



## MITIGATION PROPOSAL

**TO:** Hingham Conservation Commission

**FROM:** Brad Holmes

**DATE:** November 24, 2025

**RE:** Derby Academy, Hingham

In support of the Notice of Intent (NOI) application under review for the after the fact permitting of the air handler/air conditioning system with infrastructure at the Derby Academy, Environmental Consulting & Restoration, LLC (ECR) is proposing this Mitigation Proposal to mitigate the past site work and to bring the project into compliance with the Town of Hingham's Conservation Policies. Based on the updated survey and plan prepared by Merrill Engineers & Land Surveyors (see attached), the completed project avoids impacts to wetland resource areas such as Coastal Bank, Bordering Vegetated Wetlands, and Land Subject to Coastal Storm Flowage. However, the completed project is located within the buffer zone to wetland resource areas. More specifically, please note the following:

- The project area is within the 100-foot buffer zone to the top of a Coastal Bank. The Coastal Bank near the project area at the site follows the limit of Land Subject to Coastal Storm Flowage where there is a slope of greater than 10 to 1 within the coastal flood zone.
- A small portion of the project area is within the 0-to-50-foot buffer zone, which is approximately 244 square feet. Of that area, approximately 96 square feet is impervious and 148 square feet is pervious.
- The majority of the project area is located between the 50 and 100 foot buffer zone, which is approximately 2,530 square feet. Of that area, approximately 1,365 square feet is impervious.

Based on the area calculations listed above, mitigation is necessary to comply with the Hingham Conservation Commission's mitigation policy. Mitigation is proposed as follows:

- 0 to 50 feet (2 to 1 ratio for impervious) = 192 square feet
  - 0 to 50 feet (1 to 1 ratio for pervious) = 148 square feet
  - 50 to 100 feet (1 to 1 ratio for impervious) = 1,365 square feet
- Total Mitigation Area = 1,705 square feet

Additional compliance with the Hingham Conservation Commission's tree removal policy is also necessary. As noted in the NOI application, 3 trees were removed as part of this project. Therefore, replacement planting at a 2 to 1 ratio is proposed, meaning replacement planting of 6 trees.

Based on the calculations listed above, ECR is proposing the following Mitigation Activities:

1. Non-Native Invasive Plant Removal – Prior to the start of mitigation planting activities, the existing non-native invasive plants within the area are proposed for removal. The mitigation area contains some non-native invasive plants mixed among native vegetation. The non-native invasive plants consist of species such as Burning Bush (*Euonymus alatus*), Oriental Bittersweet (*Celastrus orbiculatus*), and Glossy Buckthorn (*Rhamnus frangula*). Although these invasive plants are found in lower numbers at the site, the control of these plants is the first step in any vegetation management proposal. These invasive plants significantly degrade the environment and if left



unmanaged will continue to expand throughout the buffer zone. The Massachusetts Invasive Plant Advisory Group defines invasive plants as "non-native species that have spread into native or minimally managed plant systems in Massachusetts, causing economic or environmental harm by developing self-sustaining populations and becoming dominant and/or disruptive to those systems".

The woody invasives are proposed to be treated and removed from the mitigation site utilizing the "cut & paint" method. The targeted plants will be flagged in the field by the overseeing botanist, flush cut at the base of their stem, and then removed from the site. Upon cutting, the stems will be painted with herbicide to prevent stump sprouting and ultimately kill off the remaining root mass. The herbicide product proposed for use will be chosen by the licensed herbicide applicator to include coordination of the product details with the Conservation Agent prior to application. Though labor intensive, the cut & paint technique prevents herbicide exposure to non-target plants.

Since the existing non-native invasive plants are found in lower densities and mixed among the other native vegetation, the overall mitigation project area has been expanded beyond what the requirement area is calculated at. Please refer to the Mitigation Project Area Schematic on the following page for more information.

2. **Native Planting** – Following the removal of the non-native invasive plants, the planting of native saplings and shrubs are proposed for interplanting throughout the mitigation area. The number of proposed mitigation plantings are based on the mitigation area requirement of 1,705 square feet. Using saplings spaced approximately 12 feet on center and shrubs spaced approximately 8 feet on center requires at least 14 saplings and 31 shrubs for replanting activities. The spacing for replacement planting follows DEP’s Guidance for Inland Wetland Replacement (September 2022). The following list of plants are proposed for interplanting throughout the mitigation area:

TREE SPECIES	SIZE (height)	NUMBER
Red Oak ( <i>Quercus rubra</i> )	6 to 8 feet	5
White Oak ( <i>Quercus alba</i> )	6 to 8 feet	5
Red Maple ( <i>Acer rubrum</i> )	6 to 8 feet	5
Red Cedar ( <i>Juniperus virginiana</i> )	6 to 8 feet	5
Total		20
Note, 6 additional trees included to comply with Tree Removal Policy		

SHRUB SPECIES	SIZE (height)	NUMBER
Highbush Blueberry ( <i>Vaccinium corymbosum</i> )	1.5 to 2 feet	6
Bayberry ( <i>Myrica pennsylvanica</i> )	1.5 to 2 feet	5
Winterberry ( <i>Ilex verticillata</i> )	1.5 to 2 feet	5
Witch Hazel ( <i>Hamamelis virginiana</i> )	1.5 to 2 feet	5
Northern Arrowwood ( <i>Viburnum dentatum</i> )	1.5 to 2 feet	5
Sweet Pepperbush ( <i>Clethra alnifolia</i> )	1.5 to 2 feet	5
Total		31

# ECR

Environmental Consulting & Restoration, LLC



Upon completion of planting, the root zones of the plants will be mulched with a 1- to 2-inch-thick layer of leaf litter or other natural organic mulch. All plantings to be spaced randomly to supplement the existing vegetation and fill in areas where invasive plants were removed. Plant layout will be at the discretion of the overseeing wetland scientist and coordinated with the Conservation Agent. It is not practical to identify the location of the proposed plantings on the site plan due to the presence of the invasive vegetation. However, the planting location or “asbuilt” planting plan could be completed and submitted to the Conservation office following completion of the initial planting work. Monitoring and reporting tasks will follow the special conditions of the anticipated Order of Conditions.

Included with this proposal are the following attachments:

1. Existing Conditions Plan showing the top of the Coastal Bank by Merrill Engineers & Land Surveyors
2. Proposed Mitigation Plan

Upon review of this Mitigation Proposal, please contact me at (617) 529-3792 or [Brad@ecrwetlands.com](mailto:Brad@ecrwetlands.com) with any questions or requests for additional information.

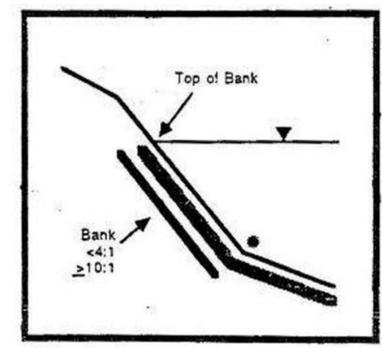
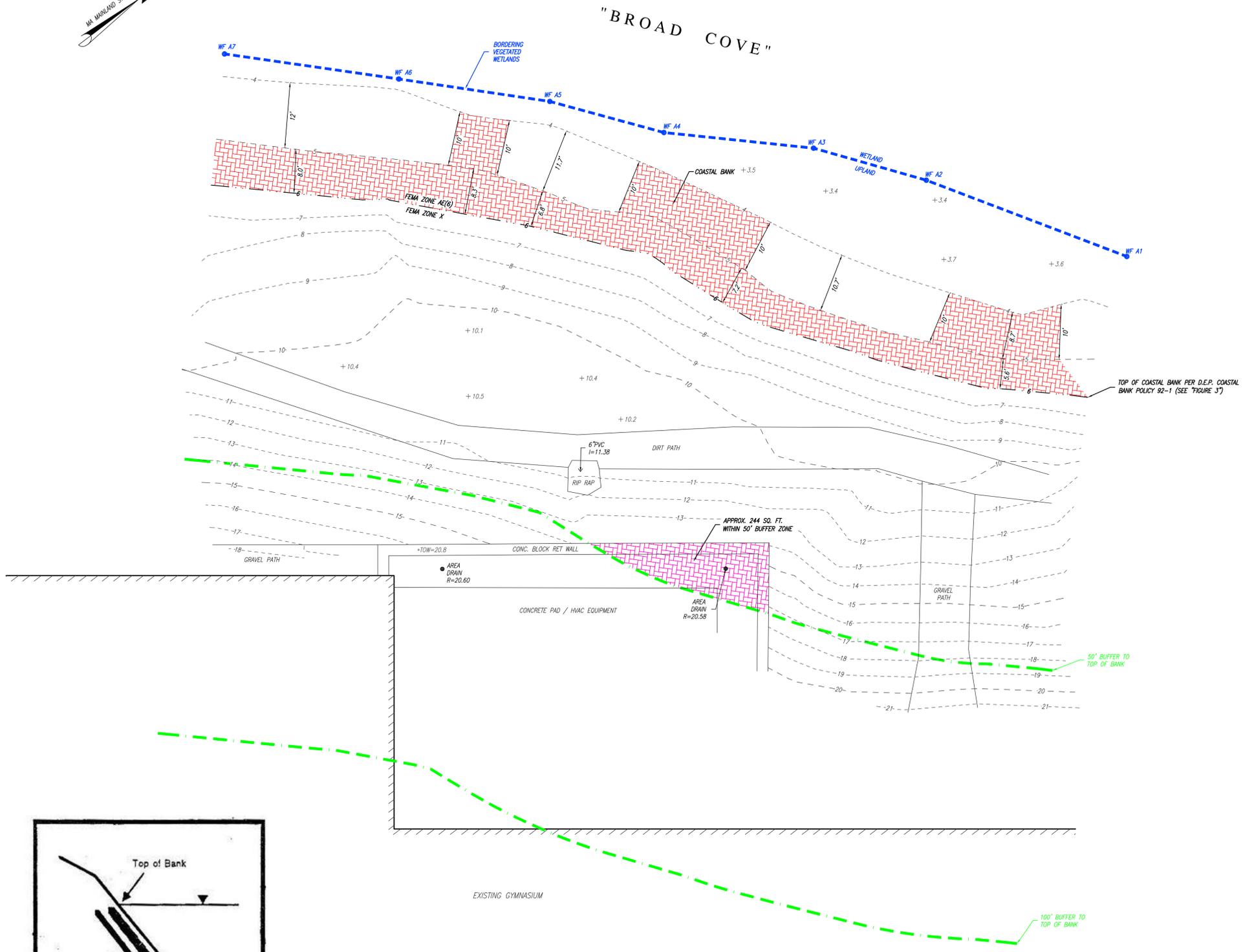
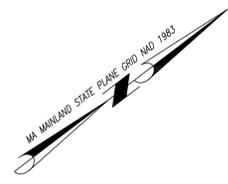
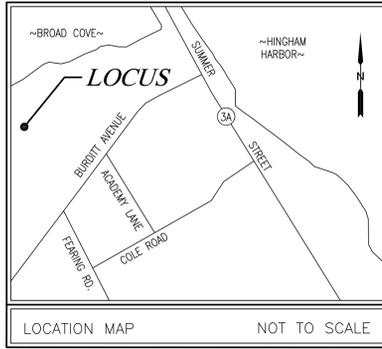
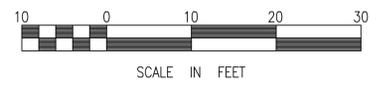


Figure 3



**RECORD OWNER:**  
 ASSESSORS PARCEL 49-57  
 56 BURDITT AVENUE  
 TRUSTEES OF DERBY ACADEMY  
 56 BURDITT AVENUE  
 HINGHAM, MA 02043

- NOTES:**
- EXISTING PROPERTY LINES WERE NOT INVESTIGATED FOR THE PURPOSES OF THIS PLAN.
  - TOPOGRAPHIC AND DETAIL INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY PERFORMED BY MERRILL ENGINEERS AND LAND SURVEYORS DURING OCTOBER OF 2025.
  - ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
  - WETLAND RESOURCE AREAS SHOWN ON THIS PLAN WERE DELINEATED BY ENVIRONMENTAL CONSULTING AND RESTORATION, LLC DURING OCTOBER OF 2025 AND FIELD LOCATED BY MERRILL ENGINEERS AND LAND SURVEYORS.
  - SUBJECT SITE IS IN THE "RESIDENCE A" DISTRICT AS DEPICTED ON THE TOWN OF HINGHAM ZONING MAP.
  - EXISTING UTILITIES WERE NOT INVESTIGATED FOR THE PURPOSES OF THIS PLAN.

**FLOOD NOTE:**  
 THIS PROPERTY IS LOCATED IN ZONES "AE(6)" & "X" OF THE FLOOD INSURANCE RATE MAP, AS SHOWN ON COMMUNITY MAP No. 25023C0082K, WHICH BEARS AN EFFECTIVE DATE OF JULY 3, 2024, AND IS PARTIALLY LOCATED IN A SPECIAL FLOOD HAZARD AREA.

- ENVIRONMENTAL NOTES:**
- SITE IS NOT WITHIN AN A.C.E.C. (AREA OF CRITICAL ENVIRONMENTAL CONCERN).
  - SITE IS NOT WITHIN AN AREA OF ESTIMATED HABITAT OF RARE WILDLIFE PER NHESP MAP "ESTIMATED HABITATS OF RARE WILDLIFE" FOR USE WITH THE MA WETLANDS PROTECTION ACT REGULATIONS (310 CMR 10).
  - SITE DOES NOT CONTAIN A CERTIFIED VERNAL POOL PER NHESP MAP "CERTIFIED VERNAL POOLS."
  - SITE IS NOT WITHIN A PRIORITY HABITAT PER NHESP MAP "PRIORITY HABITATS OF RARE SPECIES" FOR SPECIES UNDER THE MASSACHUSETTS ENDANGERED SPECIES ACT, REGULATIONS (321 CMR10).
  - SITE IS NOT LOCATED WITHIN A STATE APPROVED ZONE II GROUND WATER RECHARGE PROTECTION AREA.

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REVISIONS:

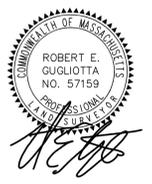

DRAWN BY:  
REG

DESIGNED BY:

CHECKED BY:

SCALE:  
1" = 10'

STAMP:



427 Columbia Road  
 Hanover, MA 02339  
 781-826-9200

362 Court Street  
 Plymouth, MA 02360  
 508-746-6060

Marine Division:  
 26 Union Street  
 Plymouth, MA 02360  
 508-746-6060

448 N. Falmouth Hwy, Unit A  
 North Falmouth, MA 02556  
 508-563-2183

PROJECT #:  
25-447

PROJECT:  
 DERBY ACADEMY  
 56 BURDITT AVENUE  
 ASSESSORS PARCEL 49-57  
 HINGHAM,  
 MASSACHUSETTS

CLIENT:  
 SAGAMORE PLUMBING  
 75 RESEARCH ROAD  
 HINGHAM, MA 02043

DRAWING PATH:  
H:\25-447\SURVEY\DWG\25-447\_SV.DWG

DATE:  
OCTOBER 15, 2025

PARTIAL EXISTING  
 CONDITIONS PLAN

