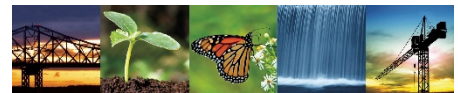




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August 2, 2024
15.0166500.48

HERITAGE Land Survey and Engineering, Inc.
241 College Highway
Southampton, MA 01073

Re: Wetland Assessment and Delineation Findings Report
354 College Highway
Southampton, MA 01073

Dear Mr. Hunsaker,

In accordance with our contract, GZA conducted a wetland assessment and delineation on June 18, 2024, within an approximately 1.3-acre parcel (**Figure 1**) that is located at 354 College Highway, Southampton, Massachusetts ("Site"). The intention of the assessment was to determine if regulated wetland resources are present on the Site. GZA returned to the Site on July 26, 2024, to collect a paired wetland data form for the isolated wetland present onsite. This letter report provides an overview of our assessment methodology and findings.



Figure 1: Approximate Site limits.

Assessment Findings

Desktop Survey

GZA reviewed MassGIS to assess if wetland related resources are present on the Site (**Table 1**).

Table 1. Summary of On-Site Wetland Related Resources from MassGIS

Resource	Present
Areas of Critical Environmental Concern (ACEC)	No
Outstanding Resource Water (ORW)	No
Priority Habitat for Rare and Endangered Species	No
Certified Vernal Pools	No
FEMA Floodplain, 100-year	No
Riverfront Area	No
Bank	No
Bordering Vegetated Wetland	No

Site Observations

On Tuesday June 18, 2024, and July 26, 2024, Environmental Scientists from GZA conducted a wetland assessment and resource area delineation at the above referenced Site. Our wetland assessment and delineation methodologies were consistent with the *Massachusetts Handbook for Delineating Bordering*



Vegetated Wetlands, Second Edition, Jackson, S.D, D.J. Henson, D. Hilgeman, M. McHugh, and L. Rhodes, 2022, Boston, MA., Massachusetts Department of Environmental Protection, Bureau of Water resources, Wetlands Program; and *Corps of Engineers Wetland Delineation Manual, Environmental Laboratory. Technical Report Y-87-1*. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS; 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, ed. J.S. Wakely, R.W. Lichvar, and C. C. Noble; ERDC/EL TR-12-1. *Vicksburg, MS: U.S. Army Engineer Research and Development Center (Version 2.0)*.

The topography of the Site slopes gently downhill from the northwest to the southeast. A review of the MassGIS MassMapper online portal indicates the presence of a hydrologic connection near the southeastern corner of the Site which flows east under College Highway. The stream is not shown on the most recent United States Geological Survey (USGS) map. An evaluation using the USGS StreamStats method from a downgradient digital centerline determined that the stream does not meet the definition of a perennial river per 310 CMR 10.58(2)(a)(1)(a-c).

A small, cleared meadow area was observed near the entrance gate to the property. Plant species within the meadow included black birch (*Betula lenta*), goldenrod (*Solidago sp.*), hayscented fern (*Dennstaedtia punctilobula*), bristly dewberry (*Rubus hispida*), red maple (*Acer rubrum*), and red oak (*Quercus rubra*). The forested upland portion of the Site consisted primarily of red oak (*Quercus rubra*) and white pine (*Pinus strobus*). Within the understory, witch hazel (*Hamamelis virginiana*), mountain laurel (*Kalmia latifolia*), and black birch were observed. Canada mayflower (*Maianthemum canadense*), Indian cucumber-root (*Medeola virginiana*), and tree club moss (*Lycopodium dendroideum*) was seen within the herbaceous layer. A small isolated wetland was observed within the center of the Site.

A country drainage swale was observed along the Site's frontage with College Highway. This was interrupted by a gated entrance to the property. A concrete stormwater swale was observed at the southern side of the property entrance gate within the drainage swale which directs flow towards a culvert located off-site near the southeastern corner of the property.

Based upon our field review, we did not identify any State or Federally regulated wetland resources on the Site consistent with the definitions of the Massachusetts Wetland Protection Act Regulations 310 CMR 10.00.

Isolated Vegetated Wetland

GZA identified an Isolated Vegetated Wetland (IVW) near the center of the Site (Photo 1). The IVW is surrounded by (particularly on the western side) and possibly the result of what is believed to be human transported material, likely compost or manure. The large quantity of organic material is likely contributing to the dominance of hydrophytic vegetation at this location by holding water and releasing it slowly. No hydrologic connections entering or exiting the IVW were observed nor was there any standing water present during the site visits. The IVW was flagged as Wetland A and identified in the field with flags A1 – A10. The predominant species within the herbaceous layer were Japanese stiltgrass (*Microstegium vimineum*), Canadian clearweed (*Pilea pumila*), long-beaked sedge (*Carex sprengei*), soft rush (*Juncus effusus*), false nettle (*Boehmeria cylindrica*), and pendulous sedge (*Carex pendula*). Isolated wetlands are not protected under the WPA unless they fall within other jurisdictional resource areas. Southampton's Chapter 264 Wetland



Photo 1: IVW-A facing south.



Protection Bylaw regulates isolated wetlands that are greater than 400 square feet in area. The wetland on site is approximately 660 square feet in area and therefore would be subject to review under the Town's Bylaw. Isolated wetlands are not federally protected by the Corps since they do not have a relatively permanent surface connection to waters of the U.S. Therefore, the wetland observed on the Site is presumed to not be under the jurisdiction of the Massachusetts Wetlands Protection Act (WPA; M.G.L. c. 131, § 40), its companion regulations (310 CMR 10.00), or Section 404 of the federal Clean Water Act as administered by the U.S. Army Corps of Engineers (Corps).

Intermittent Stream

An intermittent stream was observed near the southeast corner of the Site boundary which conveys flow towards an approximately 36-inch diameter culvert that runs beneath College Highway (Photo 2). The off-property stream appears to qualify as an intermittent stream, consistent with the criteria defined at 310 CMR 10.58(2)(a)(1)(b) and (c) (i through ii). The stream channel varies in width from 6-8 feet wide and has a sandy/cobble substrate that includes small vertical drops along the length of the channel. The water depth at the time of our assessment in this area was observed to be approximately 2 to 10 inches. Observations within the channel indicated evidence of scouring and deposition of vegetation in the areas where there was low flow.



Photo 2: A culvert near the southeastern corner of the Site.

The bank of the intermittent stream as the was observed to be off-site and therefore no wetland flags were placed in the field. GZA estimated a portion of the stream bank's location using gps to project the stream's buffer zone onto the project Site as shown in the attached Wetland Sketch map.



Summary of Findings

Based upon our desktop survey and field assessment, GZA did not observe State or federally regulated wetland resources on the Site. An isolated vegetated wetland observed on the Site appears to meet the criteria as a regulated feature under the Southampton Wetland Bylaw and is therefore subject to review by the Conservation Commission. The intermittent stream directly to the south of the southern property boundary projects 100-feet of jurisdictional Buffer Zone which extends onto the property. The Buffer Zone is jurisdictional under the WPA and its companion regulations.

Alteration of the soil or vegetation within a wetland resource or its Buffer Zone requires approval, at a minimum, from the Southampton Conservation Commission and adherence to specific performance standards.

Should you have any questions, please feel free to contact Joseph Rogers at 413-726-2109 or joseph.rogers@gza.com.

Sincerely,
GZA GeoEnvironmental, Inc.

A handwritten signature in blue ink that reads "Joseph Rogers".

Joseph Rogers, PWS, CESSWI
Senior Project Manager

A handwritten signature in blue ink that reads "Robin J. Casioppo".

Robin Casioppo, PWS, CESSWI
Consultant / Reviewer

A handwritten signature in black ink that reads "Stephen Lecco".

Stephen Lecco, PWS, AICP, CEP
Principal in Charge

Encl: Natural Resource Survey and Assessment Limitations



USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) has prepared this report on behalf of, and for the exclusive use of HERITAGE Land Survey and Engineering, Inc. ("Client") for the stated purpose(s) and location(s) identified in the report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the data gathered and observations made during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

LIMITS TO OBSERVATIONS

4. Natural resource characteristics are inherently variable. Biological community composition and diversity can be affected by seasonal, annual or anthropogenic influences. In addition, soil conditions are reflective of subsurface geologic materials, the composition and distribution of which vary spatially.
5. The observations described in this report were made on the dates referenced and under the conditions stated therein. Conditions observed and reported by GZA reflect the conditions that could be reasonably observed based upon the visual observations of surface conditions and/or a limited observation of subsurface conditions at the specific time of observation. Such conditions are subject to environmental and circumstantial alteration and may not reflect conditions observable at another time.
6. The conclusions and recommendations contained in this report are based upon the data obtained from a limited number of surveys performed during the course of our work on the site, as described in the Report. There may be variations between these surveys and other past or future surveys due to inherent environmental and circumstantial variability.

RELIANCE ON INFORMATION FROM OTHERS

7. Preparation of this Report may have relied upon information made available by Federal, state and local authorities; and/or work products prepared by other professionals as specified in the report. Unless specifically stated, GZA did not attempt to independently verify the accuracy or completeness of that information.

COMPLIANCE WITH REGULATIONS AND CODES

8. GZA's services were performed to render an opinion on the presence and/or condition of natural resources as described in the Report. Standards used to identify or assess these resources as well as regulatory jurisdiction, if any, are stated in the Report. Standards for identification of jurisdictional resources and regulatory control over them may vary between



governmental agencies at Federal, state and local levels and are subject to change over time which may affect the conclusions and findings of this report.

NEW INFORMATION

9. In the event that the Client or others authorized to use this report obtain information on environmental regulatory compliance issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this work, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

10. GZA recommends that we be retained to provide further investigation, if necessary, which would allow GZA to (1) observe compliance with the concepts and recommendations contained herein; (2) evaluate whether the manner of implementation creates a potential new finding; and (3) evaluate whether the manner of implementation affects or changes the conditions on which our opinions were made.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 354 College Highway City/County: Southampton/Hampshire Sampling Date: 07/26/24
 Applicant/Owner: HERITAGE Land Survey and Engineering, Inc. State: MA Sampling Point: SP1
 Investigator(s): GZA - JNR Section, Township, Range: _____
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): Convex Slope %: 1
 Subregion (LRR or MLRA): LRR R Lat: 42.206262 Long: -72.72722 Datum: NAD83
 Soil Map Unit Name: Wethersfield fine sandy loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ 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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
---	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Indicators of wetland hydrology were not observed at this location

VEGETATION – Use scientific names of plants.

Sampling Point: SP1

<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus rubra</u>	50	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>12.5%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border:none;"> <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>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>105</u></td> <td>x 4 = <u>420</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>430</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.91</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>105</u>	x 4 = <u>420</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>430</u> (B)	Prevalence Index = B/A = <u>3.91</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>105</u>	x 4 = <u>420</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>110</u> (A)	<u>430</u> (B)																			
Prevalence Index = B/A = <u>3.91</u>																				
2. <u>Pinus strobus</u>	25	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	75	=Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' Radius</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Betula lenta</u>	10	Yes	FACU																	
2. <u>Pinus strobus</u>	5	Yes	FACU																	
3. <u>Vaccinium corymbosum</u>	5	Yes	FACW																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	20	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5' Radius</u>)																				
1. <u>Gaultheria procumbens</u>	10	Yes	FACU																	
2. <u>Pinus strobus</u>	5	Yes	FACU																	
3. <u>Ssolidago sp.</u>	5	Yes																		
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	20	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>30' Radius</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
				Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SP1

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 ¹	Loc ²		
0-1	10YR 3/2	100					Loamy/Clayey	
1-6	10YR 3/4	100					Loamy/Clayey	
6-20	10YR 4/6	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			
<input type="checkbox"/> Sandy Redox (S5)			
<input type="checkbox"/> Stripped Matrix (S6)			
<input type="checkbox"/> Dark Surface (S7)			

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

Restrictive Layer (if observed):	Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Type: _____ N/A			
Depth (inches): _____			

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 354 College Highway City/County: Southampton/Hampshire Sampling Date: 07/26/24
 Applicant/Owner: HERITAGE Land Survey and Engineering, Inc. State: MA Sampling Point: SP2
 Investigator(s): GZA - JNR Section, Township, Range: _____
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): Concave Slope %: 1
 Subregion (LRR or MLRA): LRR R Lat: 42.206262 Long: -72.72722 Datum: NAD83
 Soil Map Unit Name: Wethersfield fine sandy loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ 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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) <u>X</u> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
---	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Indicators of wetland hydrology were not observed at this location

VEGETATION – Use scientific names of plants.

Sampling Point: SP2

<u>Tree Stratum</u> (Plot size: <u>30' Radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">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>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>75</u></td> <td>x 3 = <u>225</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>95</u></td> <td>(A) <u>265</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.79</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>75</u>	x 3 = <u>225</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u>	(A) <u>265</u> (B)	Prevalence Index = B/A = <u>2.79</u>	
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Prevalence Index = B/A = <u>2.79</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' Radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5' Radius</u>)																				
1. <u>Microstegium vimineum</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Pilea pumila</u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Carex sprengeii</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Impatiens capensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>30' Radius</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No _____

Remarks: (Include photo numbers here or on a separate sheet.)



LEGEND



- PARCEL BOUNDARY
- WETLAND FLAG
- STORMWATER SWALE
- CULVERT
- ESTIMATED STREAM BANK
- GATE
- ▶ DELINEATED ISOLATED VEGETATED WETLAND (BYLAW ONLY)
- 100FT BUFFER ZONE (BYLAW ONLY)
- ESTIMATED INTERMITTENT STREAM - BANK
- - - STORMWATER SWALE
- 100FT BUFFER ZONE

NOTES:

1. BASE MAP SOURCE: 2023 Aerial Imagery MassGIS
2. WETLAND BOUNDARIES SHOWN HEREON WERE DELINEATED ON JUNE 18, 2024 BY GZA, 1350 MAIN STREET, SUITE 1400, SPRINGFIELD, MA 01103.



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**354 COLLEGE HIGHWAY WETLAND DELINEATION
354 COLLEGE HIGHWAY
SOUTHAMPTON, MA 01073**

WETLAND SKETCH MAP

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: HERITAGE LAND SURVEYING & ENGINEERING, INC. 241 COLLEGE HIGHWAY SOUTHAMPTON, MA 01073	
PROJ MGR: JNR	REVIEWED BY: SLL	CHECKED BY: RJC	FIGURE 3
DESIGNED BY: PDL	DRAWN BY: PDL	SCALE: 1 in 50 ft	
DATE: 07/26/2024	PROJECT NO: 15.0166500.48	REVISION NO:	