April 27, 2021

Lancaster Conservation Commission
Prescott Building
701 Main Street, Suite 4
Lancaster, MA 01523

Re: Notice of Intent (NOI)
McGovern Boulevard, Phase 2, Roadway Construction, Lancaster, MA

Goddard Consulting, LLC (Goddard) is pleased to submit this Notice of Intent (NOI) on behalf of the applicant Steve Boucher, North Lancaster LLC the proposed roadway improvements to McGovern Boulevard (Assessor Map – Parcel: 14-4.D, 14-4.F, 14-4.G, 14-4.H 14-4.I, 14-4.J, 14-4.N, 14-9,). This NOI application is for proposed work within Buffer Zone, Riverfront Area, Bordering Land Subject to Flooding, Land Under Water Bodies, Bank and Bordering Vegetated Wetland. This NOI is being jointly filed only under the MA Wetlands Protection Act (WPA) and Lancaster Wetlands Protection Bylaw.

Ten copies and one original of this submittal is enclosed, along with ten full size paper copy of site plans. The titles of all the documents enclosed are as follows:

- NOI (WPA Form 3) Application form
- Wetland Fee Transmittal Form & Copy of Checks
- Certified Abutter List
- Notification to Abutters
- Affidavit of Service
- *Regulation Discussion,* Roadway improvements - McGovern Boulevard, Lancaster, MA, Goddard Consulting, LLC, 4/26/21
- *WETLAND REPLICATION STREAMBED RESTORATION, AND BLSF RESTORATION PLAN, 4/26/2021*
- National Flood Hazard Layer FIRMete, FEMA
- *Drainage Analysis, Definitive Subdivision – Phase II,* Hannigan Engineering, Inc., 3/26/2021
- *Floodplain Review,* 2 Sheets , Hannigan Engineering, Inc., 3/26/2021
- *McGovern Boulevard, Phase II: Roadway Construction,* 15 sheets, Hannigan Engineering, Inc., 3/26/2021

Please feel free to contact us if you have any questions.
Very truly yours,

Scott Goddard,
Principal & PWS

CC:

- Wetlands Division, DEP – CERO, 8 New Bond Street, Worcester, MA 01606
- North Lancaster LLC, Steve Boucher, 435R Lancaster Street, Leominster, MA 01453
- 702 LLC, 259 Turnpike Rd. Suite 100, Southborough, 01772
- Cadette And Nadreau Lancaster Realty LLC, 456 Main Street, Leominster, MA 01453
- N & K Lancaster LLC, 16 E. Main Street, Westborough, MA 01581
- Benters LLC, 148 Kaleva Road, Lancaster, MA 01523

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
& Lancaster Wetlands Protection Bylaw

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lancaster
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):

a. Street Address	b. City/Town	c. Zip Code
0 McGovern Blvd	Lancaster	01561

Latitude and Longitude:

d. Latitude	e. Longitude
42.43771N	71.70910W

f. Assessors Map/Plat Number	g. Parcel /Lot Number
14	4.D, 4.F, 14.G, 4.H, 4.I, 4.J, 4.N, 4.0, 9.0,

2. Applicant:

a. First Name	b. Last Name
Steve	Boucher

c. Organization: North Lancaster LLC (Owner Map/Lot 14-4.N)

d. Street Address: 435R Lancaster Street

e. City/Town	f. State	g. Zip Code
Leominster	MA	01453

h. Phone Number	i. Fax Number	j. Email Address
978-534-0816		steve@boucher-construction.com

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

a. First Name	b. Last Name
See attached list	

c. Organization

d. Street Address

e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

a. First Name	b. Last Name
Scott	Goddard

c. Company: Goddard Consulting, LLC

d. Street Address: 291 Main Street, Suite #8

e. City/Town	f. State	g. Zip Code
Northborough	MA	01532

h. Phone Number	i. Fax Number	j. Email address
508-393-3784		scott@goddardconsultingllc.com

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

a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid
$2,175	$1,100	$1,075

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3a. Additional Property owner (required if different from applicant):

Robert
a. First Name

Redmond
b. Last Name

Benters LLC (Map/Lot 14-9.0)
c. Organization

148 Kaleva Road
d. Street Address

Lancaster
e. City/Town

MA
f. State

Lancaster
e. City/Town

h. Phone Number

i. Fax Number

h. Phone Number

3b. Additional Property owner (required if different from applicant):

William
a. First Name

Depietri
b. Last Name

702 LLC (Map/Lot 14-4.D)
c. Organization

259 Turnpike Road, Suite 100
d. Street Address

Southborough
e. City/Town

MA
f. State

01772
g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

3c. Additional Property owner (required if different from applicant):

John
a. First Name

Nadreau
b. Last Name

Cadette And Nadreau Lancaster Realty LLC (Map/Lot 14-4.F, 14-4.G)
c. Organization

456 Main Street
d. Street Address

Leominster
e. City/Town

MA
f. State

Leominster
e. City/Town

h. Phone Number

i. Fax Number

h. Phone Number

3d. Additional Property owner (required if different from applicant):

Norman
a. First Name

Brooks (Trustee)
b. Last Name

McGovern Boulevard Lots LLC (14-4.H, 14-4.I, 14-4.J)
c. Organization

435 Lancaster Street
d. Street Address

Leominster
e. City/Town

MA
f. State

02459
g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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A. General Information (continued)

6. General Project Description:

Roadway widening and improvements. Widening existing crossing with larger culvert.

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)

10.53(3)(e)
2. Limited Project Type

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:

Worcester Registry of Deeds	
a. County	b. Certificate # (if registered land)
58389, 52313, 59673, 54278, 57653, 62792	386, 272, 28, 197, 199, 180
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.

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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. ☒ Bank	45 perm. 25 Temp. (1. linear feet)	25 restored in-place (2. linear feet)
b. ☒ Bordering Vegetated Wetland	615 perm. 380 Temp (1. square feet)	2,144 Replicated, 280 in-place (2. square feet)
c. ☒ Land Under Waterbodies and Waterways	378 perm. 312 Temp. (1. square feet)	312 restored in-place (2. square feet)
	None (3. cubic yards dredged)	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☒ Bordering Land Subject to Flooding	75,885 (natural and disturbed) (1. square feet)	26,550 (natural) (2. square feet)
	32,978 (3. cubic feet of flood storage lost)	41,539 (4. cubic feet replaced)
e. ☐ Isolated Land Subject to Flooding	(1. square feet)	
	(2. cubic feet of flood storage lost)	(3. cubic feet replaced)
f. ☒ Riverfront Area	McGovern Brook (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: 663,000 square feet

4. Proposed alteration of the Riverfront Area: (See Regulation Discussion)

	a. total square feet (Permanent)	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
Permanent	35,650SF (7,000 SF increase)	17,950 SF	17,700 SF

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.

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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.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ 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. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ 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. ☒ Project Involves Stream Crossings

a. number of new stream crossings | b. number of replacement stream crossings: 1

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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

1. 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.

   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 1, 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*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ 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 http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/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.

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

(c) ☐ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). 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, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm; 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:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

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.

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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.

   Central Nashua River Valley
   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.

D. Additional Information (cont'd)

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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.

McGovern Boulevard, Phase II: Roadway Construction, 15 sheets
a. Plan Title

Hannigan Engineering, Inc
b. Prepared By

William D. Hannigan
c. Signed and Stamped by

3/26/2021
d. Final Revision Date

1"=40'/Varies
e. Scale

Drainage Analysis, Definitive Subdivision – Phase II
f. Additional Plan or Document Title

3/26/2021
g. Date

Floodplain Review, 2 Sheets
f. Additional Plan or Document Title

3/26/2021
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:

1066
2. Municipal Check Number

4/22/2021
3. Check date

1065
4. State Check Number

4/22/2021
5. Check date

Steve
6. Payor name on check: First Name

Boucher, North Lancaster LLC
7. Payor name on check: Last Name

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Provided by MassDEP:

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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 (North Lancaster LLC) — 2. Date: 4-16-2021

3a. Signature of Property Owner (Berlors LLC) — 4a. Date: 4/19/2021

3b. Signature of Property Owner (702 LLC) — 4b. Date: 4/20/2021

3c. Signature of Property Owner (Cadotte and Nadreau Lancaster Realty LLC) — 4c. Date: 4-16-2021

3d. Signature of Property Owner (McGovern Boulevard Lots LLC) — 4d. Date

5. Signature of Representative (Scott Goddard, Goddard Consulting LLC) — 6. Date: 4/20/2021

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.

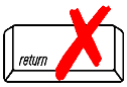
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

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

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



A. Applicant Information

1. Location of Project:

0 McGovern Boulevard	Lancaster
a. Street Address	b. City/Town
1065	$1,075
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Steve		Boucher	
a. First Name		b. Last Name	
North Lancaster LLC (Owner Map/Lot 14-4.N,14.4.0)			
c. Organization			
435R Lancaster Street			
d. Mailing Address			
Lancaster	MA	01453	
e. City/Town	f. State	g. Zip Code	
978-534-0816		steve@boucher-construction.com	
h. Phone Number	i. Fax Number	j. Email Address	

3. Property Owner (if different): (**See attached List)**

See attached List			
a. First Name		b. Last Name	
c. Organization			
d. Mailing Address			
e. City/Town	f. State	g. Zip Code	
h. Phone Number	i. Fax Number	j. Email Address	

B. Fees

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

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 4(a)	1	$1,450*1.5 RFA	$2,175

Step 5/Total Project Fee: $2,175

Step 6/Fee Payments:

Total Project Fee:	$2,175 a. Total Fee from Step 5
State share of filing Fee:	$1,075 b. 1/2 Total Fee **less $**12.50
City/Town share of filling Fee:	$1,100 c. 1/2 Total Fee **plus** $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.)

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
& Lancaster Wetlands Protection Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Lancaster
City/Town

3a. Additional Property owner (required if different from applicant):

Robert
a. First Name

Redmond
b. Last Name

Benters LLC (Map/Lot 14-9.0)
c. Organization

148 Kaleva Road
d. Street Address

Lancaster
e. City/Town

MA
f. State

Lancaster
e. City/Town

h. Phone Number

i. Fax Number

h. Phone Number

3b. Additional Property owner (required if different from applicant):

William
a. First Name

Depietri
b. Last Name

702 LLC (Map/Lot 14-4.D)
c. Organization

259 Turnpike Road, Suite 100
d. Street Address

Southborough
e. City/Town

MA
f. State

01772
g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

3c. Additional Property owner (required if different from applicant):

John
a. First Name

Nadreau
b. Last Name

Cadette And Nadreau Lancaster Realty LLC (Map/Lot 14-4.F, 14-4.G)
c. Organization

456 Main Street
d. Street Address

Leominster
e. City/Town

MA
f. State

Leominster
e. City/Town

h. Phone Number

i. Fax Number

h. Phone Number

3d. Additional Property owner (required if different from applicant):

Norman
a. First Name

Brooks (Trustee)
b. Last Name

McGovern Boulevard Lots LLC (14-4.H, 14-4.I, 14-4.J)
c. Organization

435 Lancaster Street
d. Street Address

Leominster
e. City/Town

MA
f. State

02459
g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

TOWN OF LANCASTER
BOARD OF ASSESSORS

Request for Certified Abutters List

Lot #	- Owner
014-0004.D	- 702 LLC
014-0004.F	- Cadette & Nadreau Lancaster Realty
014-0004.G	- Cadette & Nadreau Lancaster Realty
014-0004.H	- McGovern Boulevard Lots LLC
014-0004.I	- McGovern Boulevard Lots LLC
014-0004.J	- McGovern Boulevard Lots LLC
014-0004.N	- North Lancaster LLC
014-0009.0	- Benters LLC

SUBJECT PARCEL: ADDRESS: _____

MAP: _____ PARCEL: _____

CURRENT OWNER: _____

REQUESTER'S NAME: NAME: Mark Arnold, Goddard Consulting LLC

MAILING ADDRESS: 291 Main Street

CITY: Northborogh STATE: MA ZIP: 01532

PHONE#: 508-393-3784

INTENDED USE: CHECK APPROPRIATE BOX

____ BOARD OF APPEALS (ZONING)
____ BOARD OF HEALTH
____ BOARD OF SELECTMEN
✔ CONSERVATION
____ PLANNING BOARD
____ OTHER: _____

CERTIFIED LIST SHOULD BE: CHECK APPROPRIATE BOX

✔ EMAIL TO: mark@goddardconsultingllc.com
____ PICKED UP (WILL CALL WHEN READY)
____ FORWARDED TO DEPARTMENT: _____
____ MAILED TO OWNER
____ MAILED TO REQUESTER
____ OTHER: _____

4/20/2021
DATE OF REQUEST

SIGNATURE OF REQUESTER

PLEASE ALLOW A MINIMUM OF 2 WORKING DAYS FROM REQUEST DATE FOR COMPLETED CERTIFIED LIST

DEBRA A. SANDERS
PRINCIPAL ASSESSOR, EXT 1301

BOBBI-JO WILLIAMS
FINANCE TECHNICIAN, EXT 1312

701 MAIN STREET, SUITE 3, LANCASTER, MASSACHUSETTS 01523
TELEPHONE: 978-365-3326 FACSIMILE: 978-368-9083 EMAIL: ASSESSORS@LANCASTERMA.NET

300 foot Abutters List Report

Lancaster, MA
April 20, 2021

Subject Properties:

Parcel Number: 014-0004.D
CAMA Number: 014-0004.D
Property Address: 0 LUNENBURG RD
Mailing Address: 702 LLC
259 TURNPIKE RD SUITE 100
SOUTHBOROUGH, MA 01772

Parcel Number: 014-0004.F
CAMA Number: 014-0004.F
Property Address: 35 MCGOVERN BOULEVARD
Mailing Address: CADETTE & NADREAU LANCASTER REALTY
456 MAIN ST
LEOMINSTER, MA 01453

Parcel Number: 014-0004.G
CAMA Number: 014-0004.G
Property Address: 55 MCGOVERN BOULEVARD
Mailing Address: CADETTE AND NADREAU LANCASTER REALTY LLC
456 MAIN STREET
LEOMINSTER, MA 01453

Parcel Number: 014-0004.H
CAMA Number: 014-0004.H
Property Address: 30 MCGOVERN BOULEVARD
Mailing Address: NORTH LANCASTER LLC
435 LANCASTER ST
LEOMINSTER, MA 01453

Parcel Number: 014-0004.I
CAMA Number: 014-0004.I
Property Address: 40 MCGOVERN BOULEVARD
Mailing Address: NORTH LANCASTER LLC
435 LANCASTER ST
LEOMINSTER, MA 01453

Parcel Number: 014-0004.J
CAMA Number: 014-0004.J
Property Address: 50 MCGOVERN BOULEVARD
Mailing Address: NORTH LANCASTER LLC
435 LANCASTER ST
LEOMINSTER, MA 01453

Parcel Number: 014-0004.N
CAMA Number: 014-0004.N
Property Address: 0 MCGOVERN BOULEVARD
Mailing Address: N & K LANCASTER LLC
16 E MAIN ST
WESTBOROUGH, MA 01581

Parcel Number: 014-0009.0
CAMA Number: 014-0009.0
Property Address: 70 MCGOVERN BOULEVARD
Mailing Address: BENTERS LLC
148 KALEVA RD
LANCASTER, MA 01523

Abutters:

Parcel Number: 008-0045.0
CAMA Number: 008-0045.0
Property Address: 0 WHITE POND RD
Mailing Address: 702 LLC
259 TURNPIKE RD SUITE 100
SOUTHBOROUGH, MA 01772

Parcel Number: 009-0006.0
CAMA Number: 009-0006.0
Property Address: 0 LUNENBURG RD
Mailing Address: KEYWAY PROPERTIES INC
1558 LUNENBURG RD
LANCASTER, MA 01523

300 foot Abutters List Report

Lancaster, MA
April 20, 2021

Parcel Number:	009-0017.0	Mailing Address:	KIMBALL FARM AT OAKRIDGE LLC
CAMA Number:	009-0017.0		400 LITTLETON RD
Property Address:	1543 LUNENBURG RD		WESTFORD, MA 01886
Parcel Number:	014-0003.B	Mailing Address:	702 LLC
CAMA Number:	014-0003.B		259 TURNPIKE RD SUITE 100
Property Address:	0 MCGOVERN BOULEVARD		SOUTHBOROUGH, MA 01772
Parcel Number:	014-0004.0	Mailing Address:	N & K LANCASTER LLC
CAMA Number:	014-0004.0		16 E MAIN ST
Property Address:	1424 LUNENBURG RD		WESTBOROUGH, MA 01581
Parcel Number:	014-0004.A	Mailing Address:	NORTH LANCASTER LLC
CAMA Number:	014-0004.A		435R LANCASTER ST
Property Address:	1410 LUNENBURG RD		LEOMINSTER, MA 01453
Parcel Number:	014-0004.B	Mailing Address:	CADETTE & NADREAU LANCASTER
CAMA Number:	014-0004.B		REALTY
Property Address:	1474 LUNENBURG RD		456 MAIN ST
			LEOMINSTER, MA 01453
Parcel Number:	014-0004.C	Mailing Address:	CADETTE & NADREAU LANCASTER
CAMA Number:	014-0004.C		REALTY
Property Address:	1497 LUNENBURG RD		456 MAIN ST
			LEOMINSTER, MA 01453
Parcel Number:	014-0004.K	Mailing Address:	NORTH LANCASTER LLC
CAMA Number:	014-0004.K		435 LANCASTER ST
Property Address:	60 MCGOVERN BOULEVARD		LEOMINSTER, MA 01453
Parcel Number:	014-0004.L	Mailing Address:	~~NORTH LANCASTER LLC~~ Harper Stephen A
CAMA Number:	014-0004.L		~~435 LANCASTER ST~~ 1557 Lunenburg Rd
Property Address:	65 MCGOVERN BOULEVARD		~~LEOMINSTER, MA 01453~~ Lancaster MA 01523
Parcel Number:	014-0004.M	Mailing Address:	NORTH LANCASTER LLC
CAMA Number:	014-0004.M		435 LANCASTER ST
Property Address:	75 MCGOVERN BOULEVARD		LEOMINSTER, MA 01453
Parcel Number:	014-0006.0	Mailing Address:	LANCASTER PROPERTY MANAGEMENT
CAMA Number:	014-0006.0		
Property Address:	1340 LUNENBURG RD		152 WALCOTT ST
			STOW, MA 01775
Parcel Number:	014-0008.0	Mailing Address:	NORTH LANCASTER LLC
CAMA Number:	014-0008.0		435R LANCASTER ST
Property Address:	0 LUNENBURG RD		LEOMINSTER, MA 01453
Parcel Number:	014-0008.A	Mailing Address:	NORTH LANCASTER LLC
CAMA Number:	014-0008.A		435 LANCASTER ST
Property Address:	0 REAR LUNENBURG RD		LEOMINSTER, MA 01453

300 foot Abutters List Report

Lancaster, MA
April 20, 2021

Parcel Number:	014-0008.B	Mailing Address:	702 LLC 259 TURNPIKE RD SUITE 100 SOUTHBOROUGH, MA 01772
CAMA Number:	014-0008.B		
Property Address:	0 REAR LUNENBURG RD		
Parcel Number:	014-0009.C	Mailing Address:	NORTH LANCASTER LLC 435R LANCASTER ST LEOMINSTER, MA 01453
CAMA Number:	014-0009.C		
Property Address:	0 REAR LUNENBURG RD		
Parcel Number:	014-0011.0	Mailing Address:	MASSACHUSETTS COMMONWEALTH OF C/O DCAM,1 ASHBURTON PLACE BOSTON, MA 02108
CAMA Number:	014-0011.0		
Property Address:	0 LUNENBURG RD REAR		

Michael T Burke Sr
Michael Burke Sr, Vice-Chairmen
Lancaster Board of Assessors
3 pages April 21, 2021

CERTIFIED COPY

Notification to Abutters Under the Massachusetts Wetlands Protection Act

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 you are hereby notified of the following.

A. The name of the applicant is: **North Lancaster LLC**

B. The applicant has filed a Notice of Intent (NOI) with the Conservation Commission for the municipality of **Lancaster, MA** seeking permission to conduct proposed work under the Wetlands Protection Act (General Laws Chapter 131, Section 40) and Lancaster Wetlands Bylaw.

C. The project scope is: **Widening of McGovern Boulevard with associated grading and stormwater management, improving existing culvert with associated wetland impacts, and mitigation.**

D. The address of the lot where the activity is proposed is: **0 McGovern Boulevard, Lancaster, MA (Assessor Map/Parcel : 14-4.D, 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.N, 14-9.0).**

E. Copies of the NOI may be examined at the **Prescott Building** (701 Main Street, Suite 4, Lower Level, Lancaster, MA 01523) **Conservation Commission Office** between the hours of **10:00am - 4:00pm** on **Monday and Tuesday.** For more information, call **(978) 365-3326** to confirm if staff are available.

F. Copies of the NOI may be obtained for a reasonable fee from the applicant's representative, by calling **(508) 393-3784** between the hours of **9 and 4** on the following days of the week: **M-F.**

G. Information regarding the date, time, and place of the public hearing may be obtained from **Lancaster Conservation Commission** by calling **(978) 365-3326**

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in a **The Item**, Clinton, ma

NOTE: Notice of the public hearing, including the date, time, and place, will be posted in the City Hall not less than forty-eight (48) hours in advance.

Note: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

☒ **Central Region: (508) 792-7650**
☐ Southeast Region: (508) 946-2700
☐ Northeast Region: (978) 694-3200
☐ Western Region: (413) 784-1100

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act & Lancaster Wetlands Protection Bylaw

I, Mark Arnold hereby certify under the pains and penalties of perjury that on 4/27/2021 I gave notification to abutters in Compliance with the second paragraph of Massachusetts General Law Chapter 131, Section 40, and the DEP Guide to Abutter Notification dating April, 8, 1994 in connection with the following matter:

A Notice of Intent was filed under the Massachusetts Wetlands Protection Act with the Lancaster Conservation Commission on 4/27/2021 for the property located at 0 McGovern Blvd (Assessor Map – Parcel: 14-4.D, 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.N, 14-9.0)

The form of the notification, and the list of abutters to whom it was given, and their addresses, are attached to this Affidavit of Service.

(Mark Arnold)

4/27/2021

April 26, 2021

Regulation Discussion

Roadway improvements - McGovern Boulevard, Lancaster, MA

Submitted to:
Lancaster Conservation Commission
Prescott Building
701 Main Street, Suite 4
Lancaster, MA 01523

Prepared for:
Steve Boucher
North Lancaster LLC
435R Lancaster Street
Leominster, MA 01453

Table of Contents

1 Introduction

The purpose of this discussion is to review and clarify the regulation performance standards and alternative analysis for the proposed road widening of McGovern Boulevard.

1.1 Issues Addressed in this Regulation Discussion

1.1.1 Riverfront Area Compliance

This report will provide discussion on compliance with applicable Riverfront Area regulations to the proposed work.

1.1.2 Other Resource Area Compliance

This report will provide discussion on compliance with applicable regulations to the proposed work with regard to Bordering Vegetated Wetlands (BVW), Bank, Land under Water Bodies (LUW) and Bordering Land Subject to Flooding (BLSF).

1.2 Existing Conditions

The existing roadway called McGovern Blvd was last improved in 2014-2015 to allow for the construction of the soccer sports fields on Lot 14-9 and access to the gravel processing site at the end of the roadway. The existing roadway narrows (from 40 feet to 24 feet) before the river crossing and stays narrow for the rest of its length. This improvement did not include stormwater catch basins and stormwater basins, it was the minimal width allowed for the current use of the surrounding properties. Several stormwater basins were constructed as part of the soccer sports fields, but no roadway stormwater was directed to those basins. The roadway work was along an historic disturbed access road with a large car junkyard previously operating on the lots. As such, a large portion of the BLSF and Riverfront has been and still remains altered from natural conditions.

The Resource Areas present include Riverfront from McGovern Brook, with associated Bank, LUW, BVW along its Bank (Figure 1, Figure 2, and Figure 3). In addition, a Zone A (no base flood elevation), BLSF is present along the river. At the end of the roadway (adjacent to the soccer fields) there is a second crossing of an intermittent stream and BVW crosses the roadway. The existing river crossing (Photo 1, Photo 2, and Photo 3) has a 5-foot wide box culvert which includes a concrete bottom. The culvert has clearly created a restriction within the river as the Bank of the river varies from 9-15 feet (upgradient and downgradient) width. The total riverfront area along with existing disturbance is shown in Figure 4, Photo 4 and summarized in Table 1.

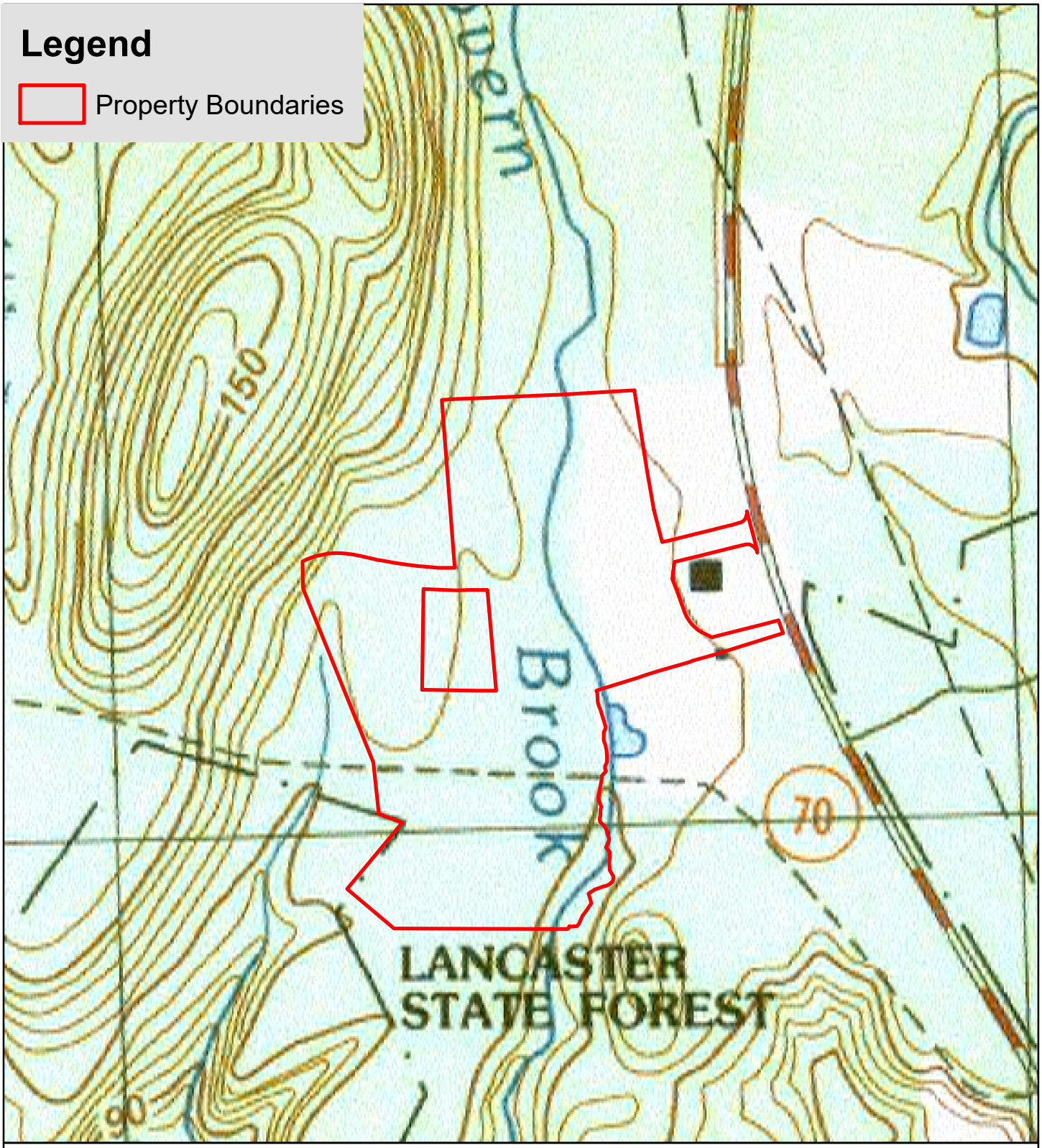


Figure 1: USGS View of Locus Site

Off McGovern Boulevard- Lancaster, MA

(Parcels: 14.4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

N

Date: 4/20/21

0 180 360 720 Feet

1 inch = 500 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

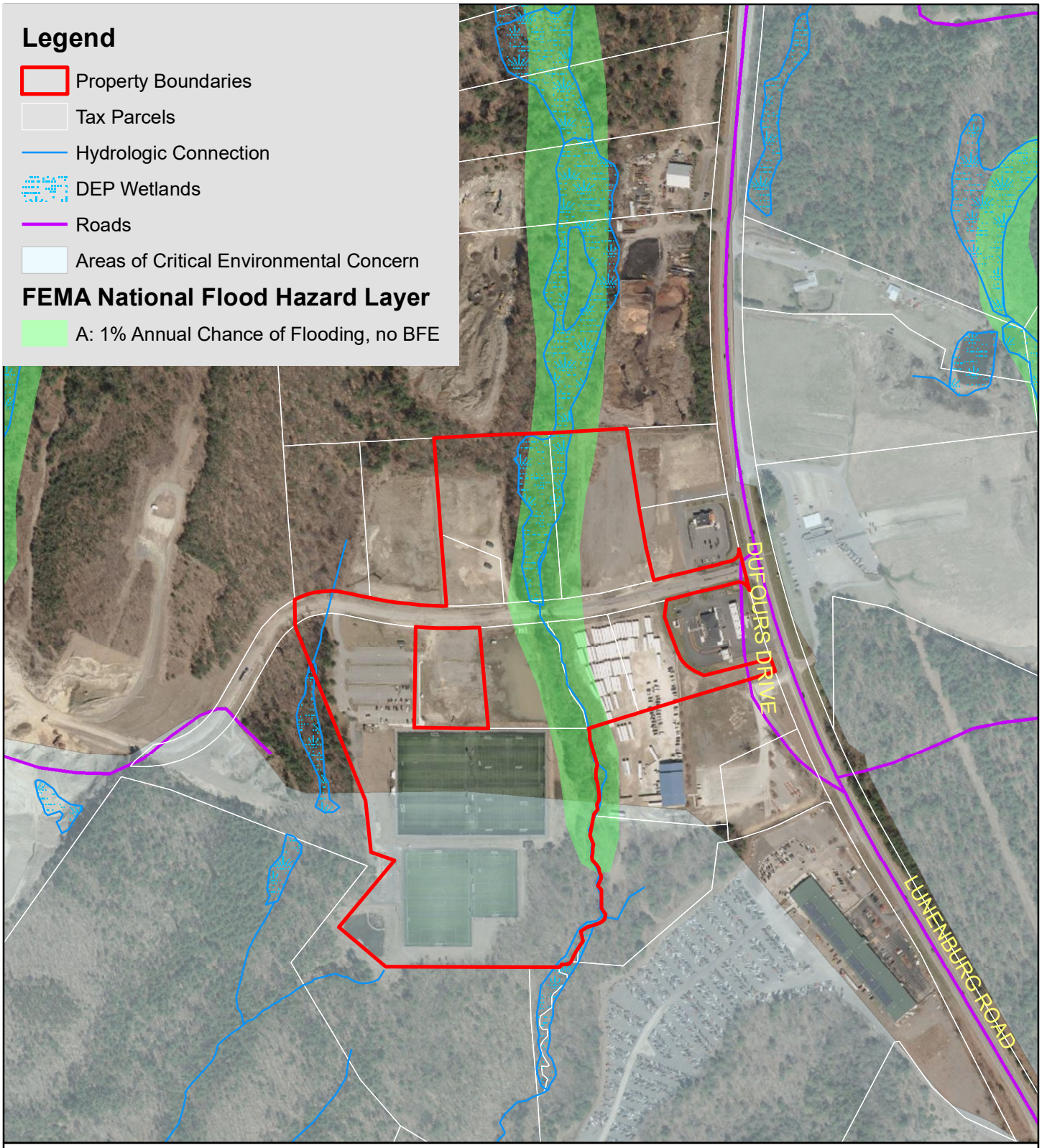


Figure 2: Orthophoto View of Locus Site

Off McGovern Boulevard- Lancaster, MA

(Parcels: 14.4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

N

Date: 4/20/21

Feet

0 175 350 700

1 inch = 500 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

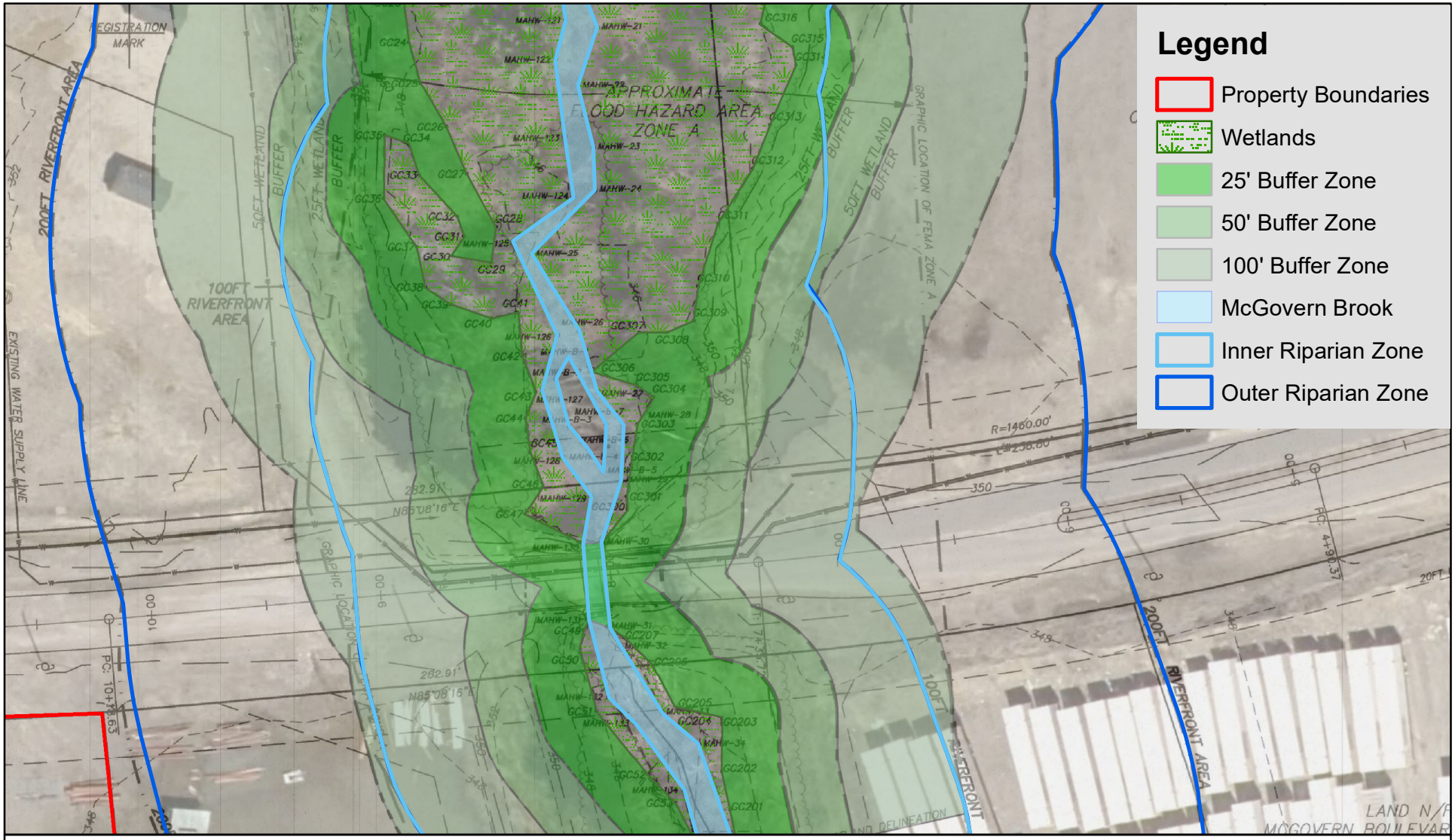


Figure 3: Existing Conditions

Off McGovern Boulevard- Lancaster, MA

(Parcels: 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

N

Date: 4/20/21

0 20 40 80 Feet

1 inch = 63 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

Existing Conditions						
	0-100 Foot	100-200 Foot	Total	0-100 Foot Disturbed	100-200 Foot Disturbed	Total Disturbed
Lot 14-4.D	16,700	17,100	33,800	11,800	16,900	28,700
Lot 14-4.F	60,900	62,200	123,100	24,300	62,900	87,200
Lot 14-4.G	74,300	65,800	140,100	7,500	23,500	31,000
Lot 14-4.I	41,400	38,700	80,100	17,800	38,800	56,600
Lot 14-4.H	-	200	200	-	200	200
Lot 14-4.N	-	14,100	14,100	-	14,100	14,100
Lot 14-4.J	42,300	40,400	82,700	9,800	40,200	50,000
Lot 14-9.0	95,800	93,100	188,900	-	22,100	22,100
Total	331,400	331,600	663,000	71,200	218,700	289,900

Legend

- Property Boundaries
- Tax Parcels
- McGovern Brook
- Inner Riparian Zone
- Outer Riparian Zone

Lot 14-4.G
Lot 14-4.F
Lot 14-4.N
Lot 14-4.D
Lot 14-4.I
Lot 14-4.H
Lot 14-4.J
Lot 14-9.0

Figure 4: Existing On-site Riverfront Area

Off McGovern Boulevard- Lancaster, MA
(Parcels: 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

Date: 4/20/21

0 75 150 300 Feet

1 inch = 200 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

Table 1: Existing Conditions within Riverfront

Existing Conditions						
	0-100 Foot	100-200 Foot	Total	0-100 Foot Disturbed	100-200 Foot Disturbed	Total Disturbed
Lot 14-4.D	16,900	16,800	33,700	11,800	16,900	28,700
Lot 14-4.F	60,900	62,200	123,100	24,300	62,900	87,200
Lot 14-4.G	74,300	65,800	140,100	7,500	23,500	31,000
Lot 14-4.I	41,400	38,700	80,100	17,800	38,800	56,600
Lot 14-4.H	-	200	200	-	200	200
Lot 14-4.N	-	14,100	14,100	-	14,100	14,100
Lot 14-4.J	42,300	40,400	82,700	9,800	40,200	50,000
Lot 14-9.0	95,800	93,100	188,900	-	22,100	22,100
Total	331,600	331,300	662,900	71,200	218,700	289,900

Photo 1: Existing stream crossing slope on McGovern Blvd, 11/19/2020

Photo 2: Downgradient of existing stream crossing on McGovern Blvd, 11/19/2020

Photo 3: Upgradient of existing stream crossing on McGovern Blvd, 11/19/2020

Photo 4: Disturbed edge of woods (Lot 14-4.J) southwest of McGovern Blvd stream crossing, 11/19/2020

2 Proposed Work in Riverfront Area

The project's overall purpose is to provide required roadway width and stormwater management to comply with the Lancaster Planning Board requirements for development of surrounding upland properties. The main disturbance for the project is relates to the (1) roadway widening (2) stormwater improvements (3) temporary disturbance for construction stormwater management (within existing disturbed area) and (4) BLSF and wetland mitigation area.

The existing roadway narrows (from 40 feet to 24 feet) before the river crossing and stays narrow for the rest of its length. The project proposes to widen the roadway to minimum width and pedestrian sidewalk allowed under the Lancaster Planning Board to extend the road to just past the soccer complex entrance (Station 15+84).

The road widening requires the river crossing to be widened which presents the opportunity to improve the existing crossing. The proposed culvert replacement will be widened from 5 feet to 18 feet while also replacing the 4-sided culvert with a 3-sided culvert to provide a natural stream substrate within the culvert.

This work includes impacts and restoration to resource areas as outlined in Table 2 and Table 3. These impact areas are shown in Figure 5, Figure 6, Figure 7, and Figure 8.

Table 2: Resource Area Impacts (excluding RFA)

Resource Area Type	Permanent Alteration	Temporary Alteration	Total	Replication	Change
BVW (SF)	615	380	995	2,144	1,149
LUW (SF)	378	310	719	NA	- 378
BLSF (SF)	38,130*		38,130	26,550	-11,580*
BLSF (CF)	32,978		32,978	41,539	8,561
Bank (LF)	45	25	70		-45

- Alteration area includes BLSF in roadway
- Decrease in BLSF is primarily within the roadway

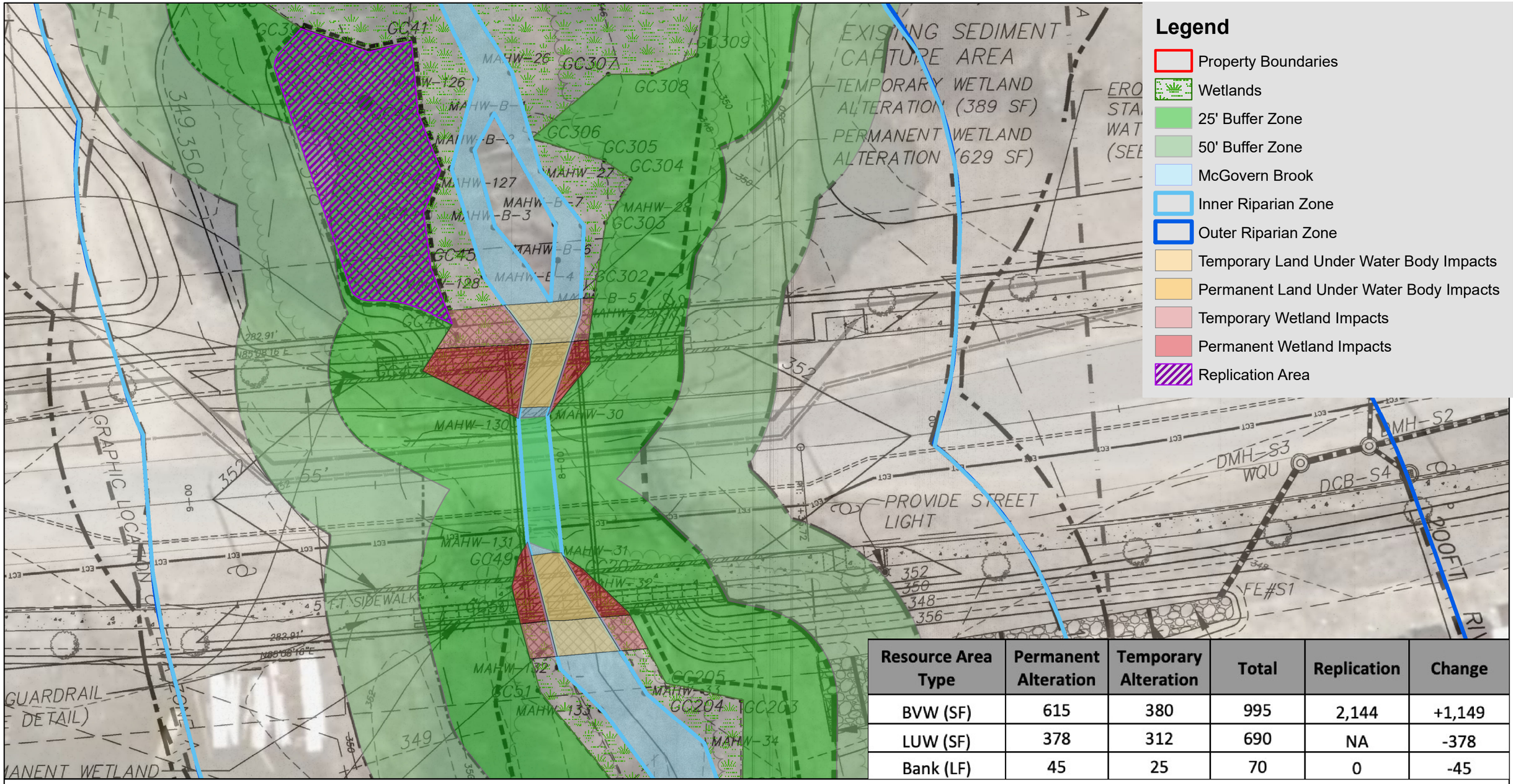
The impacts to BVW and BLSF are mitigated southwest and northwest of the crossing to provide BVW wetland replication (2,144 SF) and BLSF compensatory storage volume (8,561 Cubic Feet).

To provide stormwater control during the project, storm basins are proposed on the west and east sides of the crossing which will be loamed and seeded at the project completion. Work stops at Station 15+84.

Table 3: Work proposed within Riverfront

	0-100 Foot	100-200 Foot	Total
Roadway - Pavement	13,550	12,700	26,250
Roadway slopes - Degraded	300	-	300
Roadway Landscaping	2,400	4150	6,550
Sub-Total (roadway right of way)*	**16,250**	**16,850**	**33,100**
Roadway slopes - Degraded	**1,700**	**850**	**2,550**
Project Total Degraded and Disturbed	17,950	17,700	35,650
Stormwater Management Areas (existing degraded areas)	**8,850**	**22,050**	**30,900**
BLSF Mitigation Areas (existing disturbed and natural)	26,550	-	**26,550**
Riverfront Mitigation Areas (existing degraded)	14,100	-	**14,100**
Project Total Work in Riverfront	**67,450**	**39,750**	**107,200**
***Reduction of riverfront (600 SF) is due to larger culvert**			
Summary of Change within Riverfront Work			
Existing - Total Degraded	**11,850**	**16,850**	**28,700**
Proposed - Total Degraded	**17,950**	**17,700**	**35,650**
Net Change in Degraded	**6,100**	**850**	**6,950**
Proposed Riverfront Restoration - Figure 8	**14,100**	**0**	**14,100**
Net Change - Natural Riverfront	**8,000**	**(850)**	**7,150**

Due to the increase in impervious surface within the inner riparian zone (0-100 foot Riverfront) the project is filed as a limited project under 10.53(3)(e) to widen the existing road to minimum legal and practical width acceptable to the Lancaster Planning Board. The existing roadway has 28,700 SF within Riverfront and proposed roadway has 35,650 SF of degraded surfaces (roadway, sidewalk and retaining walls) resulting in an increase of 7,000 SF. The project has proposed 14,100 SF of Riverfront mitigation on Lot 14.4.I which results in a net increase of 8,000 SF (2:1 increase) of natural Riverfront area.



Resource Area Type	Permanent Alteration	Temporary Alteration	Total	Replication	Change
BVW (SF)	615	380	995	2,144	+1,149
LUW (SF)	378	312	690	NA	-378
Bank (LF)	45	25	70	0	-45

Figure 5: Proposed Resource Area Impacts (excluding RFA, BLSF)

Off McGovern Boulevard- Lancaster, MA
(Parcels: 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

N
Date: 4/20/21
0 10 20 40 Feet
1 inch = 25 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

Resource Area Type	Total Work in BLSF	BLSF Within Natural Areas	Areas to be Revegetated	Area of Previously Disturbed BLSF
Square Feet	75,885	41,317	26,550	34,568

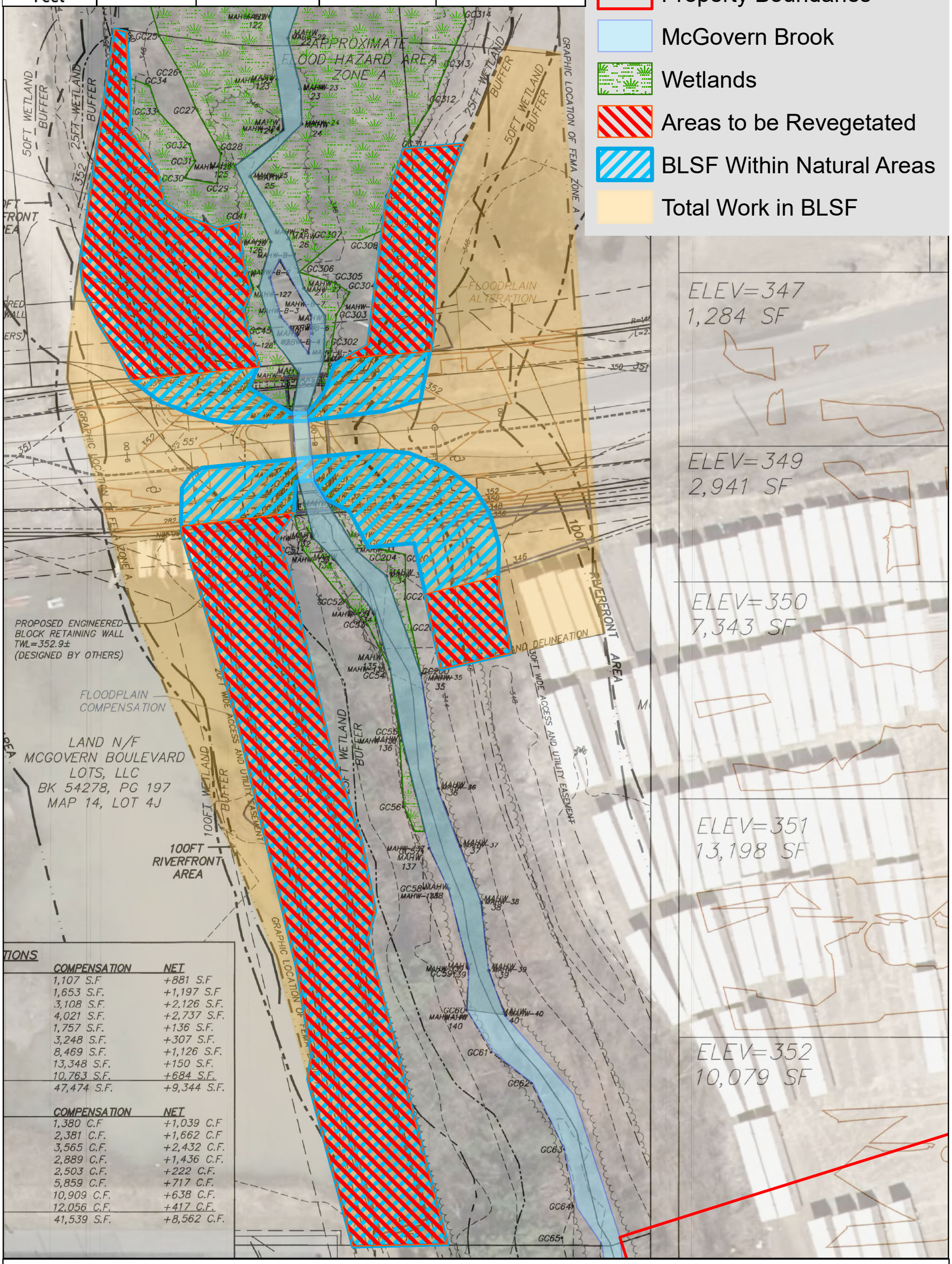


Figure 6: BLSF Impacts

Off McGovern Boulevard- Lancaster, MA

(Parcels: 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

N

Date: 4/20/21

Feet

0 15 30 60

1 inch = 50 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

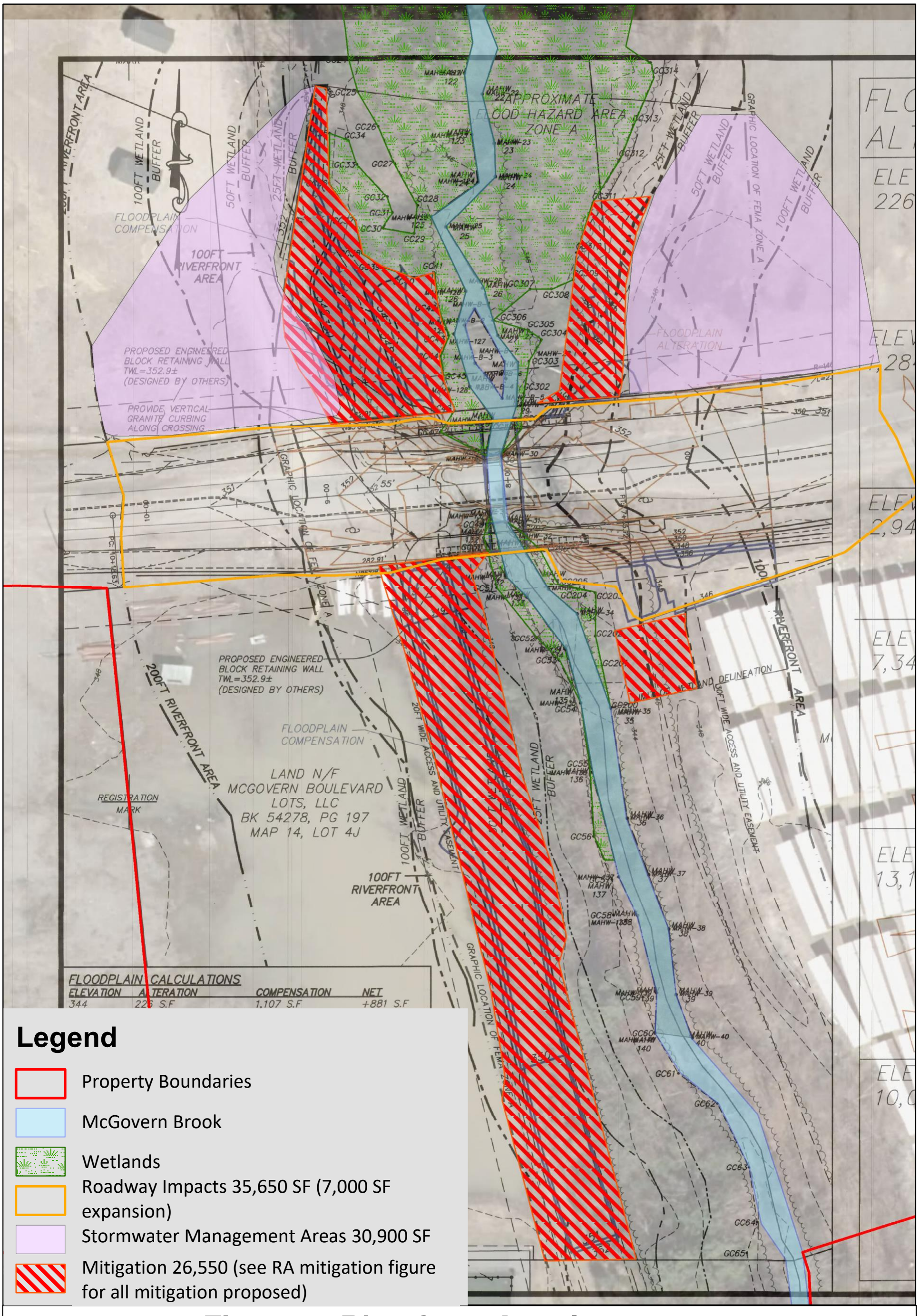


Figure 7: Riverfront Area Impacts

Off McGovern Boulevard- Lancaster, MA

(Parcels: 14-4.F, 14-4.G, 14-4H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0,)

N

Date: 4/20/21

Feet

0 15 30 60

1 inch = 50 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

Riverfront Restoration is in addition to BLSF Mitigation. See Figure 6 BLSF Impacts

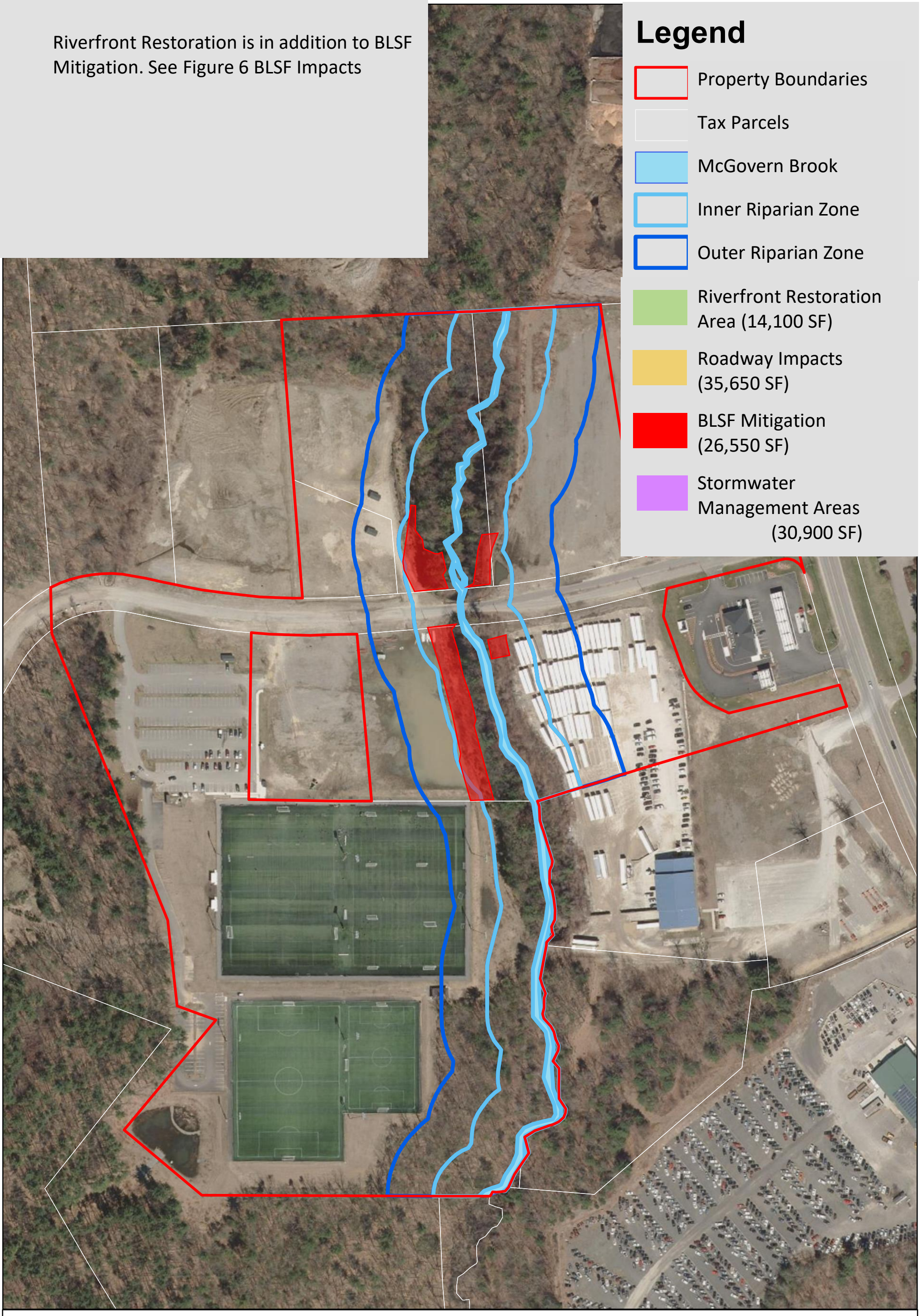


Figure 8: Proposed Riverfront Area Work

Off McGovern Boulevard- Lancaster, MA

(Parcels: 14-4.F, 14-4.G, 14-4.H, 14-4.I, 14-4.J, 14-4.K, 14-4.N, 14-4.0)

Date: 4/20/21

0 75 150 300 Feet

1 inch = 200 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING LLC
Strategic Wetland Permitting

3 Riverfront Area Compliance

3.1 Scope of Riverfront Area Activities

As discussed above, the proposed work within the Riverfront Area is a limited project under 10.53(3)(e) due to work within the riparian zone. The project has sought to comply with all the 310 CMR 10.58 standards to the maximum extent practicable and is a significant improvement to the stream crossing while complying with the minimum legal and practical width acceptable to the Lancaster Planning Board (pavement width 55 feet at crossing).

310 CMR 10.53(3)

(3) Notwithstanding the provisions of 310 CMR 10.54 through 10.58 and 10.60, the Issuing Authority may issue an Order of Conditions and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40 permitting the following limited projects (although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59). In determining whether to exercise its discretion to approve the limited projects listed in 310 CMR 10.53(3), the Issuing Authority shall consider the following factors: the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, § 40, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

310 CMR 10.53(3)(e)

(e) The construction and maintenance of a new roadway or driveway of minimum legal and practical width acceptable to the planning board, where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable. Such roadway or driveway shall be constructed in a manner which does not restrict the flow of water. Reasonable alternative means of access may include any previously or currently available alternatives such as realignment or reconfiguration of the project to conform to 310 CMR 10.54 through 10.58 or to otherwise minimize adverse impacts on resource areas. The issuing authority may require the applicant to utilize access over an adjacent parcel of land currently or formerly owned by the applicant, or in which the applicant has, or can obtain, an ownership interest. The applicant shall design the roadway or driveway according to the minimum length and width acceptable to the Planning Board, and shall present reasonable alternative means of access to the Board. The applicant shall provide replication of bordering vegetated wetlands and compensatory flood storage to the extent practicable. In the Certificate of Compliance, the issuing authority may continue a condition imposed in the Order of Conditions to prohibit further activities under 310 CMR 10.53(3)(e).

The net result of the work within the riverfront is a 9,900 SF increase in disturbance (pavement, side walk, side slopes, and roadway trees) within the riverfront from existing conditions. All of this disturbance is within the roadway right of way. As mitigation for this increase, 14,100 SF of disturbed inner riparian zone will be restored on Lot 14.4.I. This is a significant mitigation area along with the improved river crossing which improves resource area connectivity. All other Performance Standards for 310 CMR 10.54, 10.55, 10.56 and 10.57 have been complied with as discussed below with the exception of the wildlife habitat evaluation which is pending.

3.2 Efforts to avoid and minimize

The project's general purpose is to provide the minimum width (55 feet at crossing) with associated pedestrian access as required by the Lancaster Planning Board. The crossing is limited to one sidewalk as part of the Planning Board waiver requests to reduce the width of the crossing to the minimum while still complying with required roadway width, pedestrian access and safety measure (i.e. guard rails). The proposed retaining walls at the crossing have significantly reduce conventional slope grading impacts within the Riverfront in an effort to minimize disturbance.

3.3 Riverfront Standards

310 CMR 10.58 (4)(a**)** states the following:

(4). Where the presumption set forth in 310 CMR 10.58(3) is not overcome, the applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c.131 § 40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. In the event that the presumption is partially overcome, the issuing authority shall make a written determination setting forth its grounds in the Order of Conditions and the partial rebuttal shall be taken into account in the application of 310 CMR 10.58 (4)(d)1.a. and c.; the issuing authority shall impose conditions in the Order that contribute to the protection of interests for which the riverfront area is significant.

(a) <u>Protection of Other Resource Areas.</u> The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional requirements that might otherwise be imposed on work in the buffer zone within the riverfront area.

The proposed work contributes to the protection of the interests of M.G.L. c. 131, § 40 to the greatest extent feasible while complying with the minimum legal and practical width acceptable to the Lancaster Planning Board. Work required has been designed within areas previously

disturbed where possible, but the widening of the river crossing does require disturbance within undisturbed areas as well as areas that have naturalized since the roadway was improved in 2015.

Other disturbance proposed is for a temporary stormwater management basin (within existing disturbed riverfront) and mitigation for BVW replication and BLSF compensatory storage with associated access disturbance. Lastly the project does proposes 14,100 SF of riverfront restoration within the Inner Riparian Zone on Lot 14.4.I to mitigate the increase of 7,000 SF of disturbance within the roadway right of way for the project.

310 CMR 10.58 (4)(d**)** states the following:

The following discussion walks through the standards of 310 CMR 10.58(4)(d)

> *(d) No Significant Adverse Impact. The work, including proposed mitigation measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, § 40.*
>
> *1. Within 200 foot riverfront areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997 or lots recorded after October 6, 1997 subject to the restrictions of 310 CMR 10.58(4)(c)2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:*
>
> *a. At a minimum, a 100 foot wide area of undisturbed vegetation is provided. This area shall extend from mean annual high-water along the river unless another location would better protect the interests identified in M.G.L. c. 131 § 40. If there is not a 100 foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100 foot wide corridor of natural vegetation. Replication and compensatory storage required to meet other resource area performance standards are allowed within this area; structural stormwater management measures may be allowed only when there is no practicable alternative. Temporary impacts where necessary for installation of linear site-related utilities are allowed, provided the area is restored to its natural conditions. Proposed work which does not meet the requirement of 310 CMR 10.58(4)(d)1.a. may be allowed only if an applicant demonstrates by a preponderance of evidence from a competent source that an area of undisturbed vegetation with an overall average width of 100 feet will provide equivalent protection of the riverfront area, or that a partial rebuttal of the presumptions of significance is sufficient to justify a lesser area of undisturbed vegetation;*

They project has limited work within the inner riparian zone (0-100 feet) except for the minimum legal and practical roadway width acceptable to the Lancaster Planning Board.

b. Stormwater is managed according to standards established by the Department in its Stormwater Policy.

The project has provided for full stormwater management of the roadway which is an improvement since the existing road has no stormwater management.

c. Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions. Work shall not result in an impairment of the capacity to provide vernal pool habitat identified by evidence from a competent source, but not yet certified. For work within an undeveloped riverfront area which exceeds 5,000 square feet, the issuing authority may require a wildlife habitat evaluation study under 310 CMR 10.60.

The project impacts are outlined in Table 2. Performance standards for each Resource Area are discussed in Section 4.

d. Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution. The calculation of square footage of alteration shall exclude areas of replication or compensatory flood storage required to meet performance standards for other resource areas, or any area of restoration within the riverfront area. The calculation also shall exclude areas used for structural stormwater management measures, provided there is no practicable alternative to siting these structures within the riverfront area and provided a wildlife corridor is maintained (e.g. detention basins shall not be fenced).

The project proposes robust erosion controls (silt fence with straw wattle) considering the proximity to the Resource Areas on site. This includes temporary stormwater basin for the west side of the crossing where the roadway is being significantly widened. The east side of the crossing has a very small expansion of pavement which the erosion controls can support.

3.4 Project Alternatives Analysis

As discussed above, the project is to widen the existing roadway to comply with the minimum legal and practical width acceptable to the Lancaster Planning Board. Each alternative considers a 72-foot long crossing to meet required roadway width (55 feet) with associated site walk and guardrails. Crossing width can be narrowed to 72 feet if retaining walls are used rather than traditional side slopes.

3.4.1 Alterative 1: No build

This alternative would not widen the roadway within the Riverfront Area. This alternative is not practicable because of requirements of the Lancaster Planning Board.

3.4.2 Alterative 2: Alternative Access

This would consider alternative access to the site. The planning board is requiring multiple access points (Principle + Emergency) to the site. Therefore there must be multiple points of access with at least one main access point. The applicant has considered access off either Jonny Appleseed Lane or White Pond Road, however, these rural roads would require significant improvements along their entire lengths to support the traffic needs of the property (Figure 9). Other crossings that exist over McGovern Brook would require similar crossing widths along with longer roadways and associated infrastructure (Figure 9). Lastly Lancaster Road (Route 70) is a roadway that can best support traffic from the sites access point. The overall net impacts to alternative principal access points resulted in these being dismissed as alternatives.

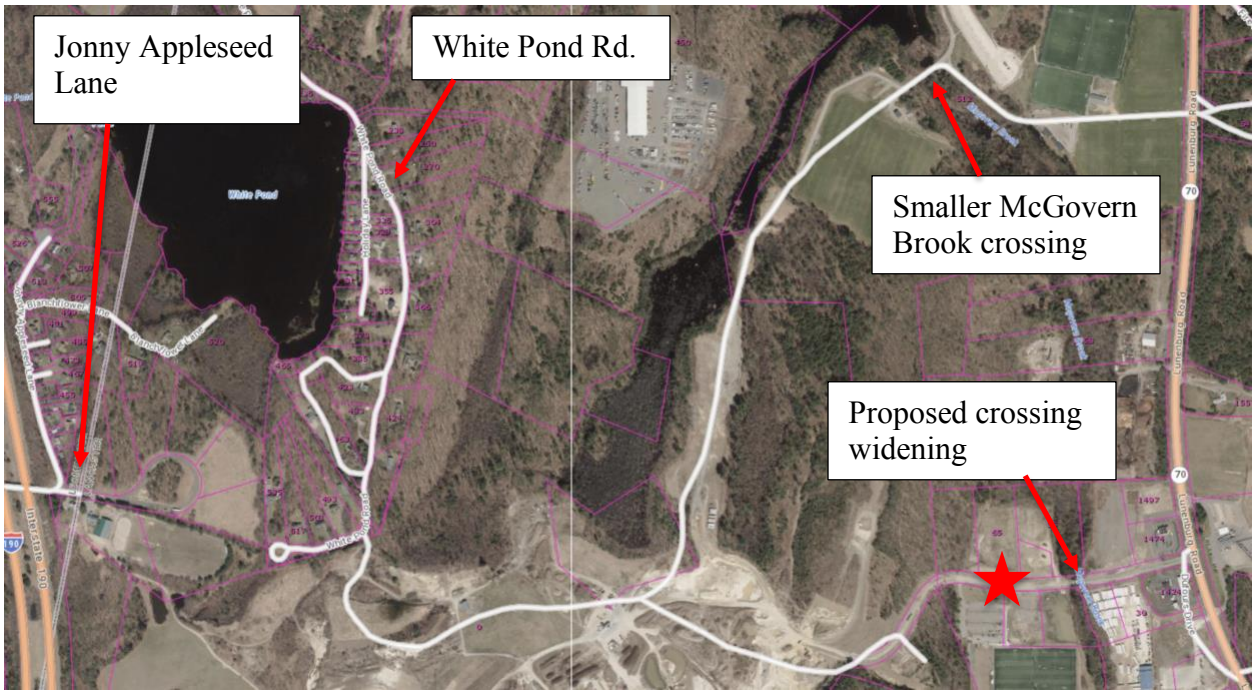


Figure 9: Considered alternative access points

3.4.3 Alterative 3: Bridge Crossing

This alternative would widen the roadway and use a 18-foot wide, 4-foot tall bridge to cross the river. This alterative would result in an improvement to the existing crossing and also meet stream crossing standards. The bridge structure may reduce BLSF impacts but not substantially as additional depth is necessary for utilities. Although the span could be increased this would increase the bridge cost whereas the 18-foot wide bridge satisfies stream crossing standards. In addition, similar impacts to Bank, BVW and LUW would occur. This alternative would meet the requirements of the Lancaster Planning Board, however, bridge construction is a significant cost and a culvert can provide similar specifications to comply with stream crossing standards. As such this alternative was dismissed.

3.4.4 Alterative 4: Conventional Crossing

This alternative would widen the roadway to the minimum allowed by the Lancaster Planning Board with a sidewalk on each side of the road. In addition, the roadway slopes would be graded in a traditional manner at 2:1 which would result in creating a disturbance areas of +20,000 SF just for the slopes. This disturbance would be in addition to the roadway width and sidewalks. A 3-sided culver that is 18-foot wide, 4-foot tall could be used to cross the river. This would result in an improvement to the existing crossing and also meet stream crossing standards. This alternate would also meet the requirements of the Lancaster Planning Board without waivers. Because this alternative doesn't consider waivers that could be granted by the Lancaster Planning Board nor the use of retaining walls to reduce the grading disturbance, this alternative was dismissed.

3.4.5 Alterative 5: Current Project

This alternative would widen the roadway to the minimum allowed by the Lancaster Planning Board with the wavier to reduce the two sidewalks to a single one. The proposed culvert would be a 3-sided culver that is 18-foot wide, 4-foot tall culvert to cross the river. This alterative would result in an improvement to the existing crossing and also meet stream crossing standards. This would also meet the requirements of the Lancaster Planning Board, as this alternative meets stream crossing standards with similar improvements and impacts as compared to a bridge structure (Alternative 3), this alternative was selected.

4 Performance Standards for other Resource Areas

The work proposed includes work within BLSF, BVW, LUW, and on Bank. There are no performance standards for the Buffer Zone however, disturbance has been limited to necessary work areas to widen the roadway.

The following discussion is provided to show that performance standards are met under 10.54, 10.55, 10.56 and 10.57 for all work.

Performance Standards for 310 CMR 10.54

The proposed project will impact 67 feet (45 feet permanently, 25 feet temporary) of Bank, but will improve overall conditions, by widening the culvert (from 8 feet to 18 feet) and also providing a natural stream bed within the culvert rather than the existing concrete culvert base (Figure 5).

To meet the Bank Performance Standards, the following analysis was performed. Regulations 310 CMR 10.54(4)(a) states in part the following:

Any proposed work on a Bank shall not impair the following:

1. *The physical stability of the Bank;*

The physical stability of the Bank will be improved with widening culvert to stream crossing standards that will reduce existing scour of the stream bank and riverbed.

Existing Bank width of +/- 13 feet downstream, +/- 9 feet upstream. Using 13-foot stream width the existing culvert of 5 feet is undersized. The proposed culvert will be 18 feet (required Bank-full width = 13 x 1.2 = 15.6 feet < 18 feet complies with bank-full width). The culvert will be 4-feet tall and 72 feet long (Openness Ratio = (18-feet x 40-feet)/72-feet = 1 feet >0.82 minimum openness required). The proposed culvert of 18 feet by 4 feet and 72 feet long therefore complies with both bank full width and openness ratio requirements of the Massachusetts Stream Crossing Standards and is a significant improvement to the existing crossing.

2. *The water carrying capacity of the existing channel within the Bank;*

The proposed culvert extension will improve the carrying capacity of the existing crossing and meet stream crossing standards.

3. *Ground water and surface water quality;*

Ground water and surface water quality will not be impacted. The widening culvert to stream crossing standards that will reduce existing scour of the bank of the riverbed and thus improve water quality.

4. *The capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;*

The proposed work will improve the movement of fish by restoring the streambed connection through the culvert. The existing culvert is preventing movement of wildlife along the river.

5. *The capacity of the Bank to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. In the case of a bank of a river or an intermittent stream, the impact shall be measured on each side of the stream or river. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*

The properties that make up this NOI contain hundreds (+500 feet) of linear feet of Bank along McGovern Brook, as such the threshold of Bank impact is 50 feet. The proposed permanent impact of 45 feet of Bank is less than 50 feet and thus there is no presumption of impacts to important wildlife habitat functions under the regulations.

4.1 Performance Standards for 310 CMR 10.55

The proposed project will permanently impact 615 SF and temporarily impact 380 SF of BVW (Figure 5). BVW impacts are proposed to allow the existing culvert to be widened and extended. A replication of 2,144 SF is proposed to mitigate for permanent impacts, while the temporary impacts will be restored in place.

To meet the BVW Performance Standards, the following analysis was performed. Regulation 310 CMR 10.55(4)(b) states in part the following:

> 310 CMR 10.55(4)(b)
>
> *(b) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5000 square feet of Bordering Vegetated Wetland when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost:*
>
> 1. *the surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");*

The project will permanently impact 615 SF of wetlands upgradient and downgradient of the existing culvert. The proposed replacement area will create a wetland of 2,144 SF which is a replacement of 3.48:1 ratio (1:1 ratio required under Act).

> 2. *the ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;*

The replacement area is directly adjacent to the impacted wetlands so that it has similar ground water and surface elevation.

> 3. *The overall horizontal configuration and location of the replacement area with respect to the Bank shall be similar to that of the lost area;*

The overall horizontal configuration and location of the replacement area is proposed adjacent to the BVW that abuts Bank.

> 4. *The replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;*

The replacement area will have an unrestricted hydraulic connection to the same wetland system, and the same delineated BVW system as the lost area.

5. *The replacement area shall be located within the same general area of the waterbody or reach of the waterway as the lost area;*

The replacement area is located near to and connected same BVW system as the lost area.

6. *At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporarily stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods; and*

The replacement area has been designed with native tree, shrub and herbaceous species with the intention of complying with this condition. As described in the monitoring section below, the replacement area will be inspected annually for two growing seasons to ensure that the replacement area meets the 75% coverage within two growing seasons. Any bare soils following construction will have been seeded with New England Wetland Plants Wetmix or equivalent, so soil stabilization should occur rapidly.

7. *The replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00. In the exercise of this discretion, the issuing authority shall consider the magnitude of the alteration, and the significance of the project site to the interests identified in M.G.L. c. 131, Sec. 40, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, area provided to contribute to the protection of the interests identified in M.G.L. c. 131, Sec. 40.*

The project has been proposed to avoid and minimize wetland impacts with retaining walls while complying with the Lancaster Planning Board roadway requirements. The replacement area meets the general performance standards for the altered resource area, which is BVW.

4.2 Performance Standards for 310 CMR 10.56

The proposed crossing extension will permanently impact 378 SF and temporally impact 312 SF of LUW (Figure 5). To meet the LUW performance standards, the following analysis was performed:

310 CMR 10.56(4)(a) states in part the following:

(a) Where the presumption set forth in 310 CMR 10.56(3) is not overcome, any proposed work within Land under Water Bodies and Waterways shall not impair the following:

1. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;

The proposed culvert extension will widen the culvert to comply with stream crossing standards. This will improve the overall carrying capacity of the crossing.

2. Ground and surface water quality;

The widening of the culvert to stream crossing standards will reduce existing scour of the stream bank and riverbed thereby improving water quality.

3. The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and

The existing crossing has created erosion and scour along with a drop within the stream that could impact movement of fish. The proposed culvert will widen the stream and provide a natural stream bed. The capacity of the river to provide habitat for fish will be improved.

4. The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.

The proposed crossing extension will permanently impact 378 SF and temporally impact 312 SF of LUW. As the stream varies from 9-15 feet, over 500+ feet the project will impact (permanent and temporary = 690 SF) less than 10% or 5,000 SF and thus no impact to wildlife habitat is presumed to occur under the regulations.

5. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.

The proposed crossing extension will widen and lengthen the existing culvert to meet stream crossing standards and also provide for a natural stream substate, which are significant improvements to the crossing in consideration for the culvert being lengthened.

4.3 Performance Standards for 310 CMR 10.57

To meet the Bordering Land Subject to Flooding (BLSF) Performance Standards, the following analysis was performed. The site has A-Zone Flood Plain with no base flood elevation. The floodplain was conservatively presumed at elevation 352 based on the graphical A-Zone Flood Plain shown by FEMA. This elevation is 2 feet above the most of the land on the surrounding lots which are not mapped within the floodplain. All fill for the project below elevation 352 is mitigated with compensatory storage. A large portion of the work within the BLSF is within previously altered BLSF (34,568 SF), while the remaining 41,317 SF of BLSF work is primarily to allow for re-grading for BLSF compensatory storage (Figure *6*).

310 CMR 10.57(4)(a) states in part the following:

> *(4) Bordering Land Subject to Flooding.*
> *(a) General Performance Standards.*
> *1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.*

The proposed crossing expansion will impact BLSF on the upgradient and downgradient parts of the crossing. The project proposes compensatory storage upgradient and down gradient of the culvert for all work within the mapped floodplain. As shown on the site plans and Table 4, compensatory storage has been provide at 1-foot increments to shows no loss of BLSF area or volume, but rather an increase of 8,537 Cubic Feet (CF) of BLSF volume at 1-foot incremental elevations (Figure 6 and *Floodplain Review,* 2 Sheets , Hannigan Engineering, Inc., 3/26/2021). Note the wetland impacts and replication area are both included in the BLSF calculations.

Table 4: BLSF Flood Plain Compensatory Storage (*Floodplain Review, 2 Sheets , Hannigan Engineering, Inc., 3/26/2021*)

FLOODPLAIN CALCULATIONS			
ELEVATION	ALTERATION	COMPENSATION	NET
344–345	341 C.F	1,380 C.F	+1,039 C.F
345–346	719 C.F.	2,381 C.F.	+1,662 C.F
346–347	1,133 C.F	3,565 C.F.	+2,432 C.F.
347–348	1,453 C.F.	2,889 C.F.	+1,436 C.F.
348–349	2,281 C.F.	2,503 C.F.	+222 C.F.
349–350	5,142 C.F.	5,859 C.F.	+717 C.F.
350–351	10,271 C.F.	10,909 C.F.	+638 C.F.
351–352	11,639 C.F.	12,056 C.F.	+417 C.F.
NET	32,978 C.F.	41,539 S.F.	+8,562 C.F.

> *2. Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*

The proposed compensatory storage has an unrestricted flow from the river to the compensatory storage area.

> *3. Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*

Work is primarily within disturbed area (roadway, armored slopes) with minor disturbance in natural BLSF (shrubland or forested)(Figure *6*). A detailed wildlife habitat evaluation will be submitted shortly to discuss the impacts to BLSF.

5 Bylaw Compliance

Under sections 306-7 the Lancaster Wetlands Bylaw Regulations, work is proposed within the 25-foot No Disturb Zone. This work is necessary for widening the roadway and mitigation (BVW and BLSF) as required by the WPA. No unnecessary work is proposed within the 25-foot No Disturb Zone and permanent and temporary disturbance has been pushed to areas previously disturbed where possible. As noted above, the project is to meet Lancaster Planning Board

roadway requirements and no other development work is proposed, except at the crossing where the 25-foot No Disturb Zone has been respected. A wavier is requested for work within the 25-foot No Disturb Zone to allow the crossing to be widened as necessary for compliance with the Lancaster Planning Board roadway requirements. An erosion and sediment control plan is provided on the site plans with details on erosion control methods, demarcation of sensitive areas, access, clearing, grubbing, stripping, rough grading, drainage, landscaping and stormwater basin construction.

6 Conclusion

The project design has considered the best options to avoid, minimize and mitigate work within the Riverfront Area and Resource Areas along with minimizing disturbance where practicable and in conclusion the project has been designed to provide the required roadway width and stormwater management to comply with the Lancaster Planning Board.

April 26, 2021

WETLAND REPLICATION RIVERBED RESTORATION, AND BLSF RESTORATION PLAN

McGovern Boulevard, Phase 2,
Roadway Construction,
Lancaster, MA

PURPOSE:
CONSTRUCTION DOCUMENT

PREPARED FOR:
Steve Boucher
North Lancaster LLC
435R Lancaster Street
Leominster, MA 01453

All construction work discussed in this document shall be supervised by a qualified wetland scientist with a minimum of five years' experience.

Table of Contents

Introduction:

This document incorporates all the procedural requirements under the Order of Conditions. This document incorporates restoration of temporary impacts and mitigation of permanent impacts to Bordering Vegetated Wetlands (BVW), Land Under Water Bodies (LUW), Bank, and Bordering Land subject to Flooding (BLSF).

I. RIVER CROSSING RESTORATION

References: See Site Plan cited in Order of Conditions

A. LOCATION:

The river Crossing is located at the existing river crossing of McGovern Blvd (Station 8+00). The existing 4-sided 5-foot box culvert will be replaced with a 18-foot wide, 4-foot tall 3-sided box culvert.

B. GENERAL INSTALLATION PROCEDURES:

The following procedures are for the culvert installation and restoration of temporary impacts to Bank, BVW and LUW.

Supervision: All work shall be supervised by a qualified wetland scientist with a minimum of five years' experience. The supervisor shall submit monitoring reports to the Conservation Commission

as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Timing: Work within the river shall take place during low-flow to no-flow conditions, which is typically between May 15 and October 15.

a. If flow is encountered, provide a temporary sand bag dam with diversion pipe (36" or greater)
b. Dewatering will be to temporary stormwater basins if pumping is required.

Step 1: Stake Limits of Work, Confirm wetland flags in place & Install ECB.
Field stake limit of work, culverts and wing walls and confirm wetland flags are in place on site as shown on the project site plans. Erosion control barriers shall then be installed in the form of staked siltation fence and mulch sock (or similar invasive-free barrier) placed at the limit of work. These will remain in place and be maintained until the areas are completely stabilized.

Step 2: Photograph Pre-Construction Conditions
Supervising Scientist shall take detailed photographic and/or video documentation of pre-existing riverbed conditions near the culvert. This will aid in the restoration of pre-existing riverbed conditions within the culvert after installation.

Step 3: Remove any potential wildlife habitat features
This includes rocks, stones (at least 6-inches long +/-) or large woody debris. These features should be stockpiled nearby for later replacement within the culvert.

Step 4: Excavate riverbed material and wetland soils from temporary impacts
First excavate top 1-6 inches of organic, sandy or cobbly substrate. Stockpile material carefully in a designated location nearby for replacement in culvert. Then remove remainder of riverbed soils to desired grade. Where excavation is not necessary cover natural soils and riverbed with fabric to keep soils protected during work.

Step 5: Install Culvert Footings
Perform the culvert footing installation in accordance with approved structural engineered plans and details.

Step 6: Restore Riverbed (Bank and LUW)
Following culvert footing installation, restore historic river channel and substrate. Because the culvert is replacing an existing 4-side box culvert an import of River Rock substrate (rounded stones)will be necessary. By volume imported river substrate shall be +/- 18" in depth and consist of 5% loam with the following percentages of stone: 20% 12"+ stones, 30% 3-12" stones, 30% 1-3" stones and 15% 0.25"-1" gravel.

A. Grade river channel to match pre-existing conditions. Final micro- topography of the channel should be a sinuous configuration to match the profiles of the existing river above where the river is in its natural state.
B. If the topsoil has been stripped, replace with stockpiled material.

C. Place rocks or stones (6-inch +) on the riverbed surface in a natural/random formation to approximate the existing historic riverbed.
D. Prepare Bank soil and stones for touching up bank along footings.
E. Restore temporary impacts to LUW and Bank outside the culvert footing with the bank tying into the undisturbed bank.

Step 7: Install Culvert Head Section

Perform the Culvert Head Section installation in accordance with approved structural engineered plans and details.

a. Once culvert head section is installed on footing, complete touchup of bank restoration by hand within culvert.

Step 8: Install Crossing Retaining walls

Complete crossing retaining walls with footings remaining 6-12" below final grade to allow for restoration work.

Step 9: Shift Erosion Controls to restore natural river flow through culvert

Remove erosion controls that cross the river, and tie line of new erosion controls to culvert/wingwall interface. Install new erosion controls over culvert to prevent erosion into the river channel.

Step 10: Restoration of Temporary Impacts to Wetlands

Once crossing retaining walls are completed, stockpiled soils from the temporary wetland impacts will be placed from the face of the wall to the limit of disturbance with a minimum depth of 6" within the areas proposed to be restored back to wetlands. The soil may be amended with a composted of leaf litter from a reputable source and having an organic content of between 12-20%.

Step 11: Seed and plant of disturbed areas

Hand seed disturbed areas of the riverbed and adjacent areas of the wing walls with New England Wetland Plants WETMIX or equivalent. Mulching with invasive free straw as necessary and as directed by the supervising wetland scientist. Plantings proposed will be placed under Section I.C.

Step 12: Complete roadway

Following installation of utilities, culvert and completion of riverbed and wetland restoration, complete the roadway with final grading, curbing, and paving.

Step 13: Restoration Monitoring

Annual monitoring reports shall be prepared for the restoration area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of a once-annual inspection, during spring or other time of year when the river is flowing **and** vegetation is growing. Monitoring reports shall be submitted to the Commission by November 30th of each year. Monitoring reports shall describe, using narrative and color photographs, the physical characteristics of the riverbed restoration area with respect to flow characteristics, wildlife habitat features, soil characteristics, and survival of vegetation from the seed mix and plantings.

C. PLANTING LIST & PLANTING PLAN:

Proposed Planting Plan and Seed Mixes for River and Wetlands Restoration

These plantings are for the temporary disturbance upgradient and downgradient of the culvert.

Common Name	Scientific Name	Number	Size
Shrubs (n=12)*			
Sweet Pepperbush (FAC+)	*Clethra alnifolia*	3	18-24”
Highbush Blueberry (FACW)	*Vaccinium corymbosum*	2	18-24”
Winterberry (FACW+)	*Ilex verticillata*	3	18-24”
Spicebush (FACW-)	*Lindera benzoin*	2	18-24”
Ground Cover (n=10)*			
Cinnamon Fern (FACW)	*Osmundastrum cinnamomea*	10	1 gal. pot
Seed Mix			
New England Wetland Plants WETMIX or equivalent* (Restored Wetland)			1 lbs
New England Conservation Seedmix or equivalent* (Edges of Restored Wetland)			1 lbs

*Planting species and seedmixes may be substituted with Conservation Commission consent with similar native species with the same wetland indicator status if certain species are unavailable.

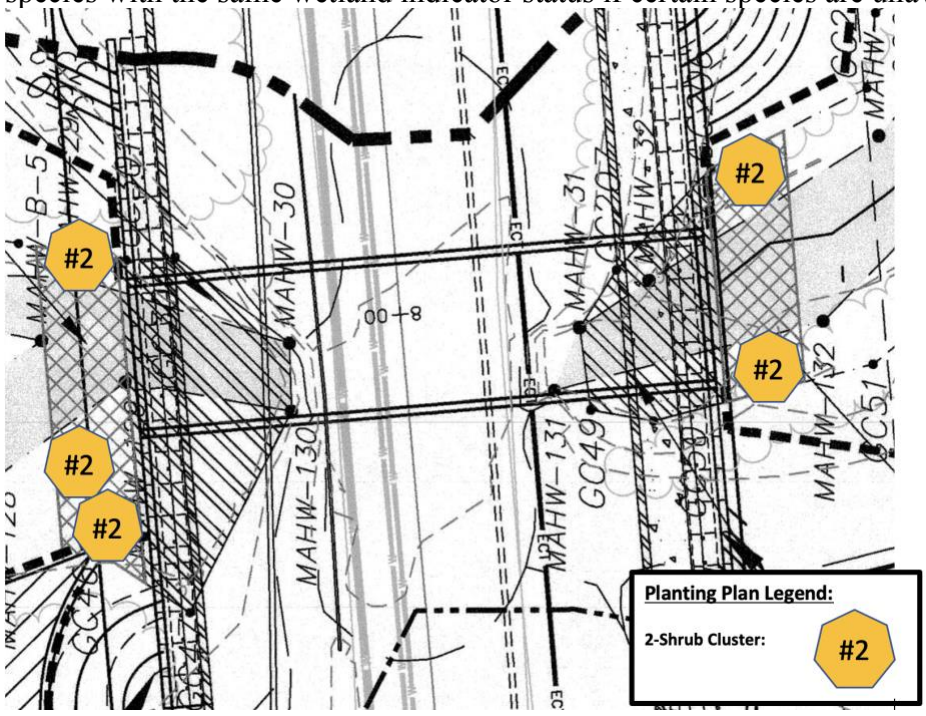


Figure 1: River Crossing Planting Plan

II. WETLAND REPLICATION AREA

References:

- See Site Plan cited in Order of Conditions

A. LOCATION:

The Wetland Replication Area is proposed to restore permanent wetland impacts and will be located to the northwest of the river crossing of McGovern Brook on McGovern Boulevard. The Wetland Replication Area is an area of ± 2,144 SF.

B. GENERAL INSTALLATION PROCEDURES:

Supervision: All work within the replication area shall be supervised by a qualified wetland scientist with a minimum of five years' experience. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Timing: Work shall take place ideally when the altered wetlands are drier (summer months). If the wetlands are not dry and dewatering is necessary, a dewatering plan shall be approved by the Conservation Commission and then implemented. The construction and installation of the replication area should be accomplished as close to the spring or fall growing seasons (between April 16 and May 31 or between September 16 and October 30) as possible. Planting during these periods is highly recommended. The replication area grading is advised not commence unless the contractor can guarantee completion of the work within the replication area within the same season. Planting outside the spring and fall growing season will require watering of plantings until they are established.

Step 1: Stake Limits of Work, Confirm wetland flags in place & Install ECB

Stake out limits of work for replication areas and confirm wetland flags are in place on site. Erosion control barriers shall then be installed in the form of staked siltation fence and mulch sock (or similar invasive-free barrier) placed at the limit of work for the replication area. These will remain in place and be maintained until the areas are completely stabilized and then may be removed after approval of the Conservation Commission. The wetland scientist shall have authority to require additional erosion control measures if deemed necessary.

Step 2a: Identify shrubs and woody debris to be re-used in replication area

The wetland scientist shall identify and flag any native shrubs within the replication areas and/or the BVW alteration areas that may be dug up and stockpiled for use as additional plantings in the replication area. Any flagged specimens shall be removed and stockpiled in a designated area outside the replication area. Any large woody debris (rotting logs) shall also be identified and flagged for stockpiling and subsequent addition to the replication area. Wetland trees that lie along the edge of the replication area may be preserved at the discretion of the wetland scientist.

Step 2b: Remove trees and vegetation
Once flagged trees, shrub and woody debris specimens have all been removed and stockpiled, clear and remove all remaining vegetation within the replication areas and the BVW alteration areas in preparation for excavation and grading.

Step 3: Excavation of BVW Alteration Areas
Prior to any soil excavation, a stockpile area for organic soils shall be prepared in the vicinity of the replication area, but immediately adjacent to the existing wetland resource area boundary. An excavator or backhoe shall remove existing organic soils up to the edge of the staked fill area boundary from the BVW alteration areas. Excavated soils shall be transported to and stored in the designated location near the replication areas. Care shall be taken to avoid contact with other non-wetland soils that may contain seeds of undesirable plant species.

Step 4: Excavation of new BVW Replication Area
An excavator or backhoe shall remove existing soils up to the edge of the staked BVW replication area boundary, to a depth at which redoximorphic features become visible in the C-horizon at the soil surface and at least one foot below proposed final grade, all of which shall be supervised and directed by the wetland scientist. During the excavation, leaf litter should be stockpiled separately for re-use in the replication area. Topsoil and subsoil shall be removed from the area for re-use elsewhere in the project site or removed from the site. Subsoil of the C-horizon shall be loosened prior to Step 5 to ensure soils aren't compacted prior to topsoil placement.

Step 5: Final Grading of Replication Area
Upon removal of existing soils down to the proper depth (as determined by the wetland scientist), the organic soil should be sourced from the soils stockpiled from the impact area. If the transplanted soils do not fill entire replication area, supplement with organic soils from an offsite source. The soil may be amended with the primary source consist of organic materials composted of leaf litter from a reputable source and having an organic content of between 12-20%. Topsoil shall be placed within the replication area to a depth 6-12" and even with the surrounding proposed elevation on the design plan, to be determined by the supervising wetland scientist. Final grade shall be per site grading plans for BLSF compensatory storage. Placement of soil shall be such that no equipment drives over or compacts placed wetland soils. Final grading will result in micro relief of pits and mounds. Slopes around the replication area shall be graded per approved grading plan with erosion control mats installed as necessary.

Step 6: Place woody debris and boulders
Woody debris and boulders shall be randomly placed throughout the replication area to provide cover for wildlife.

Step 7: Planting
Precise citing of plants may be determined by the wetland scientist in the field prior to installation. All plantings shall be distributed randomly throughout the area; trees spaced at 10-15' on center; shrubs spaced at 6-10' on center and herbaceous species 3' or less on center. All plantings will be removed from burlap sacks, wire cages and plastic containers prior to planting. Each plant will have it roots loosened prior to planting to encourage root growth away from the planting bulb. Leaf litter

shall be spread throughout area if available. Wetland seed mix shall be scattered evenly by hand throughout the replication area. Once all work is complete an erosion control barrier will be installed to enclose the replication area on the access side of the replication area.

Step 8: As-built

Interim as-built plans, complete with one-foot contours, spot elevations, surface area, and cross sections of the replication area shall be prepared by a Registered Professional Land Surveyor of the Commonwealth and submitted to the Commission within 30 days of completion of final grading.

Step 9: Erosion Controls Removal

Once the replication area is stable a request shall be submitted to the Conservation Commission to remove the erosion controls downgradient of the wetland replication area to allow wildlife movement into the replication area. Upon approval of stabilization erosion controls shall be removed promptly and any significant disturbance seeded with a wetland seed mix as specified above.

Step 10: Replication Monitoring

a. **Seasonal monitoring reports** shall be prepared for the replication area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of early summer and early fall inspections, and will include photographs and details about the vitality of the replication area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the replication area with respect to stability, soil characteristics (i.e. horizons, depths, texture, percent gravel and rock, organic matter, Munsell hue, value and chroma, consistence and evidence of hydrologic influence), survival of vegetation and plant mortality, aerial extent and distribution, species diversity, and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be monitored and removed.

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

C. PLANTING LIST & PLANTING PLAN:

Proposed Plantings for Replication Area (2,144 s.f.)

Common Name	Scientific Name	Number	Size
Trees (n= 12)*			
Red Maple (FAC)	*Acer rubrum*	4	4-5’
Tupelo (FAC)	*Nyssa sylvatica*	4	4-5-

Yellow Birch (FAC)	*Betula alleghaniensis*	4	4-5’
Shrubs (n=28)*			
Sweet Pepperbush (FAC+)	*Clethra alnifolia*	7	18-24”
Highbush Blueberry (FACW)	*Vaccinium corymbosum*	7	18-24”
Winterberry (FACW+)	*Ilex verticillata*	7	18-24”
Spicebush (FACW-)	*Lindera benzoin*	7	18-24”
Seed Mix			
New England Wetland Plants WETMIX or equivalent* (Replication area)			2 lbs
New England Conservation Seedmix or equivalent* (Side slopes of replication area)			1 lbs

*Planting species and seedmixes may be substituted with Conservation Commission consent with similar native species with the same wetland indicator status if certain species are unavailable.

Plantings shall be distributed as follows with discretion given to the supervising wetland scientist. Trees spaced at 10-15’ on center; shrubs spaced at 6-10’ on center and herbaceous species 3’ or less on center. Shrubs shall be planted in clumps of 4 of the same species. As a rule, plants of the same species will be placed in groupings to more closely mimic natural conditions. Trees planted on mounds and shrubs and herbaceous cover in depressions.

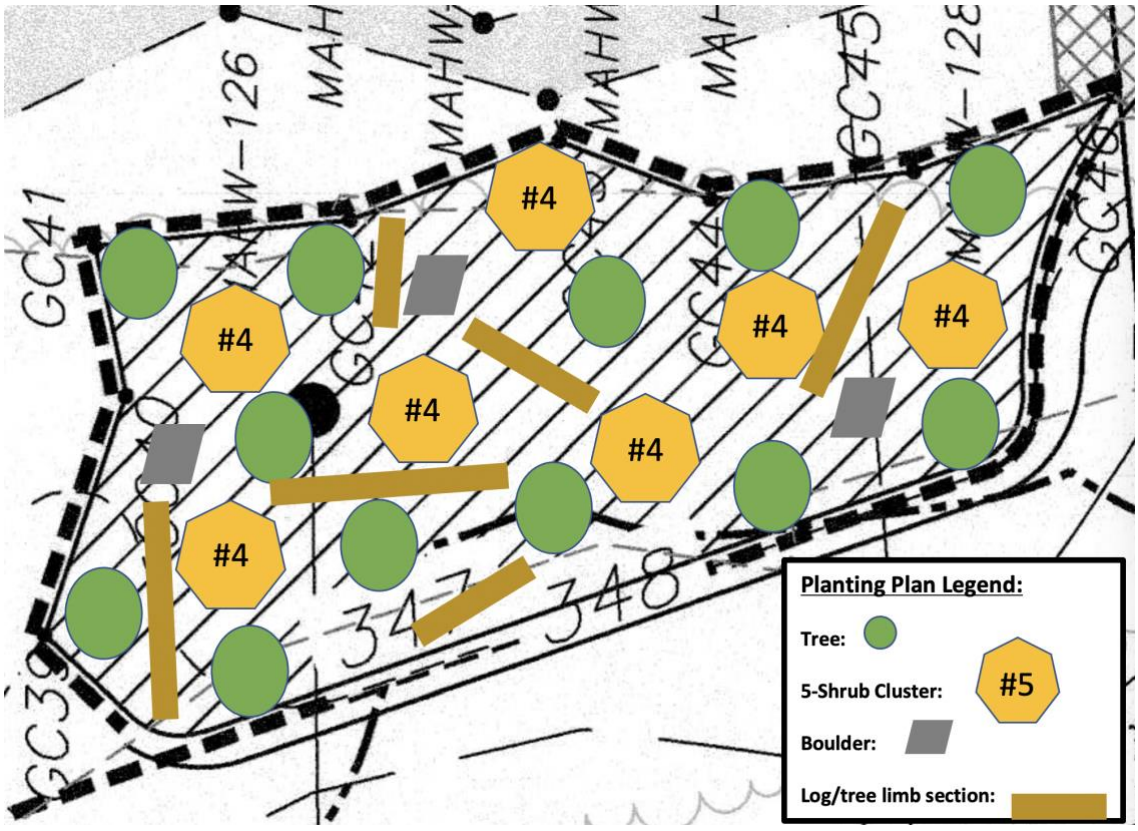


Figure 2: Wetland Replication Planting Plan

III. BLSF AND RIVERFRONT RESTORATION

References:

- See Site Plan cited in Order of Conditions

A. LOCATION:

1. BLSF restoration areas are shown on the *Floodplain Review,* 2 Sheet by Hannigan Engineering, Inc., 3/26/2021
2. Riverfront restoration area (10,000 SF) is shown on the *Proposed Riverfront Area Work* Goddard Consulting, LLC, 4/20/21

B. GENERAL INSTALLATION PROCEDURES:

Supervision: All work within the wetland restoration area shall be supervised by a qualified wetland scientist with a minimum of five years' experience. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Timing: The restoration work should be accomplished as close to the spring or fall growing seasons (between April 16 and May 31 or between September 16 and October 30) as possible. Planting during these periods is highly recommended. The restoration grading is advised not to commence unless the contractor can guarantee completion of the work within the same season. Planting outside the spring and fall growing season will require watering of plantings until they are established.

Step 1: Stake Limits of Work, Confirm wetland flags in place & Install ECB
Stake out limits of work for BLSF areas and riverfront restoration work and confirm wetland flags are in place on site. Erosion control barriers shall then be installed in the form of staked siltation fence and mulch sock (or similar invasive-free barrier) placed at the limit of work for the BLSF area. These will remain in place and be maintained until the areas are completely stabilized and then may be removed after approval of the Conservation Commission. Wetland scientist shall have authority to require additional erosion control measures if deemed necessary.

Step 2: Identify shrubs and woody debris to be re-used in BLSF area
The wetland scientist shall identify and flag any native shrubs within the temporary wetland impact area that will be damaged from construction. This will be AS NECESSARY for excavation and grading. If vegetation can remain during construction, vegetation will be left in place.

Step 3: Grading of BLSF Area and restoring Riverfront Area
Grading of the BLSF area shall consist of stripping topsoil and stockpile for re-use. BLSF area will be cut below proposed grade to allow for topsoil placement. Final grades will follow engineered

BLSF compensatory grading. Riverfront restoration will be completed by adding +/- 6" of topsoil over areas that do not contain topsoil and the area will be seeded as outlined below.

Step 4: Place woody debris and boulders
Woody debris and boulders shall be randomly placed throughout the BLSF area to provide cover for wildlife.

Step 5: Seeding and transplanting vegetation
The BLSF compensatory storage and riverfront restoration will be seeded with a New England Conservation Seedmix. In addition, any native vegetation saved prior to grading should be transplanted back within the BLSF compensatory storage area.

Step 6: As-built
Interim as-built plans, complete with one-foot contours, spot elevations, and surface area shall be prepared by a Registered Professional Land Surveyor of the Commonwealth and submitted to the Commission within 30 days of completion of final grading. Upon the as-built completion and the project engineer shall review the plan and confirm that the required compensatory storage has been provided per the approved plans.

Step 7: Erosion Controls Removal
Once BLSF and riverfront restoration areas are stable, a request shall be submitted to the Conservation Commission to remove the erosion controls around areas. Upon approval of stabilization, erosion controls shall be removed promptly and any significant disturbance shall be seeded with a wetland seed mix as specified below.

Step 8: BLSF and Riverfront Restoration Monitoring
a. **Seasonal monitoring reports** shall be prepared for the BLSF compensatory storage area and riverfront restoration area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of early summer and early fall inspections, and will include photographs and details about the vitality of the areas. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the areas with respect to stability, top soil characteristics, stabilization, aerial extent and distribution and species diversity. Invasive species will be monitored and removed by hand unless other methods approved under the Order of Conditions.

C. SEEDING LIST:

Seed Mix	
New England Conservation Seedmix by NEWP or equivalent*	21 lbs (1lb per 1,750 SF)

*Seedmixes may be substituted with Conservation Commission consent with similar native species with the same wetland indicator status if certain species are unavailable.

National Flood Hazard Layer FIRMette

FEMA

71°42'2"W 42°30'36"N

71°41'25"W 42°30'9"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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