WORK PAD +/- 9,331 SQ. FT.

Florida State Forest

LL #119

TEMPORARY WETLAND IMPACT STRUCTURE 114 WORK PAD +/- 5,812 SQ. FT.

W-71

116 117

115 116

115

114

E131

W-74

113 114

112

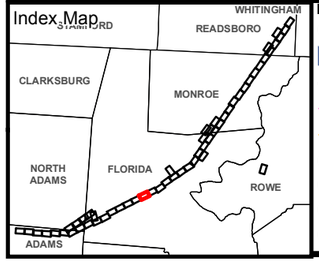
TEMPORARY WETLAND IMPACT STRUCTURE 117 ACCESS +/- 4,466 SQ. FT.

ACCESS FROM ROUTE 2

TEMPORARY WETLAND IMPACT STRUCTURE 116 ACCESS +/- 3,801 SQ. FT.

1840'
1850'
1860'
1870'
1879'
1889'
1899'
1909'
1919'
1929'
1939'
1948'
1958'
1968'
1978'
1988'
1998'
2007'
2017'
2027'
2037'
2047'
2057'
2066'
2076'
2086'
2096'
2106'
2116'
2125'

Index Map



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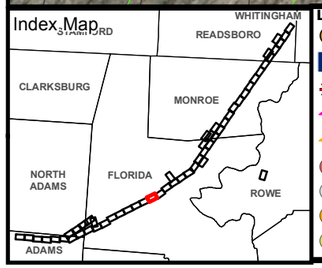

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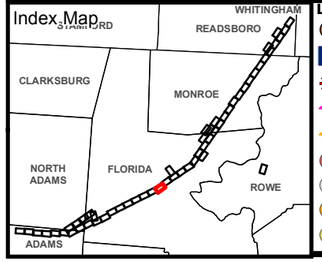

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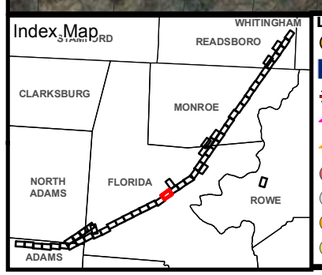

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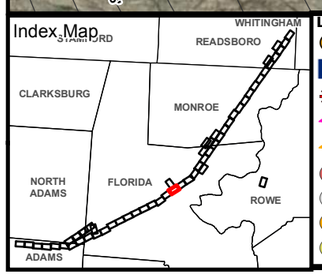

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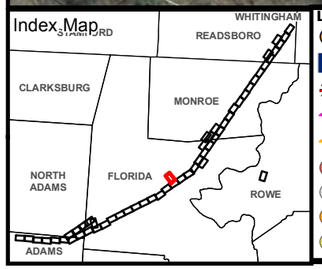

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0 50 100
Feet

Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

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FLORIDA

LL #145

LL #148

LL #149

LL #147

LL #137

LL #146

GREER ROAD

Cascade Brook

TEMPORARY WETLAND IMPACT
STRUCTURE 94 WORK PAD
+/- 9,854 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 93 WORK PAD
+/- 9,001 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 95 ACCESS
+/- 7,996 SQ. FT

S-61

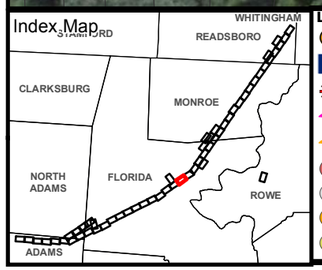
E131

W-76

J10

95 94 93 92 91 24 23 22

1712' 1702' 1692' 1673' 1663' 1653' 1634' 1624' 1584' 1574' 1564' 1555' 1545' 1535' 1526' 1516'



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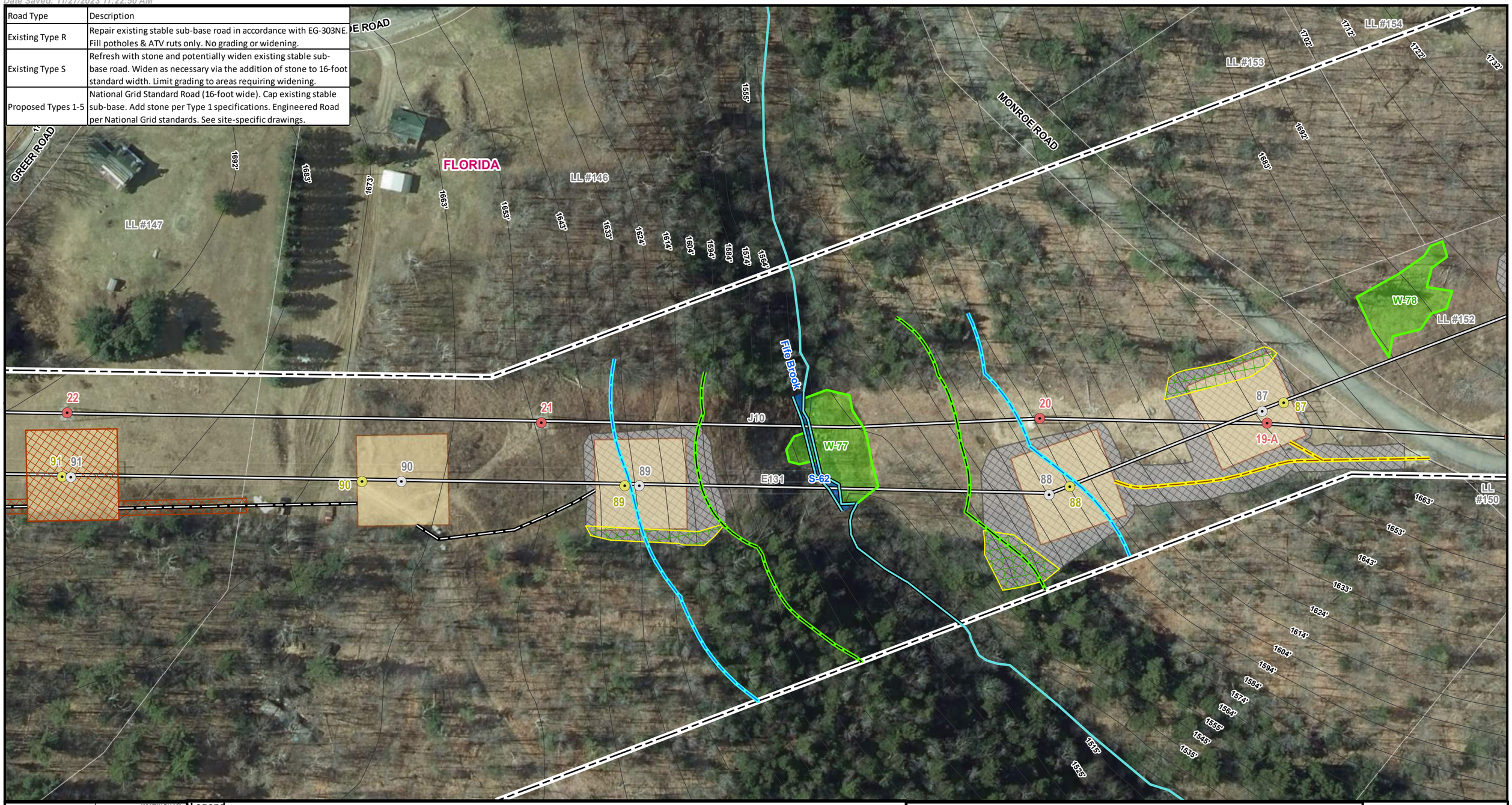

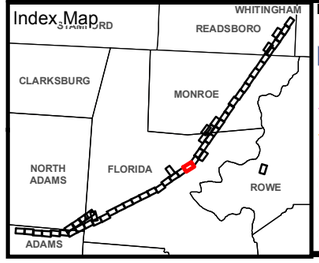

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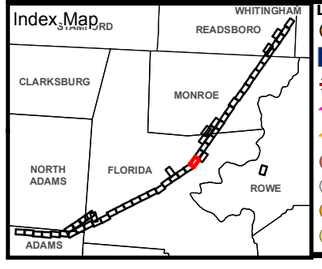

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LL #159
LL #163
LL #162
LL #160
FLORIDA
LL #161
LL #164
2017
2027
2037
2047
2057

TEMPORARY WETLAND IMPACT STRUCTURES 79A PULL PAD +/- 1,643 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURES 80 AND 79 PULL PAD +/- 5,362 SQ. FT.

PULL PAD

S-31
S-63
82
81A
27
81
W-80
26A
26B
E131
W-81
80
79A
79
78
LL #158
1742'
1731'
1761'
1771'
1837'
26
25A
LL #104
PULL PAD
SWITCH GEAR PERMANENT IMPACTS +/- 300 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURES 80 WORK PAD +/- 4,460 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURES 79 WORK PAD +/- 4,782 SQ. FT.

1958'
1968'
Monroe State Forest
LL #161
1732'
1859'
1879'
1899'
1909'
1919'
1939'
1948'
1978'
1988'
1998'
2007'
MONROE ROAD
LL #157

Index Map
WHITINGHAM
READSBORO
CLARKSBURG
MONROE
NORTH ADAMS
FLORIDA
ROWE
ADAMS

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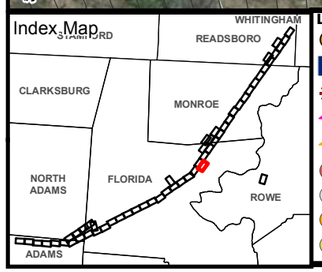

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LL #164
LL #161
FLORIDA
MONROE ROAD
Monroe State Forest
E131
S-69
W-35

APPROXIMATELY 15-FOOT DROP OFF NORTHEAST OF MONROE ROAD ACROSS THE ENTIRE RIGHT-OF-WAY

ACCESS CONTINUE
PAGE 34
(MONROE RO

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STAMFORD
WHITINGHAM
READSBORO
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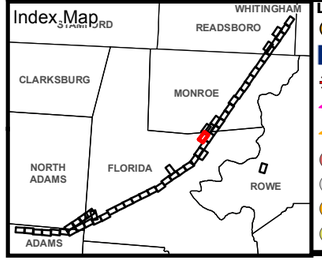

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Tighe&Bond

DRAFT

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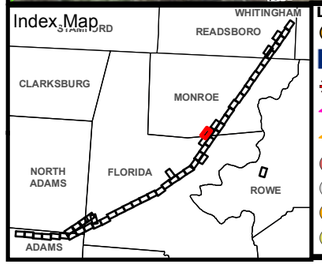

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- Culvert
- Gate
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- NHESP Potential Vernal Pools
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- Existing Structure to be Removed
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- Wetland Replication Area*
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- Municipal Boundary
- Limits of Disturbance*

1 inch = 100 feet
0 50 100
Feet

Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Florida/Monroe, Massachusetts

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
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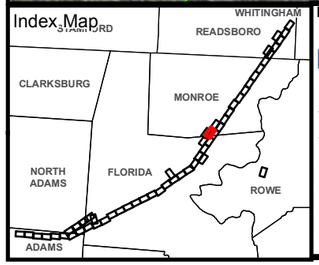

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ACCESS FROM SOUTH ROAD

ACCESS TO STRUCTURE 56

MONROE

TEMPORARY WETLAND IMPACT STRUCTURE 58 ACCESS +/- 2,081 SQ. FT.

W-87

Monroe State Forest

S-34

S-35

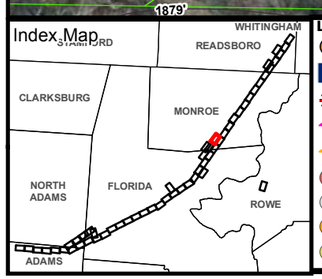
LL #165

1702' 1692' 1683' 1673' 1663' 1653' 1643' 1633' 1624' 1614' 1604' 1594' 1584' 1574' 1564' 1555' 1545' 1535' 1525' 1515' 1505' 1496' 1486' 1476' 1466'

1732' 1742' 1751' 1761' 1771' 1781' 1791' 1801' 1811' 1820' 1830' 1840' 1860' 1870' 1879'

1712' 1722'

Index Map



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FLORIDA

TEMPORARY WETLAND IMPACT
STRUCTURE 71 ACCESS
+/- 1,358 SQ. FT.

STEEP SLOPE COVERED IN BOULDERS.
SUITABLE ACCESS WAS NOT IDENTIFIED.

ACCESS FROM
SOUTH ROAD
(PAGE 34)

ACCESS CONTINUED FROM
PAGE 34
(MONROE ROAD)

Smith Brook

S-69 S-33 S-64

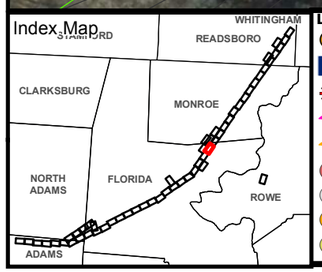
W-85

E131

72 72 71 71 70 70 69 69

Monroe State Forest

LL #161



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0 50 100
Feet

Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

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MONROE

FLORIDA

Monroe State Forest

LL #165

LL #166

LL #161

ACCESS FROM SOUTH ROAD (PAGE 34)

ACCESS FROM SOUTH ROAD TO RAYCROFT ROAD EXTENSION (PAGE 34)

TEMPORARY WETLAND IMPACT STRUCTURE 68 AND 67 PULL PAD +/- 2,164 SQ. FT.

PULL PAD

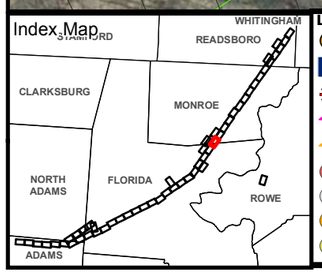
TEMPORARY WETLAND IMPACT STRUCTURE 65 ACCESS +/- 1,044 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 65 WORK PAD +/- 850 SQ. FT.

68 68 E131 W-86 67 67 66 66 65 65 W-87 W-88 64 64 63

1938' 1929' 1919' 1870' 1879' 1889' 1899' 1870' 1879' 1799' 1781' 1771' 1790' 1811' 1820' 1830' 1840' 1850'

Index Map



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MONROE

Monroe State Forest

ACCESS FROM SOUTH ROAD (MAP SHEET 34) TO STRUCTURE 58

TEMPORARY WETLAND IMPACT STRUCTURER 62 WORK PAD +/- 544 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURER 60 WORK PAD +/- 929 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURER 63 ACCESS +/- 1,594 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURER 62 WORK PAD +/- 654 SQ. FT.

W-89 W-90 W-91 W-92

E131

LL #166 LL #165

63 62 61 60 59

1899' 1879' 1889' 1879' 1870' 1860' 1850' 1840' 1830' 1820' 1811' 1801' 1791' 1781' 1771' 1761' 1751' 1742' 1732' 1722' 1712' 1702' 1692' 1683' 1673' 1663' 1653' 1643' 1633' 1624' 1614' 1604' 1594' 1584' 1574' 1564' 1555' 1545' 1535' 1525' 1515' 1053'

Index Map
WHITINGHAM
READSBORO
CLARKSBURG
MONROE
NORTH ADAMS
FLORIDA
ROWE
ADAMS

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MONROE

LL #165

Monroe State Forest

Dunbar Brook

TEMPORARY WETLAND IMPACT
STRUCTURE 56 ACCESS
+/- 1,079 SQ. FT.

SLEEVES IN
ALL CONDUCTORS

S-36 S-65 W-93 W-94

E131

58 57 56 55

1407' 1417' 1427' 1437' 1446' 1496' 1505' 1515' 1525' 1535' 1545' 1555' 1564' 1574' 1584' 1594' 1604' 1614' 1624' 1633' 1643'

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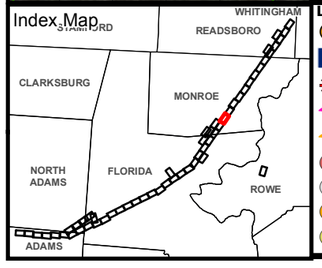

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MONROE

Monroe State Forest

LL #165

LL #169

NOTE: THIS WATERCOURSE WILL BE SPANNED USING APPROPRIATE WATERCOURSE CROSSING TECHNIQUES IN ACCORDANCE WITH THE NATIONAL GRID ACCESS, MAINTENANCE AND CONSTRUCTION BMP DOCUMENT - EG303NE. THE WATERCOURSE IS APPROXIMATELY 10 FEET WIDE AT THE PROPOSED CROSSING LOCATION AS MEASURED ACROSS THE TOP OF OPPOSING BANKS.

TEMPORARY WETLAND IMPACT STRUCTURE 53 WORK PAD +/- 4,433 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 52 WORK PAD +/- 4,966 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 55 ACCESS +/- 169 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 54 ACCESS +/- 347 SQ. FT.

STEEP SLOPES ON EACH SIDE OF A WIDE RAVINE

ACCESS FROM GORE ROAD

W-95 W-96 W-97 W-98 W-99

S-37 S-38 S-39 S-66

Haley Brook

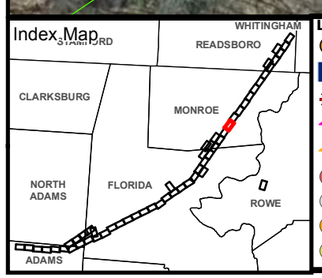
E131

55 54 53 52

1614' 1604' 1594' 1584' 1574' 1564' 1554' 1545' 1535' 1525' 1515' 1505' 1498' 1486' 1476' 1466' 1456' 1446' 1437' 1533'

1604' 1614' 1624' 1633' 1643' 1653' 1663' 1673' 1683' 1692' 1702' 1712' 1722' 1732' 1742' 1751' 1761' 1771' 1781' 1791' 1801' 1811' 1820'

Index Map



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1 inch = 100 feet

0 50 100

Feet

*Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Monroe, Massachusetts

Basemap: ESRI World Imagery Basemap
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LL #169

MONROE

LL #165

W-99

W-102

W-103

W-101

W-100

W-104

E131

TEMPORARY WETLAND IMPACT
STRUCTURE 48 WORK PAD
+/- 3,285 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 47 WORK PAD
+/- 10,017 SQ. FT.

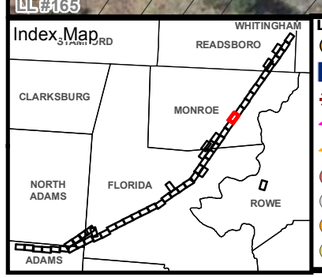
ACCESS FROM
GORE ROAD

SLEEVES IN BOTH
SHIELD WIRES

TEMPORARY WETLAND IMPACT
STRUCTURE 48 ACCESS
+/- 3,270 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 47 ACCESS
+/- 4,426 SQ. FT.

Index Map



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MONROE

LL #167
LL #169
LL #168
LL #167

TEMPORARY WETLAND IMPACT STRUCTURE 47 ACCESS +/- 4,426 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 46 WORK PAD +/- 1,340 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 44 WORK PAD +/- 1,437 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 43 WORK PAD +/- 9,743 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 44 ACCESS +/- 104 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 44 AND 43 PULL PAD +/- 5,534 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 43 AND 42 PULL PAD +/- 5,153 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 43 ACCESS +/- 5,413 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 47 ACCESS +/- 1,296 SQ. FT.

W-104 W-105 W-106 W-107 W-108 W-109 W-110 W-111 W-112

S-40 S-41

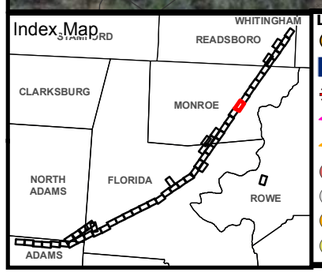
E131

GORE ROAD

1909' 1899' 1978' 1968' 1955' 1948' 1919' 1938' 1889' 1879' 1870' 1860' 1850' 1830' 1820'

46 45 44 43

Index Map



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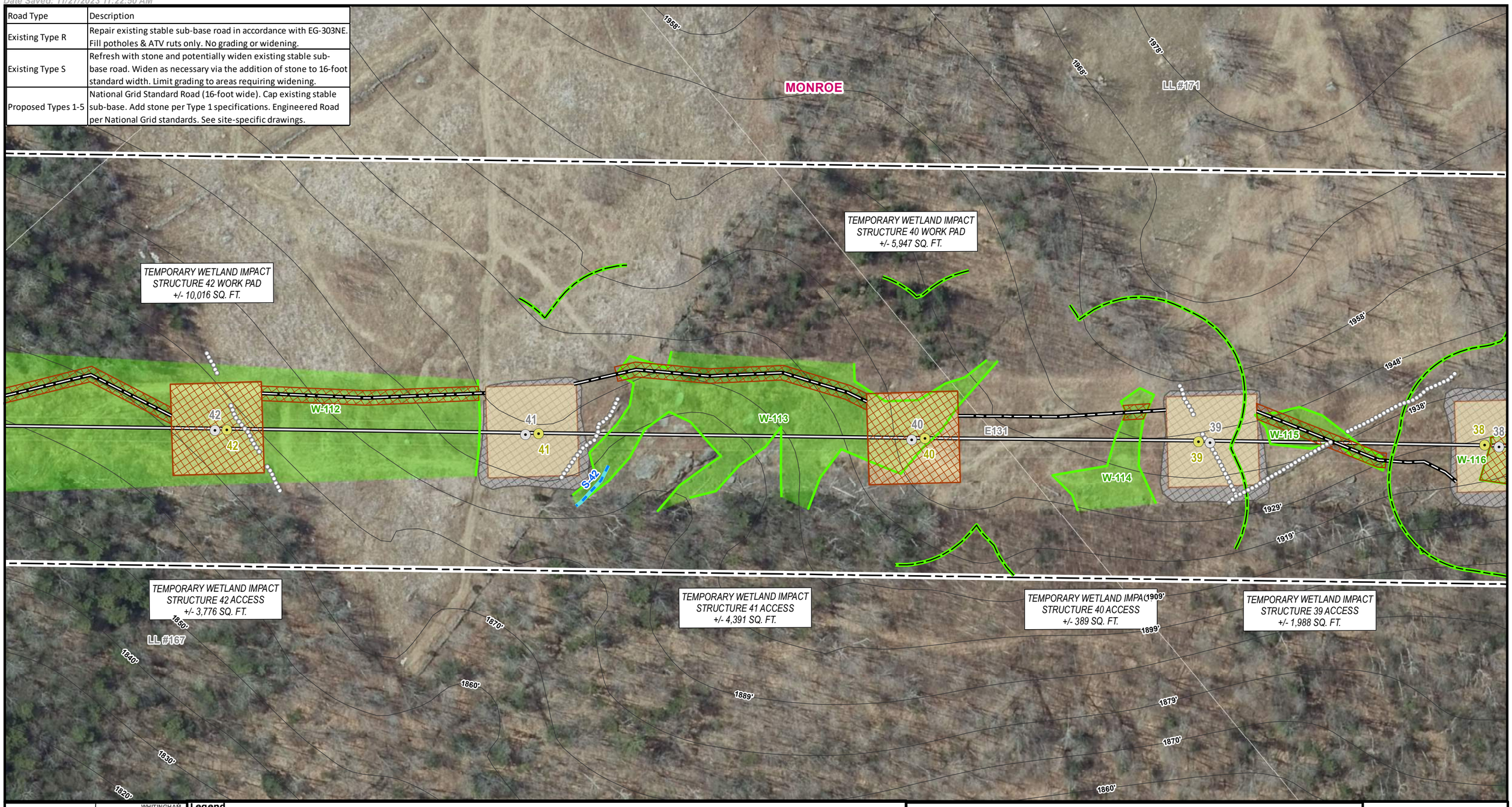

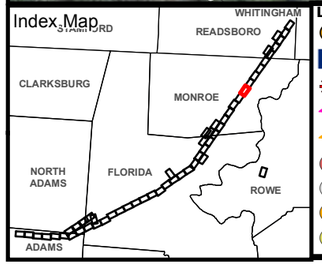

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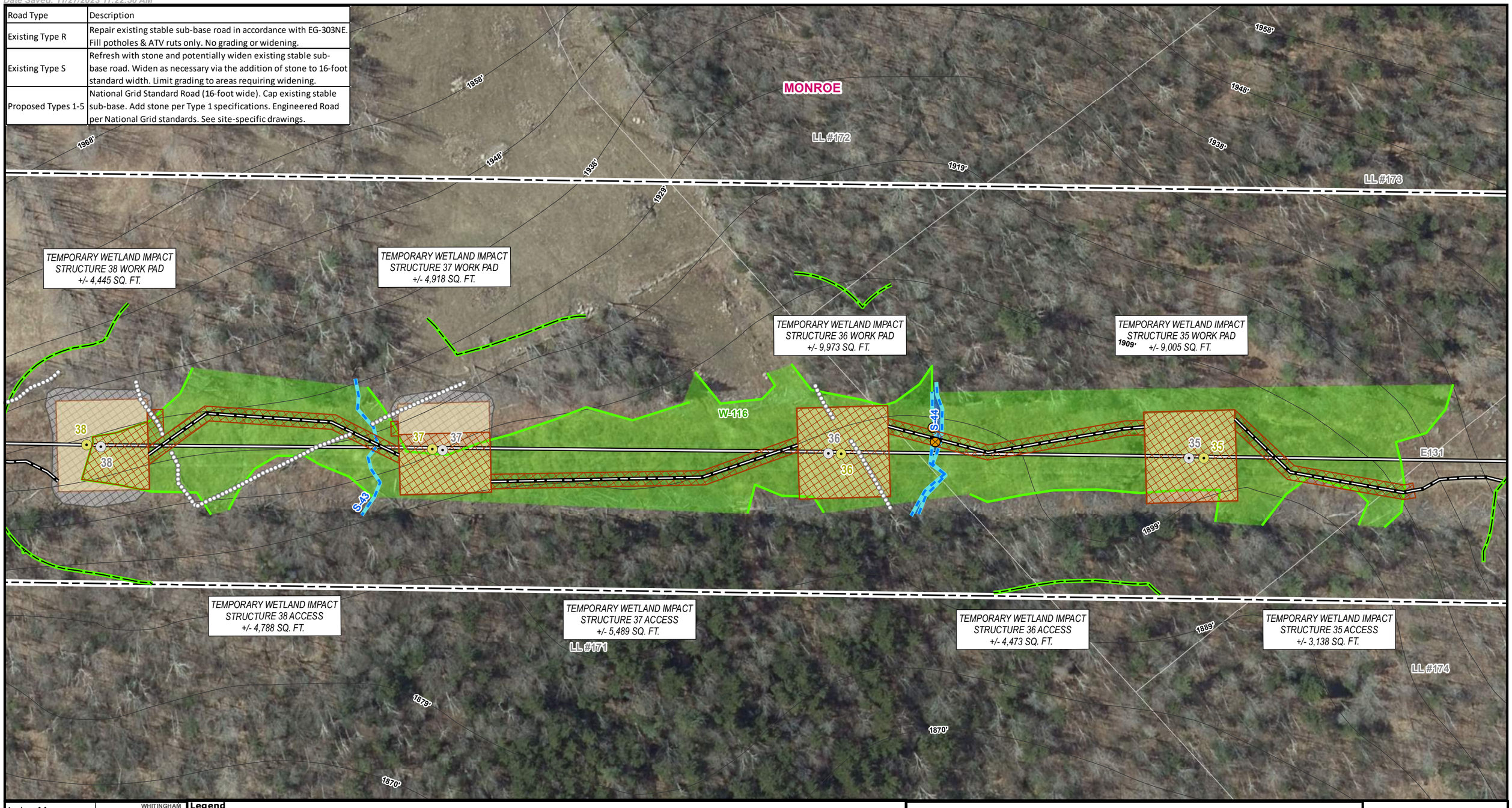

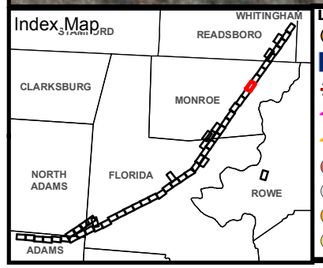

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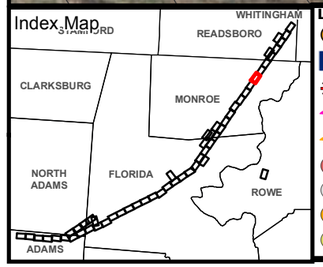

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MONROE
LL #176
LL #178
LL #179
LL #181
LL #175
1986'
1996'
2007'
2017'
2027'
2037'
1978'
1948'
1938'
1929'
1919'
1909'
1899'
1889'
1879'
1870'
1860'
TEMPORARY WETLAND IMPACT
STRUCTURE 29 ACCESS
+/- 557 SQ. FT.
TEMPORARY WETLAND IMPACT
STRUCTURE 30 WORK PAD
+/- 316 SQ. FT.
TEMPORARY WETLAND IMPACT
STRUCTURE 29 WORK PAD
+/- 4,112 SQ. FT.
TEMPORARY WETLAND IMPACT
STRUCTURE 27 WORK PAD
+/- 1,016 SQ. FT.
MAIN ROAD
TOWER ROAD
PULL PAD
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W-123
W-124
W-125
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STAMFORD
WHITINGHAM
READSBORO
CLARKSBURG
MONROE
NORTH ADAMS
FLORIDA
ROWE
ADAMS

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MONROE
READSBORO
SHIPPEE RD
MAIN ROAD
LL #179
LL #181
LL #182
LL #183
LL #184
LL #180
LL #175
E131
W-125
W-126
W-127
W-128
W-129
W-130
W-131
S-48
TEMPORARY WETLAND IMPACT STRUCTURE 26 WORK PAD +/- 188 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 25 WORK PAD +/- 550 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 24 WORK PAD +/- 813 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 23 WORK PAD +/- 425 SQ. FT.
WETLAND REPLICATION AREA +/- 700 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 26 ACCESS +/- 1,089 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 26 AND 25 PULL PAD +/- 4,328 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 25 ACCESS +/- 2,806 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 22 ACCESS +/- 1,120 SQ. FT.
2057'
2047'
2037'
2027'
2017'
2007'
1998'
1988'
1978'
1968'
1958'
1948'
1938'
1929'
1919'
1909'

Index Map
WHITINGHAM
STAMFORD
READSBORO
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NORTH ADAMS
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1 inch = 100 feet
0 50 100
Feet

Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Monroe, Massachusetts/Readsboro, Vermont

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
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Tighe&Bond

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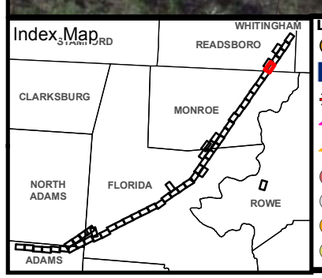
LL #184
LL #185
LL #186
LL #183
LL #180
1893'
1880'
1879'
1870'
1840'
1860'
1850'
Wetland H
PRIVATE DRIVEWAY OFF SHIPPEE ROAD
TEMPORARY WETLAND IMPACT STRUCTURE 21 WORK PAD +/- 6,662 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 19 WORK PAD +/- 732 SQ. FT.
READSBORO
MONROE
Class 2 Wetlands
Wetland A
Wetland B
Wetland C
Wetland D
E131
W-131
22
21
20
19
TEMPORARY WETLAND IMPACT STRUCTURE 22 ACCESS +/- 1,120 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 21 ACCESS +/- 5,767 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 20 WORK PAD +/- 8,970 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 20 ACCESS +/- 1,087 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 19 ACCESS +/- 3,224 SQ. FT.

Index Map


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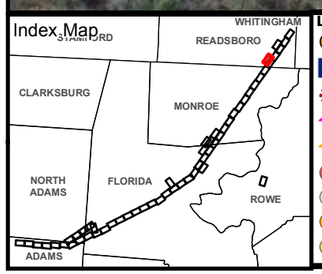

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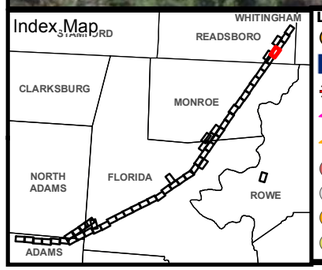
READSBORO
LL #187
LL #188
LL #183
E131
ACCESS FROM SHIPPEE ROAD
TEMPORARY WETLAND IMPACT STRUCTURE 17 WORK PAD +/- 1,453 SQ. FT.
PRIME AG SOIL AREA. NO GRADING, TEMPORARY GRAVEL
TEMPORARY WETLAND IMPACT STRUCTURE 18 WORK PAD +/- 648 SQ. FT.
TEMPORARY WETLAND IMPACT STRUCTURE 18 ACCESS +/- 614 SQ. FT.
Wetland D
Wetland E
Wetland F
Wetland G
18
17
16
15
1791'
1801'
1811'
1820'
1830'
1840'
1850'
1860'



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READSBORO

LL #188

LL #189

LL #190

LL #187

LL #183

LL #192

E131

S-68

Wetland R

Wetland R

Wetland U

Wetland U

Wetland S

Wetland T

South Branch Deerfield River

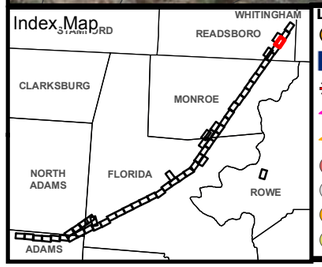
TEMPORARY WETLAND IMPACT STRUCTURE 14 WORK PAD +/- 1,821 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 11 ACCESS +/- 942 SQ. FT.

ACCESS FROM BOSLEY HILL ROAD

TEMPORARY WETLAND IMPACT STRUCTURE 11 WORK PAD +/- 1,685 SQ. FT.

Index Map



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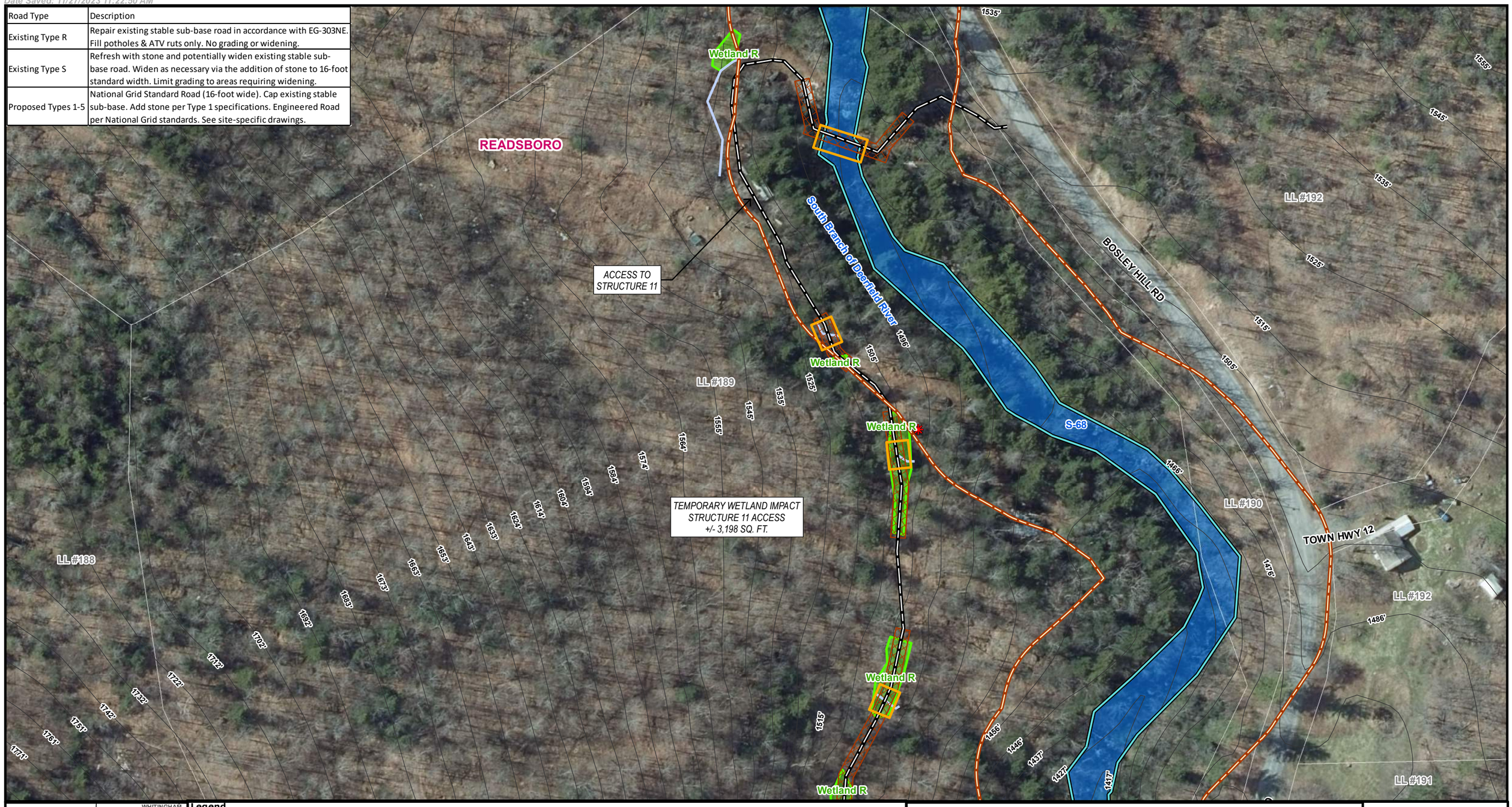

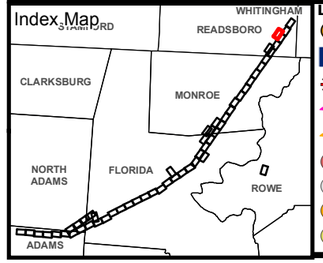

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READSBORO

LL #191

LL #192

LL #190

S-68

S-49

S-50

E131

Wetland I

Wetland J

Wetland K

Wetland L

Wetland M

Wetland N

Wetland S

South Branch Deerfield River

TYPE 1-5 BEING ESIGNED BY BSC

TEMPORARY WETLAND IMPACT STRUCTURE 9 WORK PAD +/- 1,254 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 9 ACCESS +/- 968 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 9 ACCESS +/- 2,508 SQ. FT.

TEMPORARY WETLAND IMPACT STRUCTURE 7 ACCESS +/- 403 SQ. FT,

10 10 9 9 8 8 7 7

1633' 1643' 1653' 1663' 1624'

1328' 1338' 1348' 1358' 1368' 1387' 1397' 1407' 1427' 1437' 1446' 1456' 1466' 1476' 1486' 1496' 1505' 1515' 1525' 1535' 1545' 1555' 1564' 1574' 1584' 1594' 1604' 1614' 1624' 1634' 1643' 1653' 1663' 1673' 1683' 1624' 1614'

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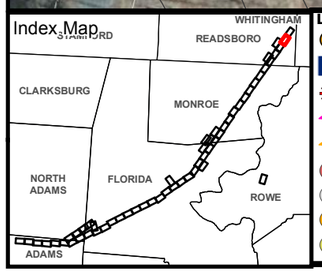

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TEMPORARY WETLAND IMPACT
STRUCTURE 4 ACCESS
+/- 344 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 6 WORK PAD
+/- 3,251 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 6 ACCESS
+/- 593 SQ. FT.

TEMPORARY WETLAND IMPACT
STRUCTURE 2 WORK PAD
+/- 3,286 SQ. FT.

LL #192

LL #190

READSBORO

E131

Wetland O

Wetland N

Wetland Q

Wetland P

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FLORIDA
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- Intermittent Stream
- Mean High Water
- Delineated Wetland Boundary
- Delineated Wetland Area*
- Wetland Area (Not Delineated)*
- 100 Year Flood Zone
- Delineated Watercourse Area*
- Work Area - Work Pad*
- Proposed Matting
- Area of Critical Environmental Concern (ACEC)
- Deer Wintering Areas
- Surface Water Source Protection Areas
- Ground Water Source Protection Areas
- RTE Species & Significant Communities
- Stream Span
- Uncommon Species and Other Features
- Natural Areas
- Potentially Contaminated Sites
- NHESP 2021 Rare Species Data
- Delineated Vernal Pool*
- Mitigation Area
- Rare Plant Species
- MassDEP Oil and/or Hazardous Material Site (Chapter 21E)
- MassDEP Oil and/or Hazardous Material Site with AUL
- Rare Plant Species Area
- DCR/State Owned Land
- Proposed Tree Clearing Area
- Wetland Replication Area*
- Approximate Parcel Boundary
- Municipal Boundary
- Limits of Disturbance*

*Indicates Layers Set to Transparency

1 inch = 100 feet
0 50 100
Feet

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Readsboro, Vermont

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Vermont Center for Geographic Information

Parcels downloaded from MassGIS:
Adams (FY20), North Adams (FY18), Florida (FY18), and Monroe (FY18).

The information/data provided in this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation or parcel level analysis. The maps should not be used for construction purposes.

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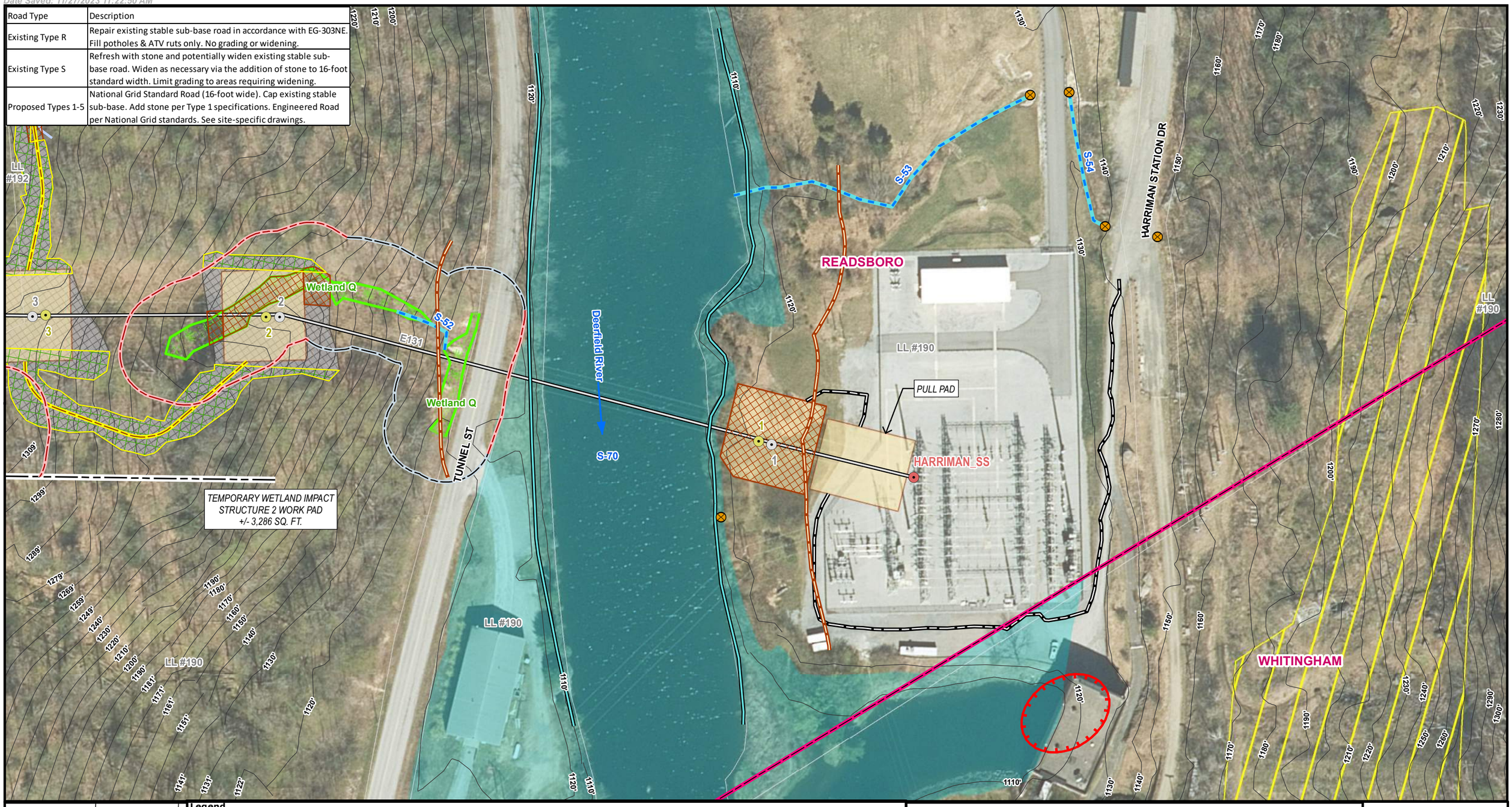
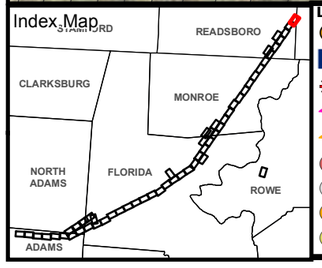
DRAFT

Road Type	Description
Existing Type R	Repair existing stable sub-base road in accordance with EG-303NE. Fill potholes & ATV ruts only. No grading or widening.
Existing Type S	Refresh with stone and potentially widen existing stable sub-base road. Widen as necessary via the addition of stone to 16-foot standard width. Limit grading to areas requiring widening.
Proposed Types 1-5	National Grid Standard Road (16-foot wide). Cap existing stable sub-base. Add stone per Type 1 specifications. Engineered Road per National Grid standards. See site-specific drawings.





Legend

- Culvert
- Gate
- Delineated Vernal Pool
- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- Existing Structure
- Existing Structure to be Replaced
- Existing Structure to be Removed
- Proposed Structure
- Transmission Centerline
- 10 ft Contours
- Approximate ROW
- Railroad
- Proposed Access
- Existing Access
- Electric Fence
- Fence
- Guard Rail
- Stone Wall
- Retaining Wall
- 50-foot Buffer Zone
- 50-foot Riparian Buffer
- 100-foot Buffer Zone
- 100-foot Riparian Buffer
- 200-foot Riverfront Area
- Hydrologic Connection
- Stream (Non-Jurisdictional)
- Intermittent Stream
- Mean High Water
- Delineated Wetland Boundary
- Delineated Wetland Area*
- Wetland Area (Not Delineated)*
- 100 Year Flood Zone
- Delineated Watercourse Area*
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- MassDEP Oil and/or Hazardous Material Site with AUL
- Rare Plant Species Area
- DCR/State Owned Land
- Proposed Tree Clearing Area
- Wetland Replication Area*
- Approximate Parcel Boundary
- Municipal Boundary
- Limits of Disturbance*

1 inch = 100 feet
0 50 100
Feet

Indicates Layers Set to Transparency

E131 - ASSET CONDITION REFURBISHMENT PROJECT

Environmental Resources Map

Readsboro/Whitingham, Vermont

Basemap: ESRI World Imagery Basemap
Data source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs.
Vermont Center for Geographic Information

Parcels downloaded from MassGIS:
Adams (FY20), North Adams (FY18), Florida (FY18), and Monroe (FY18).

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APPENDIX C

Statewide Environmental Justic					
First Name	**Last Name**	**Title**	**Phone**	**Email**	**Affiliation**
Claire	B.W. Muller	Movement Building Director	508 308-9261	claire@uumassaction.org	Unitarian Universalist Mass Action Network
Julia	Blatt	Executive Director	(617) 714-4272	juliablatt@massriversalliance.org	Mass Rivers Alliance
Jodi	Valenta	Massachusetts State Director	(617) 367-6200	Jodi.Valenta@tpl.org	The Trust for Public Land
Kerry	Bowie	Board President	Not Provided	kerry@msaadapartners.com	Browning the GreenSpace
Sylvia	Broude	Executive Director	617 292-4821	sylvia@communityactionworks.org	Community Action Works
Heather	Clish	Director of Conservation & Recreation Policy	(617) 523-0655	hclish@outdoors.org	Appalachian Mountain Club
Johannes Brittney	Epke Jenkins	Staff Attorney Vice President	617 850-1761	jepke@clf.org Bjenkins@clf.org	Conservation Law Foundation
Ben	Hellerstein	MA State Director	617-747-4368	ben@environmentmassachusetts.org	Environment Massachusetts
Robb	Johnson	Executive Director	(978) 443-2233	robb@massland.org	Mass Land Trust Coalition
Cindy	Luppi	New England Director	617-338-8131 x208	cluppi@cleanwater.org	Clean Water Action
Lena Miles	Entin Gresham	Interim Co-Directors	Not Provided	Lena@N2NMa.org Miles@N2NMa.org	Neighbor to Neighbor Mass.
Rob	Moir	Executive Director	Not Provided	rob@oceanriver.org	Ocean River Institute
Deb	Pasternak	Director, MA Chapter	617-423-5775	deb.pasternak@sierraclub.org	Sierra Club MA
Heidi	Ricci	Director of Policy	Not Provided	hricci@massaudubon.org	Mass Audubon

Updated on:
01/12/2024

Indigenous Organizations					
First Name	**Last Name**	**Title**	**Phone**	**Email**	**Affiliation**
Alma	Gordon	President	Not Provided	tribalcouncil@chappaquiddickwampanoag.org	Chappaquiddick Tribe of the Wampanoag Nation
Cheryll	Toney Holley	Chair	774-317-9138	crwritings@aol.com	Nipmuc Nation (Hassanamisco Nipmucs)
John	Peters, Jr.	Executive Director	617-573-1292	john.peters@mass.gov	Massachusetts Commission on Indian Affairs (MCIA)
Melissa	Ferretti	Chair	(508) 304-5023	melissa@herringpondtribe.org	Herring Pond Wampanoag Tribe
Patricia	D. Rocker	Council Chair	Not Provided	rockerpatriciad@verizon.net	Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan
Raquel	Halsey	Executive Director	(617) 232-0343	rhalsey@naicob.org	North American Indian Center of Boston
Cora	Pierce	Not Provided	Not Provided	Coradot@yahoo.com	Pocassett Wampanoag Tribe
Elizabth	Soloman	Not Provided	Not Provided	Solomon.Elizabeth@gmail.com	Massachusetts Tribe at Ponkapoag

Federally Recognized Tribes						
First	**Last**	**Title**	**Phone**	**Email**	**Affiliation**	**Notes**
Bettina	Washington	Tribal Historic Preservation Officer	508-560-9014	thpo@wampanoagtribe-nsn.gov	Wampanoag Tribe of Gay Head (Aquinnah)	
Stockbridge-Munsee Tribe		Historic Preservation Manager	413-884-6048	THPO@Mohican-nsn.gov	Stockbridge-Munsee Tribe	**Only for projects in: Berkshire County, Agawam, Amherst, Athol, Charlemont,Chicopee, Easthampton, Gardner, Greenfield, Hadley, Heath, Hubbardston, Ludlow, Monroe, Northampton, Orange, Palmer, Rowe, Royalston, Southwick, Springfield, Sunderland, Ware, Wendell, West Springfield, Westfield**
Brian	Weeden	Chair	774-413-0520	Brian.Weeden@mwtribe-nsn.gov	Mashpee Wampanoag Tribe	

First Name	Last Name	Title	Service Area	Phone Number	Email	Affiliation
Jane	Winn	Executive Director	Adams, Alford, Becket, Cheshire, Clarksburg, Dalton, Egermont, Florida, Great Barrington, Hancock, Hinsdale, Lanesborough, Lee, Lenox, Monterey, Mount Washington, New Ashford, New Marlborough, North Adams, Otis, Peru, Pittsfield, Richmond, Sandisfield, Savoy, Sheffield, Stockbridge, Tyringham, Washington, West Stockbridge, Williamstown, Windsor	413-464-9402	team@thebeatnews.org	Berkshire Environmental Action Team

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E131

Asset Condition Refurbishment Project Fact Sheet

Readsboro, VT to Adams, MA

Overview

The E131 Asset Condition Refurbishment (ACR) Project is proposed to address the aging condition of existing transmission structures along the 12-mile transmission line right-of-way (ROW) beginning in Adams, MA through the Towns of North Adams, Florida, Monroe, and into Readsboro, VT. This Project addresses existing structures which are over 90 years old and are no longer fit for their purpose. The scope includes replacement of the current predominantly wood structures with new steel H-frame structures and foundations, and the addition of Optical Ground Wire (OPGW) to improve communications. Improvements to existing, and construction of new access routes are also required to facilitate construction and future maintenance. The new structures will be built within proximity to the existing structures to maintain the current ROW configuration. The new structures are expected to be minimally taller than the existing. Existing structures will be removed when the new structures are in place. To view diagrams of the proposed structure visit www.e131project.com.

Location

New England Power Company
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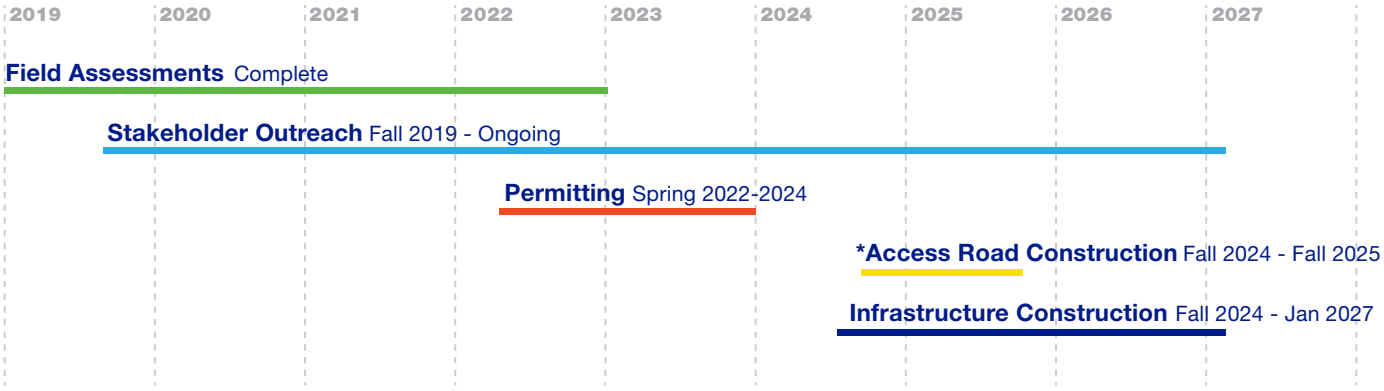
Schedule

Environmental permitting is underway, which includes the required federal, state and local board reviews and approvals. Pending permit approvals, construction is expected to begin in late 2024 and will take several years to complete. The schedule below is subject to change as the Project progresses.



*Where Needed

Dates are subject to change

Stay Informed

National Grid is committed to keeping you informed and encourages feedback from residents, businesses, community groups, and local officials.

If you have any questions, would like additional information or would like to receive email updates about the Project, please email **info@e131project.com**, call the Project Hotline at **877-616-3131**, scan the QR code, or visit the Project website at **www.e131project.com**

New England Power Company
nationalgrid

nationalgrid

Trees and transmission lines
Requests for wood

E131 Asset Condition Refurbishment Project

Dear Neighbor:

We are reaching out to inform you of an upcoming opportunity to participate in the E131 ACR Wood Program. Selective tree removals are required to improve existing access routes, construct new access routes, and to install work pads. This will be done prior to construction for safety and Project efficiency.

National Grid takes great care when improving transmission line routes and locating access roads, foundations and structures. Prior to improving a transmission line, the right-of-way must be mowed and select trees cut to allow construction activities and continued transmission line operation. Prior to construction, the “clearing edge” of the right-of-way is surveyed and staked. Trees located at the edge of the right-of-way that can potentially interfere with the transmission line may also be removed, while low growing vegetation may be left in place if it does not interfere with construction activities.

Keeping trees away from transmission lines is vital for reliability and crucial to public and worker safety.

continued on the back

Wood Program

National Grid is in the process of developing a Wood Program for this Project to ensure the wood from cleared trees is put to the best use possible. Wood cleared on private properties will be offered to those individual landowners. Excess wood, if any, will be distributed according to the Wood Program which will be finalized before construction. If you are interested in learning more about the Wood Program, please reach us by calling the Project Hotline at **(877) 616-3131**, emailing **info@e131project.com**, or filling out our contact form by scanning the QR code or visiting our website at **https://e131project.com.**

Low-growing shrubs are compatible with transmission line rights-of-way.

Stay Informed

Learn more about the project scope, timeline, and ongoing activities by visiting the Project website at:

https://e131project.com

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APPENDIX D

E131 Asset Condition Refurbishment Project: Carbon Accounting

OCTOBER 9, 2023

PREPARED FOR

New England Power Company

PREPARED BY

SWCA Environmental Consultants

E131 ASSET CONDITION REFURBISHMENT PROJECT: CARBON ACCOUNTING

Prepared for

New England Power Company

Prepared by

SWCA Environmental Consultants
1101 Telegraph Road, Building B
West Chester, Pennsylvania 19380
www.swca.com

October 9 2023

EXECUTIVE SUMMARY

New England Power Company (NEP) is working to ensure New England's power grid is reliable today and resilient in the face of future demand increases, efforts to integrate low-carbon energy resources, and a potential climate-driven increase in the frequency and intensity of extreme weather events. To that end, NEP plans to upgrade the E131 line by replacing all wooden H-frame structures within the existing right-of-way (ROW) with new steel structures, replacing insulators and hardware, upgrading ground wires, installing three new switch structures, and replacing conductor in four sections. The Project will a) result in a more resilient transmission line by addressing safety, asset reliability, and repair requirements; b) improve communication between substations; and c) reduce overall environmental disturbance by reducing the frequency of maintenance-related activity along the ROW.

The Line E131 ROW will not be widened because of the Project and vegetation maintenance within the ROW will not be changed. However, the Project will require a) the cutting of approximately 11.31 acres of trees located primarily in the existing easement to accommodate construction activities; and b) the conversion of approximately 51.64 acres of exposed soil/low-growing grass/shrub to a mix of exposed soil, low-growing grasses, and gravel.

This analysis was prepared to ensure that the Massachusetts Environmental Protection Act office is informed of the expected change in greenhouse gas (GHG) emissions likely to be brought about by the Project. Following the Council on Environmental Quality's January 2023 Interim National Environmental Policy Act Guidance on Greenhouse Gas Emissions,[1] this includes an analysis of the net GHG emissions.

From a GHG accounting perspective, the Project is likely to bring about the following changes.

1. 3,375 U.S. tons of carbon dioxide equivalents (CO_2e) currently sequestered in live biomass, forest soil, dead wood, and litter may be released due to vegetation clearing and/or soil disturbance along access roads.
2. The conversion of vegetated habitat primarily for the purpose of improving access will reduce the rate of future GHG sequestration within the affected footprints, resulting in the Project-related increase of approximately 50 U.S. tons of CO_2e.
3. More than 150 U.S. tons of GHG will likely not be emitted because of Project-related increases in reliability, and Project-related increases in grid resiliency represent an unquantified GHG benefit of the Project.

Thus, the Project is expected to result in no more than a 3,275 U.S. ton increase in CO_2e emissions over its 30-year lifespan.

[1] 88 Federal Register 1196. Available at: https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate.

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1 REPORT PURPOSE AND NEED

New England Power Company (NEP) is working to ensure New England's power grid is reliable today and resilient in the face of future demand increases, efforts to integrate low-carbon energy resources, and a potential climate-driven increase in the frequency and intensity of extreme weather events. To that end, NEP plans to upgrade the E131 line by replacing all wooden H-frame structures within the existing right-of-way (ROW) with new steel structures, replacing insulators and hardware, upgrading ground wires, installing three new switch structures and replacing conductor in four sections. The Project will a) result in a more resilient transmission line by addressing safety, asset reliability and repair requirements; b) improve communication between substations; and c) reduce overall environmental disturbance by reducing the frequency of maintenance-related activity along the ROW.

The Line E131 ROW will not be widened because of the Project and vegetation maintenance within the ROW will not be changed. However, the Project will require:

- The cutting of approximately 11.31 acres of trees located primarily in the existing easement to accommodate construction activities; and
- The conversion of approximately 51.64 acres of exposed soil/low growing grass/shrub[2] to a mix of exposed soil, low growing grasses and gravel.

This analysis was prepared to ensure that the Massachusetts Environmental Protection Act office is informed of the expected change in greenhouse gas (GHG) emissions likely to be brought about by the Project. Following the Council on Environmental Quality's January 2023 Interim National Environmental Policy Act Guidance on Greenhouse Gas Emissions,[3] this includes an analysis of the net GHG emissions.

2 METHODOLGICAL OVERVIEW

This assessment is designed to provide the best practical estimate of the change in GHG emissions brought about by the Project. The estimate considers multiple biophysical and behavioral processes that will have a material effect on the actual Project-related change in GHG emission. It is acknowledged that the scientific community has studied some processes extensively and so their effects are characterized with a relatively high degree of precision; other processes have been subject to less study and so are characterized with less precision.

Project-related changes in GHG emissions are estimated as a function of three processes.

1. Some carbon currently sequestered in live biomass, forest soil, dead wood, and litter may be released due to vegetation clearing and/or soil disturbance along access roads.
2. The conversion of forest and/or exposed soil/low-growing grass/shrub habitat into exposed soil/low-growing grasses/gravel may reduce the rate of future GHG sequestration within the affected footprints.
3. Some GHG will not be emitted because reliability and resiliency of the electricity transmission grid is increased when the Project is implemented.

[2] This will occur primarily in existing, currently maintained ROW. The mix of exposed soil, low-growing grasses, and shrubs will be leveled as necessary and covered with gravel to facilitate equipment movement.

[3] 88 Federal Register 1196. Available at: https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate.

The methods used to quantify the change in GHG emission associated with each process are outlined in Sections 2.1, 2.2, and 2.3, respectively.

2.1 Release of Currently Sequestered Carbon

2.1.1 Existing Forested Habitat

Living trees and plants absorb carbon dioxide (CO_2) from the air. As part of the photosynthetic process, the oxygen and carbon molecules are separated; the oxygen is released back into the air while the carbon becomes part of the tree or plant itself. In a functioning forest, the carbon removed from the air is stored in one of four pools: 1) aboveground live biomass, 2) belowground live biomass (roots), 3) soil organic carbon, or 4) dead wood and forest litter.

When trees are cleared from an area, some of the stored carbon that would otherwise remain sequestered may be released back into the atmosphere as carbon dioxide. To determine "how much" extra carbon is released when forests are disturbed, it is necessary to understand both the biophysical processes that cause carbon to be released from the various carbon pools as well as the human behaviors that often act to mitigate those tree-clearing-related releases.

For example, if an acre of forest is cut and used as timber, the resulting GHG emission estimate must account for not only the change in the amount of carbon released from the forested footprint, it must also account for the series of market changes that arise because unanticipated logs are introduced into the timber market, which will tend to reduce the amount of acreage cleared for timber at some other location. This "market based" effect is commonly referred to as "leakage."[4] To illustrate the leakage concept, consider the following hypothetical example.

1. Imagine a community that clears 50 acres of forest each summer to produce 500 cords of wood which they burn for home heating.
2. Now assume that a ROW project that affects 50 acres of forest results in 500 cords of firewood being unexpectedly introduced into the community's firewood supply chain in the fall season.
3. The additional 500 cords of firewood entering the market in the fall will not cause the community to burn 1,000 cords of wood in the winter. Given the increased availability of firewood, they might increase usage to 600 cords and save the remaining 400 cords for the following year.
4. When the following summer arrives, the community will already have 400 cords of firewood available. As such, rather than clearing 50 acres of forest to meet their needs, they will only clear 10 acres to ensure that a total of 500 cords of firewood are available.

In this hypothetical example, absent any ROW management, 100 acres of forest would have been cleared by the community to create 2 years' worth of firewood. Because ROW management increased the local firewood supply, the community cleared only 60 acres (50 in the first summer and 10 in the second summer). Along with the 50 acres cleared because of the ROW project, this brings the total amount of forest clearing over the two years to 110 acres. Thus, the ROW project caused total forest clearing to increase from 100 acres to 110 acres and carbon accounting is properly based on the 10-acre net increase in tree clearing brought about by the ROW project. In other words, because logs were placed into the

[4] The Intergovernmental Panel on Climate Change (IPCC) *Special Report on Land Use, Land Use Change and Forestry* defines leakage as "…the indirect impact that…an activity in a certain place at a certain time has on carbon storage at another place or time" (IPCC 2000, section 2.3.5.2, p. 71). From an economics perspective, leakage occurs when a project causes a shift in market equilibria that results in market participants behaving in a manner that offsets (either partially or in its entirety) a change in GHG emission that would otherwise be brought about by a project. Streck (2022) is an informative primer on leakage.

firewood market, economic linkages offset 80 percent of the GHG releases that might otherwise be associated with the ROW management.

To estimate the effect of leakage in the context of this Project, it is noted that the Climate Action Reserve's Climate Forward Reforestation Methodology, Version 2.0 (2022), suggests that, when project logs are placed into markets, and so long as the projects do not occur on existing commercial forest land, leakage is likely to offset 24 to 50 percent of the GHG changes that would otherwise be associated with a project.

Herein it is assumed that, when project logs are used as timber, firewood, or other forestry products, leakage reduces the amount of GHG release that would otherwise be associated with that forest clearing by 50 percent (i.e., the upper end of the Climate Action Reserve's range). The upper end of the "leakage range" was selected based on a firewood and heating oil analysis by the Alaska Department of Conservation (2019) and an analysis of general energy use in U.S. buildings by the Energy Information Administration (EIA) (2021a). SWCA believes 50 percent is more likely to understate than overstate the true effect of leakage because the wood at issue will either be a) provided at no cost as part of firewood donation programs or b) provided at no cost to either landowners or vegetation management contractors to utilize for a productive use of their choosing. In contrast, the 24 to 50 percent range and the associated literature on leakage is generally based on modest price differentials instead of "zero costs."

2.1.2 Existing Exposed Soil/Low-Growing Grass/Shrub Habitat

As noted in the prior section, living plants absorb carbon dioxide from the air; the oxygen is released back into the air while the carbon becomes part of the plant itself. In a habitat characterized as exposed soil/ low-growing grasses/shrub, the carbon removed from the air is stored in one of four pools 1) aboveground live biomass, 2) belowground live biomass (roots), 3) soil organic carbon, or 4) litter.

The carbon stored in the the live aboveground portion of the low-growing grasses and/or litter is largely ephemeral in that it will cycle into the soil or into the air over a relatively short timeframe. In this type of habitat, carbon is only truly sequestered in either the belowground live biomass or as soil organic carbon.

It is also noted that, because none of the low-growing grasses affected by the Project will be put to any productive use, leakage is not an important issue in the context of work occurring in existing exposed soil/low-growing grass/shrub habitat.

2.2 Habitat Conversion

2.2.1 Existing Forest Habitat to Gravel-Covered Soil

The conversion of forest into gravel-covered soil will reduce the rate of future GHG sequestration within the affected forested footprint.

- Catanzaro and D'Amato (2019) estimate an average annual carbon sequestration rate for Massachusetts forests of 1.66 U.S. tons of carbon dioxide equivalents (CO_2e) per acre. Their estimate is based on Smith et al. (2006), who report that the annual rate of carbon sequestration in a typically aged (around 100 years old) New England maple–beech–yellow birch forest is around 0.41 metric tons of carbon per acre-year.[5]
- This assessment assumes that gravel-covered soils do not sequester CO_2e.

[5] Smith et al. (2006) reports 0.41 metric tons of carbon per acre year. This is equivalent to 0.45 U.S. tons of carbon per acre year which is equivalent to 1.66 U.S. tons of CO_2e per acre.

To simplify calculations, it is conservatively assumed[6] that any acreage not forested due to leakage would have been allowed to return to a forested state once cleared under baseline conditions. Under this assumption, and noting that the forest cleared because of the Project will be maintained as gravel-covered soil, losses of future sequestration when forest is converted to gravel-covered soil because of the Project need not be adjusted to account for leakage.

2.2.2 Exposed Soil/Low-Growing Grass/Shrub Habitat to Gravel-Covered Soil

The conversion of existing exposed soil/low-growing grass/shrub habitat into gravel-covered soil could alter the rate of future GHG sequestration within the affected soil/grass/shrub footprint. Any alteration will be a function of two opposing processes. First, the removal of the low-growing grasses will reduce the rate at which carbon is sequestered as belowground live biomass. Second, the introduction of gravel will reduce soil erosion and so reduce the rate at which carbon is released from the soil to the atmosphere.

The effect of covering an exposed soil and low-growing grass habitat with gravel has not, to the best of our knowledge, been studied. We assume that two opposing processes fully offset one another and so the Project brings about no net change in future sequestration rates within the exposed soil and low-growing grass habitat.

2.3 Grid Reliability and Resiliency

There are three main steps required to get electricity to a home or business: generation, transmission, and distribution. Generation refers to the process of converting energy including fossil fuels (coal, oil, and natural gas), nuclear reactions (fission), and renewable sources (such as solar, wind, geothermal and hydroelectric power) into electricity. Transmission refers to transporting electricity, typically over long distances, from the place where the electricity is created to the areas where it is needed. Distribution is the process of transferring electricity over the relatively short distance from the end of the transmission cables to an end user (Resources for the Future 2022).

The Project will occur along the existing E131 transmission corridor, which extends approximately 13 linear miles from the Harriman #8 Substation in Readsboro, Vermont, to the Adams #21 Substation in Adams, Massachusetts. The E131 Lines are part of New England's regional power grid, carrying network power flows and supplying distribution stations in Vermont and Massachusetts. ISO New England, the non-profit regional transmission organization responsible for administering the wholesale electricity markets and keeping electricity supply in balance with electricity demand, relies on the E131 line to move electricity from the places where electricity is generated to locations where electricity is in demand.

- When outages occur because of problems along the E131 line, GHG releases increase as back-up generating units are dispatched, food spoilage increases, and adverse impacts to industry are addressed. Therefore, each time the Project prevents an outage that otherwise would occur (i.e., when the reliability of the E131 line is increased), a spike in GHG emissions is avoided. This "reliability effect" is quantified by reviewing data describing the spike in GHG emission that occurs when the power goes out.
- If the limitations of the current, unimproved E131 line structures prevent ISO New England from linking low carbon intensity electricity to demand centers, it is necessary to use electricity generated by more carbon-intense means to bring supply and demand into balance. Any time the

[6] Conservative assumptions are defined in this analysis as those more likely to overstate than understate any potential Project-related increase in GHG emissions.

Project prevents the need to utilize more carbon-intense electricity, a spike in GHG emissions is avoided. This "resiliency effect" is discussed by not quantified.

3 DETAILED CALCULATIONS

3.1 Release of Currently Sequestered Carbon

Table 1 illustrates the calculations used to estimate the amount of currently sequestered carbon released from the Project footprint because of the project. The reasoning behind each input and calculation is described in the remainder of this section.

3.1.1 Leakage Adjusted Acres

NEP is working with landowners, its contractors, local organizations, and the state to ensure that the wood created as a result of the Project is used in some productive enterprise. These actions not only benefit the community directly, they also reduce the level of GHG emissions that would otherwise be associated with the Project-related forest disturbance.

To determine the actual change in carbon emission brought about by Project-related forest disturbance, it is necessary to consider if and how people will use the trees felled as a result of the Project. This analysis identifies four potential fates for these trees.

1. Thirty one percent[7] of Project-related forest disturbance is assigned the fate "wood retained by landowners."
2. Wood not retained by landowners may be taken to sawmills (or other commercial wood users) at the discretion of National Grid's vegetation management contractors. As previously noted, so long as felled wood is used for some useful enterprise, market behavior (i.e., leakage) will offset some of the GHG emissions that would otherwise be associated with the forest disturbance. However, because National Grid does not require its contractors to remove marketable wood to sawmills or other commercial wood users, this assessment conservatively assigns this fate to none of the wood felled as a result of the Project.
3. Twenty-five percent[8] of the Project-related forest disturbance is assigned the fate "donated for use as firewood."
4. Because of NEP's efforts to assure that, to the maximum extant practical, Project-related wood is used in some productive enterprise, only 46 percent of the Project-related forest disturbance is assigned the fate "left in place."

[7] NEP has offered landowners the opportunity to retain felled wood for their private use. This analysis conservatively assumes that wood retained by landowners will be used as firewood. The fraction of wood assigned to this fate is based on the preliminary results of NEP's ongoing coordination with landowners affected by the A1/B2 Project during which 8 of 26 landowners who have thus far responded (31 percent) have asked that felled wood be left for their personal use.

[8] While discussions with firewood donation centers are ongoing, it is likely that the amount of wood donated will be limited by the capacity of these organizations to accept donations. As such, this analysis conservatively assumes only 25 percent of Project-related wood will be donated for use as firewood.

Table 1. Project-Related Release of Currently Sequestered Carbon

Existing Habitat	Carbon Pool	Acres	Leakage Adjusted Acres	Carbon At Risk of Release (U.S. tons per acre)	Proportion of At-Risk Carbon Released to the Air over 30 Years Due to the Project	Project-Related Release of Carbon from the Affected Footprint (U.S. tons)	Project-Related Release of CO_2e from the Affected Footprint (U.S. tons)
Forested	Aboveground Live Biomass	11.31	8.14	36.4	0.875	259.4	950.3
Forested	Belowground Live Biomass	11.31	8.14	7.7	0.591	37.1	135.8
Forested	Soil Organic Carbon	11.31	8.14	30.9	0.080	20.1	73.8
Forested	Dead Wood and Litter	11.31	8.14	17.6	0.969	138.9	508.9
Exposed Soil, Low-Growing Grass & Shrub	Aboveground Live Biomass	51.64	51.64	Not Applicable	0.000	0.0	0.0
Exposed Soil, Low-Growing Grass & Shrub	Belowground Live Biomass	51.64	51.64	7.7	0.850	338.0	1,238.4
Exposed Soil, Low-Growing Grass & Shrub	Soil Organic Carbon	51.64	51.64	30.9	0.080	127.7	467.7
Exposed Soil, Low-Growing Grass & Shrub	Litter	51.64	51.64	Not Applicable	0.000	0.0	0.0
					Total	**921.2**	**3,374.9**

Because 56 percent of the 11.31 forested acres cleared as a result of the Project (6.33 acres) will be used into some productive enterprise. As discussed in Section 2.1.1, a 50 percent forest leakage adjustment implies that, because of NEPs actions, 3.165 acres of forest at some other location that otherwise would have been cleared, will remain forest. As such, the leakage-adjusted forested acreage reported in Table 1 is 8.14. This is calculated by subtracting 3.165 *Acres of Forest Not Cleared Elsewhere Due to Leakage* from 11.31 *Acres of Project-Related Forest Clearing*.

3.1.2 Carbon At Risk of Release

Existing literature was reviewed to estimate the amount of carbon currently sequestered in each carbon pool; this is defined as carbon at risk of release. The basis of each estimate is described in the following bullets.

- The U.S. Forest Service (USFS) (2018a)[9] reports the amount of carbon stored as aboveground live biomass for three mature (80- to 100-year-old) New England hardwood forest types: 30.9 U.S. tons per acre (reported as 28 metric tons per acre) for northern hardwood, 35.3 U.S. tons per acre (reported as 32 metric tons per acre) for oak-pine, and 36.4 U.S. tons per acre (reported as 33 metric tons per acre) for oak-hickory.[10] While it is likely that the average aboveground live biomass will be less than 36.4 U.S. tons per acre[11] in the acreage subject to Project-related forest disturbance, this assessment conservatively assumes 36.4 U.S. tons of carbon are stored in each acre of ***aboveground live forest biomass*** and so are at risk of release (See Table 1).
- The USFS (2018a) reports the amount of carbon stored as belowground live biomass for three mature (80- to 100-year-old) New England hardwood forest types: 5.5 U.S. tons per acre (reported as 5 metric tons per acre) for northern hardwood and 7.7 U.S. tons per acre (reported as 7 metric tons per acre) for oak-pine and oak-hickory. While it is likely that the average for belowground live biomass will be less than 7.7 U.S. tons per acre,[12] this assessment conservatively assumes 7.7 U.S. tons of carbon are stored in each acre of ***belowground live forest biomass*** and so are at risk of release (See Table 1).
- Catanzaro and D'Amato (2019) cite data from the USFS (2018a) in reporting the amount of carbon stored in forest soils for three mature (80- to 100-year-old) New England hardwood forest types: 30.9 U.S. tons per acre (reported as 28 metric tons per acre) for northern hardwood, 29.8 U.S. tons per acre (reported as 27 metric tons per acre) for oak-pine, and 23.1 U.S. tons per acre (reported as 21 metric tons per acre) for oak-hickory.[13] As reported in Table 1, this assessment conservatively assumes 30.9 U.S. tons of carbon are stored in each acre of ***forest soil*** and so are at risk of release.

[9] See instead page 4 of Catanzaro and D'Amato (2019) for a user-friendly summary of the USFS (2018a) data.

[10] Table 5 on page 26 of Thompson et al. (2020) indicates that aboveground carbon can range from 0 up to 173 Mg per hectare (i.e., anywhere from 0 up to 77 U.S. tons per acre). Noting the broad range of Thompson et al. (i.e., 0 to 77 U.S. tons of carbon per acre) and that the Thompson et al. high end is associated with virgin forest (of which there is very little in Massachusetts), the USFS (2018a) estimates are judged to be consistent with Thompson et al. but more accurate for this assessment.

[11] The average is likely less than 36.4 U.S. tons per acre because most trees are likely less than 80 years old, and it is likely that not all trees will be oak or hickory.

[12] The average is likely less than 7.7 U.S. tons per acre because most trees are likely less than 80 years old, and it is likely that not all trees will be oak or pine.

[13] Table 6 on page 32 of Thompson et al. (2020) reports that an acre of generic forest soil in Massachusetts may contain 124.4 U.S. tons of soil organic carbon; this is considerably more than the USFS (2018a) reports for mature hardwood forests in New England. Indeed, on pages 54 and 55 of their report, Thompson et al. note that the 124.4 estimate "is much higher than most other forest estimates from the region." They go on to site studies at the Harvard Forest in central Massachusetts and at the Hubbard Brook experimental forest in New Hampshire where soil organic content was more in line with USFS reports. Thus, we consider the soil organic content estimates put forward in USFS (2018a) to be indicative of the best available information.

- Catanzaro and D'Amato (2019) cite data from the USFS (2018a) in reporting the amount of carbon stored as dead wood and forest litter for three mature (80- to 100-year-old) New England hardwood forest types: 17.6 U.S. tons per acre (reported as 5 metric tons per acre of dead wood and 11 metric tons per acre of litter) for northern hardwood, 17.6 U.S. tons per acre (reported as 4 metric tons per acre of dead wood and 12 metric tons per acre of litter) for oak-pine, and 8.8 U.S. tons per acre (reported as 5 metric tons per acre of dead wood and 3 metric tons per acre of litter) for oak-hickory. While it is likely that the average for dead wood and forest litter will be less than 17.6 U.S. tons per acre,[14] this assessment conservatively assumes 17.6 U.S. tons of carbon are stored in each acre of ***dead wood and forest litter*** and so are at risk of release (See Table 1).
- The carbon stored in the live aboveground portion of the low-growing grasses and shrubs in a ROW is largely ephemeral in that it will cycle into the soil or into the air over a relatively short timeframe. Because there is little potential for a Project-related increase in the rate of carbon released from this pool, Table 1 reports "Not Applicable" for carbon at risk in the ***aboveground live low-growing grass/shrub biomass*** pool.
- While the acreage in this category currently exists as a mosaic of exposed soil, low-growing grasses, and shrubs, it is often adjacent to forest. Because root systems for the surrounding trees will periodically run underneath this area, this assessment conservatively adopts the belowground live biomass for forests in assuming 7.7 U.S. tons of carbon are at risk of release from each acre of ***belowground live low-growing grass/shrub habitat*** (See Table 1).
- While the acreage in this category currently exists as a mosaic of exposed soil, low-growing grasses, and shrubs, the area was once likely to have been forested habitat. This assessment conservatively adopts the Catanzaro and D'Amato (2019) estimates for forest soil in assuming 30.9 U.S. tons of carbon are at risk of release from each acre of ***soil underlying the exposed soil and low-growing grass/shrub habitat*** (See Table 1).
- The carbon stored in low-growing grass/shrub litter is largely ephemeral in that it will cycle into the soil or into the air over a relatively short timeframe. Because there is little potential for a Project-related increase in the rate of carbon released from this pool, Table 1 reports "Not Applicable" for carbon at risk in the ***low-growing grass/shrub litter*** pool.

3.1.3 Proportion of At-Risk Carbon Released to the Air over 30 Years

Existing literature was reviewed to estimate the proportion of carbon currently sequestered in each carbon pool likely to be released to the air over the 30-year Project lifespan. These estimates are reported in Table 1 and the basis of each estimate is described in the following bullets

- Not all carbon stored as *aboveground live forest biomass* will be released over the 30-year project lifespan. Russel et al. (2014) report that hardwood left to decay has a half-life of 10 years. This implies that, over 30 years, 87.5 percent of the carbon stored in this pool will be released to the air while 12.5 percent will remain sequestered. Thus, Table 1 reports that 87.5 percent of the at-risk carbon currently stored as ***aboveground live forest biomass*** will be released to the air because of the Project.
- Not all carbon stored as belowground live biomass will be released over the 30-year project lifespan. Lundholm et al. (2020) reported a weighted average half-life of 17.5 years. This implies that, over 30 years, 69.5 percent of the carbon stored in this pool will be released while 30.5

[14] The average is likely less than 17.6 U.S. tons per acre because most trees are likely less than 80 years old, and it is likely that not all trees will be oak or pine.

percent remains sequestered. Additionally, approximately 85 percent of the carbon released when belowground biomass decays will enter the atmosphere. The remaining 15 percent is metabolized by heterotrophs in the soil and eventually contributes to soil organic carbon through a biophysical process known as fragmentation (Bond-Lamberty and Gower 2008). Thus Table 1 reports that 59.1 percent of the at-risk carbon currently stored as ***belowground live forest biomass*** will be released to the air because of the project. This is calculated as the product of a 69.5 percent release and a 0.85 probability that release will be to the air.

- Activities that expose sub-surface soils to the air, such as tree cutting, may result in the release of some carbon that would otherwise remain sequestered in the soil. Thompson et al. (2020) report that tree cutting associated with commercial forestry does not likely release carbon from forest soil. Thompson et al. note that their conclusion is consistent with the observation that, when measured, the carbon content of soils in yards did not differ from the carbon content of soils in forests adjacent to those yards. However, on page 55 of their report, Thompson et al. also note that, in assuming commercial tree clearing does not cause any release of carbon stored in forest soils, they may have understated potential carbon releases. This concern was based on "a metanalysis of harvest impacts on soil carbon in temperate forests worldwide [which] found that, on average, harvesting reduced soil carbon stocks by 8%, though the impacts can be ephemeral." Thus Table 1 conservatively reports that 8 percent of the at-risk carbon currently stored in ***forest soils*** will be released to the air because of the Project.

- Carbon stored in the dead wood and forest litter pool is constantly being released into the air or soil and constantly being replenished as trees die and leaves or needles drop. Because Section 3.2 (Changes in Future Carbon Sequestration Rates) uses net carbon sequestration rates for each habitat, this assessment appropriately accounts for carbon loss by assigning all carbon stored in the dead wood and forest litter pool the fate of "potentially released to the air because of the project." Russel et al. (2014) report that hardwood left to decay has a half-life of 10 years. This implies that, over 30 years, 87.5 percent of the carbon stored in dead wood (4 metric tons per acre) will be released to the air while 12.5 percent will remain sequestered. This assessment assumes that all of the forest litter (12 metric tons of carbon per acre) will decay over 30 years. Thus Table 1 reports that 96.9 percent of at-risk carbon currently stored as ***dead wood or forest litter*** will be released to the air because of the Project.[15]

- The carbon stored in the live aboveground portion of the low-growing grasses and shrubs is largely ephemeral in that it will cycle into the soil or into the air over a relatively short timeframe. Because there is little potential for a Project-related increase in the rate of carbon released from this pool, Table 1 assigns a zero probability of a Project-related increase in the amount of carbon released from the ***aboveground live low-growing grass/shrub biomass*** to the air.

- Approximately 85 percent of the carbon released when belowground biomass decays will enter the atmosphere; the remaining 15 percent is metabolized by heterotrophs in the soil and eventually contributes to soil organic carbon through a biophysical process known as fragmentation (Bond-Lamberty and Gower 2008). Thus Table 1 identifies the probability of release from ***belowground live low-growing grass/shrub biomass*** to the air as 0.85.

- Activities that expose sub-surface soils to the air, such as grading, may result in the release of some carbon that would otherwise remain sequestered in the soil. Following the logic and literature described in the assessment of forest soils, Table 1 conservatively reports that 8 percent

[15] The proportion of carbon stored in dead wood and forest litter that will be released to the air is 96.9 percent. This is calculated as the proportion of carbon stored in dead wood multiplied by the proportion released over 30 years, plus the proportion of carbon stored in litter, or $0.25 \times 0.875 + 0.75$.

of the at-risk carbon currently stored in ***soils underlying exposed soil/low-growing grass/shrub habitat*** will be released to the air because of the Project.

- The carbon stored as low-growing grass/shrub litter is largely ephemeral in that it will cycle into the soil or into the air over a relatively short timeframe. Because there is little potential for a Project-related increase in the rate of carbon release from this pool, Table 1 assigns a zero probability to a Project-related increase in the probability of carbon release from the ***low-growing grass/shrub litter*** to the air.

3.1.4 Project-Related Release of Carbon and CO_2e from the Affected Footprints

The Project-related release of carbon from the affected footprint is calculated as the product of three Table 1 inputs: a*) leakage adjusted acres*; b) *carbon at risk of release denominated as U.S. tons per acre*; and c) *the proportion of at-risk carbon released to the air over 30 years due to the Project*.

The Project-related release of CO_2e from the affected footprint is calculated *as the Project-related release of carbon from the affected footprint ÷ 0.27292 tons of carbon per ton of CO_2.*

3.2 Habitat Conversion

When mature trees and vegetation are removed and replaced with gravel-covered access roads, the rate of future carbon sequestration is reduced. In this assessment, the loss of future carbon sequestration is calculated as follows.

1. Forest covers 11.31 acres of the Project area. Catanzaro and D'Amato (2019) estimate an average annual net carbon sequestration rate for Massachusetts forests of 1.66 U.S. tons of CO_2e per acre.[16] This assessment assumes that, once forested soil is covered with gravel, it will stop sequestering carbon. Over the 30-year project life, this implies the future loss of 49.8 U.S. tons of CO_2e sequestration (calculated as 11.31 affected forest acres × 1.66 tons of CO_2e sequestration lost annually × 30 years).
2. As noted in Section 2.2.2, the conversion of existing exposed soil and low-growing grass habitat into gravel-covered soil could alter the rate of future GHG sequestration within the habitat footprint in two ways. First, the removal of the low-growing grasses will reduce the rate at which carbon is sequestered as belowground live biomass. Second, the introduction of gravel will reduce soil erosion and so reduce the rate at which carbon is released from the soil to the atmosphere. We assume that these processes fully offset one another and so the Project brings about no net change in future CO_2e sequestration.

3.3 Reliability and Resiliency

The Project is being implemented because many of the E131 assets have reached the end of their design life and inspections indicate they need repair. When implemented, the Project will a) result in a more resilient transmission line by addressing safety, asset reliability, and repair requirements; b) improve communication between substations; and c) reduce overall environmental disturbance by reducing the frequency of maintenance-related activity along the ROW.

[16] Smith et al. (2006) reports 0.41 metric tons of carbon per acre year. This is equivalent to 0.45 U.S. tons of carbon per acre year which is equivalent to 1.66 U.S. tons of CO2e per acre.

3.3.1 Increased Reliability

From 2017 through 2021 (inclusive) the E131 line experienced five "incidents." While none of them resulted in sustained customer outages, each likely resulted in momentary power fluctuations as the transmission system compensated for the line interruption. In the remainder of this section these momentary power fluctuations are referred to as flickers.

Absent the Project, a combination of asset aging and an increased frequency and intensity of climate events is expected to increase the rate of incidents with some potentially resulting in customer outages. The Project will reduce the potential for future outages and flickers associated with the E131 line; this is referred to as an increase in reliability.

Kenward and Raja (2014) report that between 2003 and 2014, weather-related power outages[17] affected an average of 15 million U.S. homes or businesses each year. These outages, which result primarily from damages to transmission lines, substations, and lower-level distribution lines, are estimated to cost the economy $18 billion to $33 billion annually (Moore 2021). Kenward and Raja (2014) and the U.S. Government Accountability Office (2021) further report that between 2003 and 2014 the rate of outages more than doubled, and that the increased frequency was driven by a combination of aging infrastructure and an increasing frequency of extreme weather events such as hurricanes, ice storms, floods, heat waves, droughts, and wildfires. Lastly, there is a consensus that extreme weather and climate-related events are expected to become more frequent and intense in the future, which, unless steps are taken to harden the grid, will cause the frequency of weather-related power outages to continue to increase in the future (Kenward and Raja 2014; Moore 2021; U.S. Government Accountability Office 2021).

Efforts similar to the Project have been identified by the President's Council of Economic Advisers, the U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability, the White House Office of Science and Technology and ISO-NE as cost effective ways to increase grid reliability[18]. This increased reliability will reduce the probability of power outages which, in turn, will not only benefit the U.S. economy, but it will also reduce outage-related spikes in GHG emissions that occur when society reacts to a power outage[19].

1. Moss and Bilich (2022) evaluated the GHG implications of citizens responding to power interruptions by installing and using back-up generation units (BUGs). They report that, in response to recent reductions in the reliability of California's grid, the Bay area and South Coast generating capacity of BUGs increased rapidly such that, when outages occur, BUGs compensate for approximately 20 percent of the lost power. Further, most BUGs are diesel-fired and release GHG at rates similar to the 1.4 metric tons of CO_2e per megawatt hour (MWh) associated with Massachusetts' local dispatchable generators. To put that in the context of a modest outage, a typical household uses about 1.2 kilowatt hours (KWh) each hour,[20] so a small outage that affects only 5,000 customers for only 4 hours may result in 4,800 KWh being generated by BUGs, which i

[17] Kenward and Raja define an outage as the loss of power for 4 or more hours.

[18] See President's Council of Economic Advisers, U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability, and the White House Office of Science and Technology 2013.

[19] A 2019 article in the USA Today, titled *The New York City Blackout was Actually Bad for the Environment,* reports that "you might think that when the lights go out, the amount of greenhouse gases emitted as people go about their day would go down. But you'd be wrong. The [carbon] footprint grows because whenever you have a power failure you have all kinds of inefficiencies and waste that cascades through the system."

[20] The EIA (2023) reports that an average house uses 893 KWh per month. This equates to approximately 1.2 KWh per hour.

s equivalent to 4.8 MWh.[21] This, in turn, likely resulted in the release of approximately 6.7 metric tons of CO_2e.

2. When the power goes out, residences and commercial operations lose refrigeration. Risk of spoilage causes homes and commercial operations to dispose of food that would otherwise be eaten. The U.S. Environmental Protection Agency (EPA) (2021) reports that, for every pound of food wasted in the United States, between 1 and 2 pounds[22] of CO_2e are unnecessarily emitted into the atmosphere as part of the production process needed to replace that food. In addition, when placed into landfills, a pound of food waste will generate about 5 pounds of CO_2e during decomposition (Brown et al. 2007). While approximately half of those GHGs will be captured (Landfill Gas Expert 2019), the remaining 2.5 pounds of CO_2e are released. Thus, between the two sources of CO_2e, each pound of food wasted results in approximately 4 pounds of CO_2e being released unnecessarily into the atmosphere. The July 13, 2019, New York City outage, which lasted only 3 hours and affected 73,000 customers, is estimated to have resulted in the loss of 29 metric tons of food[23] or about 0.0004 metric tons[24] of food per customer. Applying that to an outage affecting 5,000 customers implies the loss of 2 metric tons of food. Noting that each metric ton of food lost results in 4 metric tons of CO_2e release, it is estimated that an outage affecting 5,000 customers for just a few hours would likely result in the release of 8 U.S. metric tons of CO_2e.

3. Hussain (2019) reports that, in industrial and manufacturing operations, even seemingly small power flickers can have a significant impact. This is because manufacturers are especially vulnerable to equipment damage during outages and the electrical surges that may occur when power is restored. Ericson and Lisell (2020) refer to these types of impacts (e.g., damage to machinery and process interruptions resulting in failed output) as "fixed costs" associated with an outage and estimate that, regardless of duration, medium-sized manufacturing operations can incur costs of up to $30,000 with smaller operations incurring losses in the hundreds of dollars. To the extent these losses are driven by the need to replace damaged equipment, remanufacture products that were being manufactured when the power went out, and/or bring production processes back up to temperature, those monetary losses are associated with otherwise unnecessary increases in CO2e emissions. Even a flicker that affects 0.04 percent of New England[25] is estimated to result in the otherwise unnecessary release of approximately 5 U.S. tons of CO_2e.[26] Noting that, in the 5 years from 2017 through 2021, problems on the E131 line caused one

[21] KWh of loss is calculated as 5,000 affected customers × 4-hour blackout duration × 1.2 KWh per hour × 20 percent compensation via BUGs. To convert to MWh note that 1 MWh = 1,000 KWh.

[22] EPA (2021) reports that each year, 161 to 335 billion pounds of food is wasted, resulting in approximately 374 billion pounds of CO_2e being unnecessarily emitted.

[23] As reported in USA Today (2019); the unit is assumed to be a metric ton.

[24] This is equivalent to only 0.88 pounds per customer.

[25] There are 14.85 million residents of New England. An outage affecting 5,000 customers is affecting 0.04 percent of the New England population.

[26] The estimate was derived using the following set of calculations. First, note that New England will require at least 125,000 gigawatt hours (GWh) annually from 2023 forward and the industrial sector represents about 26 percent of total retail electricity consumption in the United States (EIA 2022) or about 32,500 GWh annually in New England (calculated as 0.26 × 125,000 GWh), which is equivalent to 32,500,000,000 KWh annually. Dividing by 8,760 hours per year, 32,500,000,000 KWh equates to 3,710,000 kilowatts (KW) of demand from New England industries. Next, note that Balducci et al. (2002) used interruption cost data for 32 standard industrial classification groups that were aggregated and weighted based on relative shares of sector GDP and estimated that, for a 1-hour interruption, industry incurs a loss of $26.35/KW in 2022 dollars. Thus, a power outage affecting 0.04 percent of the ISO New England service area (calculated as 5,700 customers affected ÷ 14.85 million New England residents) would cost approximately $39,000 in GDP (calculated as 3,710,000 KW × 0.04 percent of facilities affected × $26.35 per KW). Finally, note that every million dollars of U.S. GDP is associated with approximately 270 metric tons CO_2e (Climate Watch 2022). Thus, $39,000 of lost GDP is associated with 10 metric tons of CO_2e. If half of the at-risk CO_2e is associated with damaged equipment, partially completed products that will need to be replaced, and/or extra energy required to restart industrial processes, then each outage prevented also prevents the release of 5 metric tons of CO_2e.

flicker annually, it is likely that Project-related reliability increases will prevent the release of at least 150 tons of CO_2e over the Project's 30-year lifespan.[27]

3.3.2 Increased Resiliency

While the full grid analysis required to estimate the change in dispatches brought about by a more resilient E131 line is beyond the scope of this assessment, the following information is illustrative of GHG benefits likely to be associated with the Project-related increase in resiliency and the potential to reduce reliance on carbon intense electricity.

- From 2014 to 2018, approximately 23 oil- and gas-fired units located in Massachusetts were used to ensure reliable electricity supply during periods of peak electric demand; that is, these units operated as dispatchable units with capacity utilization factors generally under 5 percent.[28] In Massachusetts, two-thirds of these units burn primarily oil, and more than 90 percent are over 30 years old, meaning they tend to release more GHG and criteria pollutants for every unit of electricity generated than would be released if newer technology were deployed. Moreover, many of these plants are in low-income and minority communities where vulnerable populations already bear health and environmental burdens (PSE Healthy Energy 2020).[29]
- The EIA's State Electricity Profile for Massachusetts reports that, in 2020, Massachusetts electric power industry combusted petroleum to generate 36,111 MWh and released 48,502 U.S. tons of CO_2 (EIA 2021b). This equates to 1.34 U.S. tons of CO_2e per MWh of electricity generated[30] by combusting petroleum. An additional 0.14 U.S. tons of CO_2e per MWh will have been released in the process of extracting, refining, and transporting that petroleum product to the facility (Gordon and Feldman 2016) which brings the total GHG emissions per MWh of electricity produced to about 1.5 U.S. tons of CO_2e per MWh.
- Assuming a typical capacity of 25 MWh and an average run time of about 13.3 hours (as reported in PSE Healthy Energy 2020), each time one of these carbon-intense generation resources is dispatched, it results in the release of approximately 500 U.S. tons of CO_2e that would not be released if the grid had the flexibility to meet demand with renewable or stored energy resources. This is equivalent to 454 metric tons.

Based on the preceding assessment, if the Project enabled the use of low-carbon-intensity electricity just a few times per year, the Project would be neutral from a GHG accounting perspective.

[27] This estimate is considered a lower bound for three reasons. First, the New England population is increasing. Second, it is expected that climate change will increase the frequency and intensity of extreme weather events which will, in turn, increase the frequency of weather-related flickers and outages all else equal. Finally, if not replaced, the existing E131 line will continue to age which will reduce its reliability.

[28] Capacity utilization is a facility's actual output divided by the output the facility could generate if it ran all year at full capacity.

[29] PSE Healthy Energy (2020) reports having "aggregated power plant operational data on a unit basis from EIA and EPA datasets. We obtained hourly, daily, and annual data on generation (MWh), emissions (CO_2, NO_x and SO_2), and fuel consumption (MMBtu) for the years 2014 to 2018 from the EPA's Air Markets Program Database (AMPD). Although these emissions data are available at greater temporal resolution than from EIA, data are not available for all plants, so we backfilled our emissions data using reported EIA annual data for the years 2014 to 2017. Peaker units were identified as having greater than 5 MW capacity and less than 15 percent annual utilization." They further note that their data assembly was not independently verified.

[30] Calculated as 48,502 U.S. tons of CO_2 ÷ 36,111 MWh of electricity generated by combusting petroleum.

4 SUMMARY

NEP plans to improve the E131 line by replacing and upgrading older assets. The goal is to increase the resiliency of the transmission lines by addressing safety, asset reliability, and repair requirements. This will improve communication between substations and reduce overall environmental disturbance by limiting the need for unplanned maintenance.

The Line E131 ROW will not be widened because of the Project and vegetation maintenance within the ROW will not be changed. However, the Project will require a) the cutting of approximately 11.31 acres of trees located primarily in the existing easement to accommodate construction activities; and b) the conversion of approximately 51.64 acres of exposed soil/low-growing grass/shrub to a mix of exposed soil, low-growing grasses, and gravel.

From a GHG accounting perspective, the Project is likely to bring about the following changes.

1. Approximately 3,375 U.S. tons of CO_2e currently sequestered in live biomass, forest soil, dead wood, and litter may be released due to vegetation clearing and/or soil disturbance.
2. The conversion of vegetated habitat primarily for the purpose of improving access will reduce the rate of future GHG sequestration within the affected footprints, resulting in the Project-related increase of approximately 50 U.S. tons of CO_2e.
3. More than 150 U.S. tons of GHG will likely not be emitted because of Project-related increases in reliability, and Project-related increases in grid resiliency represent an unquantified GHG benefit of the Project.

Thus, the Project is expected to result in no more than a 3,275 U.S. ton increase in CO_2e emission over its 30-year lifespan.

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NORTH ADAMS

FLORIDA

ADAMS

SAVOY

Index Map

Legend

- Approximate ROW
- Proposed Tree Clearing Area
- Massachusetts EEA Hot Spot
- Environmental Justice
- 1-Mile Buffer
- Municipal Boundary
- State Boundary

N

1 inch = 1,250 feet

0 670 1,340

Feet

**Indicates Layers Set to Transparency*

EEA HOT SPOT ANALYSIS

Line E131

Figure 1A

Page 1 of 3

Basemap: ESRI World Imagery Basemap
EJ data: downloaded from MassGIS (2020)
Hot spots downloaded from Massachusetts Executive Office of Energy and Envionrmental Affairs (2022).

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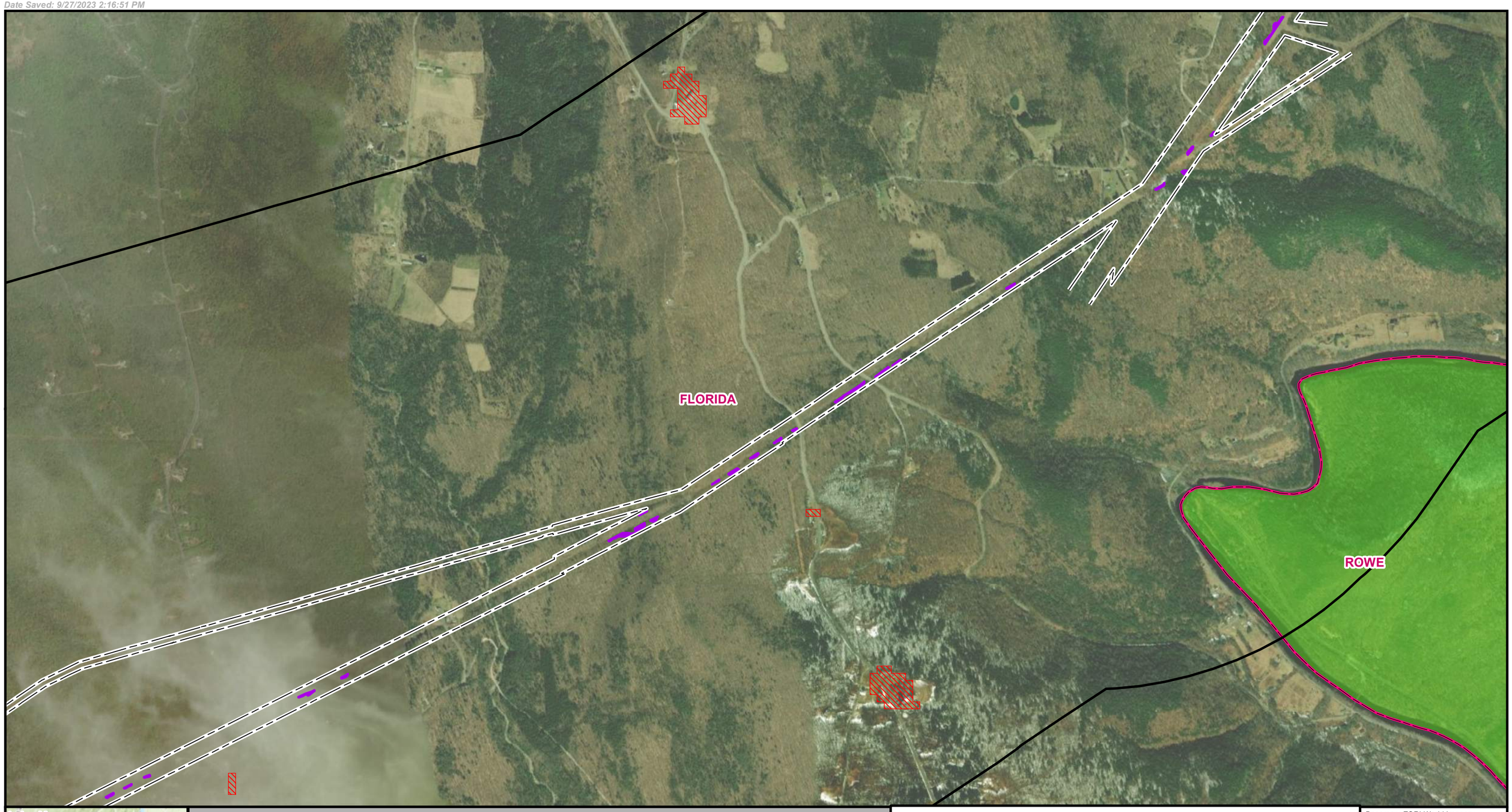
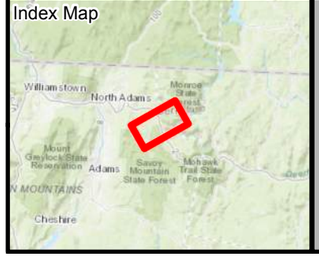


Index Map



Legend

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- Municipal Boundary
- State Boundary

N

1 inch = 1,250 feet
0 670 1,340
Feet

**Indicates Layers Set to Transparency*

EEA HOT SPOT ANALYSIS

Line E131

Figure 1B
Page 2 of 3

Basemap: ESRI World Imagery Basemap
EJ data: downloaded from MassGIS (2020)
Hot spots downloaded from Massachusetts Executive Office of Energy and Envionrmental Affairs (2022).

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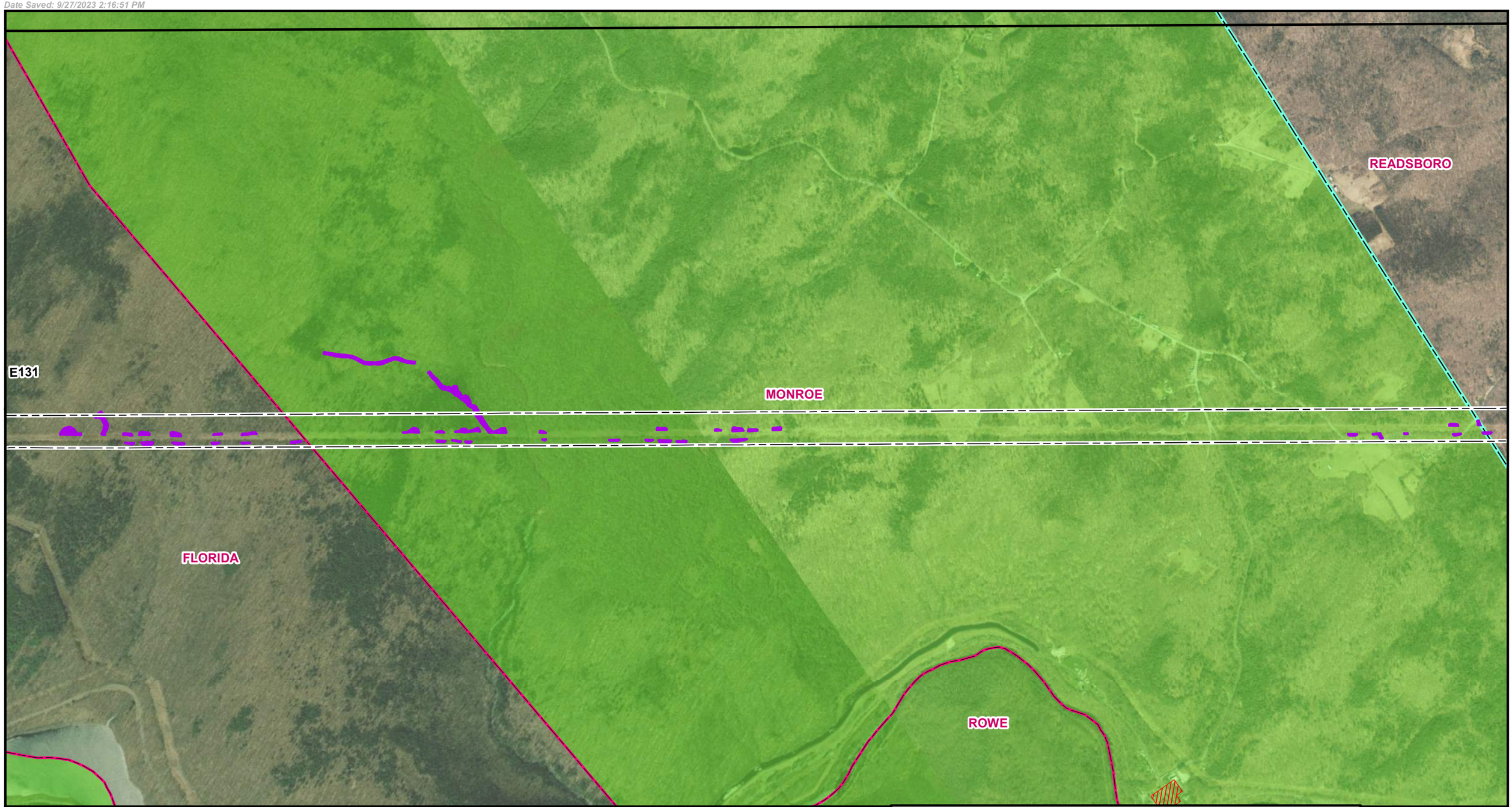
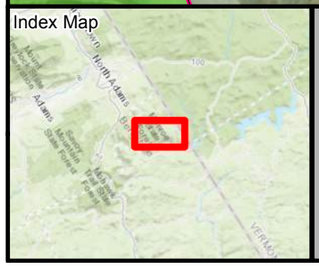


Index Map



Legend

- Approximate ROW
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- Municipal Boundary
- State Boundary

1 inch = 1,250 feet
0 670 1,340
Feet

***Indicates Layers Set to Transparency**

EEA HOT SPOT ANALYSIS

Line E131

Figure 1C
Page 3 of 3

Basemap: ESRI World Imagery Basemap
EJ data: downloaded from MassGIS (2020)
Hot spots downloaded from Massachusetts Executive Office of Energy and Envionrmental Affairs (2022).

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APPENDIX E

APPENDIX E

NEW ENGLAND POWER COMPANY
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EG-303NE

ROW Access, Maintenance and Construction Best Management Practices for New England

EG-303NE - NEP BMP Guidance

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