\\vhb\gis\proj\Worcester\12970.00 Sudbury-Hudson-EV\gis\Project\SudburytoHudson\Figures\Various\VP_Buffers_Sudbury.mxd Date: 10/12/2020

APPROX. PRESUMED VERNAL POOL 1
VP Status: Presumed
Closest Distance to Work: 75 LF
Total 100ft BZ: 40,421 SF
Previously Disturbed: 3,257 SF
Existing Suitable Habitat: 37,164 SF
Proposed Permanent Impact: 885 SF
Remaining Suitable Habitat: 35,052 SF (94.3%)

APPROX. PRESUMED VERNAL POOL 2
VP Status: Presumed
Closest Distance to Work: 70 LF
Total 100ft BZ: 39,130 SF
Previously Disturbed: 3,618 SF
Existing Suitable Habitat: 35,512 SF
Proposed Permanent Impact: 1,255 SF
Remaining Suitable Habitat: 32,259 SF (90.8%)

HUDSON

361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376

SUDBURY

WHITE POND ROAD

MARLBOROUGH

- MBTA ROW Boundary
- Limit of Grading
- Bike Path Footprint
- Town Boundaries
- Bordering Land Subject to Flooding
- 10-year Floodplain
- Delineated Wetland Edge
- Approximate Wetland Edge
- Delineated Top of Bank
- Delineated Vernal Pool Edge
- Perennial Stream
- Wetland Area
- Land Under Water
- Wetland Replication Area
- Vernal Pool Area
- 100' Vernal Pool Buffer
- Previously Disturbed
- Permanent Impact
- Temporary Impact

DRAFT

EVERSOURCE ENERGY

N

0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
Sudbury, Massachusetts

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APPROX. PRESUMED VERNAL POOL 2
VP Status: Presumed
Closest Distance to Work: 70 LF
Total 100ft BZ: 39,130 SF
Previously Disturbed: 3,618 SF
Existing Suitable Habitat: 35,512 SF
Proposed Permanent Impact: 1,255 SF
Remaining Suitable Habitat: 32,259 SF (90.8%)

SUDBURY

376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391

- MBTA ROW Boundary
- Limit of Grading
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- Wetland Area
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- Vernal Pool Area
- 100' Vernal Pool Buffer
- Previously Disturbed
- Permanent Impact
- Temporary Impact

DRAFT

EVERSOURCE ENERGY

N

0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Vernal Pool Buffers
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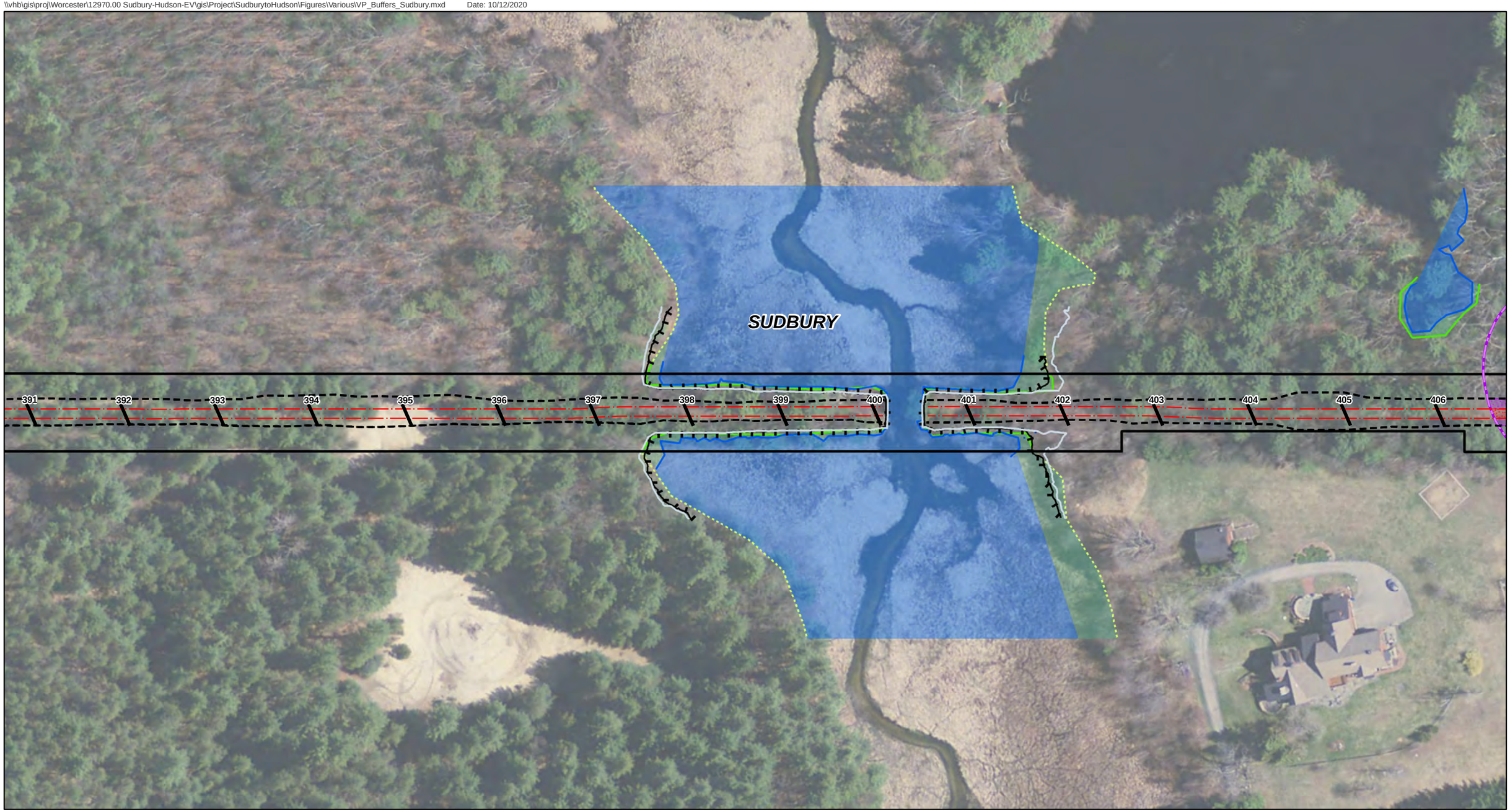

- MBTA ROW Boundary
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- 100' Vernal Pool Buffer
- Previously Disturbed
- Permanent Impact
- Temporary Impact

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0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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EVERSOURCE ENERGY

Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
Sudbury, Massachusetts

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VERNAL POOL 13
VP Status: Certifiable
Closest Distance to Work: 6 LF
Total 100ft BZ 61,455 SF
Previously Disturbed: 1,317 SF
Existing Suitable Habitat: 60,138 SF
Proposed Permanent Impact: 3,321 SF
Remaining Suitable Habitat: 51,225 SF (85.2%)

VERNAL POOL 10
VP Status: Certifiable
Closest Distance to Work: 26 LF
Total 100ft BZ 43,246 SF
Previously Disturbed: 0 SF
Existing Suitable Habitat: 43,246 SF
Proposed Permanent Impact: 2,135 SF
Remaining Suitable Habitat: 37,627 SF (87%)

VERNAL POOL 12
VP Status: Certifiable
Closest Distance to Work: 11 LF
Total 100ft BZ: 55,399 SF
Previously Disturbed: 0 SF
Existing Suitable Habitat: 55,399 SF
Proposed Permanent Impact: 3,028 SF
Remaining Suitable Habitat: 47,571 SF (85.8%)

VERNAL POOL 9
VP Status: Certifable
Closest Distance to Work: 26 LF
Total 100ft BZ: 51,702
Previously Disturbed: 0 SF
Existing Suitable Habitat: 51,702 SF
Proposed Permanent Impact: 2,648 SF
Remaining Suitable Habitat: 45,295 SF (87.6%)

VERNAL POOL 11
VP Status: Presumed
Closest Distance to Work: 8 LF
Total 100ft BZ: 99,159 SF
Previously Disturbed: 4,507 SF
Existing Suitable Habitat: 94,642 SF
Proposed Permanent Impact: 5,496 SF
Remaining Suitable Habitat: 80,406 SF (84.9%)

SUDBURY
AMANDA ROAD
DUTTON ROAD
406 407 408 409 410 411 412 413 414 415 416 41700)0 501 502 503 504

- MBTA ROW Boundary
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- Town Boundaries
- Bordering Land Subject to Flooding
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- 100' Vernal Pool Buffer
- Previously Disturbed
- Permanent Impact
- Temporary Impact

DRAFT

EVERSOURCE ENERGY

Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
Sudbury, Massachusetts

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0 100 200 Feet

Source: MassGIS, 2015 OrthoImagery, VHB

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- MBTA ROW Boundary
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- 100' Vernal Pool Buffer
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- Temporary Impact

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EVERSOURCE ENERGY

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0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Vernal Pool Buffers
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VERNAL POOL 8
VP Status: Certifiable
Closest Distance to Work: 20 LF
Total 100ft BZ: 48,876 Sf
Previously Disturbed: 0 SF
Existing Suitable Habitat: 48,876 SF
Proposed Permanent Impact: 2,568 SF
Remaining Suitable Habitat: 42,549 SF (87.1%)

VERNAL POOL 7
VP Status: Certifiable
Closest Distance to Work: 13 LF
Total 100ft BZ: 54,123 SF
Previously Disturbed: 13,290 SF
Existing Suitable Habitat: 40,833 SF
Proposed Permanent Impact: 3,048 SF
Remaining Suitable Habitat: 33,348 SF (81.7%)

AXDELL ROAD
AUSTIN ROAD
SUDBURY
PEAKHAM ROAD
ROBERT BEST ROAD
JARMAN ROAD

520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535

- MBTA ROW Boundary
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EVERSOURCE ENERGY

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0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
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WHISPERING PINE ROAD
EVERGREEN ROAD
STONEBROOK ROAD
SUDBURY
535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550
JARMAN ROAD
ROLLING LANE
ROLLING LANE

- MBTA ROW Boundary
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EVERSOURCE ENERGY

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0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Vernal Pool Buffers
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- MBTA ROW Boundary
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- Temporary Impact

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EVERSOURCE ENERGY

Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
Sudbury, Massachusetts

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0 100 200 Feet

Source: MassGIS, 2015 OrthoImagery, VHB

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- MBTA ROW Boundary
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Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
Sudbury, Massachusetts

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0 100 200 Feet

Source: MassGIS, 2015 OrthoImagery, VHB

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MBTA ROW Boundary
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Perennial Stream
Wetland Area
Land Under Water
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100' Vernal Pool Buffer
Previously Disturbed
Permanent Impact
Temporary Impact

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EVERSOURCE ENERGY

Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
Sudbury, Massachusetts

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0 100 200 Feet

Source: MassGIS, 2015 OrthoImagery, VHB

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VERNAL POOL 5
VP Status: Certifiable
Closest Distance to Work: 34 LF
Total 100ft BZ: 88,792 SF
Previously Disturbed: 4,492 SF
Existing Suitable Habitat: 84,300 SF
Proposed Permanent Impact: 4,009 SF
Remaining Suitable Habitat: 74,443 SF (88.3%)

SUDBURY

STATION ROAD

UNION AVENUE

596 597 598 599 600 601 602 603 700 24 701 702 703 704 705 706 707

- MBTA ROW Boundary
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- 100' Vernal Pool Buffer
- Previously Disturbed
- Permanent Impact
- Temporary Impact

N

0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
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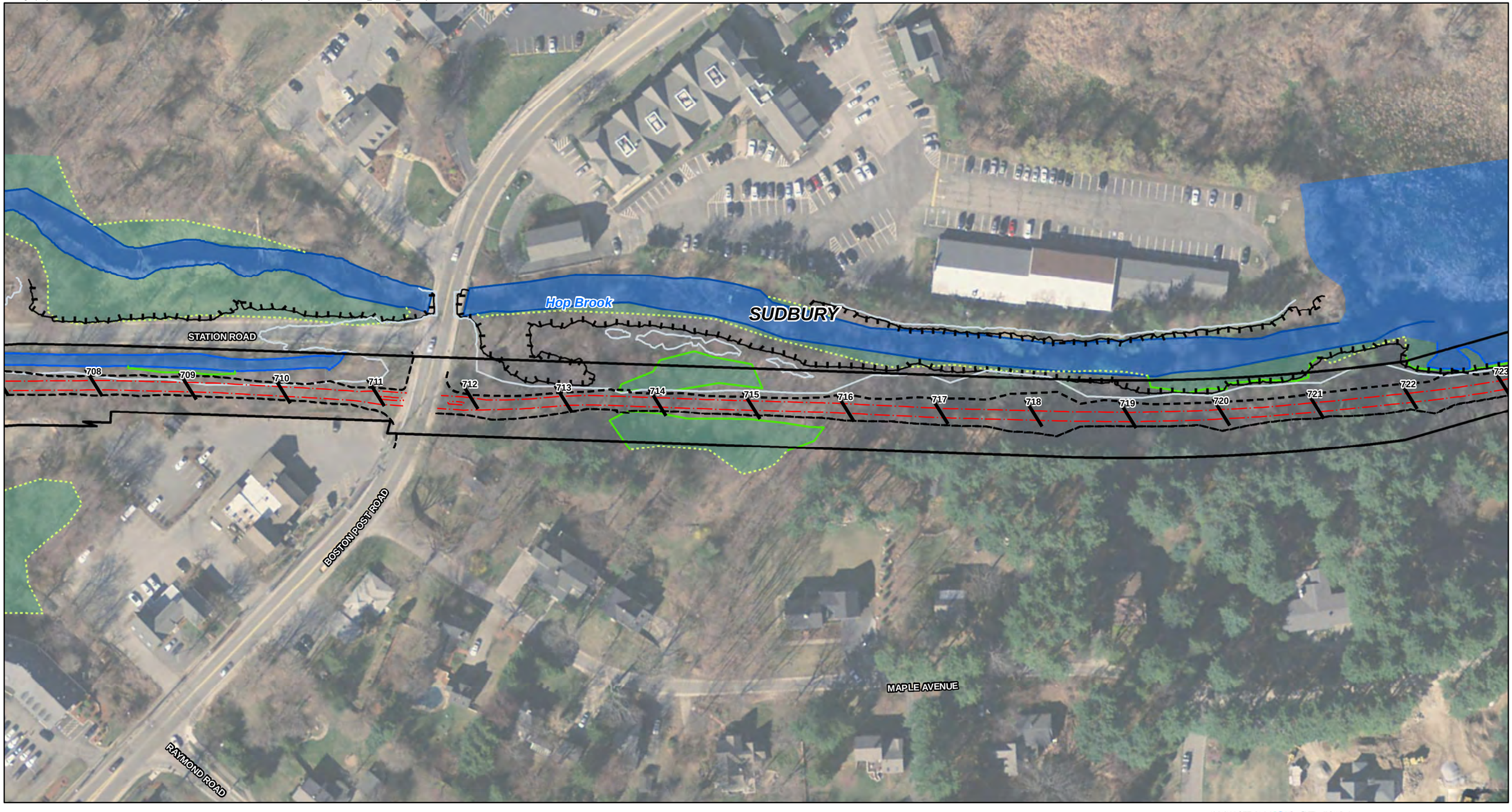

- MBTA ROW Boundary
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- Permanent Impact
- Temporary Impact

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EVERSOURCE ENERGY

Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

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0 100 200 Feet

Source: MassGIS, 2015 OrthoImagery, VHB

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Vernal Pool Buffers
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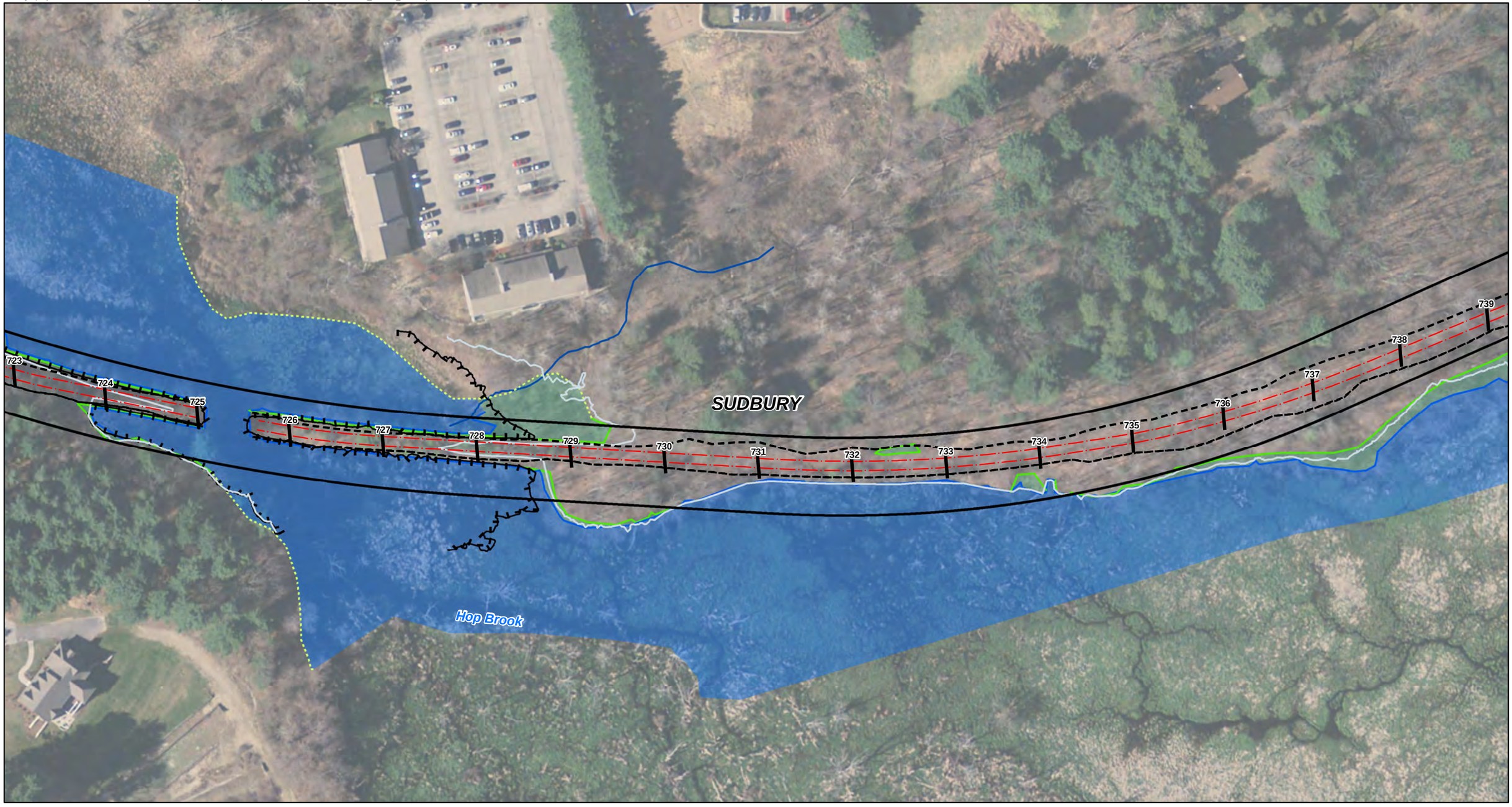

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- Temporary Impact

DRAFT

N

0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
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VERNAL POOL 3
VP Status: Presumed
Closest Distance to Work: 4 LF
Total 100ft BZ: 43,267 SF
Previously Disturbed: 0 SF
Existing Suitable Habitat: 43,267 SF
Proposed Permanent Impact: 2,423 SF
Remaining Suitable Habitat: 38,022 SF (87.9%)

VERNAL POOL 2
VP Status: Certifiable
Closest Distance to Work: 7 LF
Total 100ft BZ: 75,522 SF
Previously Disturbed: 0 SF
Existing Suitable Habitat: 75,522 SF
Proposed Permanent Impact: 4,066 SF
Remaining Suitable Habitat: 66,957 SF (88.6%)

VERNAL POOL 4
VP Status: Certifiable
Closest Distance to Work: 15 LF
Total 100ft BZ: 40,648 SF
Previously Disturbed: 0 SF
Existing Suitable Habitat: 40,648 SF
Proposed Permanent Impact: 1,707 SF
Remaining Suitable Habitat: 37,011 SF (91.1%)

BOSTON POST ROAD

SUDBURY

740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755

- MBTA ROW Boundary
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- Temporary Impact

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EVERSOURCE ENERGY

N

0 100 200 Feet

Source:
MassGIS, 2015
OrthoImagery, VHB

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Vernal Pool Buffers
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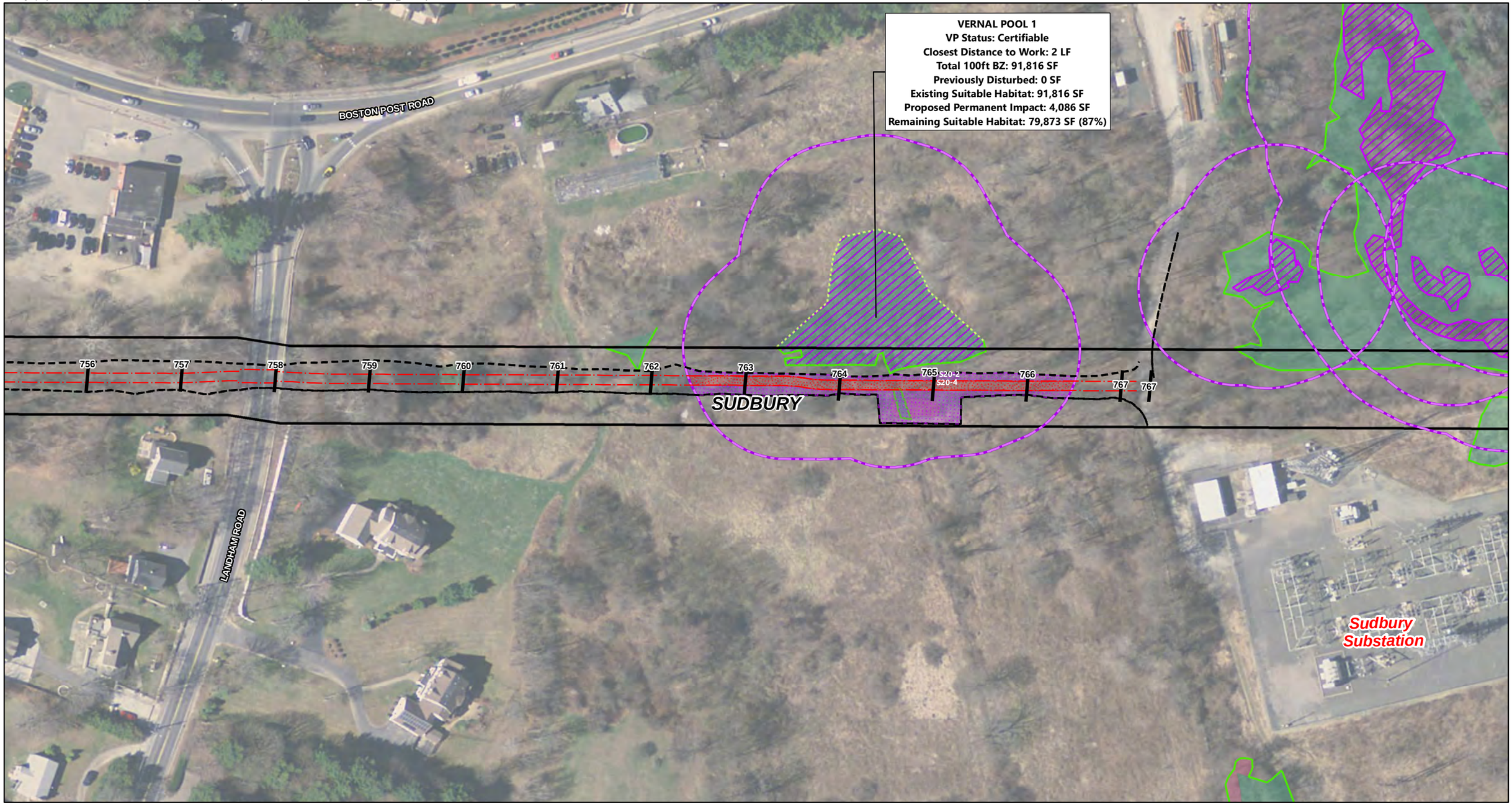

MBTA ROW Boundary
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Bordering Land Subject to Flooding
10-year Floodplain

Delineated Wetland Edge
Approximate Wetland Edge
Delineated Top of Bank
Delineated Vernal Pool Edge
Perennial Stream
Wetland Area
Land Under Water
Wetland Replication Area
Vernal Pool Area

100' Vernal Pool Buffer
Previously Disturbed
Permanent Impact
Temporary Impact

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EVERSOURCE ENERGY

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0 100 200 Feet

Source:
MassGIS, 2015
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Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project

Vernal Pool Buffers
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Table 1: Wildlife Habitat Evaluation Summary

Wetland Impact Area	BETA Comments from Table 1 (Table 1 - 8/7/2020)	Applicants' Response to BETA Comment	BETA Recommendations (Table 1 - 8/7/2020)	Applicants' Response to Recommendations	No Adverse Effect Conclusion
S1	1. Work site, removal of ground cover/brush piles and resulting bike path will restrict movement between vernal pool and neighboring wetland where amphibians will seek cover in late summer through early winter. 2. Proposed restoration includes herbaceous cover in seed mix but does not include replacing woody debris with brush piles. 3. Large Woody Debris habitat not listed on Field data form but appear in photo log. 4. Restoration includes planting of low-bush blueberry.	1. The Project will not restrict movement to/from the vernal pool. VP1 is 75 feet from proposed limits of work for project. See BETA comment for S2. 94.3% of suitable habitat within the 100 ft. VP Buffer will remain. Removal of the rails and ties improves connectivity of surrounding habitat. 2. Large woody debris was not identified within the WIA. The picture in the WHE states that the large woody debris is located outside of the WIA. 3. See response to comment 2 above. 4. No response required.	1. Restore important habitat features present in S1 2. Revise WHE to include all important habitat features present within WIA. 3. Provide planting plan, plant number, and habitat feature locations. 4. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat.	1. The important habitat features are upland food plants and dense herbaceous cover. The Project incorporates mitigation/restoration for both features, including planting food plants and reseeding with an herbaceous seed mix. See Table 2 below. 2. This was already provided in the WHE. The information is summarized in the table for WIA S1 below. 3. Revised planting plans are included with this supplemental submission which show plantings within this WIA. There are no other important wildlife habitat features within this WIA. 4. Quantification of important habitat features on the site was previously completed as per the WHE Guidance and was presented in the WHE submitted and summarized herein.	1. None of the upland food plants identified within the WIA were particularly abundant or unique to the area. All of the species identified can be found outside of the WIA in the Project Locus. Project-related losses are not expected to reduce the capacity of the area to provide the important wildlife habitat value that this feature provides and will not result in an adverse effect. The Project will include planting woody species within this WIA including lowbush blueberry and black huckleberry, which are food plants. 2. Construction activities associated with the Project will remove an insignificant amount of dense herbaceous vegetation where it presently grows. However, this will not adversely affect the wildlife habitat functions this WIA provides due to its size and because additional, larger areas of dense herbaceous vegetation are present beyond the WIA within the Project Locus. Also, the Project includes restoring all areas within the Project Site that will not be paved for the 10-foot-wide MCRT with a seed mix consisting of native herbaceous species. Within this WIA, it includes approximately 4,713 square feet of restoration with native species. In addition, the restoration plan includes planting plugs of *Carex pensylvanica* with the native herbaceous seed mix, providing additional habitat value for wildlife.
S2	1. Vernal pool far enough away to not be directly impacted. 2. Work site restricts migration to nearby wetland. 3. Impact area does not include important habitat features aside from upland food plants which will be replaced with black huckleberry plantings.	1. VP 2 is 70 feet from proposed limits of work for Project. 90.8% of suitable habitat within the 100ft. VP Buffer will remain. No response required. 2. The Project will not restrict migration to adjacent wetlands. Syncopated silt fence will be used within 450' of all vernal pools to allow migration and post-construction conditions will not restrict migration. 3. Upland food plants are the only important wildlife habitat feature present within this WIA. Therefore, mitigating/restoring with black huckleberry is appropriate.	1. Provide planting plan and plant number for restoration area. 2. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat.	1. The planting plan is provided with this supplemental submission. 2. The important habitat feature that is present (upland food plants) was previously quantified as per the WHE and was presented in the WHE submitted and summarized herein.	1. Individually, none of the food plants noted within the WIA S2 are unique to the WIA and all these species can be found outside of the WIA on the Project Locus and beyond. Because of the presence of similar food plants in areas near locations where loss of some food plants will occur, Project-related losses will not reduce the capacity of the Project Locus to provide the important wildlife habitat feature. Also, the Project will include planting black huckleberry and lowbush blueberry within this WIA, which are food plants. The Project also includes mitigation plantings in the margins of this vernal pool and outside the current limits of work to enhance VP habitat and function at this location.
S3, S4, S5, S6	1. Attachment K detailing standing deadwood replacement does not provide adequate details on how this will be accomplished, especially with sensitive and unstable wetland soils. 2. The adverse effects analysis considers all areas together. VHB determined that an	1. The Project is no longer considering reinstalling standing dead snags. 2. The adverse effects analysis did not consider all of the areas together. They were discussed collectively because they are contiguous, but each individual area was evaluated separately.	1. Revise WHE to evaluate each impact area separately. 2. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's	1. Each WIA was evaluated separately in the original WHE. However, to make the information more readily accessible, individual tables are included below which evaluate each WIA separately. 2. The features that were quantified within these WIAs include standing dead trees, tree cavities, logs within	A discussion of the no adverse effect determination for each individual WIA is presented in the applicable WIA tables below (Tables 4-7).

Wetland Impact Area	BETA Comments from Table 1 (Table 1 - 8/7/2020)	Applicants' Response to BETA Comment	BETA Recommendations (Table 1 - 8/7/2020)	Applicants' Response to Recommendations	No Adverse Effect Conclusion
	insignificant percentage of important habitat will be affected, however losses to standing vegetation with view of water in areas 3 and 6 may be just a small percentage while areas 4 and 5 will be clear-cut. 3. Almost 50% of the total square footage of S4 and S5 will be cleared, and they will not recover quickly. 4. Location for crane mats must be cleared and flattened which is potentially destructive as wetland habitat is very sensitive to changes in elevation, slope, and soil compaction.	3. S4 and S5 have a substantial restoration plan that includes planting trees and shrubs during Phase 1. 4. The crane mats do not require the "level surface" at the bottom of the slope for placement of the outermost set of cribbing. The cribbing will begin above the Bank boundary at both approaches to Bridge 128 and will not result in Bank or wetland impacts. A detailed restoration plan has been provided. Refer to revised plan set for details.	effect on the Site's ability to protect wildlife habitat. 3. Conduct WHE by resource area to confirm restoration efforts proposed in each resource area are adequate to result in a no-adverse effect. 4. Provide adequate details on the replacement of standing dead tree installation and proposed locations.	one meter of the water's surface, and an approximate amount of live or dead standing vegetation overhanging or offering a visibility of open water. No other features are required to be quantified as per direction in the WHE Guidance and were described qualitatively. 3. Evaluation by resource area is not required by the direction provided in the WHE Guidance and its data forms. The WHE and the tables below discuss the important wildlife habitat features, project impacts, proposed mitigation, and the no adverse effect determination. There were no unique features present and all features are present in the Project Locus beyond the Project Site. 4. The Project is no long proposing to reinstall standing dead trees.	
S7	1. The work site is within the buffer zone of 3 different wetlands/vernal pools yet only AURA is considered. 2. While the berm on each side of the rail will contain runoff from the site, and grading will not extend past this berm, the Project will completely separate the southern wetland from surrounding wetlands, contributing to habitat fragmentation. 3. Existing berms on either side of work area and proposed bike path create a barrier that restricts the movement of amphibians between wetlands. 4. Southern wetland fragmented from larger wetland by original rail bed, clearing ground cover and adding bike path will create additional obstacles further isolating southern wetland. Possible solution is building a tunnel under the bike path to prevent possible flooding and serve as a wildlife crossing for more sensitive species.	1. AURA includes the BVW buffer and vernal pool buffer. The impact area does not extend into wetlands and the WHE requires evaluating important wildlife habitat features within the WIA. 2. The Project will not completely separate the southern wetland from surrounding wetlands within WIA S7. The elevated railroad embankment that is currently there will remain and will continue to provide habitat connectivity. 3. It is unclear what berms BETA is referring to because the work area is on the elevated railroad embankment. Regardless, a berm will not prevent amphibians from migrating between wetlands. 4. A wildlife tunnel is not required; this is a bike path and not a highway/roadway project. Removing the rails and ties will improve connectivity by removing that barrier.	1. Evaluate the effect of the bike path construction on the southern wetland's connectivity to adjacent wetlands. 2. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 3. Evaluate the use of wildlife tunnels to mitigate for fragmentation.	1. The WHE evaluated connectivity and did not identify any connectivity concerns at S7. Existing rails, ties, walking paths and use by the public is already a factor in this area. See Table 8 for more detail. 2. The form requires quantification of standing dead trees, tree cavities, and trees that are greater than 30-inches dbh. All other important wildlife habitat features require a qualitative review, indicated as Present or Absent on the Appendix B form. The number of standing dead trees within the WIA, and outside of the WIA but within the same resource areas on the Project Locus, were counted. No tree cavities or trees >30" dbh are present within this WIA. 3. The Project will not prevent migration to and from pools. The existing rails, ties, walking paths and use by the public demonstrates that these vernal pools are viable despite these existing conditions. Further, increasing the culvert size will likely disrupt the equilibrium of the vernal pools, resulting in a change in hydrology and an adverse effect to these vernal pool areas that have formed within larger vegetated wetland complexes.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. The Project also includes mitigation plantings in the margins of Vernal Pools 9, 11, and 12 outside the current limits of work to enhance VP habitat and function. 85-88% of suitable habitat within the 100 ft. VP Buffers of the five VP's in this area will remain. 2. Although 7 standing dead trees will be removed within the WIA, 21 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 3. Large woody debris, i.e, brush piles, and removed trees, snags, and large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris presently common in the Project Locus outside of the limit of work will remain and continue to provide habitat for wildlife.
S8	1. Large number of standing dead trees to be replaced, still unsure of how/ where they will be replaced. 2. Significant invasive species present. If site is cleared and replaced with low herbaceous/ woody vegetation, then invasive species will outcompete and become dominant.	1. The Project is no longer considering reinstalling standing dead snags. 2. The Project includes an invasive species management plan, which has been provided to the Commission. The plan includes management of invasives both during and after construction.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Provide site and species-specific invasive species controls plan.	1. As discussed in some of the responses above, only certain wildlife habitat features are required to be counted. Within this WIA, standing dead trees, tree cavities, and small mammal burrows (which are not required to be counted) were quantified. 2. A site-specific invasive species control plan has been provided. The only species-specific plan is for Japanese knotweed, which will be removed, and the soil will not be reused on site.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. 2. Although 4 standing dead trees will be removed within the WIA, 4 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 3. One small (<6") tree cavity was identified that is likely the result of a woodpecker. This tree

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					cavity provided little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of this tree with a small woodpecker hole will not adversely affect wildlife due to the lack of value it provides and given the presence of more suitable cavities in the surrounding woodlands. 4. One small mammal burrow, likely a chipmunk burrow, was identified within the railroad ballast. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species. 5. Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat and approximately 13,266 square feet of restoration will occur with herbaceous native species. 6. Large woody debris, brush piles, and removed trees, snags, and large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is common along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
S9	1. Culvert connecting north and south end of stream may allow for some wildlife movement between north and south sections of wetland. This does not discuss impacts from possibly cleaning/replacing culverts if they have become blocked or damaged. 2. Large number of standing dead trees similar to S8 3. Invasive species similar to S8	1. The culvert is functioning effectively; no work is proposed. 2. S9 has 3 standing dead trees. 3. Response similar to S8.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Provide site and species-specific invasive species controls plan. 3. Evaluate the use of the culvert for wildlife migration and potential for culvert improvements to mitigate impacts to migration.	1. As discussed in some of the responses above, only certain wildlife habitat features are required to be counted. Within this WIA, standing dead trees, tree cavities, and small mammal burrows (which are not required to be counted) were quantified. 2. See discussion above regarding site and species-specific invasive species control plans. 3. See the response for S7 regarding culvert improvements.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. 81-88% of suitable habitat within the 100 ft. VP Buffer will remain. The Project also includes mitigation plantings in the margins of Vernal Pools 7 and 8 outside the current limits of work to enhance VP habitat and function. 2. Although 3 standing dead trees will be removed within the WIA, 3 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 3. The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species. 4. Large woody debris, I.e., brush piles and removed trees, snags, and large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris common long the Project Locus

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					outside of the limit of work will remain to provide habitat for wildlife.
S10	1. Culvert similar to S9 2. Invasive species similar to S8	1. Acknowledged. See response above. 2. Acknowledged. See response above.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Provide site and species-specific invasive species controls plan. 3. Evaluate the use of the culvert for wildlife migration and potential for culvert improvements to mitigate impacts to migration	1. See above discussion regarding quantification of important wildlife habitat features. 2. See discussion above regarding site and species-specific invasive species control plans. 3. See the response for S7 regarding culvert improvements.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. 2. Although 2 standing dead trees will be removed within the WIA, 25 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 3. Although the 1 cavity will be removed within the WIA, 2 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 4. The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species. 5. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
S11	1. Based on species present, work site will be removing a significant amount of early successional forest habitat; dense small trees and wooded shrubs, which will not be directly replaced. This dense vegetation restricts movement of larger predators providing safe nesting and roosting locations for small songbirds, and small mammals on the ground. 2. Adequate information not provided to determine if the surrounding vegetation is consistent with the vegetation present in the limit of work. 3. Culvert similar to S9 4. Invasive species similar to S8	1. The vegetation present does not restrict movement of larger predators. Within this WIA, there is a well-defined foot path, a small area (~100 SF) of dense herbaceous vegetation, areas of small glossy buckthorn, and other areas that have an open understory. 2. The WHE presented a list of vegetation in the WIA and identified similar vegetation in surrounding area. Also see response to comment 1 above. 3. Acknowledged. No response required. 4. Acknowledged. No response required.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Provide site and species-specific invasive species controls plan. 3. Evaluate the use of the culvert for wildlife migration and potential for culvert improvements to mitigate impacts to migration. 4. Evaluate impacts to songbird and small mammal habitat.	1. See above discussion regarding quantification of important wildlife habitat features. 2. See discussion above regarding site and species-specific invasive species control plans. 3. See the response for S7 regarding culvert improvements. 4. No adverse effect to songbirds or small mammals as detailed in Table 12.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. The Project also includes mitigation plantings in the margins of Vernal Pool 6 outside the current limits of work to enhance VP habitat and function. 85% of suitable habitat within the 100 ft. VP Buffer in this area will remain. 2. Although the 1 standing dead tree will be removed within the WIA, 5 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 3. A very small area (approximately 100 square feet) of Carex pensylvanica is present within the WIA, which will be removed from the WIA during construction. Removing this small area will not adversely affect local wildlife. Regardless, approximately 8,403 square feet of this WIA will be restored with a native herbaceous seed mix, which will provide dense herbaceous cover.

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					4. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
S12	1. Culvert similar to S9 2. Surrounding wetlands fragmented from human activity so presence of large persistent populations of wildlife species is unlikely. 3. Project will remove a large amount of dense vegetation that provides cover by local wildlife as they travel through the more developed and heavily populated area. This will not be replaced by current proposed restoration. 4. Several invasive species present like previous sections.	1. Acknowledged. No response required. 2. Acknowledged and agreed. No response required. 3. The Applicants disagree with this assessment. The Project will remove approximately 120 square feet of dense herbaceous vegetation (*Carex pensylvanica*). Other, minimal, early successional vegetation is present within this WIA. Also, wildlife are not likely to traverse through this area given the more developed and heavily populated nature of the entire vicinity and availability of other corridors in the greater area. 4. Acknowledged. No response required.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Evaluate the use of the culvert for wildlife migration and potential for culvert improvements to mitigate impacts to migration. 3. Evaluate impacts to wildlife cover habitat present within impact area. 4. Provide site and species-specific invasive species controls plan.	1. See above discussion regarding quantification of important wildlife habitat features. 2. This is a drainage pipe, not a culvert. The Applicants disagree that the Project will prevent wildlife movement and are not evaluating this drainage pipe for wildlife migration. A comprehensive mitigation package is being prepared for the Project. 3. The WHE evaluated the present of dense herbaceous cover, which is what is required. 4. See discussion above regarding site and species-specific invasive species control plans.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. 2. The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population. 3. A very small area (approximately 120 square feet) of Carex pensylvanica is present within the WIA, which will be removed from the WIA during construction. Removing this small area will not adversely affect local wildlife. Regardless, approximately 8,403 square feet of this WIA will be restored with a native herbaceous seed mix, which will provide dense herbaceous cover. 4. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
S13	1. Work area is near an already well-developed area and is largely comprised of invasive species. 2. Considering the larger section of forest and wetland north of the site, the loss of habitat in this section will not likely have a significant impact on the surrounding habitat. 3. Project site would benefit from the addition of brush piles and replanting native vegetation in place of removed invasive species as proposed in the restoration plan.	1. Acknowledged. No response required. 2. Acknowledged. No response required. 3. Acknowledged. No response required.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Provide site and species-specific invasive species controls plan.	1. See above discussion regarding quantification of important wildlife habitat features. 2. See discussion above regarding site and species-specific invasive species control plans.	1. The areas outside of the WIA contain upland food plants and the removal of the limited oaks and cherries within the WIA will not reduce the capacity of the area to provide food sources. Regardless, upland food plants will be replanted within this WIA. 85% of suitable habitat within the 100 ft. VP Buffer in this area will remain. 2. The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population. 3. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be

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					placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
S14	1. Impact area is small and surrounded by human development and a road. Similar to S13 there is likely little direct impact on the habitat of the area as a whole. 2. This area is one of the few spots that wildlife can cross Union Ave with relative cover. 3. Project may restrict movement of wildlife between the forested area surrounding wetlands 24 and 24A and the eastern habitat areas east of Route 20.	1. Acknowledged. No response required. 2. The area of the WIA that abuts Union Avenue is maintained lawn. It is very unlikely that wildlife is using this WIA to cross Union Avenue as more suitable crossings are in the surrounding woodlands. 3. The Applicants disagree. As stated in the response to 2 above, it is unlikely that wildlife is crossing Union Avenue at this heavily developed, heavily traveled roadway section. There is no forested habitat on the union Avenue side of the Project in the vicinity of the Project.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Evaluate the Project's impact on wildlife migration and fragmentation at this location.	1. See above discussion regarding quantification of important wildlife habitat features. 2. See previous responses in this row for wildlife migration and fragmentation.	1. The WIA has very limited oaks and there are oaks and other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the oaks within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources. 2. The removal of one standing dead tree within the WIA will not result in an adverse effect. There are no standing dead trees within this wetland resource area outside of the limit of work. However, there are snags beyond the WIA within the ROW and within the surrounding forest that will continue to provide this important wildlife habitat feature.
S15	1. This impact area provides the only access through this heavily developed area. 2. Provides cover for wildlife to cross both Union Ave and Boston Post road. 3. Trees and vegetation will be removed from a large stretch of land removing cover for wildlife. Restoration plan details replacing snags and plant food shrubs, but not larger tree cover needed to replicate the existing cover for larger animals that may use this corridor.	1. As with S14, it is very unlikely that wildlife is using this WIA to cross Union Avenue because there are more suitable corridors to the north or south of the Project in the vicinity. Land uses adjacent to the Project are dense residential, commercial, industrial along this entire stretch. 2. See previous response. 3. Due to the surrounding land use, it is unlikely that large animals are using this corridor. The proposed restoration plan maximizes the available space for planting and includes planting 16 each of sweet pepperbush, alternate-leaved dogwood, northern bayberry, and American hazelnut in combination with the woody and herbaceous seed mixes.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. Evaluate the Project's impact on wildlife migration and fragmentation at this location. 3. Provide restoration plans to replicate the existing habitat features.	1. See above discussion regarding quantification of important wildlife habitat features. 2. This WIA is bound on all sides by development including Union Avenue, Station Road, and commercial properties. It is unlikely that wildlife is using this as a major migratory corridor due to its location and more suitable corridors/connecting habitat in the surrounding area. Considering current conditions, the Project will not adversely affect habitat continuity and connectivity and wildlife will continue to use more suitable wildlife corridors. 3. The plans indicate the proposed plantings. Locations of large woody debris will be dictated to the contractor in the field.	1. The WIA has scattered food plants that will be removed during construction. However, upland food plants outside of the WIA will remain and the area will be restored with food plants from both the woody seed mix and shrub plantings. 2. Although the 13 standing dead trees will be removed within the WIA, 9 will remain within this WIA's resource areas, which will continue to provide this habitat feature. 3. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
S16	1. Area similar to S15 provides only corridor for wildlife in surrounding area, though area is larger, and more vegetation cover will remain for wildlife to utilize. 2. Included pictures do not show nearby wetland. unable to evaluate wetland habitat based on information provided. 3. Areas S16, S17, S18 and S19 are all evaluated together, however S16 and S19 are very large	1. See response for S15. Same applies here. 2. A photo of the 4 square feet of permanent disturbance is included with this supplemental submission. 3. This is an incorrect observation by BETA. The WHE did not focus on the section that is closest to the river crossing. The entire WIA was evaluated for important wildlife habitat features.	1. Revise WHE to evaluate each impact area separately. 2. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 3. Conduct WHE by resource area to confirm	1. The WHE evaluated each WIA separately. However, detailed tables for each individual WIA are below. 2. See above discussion regarding quantification of important wildlife habitat features. 3. Evaluation by resource area is not required by direction in WHE Guidance or supporting forms. The WHE and the tables below discuss the important wildlife habitat features, project impacts, proposed mitigation, and the no adverse effect determination.	1. Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife. 2. Although 10 standing dead trees will be removed within the WIA 5, will remain within this WIA's resource areas, which will continue to provide this habitat feature. Additional snags are also present outside of wetland resource areas, which will continue to provide habitat.

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	sections that encompass several different hydrological features over a large area, this evaluation focuses on the section ofthese areas closest to the river crossing. 4. Evaluation tends to group resources together, such as total standing dead trees, instead of standing dead trees bordering riverfront (open water), and standing dead trees within bordering wooded swamp, which provide shelter for different species.	4. The WHE identified 9 live or dead trees that overhang or provide a view of open water. It should be noted that several trees have naturally fallen since the original WHE was completed.	restoration efforts proposed in each resource area are adequate to result in a no-adverse effect. 4. Provide adequate details on the restoration plan.	There were no unique features present and all features are present beyond the Project Site. 4. The proposed restoration plan was submitted to the Commission and BETA on August 7, 2020.	3. The tree cavities that were identified that is likely the result of a woodpecker(s). These small woodpecker holes provide little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of these trees with a small woodpecker holes will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities. In addition, one larger cavity that likely formed from a trunk that died off of a tree with multiple trunks will remain within the WIAs wetland resource areas and will continue to provide habitat. 4. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife. 5. Nine trees will be removed that potentially provide views of open water. However, trees and shrubs outside of the WIA that are closer to the water will remain and will continue to provide this habitat feature.
S17, S18	1. Standing woody vegetation in S17 is being removed and not replaced based on proposed restoration plan. 2. S18 is mostly herbaceous ground cover which will be replaced. 3. Construction activities such as grading, and installation of crane mats will likely alter and impact surrounding wetlands/ waterways beyond limits of work.	1. Acknowledged. The restoration plan in this location consists of a robust planting of live trees and shrubs. 2. Acknowledged. No response required. 3. Applicant has presented detailed sequencing, erosion control plan, and restoration plan to demonstrate and ensure construction activities will not alter surrounding areas.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. See recommendations for S16.	1. See above discussion regarding quantification of important wildlife habitat features. 2. Acknowledged. See the responses to the recommendations for S16.	1. The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources. 2. There are 6 standing dead tree that will be removed within the WIA. Although no standing dead trees will remain in this area, snags outside of the limited of work will remain in the immediate vicinity and will continue to provide wildlife habitat functions. 3. The tree cavities that were identified that is likely the result of a woodpecker(s). These small woodpecker holes provide little to no habitat function of a typical tree cavity for nesting,

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					roosting, or denning wildlife. The removal of these trees with a small woodpecker holes will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities. In addition, one larger cavity that likely formed from a trunk that died off of a tree with multiple trunks will remain within the WIAs wetland resource areas and will continue to provide habitat. 4. The Project will plant 7 trees and 35 shrubs which will mitigate for the loss of this habitat feature and the area will continue to provide live vegetation that overhangs or provides views of open water. These plantings will also mitigate for the removal of overhanging branches within one meter of the water's surface. 5. The crane mats will only be temporarily placed within the backwater area of Hop Brook where standing water is present during part of the growing season. Once the crane mats are removed, and area restored as detailed, this habitat feature will continue to provide value.
S19	1. Similar to S16, impact area is large with many different resource areas all being evaluated together, though the focus of this evaluation is on the bridge construction 2. Permanent disturbance to vegetated wetland is listed on the plans and yet this habitat resource is not adequately evaluated. Restoration for this impact is grouped with restoration of BVW in S20. Evaluation not adequate to determine the Project's effect on the resource area. 3. Photos provided do not include extensive vegetated wetlands surrounding work area or the IVW to impacted, so VHBs findings cannot be confirmed.	1. See response to S16. The WHE evaluation did not only focus on the bridge area. The bridge reconstruction was considered in S18. 2. All wetland replication is proposed in one location. 3. The WHE focused on the WIAs, which are within the work area. BETA completed site visits to observe existing conditions within and outside of Project limits of work to confirm VHB findings.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat. 2. See recommendations for S16. 3. Evaluate the wildlife habitat characteristics of the vegetated wetland to be filled.	1. See above discussion regarding quantification of important wildlife habitat features. 2. Acknowledged. See the responses to the recommendations for S16. 3. The IVW was evaluated within S16 and no important wildlife habitat features were identified.	1. The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources. 2. Although 13 standing dead trees will be removed, 51 will remain within this WIA's resource areas, which will continue to provide this habitat feature. Additional snags are also present outside of wetland resource areas, which will continue to provide habitat. 3. The tree cavities that were identified that is likely the result of a woodpecker(s). These small woodpecker holes provide little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of these trees with a small woodpecker holes will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities. In addition, 7 tree cavities will remain

Wetland Impact Area	BETA Comments from Table 1 (Table 1 - 8/7/2020)	Applicants' Response to BETA Comment	BETA Recommendations (Table 1 - 8/7/2020)	Applicants' Response to Recommendations	No Adverse Effect Conclusion
					within the WIAs wetland resource areas and will continue to provide habitat. 4. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife. 5. 29 trees will be removed that potentially provide views of open water. However, trees and shrubs outside of the WIA that are closer to the water will remain and will continue to provide this habitat feature and 9 trees and 35 shrubs will be planted which will provide views of open water.
S20	1. Culvert under railway may provide wildlife migration corridor for species between north and south section of wetland. 2. VHB noted trash/ refuse within this area, which can create sources of pollution when disturbed to install the transmission line. 3. Additional information is required to determine if the proposed wetland replication area meets the performance standards. 4. The replication area is small and separated from larger wetland by the construction area and bike path. Extending the culvert in this location will decrease the openness and may further hinder species migration 5. Significant amount of dense early successional vegetation will be removed and not replaced. Not sure if this is significant to surrounding area based on photos provided.	1. The drain pipe is currently buried. The Project includes extending drain pipe to maintain and improve connectivity. 2. This is not an accurate statement. If any trash/refuse is within the limit of work, it will be removed during construction. 3. Information on how the replication area meets the performance standards was previously provided. 4. Extending the culvert will maintain vernal pool hydrology. Species migration will not be impacted by the Project. 5. The Project includes restoring approximately 10,212 square feet with shrub plantings.	1. Evaluate the potential for culvert improvements to mitigate impacts to migration. 2. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat.	1. The drainage pipe will be extended to maintain vernal pool hydrology. 2. See above discussion regarding quantification of important wildlife habitat features.	1. The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources. 85% of suitable habitat within the 100 ft. VP Buffer in this area will remain. 2. Although 4 standing dead trees will be removed, 4 will remain within this WIA's resource areas, which will continue to provide this habitat feature. Additional snags are also present outside of wetland resource areas, which will continue to provide habitat. 3. Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife. 4. The standing water will only be temporarily impacted during the extension of the drainage pipe and construction of the replication area. Once the replication area is constructed, the area will provide approximately 530 square feet of area that will provide standing water during part

Wetland Impact Area	BETA Comments from Table 1 (Table 1 - 8/7/2020)	Applicants' Response to BETA Comment	BETA Recommendations (Table 1 - 8/7/2020)	Applicants' Response to Recommendations	No Adverse Effect Conclusion
					of the growing season. This is an increase of 362 square feet of this habitat feature.
S21	1. Impact area is small and previously disturbed so impact will not be significant as it makes up a small percentage of habitat in the surrounding area.	1. Acknowledged. No response required.	1. Quantify important habitat features on the Site, and within impact area to demonstrate the Project's effect on the Site's ability to protect wildlife habitat.	1. See above discussion regarding quantification of important wildlife habitat features.	1. The no adverse effect standard is met because the WIA is on the edge of the existing Eversource driveway and will minimally impact upland food plants that are present. The resource area associated with the remainder of the WIA is expansive and has abundant food plants that will continue to provide food sources to wildlife.

Table 2: Wetland Impact Area S1 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Resource Area Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact [sf])**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area (WIA)**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed WIA**	**Post-Construction Conditions**
367+00-370+70	8,328	Bylaw	VP AURA (2,115) BVW AURA (6,213)	Wetland 45 and Approximate Vernal Pool	Drainage Structure 129A	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity. Conversely, the Project will improve connectivity to vernal pools and surrounding woodlands by removing the rails and ties, which are a barrier to salamanders.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include minimal buckthorn	Important Upland Food Plants	Minimal, scattered	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. The Project will plant lowbush blueberry and the woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.
								Dense Herbaceous Cover	Approximately 50 sf (*Carex pensylvanica*)	Greater area of *Carex pensylvanica* present within the ROW to the south of the Project limits	Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat. Within the WIA approximately 4,713 square feet of restoration will occur with herbaceous native species.

<u>Existing Culvert/Drainage Structure Details:</u>

The current drainage page is a 2'x2.5' stone box that is an equalizer pipe.

<u>Proposed Mitigation for Important Wildlife Habitat Features</u>

- Planting upland food plants including black huckleberry (*Gaylussacia baccata*) and lowbush blueberry (*Vaccinium angustifolium*)
- Restoring area within Project limits with a native herbaceous mix and plugs of *Carex pensylvanica*, which will provide dense herbaceous cover

<u>No Adverse Effect Conclusion</u>

- None of the upland food plants identified within the WIA were particularly abundant or unique to the area. All of the species identified can be found outside of the WIA in the Project Locus. Project-related losses are not expected to reduce the capacity of the area to provide the important wildlife habitat value that this feature provides and will not result in an adverse effect. Regardless of the no adverse effect determination, the Project will include planting woody species within this WIA including lowbush blueberry and black huckleberry, which are food plants.
- Construction activities associated with the Project will remove this insignificant amount of dense herbaceous vegetation where it presently grows. However, removing this small area of dense herbaceous cover will not adversely affect the wildlife habitat functions it provides due to its size and because additional, larger areas of dense herbaceous vegetation are present beyond the WIA and within the Project Locus. Irrespective of this no adverse effect determination, the Project includes restoring all areas within the Project Site that will not be paved for the 10-foot-wide MCRT with a seed mix consisting of native herbaceous species. Within this WIA, it includes approximately 4,713 square feet of restoration with native species. In addition, the restoration plan includes plantings plugs of *Carex pensylvanica*. Consequently, the seeding with a native herbaceous seed mix and planting of *Carex pensylvanica* will greatly offset that which will be lost, thereby providing additional habitat value for wildlife and will not result in an adverse effect.

Table 3: Wetland Impact Area S2 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
375+00-376+50	3,253	Bylaw	VP AURA (3,253)	Approximate Vernal Pool	None	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity. Conversely, the Project will improve connectivity to vernal pools and surrounding woodlands by removing the rails and ties, which are a barrier to salamanders.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include minimal buckthorn	Upland Food Plants	Minimal, scattered	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.

<u>Existing Culvert/Drainage Structure Details:</u>

None

<u>Proposed Mitigation for Important Wildlife Habitat Features</u>

Planting upland food plants including black huckleberry (*Gaylussacia baccata*) and lowbush blueberry (*Vaccinium angustifolium*)

<u>No Adverse Effect Conclusion</u>

Individually, none of the food plants noted within the WIA S2 are unique to the WIA and all these species can be found outside of the WIA on the Project Locus and beyond. Because of the presence of similar food plants in areas near locations where loss of some food plants from the Project will occur, Project-related losses are not expected to reduce the capacity of the Project Locus and surrounding area to provide the important wildlife habitat value that this feature provides. Regardless of the no adverse effect determination, the Project will include planting black huckleberry and lowbush blueberry within this WIA, which are food plants. VP 2 is 70 feet from proposed limits of work for Project. 90.8% of suitable habitat within the 100ft. VP Buffer will remain. Project also includes mitigation plantings in the margins of this vernal pool and outside the current limits of work to enhance VP habitat and function at this location.

Table 4: Wetland Impact Area S3 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
395+75-399+10	7,893	MWPA/Bylaw	MWPA RFA (7,893) BVW AURA (5,788)	Wetland 44 and Hop Brook	None	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity. Conversely, the Project will improve connectivity to vernal pools and surrounding woodlands by removing the rails and ties, which are a barrier to salamanders.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include buckthorn and Morrow's honeysuckle.	Upland Food Plants	Limited oaks	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	1	None	No snags will be present within this resource area in post-construction conditions.
								Large Woody Debris	Scattered, minimal	Abundant	Brush piles and/or placement of trees, snags, and large limbs on the ground to mitigate for removal of large woody debris
								Live/Dead Veg Overhanging or Offering Visibility of Water	12 Trees	Abundant	The trees and shrubs outside of the WIA will remain and will continue to provide this habitat function.

Existing Culvert/Drainage Structure Details:

None

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature.
- Brush piles and/or large woody debris will be placed on the ground.

No Adverse Effect Conclusion

- The WIA has very limited oaks and there are oaks and other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the oaks within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- The removal of one standing dead tree within the WIA will not result in an adverse effect. There are no standing dead trees within this wetland resource area outside of the limit of work. However, there are snags beyond the WIA within the ROW and within the surrounding forest that will continue to provide this important wildlife habitat feature.
- Brush piles and/or placement of large woody debris on the ground to mitigate for the removal of the very minimal, scattered large woody debris that is present within the WIA will provide habitat for wildlife. In addition, there is large woody debris (e.g., downed trees, large branches) outside of the WIA and on the Project Locus that will continue to provide habitat value to wildlife.
- Project will not clear down the slope so this vegetation will remain and will continue to provide views of open water.

Table 5: Wetland Impact Area S4 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
399+10-400+10	3,746	MWPA	MWPA RFA (3,746), BLSF (37), and BVW AURA (3,746)	Wetland 44 and Hop Brook	None – Bridge 128	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include glossy buckthorn and Morrow's honeysuckle.	Upland Food Plants	Limited oaks and cherries	None	The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.
								Large Woody Debris	Minor and insignificant amount	None	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, or large limbs on the ground to mitigate for removal of large woody debris
								Live/Dead Veg Overhanging or Offering Visibility of Water	Approximately 35 trees and additional shrubs	None	10 trees of 10-12 feet in height 2 trees of 7-8 feet in height, and 93 shrubs will be planted

Existing Culvert/Drainage Structure Details:

None – Bridge 128 will be rehabilitated

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature.
- Brush piles and/or large woody debris will be placed on the ground.
- 10 trees of 10-12 feet in height 2 trees of 7-8 feet in height, and 93 shrubs will be planted that will provide views of open water.

No Adverse Effect Conclusion

- The WIA has very limited oaks and cherries. There are oaks and other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the oaks within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- Brush piles and/or placement of large woody debris on the ground will mitigate for the removal of the very minimal, scattered large woody debris that is present within the WIA will provide habitat for wildlife. In addition, there is large woody debris (e.g., downed trees, large branches) outside of the WIA and on the Project Locus that will continue to provide habitat value to wildlife.
- The Project will plant 12 trees and 93 shrubs will be planted which will mitigate for the loss of this habitat feature and the area will continue to provide live vegetation that overhangs or provides views of open water.

Table 6: Wetland Impact Area S5 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
400+60-401+65	4,168	MWPA	MWPA RFA (4,168), BLSF (262), and BVW AURA (4,168)	Wetland 44 and Hop Brook	None – Bridge 128	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include glossy buckthorn and Morrow's honeysuckle.	Important Upland Food Plants	Limited black cherry and service berry	None	The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. In addition, supplemental plantings include 2 serviceberry, 2 black oak, 28 sweet pepperbush, 28 American hazelnut, 21 northern bayberry, and 16 alternate-leaved dogwoods, which are food plants. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	10	1	One standing dead tree will remain within this WIAs wetland resource areas post-construction. Additional snags outside of this WIAs resource areas will also remain.
								Tree Cavity	1 at base of a tree	None	No tree cavities will remain within the wetland resource areas associated with this WIA. Tree cavities outside of the limit of work will remain and will continue to provide habitat.
								Large Woody Debris	Minor and insignificant amount	None	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, and large limbs on the ground to mitigate for removal of large woody debris
								Fallen Log at or within 1 Meter of Water's Surface	2	None	Following construction in the area, these features will be replicated in the same general location using logs that will be generated by Project tree clearing activities.
								Live/Dead Veg Overhanging or Offering Visibility of Water	45 trees and additional shrubs	None	11 trees of 10-12 feet in height 3 trees of 7-8 feet in height, and 104 shrubs will be planted
								Turtle Nesting Area	1 small area with insignificant quality	None	None

Existing Culvert/Drainage Structure Details:

None – Bridge 128 will be rehabilitated

Proposed Mitigation for Important Wildlife Habitat Features

- The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. In addition, supplemental plantings include 2 serviceberry, 3 black oak, 26 sweet pepperbush, 26 American hazelnut, 26 northern bayberry, and 26 alternate-leaved dogwoods, which are food plants.
- The removal of large woody debris will be replicated by either creating brush piles or placing cut trees, snags, or large limbs on the ground.
- The removal of two logs within one meter of the water's surface will be replicated by placing two cut logs in the same general area following construction.
- 11 trees of 10-12 feet in height, 3 trees of 7-8 feet in height, and 104 shrubs will be planted that will provide views of open water.

No Adverse Effect Conclusion

- The WIA has very limited serviceberry and cherries. There other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the oaks within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.

- There is 1 standing dead tree that will remain in the immediate vicinity and will continue to provide wildlife habitat functions.
- The removal of the tree with the cavity at its base will not prevent wildlife from using the area and suitable cavities outside of the limit of work will remain and will continue to provide habitat.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- The two logs that will be removed during construction will be mitigated by placing two new logs in that location after construction. This will avoid any loss of this habitat feature and will not result in an adverse effect.
- The Project will plant 14 trees and 104 shrubs will be planted which will mitigate for the loss of this habitat feature and the area will continue to provide live vegetation that overhangs or provides views of open water.
- Although there is a small amount of turtle nesting habitat present in S5, the size and quality are not significant. Areas in the vicinity of the WIA contain larger and more suitable nesting habitat, particularly the sand pit area southwest on SVT property. Overall, the loss of this small area of turtle nesting habitat in the WIA is not expected to result in an adverse effect to wildlife habitat. This conclusion is based on observations of the current use of the turtle nesting area (for example, people and dogs using it to access Hop Brook) and the presence of turtle nesting habitat within the vicinity of the WIA.

Table 7: Wetland Impact Area S6 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
401+65-403+50	4,283	MWPA	MWPA RFA (4,283) and BVW AURA (2,928)	Wetland 44 and Hop Brook	None	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity. Conversely, the Project will improve connectivity to vernal pools and surrounding woodlands by removing the rails and ties, which are a barrier to salamanders.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include glossy buckthorn and Morrow's honeysuckle.	Upland Food Plants	Limited black cherry and service berry	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	2	None	Post-construction, snags outside of the limit of work will remain and will continue to provide this important wildlife habitat function.
								Large Woody Debris	Scattered, limited	Scattered, present	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees and/or large limbs on the ground to mitigate for removal of large woody debris
								Live/Dead Veg Overhanging or Offering Visibility of Water	5 trees	Abundant	The trees and shrubs outside of the WIA will remain and will continue to provide this habitat function.

Existing Culvert/Drainage Structure Details:

None

Proposed Mitigation for Important Wildlife Habitat Features

- The proposed woody seed mix that will be used to restore the WIA includes food plants.
- The removal of large woody debris will be replicated by either creating brush piles or placing cut trees, snags, or large limbs on the ground.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although the 2 standing dead trees will be removed within the WIA and there are no remaining snags within these resource areas, there are more abundant snags throughout the ROW and within the vicinity of this WIA, which will continue to provide this habitat feature.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- Only five trees will be removed that potentially provide views of open water. However, trees and shrubs outside of the WIA that are closer to the water will remain and will continue to provide this habitat feature.

Table 8: Wetland Impact Area S7 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
405+00 to 416+50	29,927	Bylaw	Vernal Pool AURA (25,635) BVW AURA (4,292)	Wetlands 39-43/Vernal Pools 9-13	Drainage Structure #127J	The WIA is embedded within a larger area of natural habitat, including conservation land. The Project will not adversely affect habitat continuity or connectivity. Conversely, the Project will improve connectivity to vernal pools and surrounding woodlands by removing the rails and ties, which are a barrier to salamanders.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including foot paths, SVT and Sudbury trail system, people walking, riding bikes, riding horses, and walking dogs (on and off leash). Invasive species include glossy buckthorn.	Important Upland Food Plants	Minimal, scattered	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 14 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	7	24	The 24 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Large Woody Debris	Limited/Scattered	Scattered	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, and large limbs on the ground will mitigate for removal of large woody debris.

Existing Culvert/Drainage Structure Details:

127J: 2' x 2' Stone Box. South headwall and wingwall partial collapse; north end total collapse. Running water audible at time of inspection. Existing cover at structure is 8.1 feet.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature. In addition, 14 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will be planted within the WIA.
- Large woody debris, whether as brush piles or placement of trees or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although the 7 standing dead trees will be removed within the WIA, 21 will remain within this WIA's resource areas, which will continue to provide this habitat feature.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- 85-88% of suitable habitat within the 100 ft. VP Buffer will remain. The Project also includes mitigation plantings in the margins of Vernal Pools 9, 11, and 12 outside the current limits of work to enhance VP habitat and function.

Table 9: Wetland Impact Area S8 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
515+00-522+90	21,299	Bylaw	BVW AURA (17,752) RFA (14,784)	Wetlands 36-38 and Unnamed Stream	Culvert 127I	This portion of the Project alignment has little to no existing habitat continuity or connectivity given that there has been residential development on both sides of the MBTA ROW in this area.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; surrounding development; and past and current recreational use including a well-define foot path, people walking, riding bikes, and walking dogs (on and off leash). Someone has also cut and stacked a significant amount of vegetation within the railroad tracks. Invasive species include glossy buckthorn, Norway maple, garlic mustard, Japanese barberry, oriental bittersweet, burning bush, Morrow's honeysuckle, and multiflora rose. Single-family residences in vicinity.	Upland Food Plants	Scattered oaks, cherry, dewberry	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 39 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	4	4	The 4 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Tree Cavities	1 (<6 inches, likely woodpecker)	None	The tree with the one small woodpecker hole will be removed during construction. Cavities in the surrounding woodlands will remain.
								Small Mammal Burrows	1	Present	The one small mammal burrow will no longer be present post-construction. However, other small mammal burrows, including chipmunks, in the surrounding woodlands will remain.
								Dense Herbaceous Cover	Area of spotted henbit	Present	Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat. Within the WIA approximately 13,266 square feet of restoration will occur with herbaceous native species.
								Large Woody Debris	Abundant (large amount placed between tracks)	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The debris on the northern end of the culvert will be removed/cleaned out. The culvert is functioning, and no other work is proposed.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature. In addition, 39 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will be planted within the WIA.
- The area within Project limits will be restored with 13,266 square feet with a native herbaceous mix to provide dense herbaceous cover.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although the 4 standing dead trees will be removed within the WIA, 4 will remain within this WIA's resource areas, which will continue to provide this habitat feature.

- One small (<6”) tree cavity was identified that is likely the result of a woodpecker. This tree cavity provided little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of this tree with a small woodpecker hole will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities.
- One small mammal burrow, likely a chipmunk burrow, was identified within the railroad ballast. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population.
- Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat and approximately 13,266 square feet of restoration will occur with herbaceous native species.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

Table 10: Wetland Impact Area S9 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
523+00-530+90	19,120	Bylaw	Bylaw RFA (10,018) VP AURA (14,417) BVW AURA (4,758)	Wetlands 33-35 and Unnamed Stream	Culvert 127G	This portion of the Project alignment has little to no existing habitat continuity or connectivity given that there has been residential development on both sides of the MBTA ROW in this area and the immediate area around this WIA is surrounded on all sides by paved roadways.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including a well-define foot path, people walking, riding bikes, and walking dogs (on and off leash). Someone has also cut and stacked a significant amount of vegetation within the railroad tracks. Invasive species include Norway maple, Japanese barberry, oriental bittersweet, burning bush, glossy buckthorn, and multiflora rose. Single-family residences in vicinity.	Upland Food Plants	Scattered oaks, cherry, huckleberry, blueberry	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 5 each northern bayberry and alternate-leaved dogwood will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	3	3	The 3 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Small Mammal Burrows	1	Present	The one small mammal burrow will no longer be present post-construction. However, other small mammal burrows, including chipmunks, in the surrounding woodlands will remain.
								Large Woody Debris	Abundant (large amount placed between tracks)	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees and/or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The culvert is functioning effectively; no work is proposed at this culvert.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature. In addition, 5 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will be planted within the WIA.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although the 3 standing dead trees will be removed within the WIA, 3 will remain within this WIA's resource areas, which will continue to provide this habitat feature.
- The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- 81-88% of suitable habitat within the 100 ft. VP Buffer will remain. The Project also includes mitigation plantings in the margins of Vernal Pools 7 and 8 outside the current limits of work to enhance VP habitat and function.

Table 11: Wetland Impact Area S10 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
533+60-543+90	24,865	MWPA	MWPA RFA (24,272) and BVW AURA (23,334)	Wetlands 30 and 31 and Dudley Brook	Culvert 127F	This portion of the Project alignment has little to no existing habitat continuity or connectivity given that there has been residential development on both sides of the MBTA ROW in this area	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including a well-define foot path, people walking, riding bikes, and walking dogs (on and off leash). Invasive species include Norway maple, Japanese barberry, oriental bittersweet, burning bush, glossy buckthorn, and multiflora rose. Single-family residences in vicinity.	Upland Food Plants	Scattered oaks, cherry, blueberry, huckleberry	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 32 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	2	25	The 25 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Tree Cavities	1	2	Two tree cavities will remain within this WIAs wetland resource areas following construction.
								Small Mammal Burrow	1	Present	The one small mammal burrow will no longer be present post-construction. However, other small mammal burrows, including chipmunks, in the surrounding woodlands will remain.
								Large Woody Debris	Scattered and abundant, some stacked piles	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The culvert is functioning effectively; no work is proposed at this culvert.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature. In addition, 32 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will be planted within the WIA.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although the 2 standing dead trees will be removed within the WIA, 25 will remain within this WIA's resource areas, which will continue to provide this habitat feature.
- Although the 1 cavity will be removed within the WIA, 2 will remain within this WIA's resource areas, which will continue to provide this habitat feature.
- The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

Table 12: Wetland Impact Area S11 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
558+10-564+20	14,270	Bylaw	Bylaw RFA (9,211) VP AURA (5,782) BWV AURA (8,488)	Wetlands 27-29 and Unnamed Stream	Culvert 127E	The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas. Limited habitat in vicinity of project due to dense residential development.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including a well-define foot path, people walking, riding bikes, and walking dogs (on and off leash). Invasive species include Norway maple, Japanese barberry, oriental bittersweet, burning bush, and glossy buckthorn. Single-family residences in vicinity.	Upland Food Plants	Limited oaks, cherries, blueberry, brambles	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	1	5	The 5 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Dense Herbaceous Cover	Approximately 100 sf of *Carex pensylvanica*	Greater area of *Carex pensylvanica* present within the ROW to the south of the Project limits	Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat. Within the WIA approximately 8,403 square feet of restoration will occur with herbaceous native species.
								Large Woody Debris	Scattered, limited	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The existing 3'x2' concrete box culvert was clear all the way through during the inspection and the interior appeared in good condition. No work is proposed at this culvert.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature.
- Within the WIA approximately 8,403 square feet of restoration will occur with herbaceous native species, which will provide dense herbaceous cover.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although the 1 standing dead tree will be removed within the WIA, 5 will remain within this WIA's resource areas, which will continue to provide this habitat feature.
- A very small area (approximately 100 square feet) of *Carex pensylvanica* is present within the WIA, which will be removed from the WIA during construction. Removing this small area will not adversely affect local wildlife. Regardless, approximately 8,403 square feet of this WIA will be restored with a native herbaceous seed mix, which will provide dense herbaceous cover.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- The Project also includes mitigation plantings in the margins of Vernal Pool 6 outside the current limits of work to enhance VP habitat and function. 85% of suitable habitat within the 100 ft. VP Buffer in this area will remain.

Table 13: Wetland Impact Area S12 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
576+10-580+00	10,309	Bylaw	BVW AURA (10,309)	Wetland 25	Drainage Pipe 127D	Existing dense residential, commercial/industrial development immediately adjacent to MBTA ROW in this area has already eliminated habitat.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including a well-define foot path, people walking, riding bikes, and walking dogs (on and off leash). Invasive species include garlic mustard, oriental bittersweet, glossy buckthorn, Morrow's honeysuckle, and multiflora rose. Multi-family residences and Whole Foods development in vicinity.	Upland Food Plants	Limited oaks, cherries, blueberry	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. Area will continue to provide upland food sources to wildlife.
								Small Mammal Burrows	1	Present	The one small mammal burrow will no longer be present post-construction. However, other small mammal burrows, including chipmunks, in the surrounding woodlands will remain.
								Dense Herbaceous Cover	Approximately 120 sf of *Carex pensylvanica*	Greater area of Carex pensylvanica present within the ROW to the north of the Project limits	Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat. Within the WIA approximately 6,382 square feet of restoration will occur with herbaceous native species.
								Large Woody Debris	Limited, scattered	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees and/or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The existing 1'x2' stone box drainage pipe is in good condition; no work is proposed.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature.
- Within the WIA approximately 8,403 square feet of restoration will occur with herbaceous native species, which will provide dense herbaceous cover.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population.
- A very small area (approximately 120 square feet) of *Carex pensylvanica* is present within the WIA, which will be removed from the WIA during construction. Removing this small area will not adversely affect local wildlife. Regardless, approximately 8,403 square feet of this WIA will be restored with a native herbaceous seed mix, which will provide dense herbaceous cover.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

Table 14: Wetland Impact Area S13 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
585+25-599+90	36,556	Bylaw	VP AURA (9,859) BVW AURA (23,705) Bylaw RFA (25,331)	Wetlands 24 and 24A and Unnamed Stream/Stormwater Ditch	Culvert 127C	The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; and past and current recreational use including a well-define foot path, people walking, riding bikes, and walking dogs (on and off leash). Invasive species include garlic mustard, oriental bittersweet, glossy buckthorn, Morrow's honeysuckle, and multiflora rose. Multi-family residences and commercial development in vicinity.	Upland Food Plants	Limited oaks and cherries	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 22 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Small Mammal Burrows	1	Present	The one small mammal burrow will no longer be present post-construction. However, other small mammal burrows, including chipmunks, in the surrounding woodlands will remain.
								Large Woody Debris	Limited, scattered	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The existing 2'x2' stone box culvert is in good condition; no work is proposed.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- The areas outside of the WIA contain upland food plants and the removal of the limited oaks and cherries within the WIA will not reduce the capacity of the area to provide food sources. Regardless, upland food plants will be replanted within this WIA.
- The one small mammal burrow will no longer be present post-construction. However, chipmunks are prolific in the area and the surrounding woodlands will continue to support this species and removal of one burrow will not adversely affect the local chipmunk population.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- 85% of suitable habitat within the 100 ft. VP Buffer in this area will remain.

Table 15: Wetland Impact Area S14 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
600+50-602+25	4,986	Bylaw	Bylaw RFA (4,986) and BVW AURA (1,554)	Unnamed Stream/Station Road Drainage Ditch	None	This portion of the Project alignment has little to no existing habitat continuity or connectivity given the existing adjacent land uses. Immediate area is developed with a paved parking area, building, and maintained lawn area. It also abuts Union Avenue and a driveway to a lumber yard and other commercial properties. The Project will not adversely affect this WIAs current habitat continuity or connectivity value.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; surrounding commercial development; and Union Avenue. Invasive species include oriental bittersweet and glossy buckthorn.	Upland Food Plants	Limited oaks	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 18 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	1	None	No snags will be present within this resource area in post-construction conditions.

Existing Culvert/Drainage Structure Details:

None

Proposed Mitigation for Important Wildlife Habitat Features

The woody seed mix includes food plants that will mitigate for the loss of this habitat feature. In addition, 18 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will be planted within the WIA.

No Adverse Effect Conclusion

- The WIA has very limited oaks and there are oaks and other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the oaks within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- The removal of one standing dead tree within the WIA will not result in an adverse effect. There are no standing dead trees within this wetland resource area outside of the limit of work. However, there are snags beyond the WIA within the ROW and within the surrounding forest that will continue to provide this important wildlife habitat feature.

Table 16: Wetland Impact Area S15 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
602+50-711+30	25,375	Bylaw/MWPA	Bylaw RFA (11,759), MPWA RFA (13,630), BLSF (1,791), and AURA (25,375)	Wetlands 20-22 and Unnamed Stream/Station Road Drainage Ditch	Drainage Pipe 127B	This WIA is bound on all sides by development including Union Avenue, Station Road, and commercial properties. It is unlikely that wildlife is using this as a major migratory corridor due to its location and more suitable corridors/connecting habitat to the north and south of the MBTA ROW and beyond the dense residential, commercial/industrial development. Considering current conditions, the Project will not adversely affect habitat continuity and connectivity and wildlife will continue to use more suitable wildlife corridors.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; surrounding commercial development; and Union Avenue, Boston Post Road, and Station Avenue. Invasive species include Norway maple, garlic mustard, Japanese barberry, oriental bittersweet, autumn olive, glossy buckthorn, Morrow's honeysuckle, and multiflora rose.	Upland Food Plants	Scattered oaks, cherry, winterberry, and grape	Similar amount of similar species present beyond the WIA	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 21 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Tree	13	9	The 9 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Large Woody Debris	Limited, scattered	Similar amount beyond the WIA	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees and/or large limbs on the ground to mitigate for removal of large woody debris

Existing Culvert/Drainage Structure Details:

The southern end of the existing 24-inch cast iron pipe appears to be a catch basin in a lumber yard parking lot. No work is proposed on this drainage pipe; the utility line will be installed beneath the pipe.

Proposed Mitigation for Important Wildlife Habitat Features

- The woody seed mix includes food plants that will mitigate for the loss of this habitat feature. In addition, 21 each of northern bayberry, alternate-leaved dogwood, and American hazelnut will be planted within the WIA.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

No Adverse Effect Conclusion

- The WIA has scattered food plants that will be removed during construction. However, upland food plants outside of the WIA will remain and the area will be restored with food plants from both the woody seed mix and shrub plantings.
- Although the 13 standing dead trees will be removed within the WIA, 9 will remain within this WIA's resource areas, which will continue to provide this habitat feature.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

Table 17: Wetland Impact Area S16 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
711+70-724+40	32,655	MWPA/ Bylaw	BLSF (31) BVW (31) BVW AURA (32,195) RFA (32,655)	Wetlands 15-19 and Hop Brook	Drainage Pipe 127A	The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; surrounding commercial development; evidence of human use; and Boston Post Road. Invasive species include Norway maple, Japanese barberry, glossy buckthorn, Morrow's honeysuckle, and multiflora rose.	Upland Food Plants	Scattered oaks, cherry, and grape	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 57 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	10	5	The 5 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Tree Cavities	16 (mostly small, <6 inches)	1	One tree cavity will remain in these resource areas post-construction. However, tree cavities outside of the limit of work will remain and will continue to provide habitat.
								Large Woody Debris	Moderate, scattered	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees and/or large limbs on the ground to mitigate for removal of large woody debris
								Live/Dead Veg Overhanging or Offering Visibility of Water	9 trees	Abundant	The trees and shrubs outside of the WIA will remain and will continue to provide this habitat function. In addition, 24 shrubs will be planted within the northern side of the WIA adjacent to Hop Brook.

Existing Culvert/Drainage Structure Details:

The existing 24-inch cast iron drainage pipe is lined with metal, which reduces its size to 19 inches. The pipe is mostly filled with dirt and the south end of the original pipe is broken. The pipe will be replaced with a 24-inch ductile iron pipe and concrete headwall.

Proposed Mitigation for Important Wildlife Habitat Features

- The proposed woody seed mix and shrubs that will be used to restore the WIA includes food plants.
- The removal of large woody debris will be replicated by either creating brush piles or placing cut trees, snags, or large limbs on the ground.

No Adverse Effect Conclusion

- Upland food plants will be replanted within this WIA. In addition, the surrounding area contains upland food plants and will continue to provide a food source to wildlife.
- Although 10 standing dead trees will be removed within the WIA 5, will remain within this WIA's resource areas, which will continue to provide this habitat feature. Additional snags are also present outside of wetland resource areas, which will continue to provide habitat.
- The tree cavities that were identified that is likely the result of a woodpecker(s). These small woodpecker holes provide little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of these trees with a small woodpecker holes will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities. In addition, one larger cavity that likely formed from a trunk that died off of a tree with multiple trunks will remain within the WIAs wetland resource areas and will continue to provide habitat.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- Nine trees will be removed that potentially provide views of open water. However, trees and shrubs outside of the WIA that are closer to the water will remain and will continue to provide this habitat feature.

Table 18: Wetland Impact Area S17 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
724+40-725+05	2,718	MWPA	MWPA RFA (2,122), BLSF (1,738), AURA (1,947), LUWW (596), BVW (178), and Bank (124 linear feet)	Wetlands 15 and 16 and Hop Brook	None – Bridge 127	The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; evidence of human use; and surrounding development. Invasive species include glossy buckthorn and autumn olive.	Upland Food Plants	Limited, scattered oaks, serviceberry, and blueberry	None	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. In addition, 8 sweet pepperbush, 2 northern bayberry, 10 winterberry, 8 silky dogwood, and 7 highbush blueberries will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	6	None	There will be no snags remaining in this isolated location. However, snags outside of the limit of work within the vicinity will remain.
								Tree Cavities	8 (small, <6 inches)	None	There will be no cavities left in this isolated location.
								Overhanging Branches within 1 M of Water's Surface	Tall shrubs	None	The shrubs that will be planted within this area will continue to provide this habitat feature.
								Live/Dead Veg Overhanging or Offering Visibility of Water	25 trees, additional shrubs	None	5 trees of 10-12 feet in height 2 trees of 7-8 feet in height, and 35 shrubs will be planted
								Standing Water Present At least Part of Growing Season	596 square feet	8,208 square feet	This is a temporary impact from placement of crane mats. Post-construction conditions will be the same as pre-construction conditions.

Existing Culvert/Drainage Structure Details:

None - Bridge 127 will be replaced.

Proposed Mitigation for Important Wildlife Habitat Features

- The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. In addition, supplemental plantings include 8 sweet pepperbush, 2 northern bayberry, 10 winterberry, 8 silky dogwood, and 7 highbush blueberries, which are food plants.
- 5 trees of 10-12 feet in height, 2 trees of 7-8 feet in height, and 35 shrubs will be planted that will provide views of open water. These plantings will also mitigate for the loss of branches overhanging within one meter of the water's surface.

No Adverse Effect Conclusion

- The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- There are 6 standing dead tree that will be removed within the WIA. Although no standing dead trees will remain in this area, snags outside of the limited of work will remain in the immediate vicinity and will continue to provide wildlife habitat functions.
- The tree cavities that were identified that is likely the result of a woodpecker(s). These small woodpecker holes provide little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of these trees with a small woodpecker holes will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities. In addition, one larger cavity that likely formed from a trunk that died off of a tree with multiple trunks will remain within the WIAs wetland resource areas and will continue to provide habitat.
- The Project will plant 7 trees and 35 shrubs which will mitigate for the loss of this habitat feature and the area will continue to provide live vegetation that overhangs or provides views of open water. These plantings will also mitigate for the removal of overhanging branches within one meter of the water's surface.
- The crane mats will only be temporarily placed within the backwater area of Hop Brook where standing water is present during part of the growing season. Once the crane mats are removed, this habitat feature will continue to provide value.

Table 19: Wetland Impact Area S18 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
725+70-726+30	2,828	MWPA	MWPA RFA (2,277), BLSF (2,154), AURA (2,160), LUWW (550), BVW (118), and Bank (122 linear feet)	Wetlands 12 and 14 and Hop Brook	None – Bridge 127	The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; evidence of human use; and surrounding development. Invasive species include glossy buckthorn and reed canary grass.	Upland Food Plants	Limited oaks, cherry, and highbush blueberry	None	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. In addition, 9 sweet pepperbush, 3 northern bayberry, 11 winterberry, 8 silky dogwood, and 6 highbush blueberries will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	1	None	No standing dead trees will be present within these resource areas post-construction.
								Logs at or within 1 m of Water's Surface	3	None	Following construction in the area, these features will be replicated in the same general location using logs that will be generated by Project tree clearing activities.
								Live/Dead Veg Overhanging or Offering Visibility of Water	8 trees, additional shrubs	None	4 trees of 10-12 feet in height, 1 tree of 7-8 feet in height, and 37 shrubs will be planted
								Standing Water Present At least Part of Growing Season	551 square feet	7,163 square feet	This is a temporary impact from placement of crane mats. Post-construction conditions will be the same as pre-construction conditions.

Existing Culvert/Drainage Structure Details:

None – Bridge 127 will be replaced

The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas.

Proposed Mitigation for Important Wildlife Habitat Features

- The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. In addition, supplemental plantings include 9 sweet pepperbush, 3 northern bayberry, 18 winterberry, 8 silky dogwood, and 6 highbush blueberries, which are food plants.
- The removal of 3 logs within one meter of the water's surface will be replicated by placing 3 cut logs in the same general area following construction.
- 4 trees of 10-12 feet in height,12 trees of 7-8 feet in height, and 37 shrubs will be planted that will provide views of open water.

No Adverse Effect Conclusion

- The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- There is one standing dead tree that will be removed within the WIA. Although no standing dead trees will remain in this area, snags outside of the limited of work will remain in the immediate vicinity and will continue to provide wildlife habitat functions.
- The removal of 3 logs within one meter of the water's surface will be replicated by placing 3 cut logs in the same general area following construction.
- The Project will plant 7 trees and 35 shrubs which will mitigate for the loss of this habitat feature and the area will continue to provide live vegetation that overhangs or provides views of open water.
- The crane mats will only be temporarily placed within the backwater area of Hop Brook where standing water is present during part of the growing season. Once the crane mats are removed, this habitat feature will continue to provide value.

Table 20: Wetland Impact Area S19 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
726+30-753+15	71,764	Bylaw/ MWPA	BLSF (3,576) RFA (61,573) BVW AURA (71,764)	Wetlands 5, 6, 7, 8, 9, 11, 12, and 14 and Hop Brook	None	The Project will maintain its existing habitat continuity and connectivity with connectors to the surrounding areas.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; evidence of human use; and surrounding development. Invasive species include garlic mustard, Japanese barberry, oriental bittersweet, glossy buckthorn, Morrow's honeysuckle, and multiflora rose.	Upland Food Plants	Scattered oaks, blackberry, and grape	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 202 each of sweet pepperbush, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	13	51	The 51 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. In addition, additional snags are present outside of the limit of work and resource areas.
								Tree Cavities	8 (<6 inches)	7	Seven tree cavities that are larger and more suitable than the woodpecker holes will remain post-construction.
								Large Woody Debris	Scattered and abundant, some areas of stacked wood	Abundant	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees and/or large limbs on the ground to mitigate for removal of large woody debris
								Live/Dead Veg Overhanging or Offering Visibility of Water	Approximately 29 trees and additional shrubs	Present	The trees and shrubs outside of the WIA will remain and will continue to provide this habitat function.

<u>Existing Culvert/Drainage Structure Details:</u>

None

<u>Proposed Mitigation for Important Wildlife Habitat Features</u>

- The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. In addition, supplemental plantings include 202 each of sweet pepperbush, northern bayberry, winterberry, silky dogwood, and highbush blueberry, which are food plants.
- 5 trees of 10-12 feet in height, 2 trees of 7-8 feet in height, and 35 shrubs will be planted that will provide views of open water. These plantings will also mitigate for the loss of branches overhanging within one meter of the water's surface.

<u>No Adverse Effect Conclusion</u>

- The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- Although 13 standing dead trees will be removed, 51 will remain within this WIA's resource areas, which will continue to provide this habitat feature. Additional snags are also present outside of wetland resource areas, which will continue to provide habitat.
- The tree cavities that were identified that is likely the result of a woodpecker(s). These small woodpecker holes provide little to no habitat function of a typical tree cavity for nesting, roosting, or denning wildlife. The removal of these trees with a small woodpecker holes will not adversely affect wildlife due to the lack of value it currently provides and the surrounding woodlands, which likely have more suitable cavities. In addition, 7 tree cavities will remain within the WIAs wetland resource areas and will continue to provide habitat.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.
- 29 trees will be removed that potentially provide views of open water. However, trees and shrubs outside of the WIA that are closer to the water will remain and will continue to provide this habitat feature and 9 trees and 35 shrubs will be planted which will provide views of open water.

Table 21: Wetland Impact Area S20 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/ Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/ Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
760+60-766+45	16,674	Bylaw	VP AURA (11,928) BVW AURA (4,746)	Wetlands 3 and 4 and Vernal Pool 1	Drainage Pipe 125B	Boston Post Road is in close proximity to the Project to the north and there is limited to no habitat in this area. The Project will maintain any existing habitat continuity and connectivity with connectors to the surrounding areas to the south.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; evidence of human use; and surrounding development. Invasive species include garlic mustard, oriental bittersweet, glossy buckthorn, Morrow's honeysuckle, and multiflora rose.	Upland Food Plants	Scattered oaks, silky dogwood, winterberry, cherry, Virginia creeper, and grape.	Greater numbers and density of upland food plants outside of proposed impact areas in remainder of resource area(s) in Project Locus.	Food plants outside of the WIA will remain. Woody seed mix that will be used to restore the WIA includes food plants. 14 each of summersweet clethra, northern bayberry, alternate-leaved dogwood, American hazelnut will also be planted within WIA. Area will continue to provide upland food sources to wildlife.
								Standing Dead Trees	4	4	The 4 trees that are outside of the WIA but within the same resource areas will remain and will continue to provide habitat. Additional snags are also present outside of the limit of work and resource areas.
								Dense Herbaceous Vegetation	Area of various herbaceous species approximately 2,500 square feet	Present	Dense herbaceous cover outside of the WIA will remain and will continue to provide wildlife habitat. Within the WIA approximately 10,212 square feet of restoration will occur with herbaceous native species.
								Large Woody Debris	Limited, scattered	Present	Large woody debris outside of the WIA will remain. Brush piles and/or placement of trees, snags, and large limbs on the ground will mitigate for removal of large woody debris.
								Standing Water Present At least Part of Growing Season	168 square feet	None	The wetland replication area has been designed and will be constructed to include 530 square feet of standing water that will be present at least part of the growing season to replicate for this feature.

Existing Culvert/Drainage Structure Details:

The existing drainage pipe is completely buried and is a 12-inch reinforced concrete pipe. The pipe will be extended to maintain vernal pool hydrology.

Proposed Mitigation for Important Wildlife Habitat Features

- The proposed plantings and woody seed mix that will be used to restore the WIA includes food plants. In addition, supplemental plantings include 14 each of sweet pepperbush, northern bayberry, winterberry, silky dogwood, and highbush blueberry, which are food plants.
- Within the WIA approximately 10,212 square feet of restoration will occur with herbaceous/woody native species, which will provide dense herbaceous/woody cover.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature.

No Adverse Effect Conclusion

- The WIA has limited upland food plants and there are other upland food plants in greater abundance outside of the WIA and on the Project Locus. In addition, the proposed seed mix and proposed serviceberry and shrub plantings includes food plants, which will mitigate for the loss of this habitat function. Therefore, the removal of the limited upland food plants within the WIA will not result in an adverse effect to wildlife and the area will continue providing food sources.
- Although 4 standing dead trees will be removed, 4 will remain within this WIA's resource areas, which will continue to provide this habitat feature. Additional snags are also present outside of wetland resource areas, which will continue to provide habitat.
- Large woody debris, whether as brush piles or placement of trees, snags, or large limbs, will be placed in the immediate area to mitigate for the loss of this habitat feature. In addition, large woody debris is commonly located along the Project Locus outside of the limit of work. This large woody debris will remain and will continue to provide habitat for wildlife.

- The standing water will only be temporarily impacted during the extension of the drainage pipe and construction of the replication area. Once the replication area is constructed, the area will provide approximately 530 square feet of area that will provide standing water during part of the growing season. This is an increase of 362 square feet of this habitat feature.
- 87% of suitable habitat within the 100 ft. VP Buffer in this area will remain.

Table 22: Wetland Impact Area S21 (Detailed WHE Summary)

								Assessment of Important Habitat Features			
Stationing	**Total Area of Wetland Impact (sf)**	**Jurisdiction (MWPA/Bylaw)**	**Wetland Resource Type(s) (Area of Impact)**	**Associated BVW and/or Stream**	**Existing Culverts/Drainage Structures**	**Habitat Continuity and Connectivity**	**Habitat Degradation and Invasive Plants Present**	**Important Habitat Feature(s) Present**	**Amount Within Impact Area**	**Amount within Wetland Resource Area on the Project Locus outside of Proposed Wetland Impact Area**	**Post-Construction Conditions**
767+00	172	Bylaw	VP AURA (108) BVW AURA (64)	Unnamed Wetland/Vernal Pool	None	This WIA is on the edge of Eversource's driveway to the Sudbury Substation. The area will continue to provide its current limited level of habitat continuity and connectivity.	Quality of wildlife habitat degraded from historical use as a railroad; the rails, ties, and ballast that remain; evidence of human use; and construction of Eversource's gravel access road to the Sudbury Substation. Invasive species oriental bittersweet, glossy buckthorn, Morrow's honeysuckle, and multiflora rose.	Upland Food Plants	Limited blackberry and grape	Abundant	Food plants outside of the WIA will remain and the area will continue to provide upland food sources to wildlife.

<u>Existing Culvert/Drainage Structure Details:</u>

None

<u>Proposed Mitigation for Important Wildlife Habitat Features</u>

None

<u>No Adverse Effect Conclusion</u>

The no adverse effect standard is met because the WIA is on the edge of the existing Eversource driveway and will minimally impact upland food plants that are present. The resource area associated with the remainder of the WIA is expansive and has abundant food plants that will continue to provide food sources to wildlife.