ECR

Environmental Consulting & Restoration, LLC

VEGETATION MANAGEMENT PLAN

TO: JDE Civil

FROM: Brad Holmes

DATE: November 13, 2025

RE: Off Huttleston Avenue, Fairhaven

Environmental Consulting & Restoration, LLC (ECR) is pleased to provide this Vegetation Management Plan to accompany the Notice of Intent application for the proposed development project located off Huttleston Avenue in Fairhaven (the site). The goal of the Vegetation Management Plan is to restore and enhance the buffer zone to a Bordering Vegetated Wetland (BVW) and Potential Vernal Pool (PVP) with a native plant community as part of the proposed project. The plan has been designed to remove non-native invasive plant species and manage the area to improve the overall capacity of the resource areas and buffers to protect the interest of the MA Wetland Protection Act (MA WPA) and the Town of Fairhaven Wetland Bylaw.

Vegetation Management Activities

Vegetation management is proposed throughout the buffer zone at the site. The remaining portions of the site are proposed for development and will be altered prior to the start of work. All vegetation clearing activities outside the management area should include proper disposal of cut vegetation to ensure the transport of invasive plant species to offsite locations does not occur.

The majority of the management area is dominated with Japanese Knotweed (*Polygonum cuspidatum*), which is an aggressive non-native invasive plant. Japanese Knotweed found within the area will be treated and removed using the following targeted methodology.

- Foliar application: Foliar applications of herbicide are appropriate when dense stands of Japanese Knotweed exist. Foliar application involves the licensed herbicide applicator applying herbicide using a low volume backpack sprayer with drift control agent and indicator dye.

- Stem injection: Using the JK Injection System®, the licensed herbicide applicator injects each individual Knotweed cane with wetland approved herbicide. The herbicide is injected at a 100% concentration, as recommended in the literature and on the supplemental herbicide label. 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.

- Glove technique (hand wipe): A licensed herbicide applicator puts on an absorbent cotton glove under a chemical-resistant glove. The applicator moistens the cotton glove with herbicide dispensed from a hand-pumped low-volume backpack sprayer equipped with specialized ultra-low-volume nozzles and then wipes each stem and leaf of the individual Knotweed plants. A solution of herbicide, wetland nonionic surfactant and blue indicator dye is used. Similar to the above method, 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.

- The Side Swipe® Pro method: The licensed herbicide applicator handles the Side Swipe Pro like a hockey stick to precisely and selectively apply herbicide to the target plants. The wipe-on applicator pad assures no drift or overspray. The protective shield over the top of the applicator pad permits safe herbicide application around desirable plants and shrubs. Again, 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.

All herbicide use will be completed by a licensed herbicide applicator in compliance with manufacturer guidelines.

Post herbicide treatment and gathering of slash follows the methodology described above. The waste products should be transported to licensed disposal facility to properly dispose of the invasive plant material to ensure no further infestations offsite. Disposal of any Knotweed slash is prohibited in any wetland or buffer zone. Throughout the construction or work duration on site, Knotweed and associated root stock should be monitored and treated accordingly. Monitoring will follow the removal of the invasive plant material and herbicidal treatments with ongoing management.

In addition to the management of Japanese Knotweed described above, any other woody invasives identified within the management area are proposed to be treated and removed from the site utilizing the "cut & paint" method. The targeted plants such as Oriental Bittersweet (Celastrus orbiculatus), Glossy Buckthorn (Rhamnus frangula), Multifloral Rose (*Rosa multiflora*), etc. will be flagged in the field by the overviewing 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 usage 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, this technique prevents herbicide exposure to non-target plants.

Following the treatment and removal of the non-native invasive species within the management area, the area will be restored using native shrubs and a native seed mix. Once the invasives have been removed, the management area should be inspected by the overviewing wetland specialist to determine the locations for planting. The management area is approximately 6,200 square feet in size; using guidance provided by MA DEP, spacing shrubs at 10 feet on center will require a total of 72 shrubs to be planted to revegetate the 6,200 square feet. The attached plan includes a plant palette that details the proposed species, size and quantity. Seeding is proposed to include top-dressing the area with new loam to facilitate seed germination and restoration of a native plant community. ECR recommends using native seed mixes available from New England Wetland Plants, Inc. such as New England Conservation/Wildlife Seed Mix - https://newp.com/wp-content/uploads/2023/03/ConservationWildlife.jpg.

The proposed vegetation management plan has been designed to be implemented over time. A practical approach to managing invasives will likely be a phased approach that implements the management protocols within smaller specified areas over time. The tasks below have been laid out for a three-year period to be completed in the specified treatment areas.

Year One
- Overviewing scientist should flag all non-native invasive woody plants to be treated and removed.
- Mechanically cut the flagged invasive woody plant species.
- Utilizing the "cut & paint" method, the stems of the cut woody plant material should be treated with appropriate herbicide applied by a licensed applicator.
- Perform herbicide treatment to Japanese Knotweed following the application strategy proposed.
- Remove cut material and dispose of at an appropriate offsite facility.
- Install erosion control measures, if necessary, prevent the conveyance of exposed soils into the wetland resource areas.
- Perform native seeding within designated areas.
- Submit annual report.

Year Two
- Monitoring and additional treatment, as necessary.
- Perform an additional round of non-native invasive plant removals following the approved methodology.
- Perform additional native seeding, where necessary.
- Submit annual report.

Year Three
- Monitoring and additional treatment, as necessary.
- Submit annual report.

The proposed vegetation management plan has been designed to provide an overall improvement to the site and the associated wetland resource areas. As the site exists today, the buffer zone has been severely degraded by non-native invasive species. If left unmanaged, non-native invasive plants can cause tremendous harm to the native environment. Successful non-native invasive plant management requires a long-term commitment and will need to be ongoing to protect the investment in the management program. The site will need to be watched carefully by scouting for new patches and individual plants even after the three years of treatment. Options for managing these pests after the initial three years usually consist of hand pulling, spot herbicide wiping, and/or cutting. Monitoring and reporting on the success of this management plan will be at the direction of the Conservation Commission.

Upon review of this Vegetation Management Proposal, please contact me at (617) 529 – 3792 or brad@ecrwetlands.com with any questions or requests for additional information.

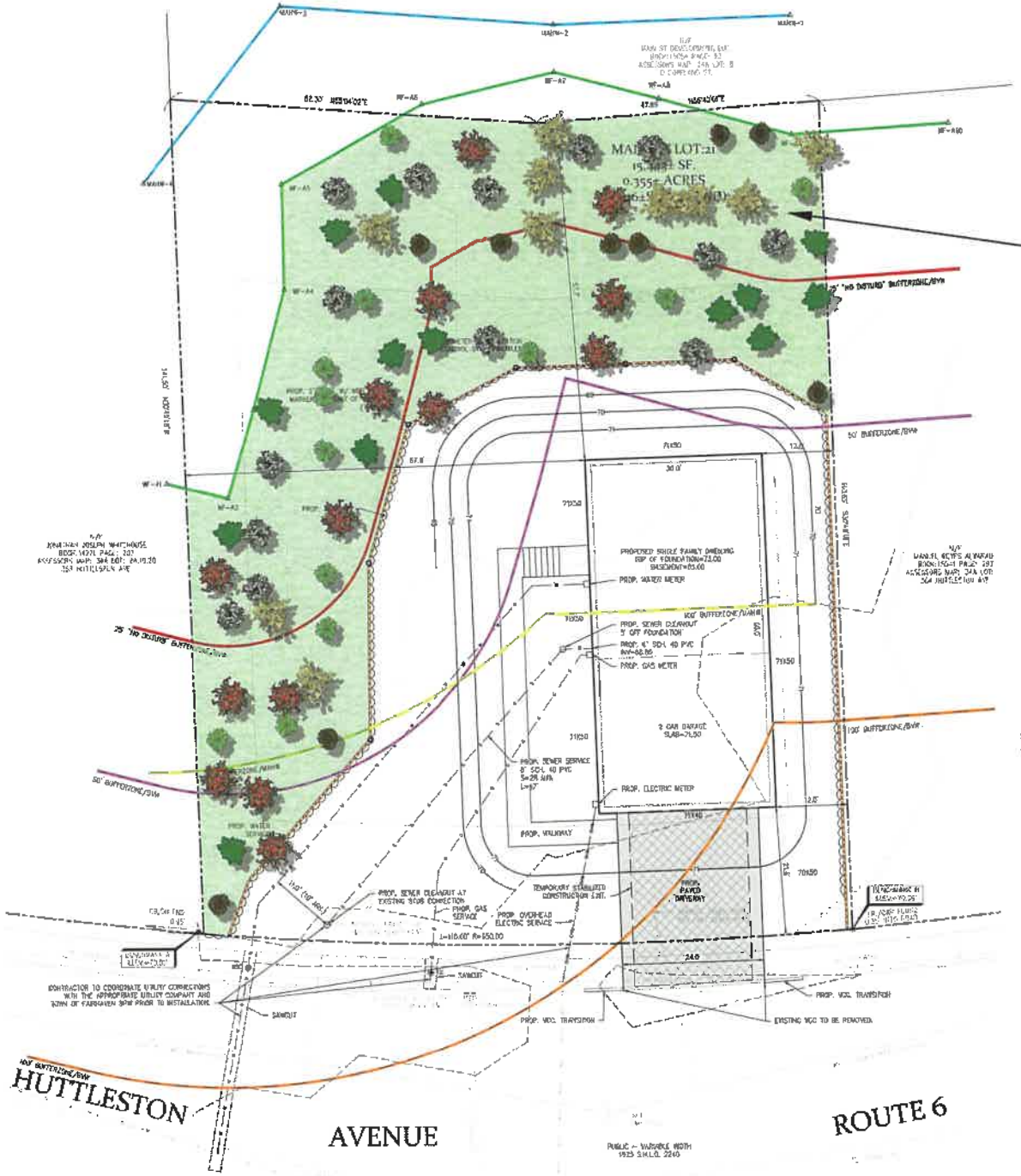
Attachment
1.) Vegetation Management Plan

Proposed Vegetation Management Plan

Off Huttleston Avenue, Fairhaven

Date: Nov. 13, 2025

Prepared By: Environmental Consulting & Restoration



Plant Legend				
Symbol	Qty	Common	Botanical	Size
	9	Bayberry	Myrica pensylvanica	1.5 - 2 ft.
	14	Black Chokeberry	Aronia melanocarpa	1.5 - 2 ft.
	14	Carolina Rose	Rosa carolina	1.5 - 2 ft.
	13	Common Juniper	Juniperus communis	1.5 - 2 ft.
	12	Mountain Laurel	Kalmia latifolia	1.5 - 2 ft.
	10	Witch Hazel	Hamamelis virginiana	1.5 - 2 ft.

Restoration Seed Mix:

NEW ENGLAND WETLAND PLANTS, INC

14 Pearl Lane South Hadley, MA 01075

PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Conservation/Wildlife Mix

Botanical Name	Common Name	Indicator
Elymus virginicus	Virginia Wild Rye	FACW-
Schizachyrium scoparium	Little Bluestem	FACU
Andropogon gerardii	Big Bluestem	FAC
Festuca rubra	Red Fescue	FACU
Sorghastrum nutans	Indian Grass	UPL
Panicum virgatum	Switch Grass	FAC
Chamaecrista fasciculata	Partridge Pea	FACU
Desmodium canadense	Showy Tick Trefoil	FAC
Asclepias tuberosa	Butterfly Milkweed	NI
Bidens frondosa	Beggar Ticks	FACW
Eupatorium purpureum (Eutrochium maculatum)	Purple Joe Pye Weed	FAC
Rudbeckia hirta	Black Eyed Susan	FACU-
Aster pilosus (Symphyotrichum pilosum)	Heath (or Hairy) Aster	UPL
Solidago juncea	Early Goldenrod	

APPLY: 25 LBS/ACRE :1750 sq ft/lb

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is $/bulk pound, FOB warehouse. Plus SH and applicable taxes.

Note: Planting details overlaid by ECR onto the site plan prepared by JDE Civil.