Known for excellence. Built on trust.

391 Transmission Line Structure Replacement Project

Eversource Energy

Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire

NHDES Alteration of Terrain Permit Application

June 1, 2022
GZA File No. 04.0190999.86

PREPARED FOR:
Eversource Energy
Hooksett, New Hampshire

GZA GeoEnvironmental, Inc.
5 Commerce Park North, Suite 201 | Bedford, NH 03110-6984
603-623-3600

Offices Nationwide
www.gza.com

Known for excellence.
Built on trust.

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com

June 1, 2022
GZA File No. 04.0190999.86

Mr. Ridgely Mauck, P.E.
Program Supervisor - Permitting
NHDES Land Resources Management
Alteration of Terrain Bureau
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302

Re: Alteration of Terrain Permit
391, 373, and 385 Transmission Line Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond,
Rochester, and Strafford, New Hampshire

Dear Mr. Mauck:

On behalf of Public Service Company of New Hampshire dba Eversource Energy (Eversource), GZA GeoEnvironmental, Inc. (GZA) is submitting this Alteration of Terrain (AoT) Permit Application for the proposed 391 Transmission Line Structure Replacement Project in accordance with Terrain Alteration Law (RSA 485-A:17), Administrative Rules (Env-Wq 1500), and discussions between New Hampshire Department of Environmental Services (NHDES) AoT Bureau and Eversource.

The proposed project includes the replacement of 64 existing utility structures along the 391, 373, and 385 Transmission Lines that exceed AoT impact thresholds. The proposed project crosses through portions of Auburn, Candia, Chester, Deerfield, Derry, Raymond, Rochester, and Strafford, New Hampshire for approximately 37 miles. Replacement of the existing utility structures is necessary to maintain the safety and reliability of the system. To more efficiently conduct routine maintenance of the existing 391, 373, and 385 Transmission Line, work pad grading and access road improvements are proposed as part of this project in upland areas. The proposed project will require disturbance subject to AoT permitting through the NHDES as a result of impact areas cumulatively exceeding 100,000 square feet of contiguous disturbance in the project area (i.e. the 391, 373, and 385 Utility Line Corridor).

Included with this submittal is a copy of the application fee check, a completed AoT Permit Application Form, a detailed project narrative, required plans and figures, and additional supporting materials. In addition, a waiver request for the preparation of a stormwater drainage report, drainage area plans, and hydrologic soil group plans and from amendment requirements for shifting of access roads greater than 20-ft is enclosed as required by Env-Wq 1509.04. The proposed project is scheduled to start in July 2022 and continue through June 2023. Eversource appreciates the efforts of

the Alteration of Terrain Bureau in helping to maintain the anticipated construction schedule, which is dependent on scheduled outages dictated by regional outage planning.

Please feel free to contact us with any questions.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Conor Madison, CPESC, CESSWI
Project Manager

Tracy Tarr, CWS, CWB, CESSWI
Consultant/Reviewer

Deborah M. Zarta Gier, CNRP
Principle

CEM
c:\users\conor.madison\appdata\local\microsoft\windows\inetcache\content.outlook\nnw6ij9r\draft 04 0190999 86 391 transmission line aot application dmz.docx

Attachments: Alteration of Terrain Permit Application

cc:
Town of Auburn, New Hampshire
Town of Candia, New Hampshire
Town of Chester, New Hampshire
Town of Deerfield, New Hampshire
Town of Derry, New Hampshire
Town of Northwood, New Hampshire
Town of Raymond, New Hampshire
City of Rochester, New Hampshire
Town of Strafford, New Hampshire

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 PROJECT BACKGROUND AND PURPOSE

The proposed project involves the replacement of 64 existing 391, 373, and 385 Transmission Line structures replacement in portions of Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire. The proposed replacement structures are old and worn and must be replaced in order for the transmission line to continue to function safely and reliably. Impacts have been minimized and avoided to the greatest extent practicable through site evaluations of access routes and work pad placements.

The project requires approximately 1,140,018 square feet (sq. ft.) of total impact, including 268,365 sq. ft. of temporary wetland matting, 48,326 sq. ft. of temporary upland matting, 57,146 sq. ft. of temporary wetland buffer impact and 766,181 sq. ft. of ground disturbance. The proposed project to replace a total of 64 existing utility poles is subject to the AoT disturbance threshold (Env-Wq 1500 and RSA 485-A:17) (See Figure **4- Alteration of Terrain Permitting Plans** and **Appendix A – Alteration of Terrain Application Form**). For purposes of presentation of details and consistency with other permitting efforts for this project, we have broken out project areas as follows:

1) Area A, Town of Derry – approximately 55,275 sq. ft. of work pad grading and associated access improvements at 391 Structures 326, and 373 Structures 320, 319, 318, and 317.

2) Area B, Town of Auburn – approximately 18,799 sq. ft. of work pad grading and associated access improvements at 373 Structure 316 and 315.

3) Area C, Town of Chester – approximately 126,888 sq. ft. of work pad grading and associated access improvements at 373 Structure 300, 299, 298, 297, 296, 295, 276, 275, and 391 Structures 294, 274 and 272.

4) Area D, Town of Raymond – approximately 74,552 sq. ft. of work pad grading and associated access improvements at 373 Structures 264, 263, 262, 256, 255, and 235.

5) Area E, Town of Candia - approximately 27,608 sq. ft. of work pad grading and associated access improvements at 373 Structures 247 and 246.

6) Area F, Town of Deerfield - approximately 107,947 sq. ft. of work pad grading and associated access improvements at 391 Structures 192, 191, 177, 163 and 373 Structure 202 and 186.

7) Area G, Town of Northwood - approximately 139,855 sq. ft. of work pad grading and associated access improvements at 391 Structures 147, 146, 145, 133, 132, 131, 130 and 385 Structures 144, 127, 126, and 125.

8) Area H, Town of Strafford - approximately 158,855 sq. ft. of work pad grading and associated access improvements at 391 Structure 121, 116, 78, 77, 76, 75, 73, 72, 71, 68, and 385 Structures 80, 78, 77, 72, 71, 69, 68, 65.

9) Area I, City of Rochester - approximately 56,402 sq. ft. of work pad grading and associated access improvements at 391 Structure 46 and 385 Structures 43, 34, 33, 24, and 23.

2.0 SITE INFORMATION

2.1 SITE LOCATION AND DESCRIPTION

Area A includes a portion of the 391 and 373 Transmission Line Right of Way (ROW) from the west side of Bypass 28 to the west side of Symphony Lane. The total work area in this portion of the ROW is approximately 1.86 miles in length and approximately 480-ft in width. Area A continues east through the Town of Derry and continues in a northwesterly direction to the Town of Derry and Town of Auburn Town Line. The width in this portion of the ROW is approximately 265-ft wide.

Area B includes the portion of the 391 and 373 Transmission Line ROW just north of the Town of Auburn and Town of Chester Town Line and continues northeasterly for approximately 0.3 miles to the Town of Auburn and Town of Chester Town Line. The width in this portion of the ROW is approximately 270-ft in width.

Area C includes the portion of the 391 and 373 Transmission Line ROW just northeast of the Town of Auburn and Town of Chester Town Line and continues in a northeasterly directly for approximately 5.3 miles to the Town of Chester and Town of Raymond Town Line. The width in this portion of the ROW is approximately 260-ft in width.

Area D includes the portion of the 391 and 373 Transmission Line ROW northeasterly of the Town of Chester and Town of Raymond Town Line and continues northeasterly for approximately 1.7 miles to the Town of Raymond and Town of Candia Town Line and continues for 2.8 miles from the Town of Candia and Town of Raymond Town Line to the Town of Raymond and Town of Deerfield Town Line. The width in this portion of the ROW is approximately 270-ft in width.

Area E includes the portion of the 391 and 373 Transmission Line ROW north of the Town of Raymond and Town of Candia Town line and continues northerly for approximately 0.8 miles to the Town of Candia and Town of Raymond Town Line. The width in this portion of the ROW is approximately 270-ft in width.

Area F includes the portion of the 391, 373, and 385 Transmission Line ROW north of the Town of Raymond and Town of Deerfield Town line and continues northerly for approximately 7.1 miles to the Town of Deerfield and Town of Northwood Town Line. The width in this portion of the ROW is approximately 275-ft in width.

Area G includes the portion of the 391 and 385 Transmission Line ROW north of the Town of Deerfield and Town of Northwood Town line and continues northerly for approximately 3 miles to the Town of Northwood and Town of Strafford Town Line. The width in this portion of the ROW is approximately 260-ft in width.

Area H includes the portion of the 391 and 385 Transmission Line ROW north of the Town of Northwood and Town of Strafford Town line and continues northerly for approximately 7.2 miles to the Town of Strafford and Town of Rochester City Line. The width in this portion of the ROW is approximately 260-ft in width.

Area I includes the portion of the 391 and 385 Transmission Line ROW northeast of the Town of Strafford and City of Rochester Town line and continues northeasterly for approximately 6.2 miles to the west side of Farmington Road in Rochester. The width in this portion of the ROW is approximately 260-ft in width.

The total project area is approximately 37 miles in length and includes the replacement of 64 utility structures in total. The project area primarily crosses privately owned rural/residential properties (see **Figure 1 – USGS Topographic Map**). There are approximately 460 wetlands along the project route located in the Towns of Auburn, Candia, Chester, Deerfield, Derry, Northwood, Strafford, Raymond, and Rochester. The majority of ground disturbance resulting from the project will be related to access and work pad preparations.

2.2 TAX MAP AND LOT(S)

Eversource holds easements across parcels along the ROW (see **Figure 4**). There are approximately 38 abutting properties that contain existing Eversource easements for the ROW involved in the project. In those project locations, the easements are considered to be the "subject property" because Eversource is the applicant/owner and only has control over the easement. These abutters have been identified and listed on the enclosed abutters list. See **Appendix B** for Abutters List.

2.3 IDENTIFICATION OF NATURAL AND CULTURAL RESOURCES

GZA GeoEnvironmental, Inc. (GZA) has been retained by Eversource to provide professional services on this project that relate to natural and cultural resource identification and assessment as well as permit applications for natural resource and alteration of terrain impacts required to complete the project. GZA has conducted field evaluations and has corresponded with the appropriate agencies to identify natural and cultural resources present in the vicinity of the proposed project.

2.3.1 Identification of Jurisdictional Wetlands and Vernal Pools

Wetlands were originally delineated and classified by Tighe and Bond in 2018 and 2019 within this ROW. GZA confirmed wetland boundaries, photographed resources, completed additional wetland documentation, and recorded data relevant to functions and values provided by these natural resources within the ROW in February 2022. GZA confirmed wetland boundaries in accordance with the United States Army Corps of Engineers (ACOE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the ACOE.

Tighe and Bond conducted a vernal pool evaluation in 2018 and 2019 and GZA conducted additional evaluations in May and June 2022 in Deerfield in accordance with "Identification and Documentation of Vernal Pools in New Hampshire," 2016, New Hampshire Fish and Game Department, Nongame and Endangered Wildlife Program. Vernal pool areas exist as confined basins and must exhibit vernal pool criteria outlined in the New Hampshire Code of Administrative Rules, Env-Wt 103.64, 104.15, and 104.44. It is typical that all potential vernal pools are considered vernal pools for the purposes of impact avoidance and minimization for Eversource maintenance projects. Therefore, no temporary or permanent impacts are proposed to any potential vernal pools as a result of this project.

2.3.2 Identification of Surface Waters

Jurisdictional limits of surface waters of the State of New Hampshire were delineated by Tighe and Bond in 2018 and 2019 in accordance with their definition in RSA 485-A:2 XIV, 482-A:4 II and rule Env-Wt 104.33. Surface waters include wherever freshwater flows or stands and tidal waters. This includes, but is not limited to, rivers, perennial and intermittent streams, lakes, ponds, intertidal zones, and tidal waters. In addition, jurisdiction extends to the portion of any bank or shore which borders such surface waters, and to any swamp or bog subject to periodic flooding by fresh water including the surrounding shore. The limit of jurisdiction for surface water areas were

confirmed as the top of bank, where a natural bank occurs or its ordinary high-water mark where a natural bank is not present.

2.3.3 Identification of Rare, Threatened, and Endangered Species

The Natural Heritage Bureau (NHB) identified rare, threatened or endangered species records within the vicinity of the 391, 373, and 385 Transmission Line ROW in the Towns of Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford (See Appendix **C** for the NHB Report and regulatory correspondence). These species include, hairy thoroughwort, large whorled pogonia, ringed boghaunter, Blanding's Turtle, northern black racer, spotted turtle, dragon's-mouth, Jefferson/blue-sotted Salamander Complex, smooth green snake, wood turtle, dwarf huckleberry, appressed bog-clubmoss, and foxtail bog-clubmoss. GZA has coordinated with New Hampshire Fish and Game (NHFG) and NHB to confirm requested best management practices requested to support approval of this Alteration of Terrain Permit Application. Typical of similar Eversource projects, GZA is retained to complete construction oversight and construction personnel will be made aware of the potential presence of spotted, wood, and Blanding's turtles, as well as eastern hognose snake and black racer snake. In addition, construction personnel will be made aware of the potential to encounter Blanding's turtle, wood turtle, and spotted turtle more frequently during turtle nesting season from late May through the beginning of July. GZA will notify the NHFG and NHB of any rare species observations for inclusion in the statewide database.

In addition, Eversource will incorporate the following reptile construction Best Management Practices (BMPs) typically requested by NHFG as general routine BMPs:

- Prior to daily construction activities, timber matting will be reviewed for snakes and turtles. GZA will provide an environmental addendum to the daily tailboards by the contracts to include guidance on protocols for snakes and provide identification for spotted turtle, wood turtle, Blanding's turtle, and northern black racer snake.
- Observed snakes and turtles will be moved off of construction access roads to limit and prevent mortality to snakes and turtles during construction.
- Erosion control matting, if utilized, will consist of jute matting. Matting with plastic mesh will be avoided to limit unintentional mortality to snakes.
- At the conclusion of the project, a summary report of any rare species observations will be provided to the NHFG Nongame Program.
- Impacts on vernal pools and potential vernal pools will be avoided.
- If spotted, wood, or Blanding's turtles are found laying eggs in a work area, please contact Melissa Doperalski (603-479-1129 cell) or Josh Megyesy (978-578-0802 cell) for further instructions.
- All observations of Eastern hognose snakes seen at any time must be immediately reported to the NHFG Department (Melissa Doperalski or Josh Megyesy) for further instructions. Please attempt to photograph this species to send it to us for verification.

2.3.4 Identification of Cultural and Historical Resources

GZA has submitted a Request for Project Review (RPR) to the New Hampshire Division of Historical Resources (NHDHR) for the proposed project.

In 2018 and 2019 GZA engaged CHG to conduct Phase IA Archeological Assessment along the 391 Transmission Line in Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester and Strafford, New Hampshire. Results of the Phase IA require Phase IB work for some work locations.

GZA will engage CHG to complete Phase IB for proposed access and work pad locations as shown on plans created by GZA and dated February 28, 2022. CHG will conduct Phase IB Survey throughout the potentially significant archaeological sites located in the project area.

In 2014 Victoria Bunker Inc (VBI) conducted a Phase IB Archeological Assessment along select areas of the 391 Transmission Line in Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester and Strafford, New Hampshire. Results of a Phase IB conducted at 391 Structure 177 require further testing.

GZA will engage CHG to complete Phase II for proposed access and work pad location at 391 Structure 177 as shown on plans created by GZA and dated February 28, 2022. CHG will conduct Phase II Survey throughout the potentially significant archaeological site located in the project area.

3.0 EXISTING CONDITIONS

The proposed project is located within the existing and maintained 391, 373 and 385 Transmission Line ROW. The proposed project work areas subject to the Alteration of Terrain permit cross through portions of five towns. Existing dirt and/or grass access routes currently used for access to existing utility structures within the ROW are proposed to be improved using gravel and stone as a part of a routine structure maintenance project. Proposed access road improvements include 12- to 16-foot-wide gravel and stone roads with a 20-foot total width limit of disturbance. Based on NRCS soil mapping, existing upland soils are primarily fine sandy loams or sandy loams and are typically stony or very stony. Slopes are variable and generally range from 0 to 60%, with an average of approximately 8-25%.

The project includes areas of uplands and wetlands located in primarily rural farmland and forested areas. In uplands, the shrub layer contains sweet fern (*Comptonia peregrina*), witch hazel (*Hamamelis virginiana*), raspberry (*Rubus idaeus*), white pine (*Pinus strobus*), eastern hemlock (*Tsuga canadensis*), white ash (*Fraxinus americana*), striped maple (*Acer pensylvanicum*), American beech (*Fagus grandifolia*), and sugar maple (*Acer saccharum*). The herbaceous layer contains goldenrod (*Solidago* spp.), hay scented fern (*Dennstaetia punctilobula*), and bracken fern (*Pteridium aquilinum*).

Wetlands in the ROW primarily consist of palustrine emergent (PEM) or palustrine scrub shrub (PSS) systems that are seasonally saturated. The shrub layer contains white meadowsweet (*Spiraea alba*), steeplebush (*Spiraea tomentosa*), winterberry holly (*Ilex verticillata*), gray birch (*Betula populifolia*), speckled alder (*Alnus incana*), yellow birch (*Betula alleghaniensis*), willow (*Salix* spp.), and balsam fir (*Abies balsamea*). The herbaceous layer contains goldenrod, cinnamon fern (*Osmundastrum cinnamomeum*), sensitive fern (*Onoclea sensibilis*), royal fern (*Osmuna regalis*), fringed sedge (*Carex crinita*), lurid sedge (*Carex lurida*), woolgrass (*Scirpus cyperinus*), jewel weed (*Impatiens capensis*), cotton sedge (*Eriophorum vaginatum*), broad-leaved cattail (*Typha latifolia*), boneset (*Eupatorium* spp.), rattlesnake grass (*Glyceria canadensis*), Canada rush (*Juncus canadensis*), and soft rush (*Juncus effusus*).

Existing conditions along the 391, 373, and 385 Transmission Line are discussed below by areas subject to jurisdiction under the Alteration of Terrain Law and Rules and consistent with discussions with the AoT Bureau for Eversource Line projects.

3.1 AOT AREA A – TOWN OF DERRY

Area A begins on the west side of Bypass 28 at 391 Structure 326 and continues to 391 Structure 311 at the town line between Derry and Auburn. This stretch includes wetland impact areas. This portion of the ROW is located in primarily forested undeveloped areas of Derry as well as near rural areas and lacks documented drainage structures in the proposed access route.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area A includes:

- 391 Structures 326, and 373 Structures 320, 319, 318, and 317 Work Pads, and
- Access 373 Structure 317 to 373 Structure 316.

3.1.1 Surface and Groundwater Protection – Area A

There are no identified streams within this portion of the project area (see Figure **3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in six wetland systems for access and work pad placement. A NHDES Statutory Permit by Notification (SPN) will be submitted for temporary wetland impacts for the proposed project in the Town of Derry. Temporary wetland and upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	9,301

According to **Figure 3**, Structure 391-326 is located within the quarter mile buffer of "Surface Waters with Impairments (2016)," with the listed impairment being Chloride. There are no direct impacts to stream systems as part of this project. Area A is not located within any of the additional AoT screening layers. These layers include "Outstanding Resource Water Watershed," "Class A Surface Water (RSA 485 A9) Watersheds," "Watersheds with Chloride Impairments 2016," "All Lakes within a Quarter Mile Buffer," "Wellhead Protection Areas," "Groundwater Classification Areas GA1," "Groundwater Classification Areas GA2," "Groundwater Classification Areas GAA," and "Water Supply Intake Protection."

3.1.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area A

Based on review of the FEMA Flood Insurance layer, a portion of Area C including Structure 391-326 as well as associated access and work pad, is located within a mapped 100-year floodplain area identified as Zone AE. It is not anticipated that the addition of gravel will impact the flood capacity of Area A. Based on review of the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), the proposed work pad and access for Structure 391-326 is not located with a 250-ft Protected Shoreland.

3.2 AOT AREA B – TOWN OF AUBURN

Area B begins at 373 Structure 316 north of the Town of Derry and Town of Auburn Town Line. Area B continues in a north and northeasterly direction to the Town of Auburn and Town of Chester Town Line. This stretch includes wetland areas. This portion of the ROW is located in a primarily forested undeveloped areas in the Town of Auburn.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area B includes:

- 373 Structure 316 and 315 Work Pads, and

3.2.1 Surface and Groundwater Protection – Area B

There are no identified streams within this portion of the project area (see **Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in two wetland systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the Town of Auburn. Temporary wetland matting and temporary upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	808

According to Figure 3, Area B is located within "Watersheds with Chloride Impairments 2016" AoT screening layer. There are no direct impacts to stream systems as part of this project. Area B is not located within any of the additional AoT screening layers. These layers include "Outstanding Resource Water Watershed," "Water Supply Intake Protection Area," "Surface Water with Impairments Quarter Mile Buffer," "Class A Surface Water (RSA 485 A9) Watersheds," "All Lakes within a Quarter Mile Buffer," "Wellhead Protection Areas," "Groundwater Classification Areas," and "Water Supply Intake Protection."

3.2.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area B

Based on review of the FEMA Flood Insurance layer, Area B is not located within a mapped 100-year floodplain area identified as Zone A. According to the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based review of the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.3 AOT AREA C – TOWN OF CHESTER

Area C begins at 391 Structure 309 just northeast of the Auburn and Chester Town Line and continues northeasterly to 391 Structure 268 at the Chester and Raymond Town Line. This stretch includes wetland areas This portion of the ROW is located in a primarily forested undeveloped areas in the Town of Chester.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area C includes:

- 373 Structure 300, 299, 298, 297, 296, 295, 276, 275, and 391 Structures 294, 274 and 272 Work Pads, and
- Access roads from 391 Structure 298 to 391 Structure 296 and from 391 Structure 274 to 391 Structure 272.

3.3.1 Surface and Groundwater Protection – Area C

There are no identified streams within this portion of the project area (see **Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in five wetland

systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the Town of Chester. Temporary wetland matting and temporary upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	35,589

According to Figure 3, there are no portions of Area C that are located within any of the additional AoT screening layers. These layers include "Watersheds with Chloride Impairments 2016," "Outstanding Resource Water Watershed," "Water Supply Intake Protection Area," "Surface Water with Impairments Quarter Mile Buffer," "Class A Surface Water (RSA 485 A9) Watersheds," "All Lakes within a Quarter Mile Buffer," "Wellhead Protection Areas," "Groundwater Classification Areas," and "Water Supply Intake Protection."

3.3.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area C

Based on review of the FEMA Flood Insurance layer, Area B is not located within a mapped 100-year floodplain area identified as Zone A. Based on review of the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.4 AOT AREA D – TOWN OF RAYMOND

Area D begins at 391 Structure 367 just northeast of the Chester and Raymond Town Line and continues north and northwesterly to 391 Structure 253 at the Raymond and Candia Town Line. Area D continues on the east side of the Candia and Raymond Town Line from 391 Structure 245 to 391 Structure 220. Area D includes wetland area impacts. This portion of the ROW is located in a primarily forested undeveloped areas and residential areas in the Town of Raymond.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area D includes:

- 373 Structures 264, 263, 262, 256, 255, and 235 Work Pads, and
- Access roads from 373 Structures 364 to 373 Structure 262.

3.4.1 Surface and Groundwater Protection – Area D

There is one named stream (Fordway Brook) and one unnamed stream within this portion of the project area associated with Wetlands RAW-50 (Fordway Brook), RAW-39 (unnamed stream) (see **Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in eight wetland systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the Town of Raymond. Temporary wetland matting and temporary upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	Impact (sq. ft.)
Wetland Matting	54,307

According to Figure 3, a portion of Area D at Structure 373-262 is location within "All Lakes with a Quarter Mile Buffer." A portion of Area D at Structure 391-238 and 373-235, within "Wellhead Protection Areas." It is not anticipated that the proposed project will have significant impacts to groundwater or surface water as the proposed ground disturbance is for minor grading and addition of stone on the ground surface. Area D is not located within "Watersheds with Chloride Impairments 2016," "Outstanding Resource Water Watershed," "Water Supply Intake Protection Area," "Surface Water with Impairments Quarter Mile Buffer," "Class A Surface Water (RSA 485 A9) Watersheds," "Groundwater Classification Areas," and "Water Supply Intake Protection."

3.4.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area D

Based on review of the FEMA Flood Insurance layer, a portion of Area D including Structure 373-364 and 373-255 and associated access and work pads are located within a mapped 100-year floodplain area identified as Zone A. It is not anticipated that the addition of gravel will impact the flood capacity of Area D. Based on review of the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.5 AOT AREA E – TOWN OF CANDIA

Area E begins at 373 Structure 347 just west of the Candia and Raymond Town Line and continues north to the Candia and Raymond Town Line. Area E includes wetland area impacts. This portion of the ROW is located in a primarily residential and some forested undeveloped areas in the Town of Candia.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area E includes:

- 373 Structure 247 and 246 Work Pads, and
- Access roads from 373 Structure 247 and 246.

3.5.1 Surface and Groundwater Protection – Area E

There are no identified streams within this portion of the project area (see **Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in one wetland systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the Town of Candia. Temporary wetland matting and temporary upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	Impact (sq. ft.)
Wetland Matting	761

According to Figure 3, a portion of Area E from Structure 373-247 and 373-246 is located within "Surface Waters with Impairments 2016 with Quarter Mile Buffer," with the listed impairment being Benthic-Macroinvertebrate

Bioassessments. It is not anticipated that the proposed project will have significant impacts to groundwater or surface water as the proposed ground disturbance is for minor grading and addition of stone on the ground surface. Area E is not located within "Outstanding Resource Water Watershed," "Water Supply Intake Protection Area," "Wellhead Protection Areas," "Class A Surface Water (RSA 485 A9) Watersheds," "Watersheds with Chloride Impairments 2016," "All Lakes within a Quarter Mile Buffer," "Groundwater Classification Areas."

3.5.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area E

Based on review of the FEMA Flood Insurance layer, Area E is not located within a mapped 100-year floodplain area. According to the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.6 AOT AREA F – TOWN OF DEERFIELD

Area F begins on the north side of the Candia and Deerfield Town Line and continues to 391 Structure 155 at the town line between Deerfield and Northwood. This stretch includes wetland impact areas and wetland buffer areas. This portion of the ROW is located in primarily forested undeveloped areas of Deerfield as well as near rural areas and lacks documented drainage structures in the proposed access route.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area F includes:

- 391 Structures 192, 191, 177, 163 and 373 Structure 202 and 186 Work Pads, and
- Access from 391 Structure 192 to 373 Structure 186, and 391 Structure 168 to 163.

3.6.1 Surface and Groundwater Protection – Area F

There are no identified streams within this portion of the project area (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in six wetland systems for access and work pad placement. A NHDES Statutory Permit by Notification (SPN) will be submitted for temporary wetland impacts for the proposed project in the Town of Derry. Temporary wetland and upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	18,916
Wetland Buffer	57, 146

Area E does not overlap additional AoT screen layers (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). There are no direct impacts to stream systems as part of this project. These layers include "Outstanding Resource Water Watershed," "Class A Surface Water (RSA 485 A9) Watersheds," "Watersheds with Chloride Impairments 2016," "All Lakes within a Quarter Mile Buffer," "Wellhead Protection Areas," "Groundwater Classification Areas GA1," Groundwater Classification Area GA2," "Groundwater Classification Areas GAA," and "Water Supply Intake Protection."

3.6.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area F

Based on review of the FEMA Flood Insurance layer, a portion of Area F including Structure 391-163 and associated access and work pads are located within a mapped 100-year floodplain area identified as Zone A. It is not anticipated that the addition of gravel will impact the flood capacity of Area F. Based on review of the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.7 AOT AREA G – TOWN OF NORTHWOOD

Area G begins at 373 Structure 150 north of the Town of Deerfield and Town of Northwood Town Line. Area G continues in a north and northeasterly direction to the Town of Northwood and Town of Strafford Town Line at 385 Structure 122. This stretch includes wetland and upland areas. This portion of the ROW is located in a primarily forested undeveloped areas in the Town of Northwood.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area G includes:

- 391 Structures 147, 146, 145, 133, 132, 131, 130 and 385 Structures 144, 127, 126, and 125 Work Pads, and
- Access from 391 Structure 147 to 145 and 391 Structure 133 to 385 Structure 125.

3.7.1 Surface and Groundwater Protection – Area G

There are three unnamed streams within this portion of the project area associated with Wetland NW-6, NW-5, and NW-4 (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in seven wetland systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the Town of Northwood. Temporary wetland matting and temporary upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	22,916
Upland Matting	35,544

Area G does not overlap AoT screening layers (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). These layers include "Outstanding Resource Water Watershed," "Water Supply Intake Protection Area," "Surface Water with Impairments Quarter Mile Buffer," "Class A Surface Water (RSA 485 A9) Watersheds," "Watersheds with Chloride Impairments 2016," "All Lakes within a Quarter Mile Buffer," "Wellhead Protection Areas," "Groundwater Classification Areas," and "Water Supply Intake Protection."

3.7.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area G

Based on review of the FEMA Flood Insurance layer, a portion of Area G is located within a mapped 100-year floodplain area identified as Zone A. It is not anticipated that the addition of gravel will impact the flood capacity of Area G. Based on review of the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there

is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.8 AOT AREA H – TOWN OF STRAFFORD

Area H begins at 391 Structure 126 just north of the Northwood and Strafford Town Line and continues northeasterly to 391 Structure 60 at the Strafford and Rochester City Line. This stretch includes wetland and upland areas. This portion of the ROW is located in a primarily forested undeveloped areas in the Town of Chester.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area H includes:

- 391 Structure 121, 116, 78, 77, 76, 75, 73, 72, 71, 68, and 385 Structures 80, 78, 77, 72, 71, 69, 68, 65 Work Pads, and
- Access roads from 385 Structure 81 to 77, 385 Structure 72 to 391 Structure 71, 391 Structure 75 to 391 Structure 71 and 391 Structure 68 to 391 Structure 66.

3.8.1 Surface and Groundwater Protection – Area H

There are two unnamed streams within this portion of the project area associated with Wetland SW-13, SW-12, and SW-05 (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in 11 wetland systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the Town of Strafford. Temporary wetland matting and temporary upland matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	99,016
Upland Matting	12,782

A portion of Area H at Structure 391-121, and 385-80 and associated access are located within both "Surface Water with Impairments Quarter Mile Buffer," with the listed impairment being Dissolved Oxygen (mg/L) and "Water Supply Intake Protection Areas" (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). A portion of Area H at Structure 391-116, and 385-78 and associated access are located within "Water Supply Intake Protection Areas." A portion of Area H at Structure 391-71, 391-68 and 385-65 and associated access are located within "Surface Water with Impairments Quarter Mile Buffer," with the listed impairment being low flow alterations. It is not anticipated that the proposed project will have direct impacts to groundwater as the proposed ground disturbance is for minor grading and addition of stone on the ground surface. Area H does not overlap any other AoT screening layers. These layers include "Outstanding Resource Water Watershed," "Class A Surface Water (RSA 485 A9) Watersheds," "Wellhead Protections Areas," "Watersheds with Chloride Impairments 2016," "All Lakes within a Quarter Mile Buffer," "Groundwater Classification Areas GA2," and "Groundwater Classification Area GA1 or GAA."

3.8.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area H

Based on review of the FEMA Flood Insurance layer, Area H is not located within a mapped 100-year floodplain area (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). In addition, based on review of the

Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

3.9 AOT AREA I – CITY OF ROCHESTER

Area I begins at 391 Structure 59 just northeast of the Strafford and Rochester Town Line and continues north and northwesterly to the New Hampshire and Maine State Line. Area I includes wetland area impacts. This portion of the ROW is located in a primarily developed and residential areas in the City of Rochester.

Land disturbance subject to Alteration of Terrain Law and Rules due to *Env-Wq 1502.58 (b) (2)* (see *Section 5.1.2* below) within Area I includes:

- 391 Structure 46 and 385 Structures 43, 34, 33, 24, and 23 Work Pads, and
- Access roads from 391 Structure 47 to 391 Structure 46 and 385 Structure 23 to 385 Structure 24.

3.9.1 Surface and Groundwater Protection – Area I

There are no identified streams within Area I (**see Figure 3 – Surface Water and Groundwater Overlay Plans**). This portion of the project area includes temporary wetland matting in eight wetland systems for access and work pad placement. A NHDES SPN will be submitted for temporary wetland impacts for the proposed project in the City of Rochester. Temporary wetland matting matting totals are summarized in the table below. AoT disturbance area is summarized in *Section 5.1.2*.

Temporary Matting	**Impact (sq. ft.)**
Wetland Matting	26,751

A portion of Area I at Structures 385-34 and 33, and associated access are located within "Wellhead Protection Areas." It is not anticipated that the proposed project will have significant impacts to groundwater or surface water as the proposed ground disturbance is for minor grading and addition of stone on the ground surface. Area D is not located within "Outstanding Resource Water Watershed," "Water Supply Intake Protection Area," "Class A Surface Water (RSA 485 A9) Watersheds," "Watersheds with Chloride Impairments 2016," "Groundwater Classification Areas GA2," "All Lakes within a Quarter Mile Buffer," and "Groundwater Classification Area GA1 or GAA."

3.9.2 FEMA 100-year Floodplain, Shoreland Protection, Designated Rivers – Area I

Based on review of the FEMA Flood Insurance layer, Area I is not located within a mapped 100-year floodplain area. In addition, based on review of the Consolidated List of Water Bodies Subject to RSA 483-B (May 11, 2020), there is no proposed work within the 250-ft of a protected shoreland. Based on the NHDES Designated River Corridor Web Map, there is no proposed work within a quarter mile of a designated river protected under RSA 483.

4.0 PROJECT DESCRIPTION

4.1 STRUCTURE REPLACEMENT AND MAINTENANCE

As previously mentioned, the proposed project includes the replacement of 64 existing utility structures within AoT areas that must be replaced due to environmental damage. The process for replacing structures consists of drilling approximately 4-ft diameter holes to install a caisson approximately 7 to 15 ft below the ground surface. New structures will be installed in caissons and backfilled with clean, suitable materials. Excess soil from drilling will be disposed in upland areas at a minimum distance of 100 ft from wetland areas. Any disturbed upland and wetland areas will be restored or stabilized upon completion of work. Anchors will also be installed to stabilize new structures. Anchors will be installed by excavating trenches, installing the concrete block anchors, and backfilling trenches. Backfill for anchors in wetlands will consist of hydric soils to maintain hydric conditions in the soil.

Old structures will be cut at the ground surface. In addition to the removal of old structures, old cross-arms, wires, and accessory equipment will be removed off-Site and disposed. Old structure butts may be dug up and removed depending on field conditions and whether or not the remaining pole butt would impact the structural integrity of new structures.

4.1.1 Access

The proposed structure replacement project utilizes existing access routes within the existing 391, 373, and 385 ROW to the greatest extent practicable. The majority of existing access routes are comprised of dirt or grassy areas and are proposed to be improved as part of this project. Proposed access routes are shown on the plans in both **Figures 3 and 4**. Access into the existing ROW will be obtained from various state and local roadways and private properties where permission has been obtained. Proposed access routes as shown on **Figures 3 and 4** were identified to minimize ground disturbance to the greatest extent practicable while providing safe and efficient access to existing utility structures. Access through existing wetlands within the project area will be completed using temporary timber matting.

4.1.1.1 Road Construction

Proposed access road improvements include 12- to 16-foot-wide gravel and stone roads with a 20-foot total width limit of disturbance. The roads will provide access to existing utility structures for routine maintenance activities. Improved access will provide reliable, permanent, and quick efficient access to utility structures for future maintenance activities and when emergency repairs are required (see **Appendix E – Photo Log**).

4.1.1.2 Wetland and Upland Temporary Matting

Access through existing wetlands in the project area will be completed using temporary timber matting to minimize and prevent rutting in the wetlands (see **Figure 4- Alteration of Terrain Permitting Plans**). In addition, upland matting may be used rather than improving access with gravel and stone if access is necessary through maintained property owner lawns or farm fields.

4.1.2 Work Pad Construction

The proposed project includes the construction of 100-foot by 100-foot gravel work pads to stage construction equipment and vehicles necessary to replace utility structures. Work pads will be constructed using clean

modified riprap (6- to 8-inch diameter) or equivalent stone. In addition, the work pad will be top-dressed with 1.5- to 3-inch diameter clean stone. Lastly, disturbed areas in proximity to the final work pad configuration will be stabilized with an upland seed mix. Upon completion of work, work pads will be reduced to a 30-foot by 60- foot gravel maintenance work pad. The restored portions of the larger gravel work pad will be seeded and mulched for restoration.

Proposed work pads in wetland areas will be constructed using temporary timber matting and removed upon completion of work.

4.2 CONSTRUCTION SEQUENCE

This proposed project is scheduled to begin in July 2022. The work is proposed to be undertaken during the summer of 2022 into the fall and winter of 2022 into 2023 following the receipt of all regulatory approvals. The following is a description of the anticipated construction sequence for this type of routine maintenance work. Once contractor(s) are scheduled, a more finalized sequence and schedule will be determined.

1) Install sediment and erosion controls in proposed locations as shown in **Figure 4**.
2) Upgrade access routes and build work pads. Timber matting to be used in uplands and wetlands as depicted in **Figure 4**.
3) Conduct drilling activities including drilling of approximately 4-ft diameter holes for caisson placement approximately 7-15-ft below ground surface.
4) Conduct structure replacement activities including installation of new structures, and removal of old structures and wire.
5) Reduce 100-foot by 100-foot gravel work pads to approximate 30-foot x 60-foot gravel work pads to remain after construction and apply seed and mulch to restored portions of gravel work pad.
6) Remove temporary timber matting and stabilized exposed soils within the ROW and restore temporarily disturbed wetland areas with appropriate wetland seed mix, as necessary.
7) Remove erosion and sedimentation controls following stabilization.

4.3 BEST MANAGEMENT PRACTICES

Work will be conducted in accordance with Best Management Practices (BMPs) as designated by the NHDES Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire dated March 2019. By implementing these BMPs, impacts to both wetland and upland areas will be minimized and prevented to the greatest extent practicable.

Where necessary, perimeter protective measures consisting of a silt fence, straw wattle, mulch, and straw bales will be installed around the structures to minimize potential impacts to nearby resource areas. Water bars will be installed in areas of road improvements with steep slopes as identified by the Contractor. If necessary and based on localized site conditions, a silt fence may be used. Disturbed soil will be seeded and mulched with hay or straw for stabilization as needed following completion of work. No equipment or material will be stored within wetland areas. Erosion controls will be implemented during construction as detailed in Notesheets 1 through 3 of **Figures 3 and 4** to minimize potential impacts during construction (see **Figure 3 – Surface Water and Groundwater Overlay Plans** and **Figure 4 – Alteration of Terrain Permitting Plans**).

Timber matting will be used in wetlands and in some upland areas to minimize impacts and provide level work pads. Upon completion of work where timber matting is implemented in upland areas, those upland areas will be restored and stabilized to pre-existing conditions, and areas of exposed soils will be seeded and/or mulched. Additionally, should any removal of BMPs be necessary, it will occur during restoration activities.

5.0 REGULATORY COMPLIANCE

5.1 ALTERATION OF TERRAIN

The NHDES requires an AoT permit whenever a project proposes to disturb more than 100,000 sq. ft. of terrain (50,000 sq. ft. if within a protected shoreland). This NHDES requirement, which is found in Administrative Rule Env-Wq-1500, is intended to protect New Hampshire surface waters by controlling soil erosion and managing stormwater runoff from developed areas. The project contains nine AoT regulated areas (referred to respectively as Areas A, B, C, D, E, F, G, H and I) along the 391, 373 and 385 Transmission Line ROW based on continuous areas of disturbance. Details on impacts in each regulated area are provided below in *Section 5.1.2* Quantification of Impacts Subject to AoT.

5.1.1 Waiver Request: Stormwater Drainage Report; Drainage Area Plan; Hydrologic Soil Group Plans (Env- WQ 15.09)

Per Env-Wq 1509.02, a waiver is being requested from the requirements to prepare a Stormwater Drainage Report, Drainage Area Plans, and Hydrologic Soil Group Plans because of the new impervious surface is limited to the footprint of new transmission line structures. It is not anticipated that the proposed structures will have a significant impact on site drainage patterns. Accordingly, stormwater treatment practices are not proposed. A formal waiver request is provided in **Appendix F**.

5.1.2 Quantification of Impacts Subject to AOT

The project requires approximately 1,140,018 square feet (sq. ft.) of total impact, including 268,365 sq. ft. of temporary wetland matting, 48,326 sq. ft. of temporary upland matting, 57,146 sq. ft. of temporary wetland buffer impact and 766,181 sq. ft. of ground disturbance. Specific areas and construction activities that significantly alter the terrain are detailed below. Additional details are shown in **Figure 4**.

AoT Area A – Derry	
Map Sheets 1 to 3	
Disturbance Type	**Impact (sq. ft)**
New Access	14,813
Gravel Work Pad	40,462
Total AoT Disturbed Area	***55,275***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area B – Town of Auburn	
Map Sheets 3 to 4	
Disturbance Type	**Impact (sq. ft)**
New Access	1,386
Gravel Work Pad	17,413
Total AoT Disturbed Area	***18,799***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area C – Town of Chester	
Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area D – Town of Raymond	
Map Sheets 11 to 14, 16	
Disturbance Type	**Impact (sq. ft)**
New Access	24,233
Gravel Work Pad	50,319
Total AoT Disturbed Area	***74,552***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area E – Town of Candia	
Map Sheets 15	
Disturbance Type	**Impact (sq. ft)**
New Access	7,711
Gravel Work Pad	19,897
Total AoT Disturbed Area	***27,608***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area F – Town of Deerfield	
Map Sheets 17-22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area G – Town of Northwood	
Map Sheets 23 to 27	
Disturbance Type	**Impact (sq. ft)**
New Access	65,621
Gravel Work Pad	74,234
Total AoT Disturbed Area	***139,855***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area H – Town of Strafford	
Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

AoT Area I – City of Rochester	
Map Sheets 38 to 41	
Disturbance Type	**Impact (sq. ft)**
New Access	11,386
Gravel Work Pad	45,016
Total AoT Disturbed Area	***56,402***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."	
-Work pad dimensions: 100-ft x 100-ft; Access road width: 16-ft	

5.2 OTHER REGULATORY PROGRAMS

Other regulatory permits and notifications required for the proposed project are summarized below.

Agency	**Permit/Notification**		**Status**
Local			
Town of Deerfield	Conditional Use		*Approved*
Town of Chester	Conditional Use		*Approved*
State			
NHDES	Statutory Permit by Notification		
	Town/City	SPN File No.	
	Derry	TBD	
	Auburn	TBD	
	Chester	TBD	
	Raymond	TBD	
	Candia	TBD	
	Deerfield	TBD	
	Northwood	TBD	
	Strafford	TBD	
	Rochester	TBD	
NHDOT	Driveway Permits		*Pending*
Federal			
EPA (Construction General Permit)	Stormwater Pollution Prevention Plan (SWPPP)		*Pending*

The proposed project includes the replacement of 64 existing utility structures along the 391, 373, and 385 Transmission Line that exceed AoT impact thresholds. This includes a total of approximately 730,282 sq. ft. of impact associated with access improvements and work pad grading across five separate work areas. The proposed project is necessary for routine maintenance of the 391, 373, and 385 Transmission Line, and to ensure the long-term safety and reliability of the electrical infrastructure.

Figure 1 – USGS Topographic Map

Figure 2 – Orthophotograph Site Map

Figure 3 – Surface Water and Groundwater Overlay Plans

Figure 4 – Alteration of Terrain Permitting Plans

Appendix A – Alteration of Terrain Permit Application Form

Appendix B – Abutters List

Appendix C – New Hampshire Natural Heritage Bureau Report and E-Mail Review from NHB and New Hampshire Fish and Game

Appendix D – Natural Resources Conservation Service Web Soil Survey

Appendix E – Photo Log

Appendix F – Waiver Request

Appendix G – Certified Mail Receipts
[Reserved for DES certified mailing receipts]

GZA GeoEnvironmental, Inc.

ALTERATION OF TERRAIN PERMIT APPLICATION

Water Division/ Alteration of Terrain Bureau/ Land Resources Management
Check the Status of your Application: www.des.nh.gov/onestop

RSA/ Rule: RSA 485-A:17, Env-Wq 1500

Administrative Use Only	Administrative Use Only	Administrative Use Only	File Number: Check No. Amount: Initials:

1. APPLICANT INFORMATION (INTENDED PERMIT HOLDER)		
Applicant Name: Eversource Energy	Contact Name: Ashley Friend	
Email: ashley.friend@eversource.com	Daytime Telephone: 603-634-2992	
Mailing Address: 13 Legends Drive		
Town/City: Hooksett	State: NH	Zip Code: 03106
2. APPLICANT'S AGENT INFORMATION If none, check here: ☐		
Business Name: GZA GeoEnvironmental, Inc.	Contact Name: Conor Madison	
Email: conor.madison@gza.com	Daytime Telephone: 603-232-8784	
Address: 5 Commerce Park North, Suite 201		
Town/City: Bedford	State: NH	Zip Code: 03110
3. PROPERTY OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)		
Applicant Name: ROW consists of existing easements	Contact Name:	
Email:	Daytime Telephone:	
Mailing Address:		
Town/City:	State:	Zip Code:
4. PROPERTY OWNER'S AGENT INFORMATION If none, check here: ☒		
Business Name:	Contact Name:	
Email:	Daytime Telephone:	
Address:		
Town/City:	State:	Zip Code:
5. CONSULTANT INFORMATION If none, check here: ☐		
Engineering Firm: GZA GeoEnvironmental, Inc.	Contact Name: Conor Madison	
Email: conor.madison@gza.com	Daytime Telephone: 603-232-8784	
Address: 5 Commerce Park North, Suite 201		
Town/City: Bedford	State: NH	Zip Code: 03110

6. PROJECT TYPE

☐ Excavation Only ☐ Residential ☐ Commercial ☐ Golf Course ☐ School ☐ Municipal
☐ Agricultural ☐ Land Conversion ☒ Other: Utility

7. PROJECT LOCATION INFORMATION

Project Name: 391/373/385 Transsmission Line Structure Replacement Project

Street/Road Address: Existing Utility Right-of-Way

Town/City: Auburn, Candia, Chester, Deerfield, Derry, (MORE)	County: Rockingham and Strafford

Tax Map: See attached	Block:	Lot Number:	Unit:

Location Coordinates: 399796N, 972950E ☐ Latitude/Longitude ☐ UTM ☒ State Plane

Post-development, will the proposed project withdraw from or directly discharge to any of the following? If yes, identify the purpose.

1. Stream or Wetland Purpose:	☐ Yes ☒ No	☐ Withdrawal	☐ Discharge
2. Man-made pond created by impounding a stream or wetland Purpose:	☐ Yes ☒ No	☐ Withdrawal	☐ Discharge
3. Unlined pond dug into the water table Purpose:	☐ Yes ☒ No	☐ Withdrawal	☐ Discharge

Post-development, will the proposed project discharge to:

- A surface water impaired for phosphorus and/or nitrogen? ☒ No ☐ **Yes - include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen**
- A Class A surface water or Outstanding Resource Water? ☒ No ☐ **Yes - include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen**
- A lake or pond not covered previously? ☒ No ☐ **Yes - include information to demonstrate that project will not cause net increase in phosphorus in the lake or pond**

Is the project a High Load area? ☐ Yes ☒ No
If yes, specify the type of high load land use or activity: _____

Is the project within a Water Supply Intake Protection Area (WSIPA)? ☒ Yes ☐ No
Is the project within a Groundwater Protection Area (GPA)? ☒ Yes ☐ No
Will the well setbacks identified in Env-Wq 1508.02 be met? ☒ Yes ☐ No

Note: Guidance document titled "*Using NHDES's OneStop WebGIS to Locate Protection Areas*" is available online. For more details on the restrictions in these areas, read Chapter 3.1 in Volume 2 of the NH Stormwater Manual.

Is any part of the property within the 100-year floodplain? ☒ Yes ☐ No
If yes: Cut volume: N/A cubic feet within the 100-year floodplain
Fill volume: N/A cubic feet within the 100-year floodplain

☐ Project **IS** within **¼ mile of a designated river** Name of River:
☒ Project is **NOT** within ¼ mile of a designated river

☐ Project **IS** within **a Coastal/Great Bay Region community - include info required by Env-Wq 1503.08(l) if applicable**
☒ Project is **NOT** within a Coastal/Great Bay Region community

8. BRIEF PROJECT DESCRIPTION (PLEASE DO NOT REPLY "SEE ATTACHED")

The proposed project includes the replacement of select utility structures in areas exceeding AoT thresholds along the existing 391, 373, and 385 Transmission Lines, which crosses through portions of Auburn, Candia, Chester, Derry, Deerfield, Northwood, Rochester, Raymond, and Strafford.

9. IF APPLICABLE, DESCRIBE ANY WORK STARTED PRIOR TO RECEIVING PERMIT

No work has been started prior to receiving a permit.

10. ADDITIONAL REQUIRED INFORMATION

A. Date a copy of the application was sent to the municipality as required by Env-Wq 1503.05(e)[1]: 6/9/2022.

(Attach proof of delivery)

B. Date a copy of the application was sent to the local river advisory committee if required by Env-Wq 1503.05(e)[2]: / / .

(Attach proof of delivery)

C. Type of plan required: ☐ Land Conversion ☐ Detailed Development ☒ Excavation, Grading & Reclamation ☐ Steep Slope

D. Additional plans required: ☐ Stormwater Drainage & Hydrologic Soil Groups ☐ Source Control ☐ Chloride Management

E. Total area of disturbance: 766,181 square feet

F. Additional impervious cover as a result of the project: _____ square feet (use the "-" symbol to indicate a net reduction in impervious coverage).

Total final impervious cover: 0 square feet

G. Total undisturbed cover: 0 square feet

H. Number of lots proposed: 0

I. Total length of roadway: 0 linear feet

J. Name(s) of receiving water(s): 0

K. Identify all other NHDES permits required for the project, and for each indicate whether an application has been filed and is pending, or if the required approval has been issued provide the permit number, registration date, or approval letter number, as applicable.

Type of Approval	Application Filed?	Status	
		Pending	If Issued:
1. Water Supply Approval	☐ Yes ☒ No ☐ N/A	☐	Permit number:
2. Wetlands Permit	☒ Yes ☐ No ☐ N/A	☒	Permit number: TBD
3. Shoreland Permit	☒ Yes ☐ No ☐ N/A	☒	Permit number: TBD
4. UIC Registration	☐ Yes ☒ No ☐ N/A	☐	Registration date:
5. Large/Small Community Well Approval	☐ Yes ☒ No ☐ N/A	☐	Approval letter date:
6. Large Groundwater Withdrawal Permit	☐ Yes ☒ No ☐ N/A	☐	Permit number:
7. Other:	☐ Yes ☐ No	☐	Permit number:

L. List all species identified by the Natural Heritage Bureau as threatened or endangered or of concern: None

M. Using NHDES's Web GIS OneStop program (www2.des.state.nh.us/gis/onestop/), with the Surface Water Impairment layer turned on, list the impairments identified for each receiving water. If no pollutants are listed, enter "N/A." BENTHIC-MACROINVERTEBRATE BIOASSESSMENTS, 560, DISSOVLED OXYGEN , CHLORIDE AND LOW FLOW ALTERATIONS

N. Did the applicant/applicant's agent have a pre-application meeting with AOT staff? ☒ Yes ☐ No

If yes, name of staff member: Ridgely Mauck

O. Will blasting of bedrock be required? ☐ Yes ☒ No If yes, estimated quantity of blast rock: _____ cubic yards

If yes, standard blasting BMP notes must be placed on the plans, available at:
http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-10-12.pdf

NOTE: If greater than 5,000 cubic yards of blast rock will be generated, a groundwater monitoring program must be developed and submitted to NHDES. Contact AOT staff for additional detail.

[1] Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the governing body of each municipality in which the project is proposed.

[2] Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the Local River Advisory Committee, if the project is within ¼ mile of a designated river.

11. CHECK ALL APPLICATION ATTACHMENTS THAT APPLY (SUBMIT WITH APPLICATION IN ORDER LISTED)

LOOSE:

- ☒ Signed application form: des.nh.gov/organization/divisions/water/aot/index.htm (with attached proof(s) of delivery)
- ☒ Check for the application fee: des.nh.gov/organization/divisions/water/aot/fees.htm
- ☒ Color copy of a USGS map with the property boundaries outlined (1" = 2,000' scale)
- ☐ If Applicant is not the property owner, proof that the applicant will have a legal right to undertake the project on the property if a permit is issued to the applicant.

BIND IN A REPORT IN THE FOLLOWING ORDER:

- ☒ Copy of the signed application form & application checklist (des.nh.gov/organization/divisions/water/aot/index.htm)
- ☒ Copy of the check
- ☒ Copy of the USGS map with the property boundaries outlined (1" = 2,000' scale)
- ☐ Narrative of the project with a summary table of the peak discharge rate for the off-site discharge points
- ☒ Web GIS printout with the "Surface Water Impairments" layer turned on - http://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx
- ☒ Web GIS printouts with the AOT screening layers turned on - http://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx
- ☒ NHB letter using DataCheck Tool – www.nhdfl.org/about-forests-and-lands/bureaus/natural-heritage-bureau/
- ☒ The Web Soil Survey Map with project's watershed outlined – websoilsurvey.nrcs.usda.gov
- ☒ Aerial photograph (1" = 2,000' scale with the site boundaries outlined)
- ☒ Photographs representative of the site
- ☐ Groundwater Recharge Volume calculations (one worksheet for each permit application): des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
- ☐ BMP worksheets (one worksheet for each treatment system): des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
- ☐ Drainage analysis, stamped by a professional engineer (see Application Checklist for details)
- ☐ Riprap apron or other energy dissipation or stability calculations
- ☐ Site Specific Soil Survey report, stamped and with a certification note prepared by the soil scientist that the survey was done in accordance with the Site Specific Soil Mapping standards, *Site-Specific Soil Mapping Standards for NH & VT, SSSNNE Special Publication No. 3*.
- ☐ Infiltration Feasibility Report (example online) [Env-Wq 1503.08(f)(3)]
- ☐ Registration and Notification Form for Storm Water Infiltration to Groundwater (UIC Registration-for underground systems only, including drywells and trenches): (http://des.nh.gov/organization/divisions/water/dwgb/dwspp/gw_discharge)
- ☐ Inspection and maintenance manual with, if applicable, long term maintenance agreements [Env-Wq 1503.08(g)]
- ☐ Source control plan

PLANS:

- ☐ One set of design plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details)
- ☐ Pre & post-development color coded soil plans on 11" x 17" (see Application Checklist for details)
- ☐ Pre & post-development drainage area plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details)

100-YEAR FLOODPLAIN REPORT:

- ☐ All information required in Env-Wq 1503.09, submitted as a separate report.

ADDITIONAL INFORMATION RE: NUTRIENTS, CLIMATE

- ☒ See Checklist for Details

☒ **REVIEW APPLICATION FOR COMPLETENESS & CONFIRM INFORMATION LISTED ON THE APPLICATION IS INCLUDED WITH SUBMITTAL.**

12. REQUIRED SIGNATURES

AR By initialing here, I acknowledge that I am required by Env-Wq 1503.20(e) to submit a copy of all approved documents to the department in PDF format on a CD within one week after permit approval.

By signing below, I certify that:

- The information contained in or otherwise submitted with this application is true, complete, and not misleading to the best of my knowledge and belief;
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the application, revoke any permit that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer; and
- I understand that I am subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.

☒ **APPLICANT** ☐ **APPLICANT'S AGENT**:

Signature:  Date: 6/9/22

Name (print or type): Ashley Friend Title: Licensing and Permitting Specialist

☐ PROPERTY OWNER ☐ PROPERTY OWNER'S AGENT:

Signature: _____ Date: _____

Name (print or type): _____ Title: _____

ATTACHMENT A:
ALTERATION OF TERRAIN PERMIT APPLICATION CHECKLIST

Check the box to indicate the item has been provided or provide an explanation why the item does not apply.

DESIGN PLANS

☐ Plans printed on 34 - 36" by 22 - 24" white paper

☐ PE stamp

☒ Wetland delineation

☒ Temporary erosion control measures

☐ Treatment for all stormwater runoff from impervious surfaces such as roadways (including gravel roadways), parking areas, and non-residential roof runoff. Guidance on treatment BMPs can be found in Volume 2, Chapter 4 of the NH Stormwater Management Manual.

☒ Pre-existing 2-foot contours

☐ Proposed 2-foot contours

☐ Drainage easements protecting the drainage/treatment structures

☒ Compliance with the Wetlands Bureau, RSA 482- A http://des.nh.gov/organization/divisions/water/wetlands/index.htm. Note that artificial detention in wetlands is not allowed.

☒ Compliance with the Comprehensive Shoreland Protection Act, RSA 483-B. http://des.nh.gov/organization/divisions/water/wetlands/cspa

☐ Benches. Benching is needed if you have more than 20 feet change in elevation on a 2:1 slope, 30 feet change in elevation on a 3:1 slope, 40 feet change in elevation on a 4:1 slope.

☐ Check to see if any proposed ponds need state Dam permits.
http://des.nh.gov/organization/divisions/water/dam/documents/damdef.pdf

DETAILS

☐ Typical roadway x-section

☐ Detention basin with inverts noted on the outlet structure

☐ Stone berm level spreader

☐ Outlet protection – riprap aprons

☒ A general installation detail for an erosion control blanket

☒ Silt fences or mulch berm

☐ Storm drain inlet protection. Note that since hay bales must be embedded 4 inches into the ground, they are not to be used on hard surfaces such as pavement.

☒ Hay bale barriers

☐ Stone check dams

☒ Gravel construction exit

☐ Temporary sediment trap

☐ The treatment BMP's proposed

☐ Any innovative BMP's proposed

CONSTRUCTION SEQUENCE/EROSION CONTROL

☒ Note that the project is to be managed in a manner that meets the requirements and intent of RSA 430:53 and Chapter Agr 3800 relative to invasive species.

☒ Note that perimeter controls shall be installed prior to earth moving operations.

☐ Note that temporary water diversion (swales, basins, etc) must be used as necessary until areas are stabilized.

☐ Note that ponds and swales shall be installed early on in the construction sequence (before rough grading the site).

☐ Note that all ditches and swales shall be stabilized prior to directing runoff to them.

☐ Note that all roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.

☒ Note that all cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade

☒ Note that all erosion controls shall be inspected weekly AND after every half-inch of rainfall.

☒ Note the limits on the open area allowed, see Env-Wq 1505.02 for detailed information.

Example note: The smallest practical area shall be disturbed during construction, but in no case shall exceed 5 acres at any one time before disturbed areas are stabilized.

☒ Note the definition of the word "stable"

Example note: An area shall be considered stable if one of the following has occurred:

- Base course gravels have been installed in areas to be paved.
- A minimum of 85 percent vegetated growth has been established.
- A minimum of 3 inches of non-erosive material such stone or riprap has been installed.
- Or, erosion control blankets have been properly installed.

☒ Note the limit of time an area may be exposed
Example note: All areas shall be stabilized within 45 days of initial disturbance.

☒ Provide temporary and permanent seeding specifications. (Reed canary grass is listed in the Green Book; however, this is a problematic species according to the Wetlands Bureau and therefore should not be specified)

☒ Provide winter construction notes that meet or exceed our standards.

Standard Winter Notes:

- All proposed vegetated areas that do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events.
- All ditches or swales which do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions.
- After October 15, incomplete road or parking surfaces, where work has stopped for the winter season, shall be protected with a minimum of 3 inches of crushed gravel per NHDOT item 304.3.

☐ Note at the end of the construction sequence that "Lot disturbance, other than that shown on the approved plans, shall not commence until after the roadway has the base course to design elevation and the associated drainage is complete and stable." – This note is applicable to single/duplex family subdivisions, when lot development is not part of the permit.

DRAINAGE ANALYSES

Please double-side 8 ½" × 11" sheets where possible but, **do not** reduce the text such that more than one page fits on one side.

☐ PE stamp

☐ Rainfall amount obtained from the Northeast Regional Climate Center- http://precip.eas.cornell.edu/. Include extreme precipitation table as obtained from the above referenced website.

☐ Drainage analyses, in the following order:

- Pre-development analysis: Drainage diagram.
- Pre-development analysis: Area Listing and Soil Listing.
- Pre-development analysis: Node listing 1-year (if applicable), 2-year, 10-year and 50-year.
- Pre-development analysis: Full summary of the 10-year storm.
- Post-development analysis: Drainage diagram.
- Post-development analysis: Area Listing and Soil Listing.
- Post-development analysis: Node listing for the 2-year, 10-year and 50-year.
- Post-development analysis: Full summary of the 10-year storm.

☐ Review the Area Listing and Soil Listing reports

- Hydrologic soil groups (HSG) match the HSGs on the soil maps provided.
- There is the same or less HSG A soil area after development (check for each HSG).
- There is the same or less "woods" cover in the post-development.
- Undeveloped land was assumed to be in "good" condition.
- The amount of impervious cover in the analyses is correct.

Note: A good check is to subtract the total impervious area used in the pre analysis from the total impervious area used in the post-analysis. For residential projects without demolition occurring, a good check is to take this change in impervious area, subtract out the roadway and divide the remaining by the number of houses/units proposed. Do these numbers make sense?

☐ Check the storage input used to model the ponds.

☐ Check to see if the artificial berms pass the 50-year storm, i.e., make sure the constructed berms on ponds are not overtopped.

☐ Check the outlet structure proposed and make sure it matches that modeled.

☐ Check to see if the total areas in the pre and post analyses are same.

☐ Confirm the correct NRCS storm type was modeled (Coos, Carroll & Grafton counties are Type II, all others Type III).

.

PRE- AND POST-DEVELOPMENT DRAINAGE AREA PLANS

☐ Plans printed on 34 - 36" by 22 - 24" on white paper.

☐ Submit these plans separate from the soil plans.

☐ A north arrow.

☐ A scale.

☐ Labeled subcatchments, reaches and ponds.

☐ Tc lines.

☐ A clear delineation of the subcatchment boundaries.

☐ Roadway station numbers.

☐ Culverts and other conveyance structures.

PRE AND POST-DEVELOPMENT COLOR-CODED SOIL PLANS

☐ 11" × 17"sheets suitable, as long as it is readable.

☐ Submit these plans separate from the drainage area plans.

☐ A north arrow.

☐ A scale.

☐ Name of the soil scientist who performed the survey and date the soil survey took place.

☐ 2-foot contours (5-foot contours if application is for a gravel pit) as well as other surveyed features.

☐ Delineation of the soil boundaries and wetland boundaries.

☐ Delineation of the subcatchment boundaries.

☐ Soil series symbols (e.g., 26).

☐ A key or legend which identifies each soil series symbol and its associated soil series name (e.g., 26 = Windsor).

☐ The hydrologic soil group color coding (A = Green, B = yellow, C= orange, D=red, Water=blue, & Impervious = gray).

Please note that excavation projects (e.g., gravel pits) have similar requirements to that above, however the following are common exceptions/additions:

☐ Drainage report is not needed if site does not have off-site flow.

☐ 5 foot contours allowed rather than 2 foot.

☐ No PE stamp needed on the plans.

☐ Add a note to the plans that the applicant must submit to the Department of Environmental Services a written update of the project and revised plans documenting the project status every five years from the date of the Alteration of Terrain permit.

☐ Add reclamation notes.

See NRCS publication titled: *Vegetating New Hampshire Sand and Gravel Pits* for a good resource, it is posted online at: http://des.nh.gov/organization/divisions/water/aot/categories/publications.

ADDITIONAL INFORMATION RE: NUTRIENTS, CLIMATE

☐ If project will discharge stormwater to a surface water impaired for phosphorus and/or nitrogen, include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen.

☐ If project will discharge stormwater to a Class A surface water or Outstanding Resource Water, include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen.

☐ If project will discharge stormwater to a lake or pond not covered previously, include information to demonstrate that project will not cause net increase in phosphorus in the lake or pond.

☐ If project is within a Coastal/Great Bay Region community, include info required by Env-Wq 1503.08(l) if applicable.

Appendix B - Parcels Intersecting Project Area

Auburn Tax Map-Lot	Candia Tax Map-Lot	Chester Tax Map-Lot	Deerfield Tax Map-Lot	Derry Tax Map-Lot
0000020000047000UT	415-13	7-31-0	418-031-000	14065
	415-12	7-28-0	408-043-000	08036-003
		7-29-0	416-062-000	14065
		1-96-0		
		1-69-1		
		1-65-0		
		1-98-0		
		11-1-0		
		7-33-0		
		4-20-0		

Northwood Tax Map-Lot	Raymond Tax Map-Lot	Rochester Tax Map-Lot	Strafford Tax Map-Lot
219-37	037-000-005-500	0216-0010-0000	16-23-3
234-38	019-000-004-400	0220-0022-0000	16-23-4
234-24	013-000-003-300	0220-0002-0000	16-6-A-0
231-64		0209-0006-0002	16-31
244-29			20-9
			4-95-1
			4-91-1

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0320** Town: Auburn Location: Eversource Right-of-way
Description: Eversource is proposing to replace 2 existing transmission structures within the existing 373 & 391 right-of-way in Auburn.

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: Please indicate the estimated time of year that the project will occur in, provide an aerial overview plan showing the location of existing and proposed access, work pad locations, existing and proposed structures. Essentially show all areas of proposed ground disturbance.**
F&G: No Comments At This Time

Plant species	State[1]	Federal	Notes
hairy thoroughwort (*Eupatorium pubescens*)	E	--	A buffer of native woods would help minimize disturbance to these rare wildflowers.
large whorled pogonia (*Isotria verticillata*)	E	--	Primary threat is habitat destruction for residential or commercial development or forestry.

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0323** Town: Candia Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 & 391 right-of-way in Candia.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: No Comments At This Time**
F&G: Please avoid Ringed Boghaunter spagnum-swamp habitat and vernal pools. Flag all vernal pools and spagnum wetlands prior to work, so impacts to these habitats can be avoided. Please send over job timing and BMPs for all species other than the Ringed Boghaunter.

Invertebrate Species	**State[1]**	**Federal**	**Notes**
Ringed Boghaunter (*Williamsonia lintneri*)	T	--	Contact the NH Fish & Game Dept (see below).

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	T	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, “SC” = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.
Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0321** Town: Chester Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 right-of-way in Chester.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: Are wetland impacts for timber matting proposed in the vicinity of Arethusa bulbosa? If so, please indicate the estimated time of year that the project will occur in, and provide an aerial overview plan showing the location of all wetland areas proposed to be disturbed. F&G: Please flag and avoid all vernal pools prior to work. Please send over proposed work timing and BMPs for the listed species so we can see that they are up to date.**

Plant species	**State[1]**	**Federal**	**Notes**
dragon's-mouth (*Arethusa bulbosa*)	E	--	Alteration of the hydrologic regime is likely the worst threat to this species. Also damaging are over-collection of flowers, succession and overshading by woody species, invasion of wetlands by exotic plant species, and human trampling of loose moss.

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	T	--	Contact the NH Fish & Game Dept (see below).

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0324** Town: Deerfield Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 & 391 right-of-way in Deerfield.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: No Comments At This Time**
F&G: Flag all vernal pools prior to work, so impacts to these habitats can be avoided. Please send over job timing and BMPs for all species.

Vertebrate species	State[1]	Federal	Notes
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Jefferson/Blue-spotted Salamander Complex (*Ambystoma pop. 3*)	--	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	T	--	Contact the NH Fish & Game Dept (see below).
Smooth Green Snake (*Opheodrys vernalis*)	SC	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).
Wood Turtle (*Glyptemys insculpta*)	SC	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.
Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/8/2022 (valid until 02/08/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0318** Town: Derry Location: Eversource Right-of-way
Description: Eversource is proposing to replace existing transmission structures within the existing 391 & 373 right-of-way in Derry.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: Please send NHB information about the work locations (work pads, access routes), and the job timing. Indicate if wetland impacts will occur, and show wetland matting on an aerial overlaid with the project area.**
F&G: Please flag and avoid all vernal pools prior to work. Please send job timing and BMPs for the listed species so we can check contact notes. As of February 3, 2022, New Hampshire Fish and Game requirements for environmental review consultation have changed.

To review the new rules, please go to https://www.wildlife.state.nh.us/legislative/proposed-rules.html. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail. The NHB datacheck results letter number needs to be included in the email subject line.

The requirements for consultation (Fis 1004) shall not apply to the following: statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule. Consultation requests for these projects can be sent directly to kim.tuttle@wildlife.nh.gov.

Plant species	State[1]	Federal	Notes
dwarf huckleberry (*Gaylussacia bigeloviana*)*	T	--	The primary threats are changes to this species' peatland habitat, including changes to local hydrology, increased nutrient input from stormwater runoff, and sedimentation

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

			from nearby disturbance.
hairy thoroughwort (*Eupatorium pubescens*)	E	--	A buffer of native woods would help minimize disturbance to these rare wildflowers.
large whorled pogonia (*Isotria verticillata*)	E	--	Primary threat is habitat destruction for residential or commercial development or forestry.
licorice goldenrod (*Solidago odora ssp. odora*)	T	--	

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Smooth Green Snake (*Opheodrys vernalis*)	SC	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0326** Town: Northwood Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 & 391 right-of-way in Northwood.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: No Comments At This Time**
F&G: Flag all vernal pools prior to work, so impacts to this habitat can be avoided. Please send over job timing and BMPs for Blanding's.

Vertebrate species	State[1]	Federal	Notes
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0322** Town: Raymond Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 & 391 right-of-way in Raymond.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: No Comments At This Time**
F&G: Please avoid Ringed Boghaunter spagnum-swamp habitat and vernal pools. Flag all vernal pools and spagnum wetlands prior to work, so impacts to these habitats can be avoided. Please send over job timing and BMPs for all specied other than the Ringed Boghaunter.

Invertebrate Species	**State[1]**	**Federal**	**Notes**
Ringed Boghaunter (*Williamsonia lintneri*)	T	--	Contact the NH Fish & Game Dept (see below).

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	T	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).
Wood Turtle (*Glyptemys insculpta*)	SC	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0328** Town: Rochester Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 & 391 right-of-way in Rochester.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: No Comments At This Time**
F&G: Flag all vernal pools prior to work, so impacts to this habitat can be avoided. Please send over job timing and BMPs for all species.

Vertebrate species	State[1]	Federal	Notes
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).
Wood Turtle (*Glyptemys insculpta*)	SC	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North
Suite 201
Bedford, NH 03110

From: NHB Review, NH Natural Heritage Bureau
Date: 2/11/2022 (valid until 02/11/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-0327** Town: Strafford Location: Eversource Right-of-way
Description: Eversource is proposing to replace select existing transmission structures within the existing 373 & 391 right-of-way in Strafford.
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: Please provide an aerial plan showng any wetland impacts for matting in the vicinity of the two state-listed clubmoss species. What is the estimated project timing?**
F&G: Flag all vernal pools prior to work, so impacts to this habitat can be avoided. Please send over job timing and BMPs for all species.

Plant species	State[1]	Federal	Notes
appressed bog-clubmoss (*Lycopodiella appressa*)	E	--	Threats to this species include changes in hydrology and destuction of the peaty habitat.
foxtail bog-clubmoss (*Lycopodiella alopecuroides*)	E	--	Threats to this species include changes in hydrology and destuction of the peaty habitat.

Vertebrate species	State[1]	Federal	Notes
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Smooth Green Snake (*Opheodrys vernalis*)	SC	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

Wood Turtle (*Glyptemys insculpta*)	SC	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

CONFIDENTIAL DNCR

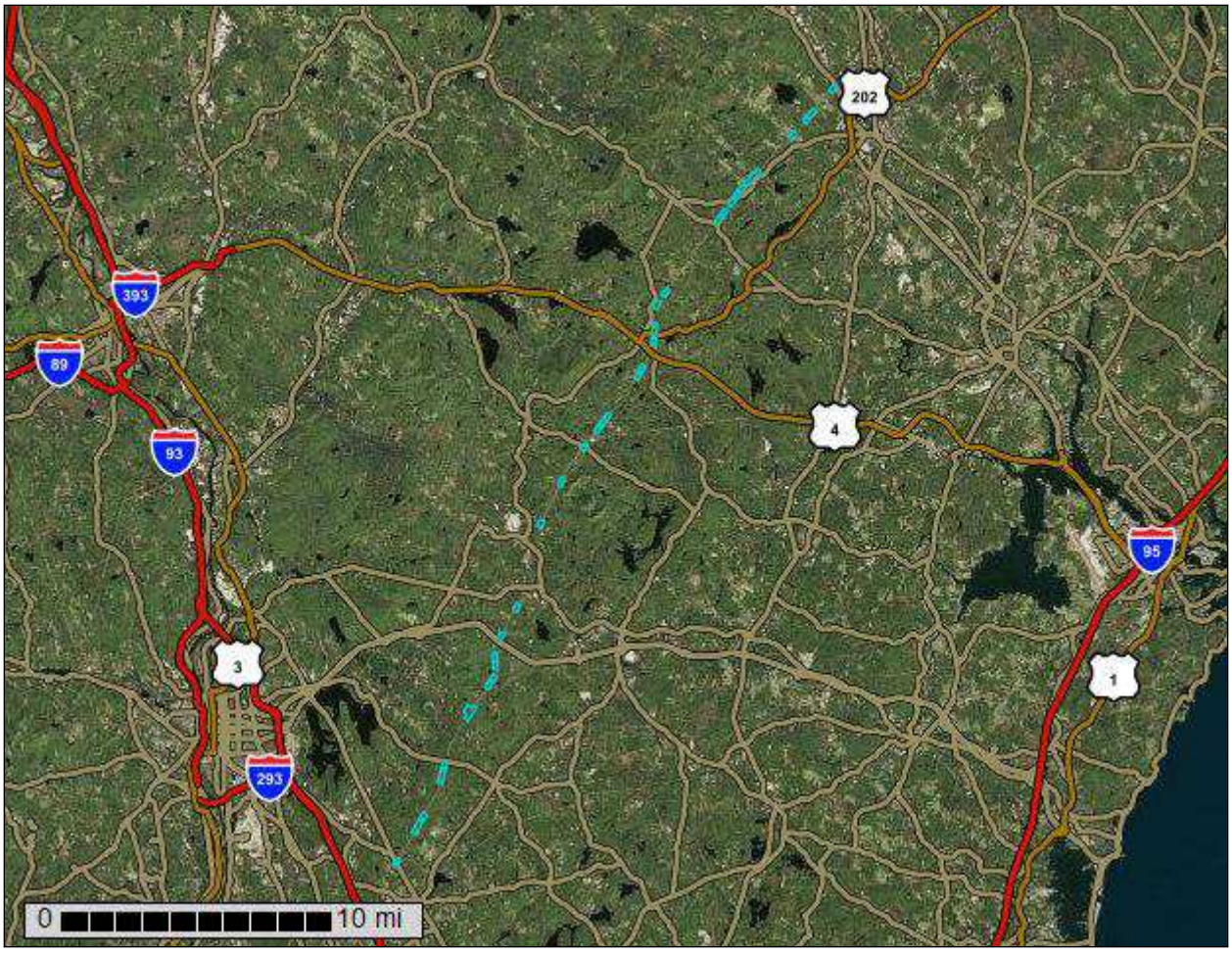
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Rockingham County, New Hampshire, and Strafford County, New Hampshire



May 2, 2022

Preface

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

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

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

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

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

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

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

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

Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

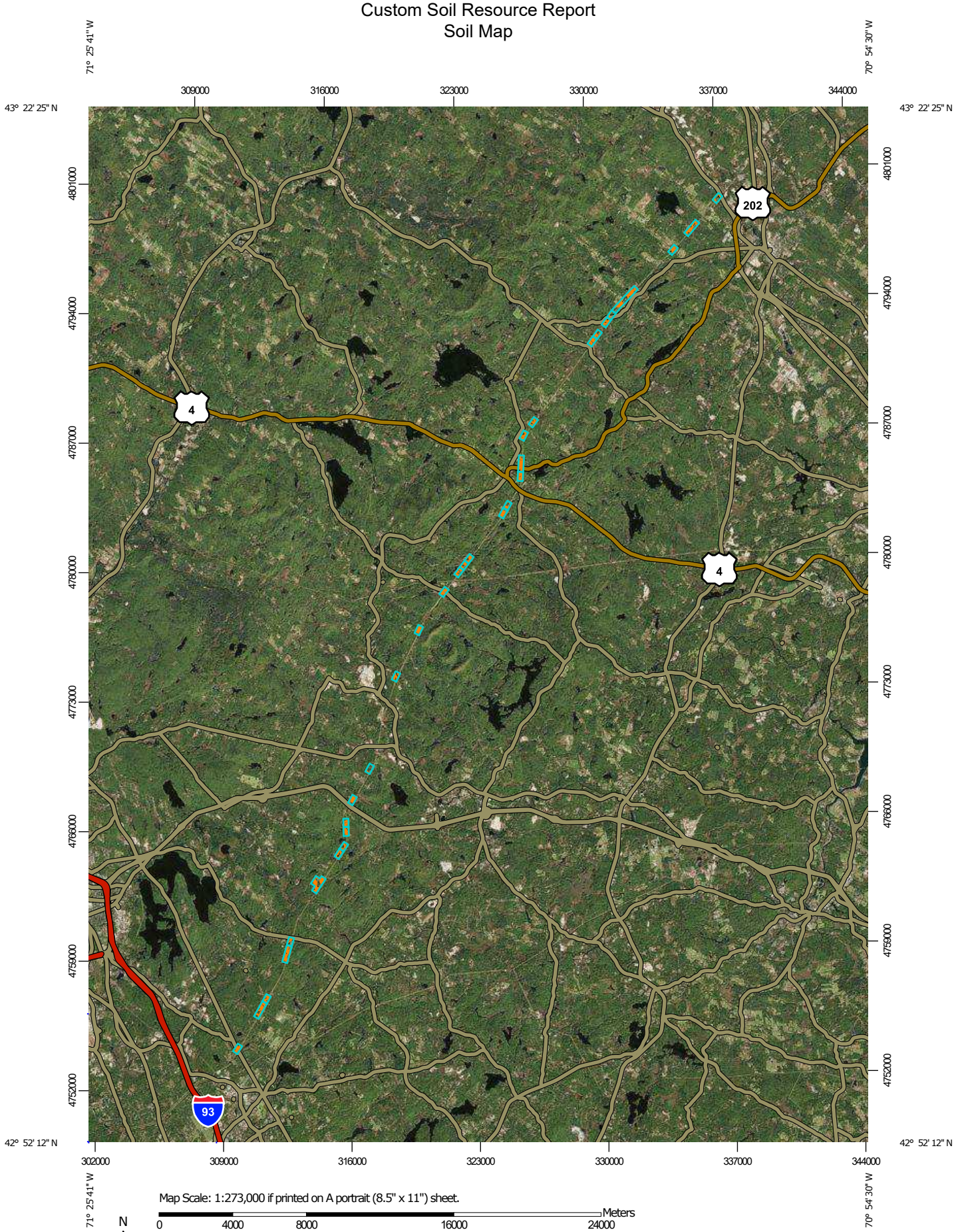
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:273,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 4000 8000 16000 24000

Feet
0 10000 20000 40000 60000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

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

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

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

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

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 24, Aug 31, 2021

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 22, Aug 31, 2021

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
29B	Woodbridge fine sandy loam, 3 to 8 percent slopes	9.8	0.7%
42B	Canton fine sandy loam, 3 to 8 percent slopes	0.1	0.0%
43B	Canton fine sandy loam, 0 to 8 percent slopes, very stony	0.3	0.0%
43C	Canton fine sandy loam, 8 to 15 percent slopes, very stony	28.9	2.2%
43D	Canton fine sandy loam, 15 to 25 percent slopes, very stony	19.6	1.5%
44B	Montauk fine sandy loam, 3 to 8 percent slopes	0.2	0.0%
44C	Montauk fine sandy loam, 8 to 15 percent slopes	0.5	0.0%
45B	Montauk fine sandy loam, 0 to 8 percent slopes, very stony	22.2	1.7%
45C	Montauk fine sandy loam, 8 to 15 percent slopes, very stony	58.9	4.4%
45D	Montauk fine sandy loam, 15 to 25 percent slopes, very stony	16.0	1.2%
66B	Paxton fine sandy loam, 3 to 8 percent slopes	10.8	0.8%
67B	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	0.7	0.1%
67C	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	23.5	1.8%
67D	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	11.0	0.8%
97	Freetown and Natchaug mucky peats, ponded, 0 to 2 percent slopes	31.9	2.4%
125	Scarboro muck, very stony	6.8	0.5%
129B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	13.6	1.0%
129C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	1.3	0.1%
140B	Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky	87.3	6.5%
140C	Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky	218.6	16.3%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
140D	Chatfield-Hollis-Canton complex, 15 to 35 percent slopes, rocky	66.7	5.0%
295	Freetown mucky peat, 0 to 2 percent slopes	74.2	5.5%
395	Swansea mucky peat, 0 to 2 percent slopes	2.2	0.2%
446B	Scituate-Newfields complex, 3 to 8 percent slopes	3.2	0.2%
447A	Scituate-Newfields complex, 0 to 3 percent slopes, very stony	17.0	1.3%
447B	Scituate-Newfields complex, 3 to 8 percent slopes, very stony	81.0	6.0%
495	Natchaug mucky peat, 0 to 2 percent slopes	6.3	0.5%
546A	Walpole very fine sandy loam, 0 to 5 percent slopes	6.9	0.5%
547A	Walpole very fine sandy loam, 0 to 3 percent slopes, very stony	4.4	0.3%
547B	Walpole very fine sandy loam, 3 to 8 percent slopes, very stony	21.3	1.6%
657A	Ridgebury fine sandy loam, 0 to 3 percent slopes, very stony	15.9	1.2%
657B	Ridgebury fine sandy loam, 3 to 8 percent slopes, very stony	22.5	1.7%
Subtotals for Soil Survey Area		**884.0**	**65.9%**
Totals for Area of Interest		**1,340.9**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CfB	Charlton fine sandy loam, 3 to 8 percent slopes	29.7	2.2%
CfC	Charlton fine sandy loam, 8 to 15 percent slopes	2.1	0.2%
CsB	Charlton fine sandy loam, 3 to 8 percent slopes, very stony	71.3	5.3%
CsC	Charlton fine sandy loam, 8 to 15 percent slopes, very stony	8.4	0.6%
GlB	Gloucester fine sandy loam, 3 to 8 percent slopes	7.4	0.6%
GlC	Gloucester fine sandy loam, 8 to 15 percent slopes	8.4	0.6%
GsB	Gloucester very stony fine sandy loam, 3 to 8 percent slopes	4.5	0.3%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GsC	Gloucester very stony fine sandy loam, 8 to 15 percent slopes	48.1	3.6%
GsD	Gloucester very stony fine sandy loam, 15 to 25 percent slopes	27.4	2.0%
GtD	Gloucester extremely stony fine sandy loam, 8 to 25 percent slopes	6.9	0.5%
HaA	Hinckley loamy sand, 0 to 3 percent slopes	10.5	0.8%
HaB	Hinckley loamy sand, 3 to 8 percent slopes	7.4	0.5%
HcB	Hollis-Charlton fine sandy loams, 3 to 8 percent slopes	0.3	0.0%
HcC	Hollis-Charlton fine sandy loams, 8 to 15 percent slopes	0.4	0.0%
HdB	Hollis-Charlton very rocky fine sandy loams, 3 to 8 percent slopes	27.6	2.1%
HeD	Hollis-Charlton extremely rocky fine sandy loams, 8 to 25 percent slopes	51.4	3.8%
HfB	Hollis-Gloucester fine sandy loams, 3 to 8 percent slopes	1.7	0.1%
HgB	Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes	10.5	0.8%
HgD	Hollis-Gloucester very rocky fine sandy loams, 15 to 25 percent slopes	0.6	0.0%
LcB	Leicester fine sandy loam, 0 to 8 percent slopes	1.9	0.1%
LeA	Leicester very stony fine sandy loam, 0 to 3 percent slopes	26.3	2.0%
LeB	Leicester very stony fine sandy loam, 3 to 8 percent slopes	1.3	0.1%
LrA	Leicester-Ridgebury fine sandy loams, 0 to 3 percent slopes, very stony	2.8	0.2%
LrB	Leicester-Ridgebury fine sandy loams, 3 to 8 percent slopes, very stony	12.3	0.9%
Ml	Mixed alluvial land, wet	11.4	0.9%
Mp	Freetown and Swansea mucky peats, 0 to 2 percent slopes	7.3	0.5%
PbB	Paxton fine sandy loam, 3 to 8 percent slopes	10.6	0.8%
PbC	Paxton fine sandy loam, 8 to 15 percent slopes	1.8	0.1%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PdB	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	14.1	1.1%
PdC	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	5.1	0.4%
PdE	Paxton very stony fine sandy loam, 25 to 60 percent slopes	0.2	0.0%
RgA	Ridgebury fine sandy loam, 0 to 3 percent slopes	0.0	0.0%
Sb	Saugatuck loamy sand	15.0	1.1%
SnB	Sutton fine sandy loam, 3 to 8 percent slopes	11.3	0.8%
SuB	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	0.8	0.1%
Wa	Whitman fine sandy loam, 0 to 3 percent slopes, very stony	5.4	0.4%
WdB	Windsor loamy sand, 3 to 8 percent slopes	4.3	0.3%
Subtotals for Soil Survey Area		**456.6**	**34.1%**
Totals for Area of Interest		**1,340.9**	**100.0%**

Map Unit Descriptions

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

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

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

components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Rockingham County, New Hampshire

29B—Woodbridge fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2ql
Elevation: 0 to 1,470 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodbridge, fine sandy loam, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Fine Sandy Loam

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 18 inches: fine sandy loam
Bw2 - 18 to 30 inches: fine sandy loam
Cd - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 10 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 8 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Toeslope, backslope, footslope
Landform position (three-dimensional): Base slope, head slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

42B—Canton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w81b
Elevation: 0 to 1,180 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Canton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Landform: Hills, moraines, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: gravelly fine sandy loam

2C - 26 to 65 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Scituate

Percent of map unit: 10 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Montauk

Percent of map unit: 5 percent
Landform: Moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Charlton

Percent of map unit: 4 percent
Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Swansea

Percent of map unit: 1 percent
Landform: Marshes, depressions, bogs, swamps, kettles
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

43B—Canton fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w81l
Elevation: 0 to 1,180 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Canton, very stony, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Very Stony

Setting

Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Scituate, very stony
Percent of map unit: 9 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Montauk, very stony
Percent of map unit: 5 percent
Landform: Recessionial moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Gloucester, very stony
Percent of map unit: 4 percent
Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Swansea
Percent of map unit: 2 percent
Landform: Marshes, depressions, bogs, swamps, kettles
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

43C—Canton fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting
National map unit symbol: 2w814
Elevation: 0 to 1,160 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Very Stony

Setting

Landform: Moraines, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Montauk, very stony

Percent of map unit: 6 percent
Landform: Recessionial moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Scituate, very stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Chatfield, very stony

Percent of map unit: 3 percent
Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Swansea

Percent of map unit: 1 percent
Landform: Marshes, depressions, bogs, swamps, kettles
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

43D—Canton fine sandy loam, 15 to 25 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w81h
Elevation: 70 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Very Stony

Setting

Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Chatfield, very stony

Percent of map unit: 6 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Montauk, very stony

Percent of map unit: 5 percent
Landform: Hills, drumlins, recessionial moraines, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Newfields, very stony

Percent of map unit: 4 percent
Landform: Ground moraines, hills, moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave

Hydric soil rating: No

44B—Montauk fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyrh
Elevation: 0 to 1,030 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Montauk and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk

Setting

Landform: Recessionial moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 26 inches: fine sandy loam
Bw2 - 26 to 34 inches: sandy loam
2Cd - 34 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C

Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate
Percent of map unit: 6 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton
Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury
Percent of map unit: 4 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

44C—Montauk fine sandy loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2w80p
Elevation: 0 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Montauk and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk

Setting
Landform: Recessionial moraines, ground moraines, hills, drumlins

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 26 inches: fine sandy loam
Bw2 - 26 to 34 inches: sandy loam
2Cd - 34 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate

Percent of map unit: 6 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 4 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

45B—Montauk fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w80v
Elevation: 0 to 1,070 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Montauk, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk, Very Stony

Setting

Landform: Recessionial moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate, very stony

Percent of map unit: 6 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

45C—Montauk fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w80w
Elevation: 0 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Montauk, very stony, and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk, Very Stony

Setting

Landform: Hills, recessionial moraines, ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate, very stony

Percent of map unit: 6 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

45D—Montauk fine sandy loam, 15 to 25 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w810
Elevation: 80 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Montauk, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk, Very Stony

Setting

Landform: Recessionial moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained

Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate, very stony
Percent of map unit: 6 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton, very stony
Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Chatfield, very stony
Percent of map unit: 4 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

66B—Paxton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2t2qp
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 9 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 6 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Toeslope, backslope, footslope
Landform position (three-dimensional): Base slope, head slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

67B—Paxton fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w673
Elevation: 0 to 1,340 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Drumlins, drainageways, depressions, hills, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton, very stony

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

67C—Paxton fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w677
Elevation: 0 to 1,330 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony
Percent of map unit: 8 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony
Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony
Percent of map unit: 2 percent
Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

67D—Paxton fine sandy loam, 15 to 25 percent slopes, very stony

Map Unit Setting
National map unit symbol: 2w67h
Elevation: 0 to 1,400 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Paxton, very stony, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 5 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 4 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex

Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 1 percent
Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

97—Freetown and Natchaug mucky peats, ponded, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w690
Elevation: 10 to 930 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Freetown, ponded, and similar soils: 38 percent
Natchaug, ponded, and similar soils: 37 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown, Ponded

Setting

Landform: Depressions, kettles, marshes, bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material

Typical profile

Oe1 - 0 to 2 inches: mucky peat
Oe2 - 2 to 79 inches: mucky peat

Properties and qualities

Slope: 0 to 2 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent

Available water supply, 0 to 60 inches: Very high (about 20.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: B/D
Ecological site: F144AY043MA - Acidic Organic Wetlands
Hydric soil rating: Yes

Description of Natchaug, Ponded

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oe1 - 0 to 12 inches: mucky peat
Oe2 - 12 to 31 inches: mucky peat
2Cg1 - 31 to 39 inches: silt loam
2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.01 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 14.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Scarboro, ponded

Percent of map unit: 9 percent
Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Maybid, ponded

Percent of map unit: 8 percent
Landform: Depressions, depressions

Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scitico

Percent of map unit: 4 percent
Landform: Depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

125—Scarboro muck, very stony

Map Unit Setting

National map unit symbol: 9cm7
Elevation: 0 to 2,100 feet
Mean annual precipitation: 28 to 45 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 100 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Scarboro and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scarboro

Setting

Landform: Outwash terraces

Typical profile

O - 0 to 12 inches: mucky peat
H1 - 12 to 16 inches: sandy loam
H2 - 16 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained

Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A/D
Ecological site: F144AY031MA - Very Wet Outwash
Hydric soil rating: Yes

Minor Components

Walpole

Percent of map unit: 10 percent
Landform: Ground moraines
Hydric soil rating: Yes

Chocorua

Percent of map unit: 5 percent
Landform: Bogs
Hydric soil rating: Yes

Ossipee

Percent of map unit: 5 percent
Landform: Bogs
Hydric soil rating: Yes

129B—Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2t2qr
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, very stony, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Ground moraines, hills, drumlins

Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton, very stony

Percent of map unit: 10 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 8 percent
Landform: Hills, drainageways, drumlins, depressions, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

129C—Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w687
Elevation: 0 to 1,420 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton, very stony
Percent of map unit: 9 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Ridgebury, very stony
Percent of map unit: 4 percent
Landform: Drumlins, depressions, hills, drainageways, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, very stony
Percent of map unit: 1 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Whitman, very stony
Percent of map unit: 1 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

140B—Chatfield-Hollis-Canton complex, 0 to 8 percent slopes, rocky

Map Unit Setting
National map unit symbol: 2w82m
Elevation: 380 to 1,070 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Chatfield, very stony, and similar soils: 35 percent
Hollis, very stony, and similar soils: 25 percent
Canton, very stony, and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Hollis, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 7 inches: gravelly fine sandy loam
Bw - 7 to 16 inches: gravelly fine sandy loam
2R - 16 to 26 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 8 to 23 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Canton, Very Stony

Setting

Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Newfields, very stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills, moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Freetown

Percent of map unit: 5 percent
Landform: Marshes, depressions, bogs, kettles, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Walpole, very stony

Percent of map unit: 3 percent
Landform: Deltas, depressions, outwash plains, depressions, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Rock outcrop

Percent of map unit: 2 percent
Landform: Ridges, hills
Hydric soil rating: Unranked

140C—Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2w82s
Elevation: 0 to 980 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Chatfield, very stony, and similar soils: 35 percent
Hollis, very stony, and similar soils: 25 percent
Canton, very stony, and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Hollis, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex

Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 7 inches: gravelly fine sandy loam
Bw - 7 to 16 inches: gravelly fine sandy loam
2R - 16 to 26 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 8 to 23 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Canton, Very Stony

Setting

Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Freetown

Percent of map unit: 5 percent
Landform: Marshes, depressions, bogs, kettles, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Newfields, very stony

Percent of map unit: 5 percent
Landform: Moraines, ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Scarboro, very stony

Percent of map unit: 3 percent
Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Rock outcrop

Percent of map unit: 2 percent
Landform: Ridges, hills
Hydric soil rating: Unranked

140D—Chatfield-Hollis-Canton complex, 15 to 35 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2w82p
Elevation: 0 to 1,340 feet

Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Chatfield, very stony, and similar soils: 35 percent
Hollis, very stony, and similar soils: 25 percent
Canton, very stony, and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Hollis, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex

Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 7 inches: gravelly fine sandy loam
Bw - 7 to 16 inches: gravelly fine sandy loam
2R - 16 to 26 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 8 to 23 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Canton, Very Stony

Setting

Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Montauk, very stony

Percent of map unit: 7 percent
Landform: Recessionial moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Scarboro, very stony

Percent of map unit: 6 percent
Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Rock outcrop

Percent of map unit: 2 percent
Landform: Ridges, hills
Hydric soil rating: Unranked

295—Freetown mucky peat, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w68v
Elevation: 0 to 860 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Freetown and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown

Setting

Landform: Depressions, kettles, marshes, bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material

Typical profile

Oe1 - 0 to 2 inches: mucky peat
Oe2 - 2 to 79 inches: mucky peat

Properties and qualities

Slope: 0 to 1 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 20.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: B/D
Ecological site: F144AY043MA - Acidic Organic Wetlands
Hydric soil rating: Yes

Minor Components

Swansea

Percent of map unit: 8 percent
Landform: Marshes, depressions, bogs, swamps, kettles
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Natchaug

Percent of map unit: 6 percent
Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 3 percent
Landform: Outwash terraces, outwash deltas, depressions, drainageways
Landform position (three-dimensional): Tread

Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman

Percent of map unit: 1 percent
Landform: Depressions, hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

395—Swansea mucky peat, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w68x
Elevation: 0 to 950 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Swansea and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swansea

Setting

Landform: Marshes, depressions, kettles, bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material over sandy and gravelly glaciofluvial deposits

Typical profile

Oe1 - 0 to 12 inches: mucky peat
Oe2 - 12 to 25 inches: mucky peat
Cg - 25 to 79 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None

Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: B/D
Ecological site: F144AY043MA - Acidic Organic Wetlands
Hydric soil rating: Yes

Minor Components

Freetown

Percent of map unit: 7 percent
Landform: Depressions, kettles, marshes, bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 5 percent
Landform: Outwash deltas, depressions, outwash terraces, drainageways
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Walpole

Percent of map unit: 5 percent
Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

446B—Scituate-Newfields complex, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9cnp
Elevation: 0 to 1,000 feet
Mean annual precipitation: 35 to 48 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Scituate and similar soils: 50 percent
Newfields and similar soils: 25 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scituate

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 32 inches: cobbly fine sandy loam
H3 - 32 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Description of Newfields

Setting

Parent material: Till

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 35 inches: fine sandy loam
H3 - 35 to 64 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Canton
Percent of map unit: 5 percent
Hydric soil rating: No

Walpole
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ridgebury
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Montauk
Percent of map unit: 5 percent
Hydric soil rating: No

Paxton
Percent of map unit: 5 percent
Hydric soil rating: No

447A—Scituate-Newfields complex, 0 to 3 percent slopes, very stony

Map Unit Setting
National map unit symbol: 9cnq
Elevation: 0 to 820 feet
Mean annual precipitation: 44 to 49 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 155 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition
Scituate and similar soils: 50 percent
Newfields and similar soils: 25 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scituate

Typical profile
H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 32 inches: cobbly fine sandy loam
H3 - 32 to 60 inches: gravelly loamy sand

Properties and qualities
Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5s
Hydrologic Soil Group: C
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Description of Newfields

Setting

Parent material: Till

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 35 inches: fine sandy loam
H3 - 35 to 64 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5s
Hydrologic Soil Group: C
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Canton

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Walpole
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Montauk
Percent of map unit: 5 percent
Hydric soil rating: No

Ridgebury
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

447B—Scituate-Newfields complex, 3 to 8 percent slopes, very stony

Map Unit Setting
National map unit symbol: 9cnr
Elevation: 0 to 1,000 feet
Mean annual precipitation: 35 to 56 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 120 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition
Scituate and similar soils: 50 percent
Newfields and similar soils: 25 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scituate

Typical profile
H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 32 inches: cobbly fine sandy loam
H3 - 32 to 60 inches: gravelly loamy sand

Properties and qualities
Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Description of Newfields

Setting

Parent material: Till

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 35 inches: fine sandy loam
H3 - 35 to 64 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Walpole

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ridgebury

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Canton

Percent of map unit: 5 percent
Hydric soil rating: No

Montauk

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

495—Natchaug mucky peat, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w691
Elevation: 0 to 910 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Natchaug and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Natchaug

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oe1 - 0 to 12 inches: mucky peat
Oe2 - 12 to 31 inches: mucky peat
2Cg1 - 31 to 39 inches: silt loam
2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.01 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 14.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Scarboro

Percent of map unit: 4 percent
Landform: Depressions, outwash terraces, drainageways, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Walpole

Percent of map unit: 4 percent
Landform: Deltas, depressions, outwash plains, depressions, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Maybid

Percent of map unit: 2 percent
Landform: Depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

546A—Walpole very fine sandy loam, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 9cpb
Elevation: 0 to 2,100 feet
Mean annual precipitation: 28 to 49 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 100 to 195 days
Farmland classification: Farmland of local importance

Map Unit Composition

Walpole and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Walpole

Setting

Landform: Depressions

Typical profile

H1 - 0 to 7 inches: very fine sandy loam
H2 - 7 to 16 inches: sandy loam
H3 - 16 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F144AY028MA - Wet Outwash
Hydric soil rating: Yes

Minor Components

Scarboro

Percent of map unit: 8 percent
Landform: Depressions
Hydric soil rating: Yes

Newfields

Percent of map unit: 7 percent
Hydric soil rating: No

547A—Walpole very fine sandy loam, 0 to 3 percent slopes, very stony

Map Unit Setting

National map unit symbol: 9cpc
Elevation: 0 to 2,100 feet
Mean annual precipitation: 28 to 49 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 100 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Walpole and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Walpole

Setting

Landform: Depressions

Typical profile

H1 - 0 to 7 inches: very fine sandy loam
H2 - 7 to 16 inches: sandy loam
H3 - 16 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A/D
Ecological site: F144AY028MA - Wet Outwash
Hydric soil rating: Yes

Minor Components

Scarboro

Percent of map unit: 10 percent
Landform: Depressions
Hydric soil rating: Yes

Newfields

Percent of map unit: 5 percent
Hydric soil rating: No

547B—Walpole very fine sandy loam, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 9cpd
Elevation: 0 to 2,100 feet

Mean annual precipitation: 28 to 48 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 100 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Walpole and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Walpole

Setting

Landform: Depressions

Typical profile

H1 - 0 to 7 inches: very fine sandy loam
H2 - 7 to 16 inches: sandy loam
H3 - 16 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A/D
Ecological site: F144AY028MA - Wet Outwash
Hydric soil rating: Yes

Minor Components

Scarboro

Percent of map unit: 10 percent
Landform: Depressions
Hydric soil rating: Yes

Newfields

Percent of map unit: 5 percent
Hydric soil rating: No

Squamscott

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

657A—Ridgebury fine sandy loam, 0 to 3 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2xffq
Elevation: 90 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, very stony, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Very Stony

Setting

Landform: Ground moraines, hills, drainageways, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5s

Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Walpole
Percent of map unit: 9 percent
Landform: Drainageways, outwash terraces, depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Woodbridge, very stony
Percent of map unit: 6 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Whitman, very stony
Percent of map unit: 3 percent
Landform: Drainageways, depressions, drumlins, ground moraines, hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Leicester, very stony
Percent of map unit: 2 percent
Landform: Depressions, hills, ground moraines, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

657B—Ridgebury fine sandy loam, 3 to 8 percent slopes, very stony

Map Unit Setting
National map unit symbol: 2xffx
Elevation: 40 to 1,320 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Very Stony

Setting

Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Woodbridge, very stony

Percent of map unit: 7 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Whitman, very stony

Percent of map unit: 4 percent
Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scituate, very stony

Percent of map unit: 2 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Walpole

Percent of map unit: 2 percent
Landform: Drainageways, outwash terraces, depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Strafford County, New Hampshire

CfB—Charlton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2wh0n
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton

Percent of map unit: 8 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Leicester

Percent of map unit: 1 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Chatfield

Percent of map unit: 1 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

CfC—Charlton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2wh0q
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Sutton, fine sandy loam

Percent of map unit: 5 percent
Landform: Ridges, hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Chatfield

Percent of map unit: 3 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Canton

Percent of map unit: 2 percent
Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

CsB—Charlton fine sandy loam, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2wh0r
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Charlton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F142XB009VT - Acidic Till Upland
Hydric soil rating: No

Minor Components

Sutton, very stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton, very stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Chatfield, very stony

Percent of map unit: 3 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, very stony

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

CsC—Charlton fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2wh0p
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B

Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton, very stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton, very stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Chatfield, very stony
Percent of map unit: 3 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, very stony
Percent of map unit: 2 percent
Landform: Depressions, hills, ground moraines, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

GIB—Gloucester fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d73
Elevation: 70 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Hollis

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 5 percent
Hydric soil rating: No

Not named pan

Percent of map unit: 5 percent
Hydric soil rating: No

GIC—Gloucester fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d74
Elevation: 20 to 970 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Not named pan

Percent of map unit: 5 percent
Hydric soil rating: No

Hollis

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 5 percent
Hydric soil rating: No

GsB—Gloucester very stony fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d75
Elevation: 30 to 1,260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

Acton
Percent of map unit: 5 percent
Hydric soil rating: No

Hollis
Percent of map unit: 5 percent
Hydric soil rating: No

GsC—Gloucester very stony fine sandy loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9d76
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting
Parent material: Till

Typical profile
H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities
Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Hollis

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 5 percent
Hydric soil rating: No

GsD—Gloucester very stony fine sandy loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9d77
Elevation: 0 to 1,380 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Not named

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

Hollis

Percent of map unit: 5 percent
Hydric soil rating: No

GtD—Gloucester extremely stony fine sandy loam, 8 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9d79
Elevation: 210 to 1,340 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: extremely stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 8 to 25 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Acton

Percent of map unit: 5 percent
Hydric soil rating: No

Hollis

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 3 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Hydric soil rating: No

HaA—Hinckley loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svm7
Elevation: 0 to 1,420 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash terraces, outwash plains, kame terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Outwash deltas, kame terraces, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

HaB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Base slope, crest, nose slope, side slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 8 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Base slope, crest, nose slope, side slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, moraines, outwash plains, kame terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, head slope, side slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Base slope, crest, nose slope, side slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

HcB—Hollis-Charlton fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d7j
Elevation: 0 to 1,020 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: fine sandy loam

H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

HcC—Hollis-Charlton fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d7k
Elevation: 0 to 1,080 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Buxton
Percent of map unit: 5 percent
Hydric soil rating: No

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

HdB—Hollis-Charlton very rocky fine sandy loams, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d7m
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Hollis and similar soils: 40 percent
Charlton and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting
Parent material: Till

Typical profile
H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities
Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: very stony fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

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

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Sutton

Percent of map unit: 5 percent
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

HeD—Hollis-Charlton extremely rocky fine sandy loams, 8 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9d7q
Elevation: 0 to 1,180 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 30 percent
Charlton and similar soils: 25 percent
Minor components: 45 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: extremely stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 8 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: extremely stony fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 25 percent
Hydric soil rating: No

Not named

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

Leicester

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent
Hydric soil rating: No

HfB—Hollis-Gloucester fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d7s
Elevation: 30 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 55 percent
Gloucester and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 3 percent
Hydric soil rating: No

Leicester

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

HgB—Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d7v
Elevation: 30 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 50 percent
Gloucester and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

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

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 3 percent
Hydric soil rating: No

Leicester

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

HgD—Hollis-Gloucester very rocky fine sandy loams, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9d7x
Elevation: 0 to 1,230 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 50 percent
Gloucester and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam

H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Not named

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

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

LcB—Leicester fine sandy loam, 0 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d80
Elevation: 50 to 1,000 feet
Mean annual precipitation: 35 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition
Leicester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester

Setting
Landform: Depressions
Parent material: Till

Typical profile
H1 - 0 to 5 inches: fine sandy loam
H2 - 5 to 44 inches: gravelly fine sandy loam

Properties and qualities
Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Whitman
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ridgebury
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Not named wet
Percent of map unit: 5 percent
Landform: Outwash terraces
Hydric soil rating: Yes

LeA—Leicester very stony fine sandy loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 9d81
Elevation: 0 to 2,100 feet
Mean annual precipitation: 28 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 100 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Leicester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester

Setting
Landform: Depressions
Parent material: Till

Typical profile
H1 - 0 to 5 inches: very stony fine sandy loam
H2 - 5 to 44 inches: gravelly fine sandy loam

Properties and qualities
Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 5 percent
Landform: Outwash terraces
Hydric soil rating: Yes

Ridgebury

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Whitman

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

LeB—Leicester very stony fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d82
Elevation: 0 to 2,100 feet
Mean annual precipitation: 28 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 100 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Leicester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester

Setting

Landform: Depressions
Parent material: Till

Typical profile

H1 - 0 to 5 inches: very stony fine sandy loam
H2 - 5 to 44 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 5 percent
Landform: Ground moraines
Hydric soil rating: Yes

Whitman

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ridgebury

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

LrA—Leicester-Ridgebury fine sandy loams, 0 to 3 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2xffr
Elevation: 20 to 960 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Leicester, very stony, and similar soils: 60 percent

Ridgebury, very stony, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester, Very Stony

Setting

Landform: Drainageways, depressions, hills, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam
C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5s
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Ridgebury, Very Stony

Setting

Landform: Ground moraines, hills, drainageways, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam

Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5s
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Walpole

Percent of map unit: 5 percent
Landform: Drainageways, outwash terraces, depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman, very stony

Percent of map unit: 3 percent
Landform: Depressions, drumlins, ground moraines, hills, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Swansea, mucky peat

Percent of map unit: 2 percent
Landform: Marshes, depressions, bogs, swamps, kettles
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

LrB—Leicester-Ridgebury fine sandy loams, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2xffs
Elevation: 100 to 1,160 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Leicester, very stony, and similar soils: 60 percent
Ridgebury, very stony, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leicester, Very Stony

Setting

Landform: Depressions, hills, drainageways, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam
C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Ridgebury, Very Stony

Setting

Landform: Ground moraines, hills, drainageways, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Woodbridge, very stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Walpole

Percent of map unit: 3 percent
Landform: Depressions, drainageways, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman, very stony

Percent of map unit: 2 percent
Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

MI—Mixed alluvial land, wet

Map Unit Setting

National map unit symbol: 9d86
Elevation: 300 to 1,800 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Mixed alluvial land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mixed Alluvial Land

Setting

Landform: Flood plains

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 72 inches: very gravelly silt loam

Properties and qualities

Slope: 0 to 2 percent
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 20.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: FrequentNone
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydric soil rating: Yes

Mp—Freetown and Swansea mucky peats, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w68w
Elevation: 10 to 940 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Freetown and similar soils: 50 percent
Swansea and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown

Setting

Landform: Depressions, kettles, marshes, bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material

Typical profile

Oe1 - 0 to 2 inches: mucky peat
Oe2 - 2 to 79 inches: mucky peat

Properties and qualities

Slope: 0 to 2 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 20.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: B/D
Ecological site: F144AY043MA - Acidic Organic Wetlands

Hydric soil rating: Yes

Description of Swansea

Setting

Landform: Marshes, depressions, bogs, swamps, kettles
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Moderately decomposed organic material over sandy and gravelly glaciofluvial deposits

Typical profile

Oe1 - 0 to 12 inches: mucky peat
Oe2 - 12 to 25 inches: mucky peat
Cg - 25 to 79 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: B/D
Ecological site: F144AY043MA - Acidic Organic Wetlands
Hydric soil rating: Yes

Minor Components

Natchaug

Percent of map unit: 10 percent
Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman

Percent of map unit: 4 percent
Landform: Depressions, hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 4 percent
Landform: Outwash terraces, drainageways, outwash deltas, depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

Maybid

Percent of map unit: 2 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

PbB—Paxton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2qp
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge

Percent of map unit: 9 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 6 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Toeslope, backslope, footslope
Landform position (three-dimensional): Base slope, head slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

PbC—Paxton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w66y
Elevation: 0 to 1,320 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 6 percent
Landform: Hills, drumlins, ground moraines

Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 2 percent
Landform: Drumlins, drainageways, depressions, ground moraines, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

PdB—Paxton fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w673
Elevation: 0 to 1,340 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Drumlins, drainageways, depressions, hills, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton, very stony

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

PdC—Paxton fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w677

Elevation: 0 to 1,330 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope

Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 2 percent
Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

PdE—Paxton very stony fine sandy loam, 25 to 60 percent slopes

Map Unit Setting

National map unit symbol: 9d8h
Elevation: 150 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Parent material: Basal lodgement till derived from granite and gneiss and/or basal lodgement till derived from schist

Typical profile

H1 - 0 to 11 inches: very stony fine sandy loam
H2 - 11 to 22 inches: fine sandy loam
H3 - 22 to 41 inches: fine sandy loam

Properties and qualities

Slope: 25 to 60 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 12 percent
Hydric soil rating: No

Hollis

Percent of map unit: 3 percent
Hydric soil rating: No

RgA—Ridgebury fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w69f
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Ridgebury and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury

Setting

Landform: Ground moraines, hills, drumlins, depressions, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Woodbridge

Percent of map unit: 9 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Whitman

Percent of map unit: 5 percent
Landform: Hills, drainageways, drumlins, ground moraines, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Leicester

Percent of map unit: 1 percent
Landform: Ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave

Hydric soil rating: Yes

Sb—Saugatuck loamy sand

Map Unit Setting

National map unit symbol: 9d8r
Elevation: 300 to 1,000 feet
Mean annual precipitation: 27 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 125 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Saugatuck and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saugatuck

Setting

Landform: Outwash terraces
Parent material: Outwash

Typical profile

H1 - 0 to 4 inches: loamy sand
H2 - 4 to 7 inches: sand
H3 - 7 to 26 inches: loamy sand
H4 - 26 to 42 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 10 to 16 inches to undefined
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 15 percent

Landform: Outwash terraces
Hydric soil rating: Yes

SnB—Sutton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w69j
Elevation: 0 to 1,410 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sutton and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sutton

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 5 inches: fine sandy loam
Bw1 - 5 to 17 inches: fine sandy loam
Bw2 - 17 to 25 inches: sandy loam
C1 - 25 to 39 inches: gravelly sandy loam
C2 - 39 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 12 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Charlton
Percent of map unit: 9 percent
Landform: Ground moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge
Percent of map unit: 5 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester
Percent of map unit: 5 percent
Landform: Ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman
Percent of map unit: 1 percent
Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

SuB—Sutton fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting
National map unit symbol: 2xfff
Elevation: 0 to 1,410 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Sutton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sutton, Very Stony

Setting

Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 7 inches: fine sandy loam
Bw1 - 7 to 19 inches: fine sandy loam
Bw2 - 19 to 27 inches: sandy loam
C1 - 27 to 41 inches: gravelly sandy loam
C2 - 41 to 62 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 12 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B/D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Charlton, very stony

Percent of map unit: 7 percent
Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton, very stony

Percent of map unit: 4 percent
Landform: Moraines, hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Leicester, very stony

Percent of map unit: 3 percent
Landform: Depressions, ground moraines, drainageways, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman, very stony

Percent of map unit: 1 percent
Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Wa—Whitman fine sandy loam, 0 to 3 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2zggn
Elevation: 130 to 970 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Whitman, very stony, and similar soils: 81 percent
Minor components: 19 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Whitman, Very Stony

Setting

Landform: Ground moraines, hills, drainageways, depressions, drumlins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

Parent material: Coarse-loamy lodgment till derived from granite and gneiss and/or schist

Typical profile

Oi - 0 to 1 inches: peat
A - 1 to 10 inches: fine sandy loam
Bg - 10 to 17 inches: gravelly fine sandy loam
Cdg - 17 to 61 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 7 to 38 inches to densic material
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5s
Hydrologic Soil Group: D
Ecological site: F144AY041MA - Very Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Ridgebury, very stony

Percent of map unit: 10 percent
Landform: Depressions, ground moraines, hills, drainageways, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Scarboro

Percent of map unit: 5 percent
Landform: Depressions, drainageways, outwash terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F144AY031MA - Very Wet Outwash
Hydric soil rating: Yes

Swansea

Percent of map unit: 3 percent
Landform: Marshes, bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F144AY043MA - Acidic Organic Wetlands

Hydric soil rating: Yes

Woodbridge, very stony

Percent of map unit: 1 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

WdB—Windsor loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svkf
Elevation: 0 to 1,210 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Dunes, outwash plains, deltas, outwash terraces
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Hinckley, loamy sand

Percent of map unit: 10 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield, loamy sand

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

References

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 1: Looking at proposed access and work pad location from Route 28 to 391 Structure 326.

Photograph No. 2: Looking at proposed access and work pad location for 373 Structure 320.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 3: Looking at proposed access and work pad location for 373 Structure 319.

Photograph No. 4: Looking at proposed access and work area for 373 Structure 318.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 5: Looking at proposed access and work pad location for 373 Structure 317.

Photograph No. 6: Looking at proposed access and work pad location adjacent to 373 Structure 316.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 7: Looking at proposed access and work pad location from Pingree Hill Road for 373 Structure 126.

Photograph No. 8: Looking at proposed access and work pad location adjacent to 373 Structure 299.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 9: Looking at proposed access and work pad location adjacent to 373 Structure 298.

Photograph No. 10: Looking at proposed access and work pad location for 373 Structure 297.

Photograph No. 11: Looking at proposed access for 373 Structure 296.

Photograph No. 12: Looking at proposed access and work pad location adjacent to 373 Structure 295.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 13: Looking at proposed access for 391 Structure 132 and 373 Structure 276.

Photograph No. 14: Looking at proposed access and work pad location adjacent to 391 Structure 274.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 15: Looking at proposed access and work pad location adjacent to 373 Structure 275.

Photograph No. 16: Looking at proposed access and work pad location adjacent to 391 Structure 272.

Photograph No. 17: Looking at proposed access and work pad location adjacent to 373 Structure 264.

Photograph No. 18: Looking at proposed access and work pad location adjacent to 373 Structure 263.

Photograph No. 19: Looking at proposed work pad location for 373 Structure 262.

Photograph No. 20: Looking at proposed access and work pad location for 373 Structure 256.

Photograph No. 21: Looking at proposed access and work pad location for 373 Structure 255.

Photograph No. 22: Looking at proposed access and work pad location for 373 Structure 247.

Photograph No. 23: Looking at proposed access and work pad location for 373 Structure 246.

Photograph No. 24: Looking at proposed access and work pad location for 373 Structure 235.

Photograph No. 25: Looking at proposed access and work pad location adjacent to 391 Structure 192.

Photograph No. 26: Looking at proposed access and work pad location for 391 Structure 191.

Photograph No. 27: Looking at proposed access and work pad location adjacent to 373 Structure 186.

Photograph No. 28: Looking at proposed access and work pad location for 391 Structure 177 from Nottingham Road.

Photograph No. 29: Looking at proposed access and work pad location for 391 Structure 163.

Photograph No. 30: Looking at proposed access and work pad location for 373 Structure 147.

Photograph No. 31: Looking at proposed access and work pad location adjacent to 385 Structure 144.

Photograph No. 32: Looking at proposed access to 373 Structure 146.

Photograph No. 33: Looking at proposed access to 373 Structure 145.

Photograph No. 34: Looking at proposed access to 391 Structure 133.

PHOTO LOG
391, 373, & 385 Transmission Line OPGW and Structure Replacement Project
Auburn, Candia, Chester, Deerfield, Derry, Northwood, Raymond, Rochester, and Strafford, New Hampshire
Photos Taken: February 10, 11, & 15, March 10 & 16, and April 6, 2022

Photograph No. 35: Looking at proposed access and work pad location for 391 Structure 132.

Photograph No. 36: Looking at proposed access to 385 Structure 127.

Photograph No. 37: Looking at proposed access and work pad location for 391 Structure 131.

Photograph No. 38: Looking at proposed access for 385 Structure 126.

Photograph No. 39: Looking at proposed access and work pad location for 391 Structure 130.

Photograph No. 40: Looking at proposed access and work pad location for 385 Structure 125.

Photograph No. 41: Looking at proposed access to 391 Structure 121.

Photograph No. 42: Looking at proposed access and work pad location for 391 Structure 116.

Photograph No. 43: Looking at proposed access and work pad location adjacent to 385 Structure 80.

Photograph No. 44: Looking at proposed access and work pad location for 385 Structure 78.

Photograph No. 45: Looking at proposed access and work pad location for 385 Structure 77.

Photograph No. 46: Looking at proposed access and work pad location for 385 Structure 72.

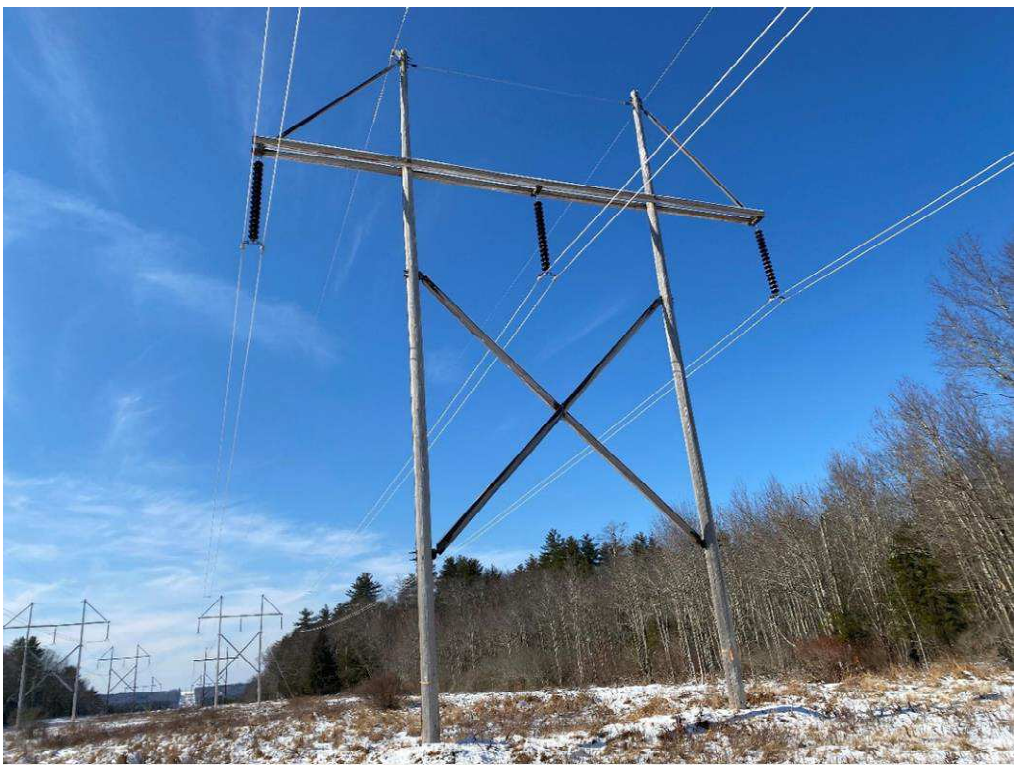
Photograph No. 47: Looking at proposed access and work pad location for 391 Structure 71.

Photograph No. 48: Looking at proposed access and work pad location for 391 Structure 78.

Photograph No. 49: Looking at proposed access and work pad location for 391 Structure 77.

Photograph No. 50: Looking at proposed access and work pad location adjacent for 385 Structure 69.

Photograph No. 51: Looking at proposed access and work pad location for 391 Structure 76.



Photograph No. 52: Looking at proposed access and work pad location for 385 Structure 68.

Photograph No. 53: Looking at proposed access and work pad location for 391 Structure 75.

Photograph No. 54: Looking at proposed access and work pad location for 391 Structure 73.

Photograph No. 55: Looking at proposed access and work pad location for 391 Structure 72.

Photograph No. 56: Looking at proposed access and work pad location to 385 Structure 65 from Second Crown Point Road.

Photograph No. 57: Looking at proposed access and work pad location for 391 Structure 71 from Second Crown Point Road.

Photograph No. 58: Looking at proposed access and work pad location for 391 Structure 68.

Photograph No. 59: Looking at proposed access and work pad location for 385 Structure 43

Photograph No. 60: Looking at proposed access and work pad location for 391 Structure 46.

Photograph No. 61: Looking at proposed access and work pad location adjacent to 385 Structure 34.

Photograph No. 62: Looking at proposed access and work pad location for 385 Structure 33.

Photograph No. 63: Looking at proposed access and work pad location for 385 Structure 23.

Photograph No. 64: Looking at proposed access and work pad location for 385 Structure 24.

Alteration of Terrain Waiver Request

RSA/Rule: RSA 485-A:17, Env – WQ 1500

Water Division / Alteration of Terrain Bureau / Land resources Management
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

A. PROJECT INFORMATION	
391/373/385 Transmission Line OPGW and Structure Replacement Project **Project Name**	
Existing 391/373/385 Transmission Line Right-of-Way **Street Address**	
Auburn, Candia, Chester, Derry, Deerfield, Northwood, Rochester, Raymond, and Strafford **City/Town**	Multiple **Zip Code**
Multiple – see attached **Tax Map/Lot Number**	

B. APPLICANT/OWNER INFORMATION		
Ashley **First Name**	Friend **Last Name**	
Eversource Energy **Organization**		
13 Legends Drive **Street Address**		
Hooksett **City/Town**	New Hampshire **State**	03106 **Zip Code**
Ashley.Friend@eversource.com **Email**	603-634-2992 **Telephone Number**	

C. APPLICANT/OWNER AGENT INFORMATION		
Conor **First Name**	Madison **Last Name**	
GZA GeoEnvironmental, Inc. **Organization**		
5 Commerce Park North, Suite 201 **Street Address**		
Bedford **City/Town**	New Hampshire **State**	03110 **Zip Code**

Conor.madison@gza.com **Email**	603-232-8784 **Telephone Number**

D. WAIVER REQUESTS

Env-Wq 1504.09 **Rule Section Waiver Request**	Stormwater Drainage Report; Drainage Area Plans; Hydrologic Soil Group Plans **Name of Rule**

Reason for Waiver Request

Eversource is requesting a waiver for preparing a Stormwater Drainage Report, Drainage Area Plans and Hydrologic Soil Group Plans for proposed access improvements and work pad grading associated with maintenance of the existing 391, 373 and 385 Transmission Line structures. The proposed access and work pad improvements for continued transmission line maintenance work will not result in new impervious surfaces. As a result, stormwater treatment practices are not proposed.

Waiver Timeline

Permanent

Proposed Alternative

The proposed access and work pad improvements will not result in new impervious surface. Therefore, there is no proposed alternative to substitute the requirements of Env-Wq 1504.09.

Compliance with Env- WQ 1509.04

The project proposes to improve access routes and work pads around utility structures for the purpose of maintaining existing utility infrastructure. This project is necessary in order to maintain the safety and reliability of the electrical infrastructure. Access and work pad improvements will be completed using stone and gravel, and therefore stormwater drainage should not be affected by the proposed project. In addition, it is not anticipated that stormwater drainage area plans would show significant differences between existing and proposed conditions. An NRCS Web Soil Survey report was generated to show general soil information within the project area. Since there is no new impervious surface area proposed and stormwater drainage is not anticipated to be affected by the proposed project, it is not anticipated that soils will be significantly impacted by the project.

Best Management Practices will be utilized to protect wetlands from erosion, sedimentation, or other environmental degradation. In addition, gravel work pads will be coated with seed and mulch to allow vegetation growth on the surface, further minimizing and preventing erosion and sedimentation. As a result, Eversource respectfully requests that a Stormwater Drainage Report, Drainage Area Plans, and Hydrologic Soil Group Plans be waived for the purposes of the proposed utility line maintenance project.

E. SIGNATURES

6/9/22

Applicant/Owner, Ashley Friend**, Eversource Energy** Date

6/9/22

Applicant/Owner Agent, Conor Madison**, GZA** Date

Alteration of Terrain Waiver Request
RSA/Rule: RSA 485-A:17, Env – WQ 1500

Water Division / Alteration of Terrain Bureau / Land resources Management
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

A. PROJECT INFORMATION	
391, 373, and 385 Transmission Line OPGW and Structure Replacement Project **Project Name**	
Existing 391, 373, and 385 Transmission Line Right-of-Way **Street Address**	
Auburn, Candia, Chester, Derry, Deerfield, Northwood, Rochester, Raymond and Strafford **City/Town**	Multiple **Zip Code**
Multiple – see attached plans **Tax Map/Lot Number**	

B. APPLICANT/OWNER INFORMATION		
Ashley **First Name**	Friend **Last Name**	
Eversource Energy **Organization**		
13 Legends Drive **Street Address**		
Hooksett **City/Town**	New Hampshire **State**	03106 **Zip Code**
Ashley.Friend@eversource.com **Email**	603-634-2992 **Telephone Number**	

C. APPLICANT/OWNER AGENT INFORMATION		
Conor **First Name**	Madison **Last Name**	
GZA GeoEnvironmental, Inc. **Organization**		
5 Commerce Park North, Suite 201 **Street Address**		
Bedford **City/Town**	New Hampshire **State**	03110 **Zip Code**
conor.madison@gza.com **Email**	603-232-8784 **Telephone Number**	

D. WAIVER REQUESTS

Env-Wq 1503.12 (d)(1&2) **Rule Section Waiver Request**	Measurement of Contiguous Area Disturbed; Inclusion in Plans **Name of Rule**

Reason for Waiver Request
Eversource is requesting a waiver for including past terrain disturbance in the measurement of contiguous disturbed area included in this 391, 373, and 385 Line AOT application. Future disturbance, beyond the scope of 391, 373, and 385 OPGW and Structure replacement project described in this application, is not known at this time.

Waiver Timeline
Permanent

Proposed Alternative
Existing terrain alteration associated with past transmission line maintenance within the 391, 373, and 385 ROW is minimal. Any existing trails or access roads that may have been created within the last 10 years will be utilized and/or improved as part of this project and have been included in the current calculations within this application. Future structure maintenance may occur within the 391, 373, and 385 ROW. Eversource, through consultation with NHDES, will evaluate whether future terrain disturbances within the 391, 373, and 385 ROW will be permitted with an amendment to this application or subject to a new, separate application.

Compliance with Env-Wq 1503.12 (d)(1&2)
The project proposes to improve access routes and work pads around utility structures for the purpose of maintaining existing utility infrastructure. This project is necessary to maintain the safety and reliability of the electrical infrastructure. Proposed disturbances anticipated for 2022 within the 391, 373, and 373 ROW are included in this application and shown on Figures 3 and 4. Project disturbances included in this application and subsequent permit approvals will be considered if future structure maintenance is proposed within the 391, 373, and 385 ROW. Eversource respectfully requests a waiver from including past disturbance in this application. Future disturbances within the E115 ROW will be evaluated and discussed with NHDES and permit amendments or new permit applications will be submitted, if necessary.

E. SIGNATURES

6/9/22

Applicant/Owner, **Ashley Friend,**
Eversource Energy

Date

6/9/22

Applicant/Owner Agent, **Conor Madison,**
GZA GeoEnvironmental, Inc.

Date

Alteration of Terrain Waiver Request
RSA/Rule: RSA 485-A:17, Env – WQ 1500

Water Division / Alteration of Terrain Bureau / Land resources Management
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

A. PROJECT INFORMATION	
391, 373, and 385 Transmission Line OPGW and Structure Replacement Project **Project Name**	
Existing 391, 373, and 385 Transmission Line Right-of-Way **Street Address**	
Auburn, Candia, Chester, Derry, Deerfield, Northwood, Rochester, Raymond, and Strafford **City/Town**	Multiple **Zip Code**
Multiple – see attached plans **Tax Map/Lot Number**	

B. APPLICANT/OWNER INFORMATION		
Ashley **First Name**	Friend **Last Name**	
Eversource Energy **Organization**		
13 Legends Drive **Street Address**		
Hooksett **City/Town**	New Hampshire **State**	03106 **Zip Code**
Ashley.Friend@eversource.com **Email**	603-634-9229 **Telephone Number**	

C. APPLICANT/OWNER AGENT INFORMATION		
Conor **First Name**	Madison **Last Name**	
GZA GeoEnvironmental, Inc. **Organization**		
5 Commerce Park North, Suite 201 **Street Address**		
Bedford **City/Town**	New Hampshire **State**	03310 **Zip Code**
Conor.madison@gza.com **Email**	603-232-8784 **Telephone Number**	

D. WAIVER REQUESTS	
Env-Wq 1503.21 (d)(6&7) **Rule Section Waiver Request**	Notification; Certification **Name of Rule**

Reason for Waiver Request

Eversource is requesting a waiver for deviations from the approved plans without applying for an amended permit or a new permit if shifts in the proposed project layout occur. Changes in project layout are frequently identified during construction by Eversource and their contractors and may be necessary to safely perform the work. Access shifts would be limited to the extent necessary for safety, would not impact new resources, and access would remain within the existing and maintained ROW. The need for additional permit applications can impact construction schedules and incur costly delays.

Waiver Timeline

Permanent

Proposed Alternative

Allow for the access road centerlines to be relocated during construction, if necessary, up to a distance equal to the approximate width of the ROW (approximately 170-230 feet on the 391, 373, and 385 Lines). Shifts would not create greater than 5% increase in disturbed area along the individual access segment, which is assumed to be the length of the access road between two work pads/structures.

Allow for the center point of the parking area, assumed to be the structure replacement work pads for transmission line projects, to be relocated during construction, if necessary, up to a distance equal to half the approximate width of the ROW (approximately 170-230 feet on the 391, 373, and 385 Lines). Shifts would not create greater than 5% increase in disturbed area at each work pad.

This would allow contractors to avoid steep terrain or other hazardous areas, or areas that may require significant grading or earthwork that may not have been identified during initial constructability reviews. Landowners may also request layout changes be made after project permitting is complete. In most cases this shift is done to reduce the amount of disturbed area.

Compliance with Env-Wq 1503.21 (d)(6&7)

The project proposes to improve access routes and work pads around utility structures for the purpose of maintaining existing utility infrastructure. This project is necessary to maintain the safety and reliability of the electrical infrastructure. Proposed disturbances shown on Figures 3 and 4 are the result of avoidance and minimization measures and constructability reviews. Layout changes and shifts will be limited to the proposed alternative above. A reduction in disturbed area is often the result. As previously mentioned, access shifts would be limited to the extent necessary to safely perform work. Access routes will remain within the existing and maintained ROW and would not disturb new resources. Best Management Practices will be utilized to protect wetlands from erosion, sedimentation, or other environmental degradation as originally proposed. Eversource respectfully requests a waiver from limiting shifts of the project road centerlines and parking areas to 20 feet.

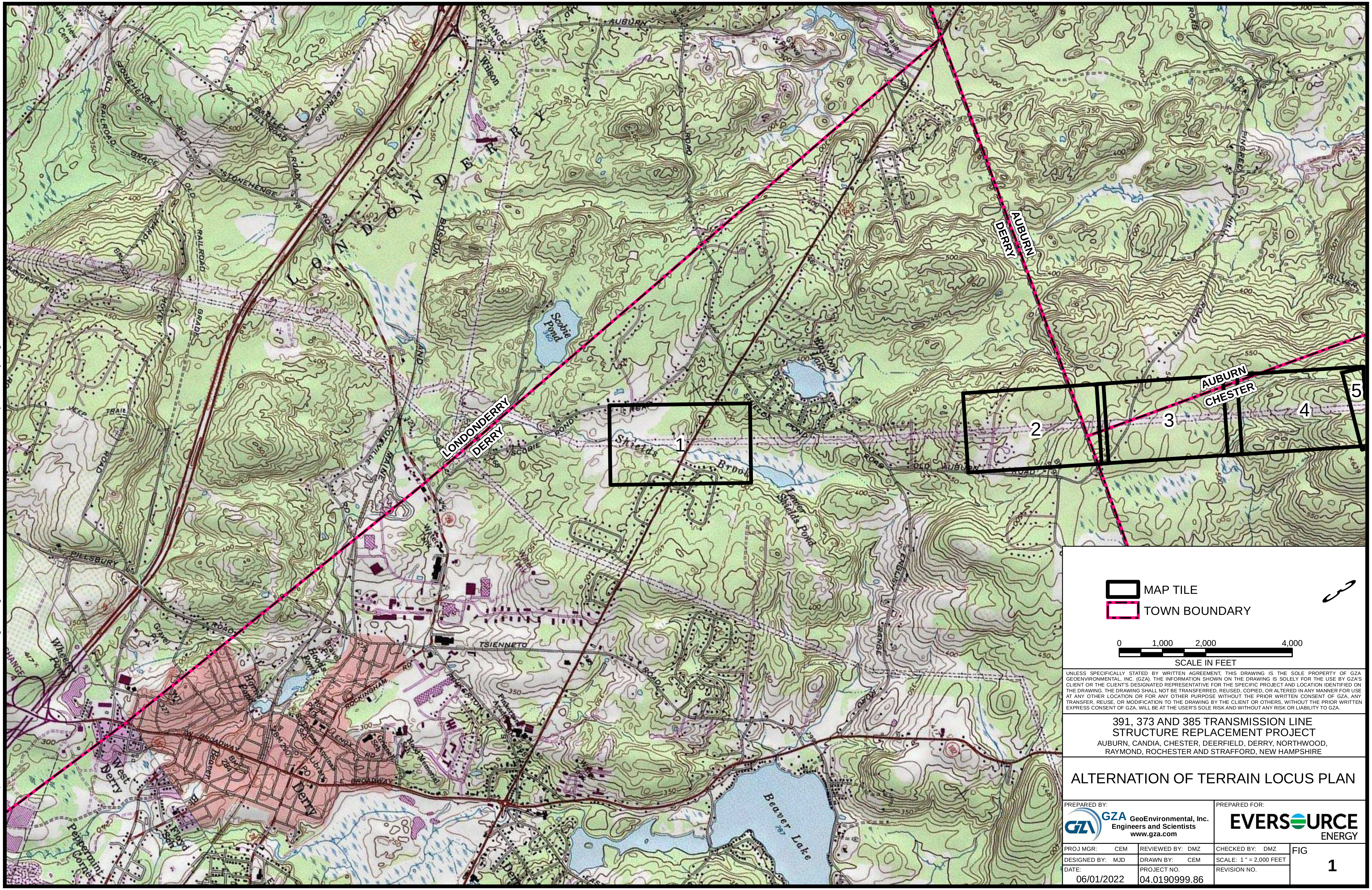
E. SIGNATURES

6/9/22

Applicant/Owner, **Ashley Friend, Eversource Energy** — Date

6/9/22

Applicant/Owner Agent, **Conor Madison, GZA GeoEnvironmental, Inc.** — Date



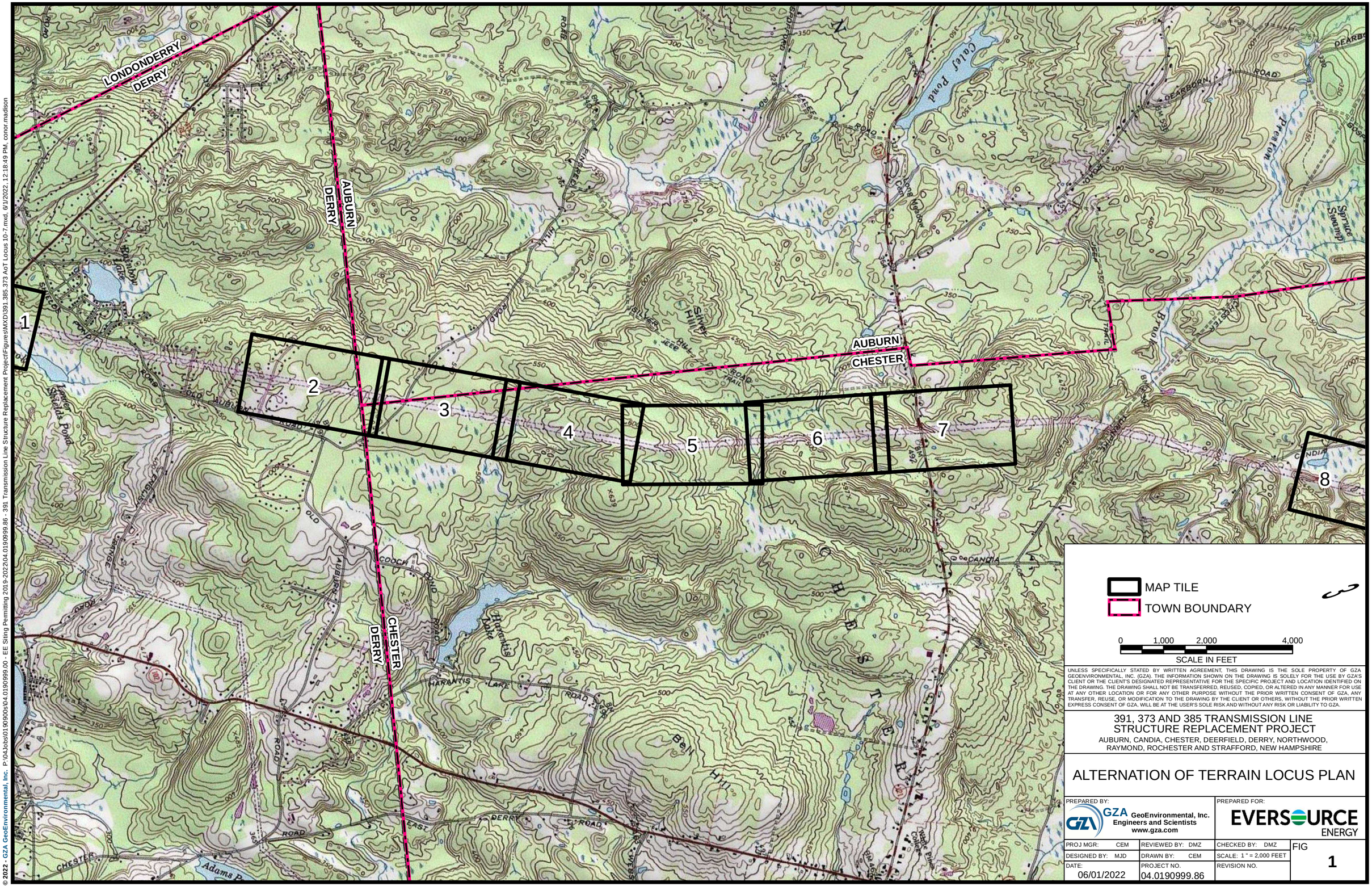
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA, ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

AUBURN
CHESTER
CHESTER
CANDIA
AUBURN
CANDIA
CHESTER
RAYMOND
CANDIA
RAYMOND
8
9
10
11
12
13

MAP TILE
TOWN BOUNDARY

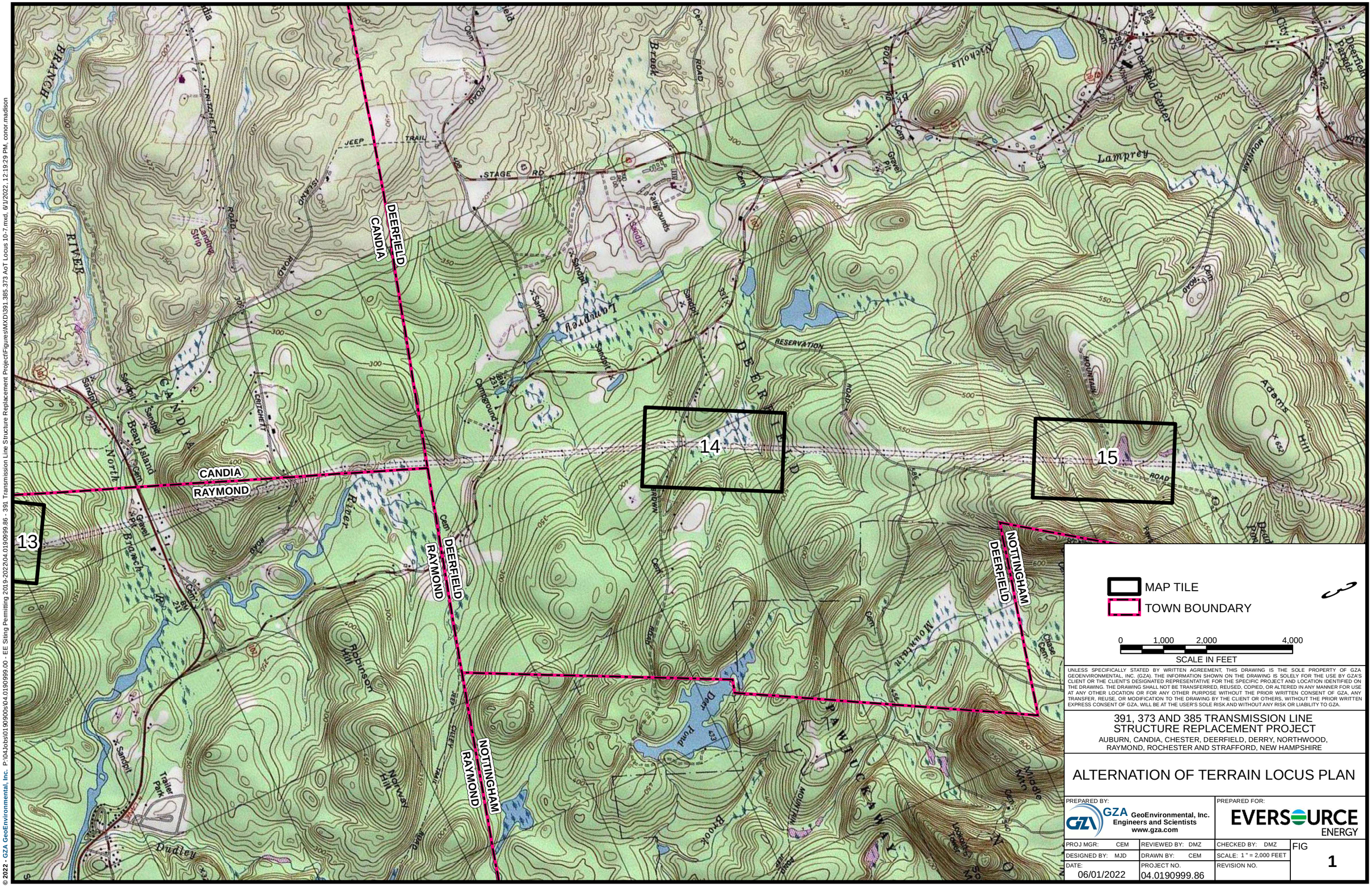
0 1,000 2,000 4,000
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

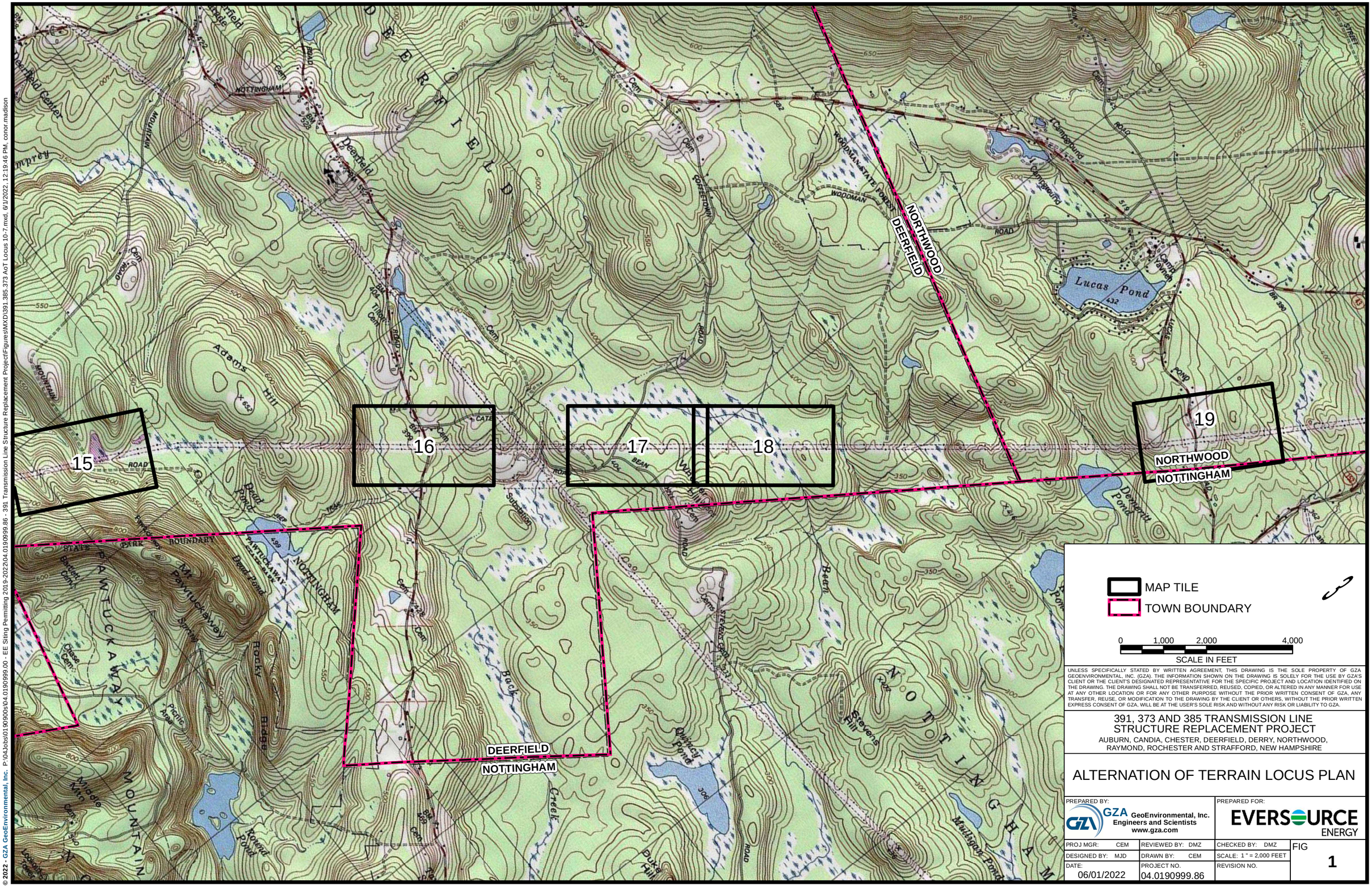
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

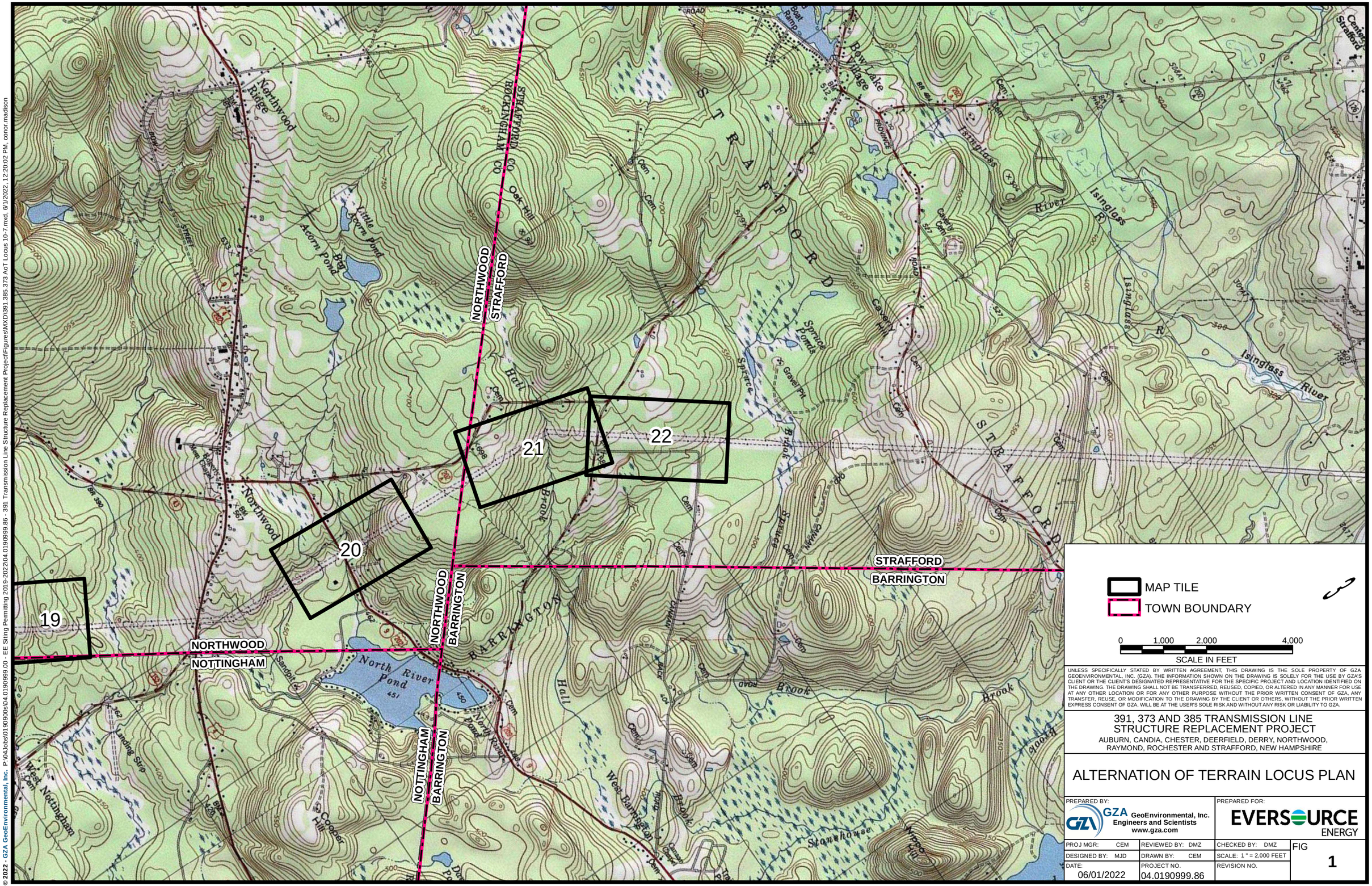
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

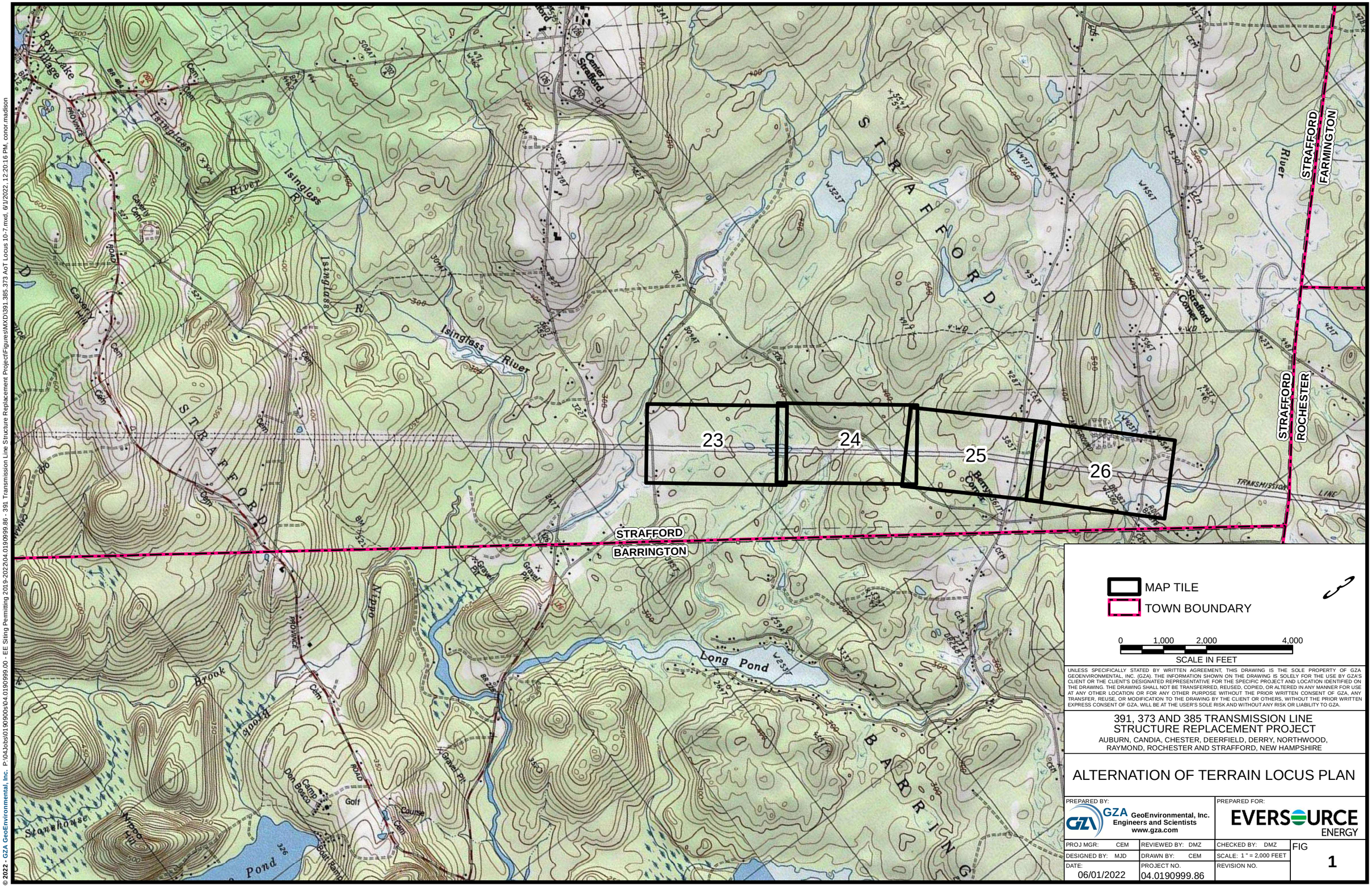
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

STRAFFORD
FARMINGTON
STRAFFORD
ROCHESTER
FARMINGTON
ROCHESTER
CORPORATE
BOUNDARY
STRAFFORD
BARRINGTON
BARRINGTON
ROCHESTER
ROCHESTER
BOSTON

26
27
28
29

Baxter Lake
Rickers Brook
Howard Brook
Axe Handle Brook
Heath Brook
River
Rochester Reservoir
Round Pond
Preston Pond
Little Lo
Strafford Corner
Meaderboro Corner
Hayes Hill
Wooden
Trailer Park
CAMPGROUND
C. CAMPGROUND
SAND AND GRAVEL PITS
SAND PIT
TRANSMISSION LINE
INTER 15
INTER 4
THOMBLY ST
LORD ST
WALNUT ST
PATTON ST
MAIN ST
DEWEY ST
MAINE
AVON
BETTS
CHESTNUT

MAP TILE
TOWN BOUNDARY

0 1,000 2,000 4,000
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN LOCUS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EVERSOURCE ENERGY

PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

LONDONDERRY
DERRY

AUBURN
DERRY

AUBURN
CHESTER

1
2
3
4
5

MAP TILE
TOWN BOUNDARY

0 1,000 2,000 4,000
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EVERSOURCE ENERGY

PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

LONDONDERRY
DERRY

AUBURN
DERRY

AUBURN
CHESTER

CHESTER
DERRY

1
2
3
4
5
6
7
8

MAP TILE
TOWN BOUNDARY

0 1,000 2,000 4,000
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

AUBURN
CHESTER

AUBURN
CANDIA

CHESTER
CANDIA

CHESTER
RAYMOND

CANDIA
RAYMOND

8

9

10

11

12

13

MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EVERSOURCE ENERGY

PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

DEERFIELD
CANDIA
CANDIA
RAYMOND
DEERFIELD
RAYMOND
NOTTINGHAM
RAYMOND
NOTTINGHAM
DEERFIELD
13
14
15

MAP TILE
TOWN BOUNDARY

0 1,000 2,000 4,000
SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

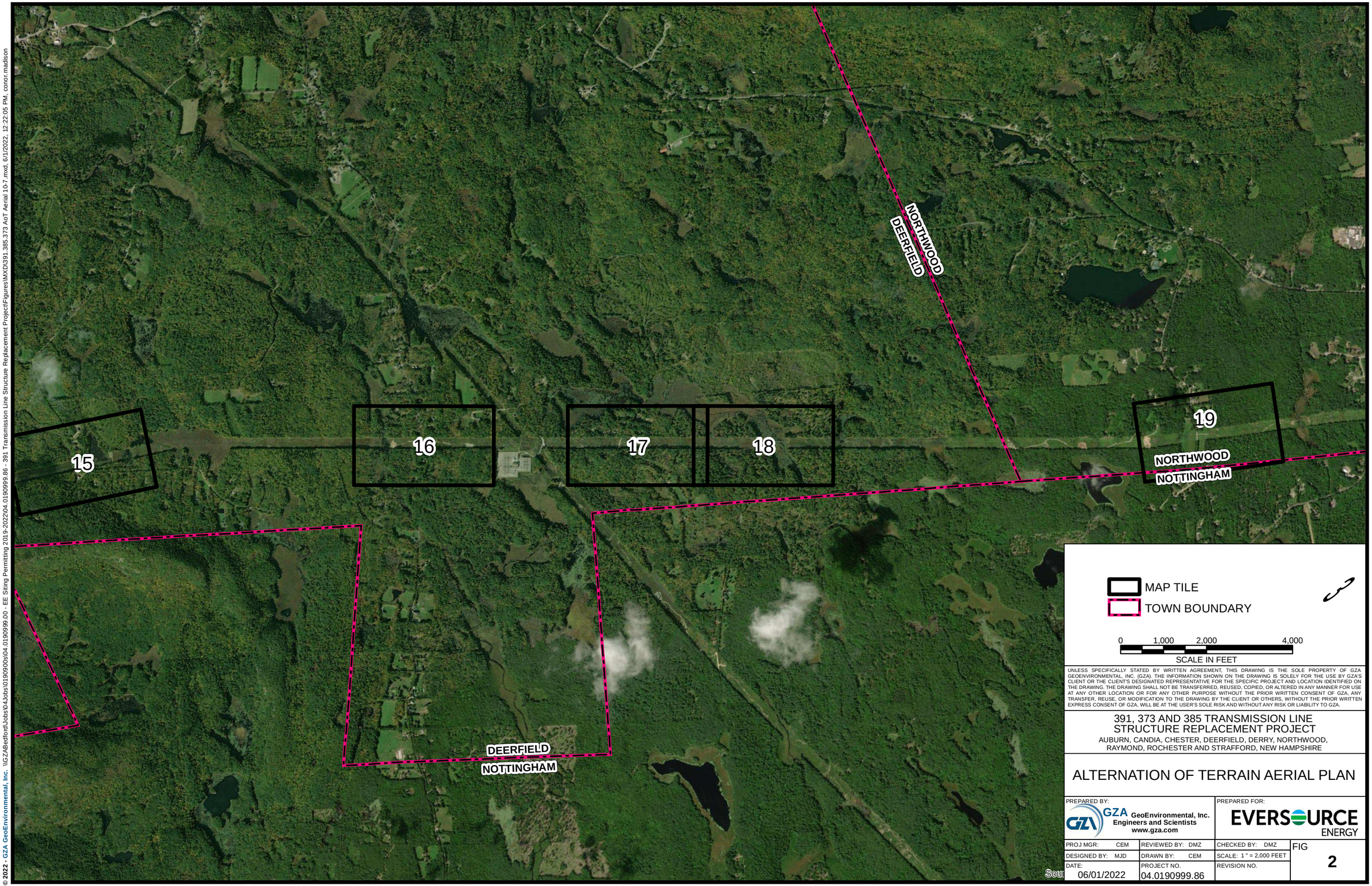
AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EVERSOURCE ENERGY

PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

NORTHWOOD
STRAFFORD

21

22

20

19

STRAFFORD
BARRINGTON

NORTHWOOD
BARRINGTON

NORTHWOOD
NOTTINGHAM

NOTTINGHAM
BARRINGTON

MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

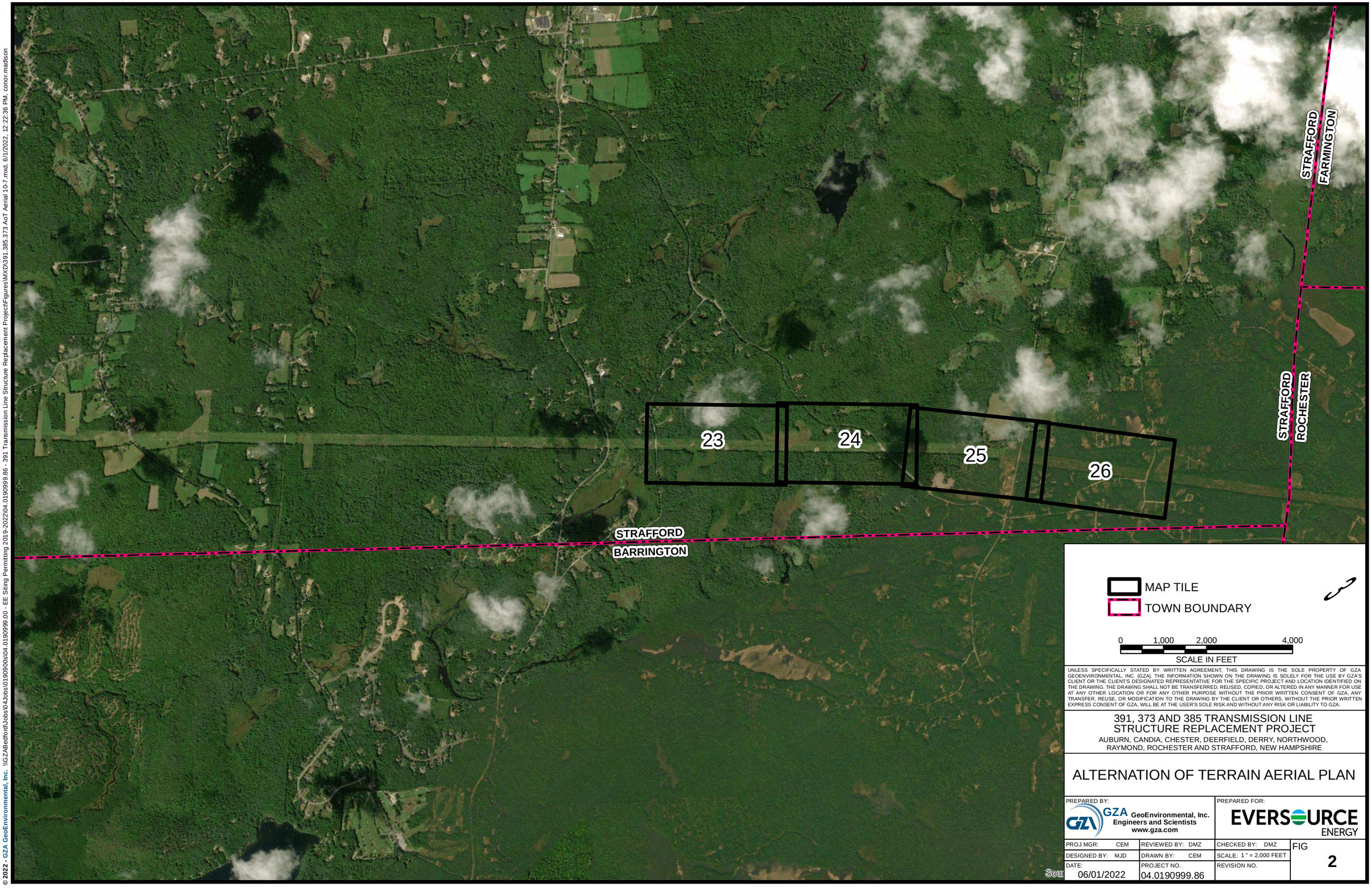
AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EVERSOURCE ENERGY

PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	



MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

STRAFFORD
FARMINGTON

FARMINGTON
ROCHESTER

STRAFFORD
ROCHESTER

STRAFFORD
BARRINGTON

BARRINGTON
ROCHESTER

26

27

28

29

MAP TILE

TOWN BOUNDARY

0 1,000 2,000 4,000

SCALE IN FEET

391, 373 AND 385 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

AUBURN, CANDIA, CHESTER, DEERFIELD, DERRY, NORTHWOOD, RAYMOND, ROCHESTER AND STRAFFORD, NEW HAMPSHIRE

ALTERNATION OF TERRAIN AERIAL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
EVERSOURCE ENERGY

PROJ MGR: CEM	REVIEWED BY: DMZ	CHECKED BY: DMZ	FIG 2
DESIGNED BY: MJD	DRAWN BY: CEM	SCALE: 1 " = 2,000 FEET	
DATE: 06/01/2022	PROJECT NO. 04.0190999.86	REVISION NO.	

ZONE AE

ZONE X

ZONE A

By Pass 28

338 337 336 335 334 333 332

373 Line

329 328 327 326 325 324

391-LINE

Shields Brook

Cilley Rd

Westgate Rd

Gregoire St

Paul Ave

Doris St

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

DERRY, NH | MAP SHEET

Date: May, 2022 | 1 OF 28

04.0190999.86

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Pass 051322 10-8.mxd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

DERRY/AUBURN, NH

MAP SHEET

Date: May, 2022

04.0190999.86

2 OF 28

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

AUBURN/CHESTER, NH | MAP SHEET

Date: May, 2022 | 3 OF 28

04.0190999.86

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022 AoT Water Resources Plans 051322 10-8.mxd

ZONE A

Unnamed Stream

304
301
303
302
373 Line
299
300
391 LINE
298
301
300
297

Unnamed Stream

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

CHESTER, NH | MAP SHEET

Date: May, 2022

04.0190999.86

4 OF 28

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siteg Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

ZONE A

Unnamed Stream

Unnamed Stream

373 Line

391-LINE

299 298 297 296 295 296 295 294 293 296 295 292

Preston Brook

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

CHESTER, NH | MAP SHEET

Date: May, 2022 | 5 OF 28

04.0190999.86

Document Path: P:\04Jobs\01990\0s\04.01.90999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

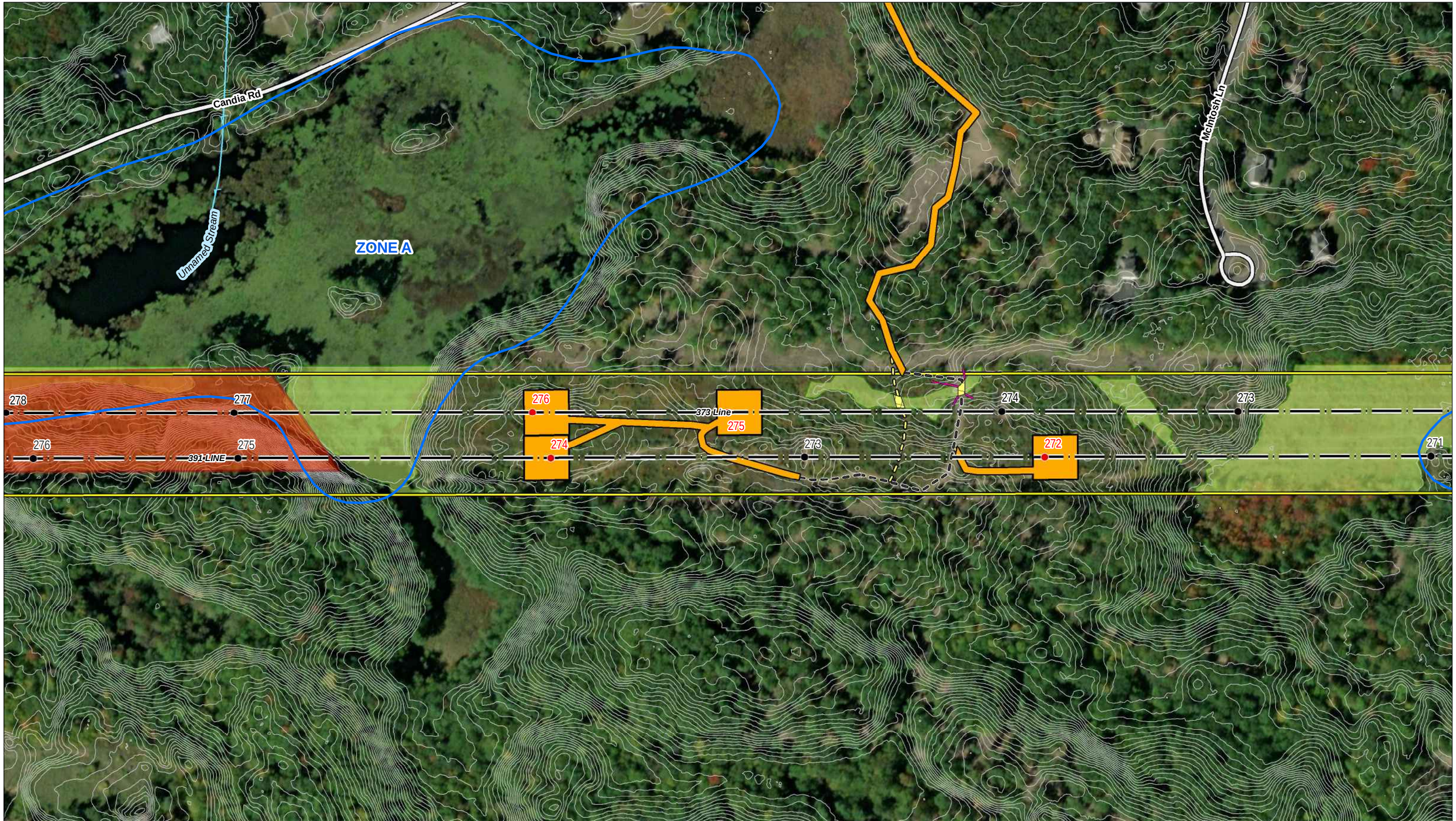
CHESTER, NH | MAP SHEET

Date: May, 2022

04.0190999.86

6 OF 28

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

CHESTER, NH | MAP SHEET

Date: May, 2022

04.0190999.86

7 OF 28

CHESTER
RAYMOND

Fordway Brook

265
373 Line
264
263
262
261
263
262
391 LINE
261
260
259

Unnamed Stream

Norton Pond Rd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet
0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

CHESTER/RAYMOND, NH | MAP SHEET

Date: May, 2022

04.0190999.86

8 OF 28

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

RAYMOND/CANDIA, NH | MAP SHEET

Date: May, 2022 | 9 OF 28

04.0190999.86

Document Path: P:\04Jobs\0190999\04.01.90999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

Lane Rd
Lane Rd
Unnamed Stream
Unnamed Stream
Patten Hill Rd
Depot Rd
373 Line
391 LINE
CANDIA
RAYMOND
ZONE A
Green Rd
Kellie Ln
255
256
254
253
252
251
250
249

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet
0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

RAYMOND/CANDIA, NH | MAP SHEET

Date: May, 2022 | 10 OF 28

04.0190999.86

Document Path: P:\04Jobs\01900\00s\04.01909999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

RAYMOND/CANDIA, NH

MAP SHEET

Date: May, 2022

11 OF 28

04.0190999.86

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

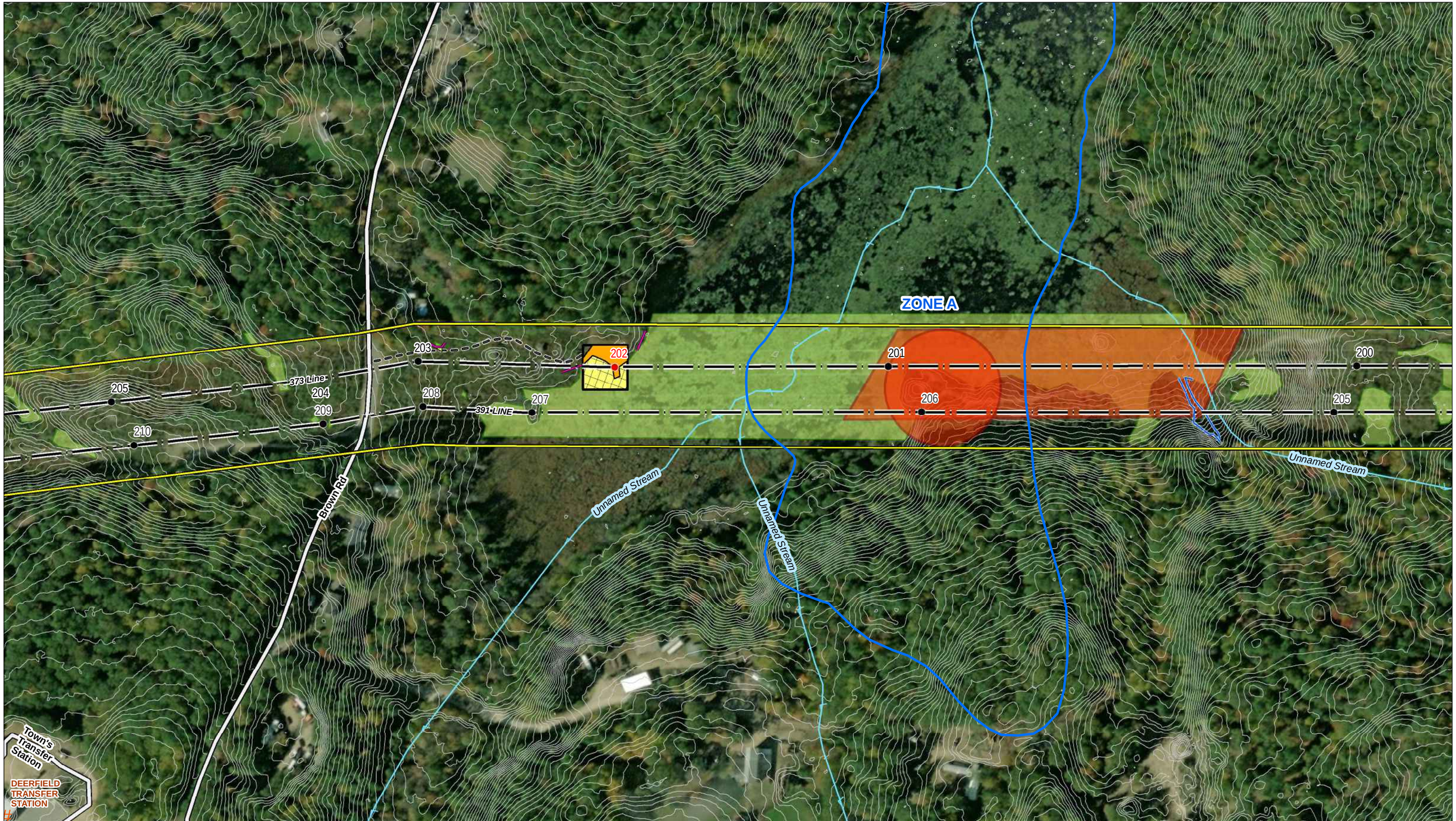
391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

RAYMOND/CANDIA, NH | MAP SHEET

Date: May, 2022

04.0190999.86

12 OF 28



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

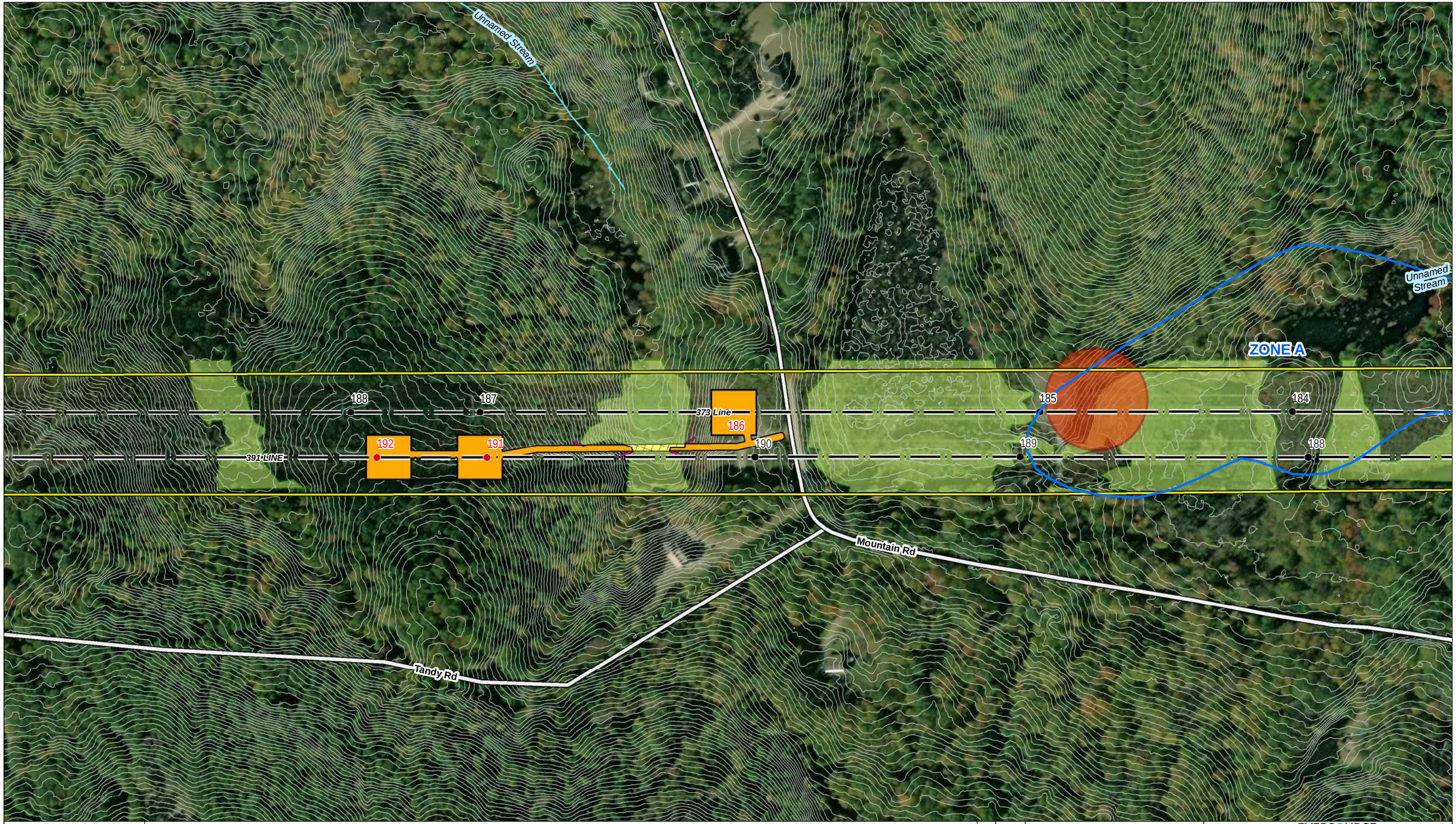
EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

DEERFIELD, NH | MAP SHEET

Date: May, 2022 | 13 OF 28

04.0190999.86



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

DEERFIELD, NH | MAP SHEET

Date: May, 2022

04.0190999.86

14 OF 28

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

DEERFIELD, NH | MAP SHEET

Date: May, 2022 | 15 OF 28

04.0190999.86

Document Path: P:\04Jobs\0190999\05\04.01909999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

DEERFIELD, NH | MAP SHEET

Date: May, 2022

04.0190999.86

16 OF 28

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

Unnamed Stream

Unnamed Stream

ZONE A

Bean River

161

385 Line

160

159

158

157

156

165

391 LINE

164

163

162

161

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

DEERFIELD, NH | MAP SHEET

Date: May, 2022

04.0190999.86

17 OF 28

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019 -2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

Twombly Dr

Lucas Pond Rd

146 145 144 143 142 141

149 148 147 146 145 144

385 Line

391 LINE

NORTHWOOD

NOTTINGHAM

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

NORTHWOOD/NOTTINGHAM, NH | MAP SHEET

Date: May, 2022 | 18 OF 28

04.0190999.86

Document Path: P:\04Jobs\03\0190\00s\04.01\90999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

ZONE A

Unnamed Stream

Rochester Rd

130 129 128 126 125 124

391 LINE 133 132 127 131 130 385 Line 129

Unnamed Stream

Priest Rd

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

NORTHWOOD, NH | MAP SHEET

Date: May, 2022 | 19 OF 28

04.0190999.86

Document Path: P:\04Jobs\0190999\04.01\90999.00 - EE Siting Permitting 2019 -2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

Drake Hill Rd
Allen Farm Rd
NORTHWOOD
STRAFFORD
Drake Hill Rd
Strafford Rd
117
122
118
385-Line
119
123
116
121
391-LINE
120
124
120
115
125
119
Hall Brook
Canaan Rd
Back Canaan Rd
ZONE A

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

NORTHWOOD/STRAFFORD, NH

MAP SHEET

Date: May, 2022

04.0190999.86

20 OF 28

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

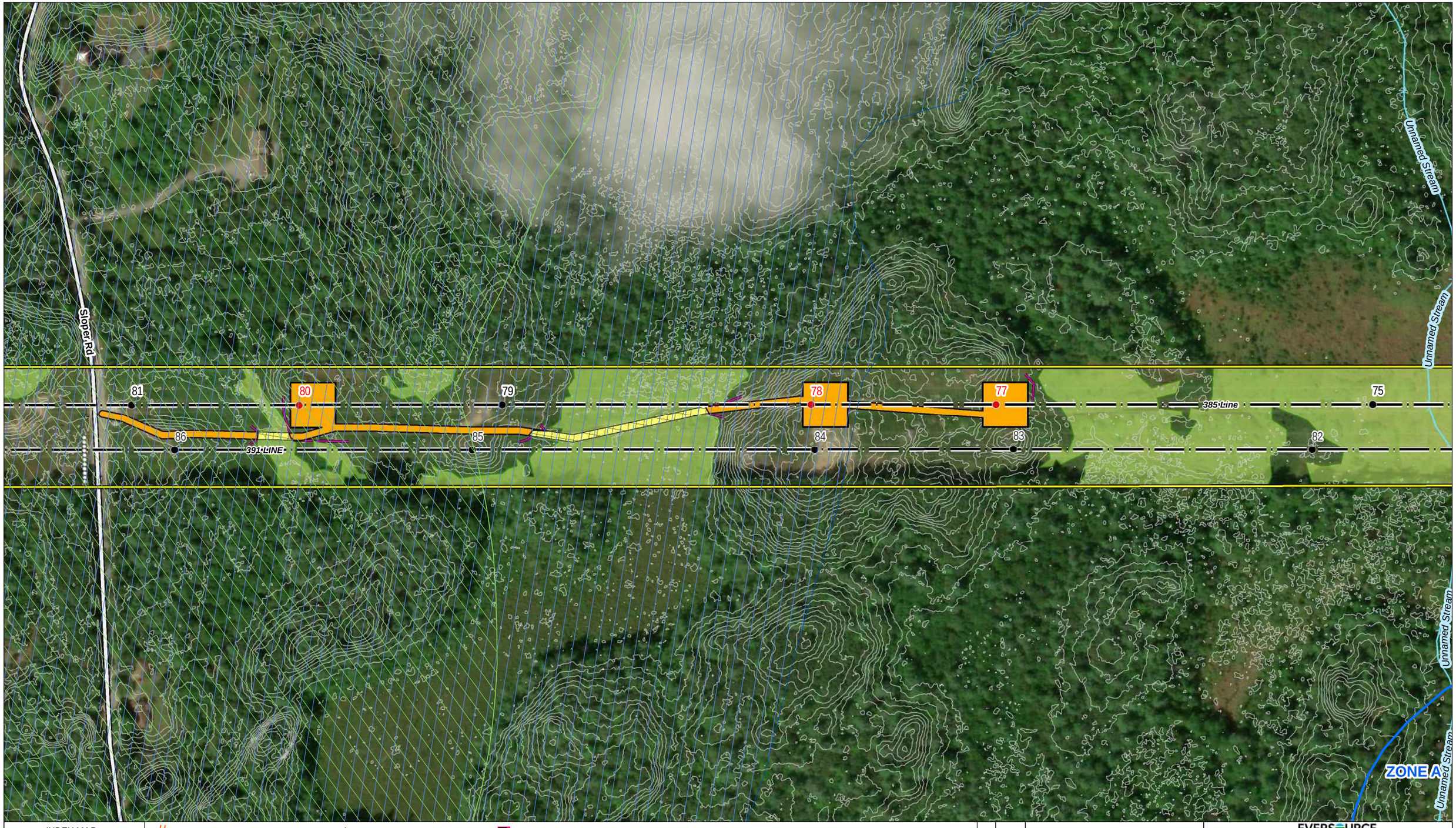
STRAFFORD, NH | MAP SHEET

Date: May, 2022

04.0190999.86

21 OF 28

Document Path: P:\04Jobs\0190\00s\04.01\90999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

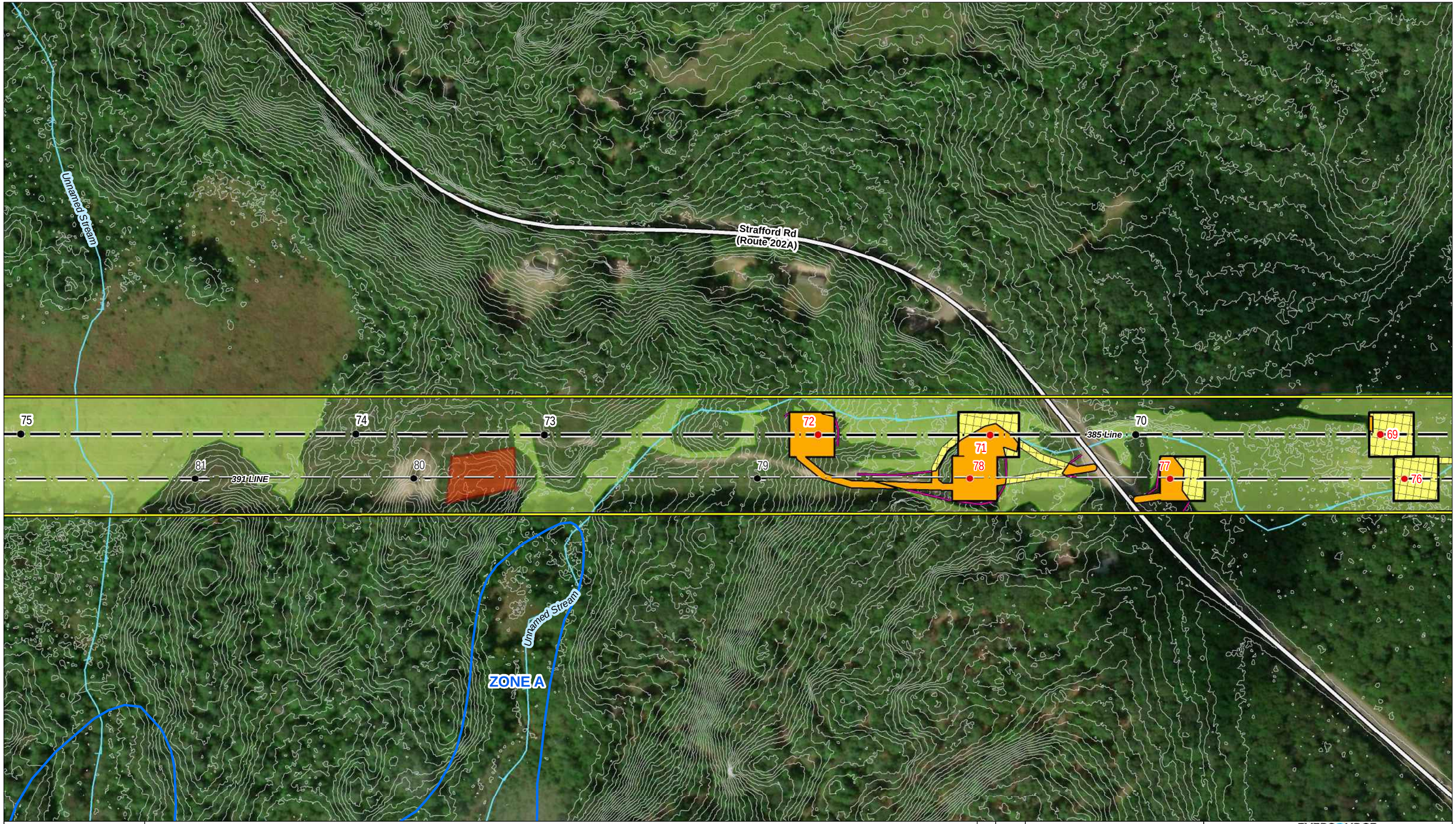
391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

STRAFFORD, NH | MAP SHEET

Date: May, 2022

04.0190999.86

22 OF 28



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT

- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

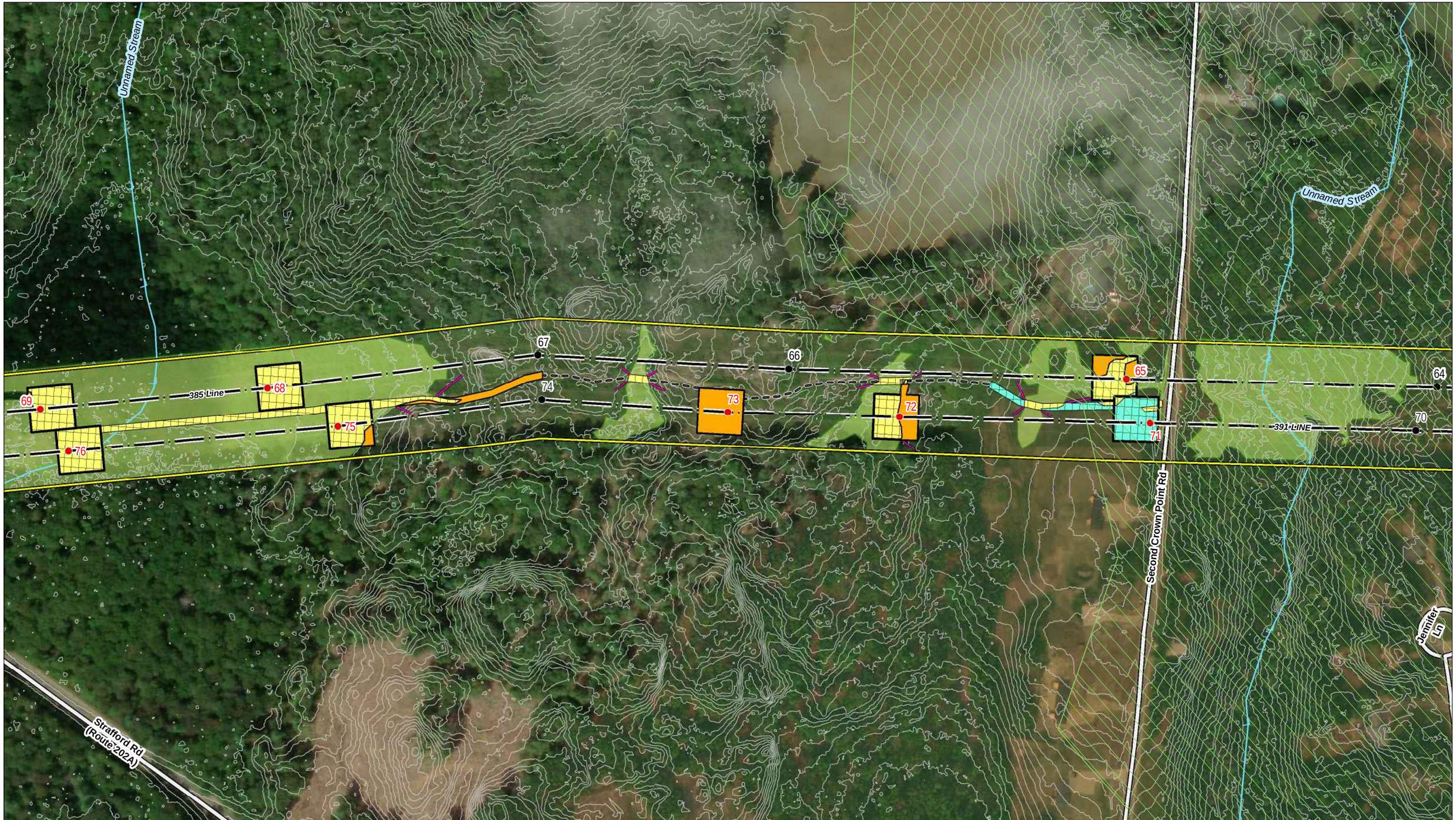
391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

STRAFFORD, NH | MAP SHEET

Date: May, 2022 | 23 OF 28

04.0190999.86

Document Path: P:\04Jobs\0190\00s\04.01909990 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 05 1322 10-8.mxd



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

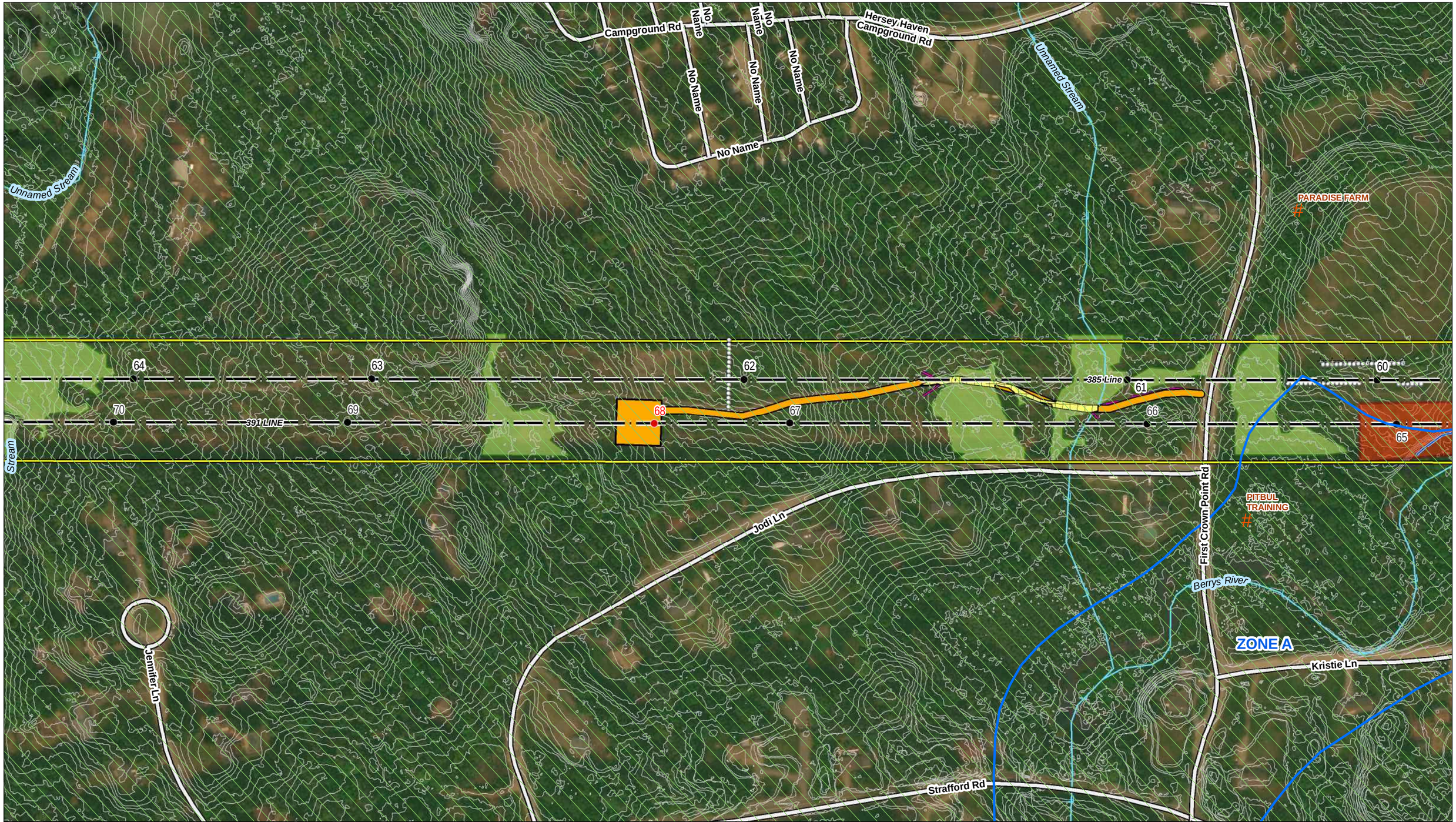
391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

STRAFFORD, NH | MAP SHEET

Date: May, 2022 | 24 OF 28

04.0190999.86

Document Path: P:\04obs\0190\90\04.01.90999.00 - EE Siting Permiting 2019-2022\04.01\0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

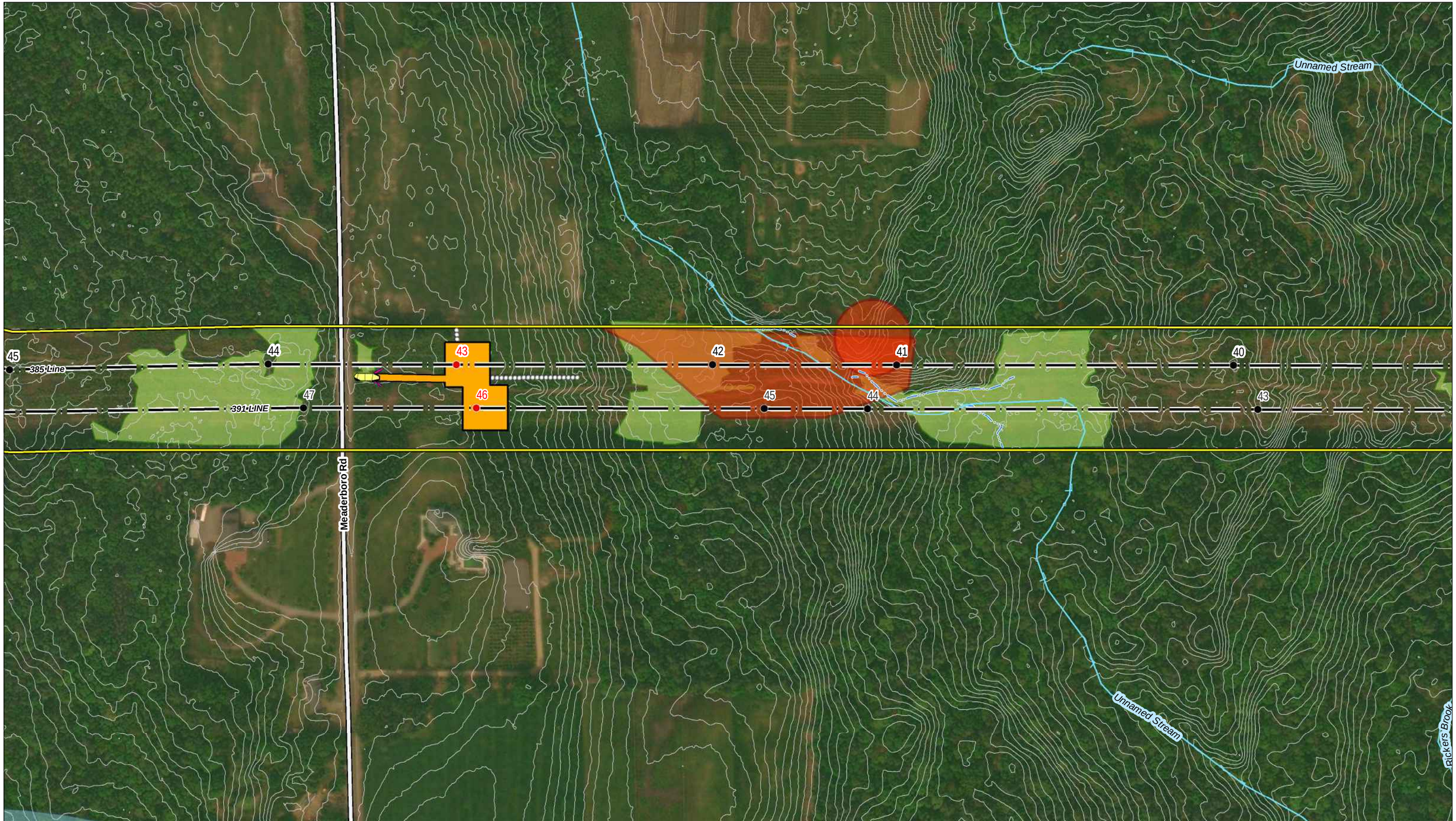
STRAFFORD, NH | MAP SHEET

Date: May, 2022

04.0190999.86

25 OF 28

Document Path: P:\04Jobs\0190900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022 AoT Water Resources Plans 051322 10-8.mxd



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

ROCHESTER, NH

MAP SHEET

Date: May, 2022

26 OF 28

04.0190999.86

INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

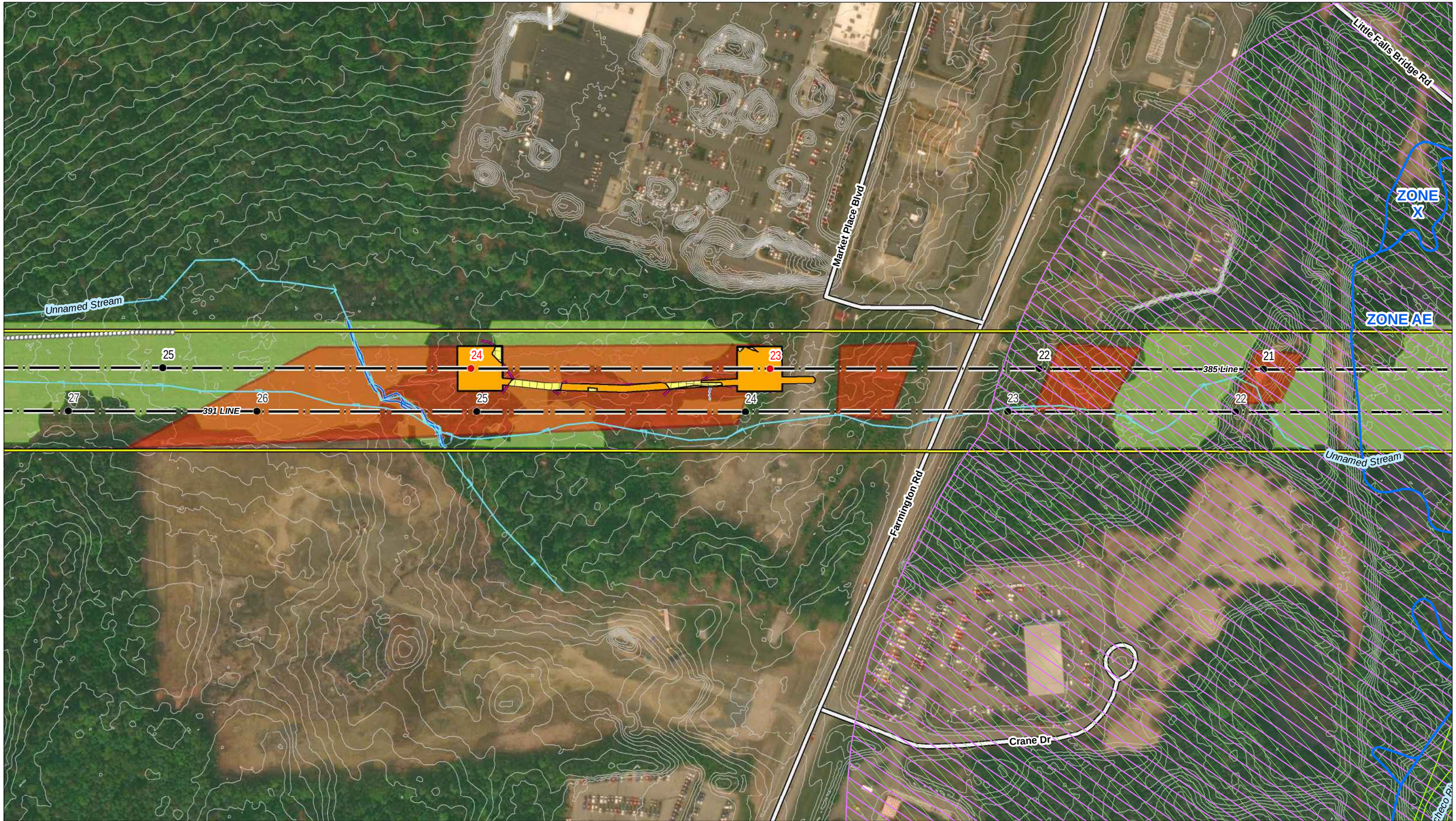
391, 385, and 373 Transmission Line Structure Replacement Project
Surface and Groundwater Overlay Plans

ROCHESTER, NH | MAP SHEET

Date: May, 2022 | 27 OF 28

04.0190999.86

Document Path: P:\04Jobs\01909\05\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd



INDEX MAP

- Local Potential Contamination Sources
- Designated River Quarter Mile Buffer
- FEMA Special Flood Hazard Area
- Wellhead Protection Areas
- Watersheds with Chloride Impairments 2016
- Water Supply Intake Protection Areas
- Surface Waters with Impairments 2016 with Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- All Lakes with a Quarter Mile Buffer
- Groundwater Classification Areas GAA
- Groundwater Classification Areas GA2
- Groundwater Classification Areas GA1
- Coastal and Great Bay Region Communities
- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Structure Replacement Project Surface and Groundwater Overlay Plans

ROCHESTER, NH

MAP SHEET

Date: May, 2022

28 OF 28

04.0190999.86

Document Path: P:\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019 -2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Water Resource Plans 051322 10-8.mxd

DYW-21
PSS1B/R2UB

DYW-20
PSS2E/PSS2J/PSS1D/PUBH

DYW-21
PSS1

By Pass 28

373 Line

391 LINE

Shields Brook

Paul Ave

326

AoT Area A - Derry Map Sheets 1 to 3	
Disturbance Type	**Impact (sq. ft)**
New Access	14,813
Gravel Work Pad	40,462
Total AoT Disturbed Area	***55,275***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

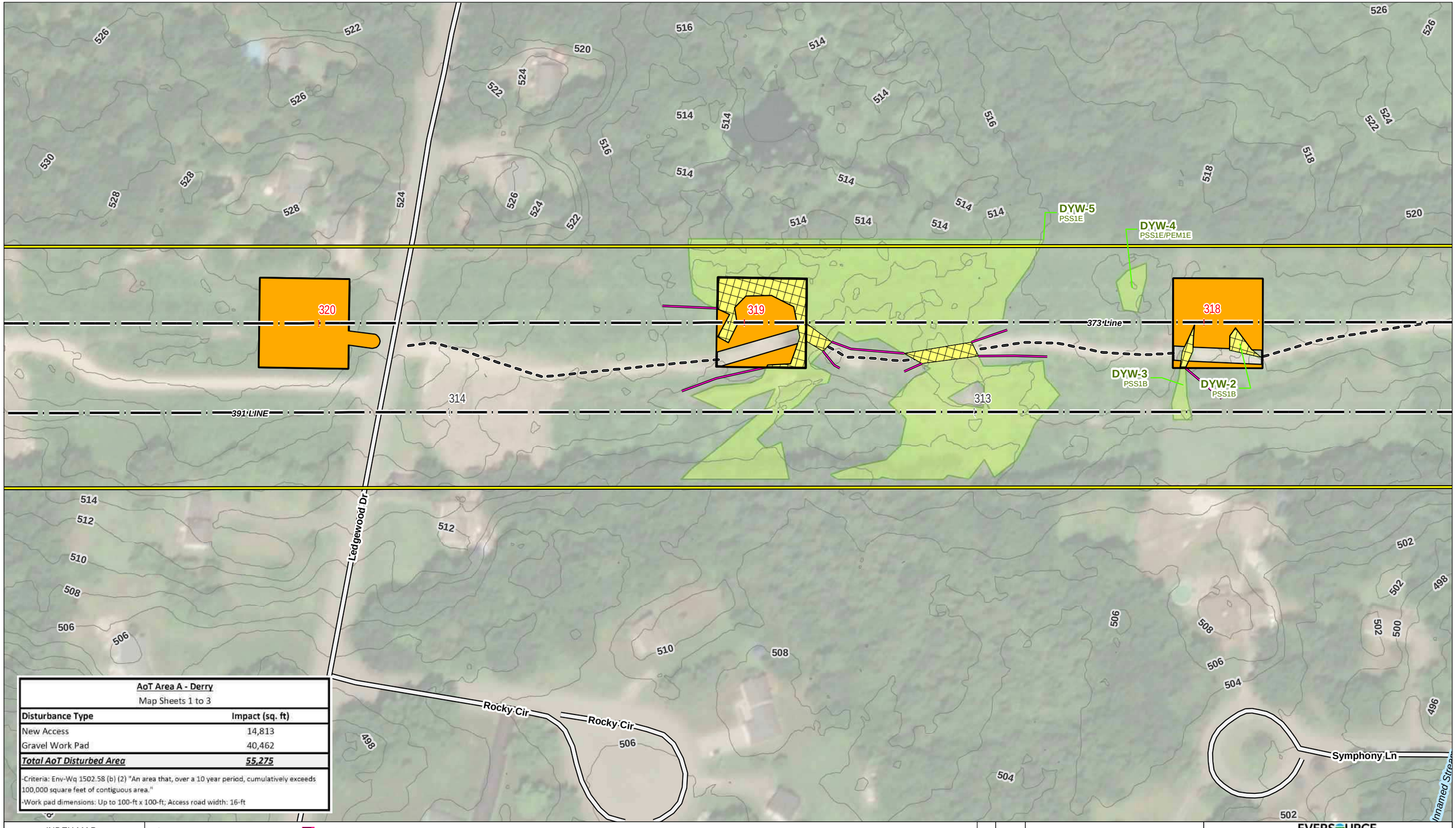
391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Derry, NH | MAP SHEET

Date: April, 2022 | 1 OF 41

04.0190999.86

Document Path: \\G\ZABedford\Jobs\04Jobs\05.90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd



AoT Area A - Derry Map Sheets 1 to 3	
Disturbance Type	**Impact (sq. ft)**
New Access	14,813
Gravel Work Pad	40,462
Total AoT Disturbed Area	***55,275***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

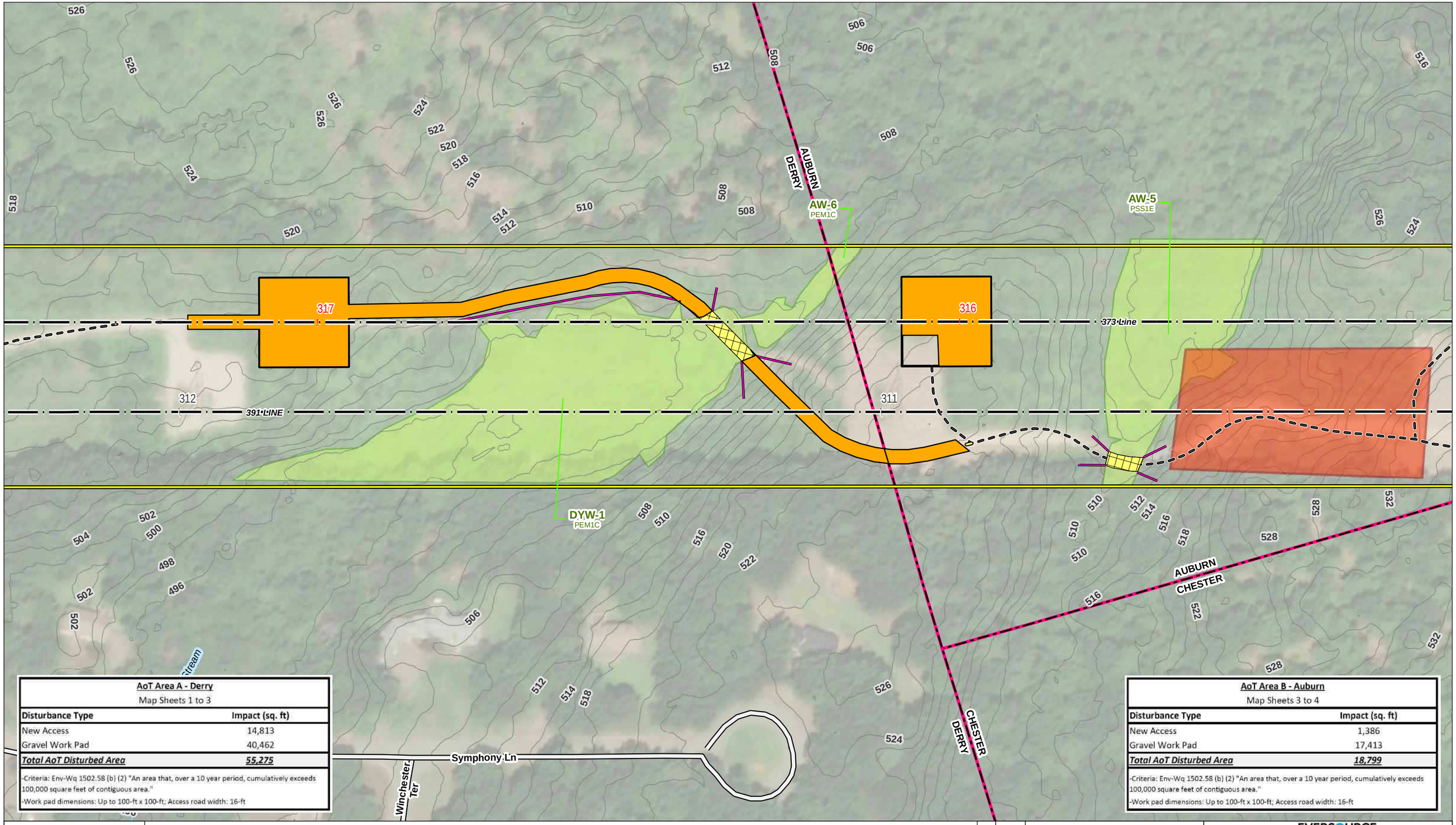
391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Derry, NH | MAP SHEET

Date: April, 2022 | 2 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\0190999\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd



AoT Area A - Derry Map Sheets 1 to 3	
Disturbance Type	**Impact (sq. ft)**
New Access	14,813
Gravel Work Pad	40,462
Total AoT Disturbed Area	***55,275***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

AoT Area B - Auburn Map Sheets 3 to 4	
Disturbance Type	**Impact (sq. ft)**
New Access	1,386
Gravel Work Pad	17,413
Total AoT Disturbed Area	***18,799***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

NO.	DATE	REVISIONS

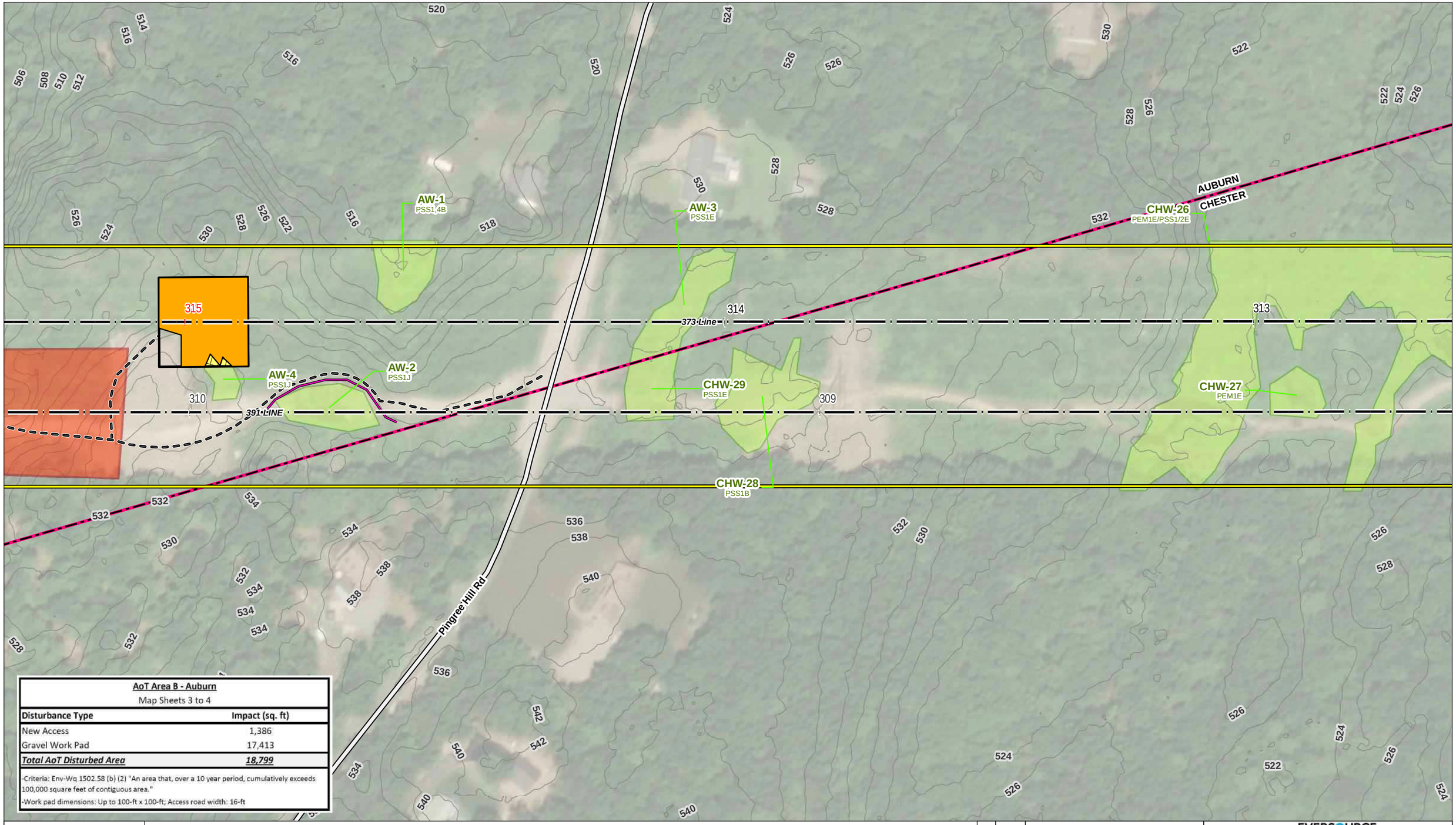
EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Derry/Auburn, NH | MAP SHEET

Date: April, 2022 | 3 OF 41

04.0190999.86



AoT Area B - Auburn Map Sheets 3 to 4	
Disturbance Type	**Impact (sq. ft)**
New Access	1,386
Gravel Work Pad	17,413
Total AoT Disturbed Area	***18,799***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

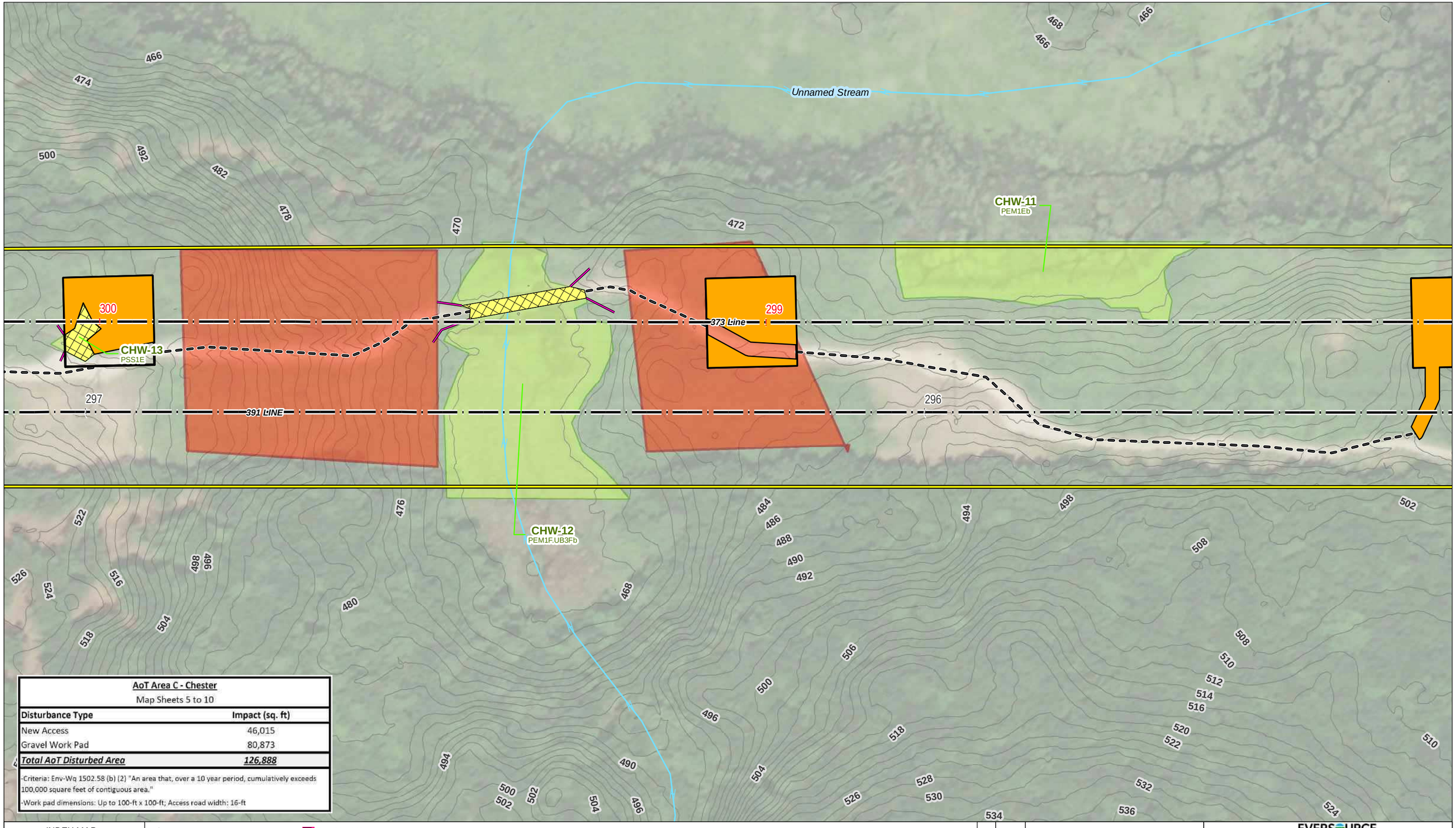
391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Auburn/Chester, NH | MAP SHEET

Date: April, 2022 | 4 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\05\190900s\04.0190999.00 - EE Siteg Permitting 2019-2021\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd



AoT Area C - Chester Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Chester, NH | MAP SHEET

Date: April, 2022 | 5 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\04.0190000s\04.0190999.00 - EE Siteg Permitting 2019-2021\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

Unnamed Stream

298 297 294 295 293

373 Line

391 LINE

CHW-10.1
PSS1E

CHW-10
PSS1E/EM1E

CHW-9
PEM1E

AoT Area C - Chester Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Chester, NH | MAP SHEET

Date: April, 2022 | 6 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\0190999\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 02052 10-8.mxd

CHW-8
PSS1E

CHW-9
PEM1E

CHW-8.1
PSS1E/PEM1E

296

295

294

373 Line

293

391 LINE

292

291

290

Chester St (Route 121)

AoT Area C - Chester Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Chester, NH | MAP SHEET

Date: April, 2022 | 7 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\05.90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020622_10-8.mxd

Unnamed Stream

CHW-38
PUB3/PSS1E/EM1E

CHW-37
PUB3

CHW-36
PSS1E

277

276

275

274

273

373 Line

391 LINE

AoT Area C - Chester Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

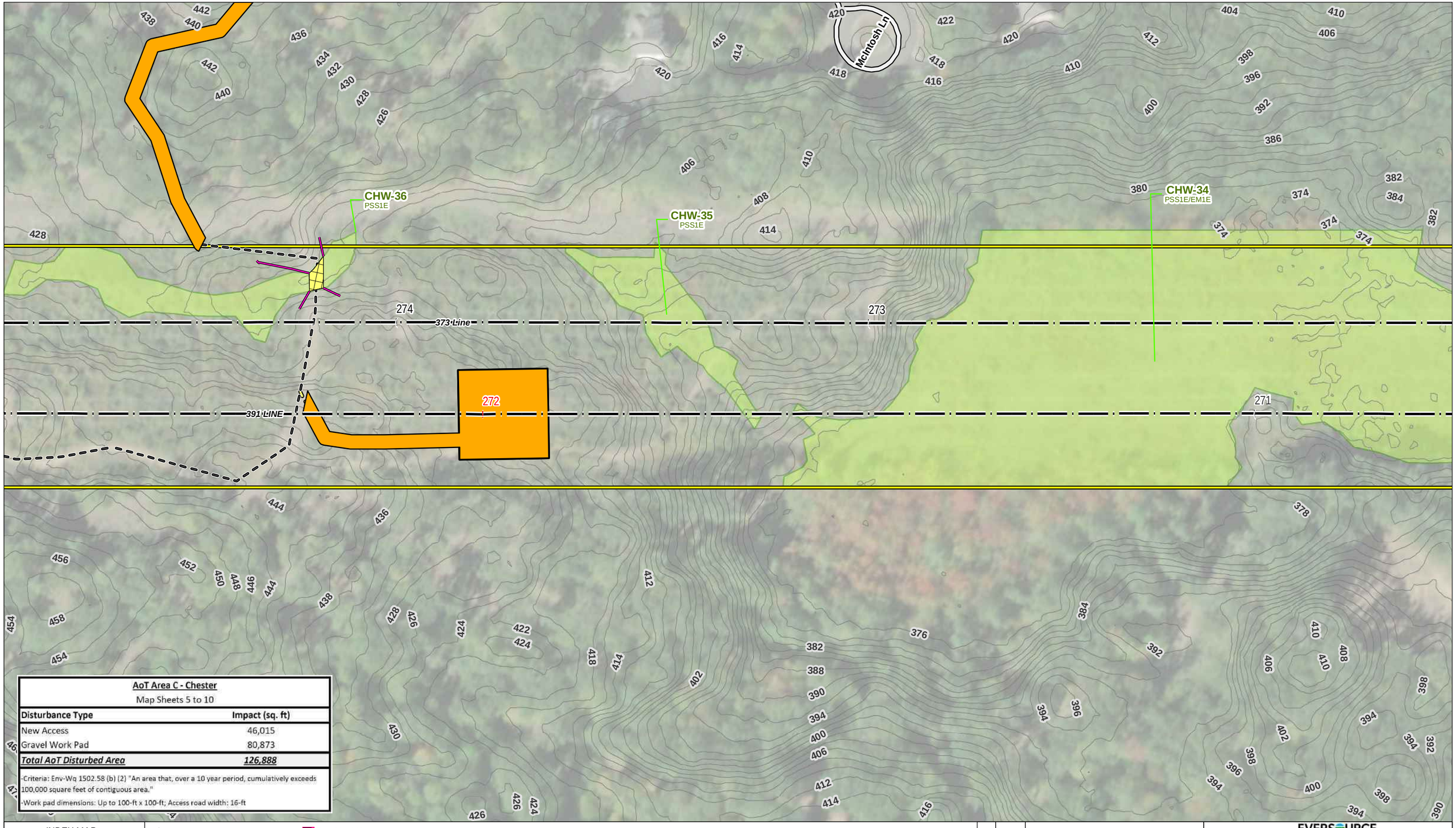
391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Chester, NH | MAP SHEET

Date: April, 2022 | 8 OF 41

04.0190999.86

Document Path: \\GZA\Bedford\Jobs\04Jobs\01\90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd



AoT Area C - Chester Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Chester, NH | MAP SHEET

Date: April, 2022 | 9 OF 41

04.0190999.86

Document Path: \\GZA\Bedford\Jobs\04Jobs\01\90000s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd

Candia Rd

Candia Rd

McIntosh Ln

McIntosh Ln

AoT Area C - Chester Map Sheets 5 to 10	
Disturbance Type	**Impact (sq. ft)**
New Access	46,015
Gravel Work Pad	80,873
Total AoT Disturbed Area	***126,888***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Chester, NH | MAP SHEET

Date: April, 2022 | 10 OF 41

04.0190999.86

Document Path: \\G2\Bedford\Jobs\04\job\01909900\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373 2022_AoT Plans 02052 2_10-8.mxd

RAW-51
PUB

RAW-50
PEM/SS

Fordway Brook

265

264

373 Line

263

391 LINE

262

261

RAW-52
PSS1B

Unnamed Stream

AoT Area D - Raymond Map Sheets 11 to 14, 16	
Disturbance Type	**Impact (sq. ft)**
New Access	24,233
Gravel Work Pad	50,319
Total AoT Disturbed Area	***74,552***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Raymond, NH | MAP SHEET

Date: April, 2022 | 11 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01900\0s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

Fordway Brook

RAW-50
PEM/SS

RAW-49
PSS/EM

RAW-48
PSS/EM

RAW-47
PSS1E/PEM1E

RAW-46
PSS1B

263

262

373 Line

261

260

259

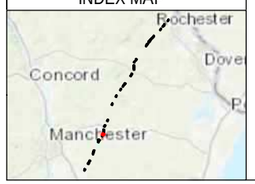
391-LINE

AoT Area D - Raymond Map Sheets 11 to 14, 16	
Disturbance Type	**Impact (sq. ft)**
New Access	24,233
Gravel Work Pad	50,319
Total AoT Disturbed Area	***74,552***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP



- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Raymond, NH | MAP SHEET

Date: April, 2022 | 12 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\03.90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391, 385, 373 2022 AoT Plans 02052

RAW-42
PSS/EM

RAW-40
PSS1E/PEM1E

RAW-41
PSS1E/PEM1E

RAW-39.1
PEM

RAW-39
PSS/EM

CANDIA
RAYMOND

Lane Rd

373 Line

391 LINE

Unnamed Stream

AoT Area D - Raymond Map Sheets 11 to 14, 16	
Disturbance Type	**Impact (sq. ft)**
New Access	24,233
Gravel Work Pad	50,319
Total AoT Disturbed Area	***74,552***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Raymond, NH | MAP SHEET

Date: April, 2022 | 13 OF 41

04.0190999.86

Document Path: \\GZA\Bedford\Jobs\04Jobs\01900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373 2022 AoT Plans 020522 10-8.mxd

Unnamed Stream

CANDIA
RAYMOND

CW-20
PSS1E/PEM1E

CW-18
PSS1B

CW-19
PSS1E/PEM1E

RAW-39
PSS/EM

255

373 Line

391 LINE

254

253

252

AoT Area D - Raymond Map Sheets 11 to 14, 16	
Disturbance Type	**Impact (sq. ft)**
New Access	24,233
Gravel Work Pad	50,319
Total AoT Disturbed Area	***74,552***
-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area." -Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft	

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Raymond, NH | MAP SHEET

Date: April, 2022 | 14 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\04.0190900s\04.0190999.00 - EE Siting Permitting 2019-2021\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

Depot Rd

CW-8
PEM1/SS1

CW-7
PSS1/EM1

CW-6
PSS1

247

246

245

373 Line

391 LINE

CANDIA

RAYMOND

CW-9
PSS1E

RAW-38
PSS1/EM1

RAW-37
PSS1

AoT Area E - Candia
Map Sheet 15

Disturbance Type	Impact (sq. ft)
New Access	7,711
Gravel Work Pad	19,897
Total AoT Disturbed Area	***27,608***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Candia, NH | MAP SHEET

Date: April, 2022 | 15 OF 41

04.0190999.86

Document Path: \\GZABedford\Data\04data\0190000s\04.0190999.00 - EE Siting Permitting 2019-2022\04 Lot 0190 999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391, 385, 373 2022 AoT Plans 02052022 10-8.mxd

Unnamed Stream

Roy St

RAW-31
PSS1E

RAW-29
PSS1E

RAW-30
PSS1E

RAW-28
PSS1E/PEM1E

RAW-26
PSS1C

RAW-27
PSS1E/PEM1E

236 | 235 | 234 — 373 Line

237 | 236 | 235 — 391 LINE

Power St

AoT Area D - Raymond Map Sheets 11 to 14, 16	
Disturbance Type	**Impact (sq. ft)**
New Access	24,233
Gravel Work Pad	50,319
Total AoT Disturbed Area	***74,552***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

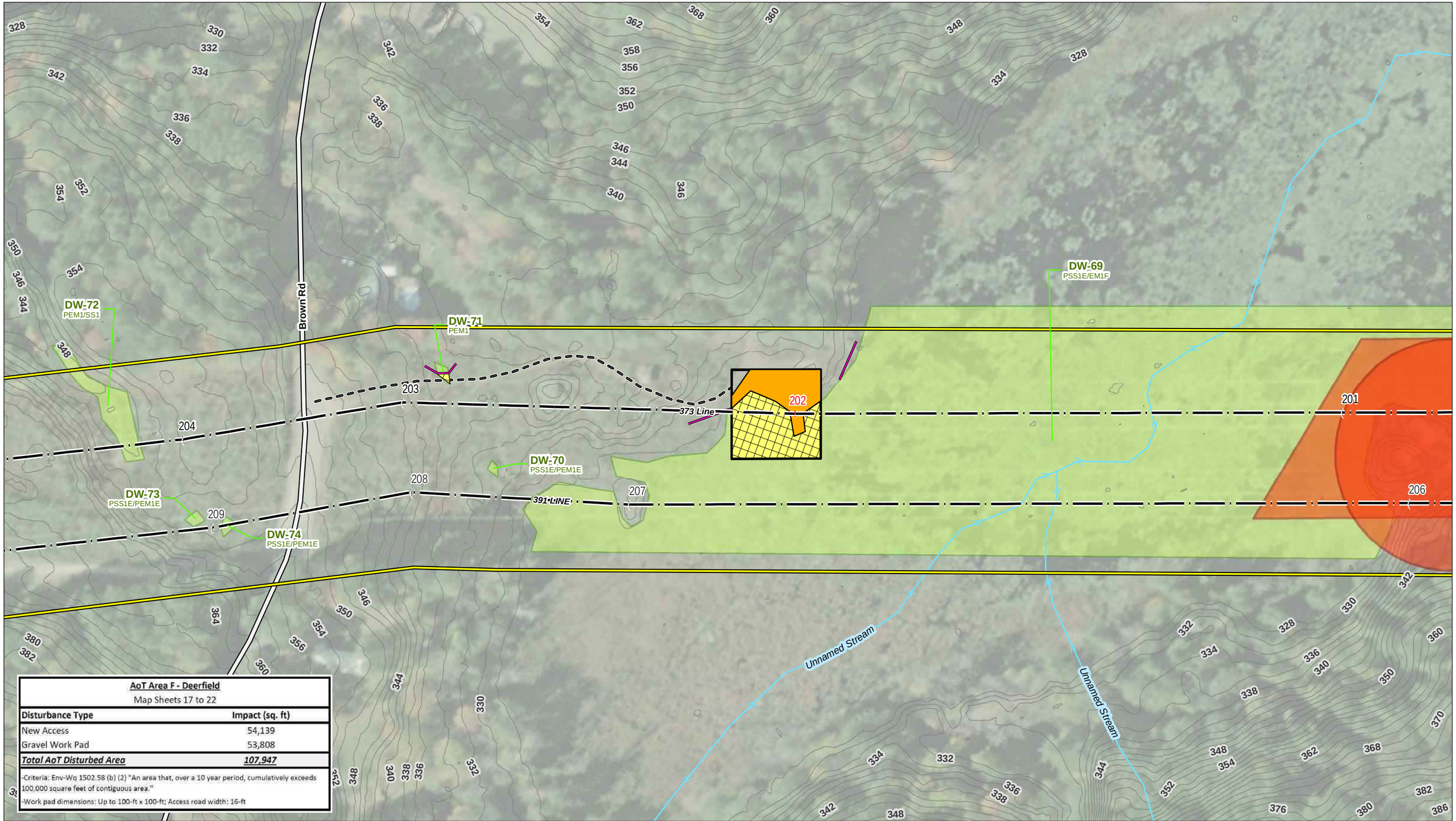
391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Raymond, NH | MAP SHEET

Date: April, 2022 | 16 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\05\190900s\04.0190999.00 - EE Siting Permitting 2019-2021\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd



AoT Area F - Deerfield Map Sheets 17 to 22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

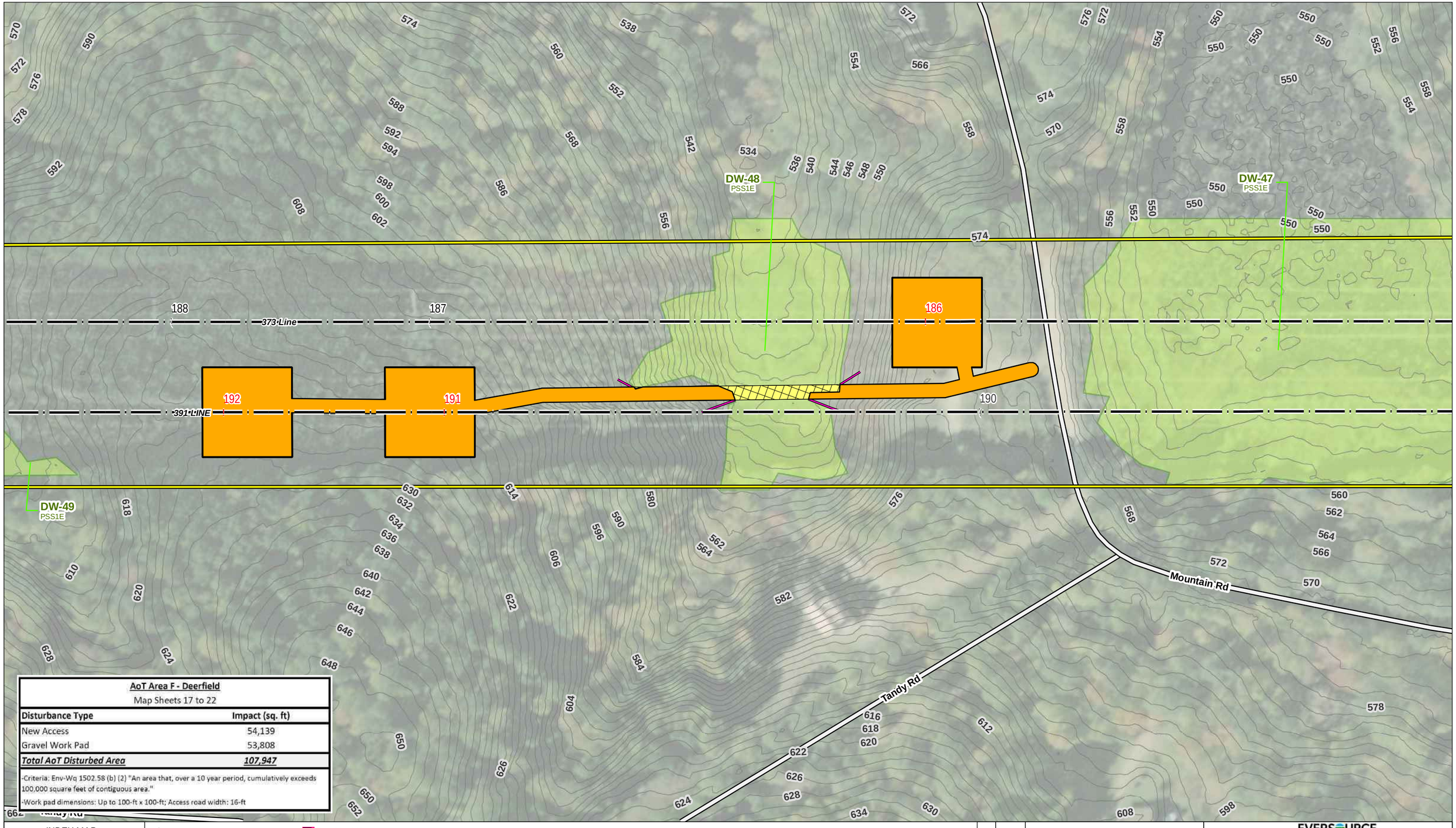
NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Deerfield, NH	MAP SHEET
Date: April, 2022	17 OF 41
04.0190999.86	

Document Path: \\GZABedford\Jobs\04Jobs\03.90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd



AoT Area F - Deerfield Map Sheets 17 to 22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Deerfield, NH | MAP SHEET

Date: April, 2022 | 18 OF 41

04.0190999.86

DW-38
PSS1

DW-37
PSS1E

DW-39
PSS1/EM1

DW-36
PEM1E/SS1E

173 | 172 | 171 — 373 Line

178 | 177 | 176 — 391-LINE

Nottingham Rd

AoT Area F - Deerfield Map Sheets 17 to 22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Deerfield, NH | MAP SHEET

Date: April, 2022 | 19 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\0190999\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 02052 10-8.mxd

DW-29
PSS1E/PEM1E

DW-26
PSS1E/PEM1E

DW-24
PSS1E/PEM1E

DW-28
PSS1E/PEM1E

DW-27
PSS1E/PEM1E

DW-25
PSS1E/PEM1E

DW-23
PSS1E/PEM1E

Coffeetown Rd

Perry Rd

Cate Rd

Bean Hill Rd

165

164

170

169

168

385 Line

391 LINE

AoT Area F - Deerfield Map Sheets 17 to 22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Deerfield, NH | MAP SHEET

Date: April, 2022 | 20 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01\90000\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd

DW-22
PSS1E/PEM1E

DW-21
PSS1E/PEM1E

DW-23
PSS1E/PEM1E

163 162 161

385-Line

167 166 165

391-LINE

AoT Area F - Deerfield Map Sheets 17 to 22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Deerfield, NH | MAP SHEET

Date: April, 2022 | 21 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01900ds\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 02052 10-8.mxd

Bean River

DW-21
PSS1E/PEM1E

DW-18
PSS1E/PEM1E/R2UB

DW-20
PSS1E/PEM1E

DW-19
PSS1E/PEM1E

161 160 159 385 Line

165 391-LINE 164 163

AoT Area F - Deerfield Map Sheets 17 to 22	
Disturbance Type	**Impact (sq. ft)**
New Access	54,139
Gravel Work Pad	53,808
Total AoT Disturbed Area	***107,947***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Deerfield, NH | MAP SHEET

Date: April, 2022 | 22 OF 41

04.0190999.86

NW-27
PSS1E/PEM1E

NW-26
PSS1E/PEM1E

385 Line

391 LINE

Lucas Pond Rd

AoT Area G - Northwood Map Sheets 23 to 27	
Disturbance Type	**Impact (sq. ft)**
New Access	65,621
Gravel Work Pad	74,234
Total AoT Disturbed Area	***139,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Northwood, NH

MAP SHEET

Date: April, 2022

23 OF 41

04.0190999.86

Document Path: \\GZABelford\Jobs\043obs\01909\00s\04.0190999.00 - EE String Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

143 142 141 385 Line

146 145 144 391 LINE

NW-25 PSS1E/PEM1E

NW-24 PSS1E/PEM1E

NW-26 PSS1E/PEM1E

NW-23 PSS1E/PEM1E

NW-22 PSS1E/PEM1E

NW-20 PSS1E/PEM1E

AoT Area G - Northwood Map Sheets 23 to 27	
Disturbance Type	**Impact (sq. ft)**
New Access	65,621
Gravel Work Pad	74,234
Total AoT Disturbed Area	***139,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

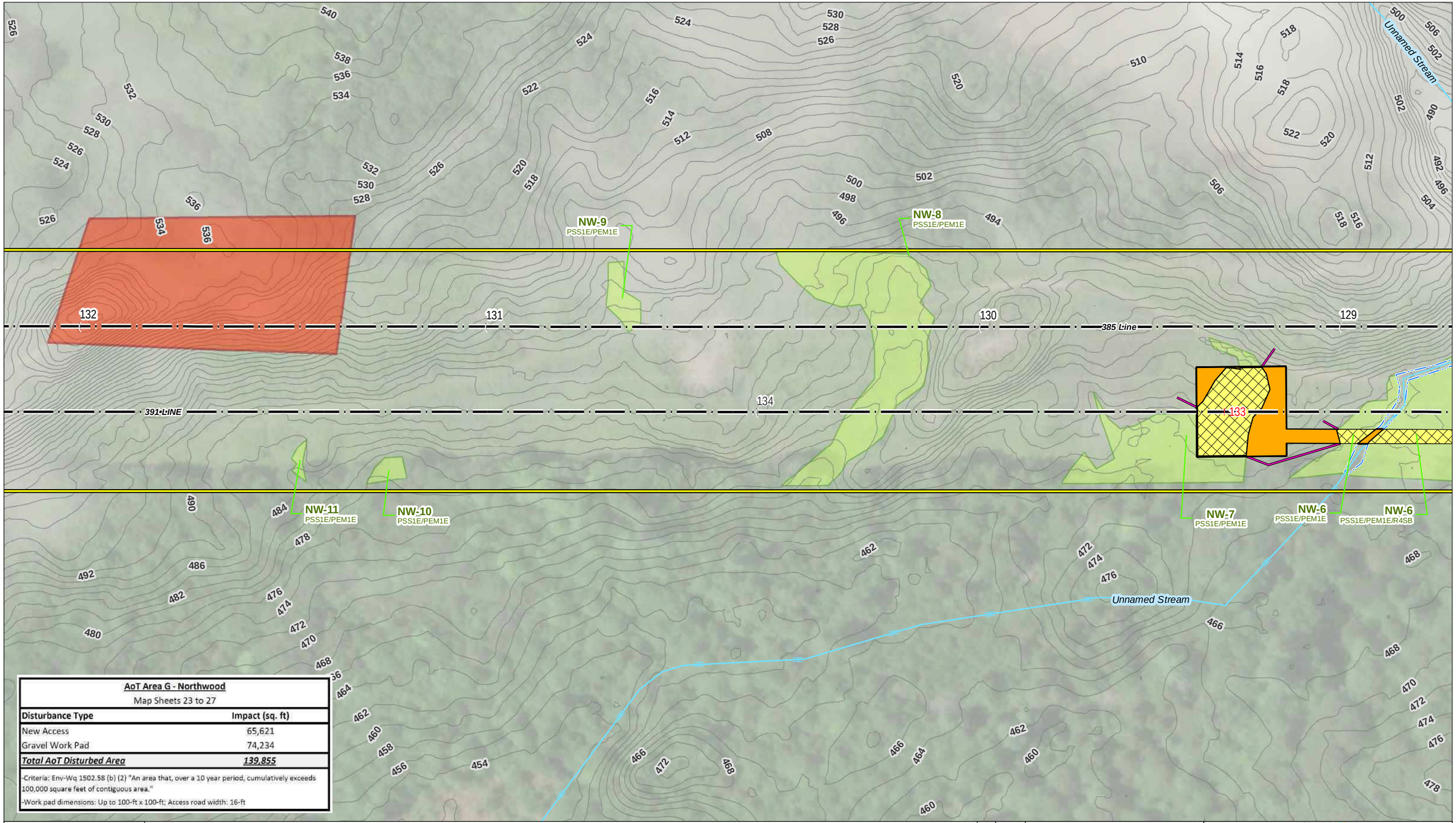
391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Northwood, NH | MAP SHEET

Date: April, 2022 | 24 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\05.90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd



AoT Area G - Northwood Map Sheets 23 to 27	
Disturbance Type	**Impact (sq. ft)**
New Access	65,621
Gravel Work Pad	74,234
Total AoT Disturbed Area	***139,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Northwood, NH | MAP SHEET

Date: April, 2022 | 25 OF 41

04.0190999.86

Document Path: \\GZA\Bedford\Jobs\04Jobs\01.90900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

AoT Area G - Northwood Map Sheets 23 to 27	
Disturbance Type	**Impact (sq. ft)**
New Access	65,621
Gravel Work Pad	74,234
Total AoT Disturbed Area	***139,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Northwood, NH | MAP SHEET

Date: April, 2022 | 26 OF 41

04.0190999.86

Document Path: \\GZABelford\Jobs\043obs\01909\obs\104.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT_Plans_020522_10-8.mxd

NW-4
PSS1E/PEM1E/R4SB

NW-3
PSS1E/PEM1E

NW-2
PSS1E/PEM1E

Unnamed Stream

126

125

130

385 Line

391 LINE

124

123

128

129

AoT Area G - Northwood Map Sheets 23 to 27	
Disturbance Type	**Impact (sq. ft)**
New Access	65,621
Gravel Work Pad	74,234
Total AoT Disturbed Area	***139,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Northwood, NH

MAP SHEET

Date: April, 2022

27 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\042Jobs\01909900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT_Plans_020522_10-8.mxd

SW-79
PSS1E/PEM1E/R2UB

SW-78
PSS1E/PEM1E

SW-76
PSS1E/PEM1E

SW-75
PSS1E/PEM1E

SW-77
PSS1E/PEM1E

SW-77.1
PSS1E/PEM1E

117

385 Line

116

122

121

120

115

391 LINE

Hall Brook

Canaan Rd

Back Canaan Rd

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 28 OF 41

04.0190999.86

Document Path: \\G2\Bedford\Jobs\04Jobs\01909900s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

112

111

385 Line

391 LINE

116

115

534

SW-66
PSS1E/PEM1E

SW-65
PSS1E/PEM1E

SW-70
PSS1E/PEM1E

SW-69
PSS1E/PEM1E

SW-68
PSS1E/PEM1E

SW-67
PSS1E/PEM1E

SW-63
PSS1E/PEM1E

Back Canaan Rd

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 29 OF 41

04.0190999.86

SW-20
PEM1/PSS1E/R2UB

SW-18
PSS/PEM1B

SW-19
PEM/PSS1C

SW-17
PEM/PSS1F

385 Line

391 LINE

Unnamed Stream

Sloper Rd

80

81

82

86

87

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 30 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04\Jobs\01900s\04.0190999.00 - EE Siting Permitting 2019-2021\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

SW-18
PSS/PEM1B

SW-16
PEM/PSS1F/R2UB

SW-17
PEM/PSS1F

79

85

84

83

78

77

385 Line

391-LINE

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 31 OF 41

04.0190999.86

Document Path: \\GZABelford\Jobs\04Jobs\01\90\0s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 02052210-8.mxd

Strafford Rd (Route 202A)

SW-16
PEM/PSS1F/R2UB

SW-14
PEM1E

SW-13
PSS1E/R2UB

SW-15
PSS1E/R2UB

74 73 72 78 80 79

385 Line

391 LINE

Unnamed Stream

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

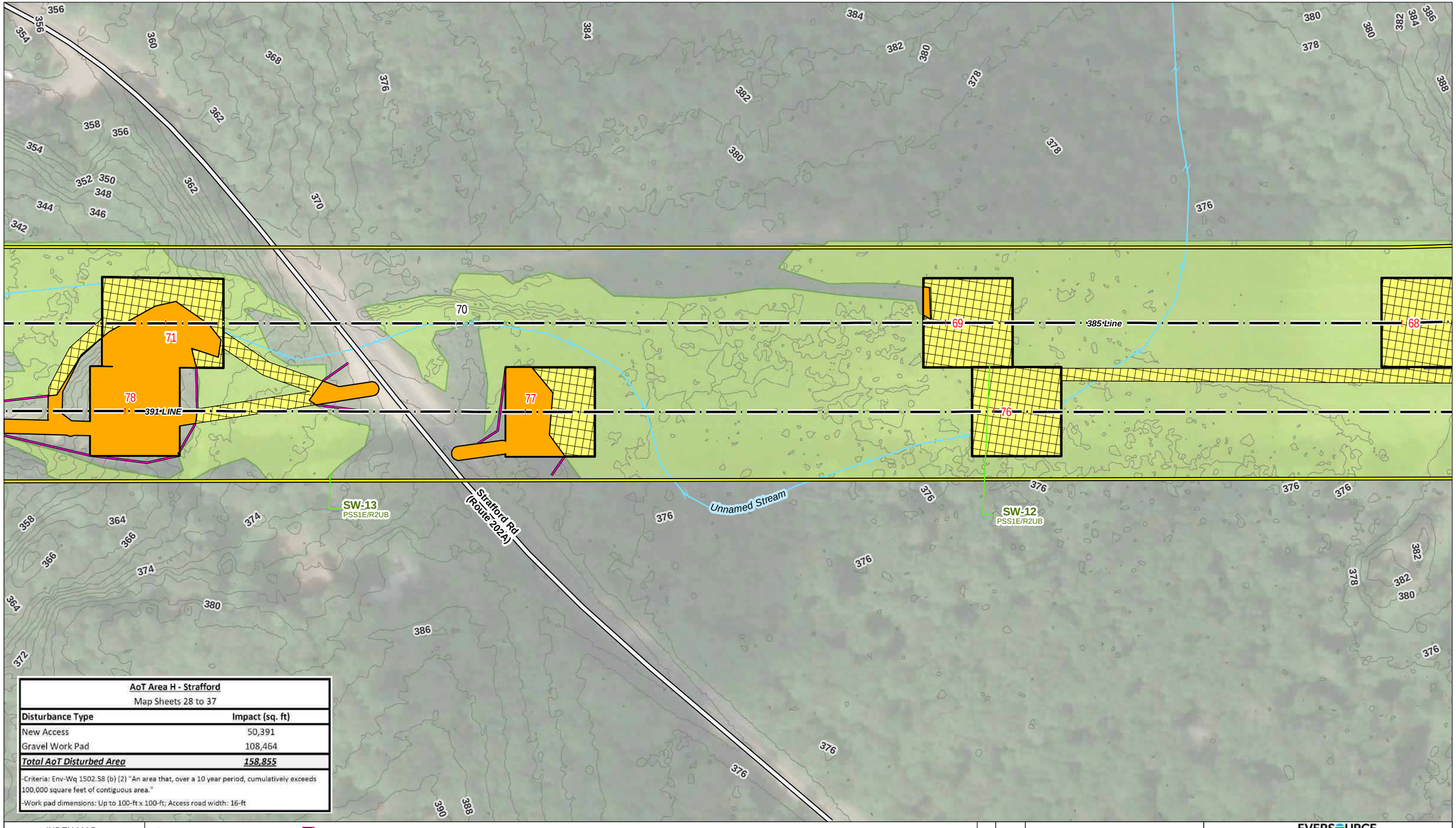
EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 32 OF 41

04.0190999.86



AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."
-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 33 OF 41

04.0190999.86

SW-12
PSS1E/R2UB

SW-10
PEM1E

SW-11
PSS1/PEM1E

SW-9
PEM1/PSS1E

67 — 385 Line — 66

74 — 391 LINE

68 | 75 | 73 | 72

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet
0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 34 OF 41

04.0190999.86

SW-8
PEM1/PSS1E

SW-7
PSS1/PEM1E/R2UB

SW-9
PEM1/PSS1E

65

64

72

71

70

385 Line

391 LINE

Second Crown Point Rd

Unnamed Stream

Jennifer Ln

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 35 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01909\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373 2022 AoT Plans 02052022_10-8.mxd

63

62

69

391-LINE

385-Line

68

67

SW-5
PEM1/PSS1E/R2UB

SW-6
PEM1/PSS1E

Jodi Ln

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 36 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01909000\04.01909999.00 - EE Siting Permitting 2019-2022\04.01909999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 02052 10-8.mxd

SW-5
PEM1/PSS1E/R2UB

SW-4
PEM1/PSS1E

SW-2
PSS1/PEM1E/R2UB

SW-3
PSS1/PEM1E

61

60

66

65

385 Line

391 LINE

Jodi Ln

First Crown Point Rd

Berrys River

Unnamed Stream

AoT Area H - Strafford Map Sheets 28 to 37	
Disturbance Type	**Impact (sq. ft)**
New Access	50,391
Gravel Work Pad	108,464
Total AoT Disturbed Area	***158,855***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Strafford, NH | MAP SHEET

Date: April, 2022 | 37 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\04.0190999\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd

RW-1
PSS1E/PEM1E

RW-2
PSS1E/PEM1E

RW-17
PSS1E/PEM1E

Unnamed Stream

385 Line

391 LINE

Meaderboro Rd

AoT Area I - Rochester Map Sheets 38 to 41	
Disturbance Type	**Impact (sq. ft)**
New Access	11,386
Gravel Work Pad	45,016
Total AoT Disturbed Area	***56,402***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Rochester, NH | MAP SHEET

Date: April, 2022 | 38 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01 90\00s\04 0190999.00 - EE Siting Permitting 2019-2022\04 0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 02052 10-8.mxd

Meadowbrook Vlg

RW-27
PSS1E/PEM1E

RW-28
PSS1E/PEM1E

RW-29
PSS1E/PEM1E

RW-30
PSS1E/PEM1E

RW-31
PSS1E/PEM1E

Sampson Rd

385 Line

391 LINE

37 36 40 39

AoT Area I - Rochester Map Sheets 38 to 41	
Disturbance Type	**Impact (sq. ft)**
New Access	11,386
Gravel Work Pad	45,016
Total AoT Disturbed Area	***56,402***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Rochester, NH | MAP SHEET

Date: April, 2022 | 39 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01909\0s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd

RW-31
PSS1E/PEM1E

RW-32
PSS1E/PEM1E

RW-33
PSS1E/PEM1E

35

385-Line

34

33

38

37

36

391-LINE

35

AoT Area I - Rochester Map Sheets 38 to 41	
Disturbance Type	**Impact (sq. ft)**
New Access	11,386
Gravel Work Pad	45,016
Total AoT Disturbed Area	***56,402***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Rochester, NH | MAP SHEET

Date: April, 2022 | 40 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\04Jobs\01909\00s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391_385_373_2022_AoT Plans 020522_10-8.mxd

RW-36
PSS1E/PEM1E/R4SB

RW-36
PSS1E/PEM1E

RW-39
PSS1E/PEM1E

RW-40
PSS1E/PEM1E

RW-38
PSS1E/PEM1E

RW-37
PSS1E/PEM1E

Unnamed Stream

Unnamed Stream

Market Place Blvd

Farmington Rd

24

23

26

25

24

385 Line

391 LINE

AoT Area I - Rochester Map Sheets 38 to 41	
Disturbance Type	**Impact (sq. ft)**
New Access	11,386
Gravel Work Pad	45,016
Total AoT Disturbed Area	***56,402***

-Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10 year period, cumulatively exceeds 100,000 square feet of contiguous area."

-Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft

INDEX MAP

- EXISITING STRUCTURE - NO WORK PROPOSED
- EXISITING STRUCTURE - TO BE REPLACEMENT
- EXISTING ACCESS
- OFF-ROW ACCESS
- PRIMARY ACCESS
- WORK AREA
- AoT DISTURBANCE AREA
- UPLAND MATTING
- NHD FLOWLINES
- NHDOT ROADS
- 2FT ELEVATION CONTOUR
- TEMPORARY WETLAND IMPACT
- TOWN BOUNDARY
- TRANSMISSION LINE
- WORK AREA
- APPROXIMATE ROW
- HIGH SENSITIVITY ARCHEOLOGICAL AREA
- INTERMITTENT STREAM CHANNEL BANK
- PERENNIAL STREAM CHANNEL BANK
- WETLAND
- FENCE
- ROCK WALL
- EROSION AND SEDIMENT CONTROL

This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

1 inch = 100 feet

0 50 100 Feet

NO.	DATE	REVISIONS

EVERSOURCE ENERGY

391, 385, and 373 Transmission Line Alteration of Terrain Permitting Plans

Rochester, NH | MAP SHEET

Date: April, 2022 | 41 OF 41

04.0190999.86

Document Path: \\GZABedford\Jobs\042jobs\01909\0s\04.0190999.00 - EE Siting Permitting 2019-2022\04.0190999.86 - 391 Transmission Line Structure Replacement Project\Figures\MXD\391 385 373 2022 AoT Plans 020522 10-8.mxd

Redaction Date: 8/14/2023 4:26:10 PM

Redaction Log

Total Number of Redactions in Document: 113

Redaction Reasons by Page

Page	Reason	Description	Occurrences
50	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
51	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
52	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
53	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
56	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
57	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
58	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
59	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
60	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
61	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
62	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
63	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
64	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
67	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
68	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
69	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
70	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
71	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
72	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
73	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
74	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
75	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
78	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
79	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
80	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
81	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
82	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
83	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
84	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
85	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
86	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
87	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
88	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
89	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
90	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
91	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
92	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
93	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
94	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
95	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
96	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
97	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
98	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
99	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
100	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
101	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
102	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
105	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
106	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
107	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
108	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
109	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
110	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
111	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
112	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
113	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
114	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
115	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
116	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
117	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
118	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
119	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
120	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
122	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
123	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
124	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
125	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
128	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
129	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
130	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
131	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
132	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
133	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
134	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
135	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
136	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
137	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
138	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
139	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
140	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
141	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
142	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
143	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
144	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
145	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
146	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
148	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
149	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
150	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
151	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
152	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
153	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
154	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
155	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
156	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
159	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
160	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
161	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
162	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
163	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
164	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
165	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
166	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
167	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
168	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
169	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
170	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
171	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
172	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
173	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
174	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
175	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
176	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Redaction Reasons by Exemption

Reason	Description	Pages (Count)
CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	50(1) 51(1) 52(1) 53(1) 56(1) 57(1) 58(1) 59(1) 60(1) 61(1) 62(1) 63(1) 64(1) 67(1) 68(1) 69(1) 70(1) 71(1) 72(1) 73(1) 74(1) 75(1) 78(1) 79(1) 80(1) 81(1) 82(1) 83(1) 84(1) 85(1) 86(1) 87(1) 88(1) 89(1) 90(1) 91(1) 92(1) 93(1) 94(1) 95(1) 96(1) 97(1) 98(1) 99(1) 100(1) 101(1) 102(1) 105(1) 106(1) 107(1) 108(1) 109(1) 110(1) 111(1) 112(1) 113(1) 114(1) 115(1) 116(1) 117(1) 118(1) 119(1)

Redaction Date: 8/14/2023 4:26:10 PM

Redaction Log

Reason	Description	Pages (Count)
CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	120(1) 122(1) 123(1) 124(1) 125(1) 128(1) 129(1) 130(1) 131(1) 132(1) 133(1) 134(1) 135(1) 136(1) 137(1) 138(1) 139(1) 140(1) 141(1) 142(1) 143(1) 144(1) 145(1) 146(1) 148(1) 149(1) 150(1) 151(1) 152(1) 153(1) 154(1) 155(1) 156(1) 159(1) 160(1) 161(1) 162(1) 163(1) 164(1) 165(1) 166(1) 167(1) 168(1) 169(1) 170(1) 171(1) 172(1) 173(1) 174(1) 175(1) 176(1)