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June 28, 2024

Ms. Jasmin Faunce
Realty Specialist
United State Forest Service
White Mountain National Forest
71 Campton, NH 03223

Re: Public Service of New Hampshire dba Eversource Energy
US Forest Service Fall Small Projects Day Meeting Application
X-178-2 115kV Transmission Line Rebuild Project Summary
Woodstock, Lincoln and Easton, New Hampshire

Dear Ms. Faunce,

As requested in advance of the fall 2024 Small Projects Day (SPD) meeting, this letter is being provided as a Project Summary of the proposed X178-2 Transmission Line Rebuild Project which is located within the White Mountain National Forest (WMNF). Eversource met with you virtually on November 2, 2023 to discuss the upcoming project and a follow up project proposal was submitted to you on February 24, 2024. A follow up meeting between Eversource, GZA and the US Forest Service (USFS) was held virtually on March 7, 2024. As we discussed, Eversource is proposing to rebuild the 115kV X178 Transmission Line which crosses through portions of Campton, Thornton, Woodstock, Easton, Lincoln, Sugar Hill, Bethlehem, Dalton and Whitefield NH between the Beebe River Substation and Whitefield Substation for approximately 49 miles (see Table 1). In total, the proposed project will replace 593 existing wooden utility poles (i.e. structures) with steel pole equivalents. Access to each structure will be required, as well as a work pad around each structure in order to stage equipment and vehicles during construction. The focus of the November 2, 2023 meeting, subsequent February 24, 2024 project summary, and March 7, 2024 meeting was in regards to the X178-2 segment which crosses through approximately 12.32 miles of the White Mountain National Forest (WMNF). The X178-2 includes 140 structure replacements in existing right-of-way overlapping the WMNF. During the March 7, 2024 meeting, there was discussion regarding the location of Old Growth Forest habitat and the proposed Reel Brook Trail off-ROW access route. Since this meeting, Eversource is no longer considering use of Reel Brook trail and has removed this access from proposed project plans. Based on feedback during the March 2024 meeting, and given Eversource has removed proposed access along Reel Brook Trail, we understand that the X178-2 project now potentially qualifies as a small project.

Table 1. Summary of X178 segments.:

<u>Project Name</u>	<u>Substations</u>	<u>Number of Structures</u>	<u>Towns</u>	<u>WMNF Segment</u>	<u>Miles in WMNF</u>	<u># Strs in WMNF</u>
X178-1	Beebe to N. Woodstock	175 STR's 14.1 Mi	Campton, Thornton & Woodstock	Yes - Woodstock	0.28	5
X178-2	N. Woodstock to Streeter Pond	231 STR's 20.8 Mi	Woodstock, Easton, Lincoln & Sugar Hill	Yes - Woodstock, Lincoln, Easton,	12.32	140
X178-3	Streeter Pond to Whitefield	187 STR's 14.1 Mi	Sugar Hill, Bethlehem, Dalton & Whitefield	No	0	0

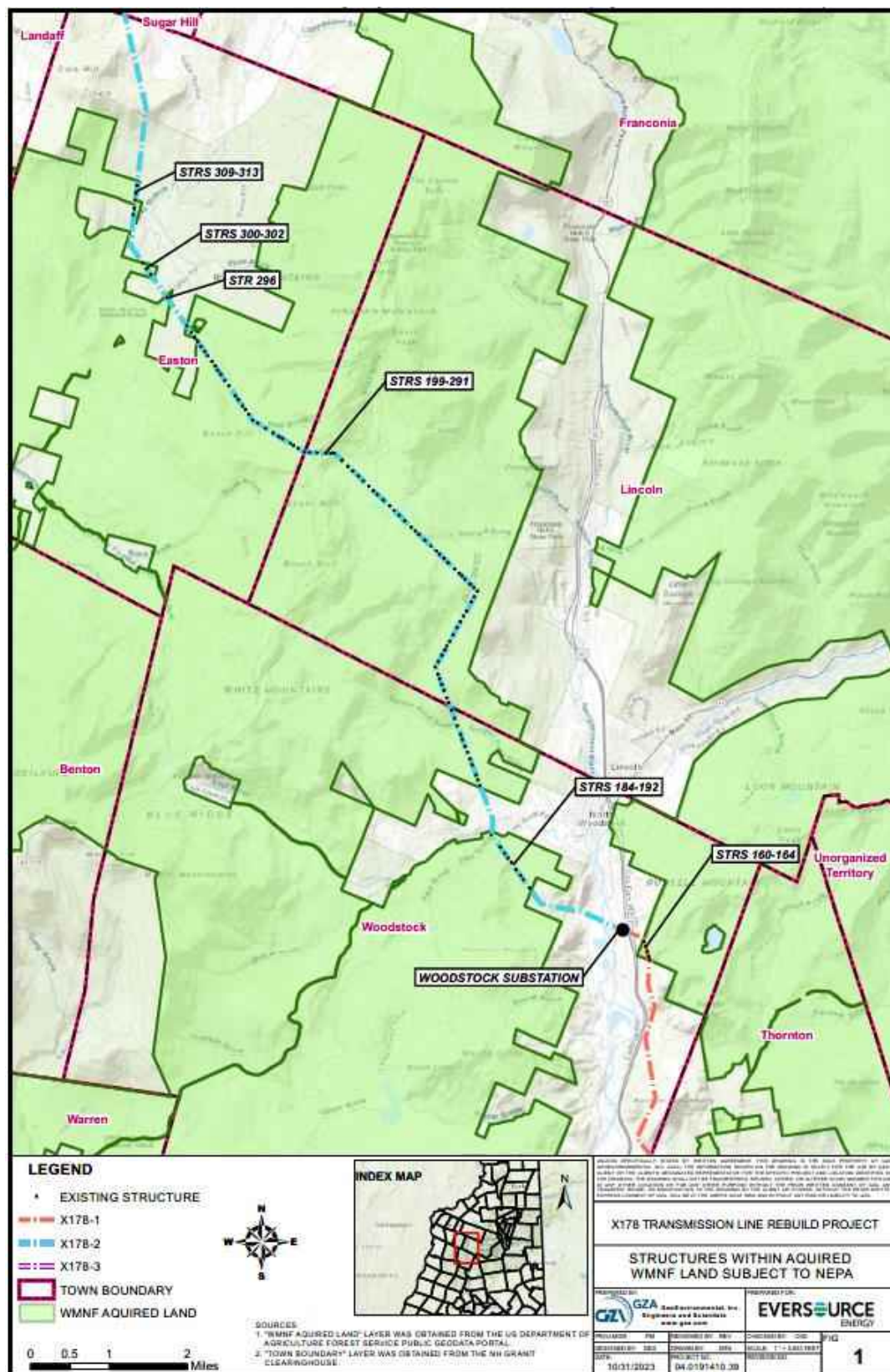


Figure 1. White Mountain National Forest Overview



Looking west at existing Structure 267 in Easton

Project Need

The 115kV X178 Transmission Line is being rebuilt as it is a critical source of Transmission infrastructure for northern New Hampshire. Physical inspections and engineering analysis of this line revealed that many of the existing wooden structures are in poor condition due to their age, woodpecker and insect damage, and pole rot. Due to the complexity of this line in terms of topography, limited access, geographic location and its importance in serving northern New Hampshire, it was determined that the entirety of the line should be rebuilt. As part of an effort to upgrade aged transmission infrastructure throughout New Hampshire the X178 will be improved with weathered steel structures, new conductors and optical ground wire (OPGW). The OPGW is a fiber optic line that facilitates communications between substations and allows for monitoring and identification of the location of potential ground fault outages on the transmission system. The replacement of existing wooden poles with steel equivalent should increase the longevity of the transmission structures and adequately support new conductors and OPGW.

Impacts and Pole Heights

Structure heights will increase on average 10-15-ft which is required to meet current National Electric Safety Code standards. The proposed project will not add any new lines within the ROW and Eversource is not proposing to expand the width of the ROW. Proposed impacts within the WMNF, pending review by various agencies are as follows:

Impacts in Square Feet

Temporary Impact in Poorly Drained Soils (Sq. Ft.)	Temporary Impact in Very Poorly Drained Soils (Sq. Ft.)	<i>Total Temporary Wetland Impact (Sq. Ft.)</i>	<i>Total Grading Impact in Uplands (Sq. Ft.)</i>
239,373	288,707	528,080	1,741,374

Impacts in Acres

Temporary Impact in Poorly Drained Soils (Acres)	Temporary Impact in Very Poorly Drained Soils (Acres)	<i>Total Temporary Wetland Impact (Acres)</i>	<i>Total Grading Impact in Uplands (Acres.)</i>
5.50	6.62	12.12	39.98

Natural Resources Evaluations

Wetlands were originally delineated in 2010 and 2015 for the entirety of this right-of-way (ROW) as part of a separate project. GZA re-delineated 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 November and December 2022 and May 2023. GZA delineated 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. Within the WMNF, GZA identified 206 wetlands within the ROW, many of which are classified as palustrine emergent and scrub-shrub systems maintained through vegetation maintenance within the ROW.

GZA conducted a vernal pool evaluation in May 2023 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. GZA identified and confirmed 25 vernal pools during May 2023, and one additional vernal pool in May 2024, for a total of 26 vernal pools. Within the WMNF, there are 16 vernal pools. Of the 16 vernal pools, six are located within existing snowmobile trails. The locations of confirmed vernal pools are depicted on project plans.

GZA submitted a request for data checks with the New Hampshire Natural Heritage Bureau (NHB) and New Hampshire Fish and Game (NHFG) in November 2022. In the Town of Easton, records of wood turtle (*Glyptemys insculpta*) were identified within the vicinity of the X178 Transmission Line ROW. GZA and Eversource have coordinated with NHFG to provide best management practices (BMPs) during construction of the project to minimize and avoid impact to wood turtles (see **Attachment D**). In the Town of Lincoln, NHB identified records of Wiegand's sedge (*Carex wiegandii*), a State endangered species, within the vicinity of the X178 Transmission Line ROW. GZA conducted surveys for Wiegand's sedge in July 2023 and did not identify Wiegand's sedge within the requested survey locations from NHB.

GZA submitted a preliminary Information for Planning and Consultation (IPaC) report for proposed work within the WMNF to identify federally listed species. The IPaC report identified potential for Canada lynx (*Lynx canadensis*), northern long-eared bat (*Myotis septentrionalis*), and monarch butterfly (*Danaus Plexippus*). GZA will submit determination keys for applicable species, including the northern long-eared bat determination key and the northeast endangered species determination key. Formal consultation through the US Fish and Wildlife Service (USFWS) will be completed, as necessary. The project will meet USFWS required BMPs resulting from consultation. It is anticipated

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that should there be a “may affect” determination for northern long-eared bat, Eversource will not conduct tree trimming or removal between April 15 and October 31.

As requested by USFS, rare and invasive species plant surveys are being conducted by GZA. A list of survey protocols and target species were provided by USFS to GZA and Eversource via email on April 10, 2024. Rare and protected species include those listed on the “Subset of RFSS that have potential to occur in powerline ROW habitats on the White Mountain National Forest (RFSS list as of 2023)” along with Grass-of-Parnassus (*Parnassia glauca*) and Canada rockcress (*Boechera stricta*). Nonnative and invasive species include those listed in the “Non-Native, Invasive Plant Species Lists for NH, ME, and WMNF – December 2023” with a focus on nonnative and invasive species known to occur within the WMNF and tracked in GIS as directed by USFS. Plant surveys are currently ongoing, and GZA anticipates having preliminary results available by early September in advance of the small projects day.

Archeological Resources

In addition, an ARPA permit was submitted to Sarah Jordan on April 13, 2023 by Independent Archaeological Consulting (IAC) to complete Phase IB Archaeological Survey within the WMNF within the X178-2 project and approved on June 15, 2023 by the USFS. Phase IB Archaeological Survey work was completed in July and August 2023, and a Request for Project Review with the NH Division of Historic Resources (NHDHR) was submitted by GZA on November 11, 2023. As requested by NHDHR, an Above Ground Architectural Resources Survey is being conducted by Preservation Company.

Constructability

Where access and work pads are proposed within wetlands with slopes less than approximately 10%, Eversource will utilize temporary timber matting in order to cross wetlands and minimize/prevent rutting and compaction in wetlands. Individual timber mats are approximately 4-ft x 16-ft and will be placed in adjoining segments in order to span wetlands. Upon completion of work, temporary timber matting will be removed. The maximum temporary timber mat work pad in wetlands will be approximately 100-ft by 100-ft. The usage of helicopter construction methods may allow for a reduction in work pad size. Throughout construction, the principles of avoidance and minimization will be implemented to the extent practicable. Regrowth of native vegetation will be monitored and if deemed necessary, native wetlands seed mix may be applied in some areas. Some permanent grading will be required in steep slope wetlands with slopes greater than 10% to facilitate safe construction, matting installation and better allow for future maintenance of the transmission infrastructure. Upon completion of work, original contours will be restored to the extent feasible. Temporarily displaced soils will be segregated and reapplied in a manner to maintain appropriate preexisting soil horizon structure. Erosion control BMPs such as application of straw mulch, biodegradable wattles, and erosion control blankets will be instituted throughout the ROW corridor. Disturbed wetlands will be monitored to confirm that adequate wetlands hydrology is maintained and revegetation is achieved.



View of timber matting installed on the B112 Transmission Line (a similar project within the WMNF).

In uplands, Eversource is proposing grading and construction of approximately 16-ft width gravel access roads and up to 100-ft x 100-ft gravel work pads at most structure locations. These access roads are required to maintain a safe access and minimize/prevent erosion and sedimentation during construction. Upon completion of work, Eversource is proposing to leave gravel access roads and work pads (reduced to 30' x 60' in uplands in order to facilitate access to structures for future maintenance. The upland areas outside the 60-ft x 30-ft gravel pad will be restored by regrading to original contours to the greatest extent feasible and adding native/naturalized seed and weed-free mulch to exposed soils. As part of required erosion control monitoring, routine inspections will be completed by erosion control professionals during construction and restoration activities.



Gravel access road on the B112 Transmission Line in the WMNF



Gravel work pad area on the B112 Transmission Line in the WMNF with seedless mulch application

Helicopter Installation Methods:

Eversource is proposing to utilize helicopters to assist in the installation of structures in locations that are difficult to replacing utilizing traditional methods. Eversource is proposing to utilize helicopter assistance to drill and set poles for proposed Structures 252 through 275. This structure span includes structures within a large peatland located between Harvard Brook and Eliza Brook, and the area near Kinsman Trail connecting to Reel Brook Trail. It is anticipated that one or more freight helicopters will support multiple ground crews to keep the helicopter efficiently utilized during construction. Smaller helicopters will be used to transport personnel to various work locations in the ROW corridor. Multiple temporary landing locations within the existing cleared ROW corridor will be utilized.

A description of this method for transmission structure installation is as follows:

- a. Matting pieces to be flown to a structure replacement location and put in place via ground crews accessing the location on foot to construct a work pad area.
- b. Drilling equipment and grouting equipment is flown to a structure installation location.
- c. Holes (piles) will be drilled using cased hole techniques with recycled water.
- d. Drilling spoils will be deposited in uplands, if possible, or may be containerized and flown out to a more suitable location.
- e. Holes are grouted with sand-cement mortar or neat cement.
- f. Steel reinforcement/anchors are installed in the grouted pile.
- g. Repeat this process for each micropile at structure base.
- h. A steel cap is installed upon the micropiles and transmission structure segments are flown in and erected at each location.

In ROW access between proposed Structures 252 to 262 and 263 to 275 is proposed to allow for the contingency of vehicle and equipment access to each structure which may be required based on safety and constructability considerations and outage constraints.

General Civil Construction Methods:

The following is a summary of the general civil construction sequence:

1. Determine Project Team and Subcontractors.

The proposed project is in the process of being bid on by contractors familiar with this type of work and have experience working in northern New Hampshire. Once the project is awarded, the contractor may choose to hire subcontractors to complete certain parts of the project (ex – civil construction, drilling, etc.). A pre-construction meeting will be held with the contractor, applicable subcontractors, Eversource, and GZA to review project restrictions, BMPs, notable features/conditions within the ROW, and construction schedule.

2. Install appropriate signage for traffic safety along public roads near construction entrances:

- a. Eversource will consult and coordinate with municipalities and police as necessary if short duration lane closures are needed to allow for safe entry and exit of construction equipment to/from the ROW. Eversource will utilize traffic signage to indicate vehicles entering and exiting and will utilize flaggers when heavy machinery and equipment enter and exit the ROW.

3. Install erosion control devices, as needed:

- a. Erosion control practices will follow the NHDES Utility BMP Manual.

- b. Typical erosion controls devices used within the ROW will consist of silt fence, straw wattles, stone check dams, and/or straw mulch stabilization.

4. Conduct as needed brush maintenance in the right of way corridor along the access route and in work pad locations:

- a. Mechanical mowing or manual flat cutting of woody vegetation as required. Routine mowing within the cleared ROW is conducted on a cyclical basis, and is anticipated to occur just before start of construction.
- b. If required, tree removals and/or trimming may be conducted along off ROW access routes. Tree removal and trimming is anticipated along two off ROW access routes described below. These off-ROW access routes contain portions of Crooked Pike Spur A, Crooked Pike Spur B, Halftrack Trail, Primary 156 snowmobile trail, and unnamed trails connecting into the ROW. It is anticipated approximately 62 trees will need to be removed from the first off ROW access route which consists of portions of an unnamed trail, Crooked Pike Spur A and Crooked Pike Spur B, and approximately 477 trees will need to be removed from the second off ROW access route which consists of portions of Halftrack Trail and Primary 156 in order to allow for safe construction vehicle and equipment access (see **Figure 3**).

5. Place construction mats in wetlands for access roads and work pads:

- a. Mats will be mobilized to the project area. Storage areas will be determined by the contractor and are usually non-Project specific yards owned or leased by the contractor or existing parking lots near the Project area. A log loader style truck will deliver mats to the ROW. Depending on the terrain, the log loader truck may deliver the mats directly to where they will be installed, or they will be stockpiled within the ROW near an existing road. A forwarder will then move the mats to where they are needed on the ROW and install them in conjunction with an excavator.

6. Temporarily grade and add gravel to wetlands on slopes greater than 10%.

- a. Proposed work pads and access routes in wetlands on slopes greater than approximately 10% will be graded and smoothed by removing and temporarily stockpiling some of the topsoil utilizing a bulldozer and excavator equipment for later wetland restoration.
- b. Install geotextile fabric over graded areas.
- c. Install gravel and stone over geotextile fabric.

7. Grade and improve upland access roads and work pads:

- a. If existing trails are present, they will be improved with a layer of compacted gravel or stone to prevent rutting.
- b. Where no existing trails are present, an approximately 12- to 16-foot-wide path will be graded smooth by removing some of the topsoil utilizing bulldozer and excavator equipment. If present, large boulders will be removed and set to the side of the route. The graded areas will be topped with compacted gravel or stone. A roller machine may be used to compact the gravel areas. Exposed soils on side slopes will be stabilized with seed and mulch.

8. Structure replacements:

- a. Drill new structure holes utilizing a tracked drill rig. In wetland areas drilling spoils are contained and relocated to upland areas.
- b. Install new poles and structure components. For directly embedded structures, Four-foot diameter metal corrugated caissons are installed in the hole and the pole is placed within the caisson and the hole is backfilled with gravel material. Typical equipment for structure erection consists of 1 to 2 bucket trucks working with a crane truck that lifts the new structure.
- c. Transfer electrical lines from old structures to new structures.
- d. Remove and haul away old structures. Pull cut pole from the ground, if possible, in upland locations. Cut pole flush with ground in wetland locations and restore area with weed-free straw mulch.

9. Mobilize OPGW and conductor wire spools and pulling equipment to designated pull pads.

10. Replace OPGW and conductor wires:

- a. Wire unclipping, pulley installation, and wire clipping is typical done with a helicopter.
- b. A bucket truck may also perform these tasks at select locations, depending on the surrounding terrain and tree cover.

11. Clean up excess/stockpiled material at work pads and pull pads.

12. Smooth/grade upland work pads and stabilize and restore with seed and mulch as necessary:

- a. Upland work pads are typically restored to an approximately 30-foot by 60-foot size.
- b. Topsoil pushed to the sides during the initial construction is used to recover the work pads.
- c. Exposed soils are stabilized with seed and mulch.

13. Restore temporarily graded wetlands

- a. Remove top layer of stone and filter fabric.
- b. Regrade wetland areas with light machinery to the greatest extent possible.
- c. Restore disturbed wetland areas with weed-free straw mulch and seeding, as necessary.

14. Remove construction mats from wetland areas

- a. Stabilize/restore disturbed wetland areas with weed-free straw mulch.
- b. Matting is removed in a similar manner to how it was installed by using log loader trucks, forwarders, and/or excavators.

15. Stabilize, restore, and clean up staging areas and entrance point

Off ROW Access

Eversource will typically access into the ROW where the ROW intersects public road crossings. However, access into the ROW is limited within the WMNF. There is an approximate nine-mile stretch of ROW with no road crossings, with the entrance into the WMNF off Lost River Road in Woodstock near existing Structure 193 and exiting off Easton Valley Road in Easton near existing Structure 296. The terrain in between these two roads crossing through the WMNF is steep and varying, resulting in potentially dangerous work conditions for construction crews. Therefore, Eversource has identified off ROW access routes for review by the USFS which could be utilized to avoid steep terrain and open ledge face conditions within the ROW where possible. In addition, additional access routes within the nine miles of WMNF serve to enhance safety in the event of an emergency during construction, by providing an additional path out of the ROW to the nearest crossroad. Eversource has identified two off ROW access routes within the WMNF as part of this proposal to the WMNF. The first off ROW access route is located in the Town of Woodstock and exits the ROW between existing Structures 184 and 185 and contains a portion of an unnamed trail which connects to Crooked Pike Spur B, then connects to Crooked Pike Spur A which enters back into the ROW between existing Structures 191 and 192. The second off ROW access route begins in the Town of Woodstock and exits the ROW between existing Structure 207 and 208, and contains a portion of Primary 156 Snowmobile Trail, then connects to Halftrack Trail where it crosses into the Town of Lincoln, and enters into the ROW in various spurs including between existing Structures 216 and 217, between Structures 217 and 218, and fully reenters the ROW between existing Structures 223 and 224.

Under the evaluation of construction alternatives, Eversource is proposing to widen and build up these trails as part of the proposed X178-2 Rebuild. GZA conducted a tree inventory to survey for trees with greater than three-inch diameter at breast height (dbh) within 10-ft off the centerline in either direction of proposed off ROW access routes.

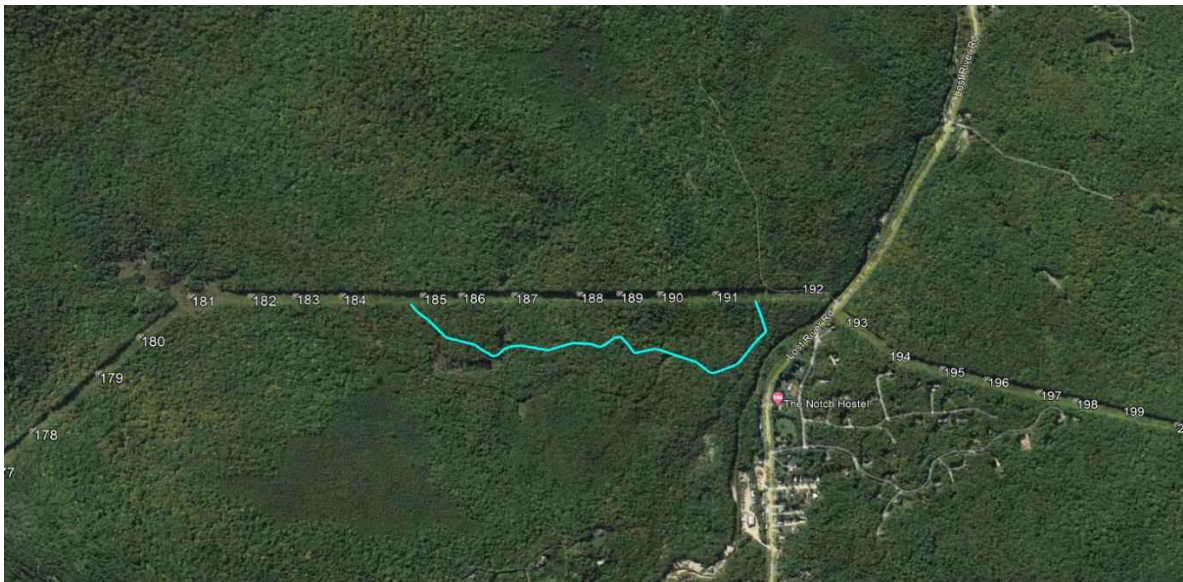
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Figure 3 provides a tree inventory figure and summary chart. It is anticipated that these trees may need to be removed to support safe access for construction equipment. In total, 539 trees were documented during this tree survey. Based on preliminary information from the USFWS, it is anticipated that these off-ROW access routes overlap with known northern long-eared bat habitat, and therefore will be subject to time of year cutting restrictions with no cutting or trimming permitted between April 15 and October 31. Additional BMPs provided by USFWS will be adhered to. As previously mentioned, once USFS provides Eversource with Old Growth Habitat areas, Eversource can determine if these off-ROW access routes overlap with this habitat.



Graphic of the off-ROW trail along X178 Transmission Line (-71.70176, 44.02049) comprised of an unnamed trail, portion of Crooked Pike Spur A, and Crooked Pike Spur B.



Photograph of the off-ROW trail located northeast of the X178 ROW.



Graphic of the off ROW access route along X178 Transmission Line (-71.72371, 44.05849) comprised of Primary 156 Snowmobile Trail and Halftrack Trail.



Photos of Halftrack Trail and Primary 156 (July 20, 2023) located northeast of the X178 ROW.

Resource Avoidance

Eversource has been completing constructability plan reviews to limit and avoid impacts to resources including wetlands, protected species, and recreational features (e.g. Appalachian Trail). In addition, Eversource has been completing reviews with state agencies and looks forward to additional feedback from the USFS. The attached notesheet includes management practices that have been requested by the New Hampshire Fish and Game Department and will be incorporated into the project. As mentioned, Eversource and GZA met virtually with the USFS on March 7, 2024 to discuss outstanding questions, project methods and concerns based on the February 24, 2024 project proposal that was submitted to USFS by Eversource. Based on the March 7, 2024 meeting, Eversource decided to remove the proposed off-ROW access along Reel Brook Trail. Removal of Reel Brook Trail from the proposed project scope reduced proposed approximate wetland impacts by 17,970 sq. ft., and reduced upland impacts associated with clearing and grading a 16-ft wide access road along Reel Brook Trail by approximately 88,180 sq. ft.

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603-714-3031**Appalachian Trail**

A portion of the Appalachian Trail (Kinsman Ridge Trail) passes through the existing X178 Transmission Line ROW by existing Structure 259. Existing Structure 259 is a three-pole wooden structure and will be replaced in-kind with a three-pole weathered steel structure. Therefore, it is not anticipated the pole replacement will have a negative aesthetic impact on the Appalachian Trail in the long term. During active construction, it is anticipated there will be construction equipment in and around the Kinsman Ridge Trail and hikers may need to be rerouted around the construction area.

Project Schedule

Work outside the WMNF is proposed to begin in August 2024 as part of Phase 1 of the project. Phase 2 of the project includes work within the WMNF. Eversource is proposing to start Phase 2 of the project within the WMNF in September 2025 pending receipt of various local, state, and federal permits. Permitting at the local, State and Federal level will be ongoing through the remainder of 2024 and through to start of construction in 2024 for Phase 1 and 2025 for Phase 2. Municipalities will be contacted to coordinate any local permitting needs. At the State level for Phase 2, through the New Hampshire Department of Environmental Services, Eversource anticipates submitting Standard Dredge and Fill Wetlands Permits, Shoreland Permits by Notification, NHDOT Permits, and Alteration of Terrain Permits. At the Federal level, Eversource anticipates obtaining coverage under the EPA Construction General Permit and preparing a Stormwater Pollution Prevention Plan and will coordinate with the Army Corps of Engineers for an Individual Permit or Pre-Construction Notification (PCN) permit as necessary.

Eversource appreciates the review of this submittal and looks forward to your review at the Small Projects Day meeting and next steps.

Sincerely,

Eversource Energy



Kurt I. Nelson
Manager of Licensing & Permitting

Attachments: Attachment A – Small Projects Day Application Form
Attachment B – Photo log
Attachment C – NHB Reports
Attachment D – NHB/NHFG Correspondence
Attachment E – Preliminary Phase 2 IPAC Report
Figure 1 – Locus
Figure 2 – Access and Permitting Plans
Figure 3 – Tree Inventory

Attachment A – Small Projects Day Application Form

File this form with Form 2, maps, and other supporting documents in the project folder under appropriate district or SO Small Projects Day subfolder.

Save shapefiles and map projects (mxd files) on the T drive:

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1. Project Name
X178-2 Transmission Line Rebuild and OPGW Project
2. Project Location —Include town(s), major roadways, and other pertinent landmark labels. Attach a map. Map should be at an appropriate scale and extent to orient a reader unfamiliar with the project location:
The X178-2 Transmission Line Rebuild and OPGW Project crosses through the White Mountain National Forest (WMNF) in the Towns of Woodstock, Lincoln, and Easton. The transmission line corridor crosses through the WMNF between Daniel Webster Highway and Lost River Road in Woodstock, between Lost River Road in Woodstock through the Town of Lincoln and to Easton Valley Road in the Town of Easton, and off Gingerbread Road in the Town of Easton. The corridor also crosses portions of Reel Brook Trail in Easton, and Kinsman Ridge Trail in Lincoln.
3. Project Proponent/Contact —Include applicant information if project is not internal. Include White Mountain National Forest contact information:
Public Service Company of NH dba Eversource Energy is the applicant, Attn: Kurt Nelson, Licensing and Permitting at kurt.nelson@eversource.com or 603-634-3256.
4. Implementation Timeframe —When is the project expected to start? Is timing critical? If so, why?
The X178-2 Project within the WMNF portion of the transmission line is proposed to begin in September 2025, and construction is anticipated to take approximately one year pending unforeseen weather or project delays. Eversource is able to complete utility pole replacements based on outage schedules which are scheduled far in advance. Therefore, timing is critical in order to complete the project safely and in accordance with outage schedules.
5. Project Funding —Is the project funded, or expected to be funded within proposed timeframe?
It is anticipated the project will be funded prior to the start of construction.
6. Implementation Mechanism (e.g., contract, partner, permittee, force account):
Eversource will award the rebuild project to a subcontractor familiar with this type of work.
7. Special Uses
Does the project require a special use permit? No If yes, has an application been accepted? Not applicable If yes, what level of review is needed? NA
8. Project fits a Categorical Exclusion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9a. Applicable Categorical Exclusion(s): 36 CFR 220.6(e)(2) Additional construction or reconstruction of existing telephone or utility lines in a designated corridor (DM Required) This category is applicable for this project because the proposed project includes replacement of existing poles within an existing and maintained utility line right-of-way (ROW). The proposed project will replace existing wooden utility poles with weathering steel utility poles. The proposed pole replacements will be in the same alignment as the existing poles. In addition, the existing poles are currently 2-3 pole "H-Frame" structures and will be replaced with 2-3 pole "H-Frame" structures. Eversource is not proposing to expand the width of the ROW and no additional utility lines are

proposed as part of this project. Eversource is proposing to construct gravel access routes to remain in uplands within the ROW to allow for safe and reliable access to Eversource's utility infrastructure in the event of an emergency or required maintenance. Upon completion of construction, the transmission line ROW will continue to function and be maintained as an electrical utility line corridor.

9b. Is a Decision Memo required? ☒Yes ☐No

10. Purpose and Need—Describe relationship between the current and desired future condition. Why is the project needed?

The 115kV X178 Transmission Line is being rebuilt as it is a critical source of Transmission infrastructure for northern New Hampshire. Physical inspections and engineering analysis of this line revealed that many of the existing wooden structures are in poor condition due to their age, woodpecker and insect damage, and pole rot. Due to the complexity of this line in terms of topography, limited access, geographic location and its importance in serving northern New Hampshire, it was determined that the entirety of the line should be rebuilt. The replacement of existing wooden poles with steel equivalent should increase the longevity of the transmission structures and adequately support new conductors and OPGW.

11. Project Description—Who, what, where, when, and how. Will trees be cut (about how many, what diameter, is a timber prescription needed)? Are there seasonal restrictions? Describe acres (footprint), access, methods, equipment, and duration, etc.

Please see the attached Project Summary narrative.

12. Management Areas and Forest Plan—Describe affected management areas (MAs) and any potential inconsistencies with the forest plan.

The work is proposed in an existing and routinely mowed/maintained utility line corridor consisting of scrub shrub and emergent vegetation. Minor limbing/brush cutting is anticipated within the ROW. Tree removal anticipated along proposed off-ROW access routes including portions of Crooked Pike Spur A, Crooked Pike Spur B, Halftrack Trail, Primary 156 Snowmobile Trail, and a portion of an unnamed trail connected to Crooked Pike Spur B (see Figure 3). Tree removal along off ROW access routes is required to allow for construction equipment to safely access through the trails.

13. Known Resource Conditions/Issues:

N/A

14. Additional Resource Considerations: Will your project occur (check all boxes that may apply and use the box below for any comments):

Within one-half mile from (1) talus or (2) anthropogenic or naturally formed rock crevices in rocky outcrops, rock faces or cliffs? Yes ☒ No ☐

During the bat inactive season (November 1 to April 14)? Yes ☒ No ☐

During the bat active season (April 15 to October 31)? Yes ☒ No ☐

During the bat pup season (May 15 to August 15)? Yes ☒ No ☐

The below information will help inform if engineering review is required or needed for decision and level of review. If all answers are no, engineering review is not required per project scope.

1. Bridge (all types other than bog bridge)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	2. Dam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
3. Building (administrative, backcountry shelter, bathroom, garage, others.)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	4. Road	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
5. Retaining wall greater than three feet	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	6. Parking area	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
7. Other infrastructure (please describe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	8. Culvert	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Eversource is working with the US Army Corps of Engineers and US Fish and Wildlife Service for best management practices related to northern long eared bat protection. Tree removal activity within proximity to known bat habitat will not occur between April 15 and October 31.

15. Public Involvement—Describe anticipated level of public involvement (e.g., SOPA only, length of scoping period, etc.). What is target SOPA publication date? Will Public Affairs be needed?

The proposed project requires a wetlands permit application through the New Hampshire Department of Environmental Services. Each affected town has the opportunity to provide public comment on the application, and Eversource a public hearing will be held to review the proposed project. In addition, Eversource is subject to local permitting requirements in each town. Abutters are notified of public hearings for local permit applications, as applicable.

16. Required Supplemental Information—The following materials must be included with the proposal for Responsible Official signature.

- ☒ Photographs and/or video documentation of project area
- ☒ Figure and/or spatial data

Project is appropriate and ready for consideration at Small Projects Day.

Responsible Official and Date

Attachment B – Photo Log

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 1: Looking westerly into Wetland WS-84, Crooked Brook.



Photograph No. 2: Looking northwesterly at proposed access to Structure 185.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 3: Looking southeasterly at proposed access to Structure 187.



Photograph No. 4: Looking northwesterly at proposed access to Structure 188.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 5: Looking northwesterly at proposed access to Structure 189.



Photograph No. 6: Looking northwesterly at proposed access to Structure 190.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 7: Looking southeasterly at proposed access to Structure 191.



Photograph No. 8: Looking northerly into Wetland WS-86.1, Pike Brook.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 9: Westerly view of ROW towards Structure 192.



Photograph No. 10: Looking northwesterly at proposed access and work pad location for Structure 199.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 11: Looking northwesterly into Wetland WS-103.



Photograph No. 12: Looking westerly at proposed work pad location for Structure 200.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 13: Looking northwesterly at proposed work pad location for Structure 201.



Photograph No. 14: Looking northerly into Wetland WS-105.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 15: Northwesterly view of ROW towards Structure 202.



Photograph No. 16: Looking northwesterly at proposed access and work pad location for Structure 203.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 17: Looking northwesterly into Wetland WS-106.



Photograph No. 18: Looking northwesterly at proposed work pad location for Structure 204.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 19: Looking northwesterly into Wetland WS-118.



Photograph No. 20: Looking northwesterly at proposed work pad location for Structure 205.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 21: Looking northwesterly into Wetland WS-117.



Photograph No. 22: Northwestern view of ROW towards Structure 206.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 23: Looking northerly into Wetland WS-116.



Photograph No. 24: Looking northerly at proposed work pad location for Structure 207.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 25: Looking northwesterly into Wetland WS-112.



Photograph No. 26: Looking northerly into Wetland WS-111, Gordon Pond Brook.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 27: Looking westerly at proposed work pad location for Structure 208.



Photograph No. 28: Looking westerly into Wetland WS-107.

PHOTO LOG

X178-2 Transmission Line Rebuild Project Easton, Lincoln, and Woodstock, New Hampshire

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 29: Looking northwesterly at proposed work pad location for Structure 209.



Photograph No. 30: Looking southerly at proposed work pad location for Structure 210.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 31: Looking northwesterly at proposed access and work pad location for Structure 211.



Photograph No. 32: Looking northwesterly at proposed access and work pad location for Structure 212.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 33: Looking northerly into Wetland L-80.



Photograph No. 34: Looking at northwesterly at proposed access to Structure 213.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 35: Looking southeasterly into Wetland L-78.



Photograph No. 36: Northwestern view of ROW towards Structure 214.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 37: Looking northwesterly at proposed work pad location for Structure 215.



Photograph No. 38: Looking northwesterly into Wetland L-81.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 39: Looking northwesterly at proposed work pad location for Structure 216.



Photograph No. 40: Looking westerly into Wetland L-73.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 41: Looking northwesterly at proposed access to Structure 217.



Photograph No. 42: Looking northeasterly into Wetland L-73, Boles Brook, and proposed access to Structure 218.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023

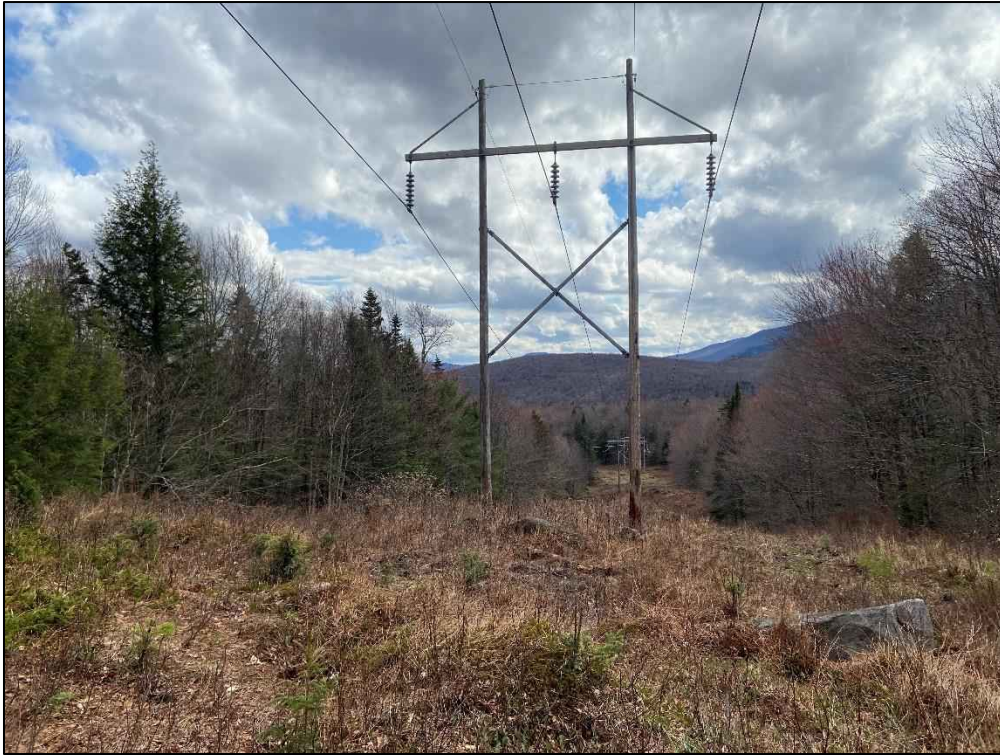


Photograph No. 43: Looking southwesterly into Wetland L-66 and proposed work pad location for Structure 218.



Photograph No. 44: Looking northeasterly at proposed access to Structure 219.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 45: Looking northeasterly at proposed work pad location for Structure 220.



Photograph No. 46: Looking northeasterly at proposed work pad location for Structure 221.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 47: Looking northeasterly at proposed work pad location for Structure 222.



Photograph No. 48: Looking northeasterly into Wetland L-47.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 49: Looking northwesterly into Wetland L-46.



Photograph No. 50: Looking northeasterly at proposed work pad location for Structure 223.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 51: Looking easterly into Wetland L-43, Boles Brook.



Photograph No. 52: Looking northerly at proposed access and work pad location for Structure 224.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 53: Looking southwesterly into Wetland L-43, adjacent to Structure 224.



Photograph No. 54: Looking northwesterly at proposed work pad location for Structure 225.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 55: Northeasterly view of ROW towards Structure 226.



Photograph No. 56: Northeasterly view of ROW towards Structure 227.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 57: Looking northeasterly into Wetland L-42.



Photograph No. 58: Looking northeasterly at proposed work pad location for Structure 228.

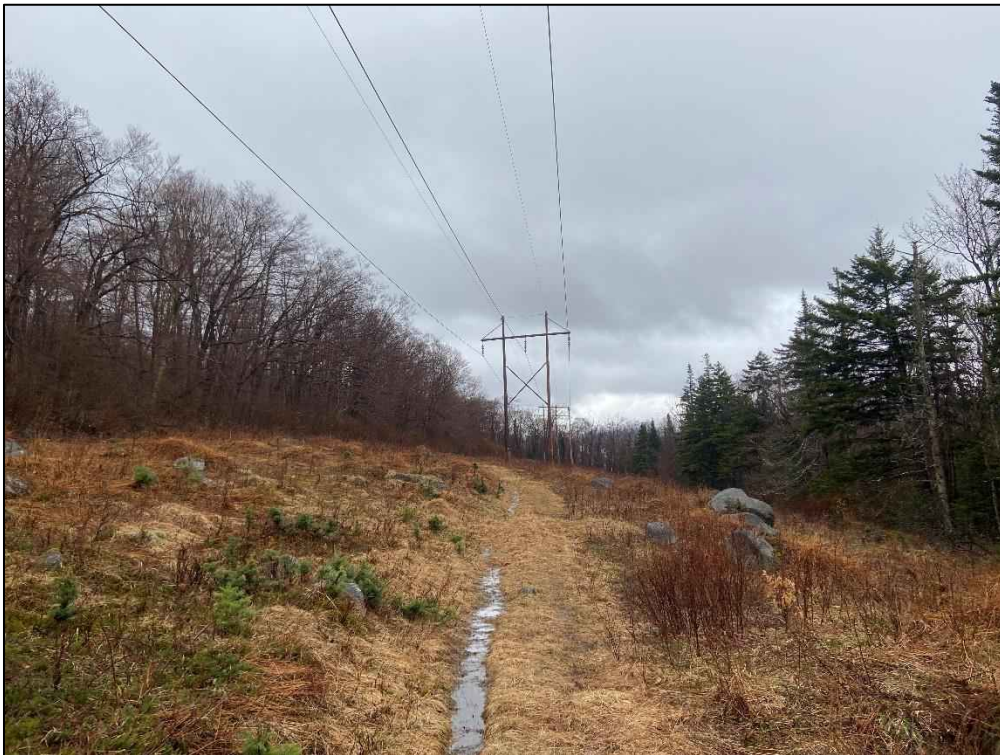
PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 59: Looking northeasterly into Wetland L-41.



Photograph No. 60: Northeasterly view of ROW towards Structure 229.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 61: Northeasterly view of ROW towards Structure 230.



Photograph No. 62: Looking easterly at proposed work pad location for Structure 231.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 63: Looking northerly into Wetland L-63.



Photograph No. 64: Westerly view of ROW towards Structure 232.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 65: Westerly at proposed work pad location for Structure 233.



Photograph No. 66: Looking southeasterly at proposed work pad location for Structure 234.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 67: Looking northwesterly at proposed work pad location for Structure 235.



Photograph No. 68: Looking southeasterly at proposed work pad location for Structure 236.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 69: Looking northwesterly at proposed access to Structure 237.



Photograph No. 70: Looking northeasterly at proposed access to Structure 238.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 71: Northwesterly view of ROW towards Structure 239.



Photograph No. 72: Looking northwesterly at proposed work pad location for Structure 240.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 73: Looking northwesterly at proposed work pad location for Structure 241.



Photograph No. 74: Northwestern view of ROW towards Structure 242.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 75: Looking northwesterly into Wetland L-32 and at proposed access and work pad location for Structure 243.



Photograph No. 76: Looking northwesterly at proposed access to Structure 244.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 77: Looking northwesterly at proposed work pad location for Structure 245.



Photograph No. 78: Looking westerly into Wetland L-23.

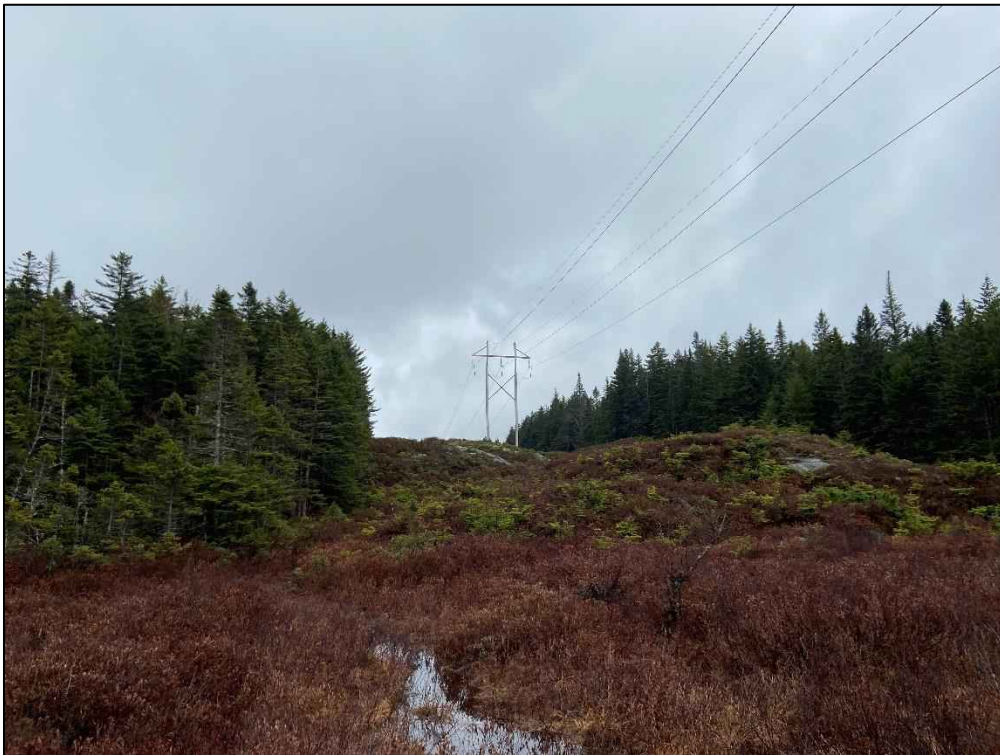
PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 79: Northwesterly view of ROW towards Structure 246.



Photograph No. 80: Southeasterly view of ROW towards Structure 247.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograoph No. 81: Looking southeasterly to Structure 247 across Harvard Brook, L-1.



Photograph No. 82: Looking southeasterly at proposed work pad location for Structure 248.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 83: Looking northwesterly at proposed work pad location for Structure 249.



Photograph No. 84: Looking northwesterly into Wetland L-1.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 85: Looking northwesterly at proposed work pad location for Structure 250.



Photograph No. 86: Northwestern view of ROW towards Structure 251.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 87: Looking northwesterly at proposed work pad location for Structure 252.



Photograph No. 88: Looking westerly at proposed work pad location for Structure 253.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 89: Looking northwesterly at proposed work pad location for Structure 254.



Photograph No. 90: Looking southeasterly into Wetland L-1, Eliza Brook.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 91: Looking northwesterly at proposed work pad location for Structure 255.



Photograph No. 92: Looking northwesterly at proposed work pad location for Structure 256.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 93: Looking northwesterly at proposed access to Structure 257.



Photograph No. 94: Looking northwesterly into Wetland L-5.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 95: Looking westerly at proposed work pad location for Structure 258.



Photograph No. 96: Looking southeasterly at proposed work pad location for Structure 259.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 97: Looking westerly at proposed work pad location for Structure 260.



Photograph No. 98: Looking westerly at proposed access and work pad location for Structure 261.

PHOTO LOG

X178-2 Transmission Line Rebuild Project Easton, Lincoln, and Woodstock, New Hampshire

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 99: Looking westerly at proposed work pad location for Structure 262.



Photograph No. 100: Looking southerly at proposed work pad location for Structure 263.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 101: Looking westerly at proposed access and work pad location for Structure 263.



Photograph No. 102: Looking westerly at proposed access and work pad location for Structure 264.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 103: Looking northwesterly at proposed work pad location for Structure 265.



Photograph No. 104: Looking easterly into Wetland L/ET-16.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 105: Northwesterly view of ROW towards Structure 266.



Photograph No. 106: Looking westerly at proposed work pad location for Structure 267.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 107: Looking easterly at proposed work pad location for Structure 268.



Photograph No. 108: Looking easterly at proposed access to Structure 269.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 109: Looking easterly at proposed work pad location for Structure 270.



Photograph No. 110: Looking easterly into Wetland ET-2, Reel Brook.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 111: Looking northeasterly at proposed work pad location for Structure 271.



Photograph No. 112 Looking northwesterly at proposed access and work pad location for Structure 272.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 113: Looking northwesterly at proposed work pad location for Structure 273.



Photograph No. 114: Looking northwesterly at proposed work pad location for Structure 274.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 115: Looking northwesterly at proposed access and work pad location for Structure 275.



Photograph No. 116: Looking westerly at proposed access and work pad location for Structure 276.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 117: Looking westerly at proposed access and work pad location for Structure 277.



Photograph No. 118: Looking westerly at proposed access to Structure 278.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 119: Looking northerly into Wetland ET-26, Reel Brook.



Photograph No. 120: Westerly view of ROW towards Structure 279.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 121: Looking westerly at proposed work pad location for Structure 280.



Photograph No. 122: Looking westerly at proposed work pad location for Structure 281.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 123: Looking westerly at proposed work pad location for Structure 282.



Photograph No. 124: Looking westerly at proposed work pad location for Structure 283.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 125: Looking westerly at proposed access and work pad location for Structure 284.



Photograph No. 126: Looking westerly at proposed access and work pad location for Structure 285.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 127: Looking westerly at proposed work pad location for Structure 286.



Photograph No. 128: Looking westerly at proposed work pad location for Structure 287.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 129: Westerly view of ROW towards Structure 288.



Photograph No. 130: Looking westerly at proposed work pad location for Structure 289 to be replaced within Wetland ET-48.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 131: Looking westerly at proposed work pad location for Structure 290.



Photograph No. 132: Looking westerly into Wetland ET-46.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 133: Looking westerly at proposed access and work pad location for Structure 291.



Photograph No. 134: Looking westerly at proposed work pad location for Structure 295.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 135: Looking northwesterly at proposed work pad location for Structure 300.



Photograph No. 136: Looking northwesterly at proposed work pad location for Structure 301.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 137: Looking northwesterly at proposed work pad location for Structure 302.



Photograph No. 138: Looking northwesterly into Wetland ET-31.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 139: Looking northwesterly at proposed work pad location for Structure 308.



Photograph No. 140: Northerly view of ROW towards Structure 309.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 141: Northwesterly view of ROW towards Structure 310.



Photograph No. 142: Looking northerly into Wetland ET-37 and northerly view of ROW towards Structure 311.

PHOTO LOG
X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire
Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 143: Looking northerly at proposed work pad location for Structure 311.



Photograph No. 144: Looking northerly at proposed access and work pad location for Structure 312.

PHOTO LOG

**X178-2 Transmission Line Rebuild Project
Easton, Lincoln, and Woodstock, New Hampshire**

Photos Taken: November 15, 29, 30, December 7, 8, 13, 14, 2022, and May 1, 2, 3, 8, 9, 10, 18, 2023



Photograph No. 145: Looking northerly into Wetland ET-50 and at proposed access and work pad location for Structure 313.



Photograph No. 146: Looking northerly into Wetland ET-52, Unnamed Stream.

Attachment C – NHB Reports

New Hampshire Natural Heritage Bureau

NHB DataCheck Results Letter

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

From: NH Natural Heritage Bureau

Date: 11/21/2023 (This letter is valid through 11/21/2024)

Re: Review by NH Natural Heritage Bureau of request dated 11/21/2023

Permit Types: Alteration of Terrain Permit
Stormwater Pollution Prevention
Wetland Standard Dredge & Fill - Major
Woodstock

NHB ID: NHB23-3373

Applicant: Lindsey White

Location: Woodstock
Tax Map: multiple, Tax Lot: multiple
Address: Eversource Right-of-way

Proj. Description: This NHB request is being submitted for the ongoing X178 Rebuild Project originally under NHB22-3461. The project is anticipated to be completed by the end of 2026.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

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.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North Suite 201
Bedford, NH 03110
lindsey.white@gza.com

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dnrcr.nh.gov

cc:

Date: 12/05/2023 (valid until 12/05/2024)

Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game

Permits: MUNICIPAL POR - Lincoln, NHDES - Alteration of Terrain Permit, NHDES - Wetland Standard Dredge & Fill - Major, USEPA - Stormwater Pollution Prevention

NHB ID: NHB23-3374

Town: Lincoln

Location: Eversource Right-of-way

Project Description: This NHB request is being submitted for the ongoing X178 Rebuild Project originally under NHB22-3462. The project is anticipated to be completed by the end of 2026.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: On 6/22/23 Ashley Litwinenko sent an email regarding NHB22-3462 requesting a survey for Wiegand's sedge (*Carex wiegandii*) which Lindsey White confirmed on 11/6/23 was not found. In Ashley's email she also stated the following:

Poor level fen/bog system— NHB has no concerns regarding this ENC and the type of work to be conducted if wetland matting is used in accordance with methods described in the memo and removed promptly after completion of work.

Medium level fen system— NHB has no concerns regarding this ENC and the type of work to be conducted if wetland matting is used in accordance with methods described in the memo and removed promptly after completion of work.

High-elevation spruce - fir forest system – NHB has no concerns regarding this ENC and the type of work to be conducted.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

If all proposed plans provided to Ashley are the same for NHB23-3374 and all previous recommendations can be adhered to, then NHB has no further concerns regarding this project at this time. Please note that we have not yet received the official rare plant survey report and if we have concerns or questions regarding the report further coordination may be needed.

NHFG Comments: No comments at this time.

NHB Consultation

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

If this NHB DataCheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification*, *permit by rule*, *permit by notification*, *routine roadway registration*, *docking structure registration*, or *conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB Database Records:

The following record(s) have been documented in the vicinity of the proposed project.

Please see the map and detailed information about the record(s) on the following pages.

Natural Community	State ¹	Federal	Notes
High-elevation spruce - fir forest system	--	--	Threats include logging and climate change.
Medium level fen system	--	--	Level fens are stagnant, and as such are characterized by low nutrient levels, relatively high acidity levels, and accumulations of peat. The primary threats to this community are changes to its hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance.
Poor level fen/bog system	--	--	Level fens are stagnant, and as such are characterized by low nutrient levels, relatively high acidity levels, and accumulations of peat. The primary threats to this community are changes to its hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance.

Plant species	State ¹	Federal	Notes
Wiegand's sedge (<i>Carex wiegandii</i>)	E	--	Primary threat to it would be removal of trees through logging or development.

¹Codes: "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 20 or more years ago.

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.

However, many areas have never been surveyed, or have only been surveyed for certain species.

NHB recommends surveys to determine what species/natural communities are present onsite.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Lindsey White, GZA GeoEnvironmental
5 Commerce Park North Suite 201
Bedford, NH 03110
lindsey.white@gza.com

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dncr.nh.gov

cc: NHFG Review

Date: 12/05/2023 (valid until 12/05/2024)

Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game

Permits: MUNICIPAL POR - Easton, NHDES - Alteration of Terrain Permit, NHDES - Wetland Standard Dredge & Fill - Major, USEPA - Stormwater Pollution Prevention

NHB ID: NHB23-3375

Town: Easton

Location: Eversource Right-of-way

Project Description: This NHB request is being submitted for the ongoing X178 Rebuild Project originally under NHB22-3463. The project is anticipated to be completed by the end of 2026.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: On 6/22/23 Ashley Litwinenko sent an email regarding NHB22-3463 and stated that NHB has no concerns for this portion of work.

If all proposed plans provided to Ashley are the same for NHB23-3375 then NHB has no further concerns regarding this project.

NHFG Comments: Please refer to NHFG consultation requirements below. Please indicate proposed project timing.

NHB Consultation

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

If this NHB DataCheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB Database Records:

The following record(s) have been documented in the vicinity of the proposed project.

Please see the map and detailed information about the record(s) on the following pages.

Natural Community	State ¹	Federal	Notes
High-elevation spruce - fir forest system	--	--	Threats include logging and climate change.
Vertebrate species	State ¹	Federal	Notes
Wood Turtle (<i>Glyptemys insculpta</i>)	SC	--	Contact the NH Fish & Game Dept (see below).

¹Codes: "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 20 or more years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above.

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.

However, many areas have never been surveyed, or have only been surveyed for certain species.

NHB recommends surveys to determine what species/natural communities are present onsite.

Attachment D – NHB/NHFG Correspondence

Lindsey White

From: Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>
Sent: Friday, November 3, 2023 3:29 PM
To: Lindsey White
Cc: Nelson, Kurt I; Winters, Melissa; FGC: NHFG review; Yuengling, Kurt; Schlosser, Michael
Subject: [EXTERNAL] NHB22-3461, NHB22-3462, NHB22-3463, and NHB22-3464 Eversource X178 Further Consultation Sugar Hill Easton Lincoln Woodstock
Attachments: Vernal Pool Summary EVS X178.PNG; Wood Turtle Flyer_2023 revision.pdf; Smooth green snake flyer.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Lindsey,

New Hampshire Fish and Game (NHFG) has reviewed the materials submitted for further consultation by GZA on October 5, 2023 for consultation on NHB22-3461, NHB22-3462, NHB22-3463, and NHB22-3464. The proposed project is for structure replacements and OPGW work with associated access on the X178 line in Sugar Hill, Easton, Lincoln and Woodstock. BMP's were issued by NHFG under FIS1004.12 on 8/23/2023. Further Consultation was sought to coordinate further on Recommendation #'s 6, 10, and 16. Updated recommendations resulting from further consultation can be found below.

Permit applications associated with this review:

1. NHDES Standard Dredge and Fill Wetlands Permit
2. NHDES Alteration of Terrain Permit

Please provide permit numbers if obtained.

Notify NHFG if/when phases on this project begin and finish. Please use subject line "NHB22-3463 Eversource X178 Structure Replacement Work Start/End Notification." Notify NHFG if there are any breaks in the schedule for active work zones.

Please note that "active season" dates for rare species are variable based on weather and other environmental factors. NHFG may recommend dates that vary from initial reviews based on available information of animal activity.

Recommended BMPs shall apply to all work areas unless otherwise specified by NHFG.

Based on the NHB datacheck results letter and the information provided in the submission, we request the following recommended permit conditions. These recommended permit conditions are applicable to all state permits listed above. Please include recommended permit conditions in final plan sheets or environmental resources map as written below (updated highlighted text as applicable) and provide to NHDES for final review, with a copy to NHFG. Permit reviewers will adopt/include NHFG permit conditions in the permit if approved.

New Hampshire Fish and Game Permit
Conditions:

1. Wood turtles (state species of special concern) occur within the vicinity of the project area. All operators and personnel working on or entering the site shall be made aware of the potential presence of these species and shall be provided flyers that help to identify these species, along with NHFG contact information. See Plan Sheet xxxxxx *Include attached flyers to plan sheet set.*
2. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) shall be posted on site at all times and communicated during morning tailgate meetings prior to work commencement.
3. Turtles and snakes may be attracted to disturbed ground during nesting season. Turtle nesting season occurs approximately May 15th – June 30th. Nesting areas may include work pads and access roads that are not hard pack gravel and other sandy/gravel work areas. All turtle species nests are protected by NH laws. Be aware of the potential to encounter nesting wildlife in these areas.
4. If a nest is observed or suspected, operators shall contact Melissa Winters (603-479-1129) or Josh Megyesy (978-578-0802) at NHFG immediately for further consultation. The nest or suspected nest shall be marked (surrounding roped off or cone buffer) and avoided; this shall be communicated to all personnel onsite. Site activities shall not occur in the area surrounding the nest or suspected nest until further guidance is provided by NHFG.
5. Vernal pools and potential vernal pools (PVP) shall be flagged prior to work, and impacts shall be avoided with the following exceptions as described in the table embedded in the attached screenshot titled, “Vernal Pool Summary EVS X178”:
 1. Wetland WS-75 and L/ET-16 contain vernal pools within the proposed work pad area for structures 180 and 269. The work pads may overlap these vernal pools to construct a safe work area. Temporary timber matting shall be utilized and restoration shall occur following impacts. Impacts to the vernal pools shall only occur December 1 to March 1. Work shall occur under frozen or dry conditions if possible. NHFG shall be notified prior to disturbance.
6. No disturb vegetative buffers of 50’ shall be maintained around vernal pools wherever possible. NHFG acknowledges the following vernal pool buffer impacts as described in the table embedded in the attached screenshot titled, “Vernal Pool Summary EVS X178 “.
 1. Wetlands WS-64, WS-75, WS-117, L-73, L-66, L-42, L-41, L-40, L/ET-16, LW-1, ET-31, ET-37 contain vernal pools. Temporary timber matting will be utilized within 50-ft of these vernal pools.

7. All matting which will be placed in waterbodies deemed suitable for hibernating rare turtles will be placed prior to the start of the inactive season (October 16-March 31) so as to prevent accidental placement atop hibernating turtles. Areas identified as suitable hibernation habitat shall be identified on plan sheets and provided to NHFG at least two weeks prior to beginning work.
8. Immediately prior to the placement of matting in wetlands during the active season (April 1-October 15), the areas shall be cleared by a trained individual. A trained individual shall be defined as any contractor who has gone through project-species protection education conducted by the qualified biologist on rare wildlife species at the site. Contact NHFG if turtles in matting areas are observed or suspected.
9. For all work pads, staging areas, matting, and access roads, searches and sweeps shall be conducted by trained individuals immediately before the start of work and movement of equipment in order to minimize the chance of animals entering an area between the sweep and work. A trained individual shall be defined as any contractor who has gone through project-species protection education conducted by the qualified biologist on rare wildlife species at the site.
10. All work activities shall be restricted to the defined roads, construction areas, and staging areas, with no equipment or materials staged or stored outside of the defined areas as shown on plan sheets or equivalent document.
 1. Minor field changes to access roads and work pads including: shifting access from one side of the right of way to the other, shifting of work pads and staging areas forward or backwards, but not increasing the overall square footage of the work pads or staging areas, may be considered based on location. NHFG shall be notified of any proposed changes.
11. Work, pull pads, and access shall be minimized to the greatest extent possible.
12. Work pads shall be reduced post-construction to 30' x 60' and restored with a native vegetative seed mix.
13. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches;
14. All observations of threatened or endangered species on the project site shall be reported immediately to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation;
15. Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHFG in digital format at the above email address for verification, as feasible;
16. In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHFG and implementation of corrective actions recommended by NHFG.
 1. Site operators or Trained Individuals shall be allowed to relocate wildlife encountered if discovered within the active work zone and if in direct harm from project activities. Wildlife shall be relocated in close proximity to the capture location but outside of the work zone and in the direction the individual was heading. NHFG shall be contacted immediately if this action occurs.
17. The NHFG, including its employees and authorized agents, shall have access to the property during the term of the permit.

Additional Recommendations:

1. Smooth green snakes (state species of special concern) occur within the vicinity of the project site. All operators and personnel working on or entering the site should be made aware of the potential presence of these species and should be provided flyers that help to identify these species, along with NHFG contact information. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) should be posted on site at all times and communicated during morning tailgate meetings prior to work commencement. See Plan Sheet **xxxxxxx**. *Include attached flyers to plan sheet set.*
2. New Hampshire Fish and Game recommends that the above conservation measures are applied to all work throughout the line, including in the towns of Woodstock, Lincoln, and Sugar Hill where there were no known observations of rare species.

NHFG has completed our review of materials submitted for further consultation under FIS 1004. No further coordination with NHFG is requested, and the final recommendations have been transmitted to the applicable permitting agency. Questions or concerns on NHFG recommendations must follow FIS 1004.12. Note that NHFG recommendations may be withdrawn pursuant to FIS 1004.13.

Let me know if you have any questions.

Thank you,

Kevin Newton

Wildlife Biologist

NH Fish and Game Department

Wildlife Division

11 Hazen Drive, Concord NH 03301

Phone: 603-271- 5860

New Hampshire Fish and Game requirements for environmental review consultation can be found at:

https://gencourt.state.nh.us/rules/state_agencies/fis1000.html. ALL requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail. **The NHB datacheck results letter number needs to be included in the email subject line to read as “NHBxx-xxxx_Project Name_FIS 1004 Consultation Submittal”.**

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. Review requests for these projects or other project types should be submitted to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail – email or mail subject line for these review requests should read “NHBxx-xxxx_Project Name_ Env. Review Request”.

Please provide shapefiles/KMZ/KMLs of the project site (and relevant features if applicable) with your submittal. Review statements provided in the NHB Datacheck Results letter for additional guidance.

Lindsey White

From: Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>
Sent: Wednesday, December 20, 2023 8:47 AM
To: Lindsey White; FGC: NHFG review; Winters, Melissa
Cc: Kurt I. Nelson (kurt.nelson@eversource.com); Tracy Tarr
Subject: [EXTERNAL] RE: NHB23-3375, NHB23-3374, NHB23-3373, and NHB23-3380 Eversource X178 Consultation - Easton, Lincoln, Woodstock and Sugar Hill

Thanks Lindsey. Barring any considerations from Melissa, I do not see a problem with your request below to apply recommendations issued by NHFG on November 3, 2023 for NHB23-3375, NHB23-3374, NHB23-3373, and NHB23-3380 Easton, Lincoln, Woodstock and Sugar Hill to the updated datacheck letters (NHB23-3375, NHB23-3374, NHB23-3373, and NHB23-3380). This rationale is based on the results of the updated datacheck letters and scope of work having not changed.

Thank you,

Kevin Newton
Wildlife Biologist
NH Fish and Game Department
Wildlife Division
11 Hazen Drive, Concord NH 03301
Phone: 603-271- 5860

New Hampshire Fish and Game requirements for environmental review consultation can be found at: https://gencourt.state.nh.us/rules/state_agencies/fis1000.html. ALL requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail. **The NHB datacheck results letter number needs to be included in the email subject line to read as "NHBxx-xxxx_Project Name_FIS 1004 Consultation Submittal".**

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. Review requests for these projects or other project types should be submitted to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail – email or mail subject line for these review requests should read **"NHBxx-xxxx_Project Name_ Env. Review Request"**.

Please provide shapefiles/KMZ/KMLs of the project site (and relevant features if applicable) with your submittal. Review statements provided in the NHB Datacheck Results letter for additional guidance.

From: Lindsey White <Lindsey.White@gza.com>
Sent: Monday, December 18, 2023 12:49 PM
To: Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>; FGC: NHFG review <NHFGreview@wildlife.nh.gov>; Winters, Melissa <Melissa.J.Winters@wildlife.nh.gov>
Cc: Kurt I. Nelson (kurt.nelson@eversource.com) <kurt.nelson@eversource.com>; Tracy Tarr <Tracy.Tarr@gza.com>
Subject: RE: NHB23-3375, NHB23-3374, NHB23-3373, and NHB23-3380 Eversource X178 Consultation - Easton, Lincoln, Woodstock and Sugar Hill

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Kevin,

That is correct.

Thanks,
Lindsey

Lindsey E. White, CPSS
Project Manager

GZA | 5 Commerce Park North | Bedford, NH 03110
o: 603.232.8753 | c: 603.851.9287 | lindsey.white@gza.com | www.gza.com | [LinkedIn](#)

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From: Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>

Sent: Monday, December 18, 2023 10:53 AM

To: Lindsey White <Lindsey.White@gza.com>; FGC: NHFG review <NHFGreview@wildlife.nh.gov>; Winters, Melissa <Melissa.J.Winters@wildlife.nh.gov>

Cc: Kurt I. Nelson (<kurt.nelson@eversource.com>) <kurt.nelson@eversource.com>; Tracy Tarr <Tracy.Tarr@gza.com>

Subject: [EXTERNAL] RE: NHB23-3375, NHB23-3374, NHB23-3373, and NHB23-3380 Eversource X178 Consultation - Easton, Lincoln, Woodstock and Sugar Hill

Hi Lindsey,

Just to confirm - site plans, timing, access routes, and BMP's proposed have not changed? The only information that has changed is the NHB datacheck letters have been updated, with no difference in wildlife records?

Thanks,

Kevin

From: Lindsey White <Lindsey.White@gza.com>

Sent: Monday, December 18, 2023 8:08 AM

To: FGC: NHFG review <NHFGreview@wildlife.nh.gov>; Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>; Winters, Melissa <Melissa.J.Winters@wildlife.nh.gov>

Cc: Kurt I. Nelson (<kurt.nelson@eversource.com>) <kurt.nelson@eversource.com>; Tracy Tarr <Tracy.Tarr@gza.com>

Subject: NHB23-3375, NHB23-3374, NHB23-3373, and NHB23-3380 Eversource X178 Consultation - Easton, Lincoln, Woodstock and Sugar Hill

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Hi Kevin,

Eversource and GZA submitted a consultation request for the X178-2 Transmission Line Rebuild Project in June 2023. As you may recall, NHFG, Eversource and GZA had a couple of email exchanges and meetings to discuss the BMP recommendations from NHFG. We received final BMP consultation on November 3, 2023 (attached) and Eversource intends to incorporate the BMPs into the project. However, the NHB reports for this project expired on November 3, 2023. As a result, GZA submitted the proposed project to the NHB Data Check Tool and referenced the prior 2022 NHB Report ID's. We have received updated 2023 NHB reports (also attached). We noted that the same wood turtle record

identified in Easton in 2022 was included on the 2023 Easton NHB report, and no additional records have been added. The Towns of Lincoln, Woodstock and Sugar Hill did not have NHFG records in 2022 or 2023. Given the final consultation was so recent and no new records have been identified, Eversource is proposing to utilize the BMPs that were provided on November 3, 2023.

<u>Town</u>	<u>2022 NHB ID</u>	<u>2022 RTE Species</u>	<u>2023 NHB ID</u>	<u>2022 RTE Species</u>	<u>Notes</u>
Easton	NHB22-3463	Wood Turtle	NHB23-3375	Wood Turtle	Same record of wood turtle on both reports, no new records identified
Lincoln	NHB22-3462	None	NHB23-3374	None	N/A
Woodstock	NHB22-3461	None	NHB23-3373	None	N/A
Sugar Hill	NHB22-3464	None	NHB23-3380	None	N/A

If this is okay with NHFG, we will incorporate this email chain into our permit applications.

Please let us know if you have any questions.

Thanks!

Lindsey E. White, CPSS
Project Manager

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o: 603.232.8753 | c: 603.851.9287 | lindsey.white@gza.com | www.gza.com | [LinkedIn](#)

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Attachment E – Preliminary Phase 2 IPAC Report

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Grafton County, New Hampshire



Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📅 (603) 223-0104

70 Commercial Street, Suite 300

Concord, NH 03301-5094

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Canada Lynx <i>Lynx canadensis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat <i>Myotis septentrionalis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus*

Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is

the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

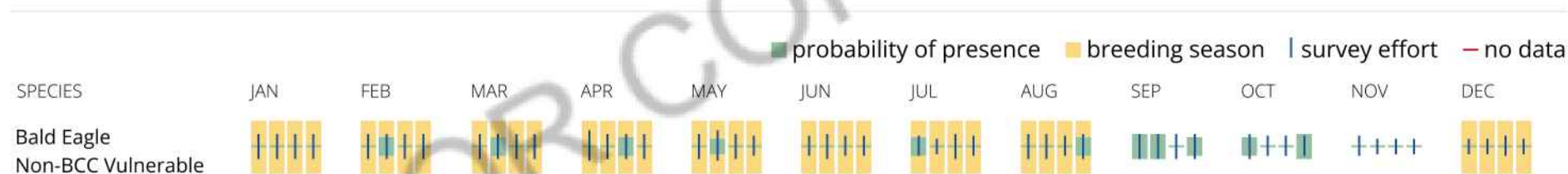
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in

that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Bay-breasted Warbler <i>Setophaga castanea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 25 to Aug 1

Bicknell's Thrush *Catharus bicknelli*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/606>

Breeds Jun 10 to Aug 20

Black-billed Cuckoo *Coccyzus erythrophthalmus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9399>

Breeds May 15 to Oct 10

Bobolink *Dolichonyx oryzivorus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Jul 31

Canada Warbler *Cardellina canadensis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Aug 10

Cape May Warbler *Setophaga tigrina*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Jun 1 to Jul 31

Chimney Swift *Chaetura pelagica*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 25

Evening Grosbeak *Coccothraustes vespertinus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 15 to Aug 10

Veery *Catharus fuscescens fuscescens*

Breeds May 15 to Jul 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

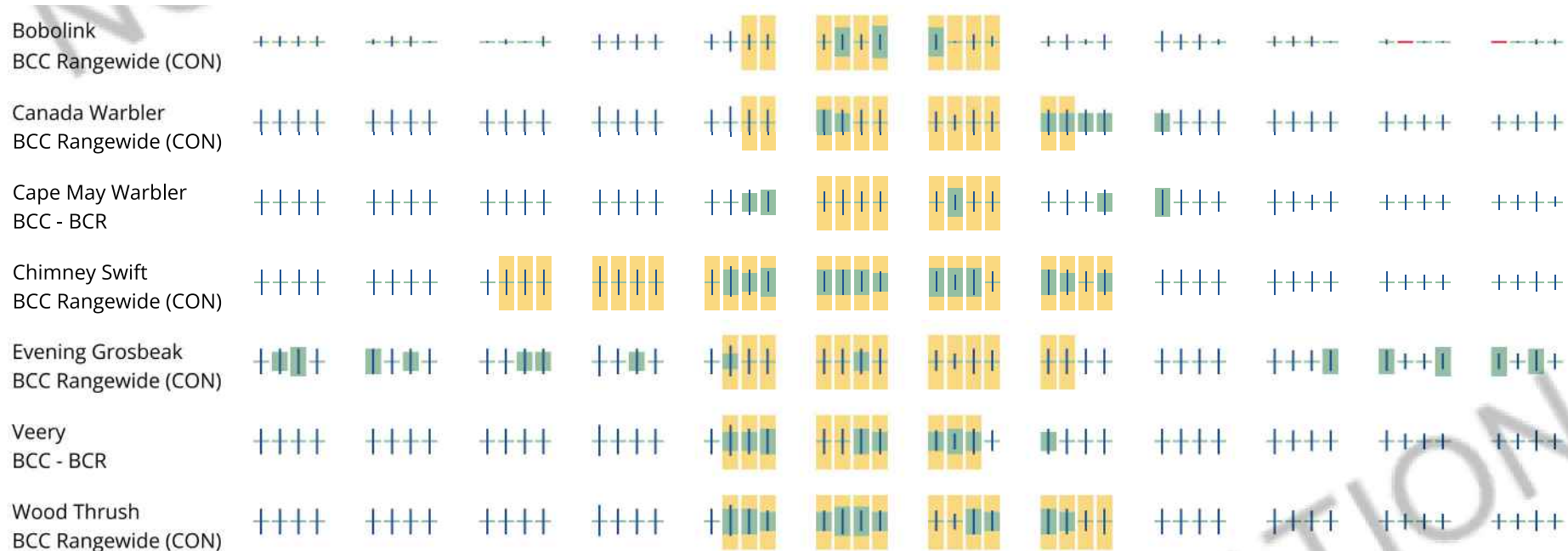
The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

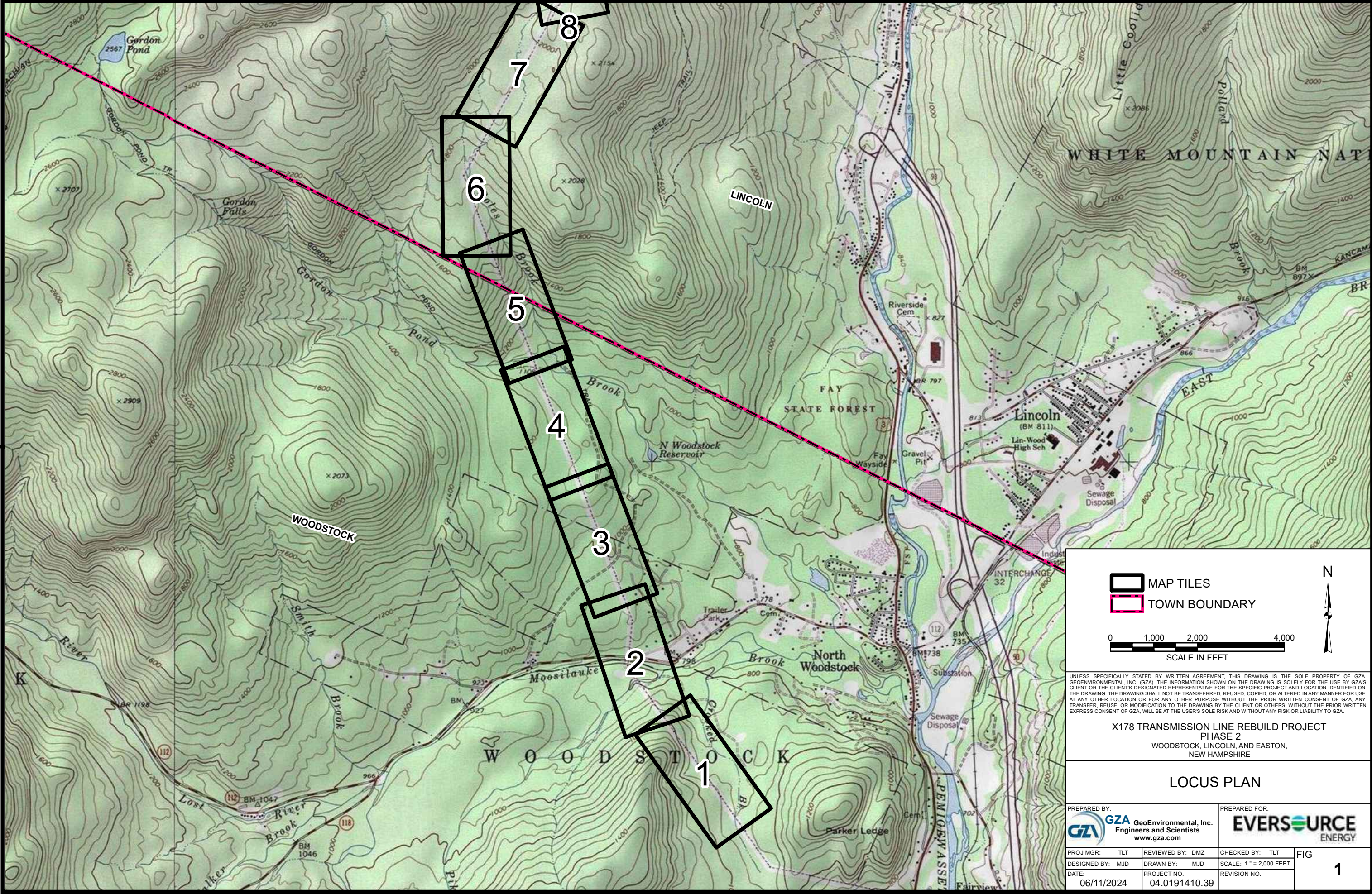
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Figure 1 – Locus

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MAP TILES

TOWN BOUNDARY

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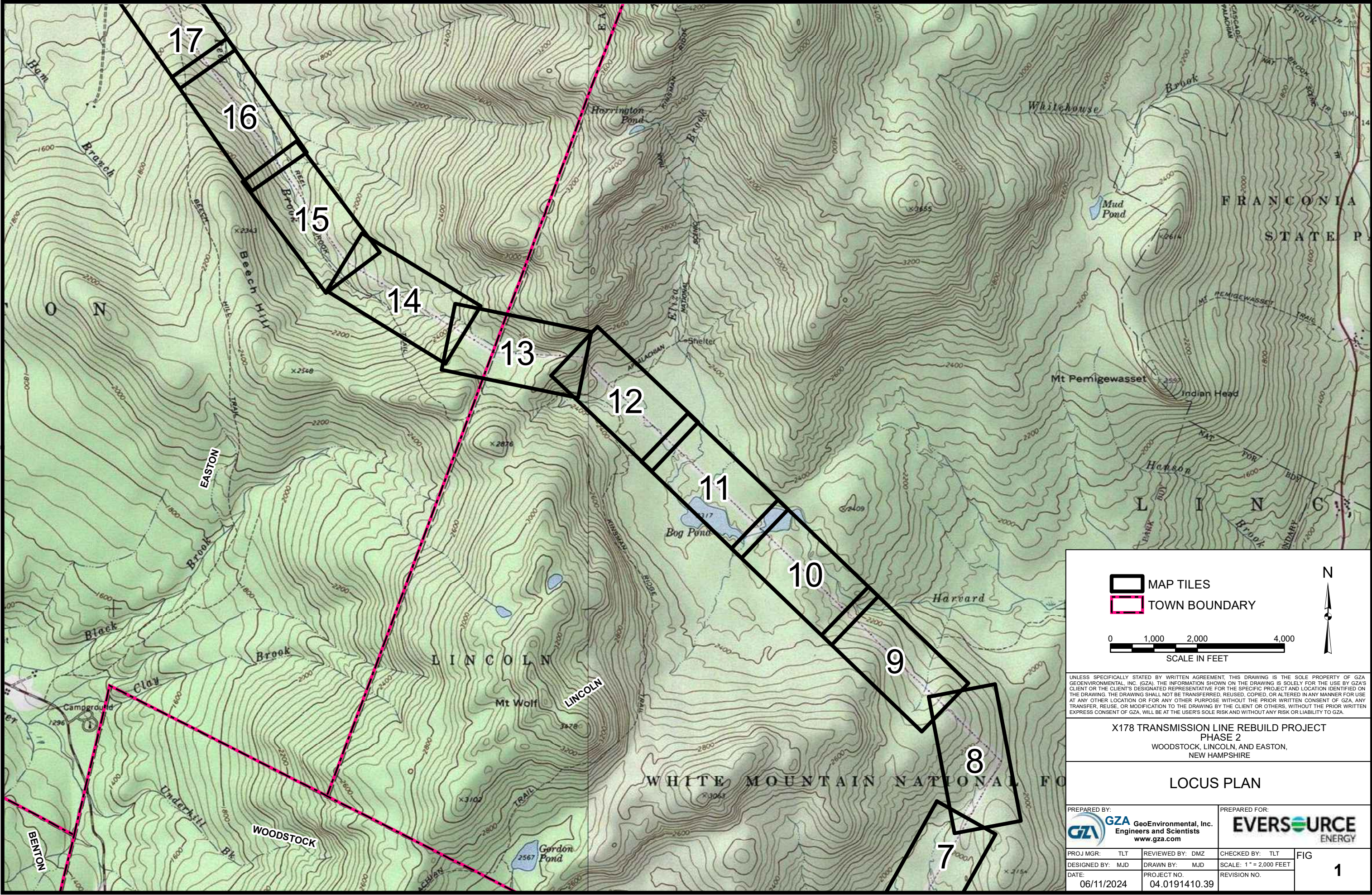
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X178 TRANSMISSION LINE REBUILD PROJECT
PHASE 2
WOODSTOCK, LINCOLN, AND EASTON,
NEW HAMPSHIRE

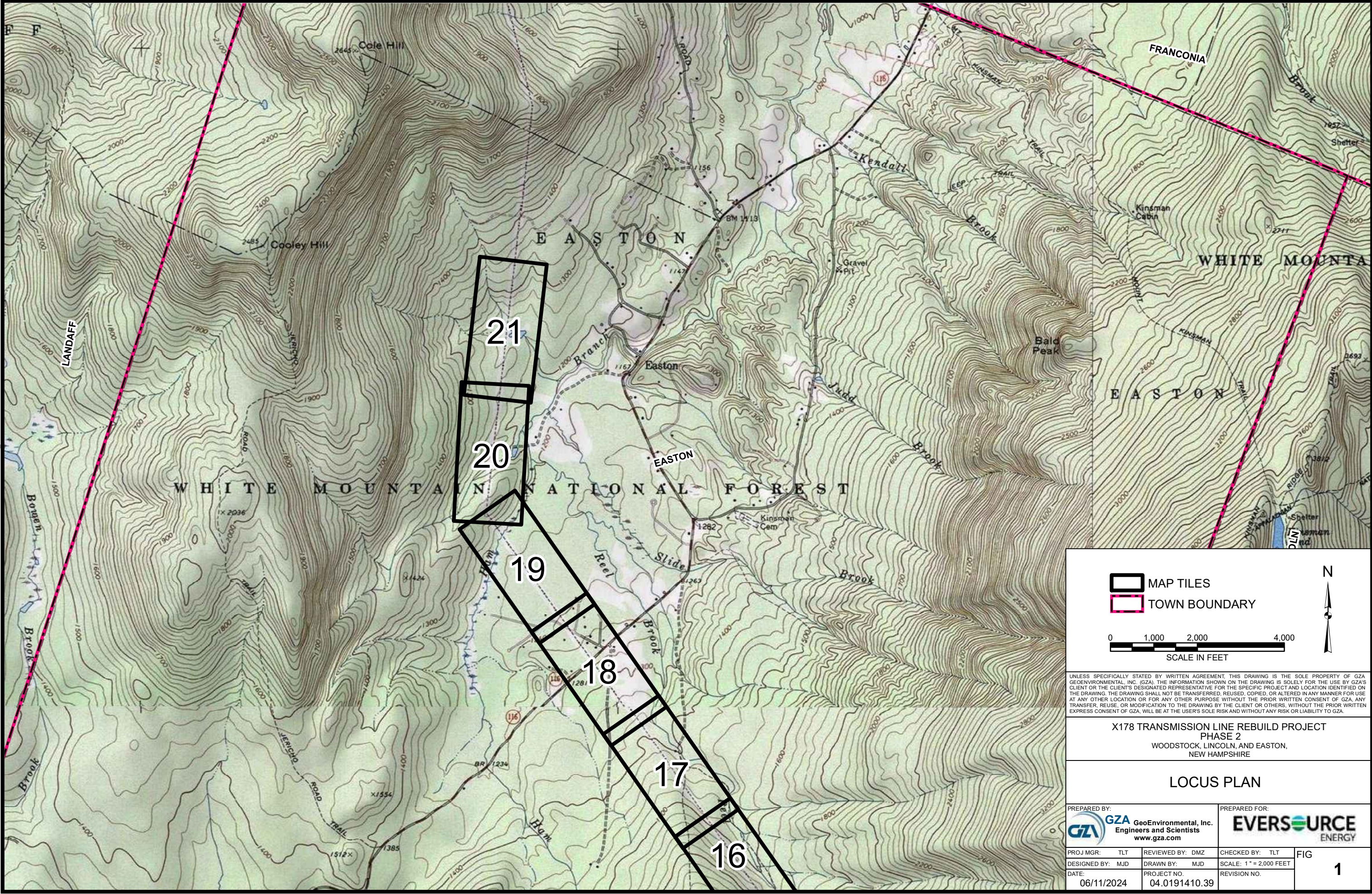
LOCUS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: TLT	REVIEWED BY: DMZ	CHECKED BY: TLT	FIG 1
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE: 1" = 2,000 FEET	
DATE: 06/11/2024	PROJECT NO. 04.0191410.39	REVISION NO.	

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SCALE IN FEET

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X178 TRANSMISSION LINE REBUILD PROJECT

PHASE 2

WOODSTOCK, LINCOLN, AND EASTON,

NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY:

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:

EVERSOURCE
ENERGY

PROJ MGR: TLT

DESIGNED BY: MJD

DATE: 06/11/2024

REVIEWED BY: DMZ

DRAWN BY: MJD

PROJECT NO. 04.0191410.39

CHECKED BY: TLT

SCALE: 1" = 2,000 FEET

REVISION NO.

FIG

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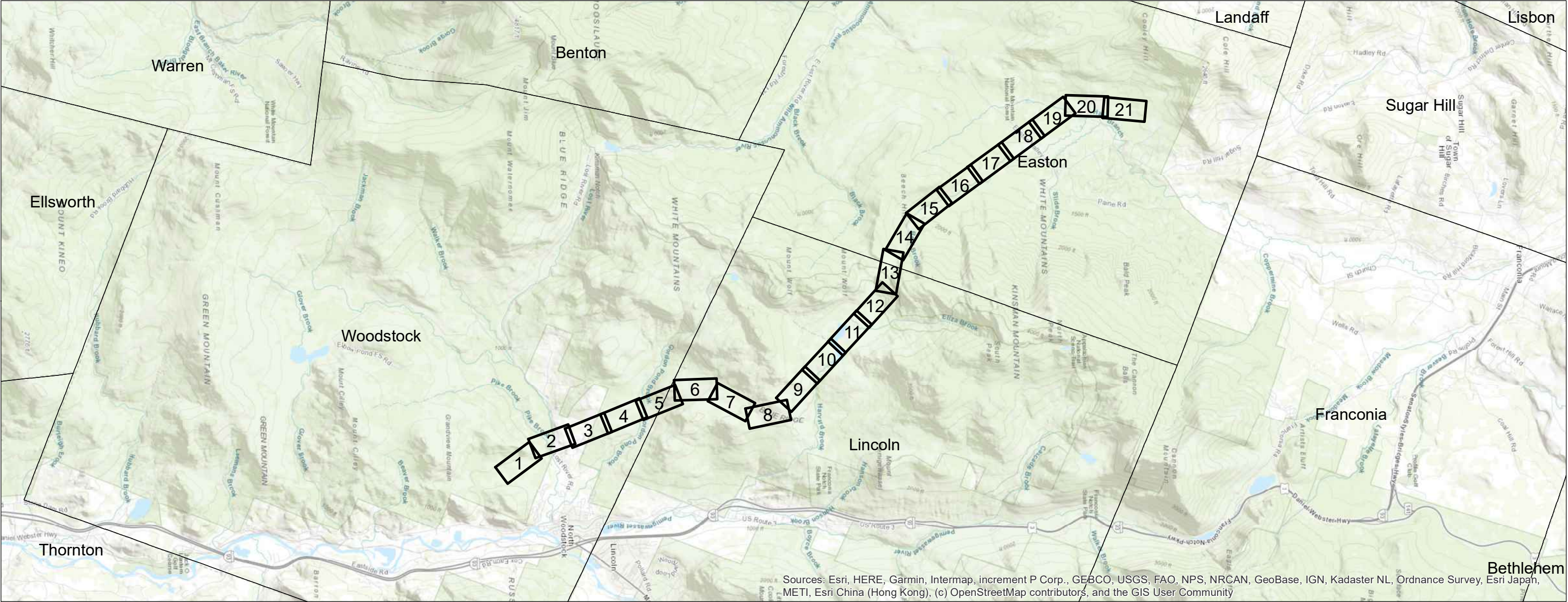
Figure 2 – Access and Permitting Plans

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X178 Transmission Line Structure Rebuild Project
White Mountain National Forest

WOODSTOCK, LINCOLN, AND EASTON, NEW HAMPSHIRE
Environmental Permitting Planset

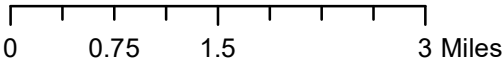
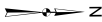
Date: June 11, 2024



PREPARED FOR:



13 Legends Drive
Hooksett, NH 03106



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PREPARED BY:



GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com



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2FT CONTOURS

1 inch = 200 feet

0 50 100 200 Feet

North Arrow

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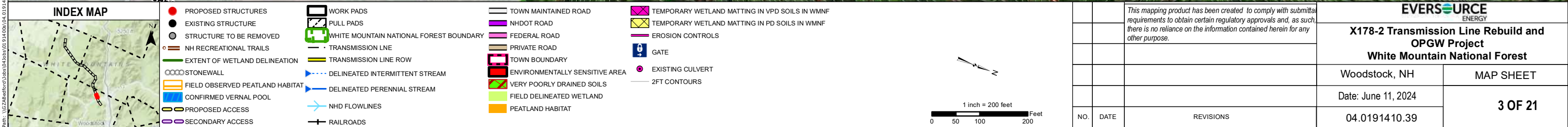
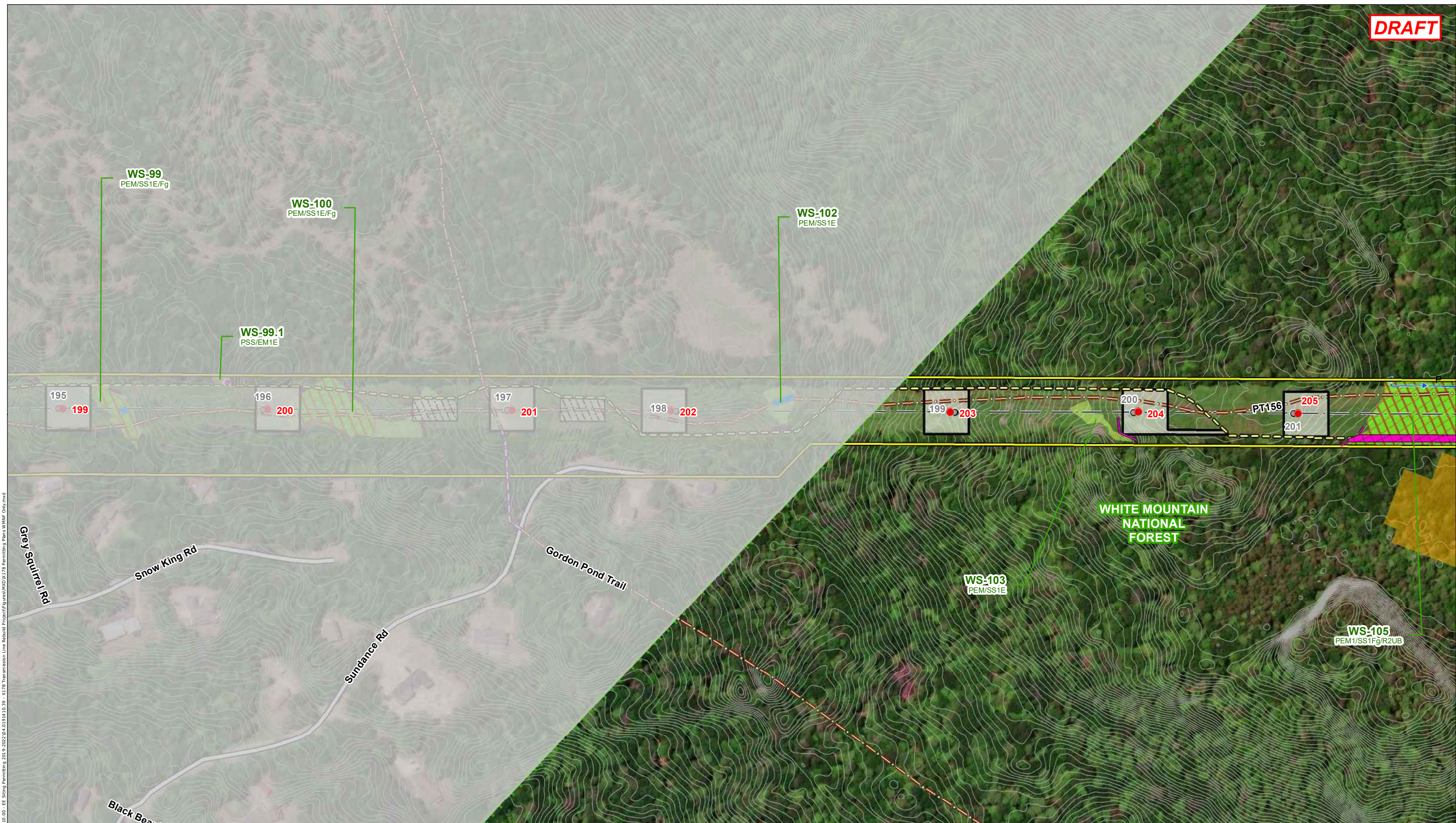
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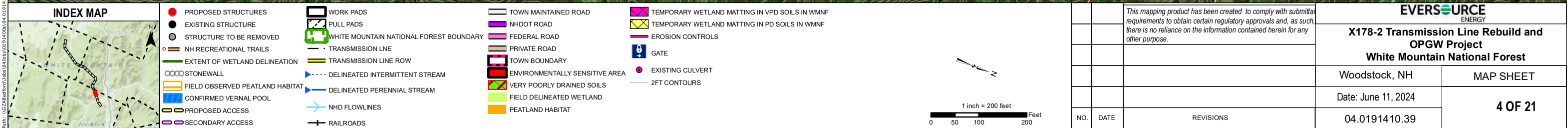
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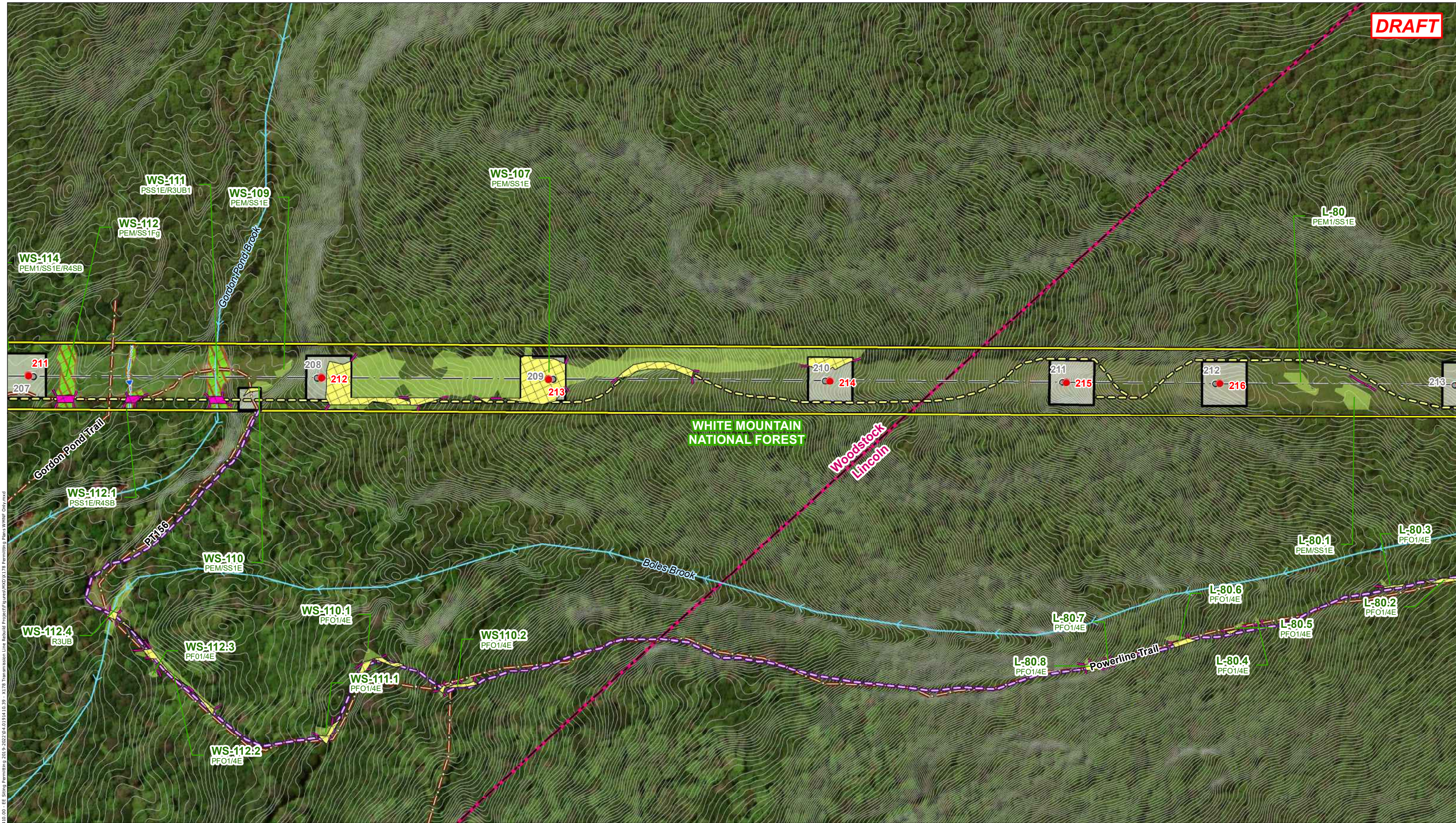
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DRAFT



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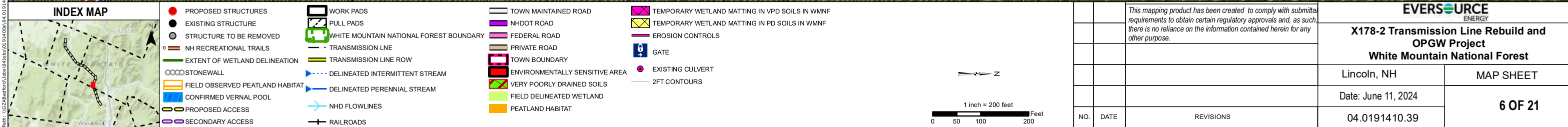
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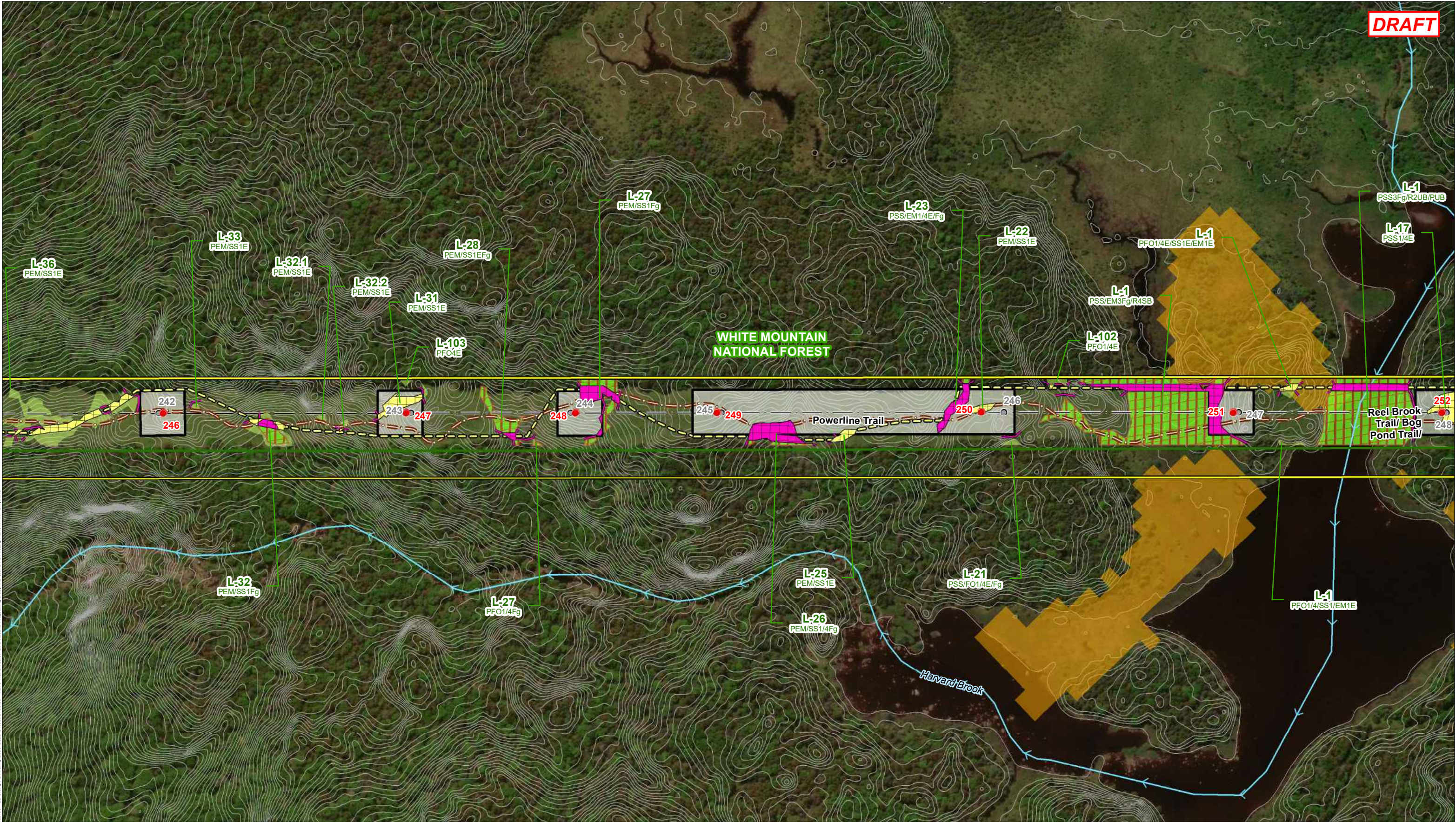
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1 inch = 200 feet

0 50 100 200 Feet

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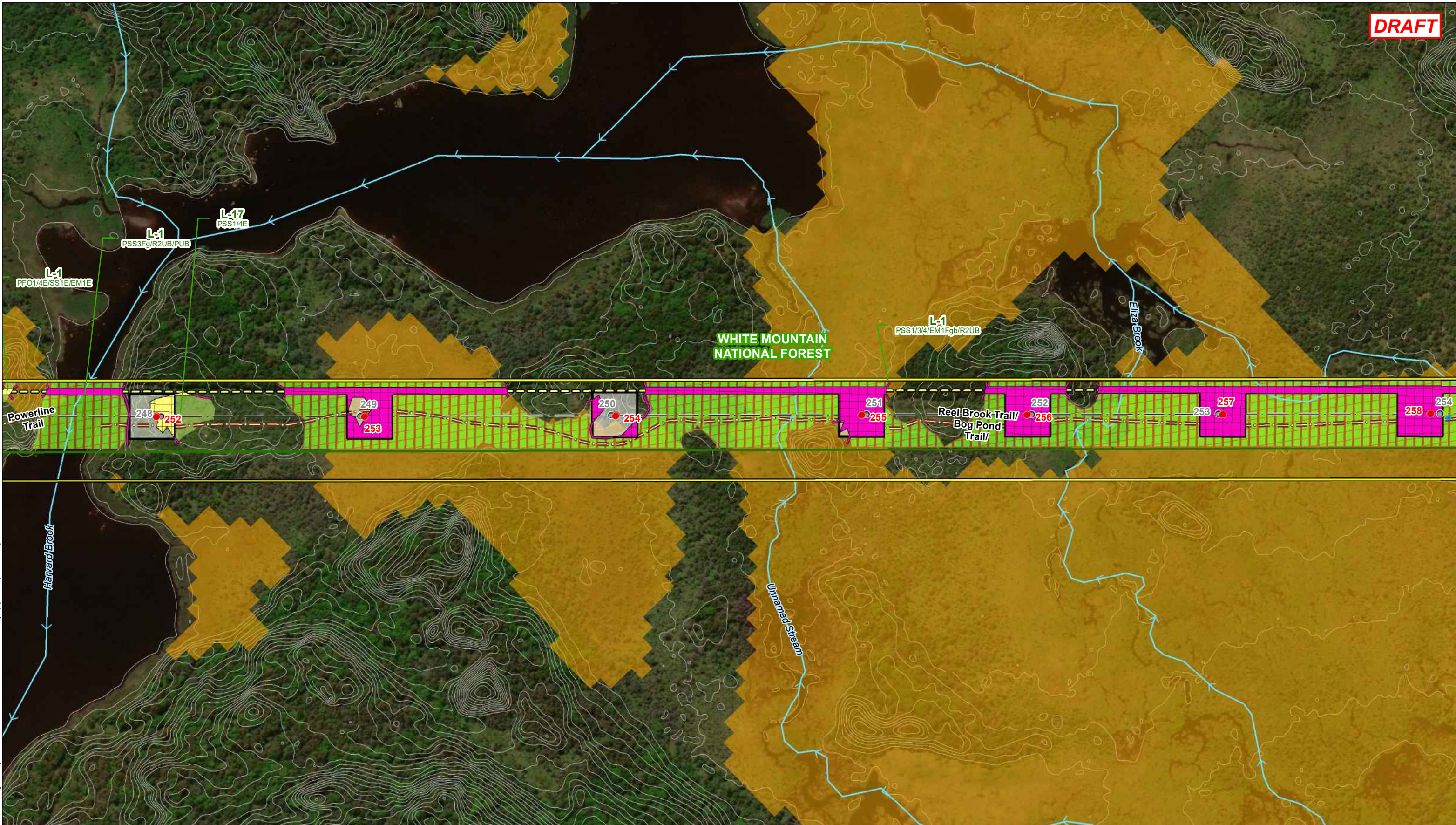
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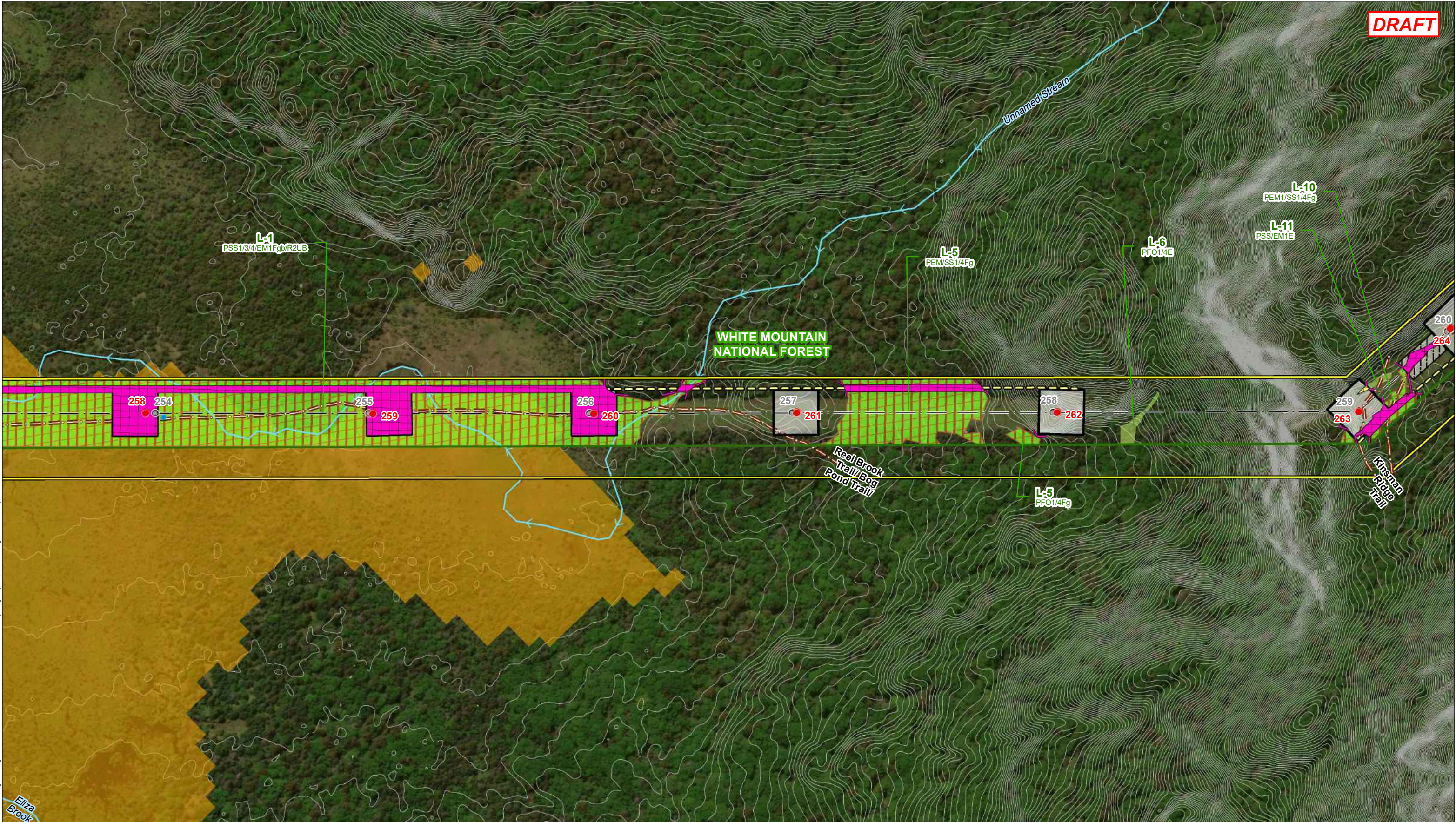
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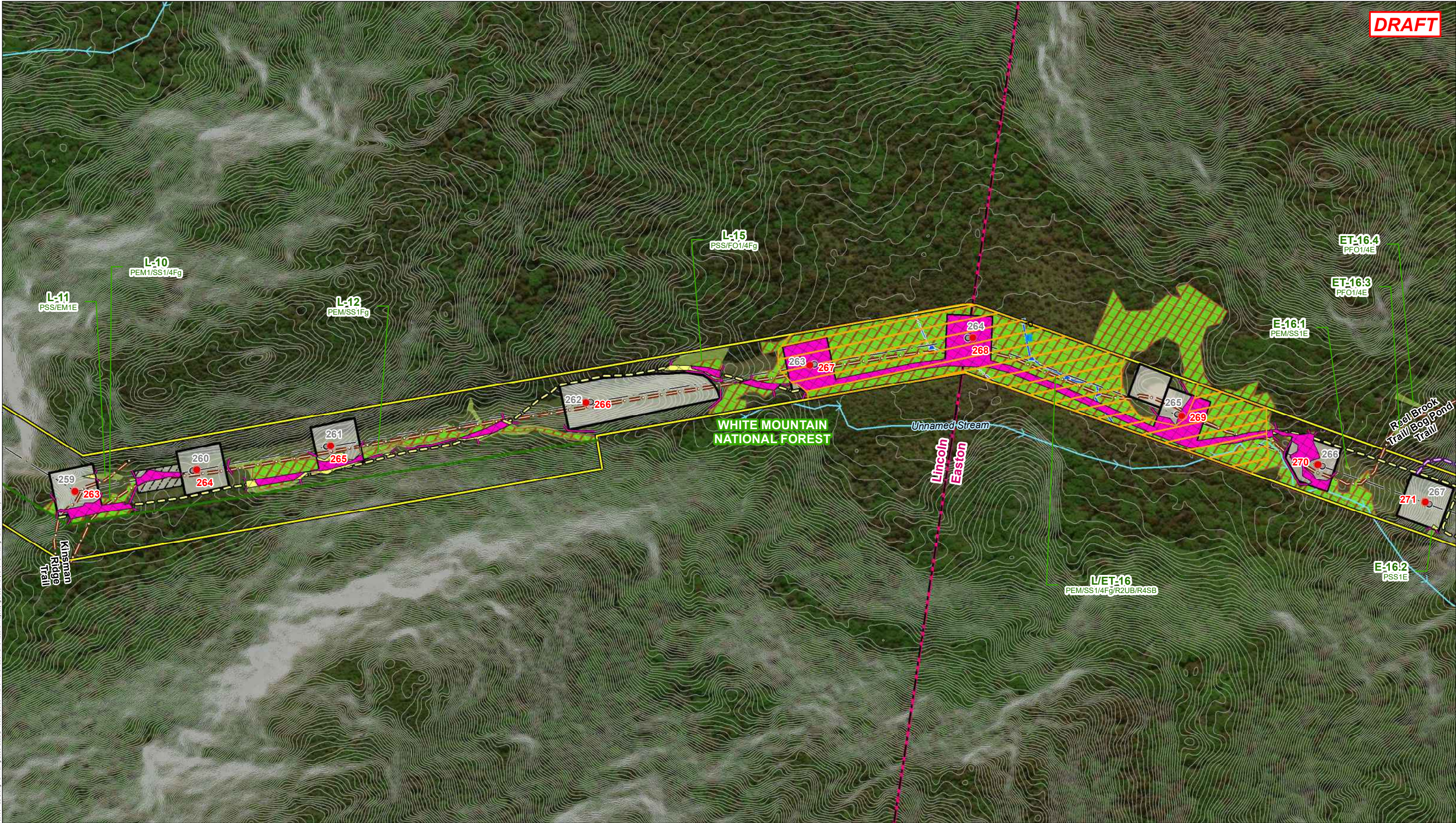
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PULL PADS

WHITE MOUNTAIN NATIONAL FOREST BOUNDARY

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TRANSMISSION LINE ROW

DELINEATED INTERMITTENT STREAM

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TEMPORARY WETLAND MATTING IN VPD SOILS IN WMNF

TEMPORARY WETLAND MATTING IN PD SOILS IN WMNF

EROSION CONTROLS

GATE

EXISTING CULVERT

2FT CONTOURS

0

50

100

200

1 inch = 200 feet

Feet

NO.

DATE

REVISIONS

		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.

EVERSOURCE

ENERGY

X178-2 Transmission Line Rebuild and OPGW Project

White Mountain National Forest

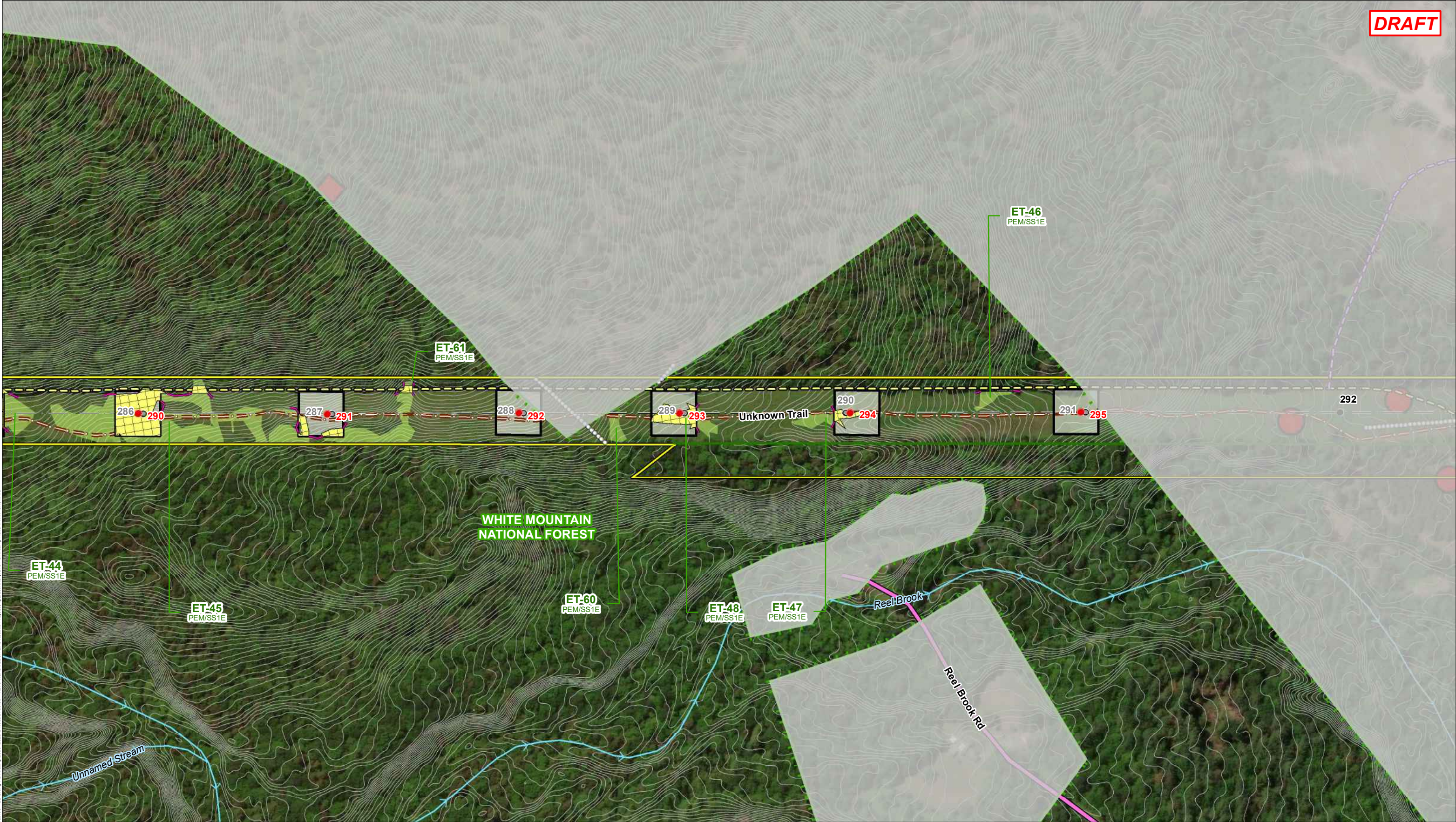
Easton, NH

MAP SHEET

Date: June 11, 2024

04.0191410.39

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2FT CONTOURS

1 inch = 200 feet

NO. DATE REVISIONS

1	04.0191410.39	Initial Mapping
2	04.0191410.39	Revised Mapping
3	04.0191410.39	Final Mapping

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EVERSOURCE ENERGY

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White Mountain National Forest

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1 inch = 200 feet

0 50 100 200 Feet

North Arrow

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			X178-2 Transmission Line Rebuild and OPGW Project	
			White Mountain National Forest	
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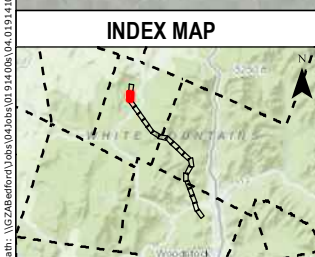
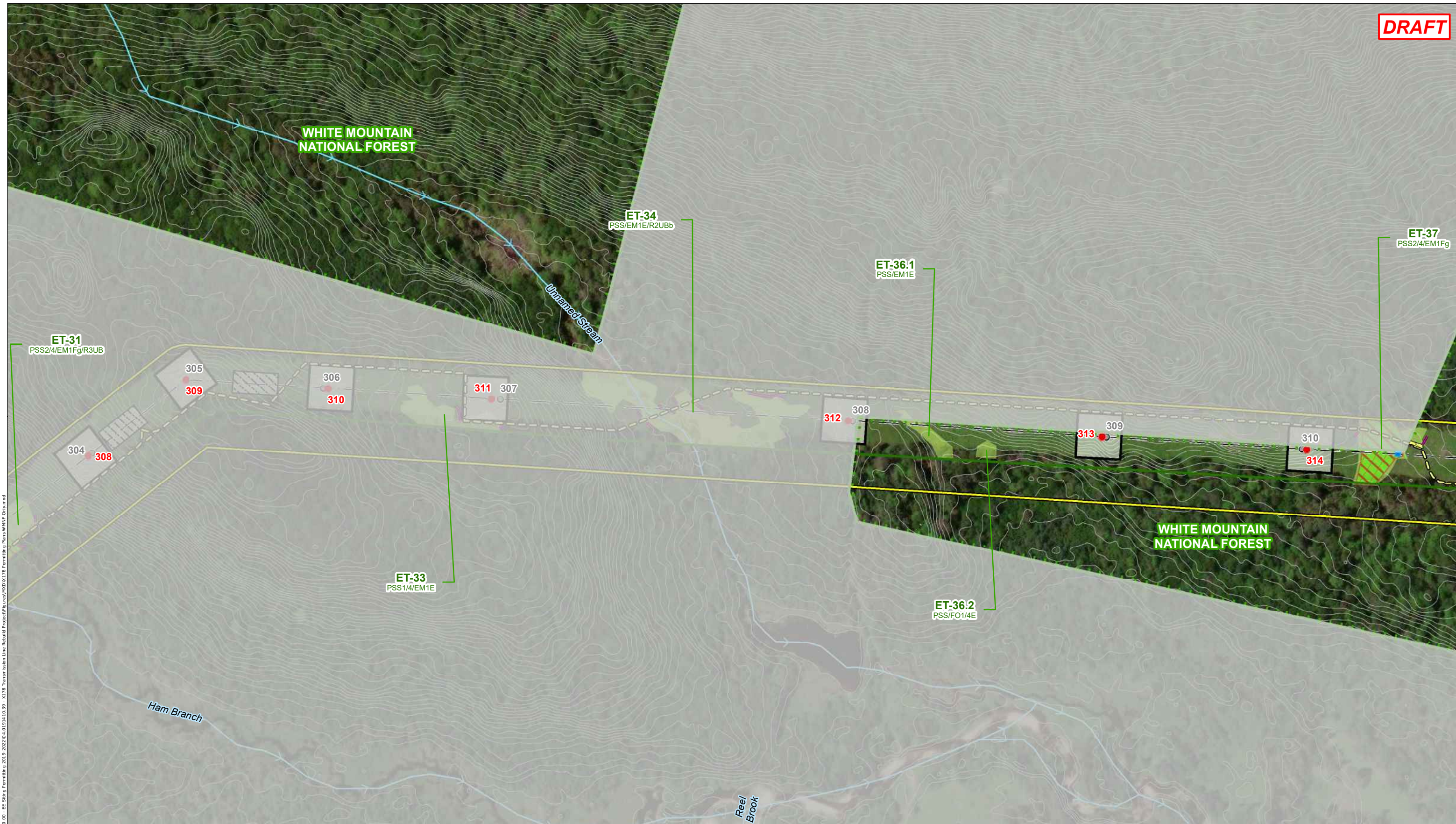
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		This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.	
		<div> <div>EVERSOURCE ENERGY</div> <div>X178-2 Transmission Line Rebuild and OPGW Project</div> <div>White Mountain National Forest</div> </div>	
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		04.0191410.39	

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ENERGY</p> | | |
| | | | | | | <p>X178-2 Transmission Line Rebuild and OPGW Project</p> | | | <p>White Mountain National Forest</p> | | |
| | | | | | | <p>Easton, NH</p> | | | <p>MAP SHEET</p> | | |
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| <p>NO. DATE REVISIONS</p> | | | <p>04.0191410.39</p> | | | | | | | | |

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1 inch = 200 feet

0 50 100 200 Feet

2

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			Easton, NH	MAP SHEET
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NO.	DATE	REVISIONS	04.0191410.39	

© 2024 - GZA GeoEnvironmental, Inc. \\GZA\Bdford\Jobs\04\Jobs\019140\03\04_0191410_00 - EE Siting Permitting 2019-2022\04_0191410_00 - EE Siting Permitting 2019-2022\04_0191410_39 - X178 Transmission Line Rebuild Project\Figures\MXD\Notesheets\No.ashet 1 REVISE S.D.F.R.F.MI.mxd, 5/15/2024, 1:30:24 PM, Lindsey White

4. SITE PLAN IS FOR PERMITTING

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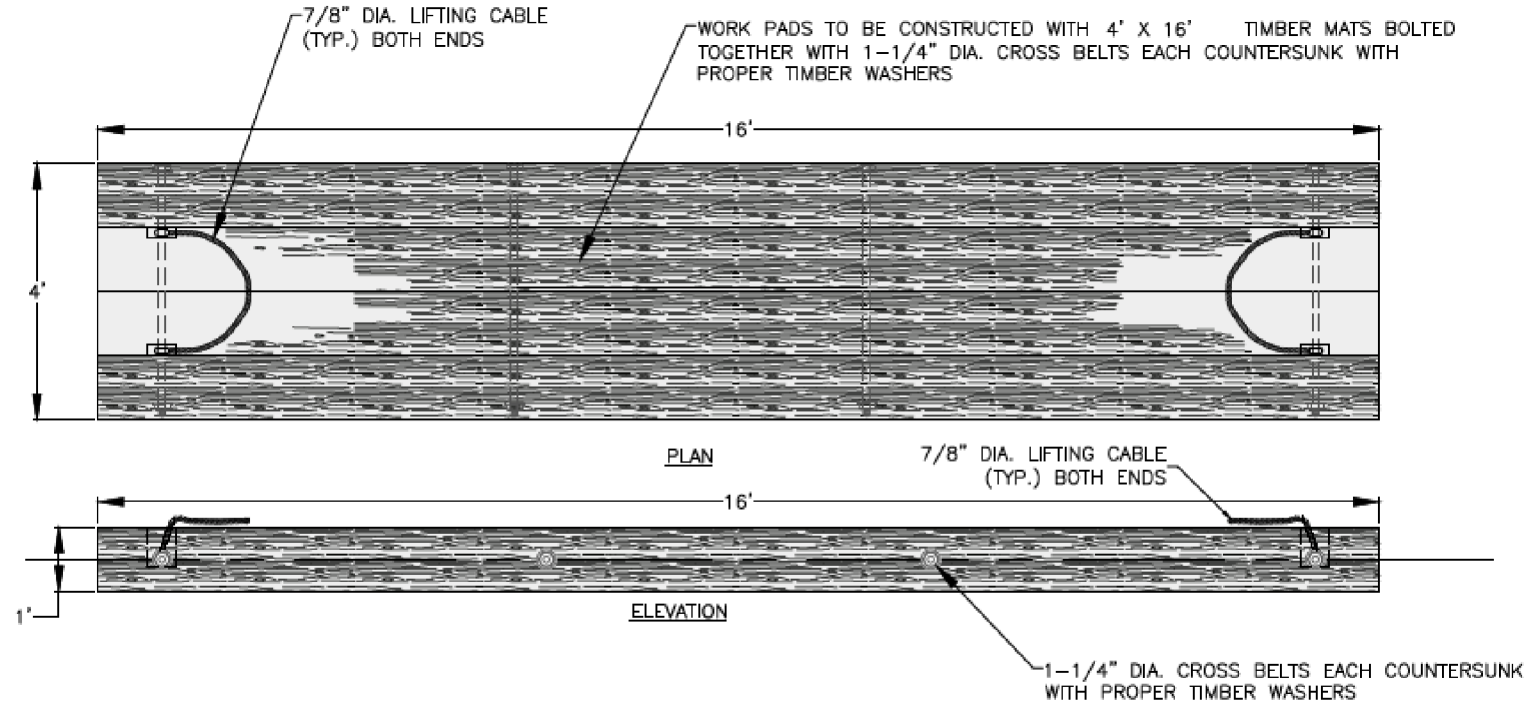
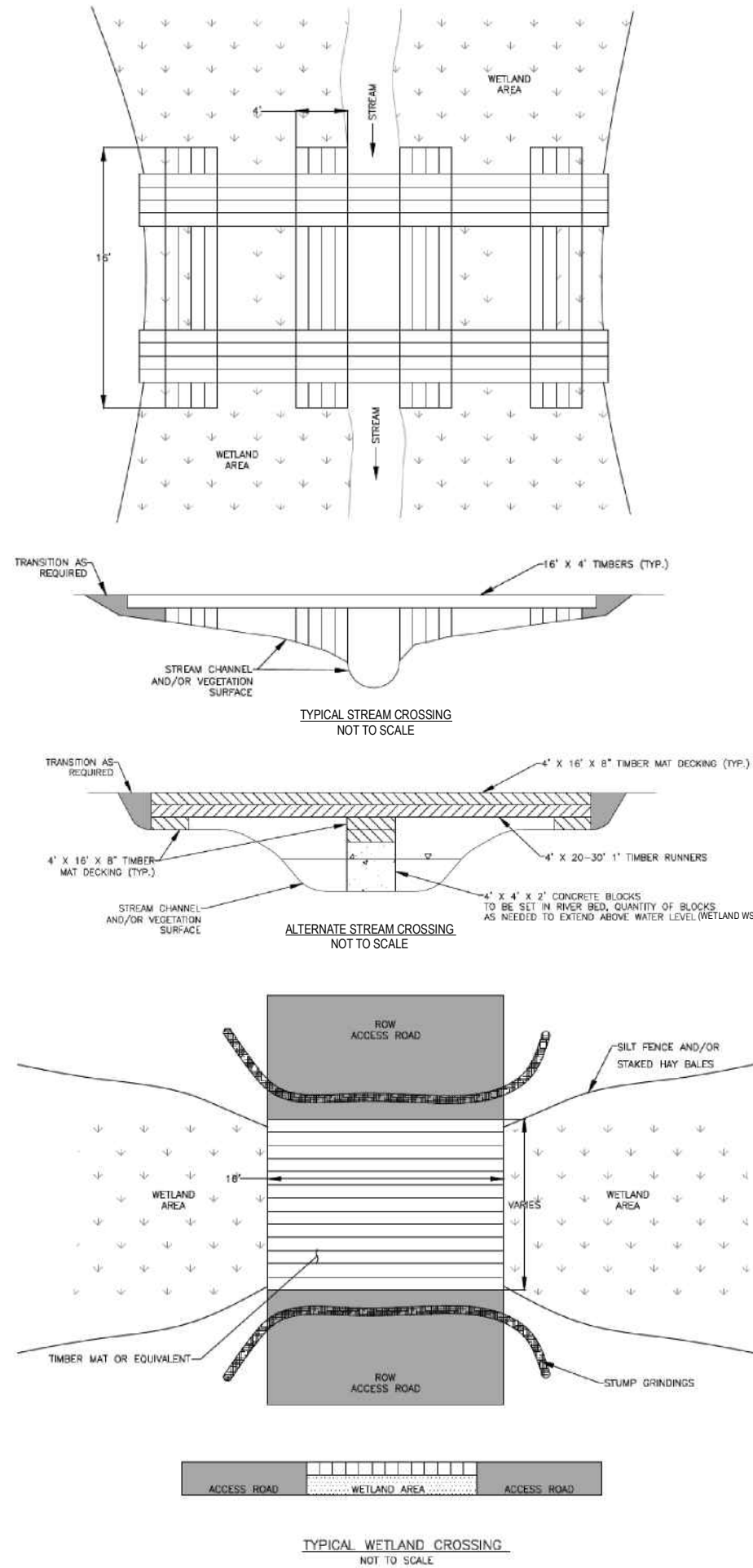
REPRESENT A PROPERTY BOUNDARY SURVEY.

REPRESENT A PROPERTY BOUNDARY SURVEY.

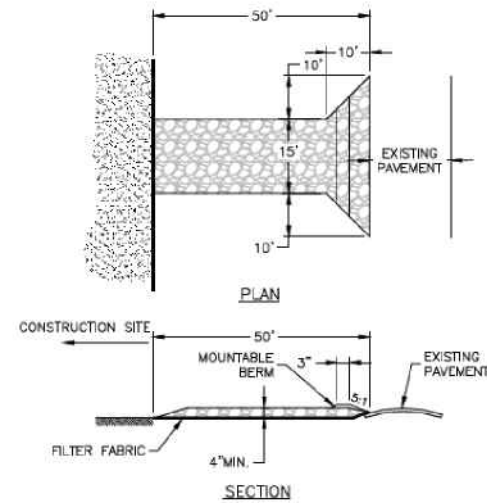
REPRESENT A PROPERTY BOUNDARY SURVEY.

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REPRESENT A PROPERTY BOUNDARY SURVEY.



TYPICAL TIMBER MAT DETAIL
NOT TO SCALE



TEMPORARY CONSTRUCTION ENTRANCE / EXIT
NOT TO SCALE

NOTES

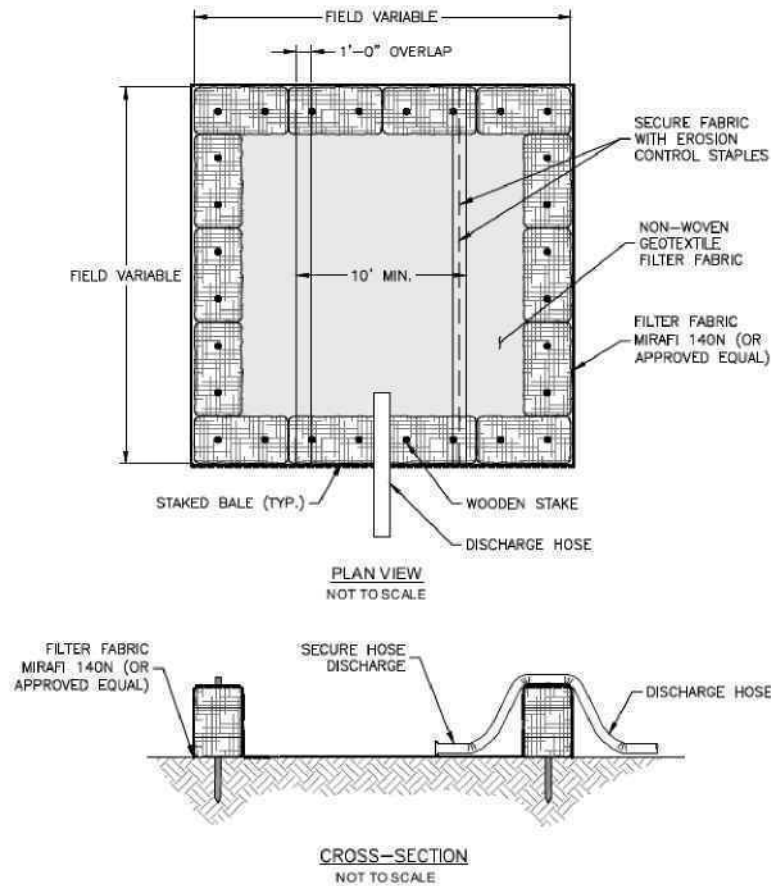
1. STONE SIZE - USE 2" STONE (MINIMUM) TO 6" STONE (MAXIMUM).
2. LENGTH - GREATER THAN OR EQUAL TO 50 FEET WITH THICKNESS OF 4".
3. WIDTH - FIFTEEN (15) FOOT TYP., BUT NOT LESS THAN FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS ENTRANCE, IF PIPING IS IMPRACTICAL, MOUNTABLE BERM SHALL BE PERMITTED.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING AND ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
6. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.
7. THE CLEAN STONE SHOULD BE INSTALLED OVER A GEOTEXTILE FABRIC. GEOTEXTILE FABRIC MAY BE OMITTED FOR PERMANENT CONSTRUCTION ENTRANCES-EXITS ON A CASE-BY-CASE BASIS WITH THE APPROVAL OF THE NATIONAL GRID ENVIRONMENTAL.
8. FOLLOWING CONSTRUCTION, THE CONSTRUCTION ENTRANCE / EXIT SHALL BE REMOVED AND THE AREA GRADED, SEEDED, AND MULCHED AS NEEDED. ENTRANCE / EXITS MAY REMAIN DEPENDING UPON FUTURE ACCESS NEEDS AND / OR PROJECT-SPECIFIC APPROVALS BUT REQUIRES APPROVALS FROM THE NATIONAL GRID ENVIRONMENTAL AND PROPERTY LEGAL.

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.

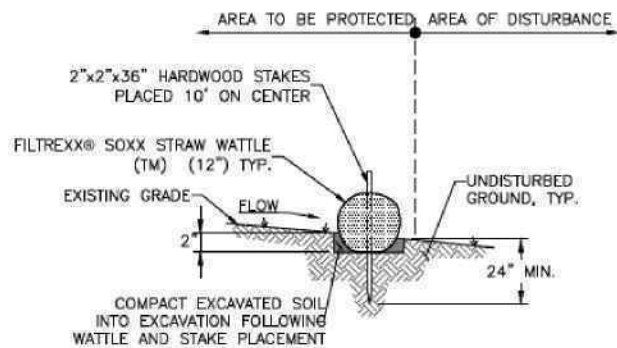
X178 TRANSMISSION LINE REBUILD
AND OPGW PROJECT
SUGAR HILL, EASTON, LINCOLN, AND WOODSTOCK, NEW HAMPSHIRE

BMP DETAILS

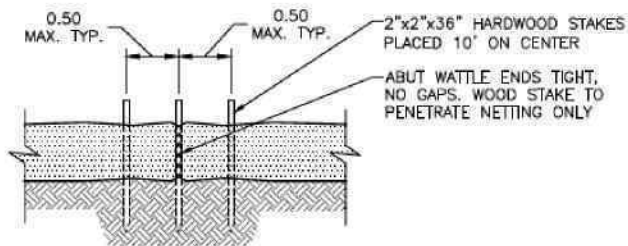
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: CEM	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S2
DESIGNED BY: HP	DRAWN BY: LEW	SCALE:	
DATE: 02/19/2024	PROJECT NO: 04.0191410.39	REVISION NO.	



DEWATERING BASIN DETAIL



STRAW WATTLE DETAIL
NOT TO SCALE



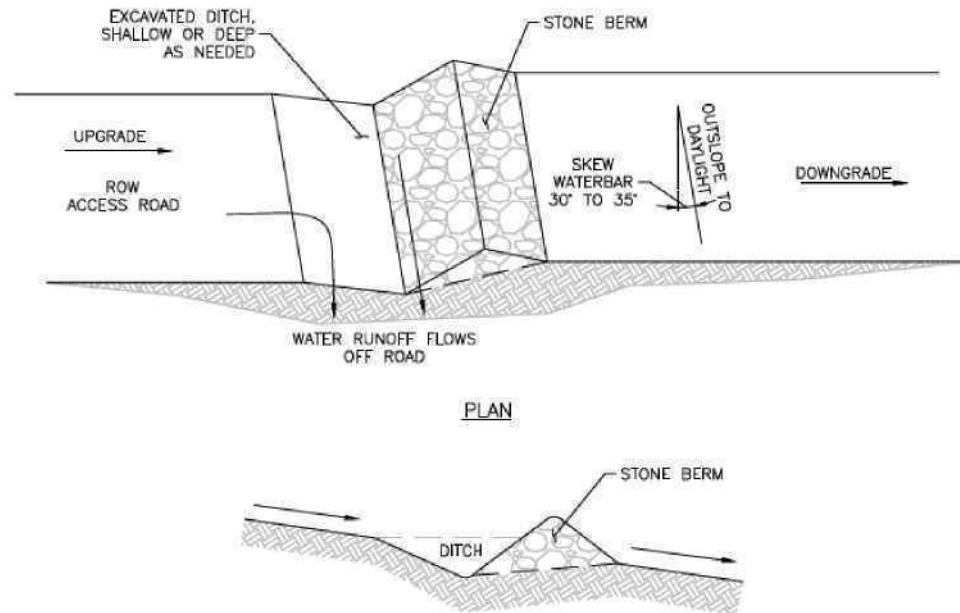
STRAW WATTLE OVERLAP
NOT TO SCALE

NOTES:

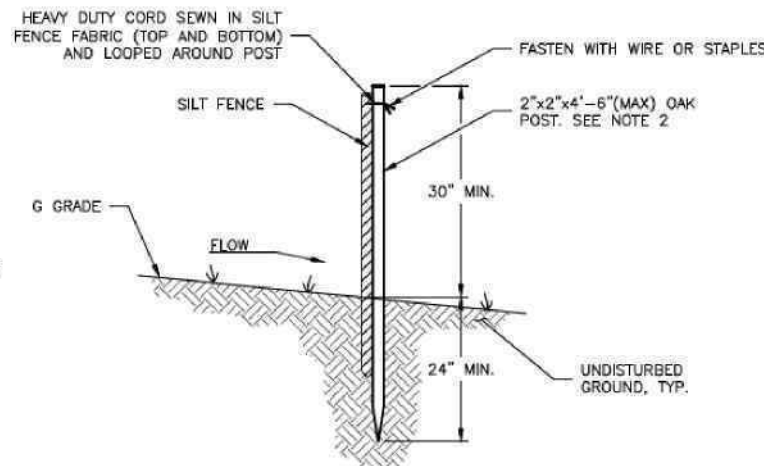
1. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENTS MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES.

NOTES:

1. DITCHES CAN BE DUG/CONSTRUCTED ALONG SIDE OF ACCESS ROAD, PER ENGINEER'S DESIGN.
2. WATER BAR OUTLET SHOULD DRAIN AT A 3% OUT-SLOPE ONTO LEVEL SPREADER, UNDISTURBED LITTER OR VEGETATION.



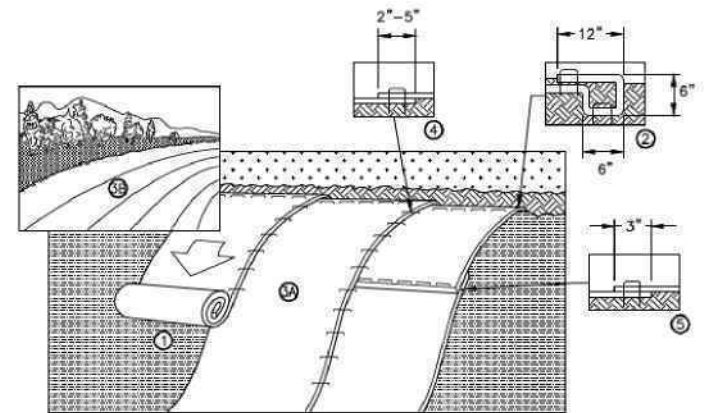
TYPICAL WATER BAR DETAIL
NOT TO SCALE



SILT FENCE DETAIL
NOT TO SCALE

NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HAMPSHIRE ENV-WQ 1506 STANDARDS.
2. SILT FENCE SHOULD BE INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STANDARD 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6"(MAX) O.C. IN WETLAND AREAS AND 4'-0"(MAX) O.C. IN WETLAND RAVINE, GULLY OR DROP OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x 4'-6"(MIN) POSTS PERMITTED FOR PREFABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



SLOPE INSTALLATION DETAIL OF EROSION CONTROL BLANKET
NOT TO SCALE

NOTES:

1. EROSION CONTROL BLANKET SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
2. STAKES/STAPLES SHOULD BE PLACED NO MORE THAN 3 FT. APART VERTICALLY AND 1 FT. APART HORIZONTALLY.
3. SLOPE SURFACES SHOULD BE FREE OF DEBRIS, INCLUDING STICKS, ROCKS AND OTHER OBSTRUCTIONS.
4. BLANKETS SHOULD BE ROLLED OUT LOOSELY AND STAKED/STAPLED TO MAINTAIN DIRECT SOIL CONTACT. DO NOT STRETCH THE BLANKETS.
5. DESIGNER/ENGINEER SHALL CHOOSE THE TYPE OF BLANKET OR MATTING DEPENDING ON SPECIFIC OBJECTIVES AND SITE CONDITIONS.

INSTALLATION NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15cm) DEEP x 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE(tm). WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2'-5" (5cm - 12.5cm) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE RECP's WIDTH.

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**X178 TRANSMISSION LINE REBUILD
AND OPGW PROJECT**
SUGAR HILL, EASTON, LINCOLN, AND WOODSTOCK, NEW HAMPSHIRE

BMP DETAILS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S3
DESIGNED BY: HP	DRAWN BY: LEW	SCALE:	
DATE: 11/17/2023	PROJECT NO. 04.0191410.39	REVISION NO.	

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NEW HAMPSHIRE FISH AND GAME AOT PERMIT CONDITIONS IN ACCORDANCE WITH ENV-WQ 1504.18 – WILDLIFE PROTECTION NOTES:

NHB22-3461 (WOODSTOCK), NHB22-3462 (LINCOLN), NHB22-3463 (EASTON), NHB22-3464 (SUAGR HILL)

NEW HAMPSHIRE FISH AND GAME PERMIT CONDITIONS:

1. WOOD TURTLES (STATE SPECIES OF SPECIAL CONCERN) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. SEE PLAN SHEET 4-5.
2. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE POSTED ON SITE AT ALL TIMES AND COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT.
3. TURTLES AND SNAKES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON. TURTLE NESTING SEASON OCCURS APPROXIMATELY MAY 15TH – JUNE 30TH. NESTING AREAS MAY INCLUDE WORK PADS AND ACCESS ROADS THAT ARE NOT HARD PACK GRAVEL AND OTHER SANDY/GRAVEL WORK AREAS. ALL TURTLE SPECIES NESTS ARE PROTECTED BY NH LAWS. BE AWARE OF THE POTENTIAL TO ENCOUNTER NESTING WILDLIFE IN THESE AREAS.
4. IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER) AND AVOIDED; THIS SHALL BE COMMUNICATED TO ALL PERSONNEL ONSITE. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHFG.
5. VERNAL POOLS AND POTENTIAL VERNAL POOLS (PVP) SHALL BE FLAGGED PRIOR TO WORK, AND IMPACTS SHALL BE AVOIDED WITH THE FOLLOWING EXCEPTIONS AS DESCRIBED IN THE TABLE EMBEDDED IN THE ATTACHED SCREENSHOT TITLED, "VERNAL POOL SUMMARY EVS X178":

1.WETLAND WS-75 AND L/ET-16 CONTAIN VERNAL POOLS WITHIN THE PROPOSED WORK PAD AREA FOR STRUCTURES 180 AND 269. THE WORK PADS MAY OVERLAP THESE VERNAL POOLS TO CONSTRUCT A SAFE WORK AREA. TEMPORARY TIMBER MATTING SHALL BE UTILIZED AND RESTORATION SHALL OCCUR FOLLOWING IMPACTS. IMPACTS TO THE VERNAL POOLS SHALL ONLY OCCUR DECEMBER 1 TO MARCH 1. WORK SHALL OCCUR UNDER FROZEN OR DRY CONDITIONS IF POSSIBLE. NHFG SHALL BE NOTIFIED PRIOR TO DISTURBANCE.
6. NO DISTURB VEGETATIVE BUFFERS OF 50' SHALL BE MAINTAINED AROUND VERNAL POOLS WHEREVER POSSIBLE. NHFG ACKNOWLEDGES THE FOLLOWING VERNAL POOL BUFFER IMPACTS AS DESCRIBED IN THE TABLE EMBEDDED IN THE ATTACHED SCREENSHOT TITLED, "VERNAL POOL SUMMARY EVS X178 ".

1.WETLANDS WS-64, WS-75,WS-117, L-73, L-66, L-42, L-41, L-40, L/ET-16, LW-1, ET-31, ET-37 CONTAIN VERNAL POOLS. TEMPORARY TIMBER MATTING WILL BE UTILIZED WITHIN 50-FT OF THESE VERNAL POOLS.
7. ALL MATTING WHICH WILL BE PLACED IN WATERBODIES DEEMED SUITABLE FOR HIBERNATING RARE TURTLES WILL BE PLACED PRIOR TO THE START OF THE INACTIVE SEASON (OCTOBER 16-MARCH 31) SO AS TO PREVENT ACCIDENTAL PLACEMENT ATOP HIBERNATING TURTLES. AREAS IDENTIFIED AS SUITABLE HIBERNATION HABITAT SHALL BE IDENTIFIED ON PLAN SHEETS AND PROVIDED TO NHFG AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK.
8. IMMEDIATELY PRIOR TO THE PLACEMENT OF MATTING IN WETLANDS DURING THE ACTIVE SEASON (APRIL 1-OCTOBER 15), THE AREAS SHALL BE CLEARED BY A TRAINED INDIVIDUAL. A TRAINED INDIVIDUAL SHALL BE DEFINED AS ANY CONTRACTOR WHO HAS GONE THROUGH PROJECT-SPECIES PROTECTION EDUCATION CONDUCTED BY THE QUALIFIED BIOLOGIST ON RARE WILDLIFE SPECIES AT THE SITE. CONTACT NHFG IF TURTLES IN MATTING AREAS ARE OBSERVED OR SUSPECTED.
9. FOR ALL WORK PADS, STAGING AREAS, MATTING, AND ACCESS ROADS, SEARCHES AND SWEEPS SHALL BE CONDUCTED BY TRAINED INDIVIDUALS IMMEDIATELY BEFORE THE START OF WORK AND MOVEMENT OF EQUIPMENT IN ORDER TO MINIMIZE THE CHANCE OF ANIMALS ENTERING AN AREA BETWEEN THE SWEEP AND WORK. A TRAINED INDIVIDUAL SHALL BE DEFINED AS ANY CONTRACTOR WHO HAS GONE THROUGH PROJECT-SPECIES PROTECTION EDUCATION CONDUCTED BY THE QUALIFIED BIOLOGIST ON RARE WILDLIFE SPECIES AT THE SITE.
10. ALL WORK ACTIVITIES SHALL BE RESTRICTED TO THE DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS, WITH NO EQUIPMENT OR MATERIALS STAGED OR STORED OUTSIDE OF THE DEFINED AREAS AS SHOWN ON PLAN SHEETS OR EQUIVALENT DOCUMENT.

1. MINOR FIELD CHANGES TO ACCESS ROADS AND WORK PADS INCLUDING: SHIFTING ACCESS FROM ONE SIDE OF THE RIGHT OF WAY TO THE OTHER, SHIFTING OF WORK PADS AND STAGING AREAS FORWARD OR BACKWARDS, BUT NOT INCREASING THE OVERALL SQUARE FOOTAGE OF THE WORK PADS OR STAGING AREAS, MAY BE CONSIDERED BASED ON LOCATION. NHFG SHALL BE NOTIFIED OF ANY PROPOSED CHANGES.
11. WORK, PULL PADS, AND ACCESS SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE.
12. WORK PADS SHALL BE REDUCED POST-CONSTRUCTION TO 30' X 60' AND RESTORED WITH A NATIVE VEGETATIVE SEED MIX.
13. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES;
14. ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION;
15. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE;
16. IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.

1. SITE OPERATORS OR TRAINED INDIVIDUALS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE AND IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
17. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

ADDITIONAL RECOMMENDATIONS:

1. SMOOTH GREEN SNAKES (STATE SPECIES OF SPECIAL CONCERN) OCCUR WITHIN THE VICINITY OF THE PROJECT SITE. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHOULD BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHOULD BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHOULD BE POSTED ON SITE AT ALL TIMES AND COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT. SEE PLAN SHEET 4-5.
2. NEW HAMPSHIRE FISH AND GAME RECOMMENDS THAT THE ABOVE CONSERVATION MEASURES ARE APPLIED TO ALL WORK THROUGHOUT THE LINE, INCLUDING IN THE TOWNS OF WOODSTOCK, LINCOLN, AND SUGAR HILL WHERE THERE WERE NO KNOWN OBSERVATIONS OF RARE SPECIES.


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.

X178-2 TRANSMISSION LINE REBUILD
AND OPGW PROJECT

SUGAR HILL, EASTON, LINCOLN, AND WOODSTOCK,
NEW HAMPSHIRE


NOTES

PREPARED BY:



GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:



PROJ MGR: LEW

REVIEWED BY: TLT

CHECKED BY: DMZ

DESIGNED BY: MJD

DRAWN BY: MJD

SCALE:

DATE: 11/06/2023

PROJECT NO. 04.0191410.39

REVISION NO.

SHEET

S4

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WOOD TURTLE (GLYPTEMYS INSCULPTA)

STATE SPECIES OF SPECIAL CONCERN



WOOD TURTLE IDENTIFICATION

1. NECK AND FORELIMBS ARE ORANGE.
2. CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WITH EACH LARGE SCUTE TAKING ON AN IRREGULAR PYRAMIDAL SHAPE.
3. ADULTS CAN BE 5-8 INCHES LONG.

SMOOTH GREEN SNAKE (LIOCHLOROPHIS VERNALIS)

SPECIES OF SPECIAL CONCERN



SMOOTH GREEN SNAKE IDENTIFICATION

1. A THIN, SLENDER BRIGHT-GREEN SNAKE MEASURING 10-20 INCHES
2. THE UNDERSIDE IS WHILE OR PALE YELLOW

*ALL PHOTOS AND IDENTIFICATION INFORMATION COURTESY OF NEW HAMPSHIRE FISH AND GAME DEPARTMENT.

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.

X178-2 TRANSMISSION LINE REBUILD
AND OPGW PROJECT
SUGAR HILL, EASTON, LINCOLN, AND WOODSTOCK,
NEW HAMPSHIRE

WILDLIFE NOTES



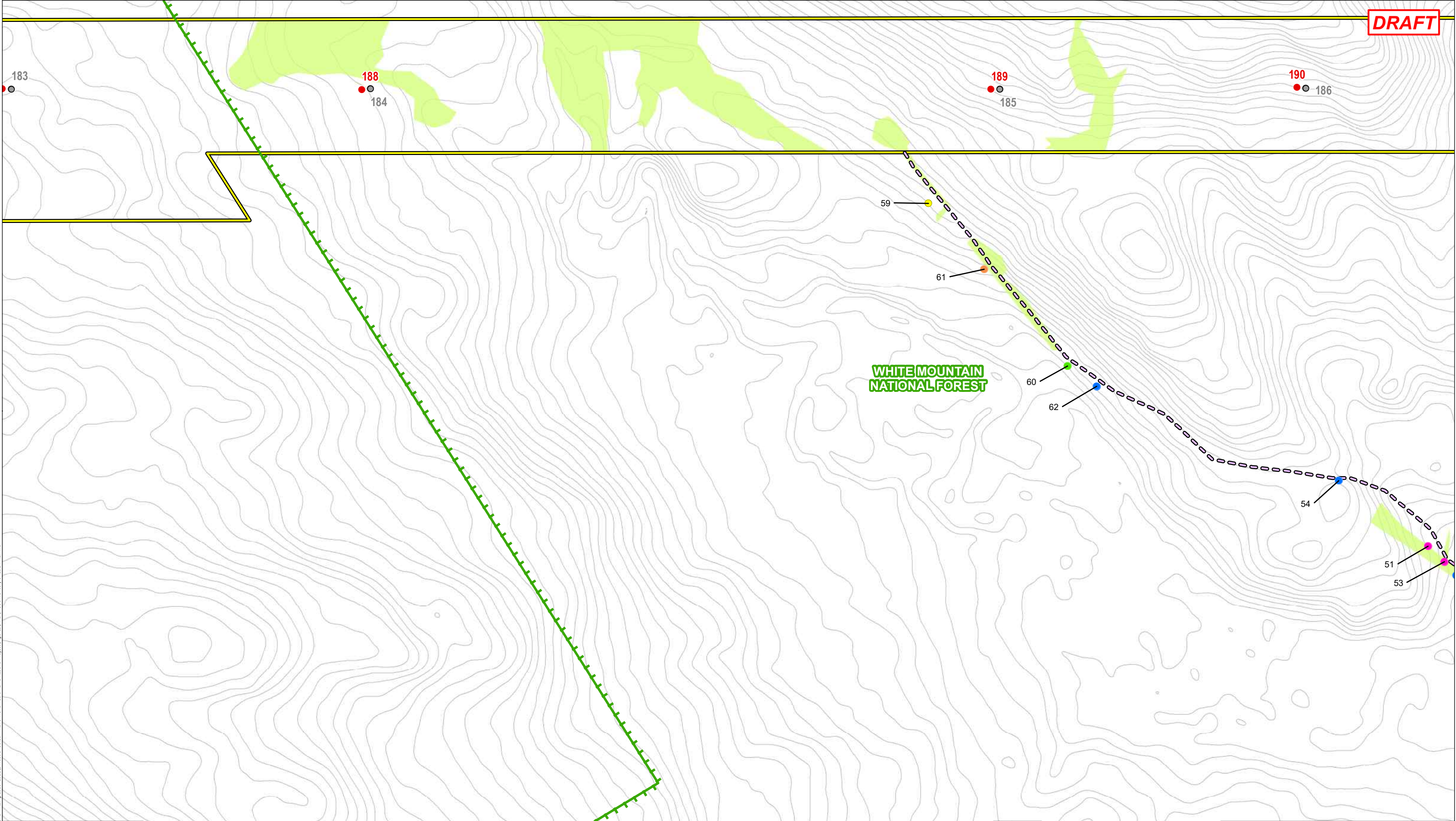
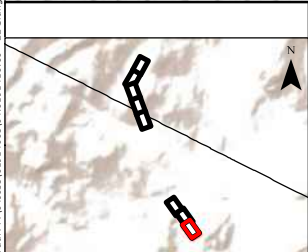
PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: 	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S5
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 11/06/2023	PROJECT NO. 04.0191410.39	REVISION NO.	

Figure 3 – Tree Inventory



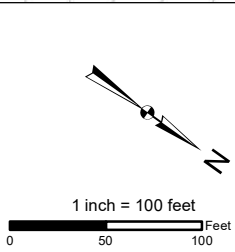
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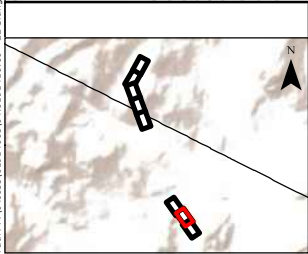


TREE SPECIES		POTENTIAL OFF-ROW ACCESS		PROPOSED STRUCTURE	
AMERICAN BEECH	RED SPRUCE	COOKED PIKE SPUR A	RED SPRUCE	EXISTING STRUCTURE - NO WORK	
BALSAM FIR	STRIPED MAPLE	COOKED PIKE SPUR B	SUGAR MAPLE	STRUCTURE TO BE REMOVED	
EASTERN HEMLOCK	WHITE ASH	HALFTRACK TRAIL SNOWMOBILE TRAIL	NO NAME TRAIL	TOWN BOUNDARY	
QUAKING ASPEN	WHITE BIRCH	PRIMARY 156 SNOWMOBILE TRAIL	WHITE MOUNTAIN NATIONAL FOREST BOUNDARY	2-FT CONTOURS	
RED MAPLE	YELLOW BIRCH				

NOTES:
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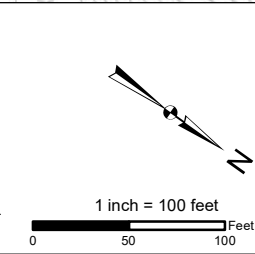
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				X178 Transmission Line Structure Rebuild Project	
				Woodstock, NH	MAP SHEET
				Date: May, 2024	1 OF 8
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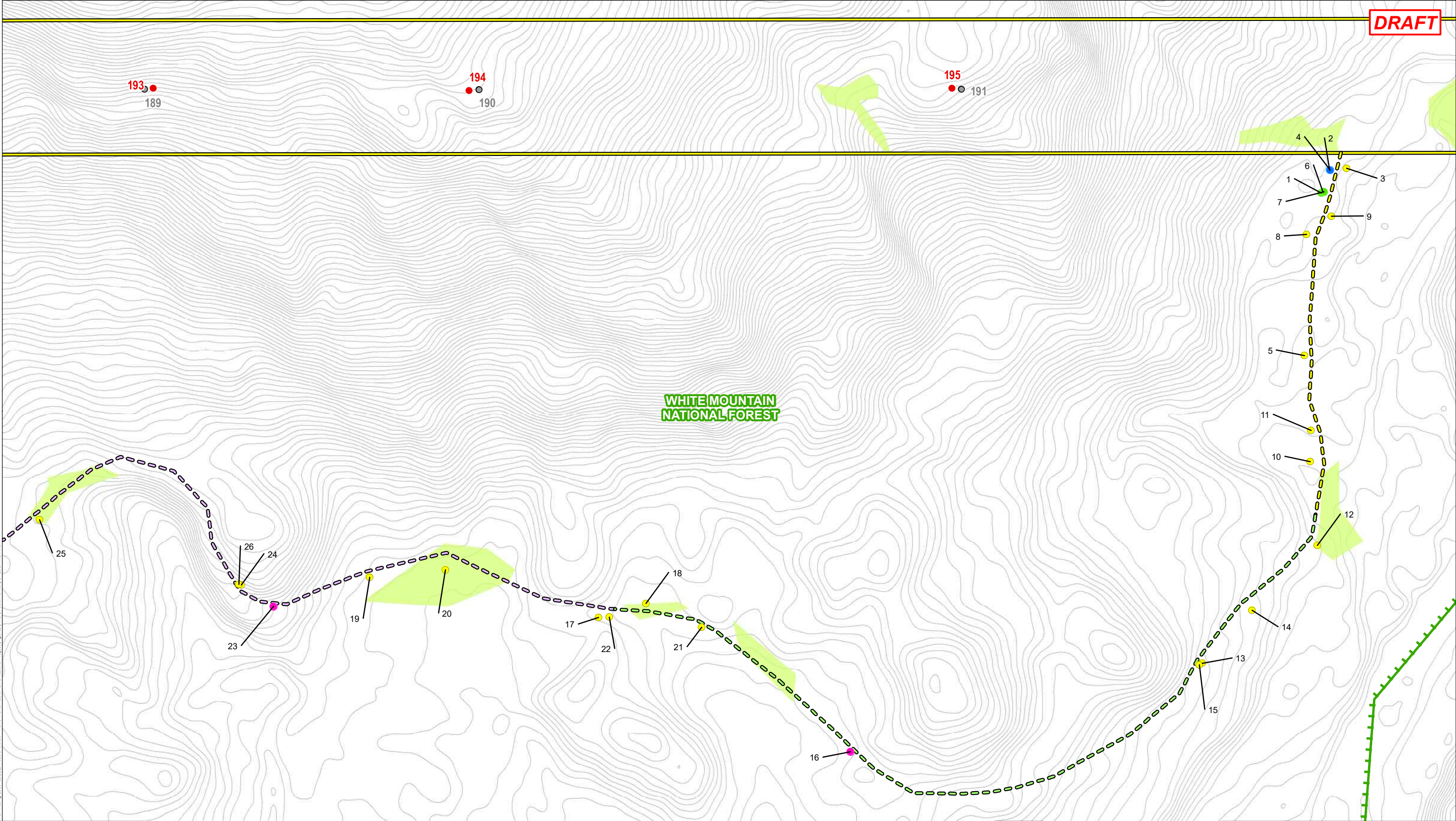
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EASTERN HEMLOCK	SUGAR MAPLE	HALFTRACK TRAIL SNOWMOBILE TRAIL	SUGAR MAPLE	TOWN BOUNDARY	
QUAKING ASPEN	WHITE ASH	NO NAME TRAIL	WHITE ASH	TRANSMISSION LINE ROW	
RED MAPLE	WHITE BIRCH	PRIMARY 156 SNOWMOBILE TRAIL	WHITE BIRCH	FIELD DELINEATED WETLAND	
	YELLOW BIRCH		YELLOW BIRCH	WHITE MOUNTAIN NATIONAL FOREST BOUNDARY	
				2-FT CONTOURS	

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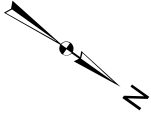
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- TREE SPECIES**

 - AMERICAN BEECH
 - BALSAM FIR
 - EASTERN HEMLOCK
 - QUAKING ASPEN
 - RED MAPLE
- RED SPRUCE
 - STRIPED MAPLE
 - SUGAR MAPLE
 - WHITE ASH
 - WHITE BIRCH
 - YELLOW BIRCH
- POTENTIAL OFF-ROW ACCESS**

 - COOKED PIKE SPUR A
 - COOKED PIKE SPUR B
 - HALFTRACK TRAIL SNOWMOBILE TRAIL
 - NO NAME TRAIL
 - PRIMARY 156 SNOWMOBILE TRAIL
- PROPOSED STRUCTURE
 - EXISTING STRUCTURE - NO WORK
 - STRUCTURE TO BE REMOVED
 - TOWN BOUNDARY
 - TRANSMISSION LINE ROW
 - FIELD DELINEATED WETLAND
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1 inch = 100 feet
0 50 100 Feet

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X178 Transmission Line Structure Rebuild Project

Woodstock, NH

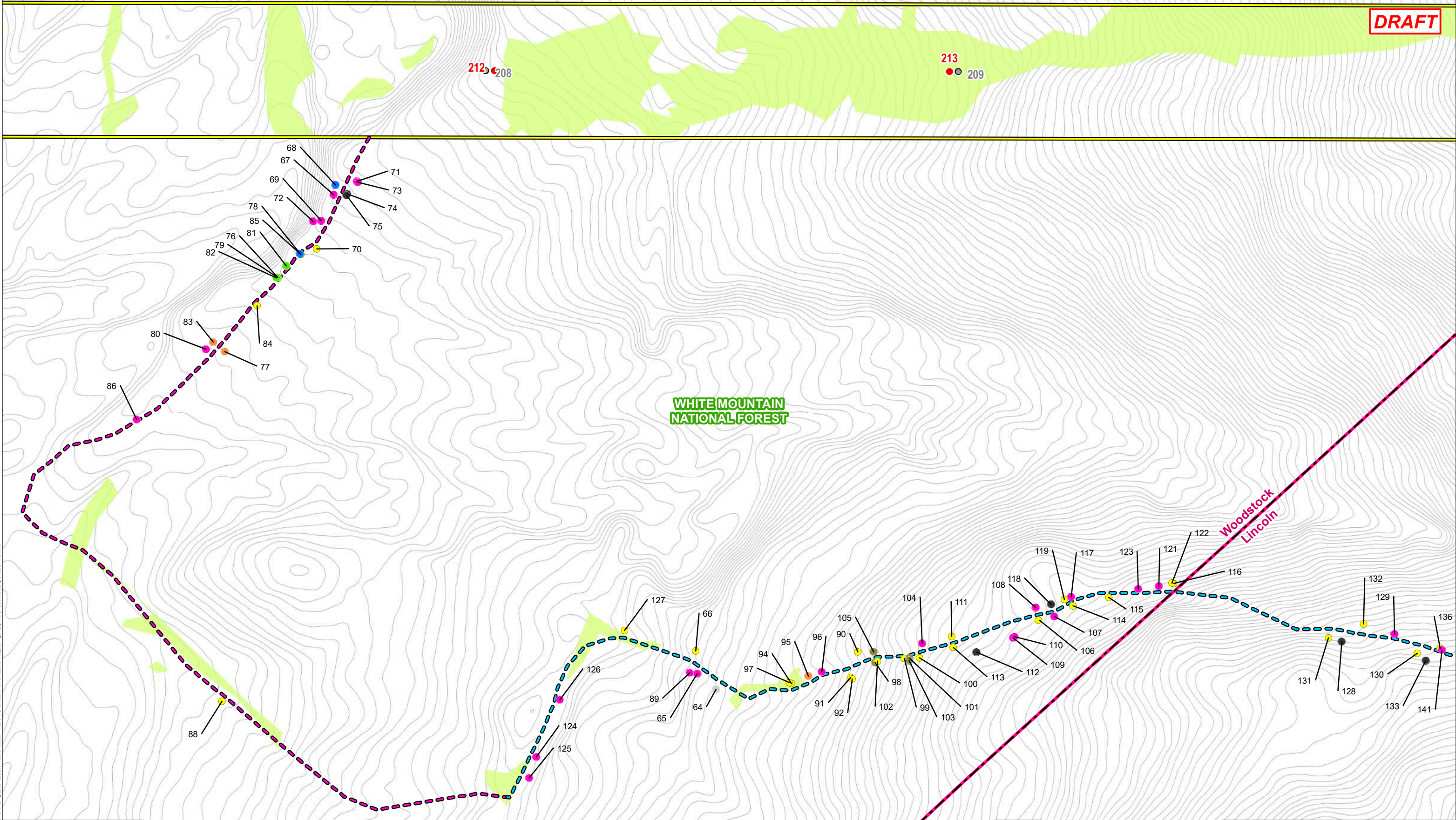
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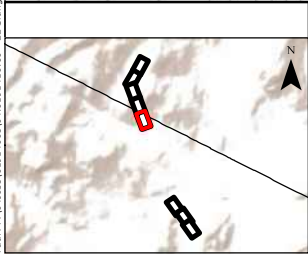
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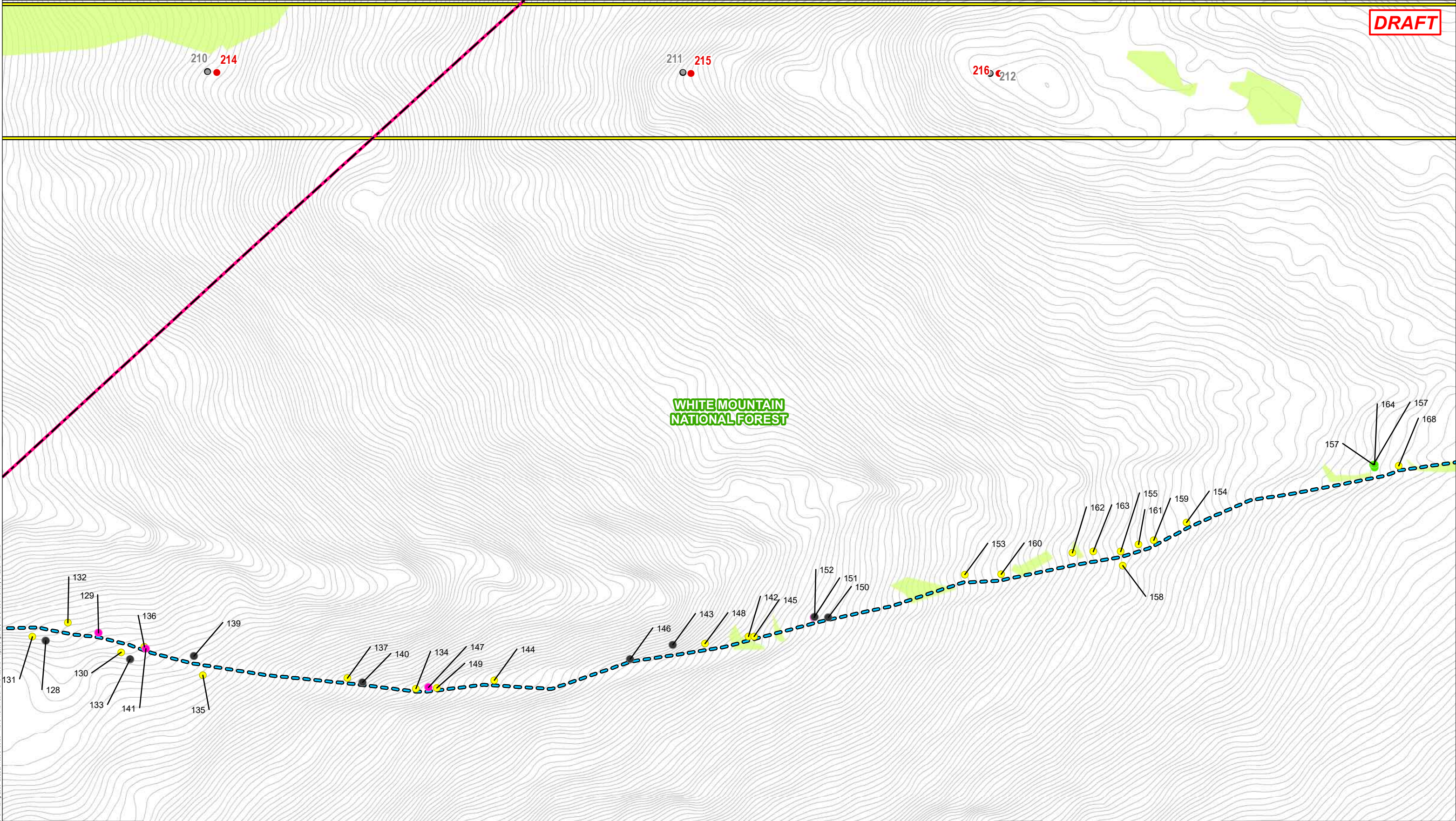
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RED MAPLE	WHITE BIRCH	PRIMARY 156 SNOWMOBILE TRAIL	TRANSMISSION LINE ROW
	YELLOW BIRCH		FIELD DELINEATED WETLAND
			WHITE MOUNTAIN NATIONAL FOREST BOUNDARY
			2-FT CONTOURS

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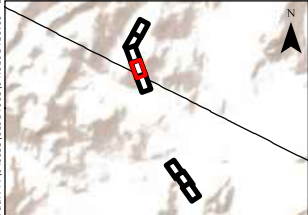
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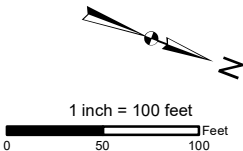
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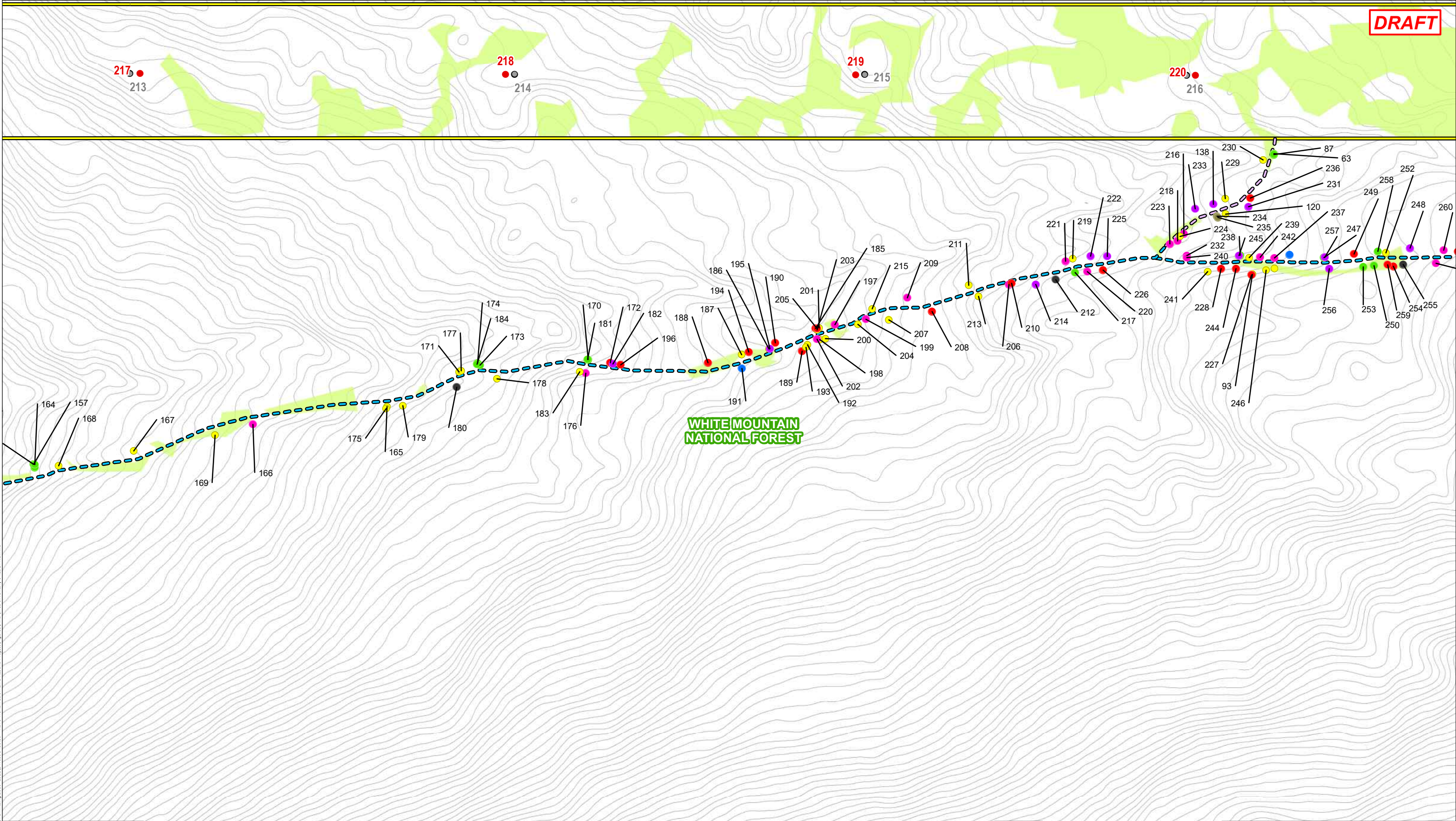
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| TREE SPECIES | POTENTIAL OFF-ROW ACCESS |
| ● RED SPRUCE | — COOKED PIKE SPUR A |
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| ● RED MAPLE | ● YELLOW BIRCH |
| ● STRIPED MAPLE | |
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- | |
|--|
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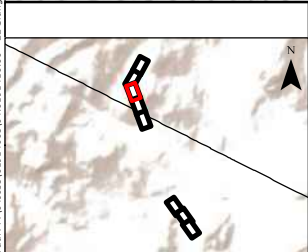
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			Woodstock/Lincoln, NH	MAP SHEET
			Date: May, 2024	5 OF 8
NO.	DATE	REVISIONS	04.0191410.39	



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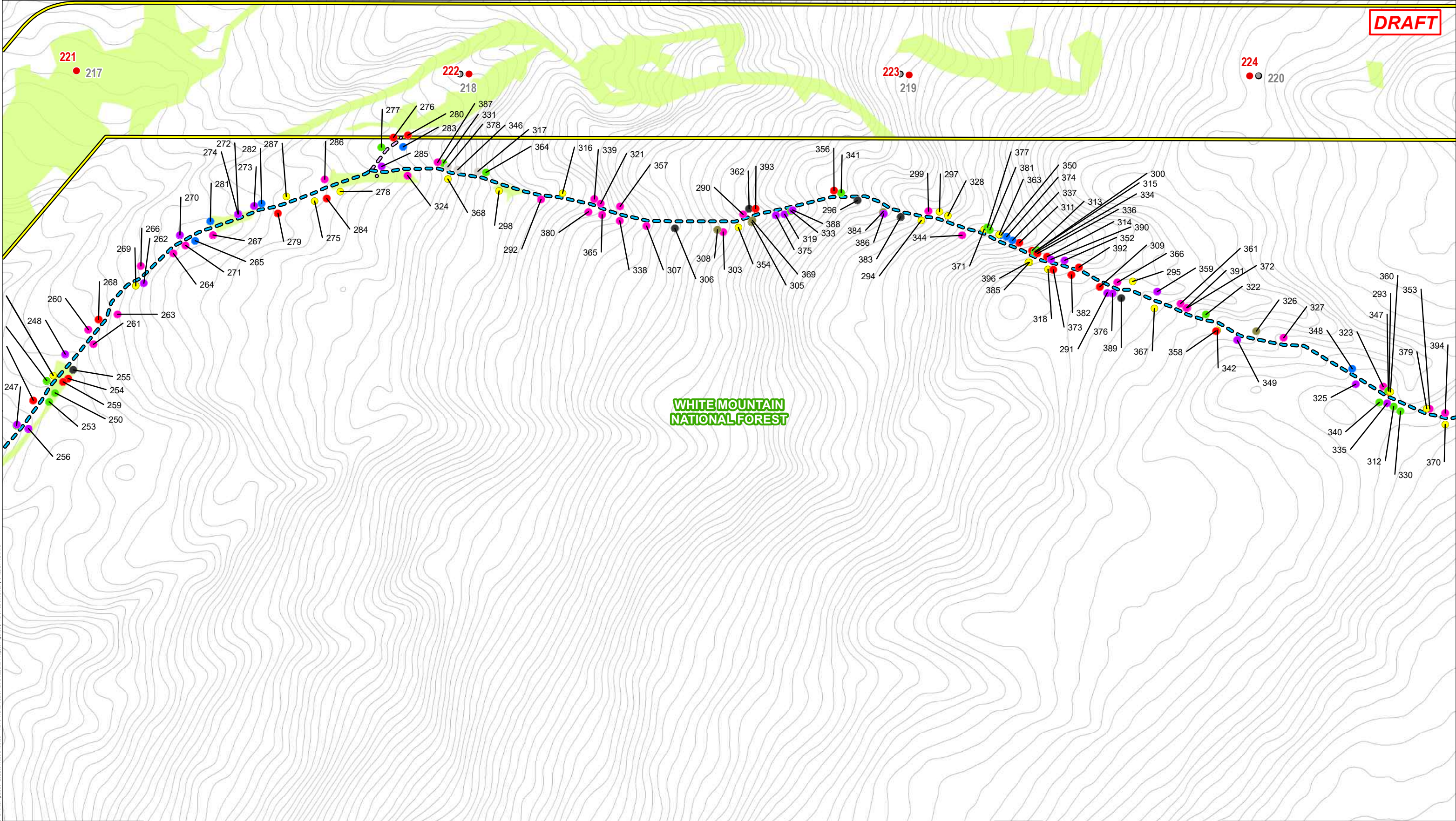
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4. FIELD DELINEATED WETLANDS AND TREES WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. WITHIN APPROXIMATELY 20 FEET OF LABELED TRAILS IN ACCORDANCE WITH THE 1987 ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL IN JULY AND AUGUST 2023.
5. GPS LOCATED POTENTIAL OFF ROW ACCESS WAS GPS LOCATED BY GZA IN APRIL 2024 USING A HAND HELD EOS ARROW GNSS RECEIVER.
6. TREE INVENTORY COMPLETED BY GZA WITHIN 10 FEET OF THE CENTERLINE OF THE TRAIL. LIVE TREES GREATER THAN 3-INCHES IN DBH WERE IDENTIFIED TO SPECIES AND TREE DIAMETER WAS MEASURED TO THE NEAREST INCH.

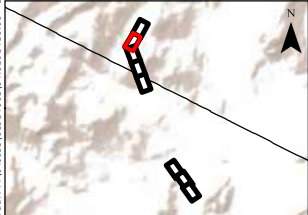
		This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.	
NO.	DATE	REVISIONS	

EVERSOURCE ENERGY	
X178 Transmission Line Structure Rebuild Project	
Lincoln, NH	MAP SHEET
Date: May, 2024	6 OF 8
04.0191410.39	

DRAFT



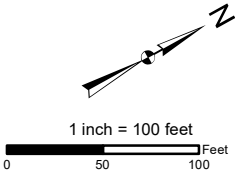
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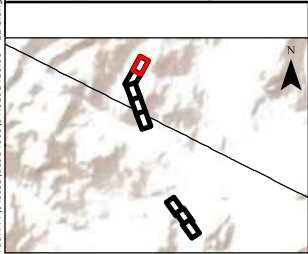
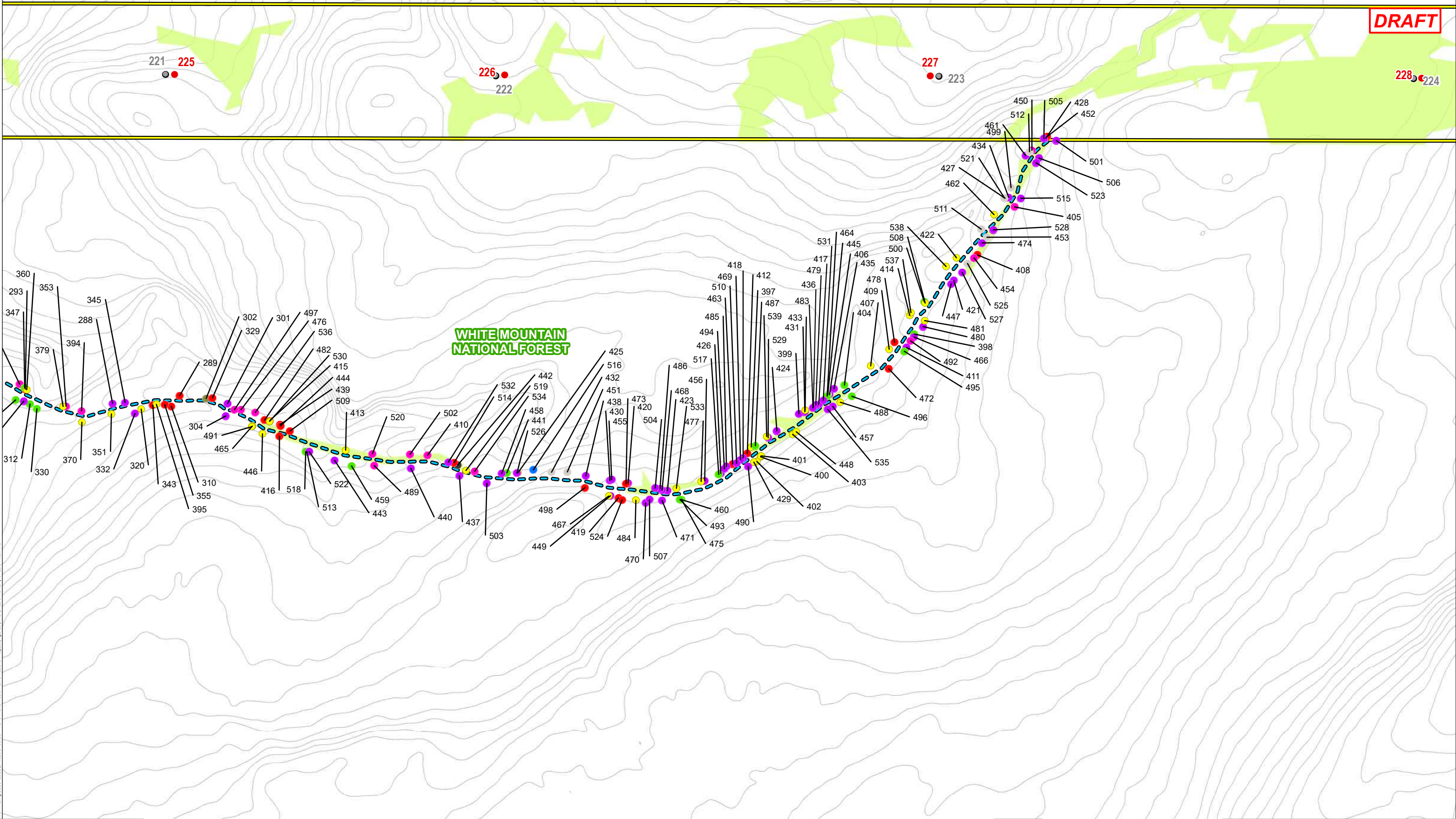
- | | |
|---------------------|---|
| TREE SPECIES | POTENTIAL OFF-ROW ACCESS |
| ● AMERICAN BEECH | ● COOKED PIKE SPUR A |
| ● BALSAM FIR | ● COOKED PIKE SPUR B |
| ● EASTERN HEMLOCK | ● HALFTRACK TRAIL SNOWMOBILE TRAIL |
| ● QUAKING ASPEN | ● NO NAME TRAIL |
| ● RED MAPLE | ● PRIMARY 156 SNOWMOBILE TRAIL |
| ● RED SPRUCE | ● STRIPED MAPLE |
| ● SUGAR MAPLE | ● WHITE ASH |
| ● WHITE BIRCH | ● WHITE MOUNTAIN NATIONAL FOREST BOUNDARY |
| ● YELLOW BIRCH | ● 2-FT CONTOURS |

NOTES:

1. PROPOSED STRUCTURES, EXISTING STRUCTURES, STRUCTURES TO BE REMOVED, AND TRANSMISSION LINE DATA LAYERS WERE OBTAINED FROM EVERSOURCE ENERGY.
2. 2FT CONTOUR DATA LAYERS WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
3. WHITE MOUNTAIN NATIONAL FOREST BOUNDARY WAS OBTAINED FROM THE USDA FOREST SERVICE FSGEODATA CLEARINGHOUSE.
4. FIELD DELINEATED WETLANDS AND TREES WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. WITHIN APPROXIMATELY 20 FEET OF LABELED TRAILS IN ACCORDANCE WITH THE 1987 AMRY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL IN JULY AND AUGUST 2023.
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6. TREE INVENTORY COMPLETED BY GZA WITHIN 10 FEET OF THE CENTERLINE OF THE TRAIL. LIVE TREES GREATER THAN 3-INCHES IN DBH WERE IDENTIFIED TO SPECIES AND TREE DIAMETER WAS MEASURED TO THE NEAREST INCH.



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		EVERSOURCE ENERGY	
		X178 Transmission Line Structure Rebuild Project	
		Lincoln, NH	MAP SHEET
		Date: May, 2024	7 OF 8
NO.	DATE	REVISIONS	04.0191410.39



TREE SPECIES		POTENTIAL OFF-ROW ACCESS		PROPOSED STRUCTURE	
AMERICAN BEECH	RED SPRUCE	COOKED PIKE SPUR A	RED SPRUCE	EXISTING STRUCTURE - NO WORK	
BALSAM FIR	STRIPED MAPLE	COOKED PIKE SPUR B	SUGAR MAPLE	STRUCTURE TO BE REMOVED	
EASTERN HEMLOCK	WHITE ASH	HALFTRACK TRAIL SNOWMOBILE TRAIL	WHITE BIRCH	TOWN BOUNDARY	
QUAKING ASPEN	WHITE BIRCH	NO NAME TRAIL	YELLOW BIRCH	TRANSMISSION LINE ROW	
RED MAPLE		PRIMARY 156 SNOWMOBILE TRAIL		FIELD DELINEATED WETLAND	
				WHITE MOUNTAIN NATIONAL FOREST BOUNDARY	
				2-FT CONTOURS	

NOTES:

1. PROPOSED STRUCTURES, EXISTING STRUCTURES, STRUCTURES TO BE REMOVED, AND TRANSMISSION LINE DATA LAYERS WERE OBTAINED FROM EVERSOURCE ENERGY.
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1 inch = 100 feet

0 50 100 Feet

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				X178 Transmission Line Structure Rebuild Project	
				Lincoln, NH	MAP SHEET
				Date: May, 2024	8 OF 8
NO.	DATE	REVISIONS		04.0191410.39	



NO NAME TRAIL - CROOKED PIKE		
CODE #	TREE SPECIES	DBH (INCH)
1	Red Maple	9"
2	Quaking Aspen	9"
3	Yellow Birch	3"
4	Eastern Hemlock	3"
5	Yellow Birch	3"
6	Red Maple	9"
7	Red Maple	6"
8	Yellow Birch	3"
9	Yellow Birch	4"
10	Yellow Birch	5"
11	Yellow Birch	4"
12	Yellow Birch	3"
13	Yellow Birch	3"
14	Yellow Birch	3"
15	Yellow Birch	4"
16	American Beech	3"
17	Yellow Birch	3"
18	Yellow Birch	3"
19	Yellow Birch	6"
20	Yellow Birch	6"
21	Yellow Birch	10"
22	Yellow Birch	3"
23	American Beech	3"
24	Yellow Birch	6"
25	Yellow Birch	5"
26	Yellow Birch	3"
27	Yellow Birch	6"
28	Red Maple	10"
29	Eastern Hemlock	7"
30	Eastern Hemlock	8"
31	Red Maple	5"

NO NAME TRAIL - CROOKED PIKE		
CODE #	TREE SPECIES	DBH (INCH)
32	Eastern Hemlock	6"
33	American Beech	3"
34	Eastern Hemlock	4"
35	American Beech	5"
36	Eastern Hemlock	6"
37	Yellow Birch	5"
38	American Beech	5"
39	American Beech	3"
40	Yellow Birch	11"
41	Yellow Birch	10"
42	Yellow Birch	11"
43	Red Maple	12"
44	Eastern Hemlock	8"
45	Eastern Hemlock	7"
46	Eastern Hemlock	5"
47	American Beech	4"
48	Eastern Hemlock	4"
49	Eastern Hemlock	6"
50	American Beech	5"
51	American Beech	3"
52	Eastern Hemlock	5"
53	American Beech	3"
54	Eastern Hemlock	3"
55	Eastern Hemlock	6"
56	American Beech	3"
57	Eastern Hemlock	9"
58	Eastern Hemlock	4"
59	Yellow Birch	3"
60	Red Maple	12"
61	White Ash	18"
62	Eastern Hemlock	10"

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.

X178 TRANSMISSION LINE
STRUCTURE REBUILD PROJECT
WOODSTOCK, NEW HAMPSHIRE

TREE SPECIES INVENTORY KEY

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: 	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S1
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 05/02/2024	PROJECT NO. 04.0191410.39	REVISION NO.	

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
63	Red Maple	5"
64	White Birch	15"
65	American Beech	9"
66	Yellow Birch	24"
67	American Beech	12"
68	Eastern Hemlock	12"
69	American Beech	12"
70	Yellow Birch	16"
71	American Beech	10"
72	American Beech	8"
73	American Beech	12"
74	Sugar Maple	12"
75	Sugar Maple	12"
76	Red Maple	8"
77	White Ash	11"
78	Yellow Birch	20"
79	Red Maple	8"
80	American Beech	7"
81	Red Maple	15"
82	Red Maple	8"
83	White Ash	7"
84	Yellow Birch	11"
85	Eastern Hemlock	10"
86	American Beech	12"
87	Red Maple	3"
88	Yellow Birch	12"
89	American Beech	13"
90	Yellow Birch	7"
91	Yellow Birch	3"
92	Yellow Birch	4"
93	Yellow Birch	6"
94	Yellow Birch	3"
95	White Ash	3"
96	American Beech	4"
97	Yellow Birch	3"
98	Striped Maple	4"
99	Yellow Birch	5"
100	Yellow Birch	3"
101	Striped Maple	3"
102	Yellow Birch	3"
103	Striped Maple	4"
104	American Beech	10"
105	Striped Maple	6"
106	Yellow Birch	4"
107	American Beech	4"
108	American Beech	11"
109	American Beech	7"
110	American Beech	13"
111	Yellow Birch	12"
112	Sugar Maple	15"

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
113	Yellow Birch	13"
114	Yellow Birch	3"
115	Yellow Birch	5"
116	Yellow Birch	3"
117	American Beech	6"
118	Sugar Maple	6"
119	Yellow Birch	9"
120	Yellow Birch	9"
121	American Beech	8"
122	Yellow Birch	10"
123	American Beech	4"
124	American Beech	5"
125	American Beech	5"
126	American Beech	5"
127	Yellow Birch	6"
128	Sugar Maple	5"
129	American Beech	11"
130	Yellow Birch	11"
131	Yellow Birch	15"
132	Yellow Birch	17"
133	Sugar Maple	4"
134	Yellow Birch	8"
135	Yellow Birch	14"
136	Yellow Birch	17"
137	Yellow Birch	4"
138	Balsam Fir	10"
139	Sugar Maple	5"
140	Sugar Maple	3"
141	American Beech	8"
142	Yellow Birch	9"
143	Sugar Maple	12"
144	Yellow Birch	10"
145	Yellow Birch	19"
146	Sugar Maple	10"
147	American Beech	10"
148	Yellow Birch	17"
149	Yellow Birch	10"
150	Sugar Maple	12"
151	American Beech	3"
152	Sugar Maple	20"
153	Yellow Birch	6"
154	Yellow Birch	4"
155	Yellow Birch	3"
156	Red Maple	11"
157	Red Maple	8"
158	Yellow Birch	5"
159	Yellow Birch	5"
160	Yellow Birch	11"
161	Yellow Birch	12"
162	Yellow Birch	12"

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
163	Yellow Birch	4"
164	Red Maple	8"
165	Yellow Birch	12"
166	American Beech	5"
167	Yellow Birch	14"
168	Yellow Birch	14"
169	Yellow Birch	10"
170	Red Maple	14"
171	Yellow Birch	10"
172	Red Spruce	5"
173	Red Maple	14"
174	Red Maple	4"
175	Yellow Birch	19"
176	American Beech	4"
177	Yellow Birch	10"
178	Yellow Birch	12"
179	Yellow Birch	6"
180	Sugar Maple	15"
181	Red Maple	14"
182	Balsam Fir	4"
183	Yellow Birch	6"
184	Red Maple	4"
185	Red Spruce	3"
186	Yellow Birch	11"
187	Yellow Birch	10"
188	Red Spruce	4"
189	Red Spruce	3"
190	Red Spruce	3"
191	Eastern Hemlock	12"
192	Yellow Birch	6"
193	Yellow Birch	15"
194	Red Spruce	3"
195	Balsam Fir	4"
196	Red Spruce	5"
197	American Beech	12"
198	Yellow Birch	3"
199	American Beech	3"
200	Yellow Birch	5"
201	Yellow Birch	4"
202	American Beech	3"
203	Yellow Birch	10"
204	Yellow Birch	3"
205	Red Spruce	3"
206	American Beech	3"
207	Yellow Birch	4"
208	Red Spruce	3"
209	American Beech	4"
210	Red Spruce	3"
211	Yellow Birch	5"
212	Sugar Maple	4"

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X178 TRANSMISSION LINE
STRUCTURE REBUILD PROJECT
WOODSTOCK, NEW HAMPSHIRE

TREE SPECIES INVENTORY KEY



PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S2
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 05/02/2024	PROJECT NO: 04.0191410.39	REVISION NO:	

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
213	Yellow Birch	6"
214	Balsam Fir	4"
215	Yellow Birch	4"
216	American Beech	4"
217	Red Maple	16"
218	American Beech	3"
219	Yellow Birch	6"
220	American Beech	10"
221	American Beech	4"
222	Balsam Fir	10"
223	American Beech	3"
224	Yellow Birch	6"
225	Balsam Fir	12"
226	Red Spruce	3"
227	Red Spruce	4"
228	Red Spruce	4"
229	Yellow Birch	4"
230	Yellow Birch	5"
231	Balsam Fir	4"
232	American Beech	5"
233	Balsam Fir	7"
234	Striped Maple	3"
235	Striped Maple	3"
236	Red Spruce	4"
237	American Beech	5"
238	Red Maple	8"
239	Yellow Birch	10"
240	American Beech	7"
241	Yellow Birch	4"
242	American Beech	3"
243	Yellow Birch	5"
244	Red Spruce	5"
245	Balsam Fir	10"
246	Yellow Birch	3"
247	Red Maple	20"
248	Balsam Fir	5"
249	Red Spruce	3"
250	Red Maple	7"
251	Eastern Hemlock	4"
252	Yellow Birch	3"
253	Red Maple	9"
254	Red Spruce	3"
255	Sugar Maple	3"
256	Balsam Fir	4"
257	Balsam Fir	4"
258	Red Maple	16"
259	Red Spruce	3"
260	American Beech	3"
261	American Beech	7"
262	Balsam Fir	4"



POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
263	American Beech	4"
264	American Beech	10"
265	Eastern Hemlock	6"
266	American Beech	4"
267	American Beech	5"
268	Red Spruce	3"
269	Yellow Birch	9"
270	Balsam Fir	7"
271	American Beech	10"
272	Balsam Fir	4"
273	Balsam Fir	4"
274	Balsam Fir	4"
275	Yellow Birch	7"
276	Red Spruce	3"
277	Red Maple	8"
278	Yellow Birch	4"
279	Red Spruce	5"
280	Red Spruce	4"
281	Eastern Hemlock	3"
282	Eastern Hemlock	5"
283	Eastern Hemlock	3"
284	Red Spruce	3"
285	Balsam Fir	12"
286	American Beech	4"
287	Yellow Birch	7"
288	Balsam Fir	8"
289	Red Spruce	4"
290	American Beech	7"
291	Balsam Fir	3"
292	American Beech	6"
293	Red Spruce	3"
294	Yellow Birch	5"
295	Yellow Birch	12"
296	Sugar Maple	5"
297	Yellow Birch	8"
298	Yellow Birch	8"
299	American Beech	3"
300	Red Maple	14"
301	Balsam Fir	4"
302	Striped Maple	4"
303	American Beech	5"
304	Balsam Fir	3"
305	Striped Maple	4"
306	Sugar Maple	16"
307	American Beech	4"
308	Striped Maple	3"
309	Red Spruce	3"
310	Red Spruce	9"
311	Red Spruce	3"
312	Red Maple	10"

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
313	Red Spruce	4"
314	Red Spruce	4"
315	Red Maple	14"
316	Yellow Birch	15"
317	White Birch	4"
318	Yellow Birch	8"
319	Balsam Fir	7"
320	Yellow Birch	11"
321	American Beech	4"
322	Red Maple	6"
323	American Beech	3"
324	American Beech	4"
325	Balsam Fir	4"
326	Striped Maple	4"
327	American Beech	3"
328	Yellow Birch	10"
329	Red Spruce	3"
330	Red Maple	14"
331	Red Maple	8"
332	Balsam Fir	4"
333	Red Maple	13"
334	Red Maple	14"
335	Balsam Fir	8"
336	Red Spruce	3"
337	Eastern Hemlock	4"
338	American Beech	5"
339	American Beech	9"
340	Red Maple	12"
341	Red Maple	3"
342	Yellow Birch	11"
343	Red Spruce	4"
344	American Beech	10"
345	Balsam Fir	4"
346	White Birch	12"
347	Red Maple	10"
348	Eastern Hemlock	3"
349	Balsam Fir	4"
350	Eastern Hemlock	3"
351	Yellow Birch	10"
352	Balsam Fir	4"
353	American Beech	4"
354	Yellow Birch	4"
355	Red Spruce	4"
356	Red Spruce	7"
357	American Beech	15"
358	Red Spruce	5"
359	Balsam Fir	12"
360	Yellow Birch	6"
361	American Beech	8"
362	Sugar Maple	14"

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X178 TRANSMISSION LINE
STRUCTURE REBUILD PROJECT
WOODSTOCK, NEW HAMPSHIRE

TREE SPECIES INVENTORY KEY

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: 	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S3
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
DATE: 05/02/2024	PROJECT NO. 04.0191410.39	REVISION NO.	

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
363	Yellow Birch	9"
364	Red Maple	14"
365	American Beech	4"
366	American Beech	4"
367	Yellow Birch	10"
368	Yellow Birch	5"
369	Striped Maple	4"
370	Yellow Birch	8"
371	Yellow Birch	5"
372	American Beech	6"
373	Red Spruce	4"
374	Eastern Hemlock	4"
375	Balsam Fir	4"
376	Balsam Fir	6"
377	Red Maple	10"
378	White Birch	7"
379	Yellow Birch	4"
380	American Beech	6"
381	Red Maple	3"
382	Red Spruce	3"
383	Sugar Maple	3"
384	Striped Maple	4"
385	Yellow Birch	6"
386	Balsam Fir	6"
387	American Beech	4"
388	Balsam Fir	5"
389	Sugar Maple	17"
390	Balsam Fir	8"
391	American Beech	4"
392	Red Spruce	3"
393	Red Spruce	3"
394	American Beech	4"
395	Yellow Birch	6"
396	Yellow Birch	6"
397	Yellow Birch	10"
398	Red Maple	10"
399	Balsam Fir	5"
400	Yellow Birch	4"
401	Yellow Birch	4"
402	Yellow Birch	7"
403	Yellow Birch	3"
404	Red Maple	9"
405	American Beech	4"
406	Balsam Fir	3"
407	Yellow Birch	10"
408	Red Spruce	4"
409	Yellow Birch	11"
410	American Beech	3"
411	Balsam Fir	7"
412	Red Spruce	4"

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
413	Yellow Birch	4"
414	Yellow Birch	4"
415	Red Spruce	3"
416	Red Spruce	3"
417	Balsam Fir	5"
418	Balsam Fir	5"
419	Red Spruce	4"
420	Balsam Fir	6"
421	Balsam Fir	5"
422	Yellow Birch	4"
423	Balsam Fir	5"
424	Balsam Fir	8"
425	Yellow Birch	9"
426	Balsam Fir	6"
427	White Birch	10"
428	Balsam Fir	9"
429	Yellow Birch	4"
430	Balsam Fir	4"
431	Balsam Fir	5"
432	White Birch	5"
433	Yellow Birch	6"
434	Balsam Fir	4"
435	Balsam Fir	4"
436	Balsam Fir	3"
437	Balsam Fir	4"
438	Balsam Fir	4"
439	Red Spruce	3"
440	Balsam Fir	7"
441	Red Maple	15"
442	Sugar Maple	9"
443	Balsam Fir	7"
444	Red Spruce	3"
445	White Birch	9"
446	Yellow Birch	4"
447	Balsam Fir	4"
448	Yellow Birch	4"
449	Balsam Fir	4"
450	American Beech	5"
451	White Birch	10"
452	Red Spruce	9"
453	White Birch	7"
454	American Beech	4"
455	Balsam Fir	7"
456	Balsam Fir	6"
457	Balsam Fir	3"
458	Balsam Fir	3"
459	Red Maple	14"
460	Balsam Fir	4"
461	Balsam Fir	4"
462	Yellow Birch	6"



POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
463	Red Spruce	4"
464	Red Maple	6"
465	Yellow Birch	4"
466	Balsam Fir	7"
467	Yellow Birch	4"
468	Balsam Fir	3"
469	Balsam Fir	5"
470	Balsam Fir	8"
471	Balsam Fir	3"
472	Red Spruce	6"
473	Red Spruce	4"
474	Balsam Fir	4"
475	Red Maple	3"
476	American Beech	4"
477	Yellow Birch	6"
478	Red Spruce	3"
479	Balsam Fir	5"
480	Balsam Fir	7"
481	Yellow Birch	13"
482	Red Spruce	3"
483	Balsam Fir	5"
484	Yellow Birch	4"
485	Balsam Fir	5"
486	Balsam Fir	7"
487	Red Maple	9"
488	Yellow Birch	4"
489	American Beech	5"
490	Balsam Fir	4"
491	Yellow Birch	4"
492	American Beech	4"
493	Red Maple	4"
494	Balsam Fir	3"
495	Red Maple	12"
496	Red Maple	9"
497	American Beech	4"
498	Red Spruce	4"
499	White Birch	6"
500	Red Maple	9"
501	Balsam Fir	4"
502	American Beech	4"
503	Balsam Fir	8"
504	Balsam Fir	5"
505	Balsam Fir	9"
506	Balsam Fir	6"
507	Balsam Fir	4"
508	Yellow Birch	3"
509	Red Spruce	3"
510	Balsam Fir	3"
511	White Birch	6"
512	White Birch	4"

POWERLINE TRAIL		
CODE #	TREE SPECIES	DBH (INCH)
513	Red Maple	12"
514	Red Spruce	5"
515	Balsam Fir	5"
516	Eastern Hemlock	7"
517	Red Maple	15"
518	Red Maple	12"
519	Yellow Birch	11"
520	American Beech	3"
521	White Birch	6"
522	Balsam Fir	5"
523	Balsam Fir	6"
524	Red Spruce	3"
525	White Birch	5"
526	Balsam Fir	7"
527	Balsam Fir	4"
528	Balsam Fir	4"
529	Balsam Fir	6"
530	Yellow Birch	4"
531	Balsam Fir	5"
532	Balsam Fir	6"
533	Yellow Birch	9"
534	American Beech	4"
535	Balsam Fir	5"
536	American Beech	3"
537	Yellow Birch	5"
538	Yellow Birch	5"
539	Yellow Birch	9"

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X178 TRANSMISSION LINE
STRUCTURE REBUILD PROJECT
WOODSTOCK, NEW HAMPSHIRE

TREE SPECIES INVENTORY KEY

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: 	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET S4
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE:	
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