



Notice of Intent:

Proposed Site Preparation –  
Driveway Installation

Buffam Road  
Pelham, Massachusetts

MARCH 2021

PREPARED FOR  
**Hank Brakeley**

PREPARED BY  
**SWCA Environmental Consultants**



**NOTICE OF INTENT  
SINGLE FAMILY HOME  
SITE PREPARATION  
BUFFAM ROAD**

Prepared for  
**Hank Brakeley**

**SWCA Environmental Consultants**  
1900 West Park Drive, Suite 280  
Westborough, MA 01581  
508-233-8769  
[www.swca.com](http://www.swca.com)

SWCA Project No. 64471.00

March 2021

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## 1 INTRODUCTION

SWCA Environmental Consultants (SWCA) has prepared this Notice of Intent (NOI) application on behalf Hank Brakeley (the Applicant) for proposed site preparation of a driveway associated with a single-family home off Buffam Road (Map 8, Lot 29.A) in Pelham, Massachusetts (the Site). The owners of the parcel are Judith and Elizabeth Knowles. The parcel is a ±44-acre parcel that runs directly adjacent to Buffam Road. The proposed construction includes a new driveway for a single-family home (the Project). A completed “WPA Form 4” and copies of the checks are included in Appendix A. Figure 1 (see Appendix B) depicts the extent of the Project on an U.S. Geological Survey (USGS) topographic map.

This NOI permit application has been developed in accordance with the Massachusetts Wetland Protection Act (MGL c.131 §40) (WPA) and its implementing Regulations (310 CMR 10.00 *et seq.*) as well as the Town of Pelham Wetland Protection Bylaw (Ch. 119). The proposed work includes limited impacts to Bordering Vegetated Wetland (BVW) and 100-foot Buffer Zone to BVW and an unnamed intermittent stream. The Project is proposed as limited project under 310 CMR 10.53(3)(e) which allows the construction of a new driveway of minimum legal and practical width acceptable by the Planning Board, where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable.

Three hard copies and an electronic copy of this NOI are being submitted to the Pelham Conservation Commission (Commission). An electronic copy of the application and supporting documents has been sent to the Massachusetts Department of Environmental Protection (MassDEP) Western Regional Office (WERO).

## 2 EXISTING CONDITONS

The Site consists of previously logged ±44-acre parcel located at along Buffam Road. Currently, the Site does not have an existing permanent suitable access road or driveway. On the east side of the parcel, an unnamed intermittent stream flows south, entering the Site in the northeast corner of the parcel and continuing south before existing the property to the southeast across Buffam Road. BVWs associated with the unnamed stream are located to the east and west of the stream. A majority of the Site consists of mid-successional mixed forest and scrub-shrub communities resultant from prior logging activities. The Site is situated at elevation 973 feet above sea level (MSL) at its northern limits and generally slopes south. Photograph of the Site are provided in Appendix C.

According to the U.S. Department of Agriculture (USDA) Web Soil Survey (Natural Resources Conservation Service [NRCS] 2019), a majority of the Site is mapped as Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony and Gloucester gravelly fine sandy loam, 3 to 8 percent slopes, very stony. Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony is listed as hydric while Gloucester gravelly find sandy loam, 3 to 8 percent slopes, very stony is not: however, the Gloucester soil does include hydric inclusions of the Ridgebury soil (NRCS 2021).

Digital Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping (FIRM) is not currently available for the Site. A review of the existing Q3 floodplain data indicates that Bordering Land Subject to Flooding (BLSF) (*i.e.*, 100-year floodplain) is mapped to the south; however, there is no floodplain mapped within the Site.

### 3 JURISDICTIONAL RESOURCES

SWCA reviewed multiple mapping resources available from the Massachusetts Geographic Information System (MassGIS) and others including, but not limited to, MassDEP wetlands and hydrologic connections, hydrography, aerial imagery, FEMA FIRMs, USGS topographic quadrangles, potential and certified vernal pools, NRCS soils, and Natural Heritage and Endangered Species Program (NHESP) Priority and Estimated Habitats for Rare Species, among others.

A qualified wetland scientist from SWCA visited the Site to determine the presence or absence of jurisdictional resource areas on December 10, 2020 and February 11, 2021.

The Environmental Resources Map in Appendix B depicts the locations of regulated resource areas within and in proximity to the site on an aerial photograph. Representative photographs are included in Appendix C. The following sections describe the on-site regulated resource areas.

#### 3.1 Bordering Vegetated Wetland

The boundaries of the on-site wetlands were determined in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation (Environmental Laboratory 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (USACE 2011), as well as in accordance with the WPA and 310 CMR 10.55(2)(c) and further described in MassDEP’s Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act (1995). The delineated wetlands are depicted on the Environmental Resources Map found in Appendix B.

As set forth in 310 CMR 10.55(2)(a-c) of the Regulations, a BVW is defined as “areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants” and the BVW boundary is determined as “the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.” BVW has a 100-foot Buffer Zone under the WPA as jurisdictional area and is regulated as a resource area under the Bylaw (see Section 3.3 below).

BVW is connected to both the east and west of the unnamed stream. A majority of the wetland is located in the center and southeast portions of the Site. Due to the BVW extending from the western to the eastern side of the wetland or is located directly adjacent to Buffam Road, the proposed driveway will intersect with a narrow portion of BVW. The proposed driveway is anticipated to impact 585-square feet of BVW. This portion of proposed impacted BVW (W1) is dominated by wetland vegetation including grey birch (*Betula populifolia*), silky dogwood (*Cornus amomum*) and winterberry (*Ilex verticillata*).

Hydric soils were identified during the wetland delineation and are classified as depleted below dark surface. Hydrologic indicators found within the wetland area water marks, water-stained leaves, and presence of a depleted matrix. SWCA Wetland Scientists completed data plots near flag W1-213 to substantiate the delineation. Wetland data forms for this datapoint can be found within Appendix C.

#### 3.2 Inland Bank

Inland Bank is the resource area which confines waterways and water bodies (i.e., streams, ponds, and lakes). For streams, it extends from Mean Annual Low Water (MALW) to Mean Annual High Water (MAHW). As set forth in 310 CMR 10.54(2)(a-c), Inland Bank is defined as “the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a bordering

vegetated wetland and adjacent floodplain, or, in the absence of these, it occurs between a water body and an upland.” Banks in proximity to the Project area were flagged with blue polyvinyl flagging with sequentially numbered alphanumeric identifiers and were GPS-located (see the Environmental Resources Map).

Inland Bank associated with the unnamed intermittent stream (S2) was identified along the east side of the parcel and east of the proposed project. The unnamed stream flows north to south along the parcel. No impacts are anticipated to Inland Bank.

### **3.3 100-Foot Buffer Zone**

The WPA includes a 100-ft Buffer Zone associated with Inland Bank and BVW. While the WPA does not regulate the 100-foot Buffer Zone a resource area, the Bylaw does include the 100-foot Buffer Zone as a regulated resource area. The 100-foot Buffer Zone within the Project area consists of logged forest land, shrubs, and roadways.

The project proposes permanent impacts to the 100-foot Buffer Zone within the Project area. Approximately 18,155-square feet of temporary impacts are proposed for the for construction of the driveway as well as ±8,575-square feet of permanent impacts. All temporary impacts will be restored to pre-construction conditions following construction including restoring original grades, seeding with a native upland habitat seed mix, and mulching with straw.

### **3.4 Land Under Water**

As defined in 310 CMR 10.56(2) “Land Under Water Bodies and Waterways (LUWW) is the land beneath any creek, river, stream, pond, or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock.” While no LUWW is located within the Project area, this resource area is in adjacent areas and associated with the unnamed intermittent stream. LUWW is not typically flagged in the field since it is fully contained within Bank or MAHW. LUWW does not occur within the Project area. There are no impacts proposed to LUWW as part of the Project.

### **3.5 200-foot Riverfront Area**

Perennial rivers are afforded a 200-foot RFA regulated resource area under the WPA and Bylaw, respectively. Buffam Brook, located off-Site to the southeast of the Site, is perennial stream according to 310 CMR 10.58(2)(a). The Brook’s 200-foot RFA extends onto the Site in the southeast corner and consists of undeveloped mid-successional forest.

The Project proposes both temporary and permanent impacts to the 200-foot RFA. A total of ±4,655-square feet of impacts are proposed for construction of the driveway. All temporary impacts will be restored to pre-construction conditions following construction including restoring original grades, seeding with a native upland habitat seed mix, and mulching with straw.

## **4 OTHER ENVIRONMENTALLY SENSITIVE RESOURCES**

SWCA reviewed MassGIS to determine if the proposed work areas are within or near other sensitive environmental areas. These areas included bordering vegetated wetland, protected rare species, important watersheds, and other special environmental characteristics.

### **4.1 WPA/Bylaw Resource Areas**

The only regulated resource areas occur within the Project area include BVW, 100-ft Buffer Zone, and 200-foot RFA. The Project area does not contain any other resource areas regulated under the WPA or Bylaw including LUWW, Inland Banks, or BLSF. Appendix B includes the FEMA Flood Hazard boundary Map for the area (Map H-01-11, Community No. 250168A, effective December 11, 1976).

### **4.2 Vernal Pools**

SWCA biologists reviewed available MassGIS datasets to determine if the Project is located within or near mapped Certified Vernal Pools (MassGIS 2021) or Potential Vernal Pools (MassGIS 2000). There are no certified or potential vernal pools mapped within or near the Project according to available MassGIS data

Priority and Estimated Habitats of Rare Species SWCA biologists reviewed available MassGIS NHESP datasets to determine if the Project is located within or near areas designated as Priority Habitats of Rare Species (MassGIS 2017a) or Estimated Habitats of Rare Wildlife (MassGIS 2017b). NHESP mapping indicates that there are no habitats of rare species mapped within or in proximity to the site.

Areas of Critical Environmental Concern SWCA reviewed MassGIS data layers to determine if the Project is located within any Areas of Critical Environmental Concern (ACEC). An ACEC is a designated area in Massachusetts that receives special recognition because of the quality, uniqueness, and significance of its natural and/or and cultural resources. ACECs are identified so that they may be protected and maintained. SWCA determined that there are no ACECs within or near the site (MassGIS 2009).

### **4.3 Outstanding Resource Areas**

SWCA reviewed MassGIS data layers to determine if the Project is located within any Outstanding Resource Waters (ORW) (MassGIS 2010). ORWs are watershed areas that have been classified as an outstanding resource under the Massachusetts Surface Water Quality Standards as determined by their important socioeconomic, recreational, ecological, and/or aesthetic values. ORWs are identified so that they may be protected and maintained. SWCA determined that there are no ORWs within or near the site (MassGIS 2010).

## **5 PROPOSED PROJECT**

The proposed project will construct a new ±12-foot-wide driveway beginning along the southeast side of the parcel leading from Buffam Road. From there, the driveway will continue northwest to cross the narrowest portion of BVW and continue north up to where the single-family home is constructed outside of jurisdictional resource areas. Work will include the site preparations for and construction of the proposed driveway. Impacts to BVW are necessary in order to access developable, upland areas of the

Site. While not proposed as part of this NOI, the single-family house and appurtenances are proposed outside of all jurisdictional areas. However, should engineering limitations (*e.g.*, bedrock, slope, etc.) require that any portion of the house construction be located within Buffer Zone or other jurisdictional area, that construction will be brought before the Commission under a separate filing.

The proposed driveway will be constructed within the existing mid-successional forest habitat on the Site. A minimal portion of the driveway will occur within RFA associated with Buffam Brook where the driveway intersects Buffam Road. Additionally, the driveway will cross both BVW and 100-foot Buffer Zone. The driveway has been designed to cross the BVW at its narrowest location to minimize impacts as much as practicable. Erosion and sediment will be staked along the perimeter of the limit of work (LOW). Once construction has been completed, temporarily disturbed soils will be revegetated with a native soil seed mix and mulched with straw.

As a single-family home, the Project is not subject to the Massachusetts Stormwater Standards.

## **5.1 Erosion and Sedimentation Control and Best Management Practices**

Sedimentation barriers are proposed along the LOW for the driveway. The Site Plans in Appendix B depict the locations of the sediment controls within the Project area. The controls will be placed at the LOW to limit disturbance and prevent sediment from entering the resource areas during construction. All sedimentation control barriers will be installed prior to any site work and shall remain in place until all surfaces are stable and any disturbed soils are sufficiently vegetated. Construction debris and sediment shall be kept on-site and shall not be permitted to migrate beyond the Project boundaries. Stormwater inlet protections (*e.g.*, filter socks) will be installed within each stormwater inlet in proximity to the Project area. On-site controls will be inspected daily, and any necessary maintenance and/or repairs will be promptly completed.

In addition to erosion and sedimentation controls, other best management practices (BMPs) such as stoned construction entrances and other similar practices routinely employed will be utilized. These BMPs will minimize potential adverse environmental impacts and include various mitigative measures that can be implemented on an as-needed basis according to various site conditions and construction methods.

## **5.2 Construction Sequencing**

Construction is expected to commence in the summer of 2021 and continue through fall 2021. Prior to mobilization, sedimentation controls will be installed around the LOW between the work area and adjacent, undisturbed habitats. Once controls are in place, other BMPs such as stone construction entrances, spoils stockpile areas, etc. will be established as needed. Weekly environmental inspections will occur during construction. After construction has been completed, all temporarily disturbed areas will be restored to their pre-construction condition including the restoration of pre-existing topographic contours, seeding exposed soils with a native seed mix, and mulching with straw.

### **Avoidance, Minimization, and Mitigation**

Impacts to regulated resource areas have been avoided and minimized as much as practicable. The proposed access off Buffam Road in the southeast of the parcel presents the least environmentally impactful option to access buildable, upland areas for the single-family home. Access from this proposed location avoids the need to cross the on-Site intermittent stream, greatly reduces adverse impacts to BVW

by reducing the need to cross a large section of wetland, and further reduces impacts to the 100-foot Buffer Zone. The proposed driveway location crosses the BVW at its narrowest location and has been situated to avoid impacts to 100-foot Buffer Zone as much as practicable. Additionally, the hydrologic connectivity of the BVW to be crossed has been maintained by proposing twin 8-inch culverts at the crossing.

Where impacts to BVW, 100-foot Buffer Zone, or RFA could not be avoided, the applicant will protect these areas and the downgradient wetlands and surface waters through the implementation of BMPs. The following measures will be implemented to protect and minimize potential adverse impacts to downgradient wetlands and surface waters:

- Expediting construction and avoiding unnecessary activities in wetlands and surface waters;
- Installing erosion and sedimentation controls to prevent sediment and siltation from entering downgradient wetlands and surface waters;
- Removing construction materials following construction, including erosion and sedimentation control barriers when area has been fully stabilized;
- Restoring all areas temporarily disturbed by construction to their original grades and surface conditions;
- Permanently stabilizing the work area after construction, by either repaving or reseeding, depending on pre-existing conditions;
- Repairing and maintaining any BMPs in a timely manner;
- Inspecting the work area following construction to ensure restoration is conducted in a timely manner;
- Prohibiting long-term parking and refueling of equipment within at least 100 feet of a wetland or stream; and
- Prohibiting the storage of hazardous materials, including chemicals, fuels, and lubricating oils within 100 feet of a wetland or stream.

## **6 REGULATORY REVIEW**

Proposed projects that are subject to the WPA and its implementing regulations as well as the Bylaw and its implementing regulations must demonstrate how they comply with the applicable performance standards. Since the only regulated resource areas present within the Project area are BVW, 100-foot Buffer Zone, and the 200-foot RFA, the following table provides a detailed overview of the performance standards under 310 CMR 10.55(4) and 310 CMR 58(4) as well as the general provisions of the WPA and inland resource areas.

## 6.1 Massachusetts Wetland Protections Act

### 6.1.1 General Provisions (310 CMR 10.03 and 310 CMR 10.53)

**Table 1. General Performance Standards for Riverfront Area (310 CMR 10.58(4))**

Citation	Regulation	Compliance
310 CMR 10.58(4)(a)	Protection of other resource areas.	Work within resource areas has been avoided and minimized as much as practicable. BMPs are proposed to protect the adjacent resource areas during construction from adverse impacts. Additionally, the hydrologic connection of the BVW will be maintained via twin culverts under the BVW crossing. The Project will not adversely impact the ability of the resource areas to protect the interests of the WPA.
310 CMR 10.58(4)(b)	Protection of rare species.	Not applicable. There is no Priority or Estimated Habitats of Rare Species mapped within the Project area.
310 CMR 10.58(4)(c)	Practicable and substantially equivalent economic alternatives.	Refer to the Alternatives Analysis below in Section 6.1.3.1. There are no practicable and substantially equivalent economic alternatives with less adverse effects on the interests of the WPA.
310 CMR 10.58(4)(d)	No Significant Adverse Impact	The Project proposes work within BVW and RFA. Impacts have been avoided and minimized to the maximum extent practicable. The work does not impair the capacity of RFA to provide important wildlife habitat function and the proposed work will not impair groundwater or surface water quality by incorporating erosion and sedimentation controls as well as construction BMPs.

**Table 2. General Provisions of Inland Resource Areas (310 CMR 10.53)**

Citation	Regulation	Compliance
310 CMR 10.53(1)	Significance of resource areas with no presumption to the protection of the interests of the WPA and work within the buffer zone reviewable under the Regulations.	Not applicable. BVW and RFA, the two resource areas proposed to be impacted by the project, include presumptions in the Regulations at 310 CMR 10.55(3) and 310 CMR 10.58(3), respectively.
310 CMR 10.53(2)	Proposed projects subject to a Restriction Order	Not applicable.
310 CMR 10.53(3)	Projects that may be permitted as a limited project	The Project is proposed as limited project under 310 CMR 10.53(3)(e) which allows the construction of a new driveway of minimum legal and practical width acceptable by the Planning Board, where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable.
310 CMR 10.53(4)	Ecological restoration limited projects	Not applicable.
310 CMR 10.53(5)	Agricultural limited projects	Not applicable.
310 CMR 10.53(6)	Limited projects related to footpaths, bikepaths, and other pedestrian or nonmotorized vehicle access within RFA but outside of other resource areas	Not applicable.

Citation	Regulation	Compliance
310 CMR 10.53(7)	Operation and maintenance plans for public or private infrastructure	Not applicable.
310 CMR 10.53(8)	Stream crossings	Not applicable.

## 6.1.2 ***Bordering Vegetated Wetland (310 CMR 10.55(4))***

**Table 3. Performance Standards for Bordering Vegetated Wetland (310 CMR 10.55(4))**

Citation	Regulation	Compliance
310 CMR 10.55(4)(a)	Work shall not destroy or otherwise impair any portion of said area	The proposed project will not impair the BVW. The proposed driveway will cross the BVW at its narrowest location with the minimum width of driveway allowed by the Town. Additionally, hydrologic connectivity within the BVW will be maintained with twin culverts under the driveway crossing.
310 CMR 10.55(b)1.	Surface are of the replacement area to be created shall be equal to that of the area that will be lost	The area to be lost is ±585 sf. A detailed mitigation plan will be submitted for approval to the Commission prior to construction.
310 CMR 10.55(b)2.	Ground water and surface elevation of the replacement	The proposed replication areas will be located adjacent to the existing BVW at similar elevations. Restoration is to be conducted under the guidance of a Professional Wetland Scientist.
310 CMR 10.55(b)3.	Overall horizontal configuration and location of the replacement area	The proposed replication areas will be adjacent to the impacted wetlands.
310 CMR 10.55(b)4.	Unrestricted hydraulic connection to the same water body or waterway as the lost area.	The replacement area and the impact area are both hydrologically connected to Williams Brook on the intermittent unnamed stream. The replication areas will be connected to the exiting BVW and will have unrestricted hydrologic connectivity to the stream.
310 CMR 10.55(b)5.	Replacement area shall be located within the same general area of the water body or reach of the waterway as the lost area.	The replacement area will be in the same general area as the lost area, ideally located within 50 feet of the impact area hydrologically connected to the existing onsite stream.
310 CMR 10.55(b)6.	Reestablishment of native vegetation and vegetative stabilization of replacement area.	A minimum of 75% cover with native species will be achieved within two years. Sedimentation controls will be established around the replacement area.
310 CMR 10.55(b)7.	Replacement area shall be provided consistent other General Performance Standards for each resource area	This standard for each resource area will be provided in a manner consistent with the applicable resource standards.
310 CMR 10.55(c)	Loss of BVW of less than 500-square feet, is in a distinct linear configuration, and it is not reasonable to further avoid or minimize impacts.	Not applicable.
310 CMR 10.55(d)	Rare species	Not applicable. The Project is not located within any mapped rare species habitat.
310 CMR 10.55(e)	ACECs	Not applicable. The Project is not located within an ACEC.

### 6.1.3 200-foot Riverfront Area (310 CMR 10.58(4))

**Table 6. 200-foot Riverfront Area (310 CMR 10.54(4))**

Citation	Regulation	Compliance
310 CMR 10.58(4)(a)	Work shall meet the performances standards for all other resource areas	The Project meets the performance standards for all other resource areas proposed to be impacted (i.e., BVW).
310 CMR 10.58(4)(b)	Protection of rare species	Not applicable. The Project is not located within any mapped rare species habitat by NHESP.
310 CMR 10.58(4)(c)	Alternatives	Three alternatives were evaluated (see below).
310 CMR 10.58(4)(d)	No significant adverse effect.	The project will not result in a significant adverse effect on the RFA to protect the interests of the WPA. The project is not subject to the Massachusetts Stormwater Standards, does not impact important wildlife habitat features or functions, and will not impair groundwater or surface water.

#### 6.1.3.1 ALTERNATIVES ANALYSIS

As part of the alternatives analysis, three alternatives were evaluated. The sections below describe each alternative, their environmental impacts, and why the alternative was selected or rejected. As a proposed lot for a single-family house, practicable alternatives are limited to the lot, subdivided lot, or any adjacent lots formerly or presently owned by the same owner. There are four lots that border the Site. Two lots to the south and southwest have single-family homes already constructed are not available for sale. A large, undeveloped lot to the northwest; however, this parcel of land over 603-acres and is not available for sale. There is a fourth parcel to the north of the Site; however, this parcel is also not for sale and contains an extensive mosaic of wetlands that would likely prohibit the development of a single-family home.

**No Action Alternative** – Under this alternative, the proposed driveway would not be constructed. The No Action Alternative would result in zero impacts to BVW, 100-foot Buffer Zone, and RFA. However, this alternative would not accomplish the Applicant’s goal of developing a single-family house on this lot. Therefore, this alternative was no selected as the Preferred Alternative.

**Alternative 2: Access Further North on Buffam Road** – Alternative 2 would access the site off Buffam Road further north from the proposed access in the southeast corner of the property via a relic logging access location. This alternative would require a large wetland complex between the intermittent unnamed stream and Buffam Road as well as a second BVW crossing, require a permanent stream crossing of the intermittent stream, and result in greater impacts to 100-ft Buffer Zone. Due to the increased environmental impacts, this alternative was not selected as the Preferred Alternative.

**Alternative 3 (Preferred Alternative): Access from the Southeast Corner** – This alternative proposes access off Buffam Road in the southeast corner of the parcel. Alternative 3 will result in minimal impacts to BVW, 100-foot Buffer Zone, and BVW; however, those impacts are less ecologically impactful that the proposed impacts resultant under Alternative 2. Alternative 3 greatly reduces impacts to BVW and the 100-foot Buffer Zone and eliminates the need for a stream crossing. While this alternative nearly doubles the required length of the driveway, it results in substantially less environmental impact to regulated resource areas. Therefore, this alternative was selected as the Preferred Alternative.

## 7 SUMMARY

On behalf of the Applicant, Hank Brakeley, the proposed work proposed in this NOI includes site preparation and construction of a new driveway for a single-family house as a limited project under 310 CMR 10.53(3)(e). The proposed driveway will minimally impact BVW, 100-foot Buffer Zone, and RFA. However, the Project has been designed to avoid and minimize impacts as much as practicable. Additionally, a mitigation plan will be submitted to offset impacts to BVW and BMPs will be employed during construction.

SWCA respectfully request the Commission issue an Order of Conditions for the proposed work under jurisdiction of the WPA and Bylaw.

## 8 REFERENCES CITED/LITERATURE CITED

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Massachusetts Department of Environmental Protection (MassDEP). 1995. Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, A Handbook. March 1995.

Massachusetts Geographic Information System (MassGIS). 2021. NHESP Certified Vernal Pools. Available at <https://docs.digital.mass.gov/dataset/massgis-data-nhosp-certified-vernal-pools>. Accessed March 5, 2021.

MassGIS. 2017a. NHESP Estimated Habitats of Rare Wildlife. Available at <https://docs.digital.mass.gov/dataset/massgis-data-nhosp-estimated-habitats-rare-wildlife>. Accessed March 5, 2021.

MassGIS. 2017b. NHESP Priority Habitats of Rare Species. Available at <https://docs.digital.mass.gov/dataset/massgis-data-nhosp-priority-habitats-rare-species>. Accessed March 5, 2021.

MassGIS. 2010. Outstanding Resource Waters. Available at <https://docs.digital.mass.gov/dataset/massgis-data-outstanding-resource-waters>. Accessed March 5, 2021.

MassGIS. 2009. Areas of Critical Environmental Concern. Available at <https://docs.digital.mass.gov/dataset/massgis-data-areas-critical-environmental-concern>. Accessed March 5, 2021.

MassGIS. 2000. NHESP Potential Vernal Pools. Available at <https://docs.digital.mass.gov/dataset/massgis-data-nhosp-potential-vernal-pools>. Accessed March 5, 2021.

Natural Resources Conservation Services (NRCS). 2019. Web Soil Survey. Available online at <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed March 5, 2021.

NRCS. 2021. State Soil Data Access (SDA) Hydric Soil Ratings by Map Unit. Available at [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd1389479.html#reportref](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1389479.html#reportref). Accessed March 5, 2021.

U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12. Vicksburg, MS: U.S. Army Engineer Research and Development Center.



**APPENDIX A**  
**Forms and Checks**



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Pelham

City/Town

**Important:**

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:  
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

**A. General Information**

1. Project Location (**Note:** electronic filers will click on button to locate project site):

<u>Buffam Road</u>	<u>Pelham</u>	<u>01002</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	<u>42.391213</u>	<u>-72.450729</u>
	d. Latitude	e. Longitude
<u>8</u>	<u>29.A</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Hank</u>	<u>Brakeley</u>	
a. First Name	b. Last Name	
c. Organization		
d. Street Address		
<u>781-234-4086</u>	<u>MA</u>	<u>02536</u>
e. City/Town	f. State	g. Zip Code
<u>h. Phone Number</u>	<u>hhbrakeley@gmail.com</u>	j. Email Address
i. Fax Number		

3. Property owner (required if different from applicant):  Check if more than one owner

<u>Elizabeth and Judith</u>	<u>Knowles</u>	
a. First Name	b. Last Name	
c. Organization		
<u>51 Seashell Lane</u>		
d. Street Address		
<u>East Falmouth</u>	<u>MA</u>	<u>02536</u>
e. City/Town	f. State	g. Zip Code
<u>h. Phone Number</u>	<u>i. Fax Number</u>	<u>j. Email address</u>

4. Representative (if any):

<u>Valerie</u>	<u>Miller</u>	
a. First Name	b. Last Name	
c. Company		
<u>15 Research Drive</u>		
d. Street Address		
<u>Amherst</u>	<u>MA</u>	<u>01002</u>
e. City/Town	f. State	g. Zip Code
<u>413-256-0202</u>	<u>vmiller@swca.com</u>	
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

<u>\$110.00</u>	<u>\$42.50</u>	<u>\$67.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Pelham
City/Town

## A. General Information (continued)

6. General Project Description:

SWCA Environmental Consultants (SWCA) has prepared this Notice of Intent on behalf of the applicant, Hank Brakeley, for the site preparatoin for a driveway associated with a single family house at on parcel Map 8, Lot 29.A along Buffam Road in Pelham, Massachusetts.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1.  Single Family Home
- 2.  Residential Subdivision
- 3.  Commercial/Industrial
- 4.  Dock/Pier
- 5.  Utilities
- 6.  Coastal engineering Structure
- 7.  Agriculture (e.g., cranberries, forestry)
- 8.  Transportation
- 9.  Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1.  Yes  No      If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)
- 310 CMR 10.53(3)(e) - "The construction and maintenace of a new...driveway of minimum legal and practical width...where reasonable alternative access...to an upland area...is unavailable."

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Hampshire	
a. County	b. Certificate # (if registered land)
10172	130
c. Book	d. Page Number

## B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1.  Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2.  Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

---

MassDEP File Number

---

Document Transaction Number

Pelham

---

City/Town

**B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)**

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	585 1. square feet	585 2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced

- f.  Riverfront Area
1. Name of Waterway (if available) - **specify coastal or inland**
2. Width of Riverfront Area (check one):
- 25 ft. - Designated Densely Developed Areas only
  - 100 ft. - New agricultural projects only
  - 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 116,370 square feet

4. Proposed alteration of the Riverfront Area:

<u>4,655</u>	<u>594</u>	<u>4,061</u>
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI?  Yes  No
6. Was the lot where the activity is proposed created prior to August 1, 1996?  Yes  No

3.  Coastal Resource Areas: (See 310 CMR 10.25-10.35)

**Note:** for coastal riverfront areas, please complete **Section B.2.f.** above.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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City/Town

**B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)**

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:  
 Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	_____	
	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	_____	_____
	a. square feet of BVW	b. square feet of Salt Marsh
5. <input type="checkbox"/> Project Involves Stream Crossings		
	_____	_____
	a. number of new stream crossings	b. number of replacement stream crossings



Massachusetts Department of Environmental Protection  
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# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:	
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Pelham	
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## C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

### Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to [http://maps.massgis.state.ma.us/PRI\\_EST\\_HAB/viewer.htm](http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm).

- a.  Yes  No **If yes, include proof of mailing or hand delivery of NOI to:**

**Natural Heritage and Endangered Species Program  
Division of Fisheries and Wildlife  
1 Rabbit Hill Road  
Westborough, MA 01581**

- August 2017  
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review\*

- Percentage/acreage of property to be altered:
  - (a) within wetland Resource Area \_\_\_\_\_ percentage/acreage
  - (b) outside Resource Area \_\_\_\_\_ percentage/acreage
- Assessor's Map or right-of-way plan of site

- Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work \*\*
  - (a)  Project description (including description of impacts outside of wetland resource area & buffer zone)
  - (b)  Photographs representative of the site

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

\*\* MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

## WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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### C. Other Applicable Standards and Requirements (cont'd)

- (c)  MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

*Projects altering 10 or more acres of land, also submit:*

- (d)  Vegetation cover type map of site
- (e)  Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following

1.  Project is exempt from MESA review.  
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2.  Separate MESA review ongoing.                      a. NHESP Tracking #                      b. Date submitted to NHESP

3.  Separate MESA review completed.  
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a.  Not applicable – project is in inland resource area only      b.  Yes     No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and  
the Cape & Islands:

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -  
Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
836 South Rodney French Blvd.  
New Bedford, MA 02744  
Email: [dmf.envreview-south@mass.gov](mailto:dmf.envreview-south@mass.gov)

Division of Marine Fisheries -  
North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930  
Email: [dmf.envreview-north@mass.gov](mailto:dmf.envreview-north@mass.gov)

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

- c.  Is this an aquaculture project?                      d.  Yes     No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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Bureau of Resource Protection - Wetlands

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**C. Other Applicable Standards and Requirements (cont'd)**

**Online Users:**

Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
- a.  Yes  No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
- b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
- a.  Yes  No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
- a.  Yes  No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
- a.  Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1.  Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
  2.  A portion of the site constitutes redevelopment
  3.  Proprietary BMPs are included in the Stormwater Management System.
- b.  No. Check why the project is exempt:
1.  Single-family house
  2.  Emergency road repair
  3.  Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

**D. Additional Information**

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

**Online Users:** Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1.  USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2.  Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

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Pelham

City/Town

**D. Additional Information (cont'd)**

3.  Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4.  List the titles and dates for all plans and other materials submitted with this NOI.

Buffam Road, Pelham, MA; Driveway Alignment

a. Plan Title

Berkshire Design Group

b. Prepared By

c. Signed and Stamped by

3/11/2021

d. Final Revision Date

e. Scale

USGS Locus Map

3/10/2021

f. Additional Plan or Document Title

g. Date

5.  If there is more than one property owner, please attach a list of these property owners not listed on this form.

6.  Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7.  Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8.  Attach NOI Wetland Fee Transmittal Form

9.  Attach Stormwater Report, if needed.

**E. Fees**

1.  Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

020089

3/10/2021

2. Municipal Check Number

3. Check date

020090

3/10/2021

4. State Check Number

5. Check date

SWCA, INC.

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

# WPA Form 3 – Notice of Intent

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Provided by MassDEP:

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Document Transaction Number

Pelham

City/Town

## F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

March 11, 2021

5. Signature of Representative (if any)

6. Date

### For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

### For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

### Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.





**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**NOI Wetland Fee Transmittal Form**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 1a	1	\$110.00	\$110.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**Step 5/Total Project Fee:** \_\_\_\_\_

**Step 6/Fee Payments:**

Total Project Fee:	\$110.00
State share of filing Fee:	\$42.50
City/Town share of filing Fee:	\$67.50
	a. Total Fee from Step 5
	b. 1/2 Total Fee <b>less</b> \$12.50
	c. 1/2 Total Fee <b>plus</b> \$12.50

**C. Submittal Requirements**

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection  
 Box 4062  
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

**To MassDEP Regional Office** (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

THE RED THERMO SECURED "SP" LOGO IN THE LOWER CORNER OF THIS CHECK MUST FADE TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION. SEE BACK FOR ADDITIONAL FEATURES.

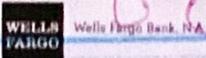
SWCA, INC.  
IMPREST ACCOUNT  
15 RESEARCH DRIVE  
AMHERST, MA 01002

DATE March 10, 2021 020088  
11-24/1210

PAY TO THE ORDER OF Town of Pelham

\$ 50.00

Fifty DOLLARS



MEMO 64471/02 NOI Bylaw Fee

*[Signature]*



⑈020088⑈



THE RED THERMO SECURED "SP" LOGO IN THE LOWER CORNER OF THIS CHECK MUST FADE TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION. SEE BACK FOR ADDITIONAL FEATURES.

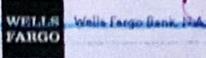
SWCA, INC.  
IMPREST ACCOUNT  
15 RESEARCH DRIVE  
AMHERST, MA 01002

DATE March 10, 2021 020089  
11-24/1210

PAY TO THE ORDER OF Town of Pelham

\$ 67.50

Sixty seven & 50/100 DOLLARS

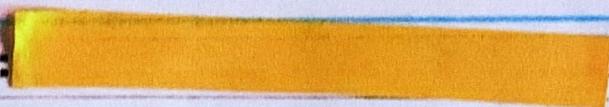


MEMO 64471/02 NOI WPA Town Fee

*[Signature]*



⑈020089⑈



THE RED THERMO SECURED "SP" LOGO IN THE LOWER CORNER OF THIS CHECK MUST FADE TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION. SEE BACK FOR ADDITIONAL FEATURES.

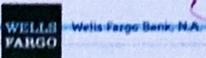
SWCA, INC.  
IMPREST ACCOUNT  
15 RESEARCH DRIVE  
AMHERST, MA 01002

DATE March 10, 2021 020090  
11-24/1210

PAY TO THE ORDER OF Commonwealth of Massachusetts

\$ 42.50

Forty two & 50/100 DOLLARS



MEMO 64471/02 NOI WPA state fee

*[Signature]*



⑈020090⑈

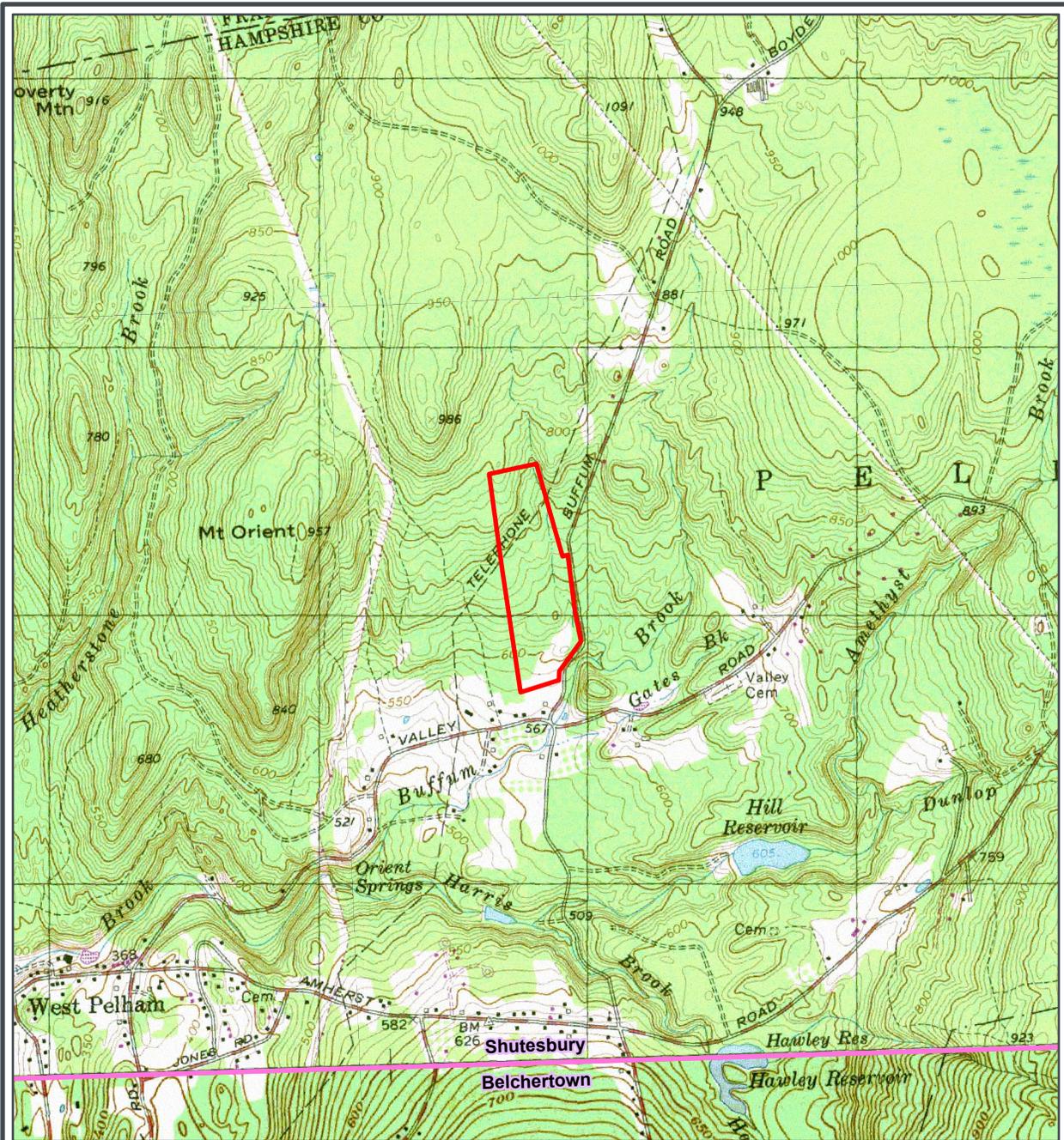


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tan

## **APPENDIX B**

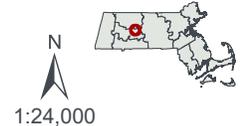
### **Figures**



PELHAM DELINEATION FOR SINGLE HOME  
**Figure 1. Project Location Map**

- ▭ Parcel Boundary
- ▭ USGS Quadrangle Boundary

Pelham, MA  
 USGS 7.5' Quadrangle: Shutesbury  
 NAD 1983 UTM Zone 18N  
 72.4507°W 42.3912°N



1:24,000

Base Map: ESRI ArcGIS Online, accessed March 2021

Updated: 3/10/2021  
 Project No. 64471





PELHAM DELINEATION FOR SINGLE HOME

**Figure 1.**  
**Environmental Resources Map**  
 Map 1 of 4



- Delineated Bank
- Delineated Wetland Boundary
- Bordering Vegetated Wetland
- Intermittent Stream
- Parcel Boundary

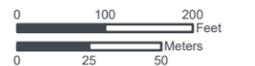
Pelham, MA  
 NAD 1983 UTM Zone 18N  
 72.4507°W 42.3912°N

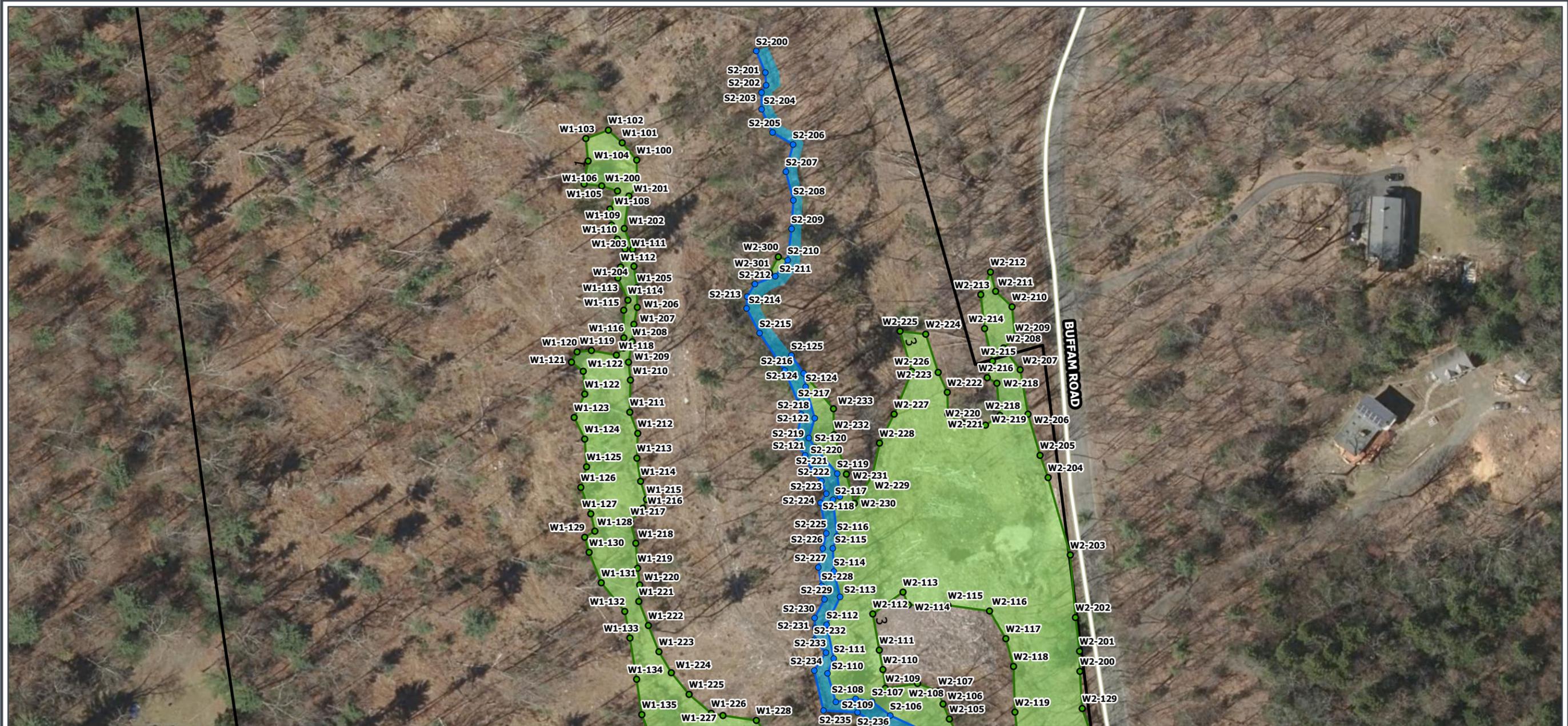
Base Map: ESRI ArcGIS Online,  
 accessed February 2021

Updated: 2/24/2021  
 Project No. 64471



1:2,500



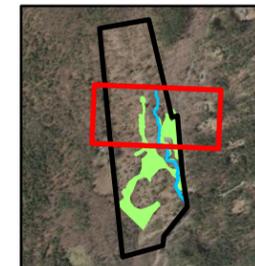


PELHAM DELINEATION FOR SINGLE HOME

**Figure 1.**  
**Environmental Resources Map**  
 Map 2 of 4



- Stream Flag
- Wetland Flag
- Delineated Bank
- Delineated Wetland Boundary
- Bordering Vegetated Wetland
- Intermittent Stream
- Parcel Boundary



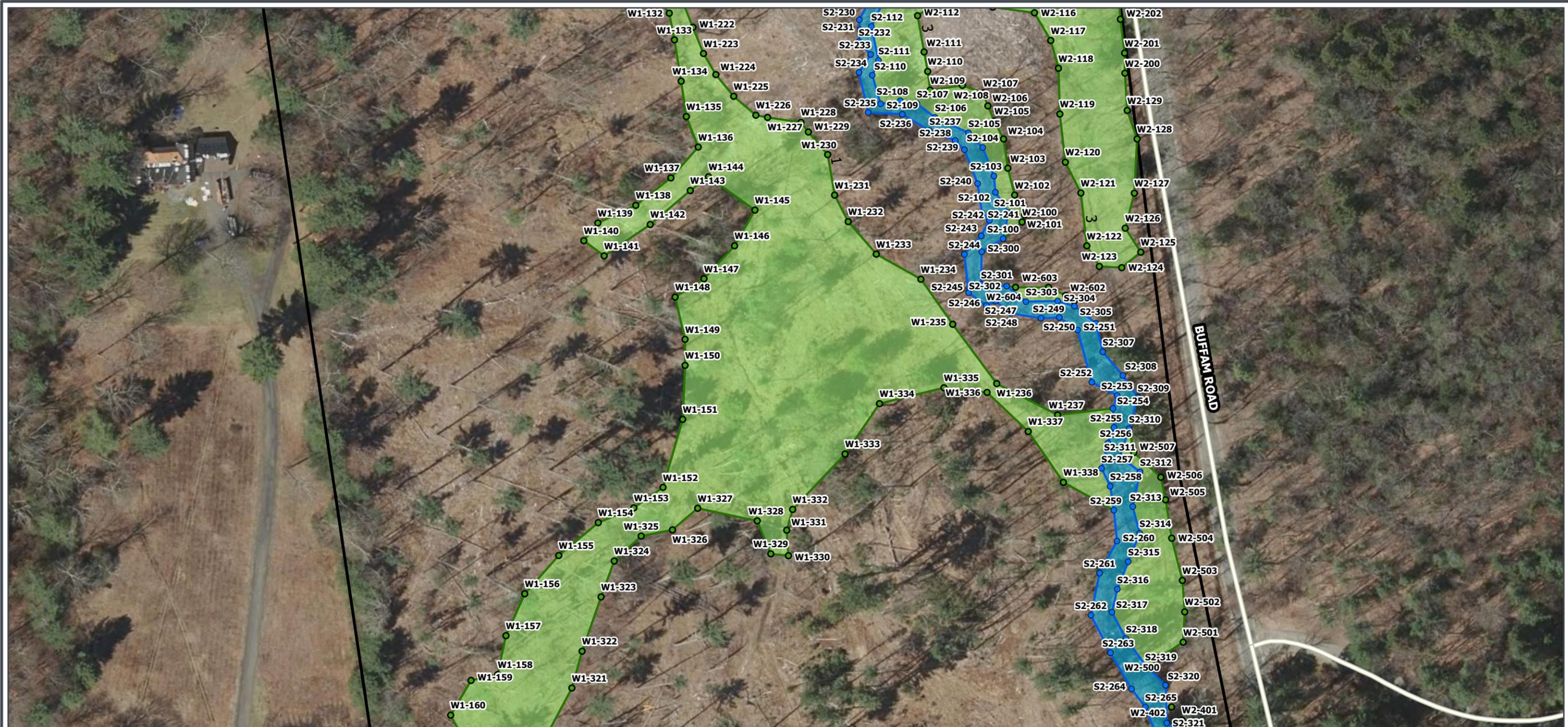
Pelham, MA  
 NAD 1983 UTM Zone 18N  
 72.4501°W 42.3919°N

Base Map: ESRI ArcGIS Online,  
 accessed February 2021

Updated: 2/24/2021  
 Project No. 64471

N

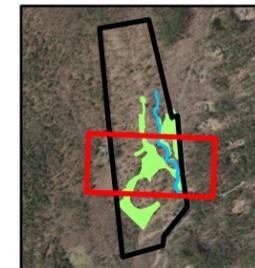
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PELHAM DELINEATION FOR SINGLE HOME  
**Figure 1.**  
**Environmental Resources Map**  
 Map 3 of 4



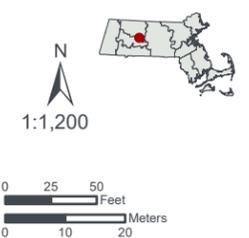
- Stream Flag
- Wetland Flag
- Delineated Bank
- Delineated Wetland Boundary
- Bordering Vegetated Wetland
- Intermittent Stream
- Parcel Boundary



Pelham, MA  
 NAD 1983 UTM Zone 18N  
 72.4503°W 42.3904°N

Base Map: ESRI ArcGIS Online,  
 accessed February 2021

Updated: 2/24/2021  
 Project No. 64471

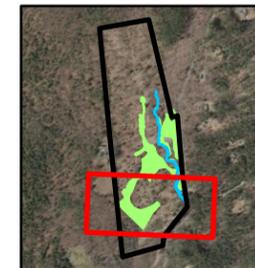




PELHAM DELINEATION FOR SINGLE HOME  
**Figure 1.**  
**Environmental Resources Map**  
 Map 4 of 4



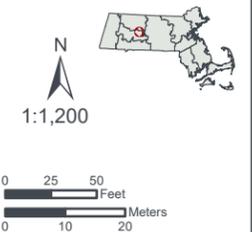
- Stream Flag
- Wetland Flag
- Delineated Bank
- Delineated Wetland Boundary
- Bordering Vegetated Wetland
- Intermittent Stream
- Parcel Boundary



Pelham, MA  
 NAD 1983 UTM Zone 18N  
 72.4503°W 42.3891°N

Base Map: ESRI ArcGIS Online,  
 accessed February 2021

Updated: 2/24/2021  
 Project No. 64471



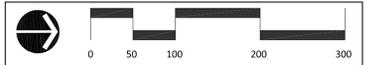
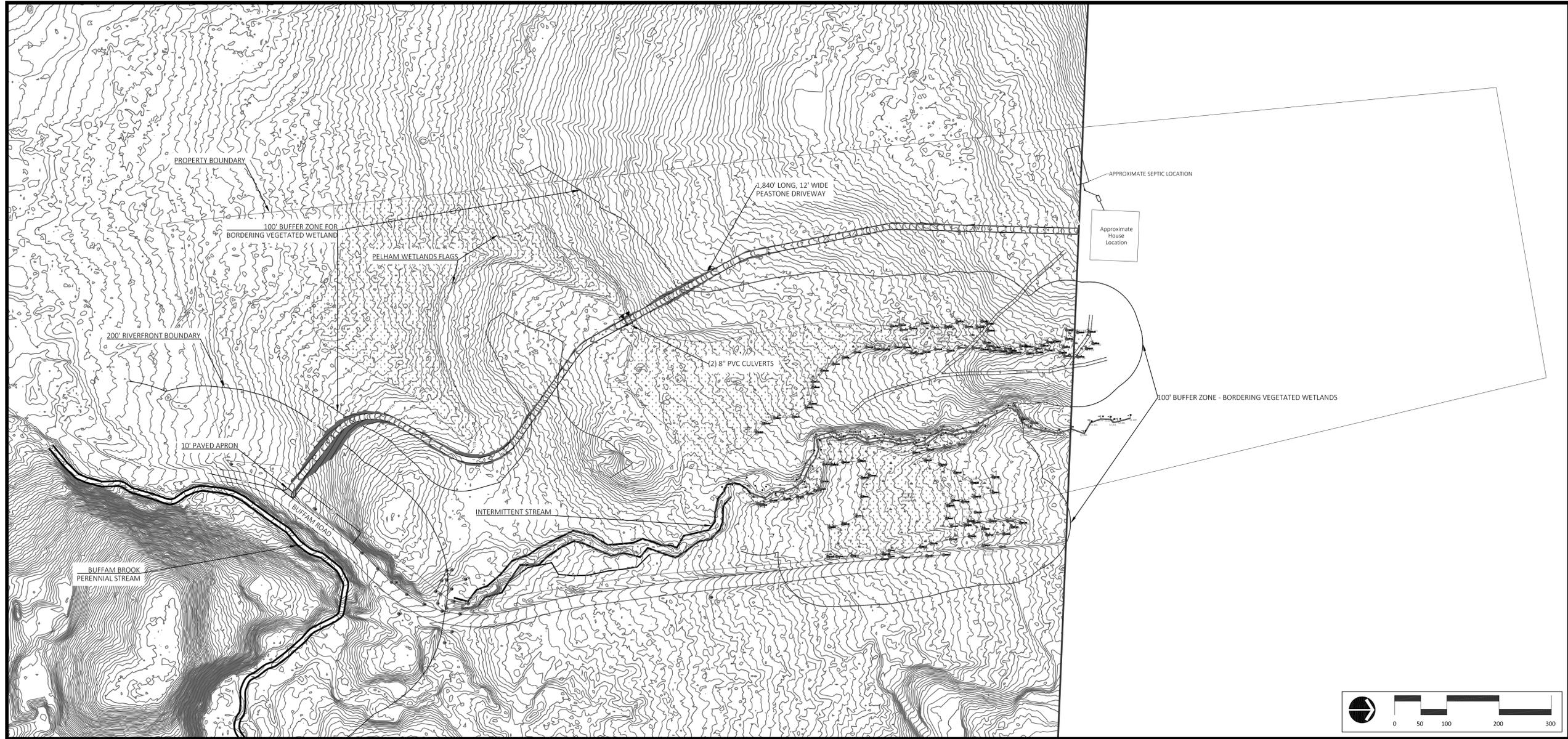
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Buffam Road  
Pelham, MA

Driveway Alignment

Overall Layout



**EXISTING CONDITIONS NOTES**

1. THE EXISTING CONDITIONS DEPICTED HEREON WERE OBTAINED BY A COMBINATION OF A FIELD SURVEY ON JANUARY 14 & 20, 2021 BY THE BERKSHIRE DESIGN GROUP, INC., AND MASS GIS OLIVER WEBSITE ([http://maps.massgis.state.ma.us/map\\_of/oliver.php](http://maps.massgis.state.ma.us/map_of/oliver.php))
2. THIS PLAN IS PREPARED AS A SITE DESIGN AND IS NOT INTENDED TO BE USED FOR DETERMINATION OF PROPERTY LINES.
3. BUFFAM BROOK PERENNIAL STREAM LOCATION ESTIMATED FROM MASS GIS OLIVER WEBSITE.
4. PELHAM WETLANDS FLAGS OBTAINED FROM MASS GIS OLIVER WEBSITE.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. IF A DISCREPANCY IS FOUND BETWEEN THIS PLAN AND THE ACTUAL FIELD CONDITION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT.
6. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
7. THIS PLAN AND SURVEY WERE PREPARED USING GNSS AND CONVENTIONAL SURVEY METHODS. A LEICA TS15 TOTAL STATION WAS USED HAVING AN ACCURACY OF 5" AND 5 PPM. A LEICA GS14 NETWORK RTK WAS USED HAVING SUBCENTIMETER ACCURACY.
8. THE BASIS OF BEARINGS, AZIMUTHS, AND THE NORTH ARROW SHOWN HEREON IS THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83). THE BASIS OF THE ELEVATIONS DEPICTED HEREON IS A GRID SEPARATION CALCULATION BASED ON GEOID12A RESULTING IN NAVD88.

Revisions	

Date:	MARCH 11, 2021	Sheet Number	L-1
Scale:	1" = 100'		
Drawn By:	LHM		
Checked By:	JS		

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Buffam Road  
Pelham, MA

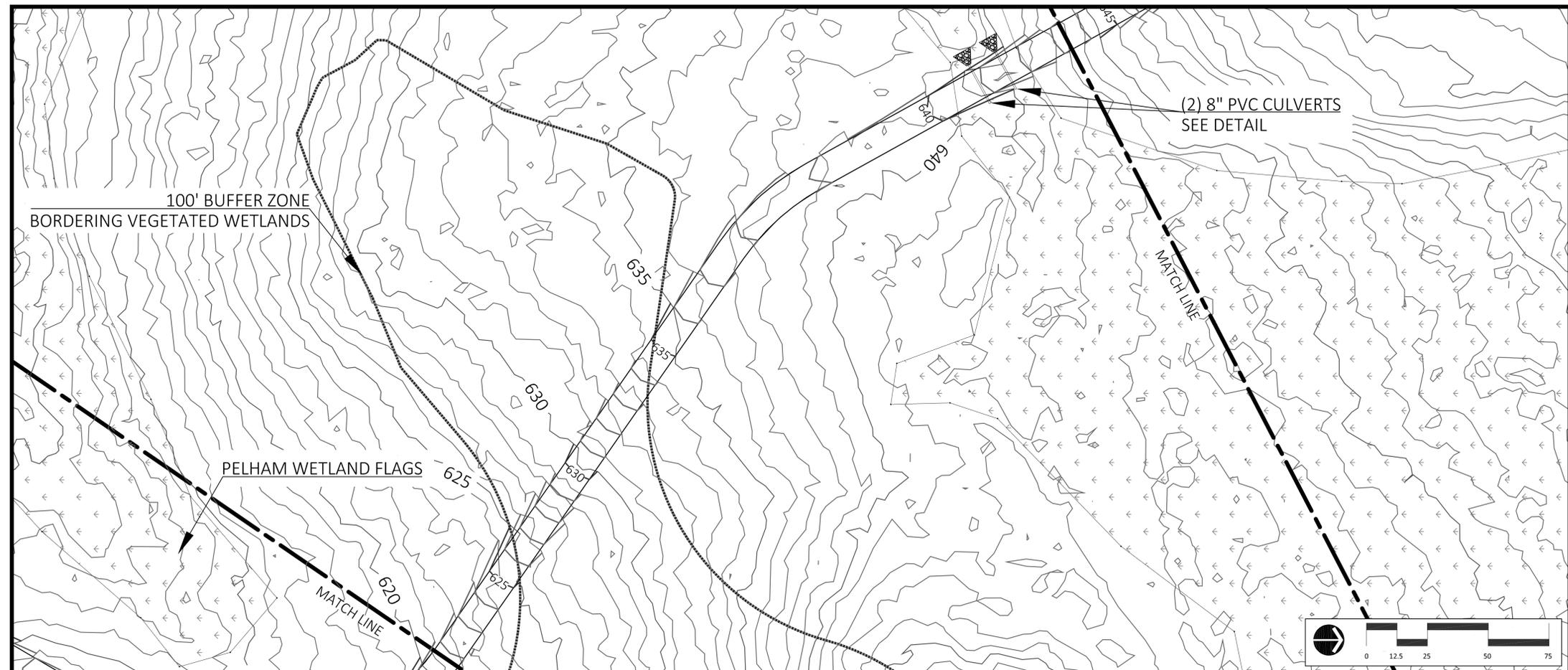
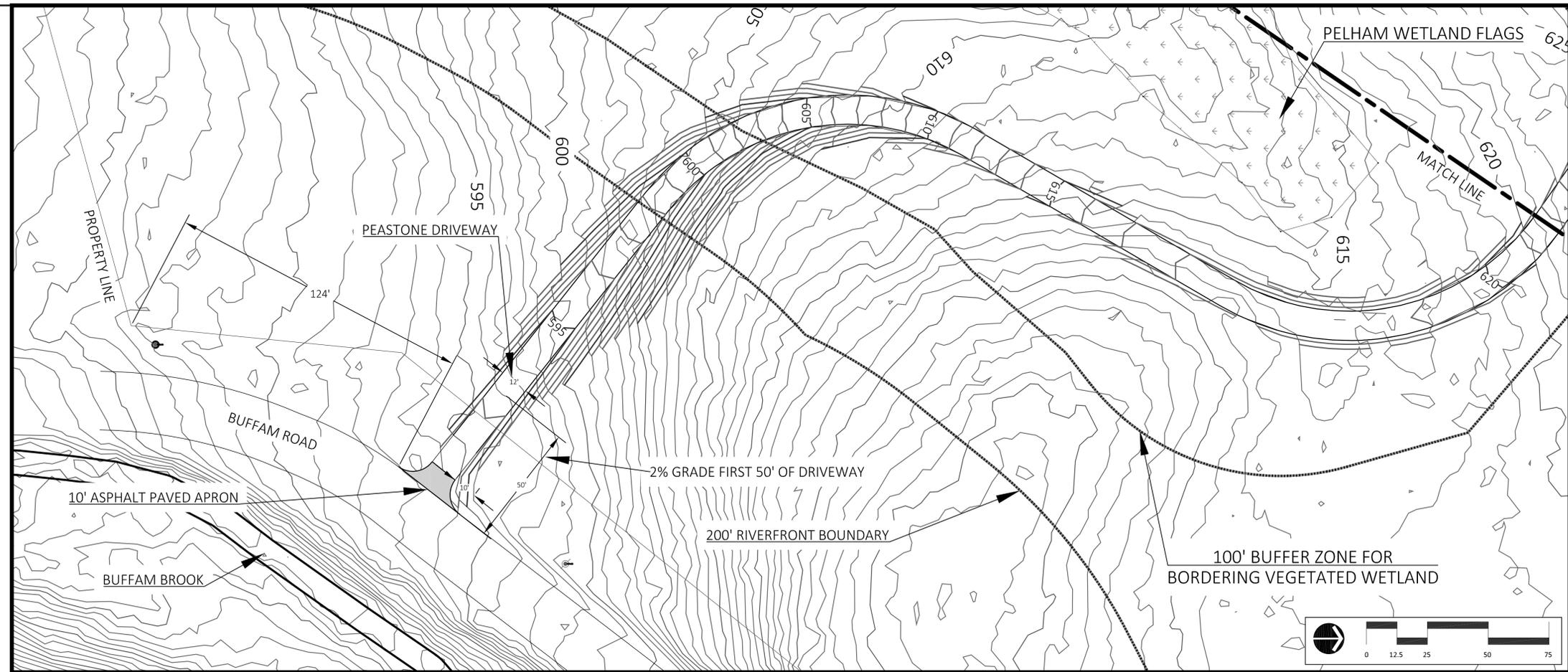
Driveway Alignment

Section Layouts

Revisions

Date: MARCH 11, 2021  
Scale: 1" = 25'  
Drawn By: LHM  
Checked By: JS

Sheet Number  
**L-2**



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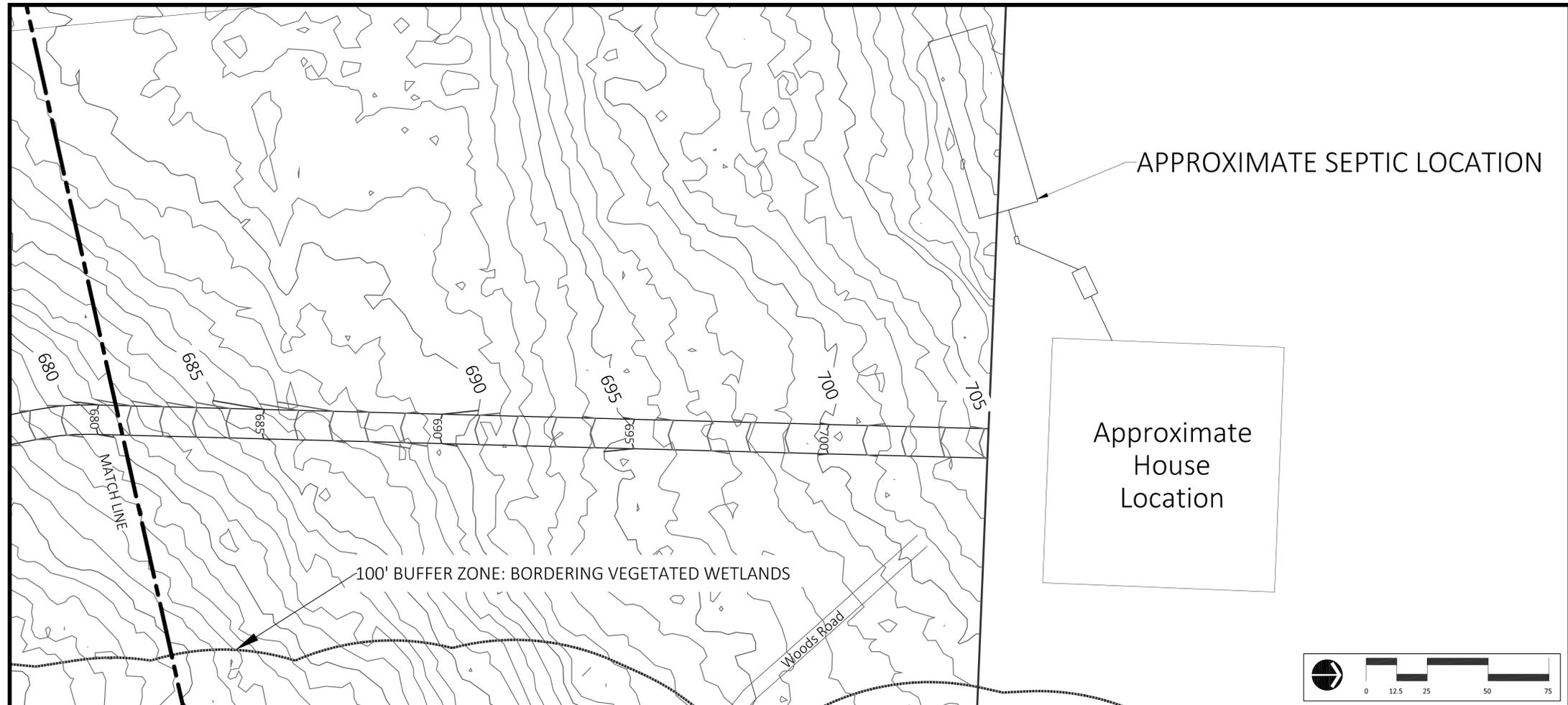
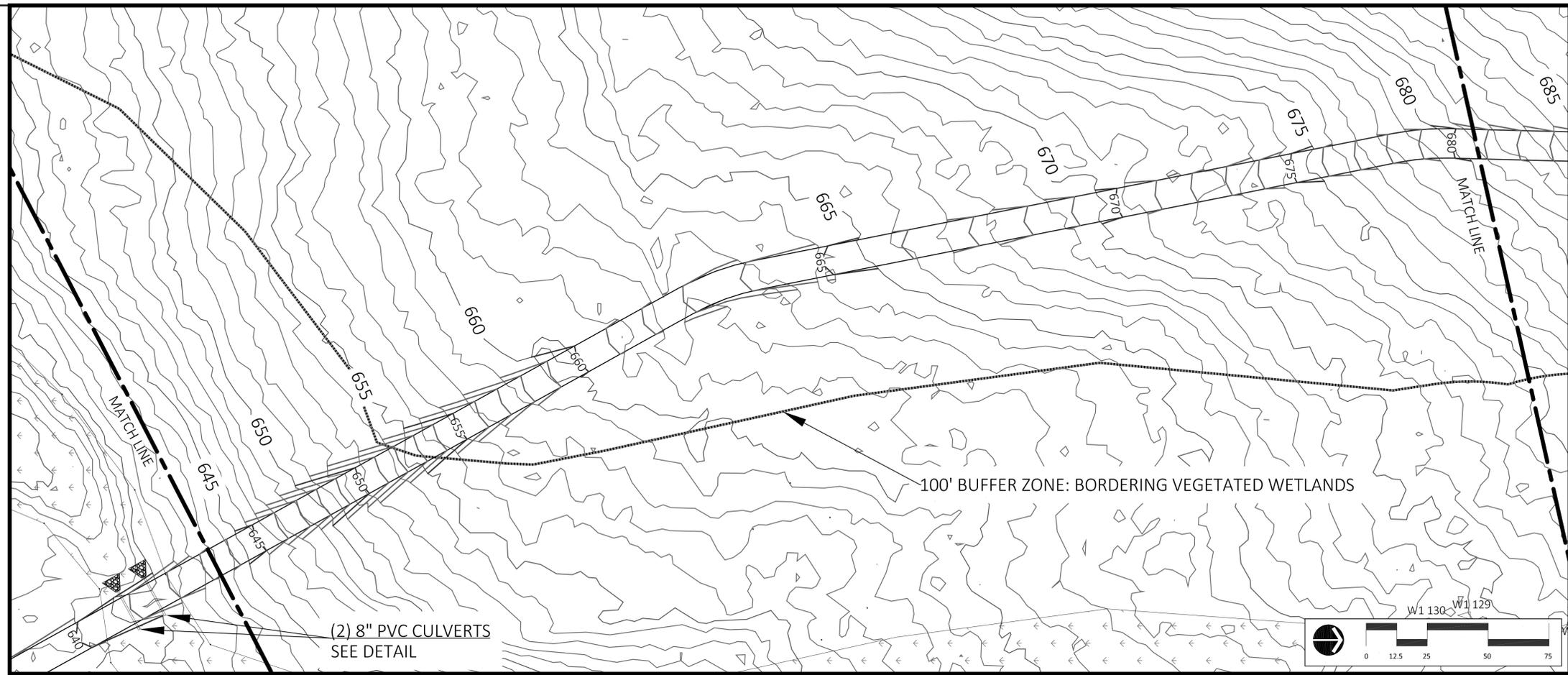
Buffam Road  
Pelham, MA

Driveway Alignment

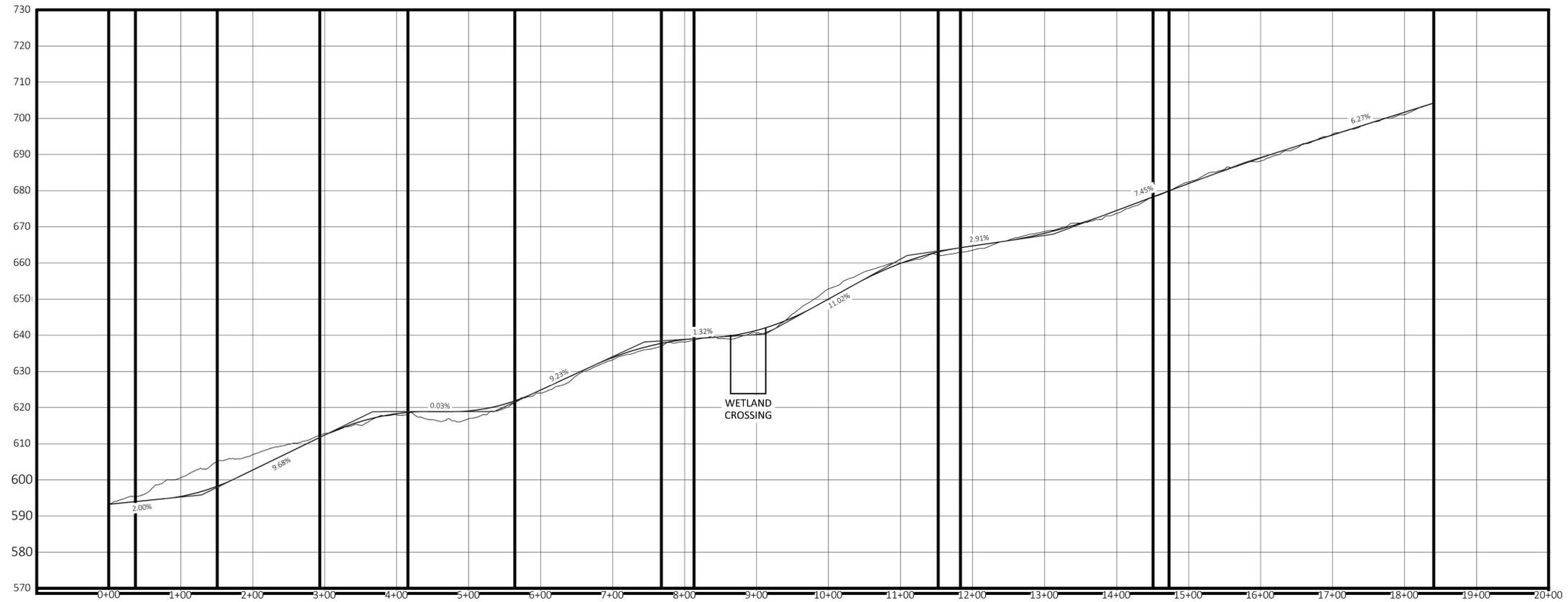
Section Layouts

Revisions	

Date:	MARCH 11, 2021	Sheet Number	<b>L-3</b>
Scale:	1" = 25'		
Drawn By:	LHM		
Checked By:	JS		



## DRIVEWAY PROFILES



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Buffam Road  
Pelham, MA

Driveway Alignment

Section Layout  
&  
Profile

Revisions	

Date:	MARCH 11, 2021	Sheet Number	<b>L-3</b>
Scale:	NTS		
Drawn By:	LHM		
Checked By:	JS		

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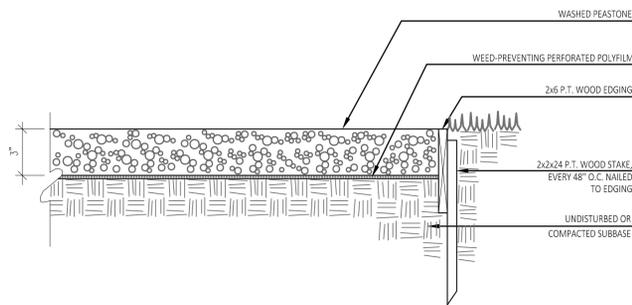
Buffam Road  
Pelham, MA

Driveway Alignment

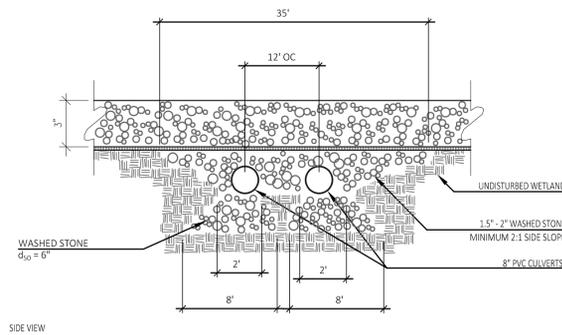
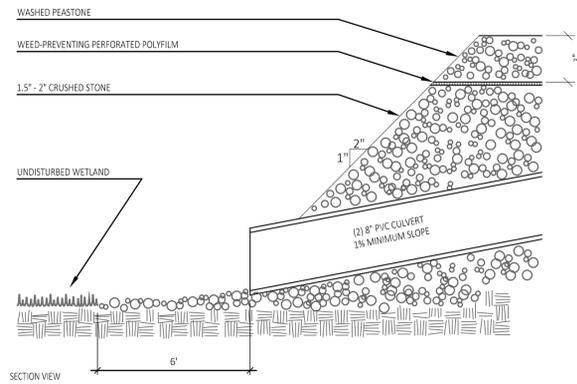
DETAILS

Revisions	

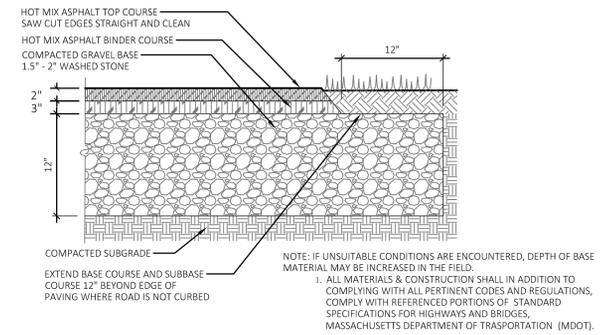
Date:	MARCH 11, 2021	Sheet Number	<b>D-1</b>
Scale:	NTS		
Drawn By:	LHM		
Checked By:	JS		



**1 Peastone Driveway**  
D-1 Not to Scale



**2 PVC Culvert**  
D-1 Not to Scale



**3 Asphalt Pavement**  
D-1 Not to Scale

## **APPENDIX C**

### **Site Photos and Data Forms**



**Photo 1. View of existing conditions of Wetland 1.**



**Photo 2. An additional view of existing conditions of Wetland 1.**



**Photo 3. View of Stream 2. Stream runs north to south of the property.**



**Photo 4. An additional view of Stream 2.**



**VEGETATION** – Use scientific names of plants.

Sampling Point: W1-Wet

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>r=30-ft</u> )																				
1. <u>Absent</u>				<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>175</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.75</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>175</u> (B)	Prevalence Index = B/A = <u>1.75</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>40</u>	x 1 = <u>40</u>																			
FACW species <u>45</u>	x 2 = <u>90</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>175</u> (B)																			
Prevalence Index = B/A = <u>1.75</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>        </u>	=Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>r=15-ft</u> )																				
1. <u>Cornus amomum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <u>        </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Betula populifolia</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Ilex verticillata</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>50</u>	=Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>r=5-ft</u> )																				
1. <u>Carex stricta</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. <u>Typha latifolia</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>																	
3. <u>Scirpus cyperinus</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>50</u>	=Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>r=30-ft</u> )																				
1. <u>Absent</u>																				
2. _____																				
3. _____																				
4. _____																				
	<u>        </u>	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)  
 - Vegetation parameter is met.





**VEGETATION – Use scientific names of plants.**

Sampling Point: W1-UP

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>r=30-ft</u> )																				
1. <u>Pinus strobus</u>	15	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14.3%</u> (A/B)																
2. <u>Quercus rubra</u>	10	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	25 =Total Cover																			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>r=15-ft</u> )																				
1. <u>Cornus amomum</u>	25	Yes	FACW	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>115</u></td> <td>x 4 = <u>460</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>530</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.53</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>115</u>	x 4 = <u>460</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>530</u> (B)	Prevalence Index = B/A = <u>3.53</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>35</u>	x 2 = <u>70</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>115</u>	x 4 = <u>460</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>530</u> (B)																			
Prevalence Index = B/A = <u>3.53</u>																				
2. <u>Kalmia latifolia</u>	15	Yes	FACU																	
3. <u>Pinus strobus</u>	10	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	50 =Total Cover																			
<b>Herb Stratum</b> (Plot size: <u>r=5-ft</u> )																				
1. <u>Grass spp</u>	50	Yes	FACU	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is $\leq 3.0^1$ <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>  </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Lycopodium spp</u>	15	Yes	FACU																	
3. <u>Gaultheria procumbens</u>	10	No	FACW																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	75 =Total Cover																			
<b>Woody Vine Stratum</b> (Plot size: <u>r=30-ft</u> )																				
1. <u>Absent</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
	=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)  
 - Vegetation parameter is not met.  
 Based on the locations of both the Grasses and Lycopodiums, it is our professional opinion that these species are most likely have the indicator status of FACU.





**VEGETATION** – Use scientific names of plants.

Sampling Point: W2-Wet

	Absolute % Cover	Dominant Species?	Indicator Status																									
<b>Tree Stratum</b> (Plot size: <u>r=30-ft</u> )																												
1. <u><i>Tsuga canadensis</i></u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;"></th> <th style="width:25%; text-align:center;">Total % Cover of:</th> <th style="width:25%; text-align:center;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align:center;"><u>25</u></td> <td style="text-align:center;">x 1 = <u>25</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>60</u></td> <td style="text-align:center;">x 2 = <u>120</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>30</u></td> <td style="text-align:center;">x 3 = <u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>10</u></td> <td style="text-align:center;">x 4 = <u>40</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>125</u> (A)</td> <td style="text-align:center;"><u>275</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.20</u></td> <td></td> </tr> </tbody> </table>		Total % Cover of:	Multiply by:	OBL species	<u>25</u>	x 1 = <u>25</u>	FACW species	<u>60</u>	x 2 = <u>120</u>	FAC species	<u>30</u>	x 3 = <u>90</u>	FACU species	<u>10</u>	x 4 = <u>40</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals:	<u>125</u> (A)	<u>275</u> (B)	Prevalence Index = B/A = <u>2.20</u>		
	Total % Cover of:	Multiply by:																										
OBL species	<u>25</u>	x 1 = <u>25</u>																										
FACW species	<u>60</u>	x 2 = <u>120</u>																										
FAC species	<u>30</u>	x 3 = <u>90</u>																										
FACU species	<u>10</u>	x 4 = <u>40</u>																										
UPL species	<u>0</u>	x 5 = <u>0</u>																										
Column Totals:	<u>125</u> (A)	<u>275</u> (B)																										
Prevalence Index = B/A = <u>2.20</u>																												
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
	<u>15</u> =Total Cover																											
<b>Sapling/Shrub Stratum</b> (Plot size: <u>r=15-ft</u> )																												
1. <u><i>Cornus amomum</i></u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <u>  </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>  </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>  </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u><i>Betula populifolia</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
	<u>35</u> =Total Cover																											
<b>Herb Stratum</b> (Plot size: <u>r=5-ft</u> )																												
1. <u><i>Juncus effusus</i></u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____																								
2. <u><i>Solidago rugosa</i></u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																									
3. <u><i>Scirpus cyperinus</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																									
4. <u><i>Cornus amomum</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																									
5. <u><i>Quercus alba</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																									
6. <u><i>Betula populifolia</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>																									
7. <u><i>Rubus allegheniensis</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
12. _____	_____	_____	_____																									
	<u>75</u> =Total Cover																											
<b>Woody Vine Stratum</b> (Plot size: <u>r=30-ft</u> )																												
1. <u>Absent</u>	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
	_____ =Total Cover																											

Remarks: (Include photo numbers here or on a separate sheet.)  
 - Vegetation parameter is met.  
 - While Eastern Hemlock (*Tsuga canadensis*) is listed as a FACU species under the USACE National Wetland Plant List, The Massachusetts Wetland Protection Act specifically names the Eastern Hemlock as a wetland species. For this reason the Eastern Hemlock has been given the FACW indicator status.

**SOIL**

Sampling Point: W2-Wet

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 2/1	100					Sandy	Fine Sandy Loam
2-6	10YR 2/2	100					Sandy	Fine Sandy Loam
6-18	10YR 4/4	85	7.5YR 4/6	15	C	M	Sandy	Distinct redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: None  
 Depth (inches): N/A

Hydric Soil Present? Yes  No

Remarks:  
 - Soils parameter is not met. This area has been significantly disturbed within the last 5 years, and seems to be transitioning from a forested area to an emergent wetland.  
 - This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. ([http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs12p2\\_051293.docx](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs12p2_051293.docx))

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Buffham Rd Single Family Home Delineation City/County: Hampshire Sampling Date: Dec. 10, 2020  
 Applicant/Owner: Hank Brakeley State: MA Sampling Point: W2-UP  
 Investigator(s): C. Bernier & F. Hoey (SWCA) Section, Township, Range: Pelham  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 5-8%  
 Subregion (LRR or MLRA): LRR R Lat: 42.391266 Long: -72.450638 Datum: WGS84  
 Soil Map Unit Name: Ridgebury Fine Sandy Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Yes, Soil  No, or Hydrology  Yes significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  No, Soil  No, or Hydrology  No naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) This data point was taken on December 10, which is outside of the typical growing season. Also, there were 2"-4" inches of snow on the ground at the time of the data collection. None of the parameters have been met.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input type="checkbox"/>
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 None

Remarks:  
 Hydrology parameter has not been met.

**VEGETATION – Use scientific names of plants.**

Sampling Point: W2-UP

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>r=30-ft</u> )																				
1. <u><i>Pinus strobus</i></u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14.3%</u> (A/B)																
2. <u><i>Quercus rubra</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>25</u>	=Total Cover																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>r=15-ft</u> )																				
1. <u><i>Cornus amomum</i></u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>115</u></td> <td>x 4 = <u>460</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>530</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.53</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>115</u>	x 4 = <u>460</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>530</u> (B)	Prevalence Index = B/A = <u>3.53</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>35</u>	x 2 = <u>70</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>115</u>	x 4 = <u>460</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>530</u> (B)																			
Prevalence Index = B/A = <u>3.53</u>																				
2. <u><i>Kalmia latifolia</i></u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u><i>Pinus strobus</i></u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>50</u>	=Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>r=5-ft</u> )																				
1. <u><i>Grass spp</i></u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is $\leq 3.0^1$ <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u><i>Lycopodium spp</i></u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u><i>Gaultheria procumbens</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>75</u>	=Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>r=30-ft</u> )																				
1. <u><i>Absent</i></u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>  X  </u>																

Remarks: (Include photo numbers here or on a separate sheet.)  
 - Vegetation parameter is not met.  
 Based on the locations of both the Grasses and Lycopodiums, it is our professional opinion that these species are most likely have the indicator status of FACU.



**APPENDIX D**  
**Abutter Information**