



Compensatory Wetland Replication Plan

for

250 Turnpike Road
(Map: 27, Lots: 46 & 2A)
Southborough, MA 01772

DATE:
July 25, 2025

ADDRESSED TO:
Southborough Zoning Board of Appeals
Cordaville Hall, Lower Level
9 Cordaville Road
Southborough, MA 01772

PREPARED BY:
Goddard Consulting LLC
291 Main Street, Suite 8
Northborough, MA 01532

PREPARED FOR:
Ferris Development Group LLC & FD 250 Turnpike, LLC
118 Turnpike Road, Suite 300
Southborough, MA 01772

Exhibits

A. *Compensatory Wetland Replication Planting Plan*, Goddard Consulting, 07/25/2025

A. EXISTING CONDITIONS

The proposed development is located within the southern portion of a ± 9.83 -acre parcel of land situated on Turnpike Road in Southborough, MA (Reference Figure 1). The site is primarily undeveloped and consists of a mixed deciduous dominant forest and forested wetland. The northern portion of the parcel contains two stormwater basins associated with existing buildings and parking lots. The adjacent forest area surrounding these basins is heavily degraded due to invasive vegetation. In contrast, the southern portion of the forest remains free of invasive species, maintaining more natural vegetation. A previously approved invasive species management plan will be implemented adjacent to the proposed development to renaturalize the remaining upland forest and forested wetlands.



Figure 1. An aerial image of the locus site.

A small network of forested wetland communities encompassing approximately 1.5 acres is present adjacent to the proposed development area. This wetland complex includes several Bordering Vegetated Wetlands (BVWs) and two intermittent streams surrounded by previously developed and undeveloped land (Reference Figure 2).

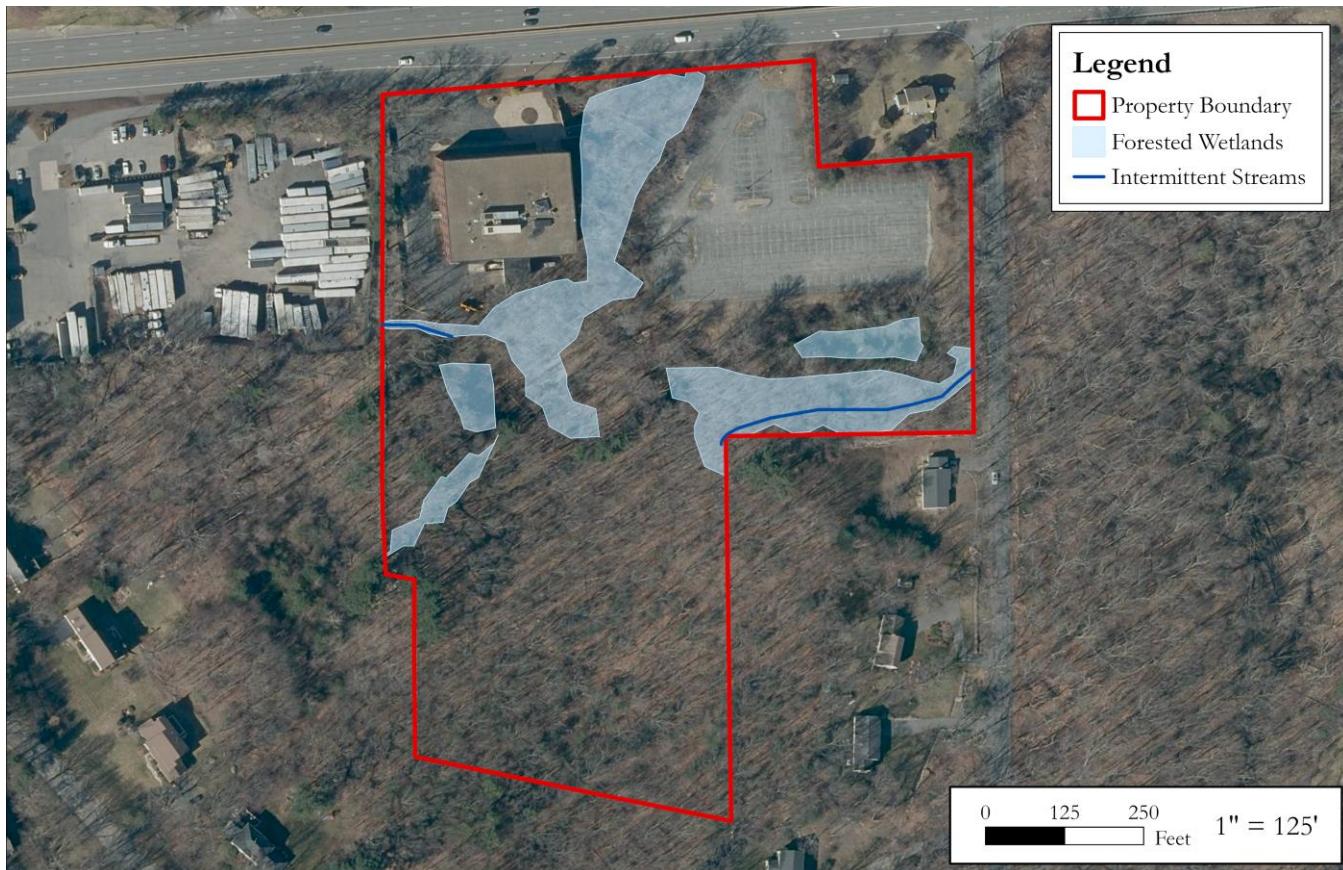


Figure 2. An aerial image of the locus site with the wetland resource areas, including Bordering Vegetated Wetlands and two intermittent streams.

The western BVW is located directly south of the western detention basin, and the eastern BVW lies to the south of the eastern detention basin. Within the eastern BVW, an intermittent stream originates within the delineated wetland boundary and flows west toward Parkerville Road. The northernmost BVW is located between two areas of existing development and is bisected by a pedestrian bridge. This wetland extends southward along the northern and eastern edges of the western stormwater detention basin.

The area north of the detention basin transitions into another intermittent stream channel and flows west into the larger wetland complex. The stream channel was heavily degraded with eroded banks and minimal natural vegetation. The stream channel is currently being restored under the guidance of a qualified wetland scientist.

According to the Massachusetts Natural Heritage and Endangered Species Program (MA NHESP), no portion of the proposed work area falls within mapped Priority or Estimated Habitat for Rare Species. The two stormwater basins located on-site may provide potential vernal pool habitat, as they exhibit the key physical and biological characteristics of vernal pools. The site is located within two Public Water Supply Watersheds, the Sudbury Reservoir and Reservoir No. 3 (Framingham), but is not mapped within a FEMA Flood Zone or Area of Critical Environmental Concern.



Photo 1. View of existing conditions of proposed wetland replication area.



Photo 2. View of existing conditions of adjacent bordering vegetated wetland.

B. PROPOSED CONDITIONS

The proposed development includes an access drive and thirty-two townhouse-style units within the 100-foot Buffer Zone to Bordering Vegetated Wetlands. Additionally, the Southborough Wetlands Protection Bylaw enforces a 20-foot No Disturb Zone to all freshwater wetlands. Five of the thirty-two units are proposed to intrude into the 20-foot No Disturb Zone, resulting in a total of 4,027 square feet of No Disturb Zone alterations. To mitigate for these alterations, a compensatory wetland replication area (Reference Photo 1) is proposed adjacent to an existing bordering vegetated wetland (Reference Exhibit A and Photo 2). This replication area will result in a net gain of 4,045 square feet of freshwater wetland on the locus site. The proposed replication area will be constructed at the same grade as the adjacent wetland to maintain adequate hydrology. The proposed location and grading will ensure the replication area experiences similar seasonal hydrology, supporting the establishment of native wetland vegetation and promoting long-term ecological stability.

The replication area will be planted with native facultative and facultative wetland species. Proposed shrub and tree quantities were selected based on MassDEP spacing guidelines. Eighteen trees and forty shrubs will be planted within the proposed replication area (Reference Section D). The selected plant species include a mix of vegetation found in the adjacent wetlands, along with additional species introduced to enhance diversity within the new wetland area. The proposed trees species include Red Maple/*Acer rubrum* (FAC), Yellow Birch/*Betula alleghaniensis* (FAC), and Swamp White Oak/*Quercus bicolor* (FACW). The proposed shrub species include Highbush Blueberry/*Vaccinium corymbosum* (FACW), Northern Spicebush/*Lindera benzoin* (FACW), Common Winterberry/*Ilex verticillata* (FACW), Sweet Pepperbush/*Clethra alnifolia* (FAC), and Speckled Alder/*Alnus incana* (FACW). The wetland replication area will be seeded with New England Wetland Seed Mix from New England Wetland Plants, Inc.

C. GENERAL INSTALLATION PROCEDURES

Supervision: All work within the replication area will be supervised by a qualified wetland scientist. The supervisor will submit monitoring reports to the Southborough Zoning Board of Appeals and Southborough Conservation Commission as described below. The reports will contain details of all work performed and photographs of completed conditions.

Timing: The installation of the plantings should be accomplished during the spring or fall growing seasons (between April 16 and May 31 or between September 16 and October 30).

Stake Limits of Work, Confirm Wetland Flags in Place & Install ECB – At Replication Area: Prior to any work, the limit of work will be staked and wetland flags confirmed by a wetland scientist. Erosion control barriers will be installed along the limit of work for the replication area. These will remain in place until the replication area has stabilized and approval is received from the Southborough Zoning Board of Appeals and/or Conservation Commission. The wetland scientist will have the authority to require additional erosion control measures if deemed necessary.

Identify Shrubs, Woody Debris, and Boulders to be re-used in Replication Area: The supervising wetland scientist shall identify and flag any native wetland shrubs within the replication areas that may be dug up and stockpiled for use as additional plantings in the replication areas. Any flagged specimens shall be removed and stockpiled in a designated area outside the replication areas. Any large woody debris (rotting logs and tree stumps), moss covered boulders/rocks, ferns (cinnamon fern), and other ground cover shall also be identified and flagged for stockpiling and subsequent addition to the replication areas. Wetland trees that lie or stand along the edge of the replication area may be preserved at the discretion of the wetland scientist.

Remove Trees and Vegetation: Once flagged trees, shrubs and woody debris specimens have all been removed and stockpiled, clear and remove all remaining vegetation within the replication area in preparation for excavation and grading.

Excavation: A storage area for soil and leaf litter from the wetland replication area will be prepared prior to excavation, outside of any resource areas or buffer zone. Upland soil from the impact zone will be excavated and transported to the storage area. Large trees should be avoided during excavation.

An excavator or backhoe will remove existing soils in the replication area to a hydrologic depth. A qualified wetland scientist will confirm redoximorphic features are visible within the C-horizon at the surface. The depth of the excavation will be at least one foot below the proposed final grade. The topsoil and subsoil will be removed from the area to either be reused or removed from the site. The subsoil of the C-horizon will be loosened prior to final grading to avoid soil compaction prior to topsoil placement. Final grading elevation will match existing BVW elevations and as favorable hydrological conditions are reached.

Following the removal of upland topsoil and subsoil, organic soils will be placed into the wetland replication area. The organic soil must consist of a 50:50 mix of loam and organic material with an organic content between 12% and 20%. The topsoil will be placed within the wetland replication area to a depth of 6" to 12", to be determined by the wetland scientist. Final grade shall be confirmed to be proper by the wetland scientist prior to plantings. No equipment should drive over the placed material to avoid soil compaction. The final grading will mimic topography with areas of pooling and flooding during heavy rain events, and surface water during wetter seasons.

Place Woody Debris and Boulders: Woody debris and moss-covered boulders currently found in the proposed replication area shall be preserved and randomly placed throughout the replication areas to provide cover for wildlife.

Planting: The plantings will be installed according to the attached planting plan (Reference Exhibit A). The precise siting of plants may be determined by the wetland scientist or landscaper in the field prior to installation. All plantings will be distributed randomly throughout the area with trees spaced at 12' to 15' on center, shrubs spaced at 8' to 10' on center, and herbaceous species 3' or less on center. The shrubs will be placed in clumps of 3 to 4 of the same species. The same species will be placed in groups to mimic natural conditions. All plantings will be removed from burlap sacks, wire cages, and plastic containers prior to planting. The trees will be planted on mounds, while shrubs and herbaceous species will be planted in depressions. Each plant will have its roots loosened prior to planting to encourage root growth away from the planting bulb. The plants will be adequately watered immediately following planting. Leaf litter will be spread throughout the area if it is available. Any significant disturbances will be seeded with the wetland seed mix as specified in the Planting List Table in Section D.

Erosion Controls Removal: Once the replication areas are stable, a request shall be submitted to the Conservation Commission to remove the erosion controls around the wetland replication areas. Upon approval of stabilization, erosion controls shall be removed promptly, and any significant disturbance shall be seeded with a wetland seed mix as specified in section C.

As-built Report and Plan: An as-built plan will be prepared by the surveyor or engineer and reviewed by the wetland scientist for certification that it was built properly. The report will include dates of replication, soil data of replicated area, dates of planting, and percent cover of individual species.

Wetland Replication Monitoring:

a. **Seasonal monitoring reports** will be prepared for the replication area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of early summer and early fall inspections and will include photographs and details about the vitality of the replication area. The monitoring reports will be submitted to the Southborough Zoning Board of Appeals and the Southborough Conservation Commission by the end of each year. The monitoring reports will describe, using narratives, plans, and color photographs, the physical characteristics of the replication area with respect to stability, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e., herb, shrub, and tree layers).

b. **At least 75% of the surface area** of the wetland replication area will be re-established with indigenous plant species within two growing seasons. If the replication area does not meet the 75% re-vegetation requirement by the end of the second growing season after installation, the applicant will submit a remediation plan to the Southborough Zoning Board of Appeals and Southborough Conservation Commission for approval that will achieve replication goals, under the supervision of a qualified wetland scientist. This plan must include an analysis of why the areas have not been successfully re-vegetated and how the applicant intends to resolve the problem.

D. PLANTING LIST

Wetland Replication Area (4,045 SF)			
Common Name	Scientific Name	Number	Size
Trees (18)*			
Red Maple (FAC)	<i>Acer rubrum</i>	6	4-5'
Yellow Birch (FAC)	<i>Betula alleghaniensis</i>	6	4-5'
Swamp White Oak (FACW)	<i>Quercus bicolor</i>	6	4-5'
Common Name	Scientific Name	Number	Size
Shrubs (40)*			
Highbush Blueberry (FACW)	<i>Vaccinium corymbosum</i>	8	1 or 2 gal. pots
Northern Spicebush (FACW)	<i>Lindera benzoin</i>	8	1 or 2 gal. pots
Common Winterberry (FACW)	<i>Ilex verticillata</i>	8	1 or 2 gal. pots
Sweet Pepperbush (FAC)	<i>Clethra alnifolia</i>	8	1 or 2 gal. pots
Speckled Alder (FACW)	<i>Alnus incana</i>	8	1 or 2 gal. pots
Seed Mix			
New England Wetland Plants WETMIX or equivalent*			2 lbs.

*Species selection dependent on nursery availability.

E. CONCLUSION

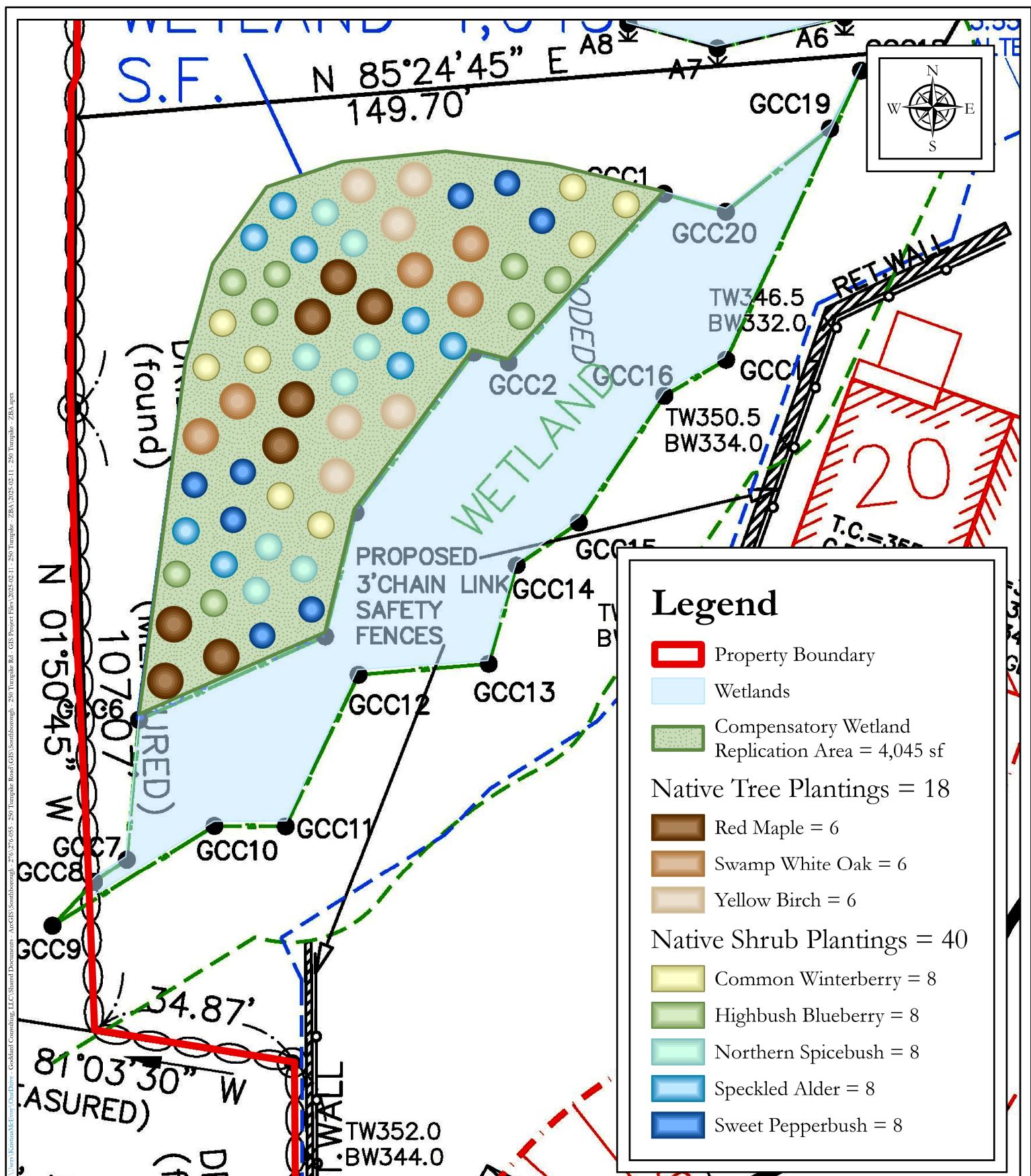
The proposed compensatory wetland replication area has been designed to mitigate for permanent alterations within the 20-foot No Disturb Zone, in accordance with the Southborough Wetlands Protection Bylaw. The wetland replication plan includes appropriate site preparation, soil modification, native plantings, and monitoring protocols to ensure the successful establishment of an ecologically functional freshwater wetland. Following completion, the wetland replication area will result in a net gain of 4,045 square feet of freshwater wetland on-site. The proposed design meets all state and local regulatory standards for wetland replication and will be implemented under the supervision of a qualified wetland scientist.

Sincerely,

Goddard Consulting, LLC



Tom Schutz, WPIT
Lead Wetland Scientist



GODDARD CONSULTING

Strategic Ecological Consulting

Compensatory Wetland Replication Planting Plan

Date: 07/25/2025

250 Turnpike Road
Southborough, MA 01772

0 15 30 Feet $1'' = 30'$

71.538436°W, 42.2892181°N

Parcel ID: 27-46, 27-2A