TOWN OF BARRINGTON

ENVIRONMENTAL IMPACT ASSESSMENT

Young Road Barrington, NH Tax Map 240, Lot 8

Prepared for:

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Prepared by:

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PART 1: INTRODUCTION

This environmental impact assessment has been prepared by Fraggle Rock Environmental for the proposed conservation Subdivision located off of Young Road in Barrington, NH (Tax Map 240, Lot 8). This environmental impact assessment has been developed in accordance with the Town of Barrington, New Hampshire Subdivision Regulations (BSD 2022 V1).

PART 2: PROJECT DESCRIPTION

The project proposes a 23-lot conservation subdivision off Young Road in Barrington, NH. The project site is bordered on the west by Young Road and is bordered on the north and west by conservation land owned by the Town of Barrington. The project proposes 23 lots with single family homes, utilizing the existing roadway (Young Road). The project also proposes open-space in the east of the lot that encompasses valuable resources, including the prime wetland and is located adjacent to existing protected lands owned by Barrington and eased by South East Land Trust. The project proposes no wetland impacts, nor wetland buffer impacts.

PART 3: ENVIRONMENTAL IMPACT ASSESSMENT

An environmental assessment was completed by Damon E. Burt, of Fraggle Rock Environmental, LLC on August 18 and 19, 2023. A majority of the site was reviewed as part of this assessment, however a portion in the east corner was not accessible at this time due to water levels in Wetland C. Please see the field review map (Appendix B) for the site review boundary.

3.1 Soils and Geology:

Per the Natural Resources Conservation Service (NRCS), soils in the front of the site are fine sandy loams (Gloucester (GlC), Hollis-Gloucester (HgC), and Charlton (CsC)). These soils are generally somewhat excessively drained or well drained. Soils in the east of the site are very stony fine sandy loam (Gloucester (GsB), Acton (AdC), and Gloucester (GsB)). These soils are moderately to somewhat moderately drained. Soils in the middle-north of the site are poorly drained and very poorly drained. The site contains no farmland soils, per NRCS. For maps of soil data see Appendix A.

3.2 Topography:

Slopes along/adjacent to Young Road are moderate and range between 8-15% and slopes in the back of the site are minimal and range between 1-8% per the Natural Resources Conservation Service (NRCS) (see Appendix A). Steep slopes/ledge outcrops and minor inclusions of 35% slopes are found on site and have been removed from building areas. Depressions include Wetlands A through E.

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3.3 Vegetation:

The Wildlife Action Plan identifies the site as generally hemlock-hardwood pine in the east, Appalachian oak-pine in the northwest and open water/marsh and shrub wetland in the north. Field observations found that the upland areas of the site are generally successional forested habitats, dominated by white pine (*Pinus strobus*), black birch (*Betula lenta*), witch hazel (*Hamamelis virginiana*), gray birch (*Betula populifolia*), and red maple (*Acer rubrum*).

For dominant vegetation in wetlands please see section 3.5.

No endangered species of vegetation were observed during the field review on August 18 and 19, 2023, however this was not a comprehensive endangered species review. Glossy buckthorn (*Frangula alnus*), an invasive shrub, was observed across the site on August 18 and 19, 2023 in both uplands and within wetlands. Other invasive species may be present, as this was not a comprehensive invasive species review.

3.4 Fish and Wildlife:

The Wildlife Action Plan has identified a majority of the site as supporting landscape. This area includes the entire proposed project area along Young Road. Additionally, a portion of the site has been identified as highest ranked in New Hampshire in the east of the site, generally consistent with Wetland C. The northeast corner of the site has been identified as highest ranked habitat in the region. The Wildlife Action Plan ranked habitat data was reviewed prior to developing the plan for the site and intentionally avoided areas of highest ranked habitat. For more details see Appendix A.

The site contains ample suitable habitat for wildlife, including threatened and endangered species. Wetlands on site, especially Wetland C, provide ample open water or ponded habitat with slow moving water for turtles, such as the Blanding's turtle, spotted turtle, and wood turtle. Open water habitats within Wetland C also provides suitable nesting and foraging habitat for waterfowl species. Shady, wooded wetlands may provide suitable habitat for salamanders or frog species. Additionally, sections of Wetland A have the potential to be vernal pools as potential vernal pool characteristics were observed in areas of the wetland during the site review on August 18 and 19, 2023. A vernal pool would offer suitable habitat and amphibian breeding areas for species such as frogs and salamanders. A vernal pool analysis was not completed as part of this environmental assessment, and therefore cannot conclude if vernal pools exist on site. The proposed open space in the east of the site contains wetlands that will be preserved and may provide suitable habitat or supporting habitat for many species. The site also provides song birds habitat and foraging opportunities due to the presence of fruiting plants such as dewberry, bunch berry, and high bush blueberry. Additionally, the site provides upland forested habitat and foraging grounds for deer and turkey.

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3.5 Wetlands:

The site contains 5 wetlands. Wetlands on site were delineated by John P. Hayes, CWS. Wetlands were reviewed by Damon E. Burt, CWS, for the purpose of this Environmental Assessment on August 18 and 19, 2023. Wetland A is a small forested/scrub-shrub wetland (PFO/PSS1E) located in the west corner of the site and continues off site to the south and west. Wetland A presented potential vernal pool characteristics such as shallow standing water with no observable outlet, however a vernal pool analysis was not completed as part of this environmental assessment and cannot confirm if Wetland A is a vernal pool. Wetland A was dominated by red maple (*Acer rubrum*), black birch (*Betula lenta*), witch hazel (*Hamamelis virginiana*), cinnamon fern (*Osmunda cinnamomea*), high bush blueberry (*Vaccinium corymbosum*), dew beery (*Rubus* spp.), Canada mayflower (*Maianthemum canadense*), royal fern (*Osmunda regalis*), and swamp white oak (*Quercus bicolor*).

Wetland B and Wetland D are two small isolated scrub-shrub wetlands (PSS1E) along the western property boundary and Young Road. Wetland B and D were dominated by white pine saplings (*Pinus strobus*), black birch saplings (*Betula lenta*), high bush blueberry (*Vaccinium corymbosum*), dew berry (*Rubus* spp.), Canada mayflower (*Maianthemum canadense*), sensitive fern (*Onoclea sensibilis*), royal fern (*Osmunda regalis*), bunch berry (*Cornus canadensis*), and shallow sedge (*Carex lurida*).

The site contains Town of Barrington Prime Wetland #4 which flows north into the adjacent conservation lands which include expansive wetlands. The prime wetland is surrounded by poorly drained wetlands (Wetland C). The prime wetland is identified by the National Wetlands Inventory (NWI) as PEM1E and PUBF with the surrounding areas of poorly drained wetland being identified as PEM1E and PSS1E. Field observations confirm that Wetland C contained areas of open water (PUBF), however surrounding wetland was generally forested (PFO1E). Additionally, the NWI identifies a riverine habitat (R2UBH) consistent with the Madla Brook identified by NH Watershed Report Card located within Wetland C. Forested wetlands in Wetland C are dominated by red maple (*Acer rubrum*), white pine (*Pinus strobus*), black birch (*Betula lenta*), yellow birch (*Betula alleghaniensis*), glossy buckthorn (*Frangula alnus*), and cinnamon fern (*Osmunda cinnamomea*). Open water habitat within Wetland C is dominated by tussock sedge (*Carex stricta*), Sedge (*scirpus* spp.), sweet pepperbush (*Clethra alnifolia*), button bush (*Cephalanthus occidentalis*), red maple (*Acer rubrum*), and lesser bur-reed (*Sparganium americanum*).

Wetland E is a Wetland located in the eastern corner of the property. Wetland E was not reviewed as part of this study as water levels in Wetland C were too high to allow passage through the property.

Buffers of 100 feet are proposed around Prime Wetland #4 and buffers of 50 feet are proposed around the poorly drained wetlands.

Wetlands on site, especially Wetland C, provide groundwater recharge and flood flow functionality due to the expansive open water habitat. Additionally, slow moving channelized flow through Wetland C (Malda Brook: NHRIV600030903-01, per the NH Watershed report card), provides opportunities for sediment, toxicant, pathogen, or nutrient retention. Wetlands on site

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also provide opportunities for nutrient export through wildlife food sources and flowering plants used by nectar-gathering insects. Finally, the site provides ample wildlife habitat, especially in the east of the property within wetlands and adjacent uplands. For more information on wildlife habitat see Section 3.4. Wetlands on site do not provide recreation or educational opportunities as no off-street parking is available and no public access exists.

3.6 Surface and Groundwater Water Quality and Quantity:

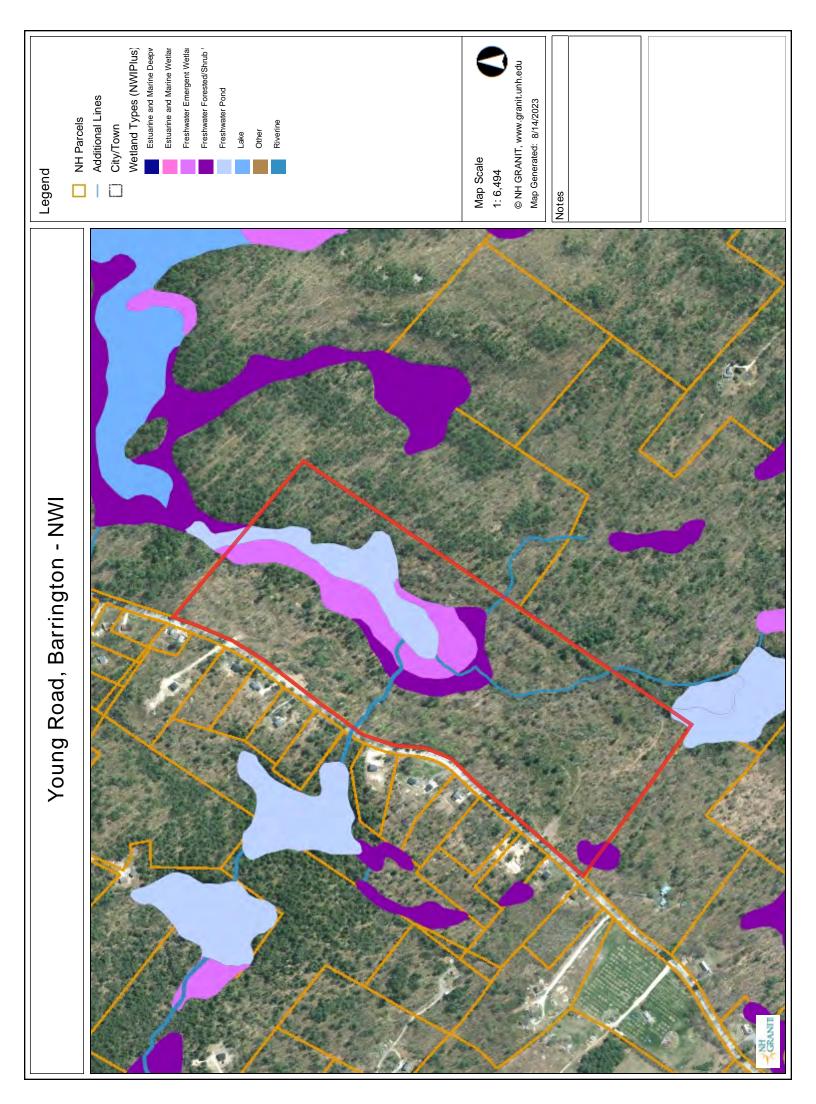
The project proposes no wetland or surface water impacts. Additionally, appropriate erosion and sediment controls will be implemented during the duration of the project which aims to maintain existing surface water quality.

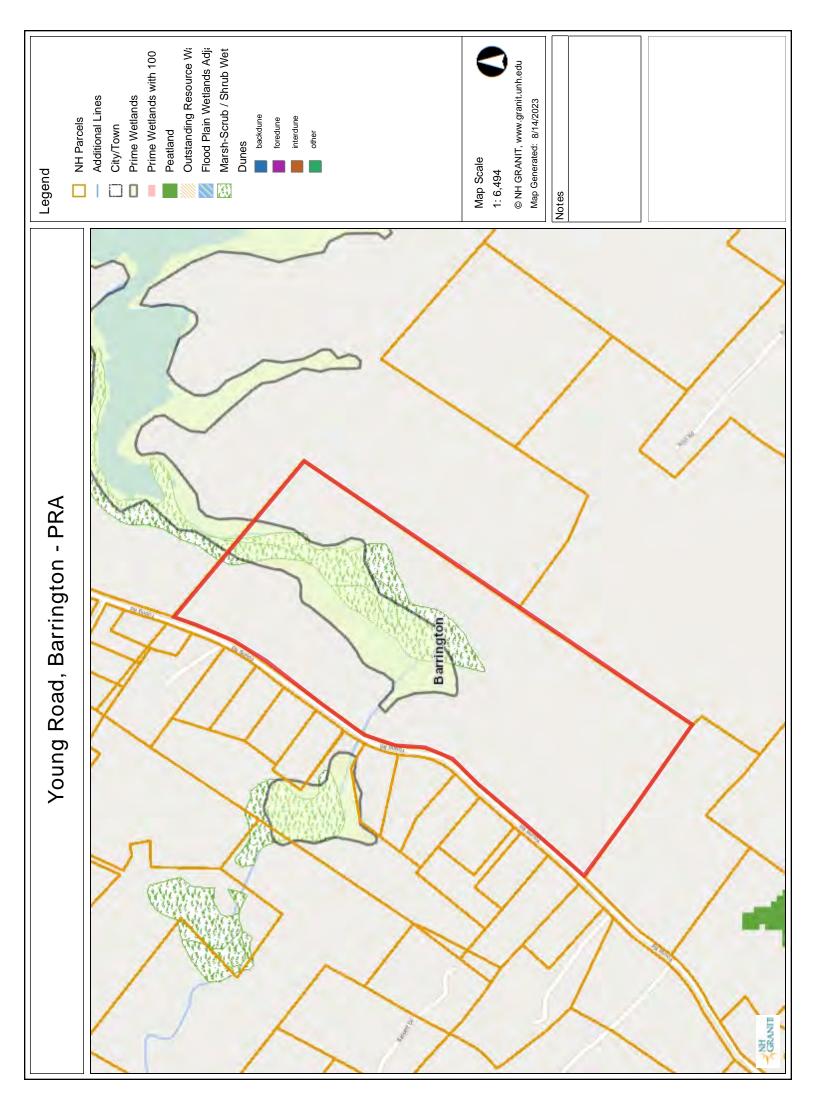
The project will have limited impact on abutters wells as the project site is at a lower elevation. Properties to the northwest of Young Road are higher than the subject site, and therefore impacts on their wells is not anticipated. Furthermore, the project does not impact the expansive wetlands in the east of the site that will maintain the necessary recharge of groundwater.

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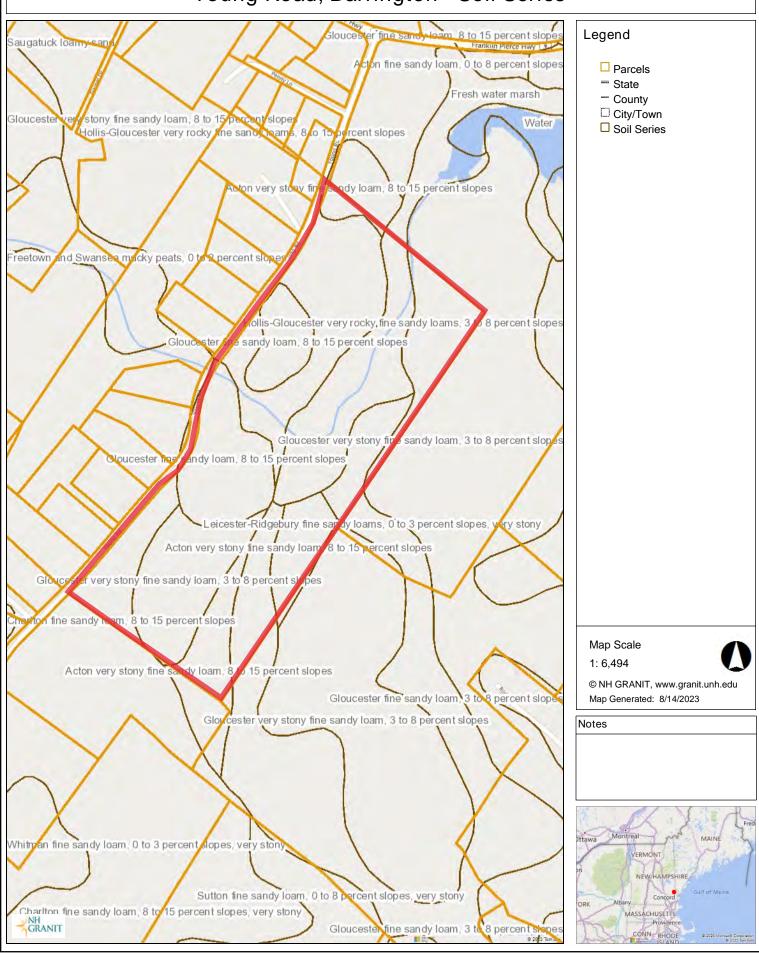
Appendix A

Site Location Maps





Young Road, Barrington - Soil Series

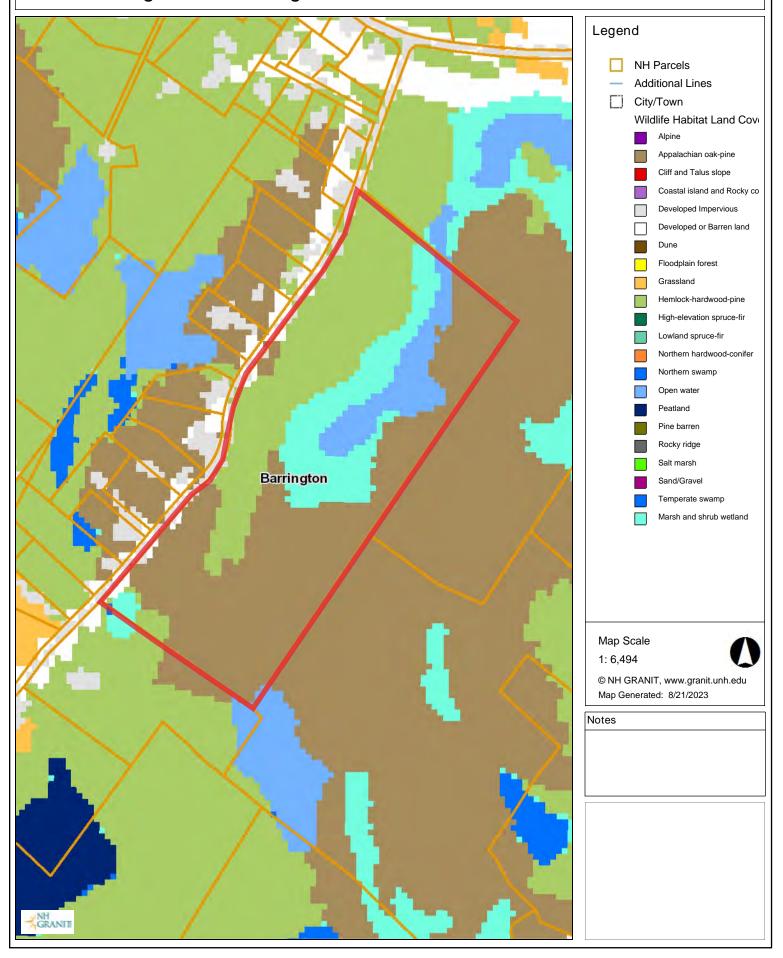


Young Road, Barrington - Drainage Class Legend AcB GIB Parcels - State - County GsC ☐ City/Town W **Drainage Class** Excessively drained Somewhat excessively drained AdC Well drained HgC HgB Moderately well drained Somewhat poorly drained Poorly drained Very poorly drained Mp Wa Fa HgB GIC GsB GIC AdC HID GsB CsC Map Scale MO 1: 6,494 GIB GsB © NH GRANIT, www.granit.unh.edu Map Generated: 8/15/2023 Notes LrA Wa VERMONT SuB MASSACHUSETTS NH GRANIT CsC CONN. RHODE

Young Road, Barrington - Soil Slope RgB Legend GIC AcB GIB Parcels - State - County ☐ City/Town GsC Representative Slope 1 - 8 9 - 15 W 16 - 25 26 - 40 AdC 40 + HgB Mp Wa Fa HgB GIC GsB GIC AdC HID GsB CsC Map Scale 1: 6,494 © NH GRANIT, www.granit.unh.edu GIB Map Generated: 8/14/2023 GsB Notes LrA VERMONT SuB GsB MASSACHUSETTS NH GRANIT CONN. RHODE

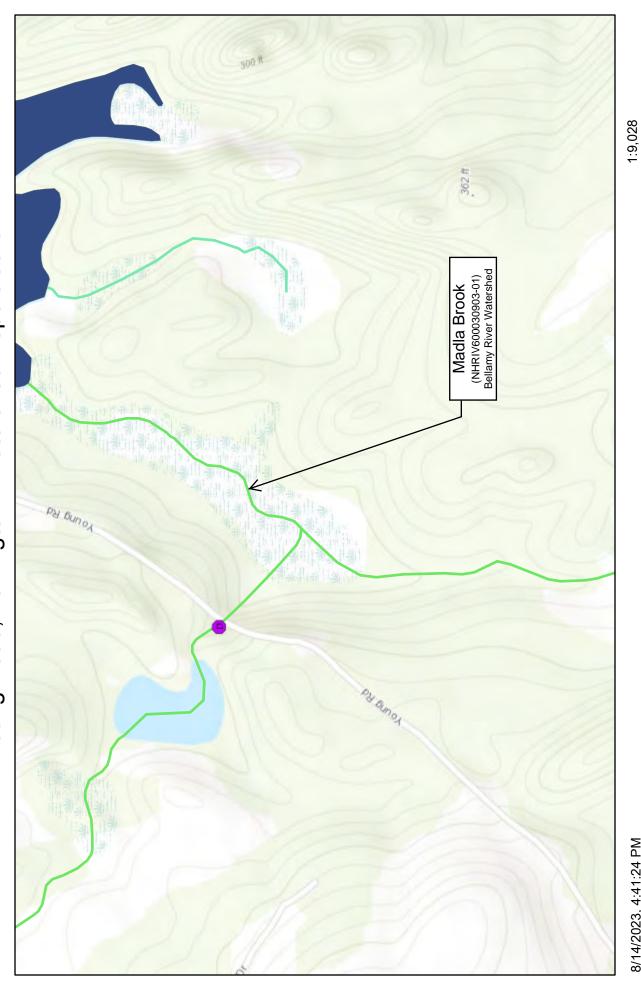
Young Road, Barrington - Farmland Soils Legend Parcels - State - County $\square \text{ City/Town}$ Farmland Soils <all other values> Conditional Prime Farmland All areas are prime farmland Farmland of local importance Farmland of statewide importance Map Scale 1: 12,988 © NH GRANIT, www.granit.unh.edu Map Generated: 8/15/2023 Notes VERMONT CONN. RHODE

Young Road, Barrington - Wildlife Action Plan - Land Cover



Young Road, Barrington - Wildlife Action Plan - Habitat Ranking Legend NH Parcels Additional Lines City/Town Highest Ranked Wildlife F 1 Highest Ranked Habitat in 2 Highest Ranked Habitat in 3 Supporting Landscape Barrington Map Scale 1: 6,494 © NH GRANIT, www.granit.unh.edu Map Generated: 8/21/2023 Notes

Young Road, Barrington - Watershed Report Card



Stations Used in 305(b)/303(d) Assessments 8/14/2023, 4:41:24 PM

2020/2022 Assessment Unit IDs (Lakes, Impoundments, Estuaries & Ocean)

The New Hampshire Department of Environmental Services, Watershed Management Bureau, ArcGIS Web AppBuilder

Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

0.07

0.2 mi

0.05

Appendix B

Site Photos and Site Review Map



Photo 1: View south into Wetland A located in the southwest corner of the site (photo taken 8/18/2023).



Photo 2: Additional view south into Wetland A which includes areas of ponded water (photo taken 8/18/2023).



Photo 3: View north into Wetland B located along the eastern property boundary near the south of the site (photo taken 8/18/2023).



Photo 4: Additional view of Wetland B from along Young Road (photo taken 8/18/2023).



Photo 5: View east near existing crossing under Young Road along the western property boundary and between proposed Lot 8-11 and Lot 8-12 where flow enters Wetland C (photo taken 8/19/2023).



Photo 6: View east from near Young Road into upland habitat near proposed Lot 8-14 (photo taken 8/19/2023).



Photo 7: View east into Wetland D located along Young Road in the southwest of the property (photo taken 8/19/2023).



Photo 8: View north into Wetland B located immediately south of Wetland D along Young Road (photo taken 8/19/2023).



Photo 9: View west into Wetland B which includes areas of standing water (photo taken 8/19/2023).



Photo 10: View east within upland near proposed Lot 8-19 (photo taken 8/19/2023).



Photo 11: View along channelized flow entering the site from the southeast, flowing north into the Prime Wetland (Wetland C) (photo taken 8/19/2023).



Photo 12: View north into Prime Wetland (Wetland C) located in the middle of the site (photo taken 8/19/2023).

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Photo 13: View east into forested wetland habitat surrounding the open water habitat within the Prime Wetland (Wetland C)



Photo 14: View east along channelized flow entering the site under the existing culvert under young Road. Flow continues east into the Prime wetland and is consistent with NWI mapped riverine and NH watershed report card data showing Malda Brook (photo taken 8/19/2023).

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Photo 15: View into marsh habitat located along the western property boundary towards the middle of the lot where expansive viewshed of the site can be seen (photo taken 8/19/2023).



Photo 16: View east into prime wetland from adjacent forested wetland habitat (photo taken 8/19/2023).



Photo 17: Additional view into the Prime Wetland looking south (photo taken 8/19/2023).



Photo 18: View east in the north of the property looking into Prime Wetland, where channelized flow continues off site to the north (photo taken 8/19/2023).



Photo 19: View east into the Prime Wetland (Wetland C) from the northern property boundary where additional expansive viewshed can be observed (photo taken 8/19/2023).

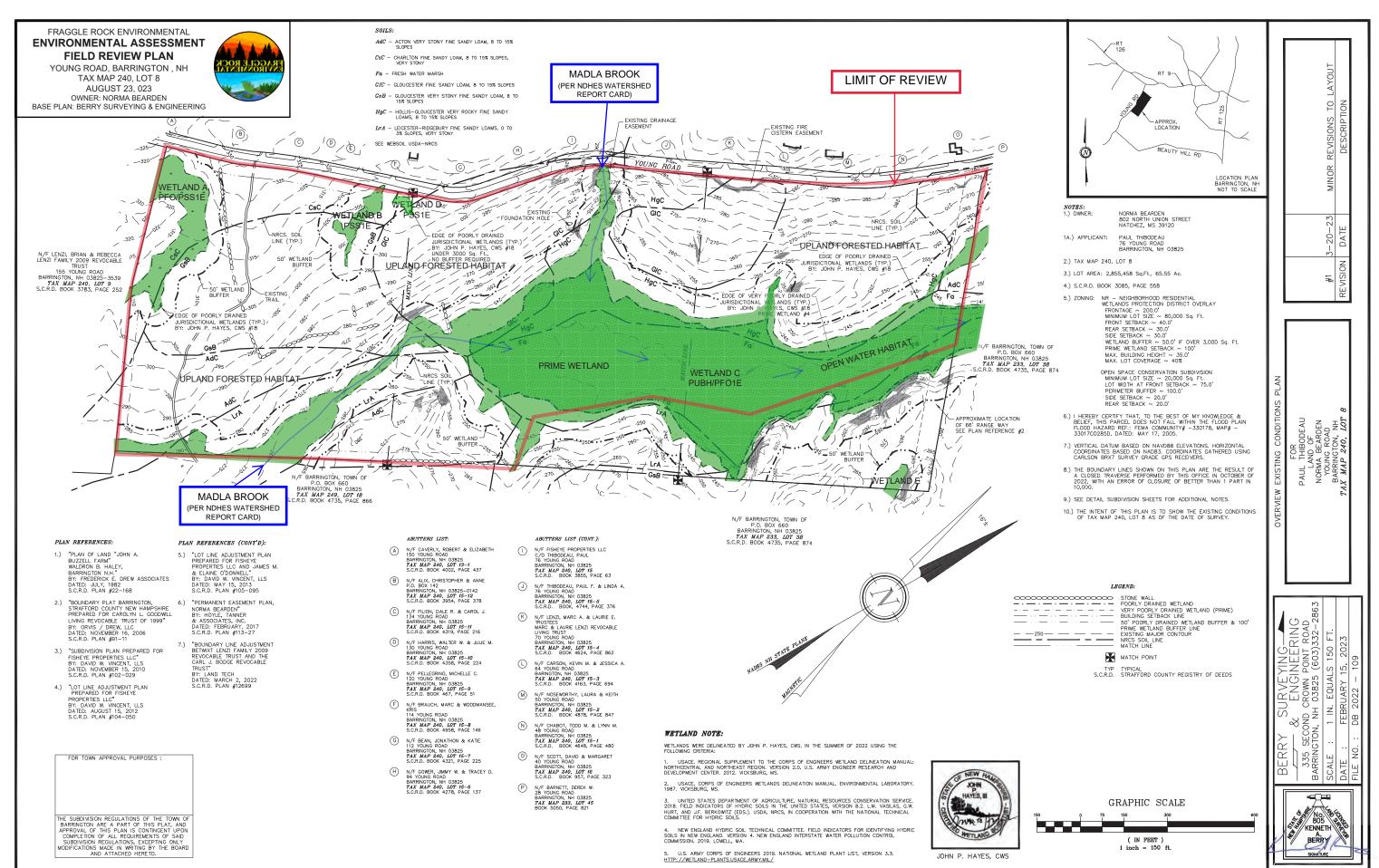


Photo 20: View north into the Prime Wetland (Wetland C) from the northern property boundary (photo taken 8/19/2023).



Photo 21: View south in uplands located along the northern property boundary (photo taken 8/19/2023).

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Appendix C

Project Plans

