Notice of Intent

City of Newburyport – Wetlands Protection Ordinance

Roadway Improvement Project

Parker Street,
Newburyport, MA

Prepared for **City of Newburyport**
60 Pleasant Street
Newburyport, MA 01950

Prepared by **TEC, Inc.**
146 Dascomb Road
Andover, MA 01810

May 15th, 2020

TABLE OF CONTENTS

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
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):

Parker Street (a. Street Address) | Newburyport (b. City/Town) | 01950 (c. Zip Code)

Latitude and Longitude: 42°47'57.73"N (d. Latitude) | 70°52'24.78"W (e. Longitude)

N/A - Public Roadway (f. Assessors Map/Plat Number) | N/A - Roadway (g. Parcel /Lot Number)

2. Applicant:

Geordie (a. First Name) | Vining (b. Last Name)

Office of Planning & Development, City of Newburyport (c. Organization)

60 Pleasant Street (d. Street Address)

Newburyport (e. City/Town) | MA (f. State) | 01950 (g. Zip Code)

(978) 465-4400 (h. Phone Number) | (i. Fax Number) | GVining@CityofNewburyport.com (j. Email Address)

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

a. First Name | b. Last Name

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):

Peter (a. First Name) | Ellison (b. Last Name)

TEC, Inc. (c. Company)

146 Dascomb Road (d. Street Address)

Andover (e. City/Town) | MA (f. State) | 01810 (g. Zip Code)

978-794-1792 (h. Phone Number) | (i. Fax Number) | pellison@theengineeringcorp.com (j. Email address)

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

Exempt (a. Total Fee Paid) | Exempt (b. State Fee Paid) | Exempt (c. City/Town Fee Paid)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
City/Town

A. General Information (continued)

6. General Project Description:

Proposed project includes construction of a multipurpose trail along Parker Street, safe pedestrian & bicyclist crossing on State Street, stormwater modifications and improvements, and general improvements of the State street and Parker Street intersection.

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

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

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

1. ☒ Yes ☐ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

"310 CMR 10.53(3)(f) "Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections…"

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:

a. County

b. Certificate # (if registered land)

c. Book

d. Page Number

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
City/Town

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☒ Bordering Vegetated Wetland	1,020 1. square feet	1,070 2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	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	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: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
City/Town

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

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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

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

   10/2008 (MassGIS)
   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.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
City/Town

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
836 South Rodney French Blvd.
New Bedford, MA 02744
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.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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

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

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

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

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☒ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☐ No. Check why the project is exempt:

      1. ☐ Single-family house

      2. ☐ Emergency road repair

      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

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

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

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

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
City/Town

D. Additional Information (cont'd)

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

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

Transportation Improvement Project
a. Plan Title

TEC, Inc.
b. Prepared By

Peter Ellison, P.E.
c. Signed and Stamped by

May 15, 2020
d. Final Revision Date

1" = 20'
e. Scale

f. Additional Plan or Document Title

g. Date

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

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

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

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

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

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

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Newburyport
City/Town

F. Signatures and Submittal Requirements

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

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

Geordie Vining

Digitally signed by Geordie Vining
DN: cn=Geordie Vining, o=City of Newburyport, MA, ou=Planning Office, email=gvining@cityofnewburyport.com, c=US
Date: 2020.05.13 15:46:18 -04'00'

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date
5-15-2020

5. Signature of Representative (if any)

6. Date

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

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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:

Parker Street	Newburyport
a. Street Address	b. City/Town
Exempt	Exempt
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Geordie	Vining	
a. First Name	b. Last Name	
Office of Planning & Development, Town of Newburyport		
c. Organization		
60 Pleasant Street		
d. Mailing Address		
Newburyport	MA	01950
e. City/Town	f. State	g. Zip Code
(978) 465-4400		GVining@CityofNewburyport.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

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
Roadway Improvements	1	Exempt	Exempt

Step 5/Total Project Fee: Exempt

Step 6/Fee Payments:

Total Project Fee: Exempt
a. Total Fee from Step 5

State share of filing Fee:
b. 1/2 Total Fee **less $**12.50

City/Town share of filling Fee:
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.)

1 NARRATIVE

INTRODUCTION AND PURPOSE

The City of Newburyport is proposing a multifunctional trail along Parker Street approximately 500 feet in length starting from the Parker Street and State Street intersection to the Shepard's Auto entrance. The project also includes reconfiguration of the Parker Street and State Street intersection to improve quality and a safe crossing through State street for pedestrians and bicyclists.

The purpose of this project is to provide an alternative transportation and recreational path for public use by constructing a trail. The project is an extension and will tie directly into the Clipper City Rail Trail. It will also provide a safe pedestrian crossing on State Street by minimizing the crossing distance and adding pedestrian activated beacons at the crosswalk. The project also calms the traffic at the intersection by adding appropriate warning signage, adjusting intersection geometry, and providing traffic safety improvements.

EXISTING CONDITIONS

Parker Street is classified as an urban minor arterial or rural major collector. The roadway contains two lanes that accommodates two-way traffic. The existing roadway is 22 ft wide with a 2 ft shoulder on both sides and the right of way is 50 ft wide. The project area near the intersection currently has a closed drainage system, however, runoff from rest of the Parker street sheet flows into roadside swales that have turned into bordering vegetated wetlands. Currently there are no sidewalks on either side of Parker Street, and there is no crosswalk on State Street for pedestrians.

Jurisdictional resource areas within the project limits include Bordering Vegetated Wetlands (BVW) on both sides of the Parker Street. The project site is not located within Estimated Habitat of Rare Wetland Wildlife and Priority Habitat as mapped by the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program as published by MassGIS and there are no certified vernal pools within 200 feet of the project site.

PROPOSED IMPROVEMENTS

The proposed project includes construction of a multi-use trail along the north side of Parker Street right of way and traffic safety improvements at the Parker Street and State Street intersection.

The proposed trail is a paved path starting from the west side of State Street and ends at the entrance to 4 Parker Street (Shepard's Automotive Center). Existing pavement

between the edge of the roadway and building located on 163 State Street (Kelly's Home Center) will be removed and replaced with a multi-use trail and loam and seed, resulting in a reduction in impervious area. Shrubs have been proposed along the edge of the building to create additional separation from the proposed trail. Timber guardrail has been proposed on the south side of the trail to provide safety for pedestrians from the moving traffic on Parker Street.

Accessible ramps and a crosswalk has been proposed at the Parker Street and State Street intersection. The intersection geometry has been tweaked to minimize the distance pedestrians have to cross at the crosswalk, providing a safer crossing. The concrete median in Parker Street will be removed and replaced with pavement, allowing turning movements for larger vehicles.

New signs have been proposed to ensure traffic safety. Parker Street and State Street will be milled and overlayed with new pavement within the project limits. Existing drainage manholes and catch basins on project site have been adjusted to accommodate the proposed changes. New deep sump and hooded catch basins are proposed to improve overall TSS removal and prevent flooding within the roadway and intersection.

This project qualifies as a limited project under 310 CMR 10.53(3)(f) of the Wetlands Protection Act. This regulation grants limited project status to projects that propose "maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems."

RESOURCE AREAS

Resource areas on or adjacent to the project site were delineated and flagged by Rimmer Environmental Consulting (Rimmer) on October 8, 2019 and summarized in a Wetland Resource Delineation Report dated October 22, 2019. The full report can be found in Section 2 of this report.

Resource areas mentioned in Rimmer's report includes only Bordering Vegetated Wetland. Any impacts proposed on the resource area are described in greater detail below.

BORDERING VEGETATED WETLANDS

Bordering vegetated wetland is located on both the north and south side of Parker Street. The wetland on the north side is broken up by a driveway for access to 4 Parker Street (Shepard's Automotive Center), however, these wetlands are connected through a culvert under the driveway.

The A-series wetlands to the east of the 4 Parker Street driveway were delineated by flags A1 thru A7. These wetlands are beyond the project limits, and there are no impacts proposed to these wetlands as part of the project.

The A-series wetlands to the west of the 4 Parker Street driveway were delineated by flags A8 thru A23. These bordering vegetated wetlands were man-made as part of the roadway construction of Parker Street. The stormwater runoff from Parker Street sheet flows directly into roadside swales which have now formed the A-series wetlands. There is an existing stone wall at the right-of-way line which was presumably formed from the original road construction. This stone wall is surrounding by upland soils creating a berm on the outside of the A-series wetlands. This BVW is dominated by common reed (phragmites australis) and purple loosestrife (lyhtrum salicaria), both invasive plants that are completely suffocating the wetland. Please refer to the attached site photos to view this area of the A-series wetlands. A culvert exists that flows from north to south beneath Parker Street, creating a hydrologic connection to the B-series wetland.

The wetland located on the south side of Parker Street was delineated by flag B1-B7 and consists mostly of purple loosestrife. This wetland is connected to an offsite pond and eventually drains into Little River.

The project site does not contain certified or potential vernal pools. The site is not located within Estimated Habitat of Rare Wetland Wildlife nor Priority Habitat as established by the Division of Fisheries and Wildife Natural Heritage and Endangered Species Program and mapped by MassGIS. Based on the FEMA flood map available online, it is not located within a FEMA 100-year flood zone.

RESOURCE AREA IMPACTS & PROPOSED MITIGATION

The project proposes a new multi-use path on the North side of Parker Street that will result in direct impacts to the A-series wetlands. Total permanent impacts proposed to the wetlands is 1,020 square feet, with an additional 150 square feet of temporary impacts that are required for the construction of a new drainage headwall. A formal variance from the City of Newburyport Wetlands Protection Ordinance has been prepared and is included in this Notice of Intent. The City of Newburyport is proposing these impacts to the wetland in order to create a multi-use recreation trail for the public good. The area of impacted wetland will also be mitigated by creation of new bordering vegetated wetlands adjacent to the B-series wetland. A total of 1,070 square feet of new bordering vegetated wetlands will be created by the project, providing a replication ratio of 1.05:1. Several alternatives were evaluated to attempt to provide a higher ratio, however, due to right-of-way constraints it is not feasible to provide a larger replication area. Please refer to the enclosed variance request for more detail on the impacted wetlands and proposed replication area.

CONSTRUCTION SEQUENCE

The following sequence is a general overview of the proposed project; however, this may be modified based on input from the Conservation Commission (ConCom).

1. Obtain Order of Conditions from ConCom
2. Pre-construction meeting with ConCom agent
3. Install erosion control barriers and silt sacks
4. Site walk with ConCom agent to inspect erosion controls
5. Construct wetland replication area
6. Perform excavation for drainage, utilities, and pavement removal
7. Construct the trail, crosswalks and associated structures
8. Install curbing, loam seed and landscaping
9. Final paving
10. Install traffic signals, signs, and pavement markings
11. Perform final inspection and address punch list items
12. Final acceptance by the City
13. Obtain Certificate of Compliance from ConCom
14. Remove erosion control barriers and silt sacks

MITIGATION

As highlighted in previous sections, the permanent impacts to BVW will be mitigated by creating a new 1,070 square foot replication area adjacent to the B-series wetland on the south side of Parker Street. A 1.05:1 ratio of wetlands lost:wetlands gained will be achieved in compliance with the performance standards of the Wetlands Protection Act. A formal variance request from the City of Newbury Wetlands Protection Ordinance is included in this Notice of Intent.

Prior to construction, erosion control and sedimentation barriers will be installed between the project area and resource areas to establish a limit-of-work. Additionally, silt sacks will be placed in all existing catch basins within and down gradient of the

limits of work. See attached Plans for the location and detail of the erosion control barriers.

All temporary impacts to resource areas will be monitored and fully restored once construction is completed. Erosion control barriers will not be removed until site is completely stabilized.

CONCLUSION

The City of Newburyport proposes construction of a new recreational trail along Parker Street, a crosswalk on State Street and other safety improvements at the State Street and Parker Street intersection. The project will significantly improve roadway safety and provide trail access for part of Clipper City Rail Trail project. Impact on the surrounding resource area was minimized to the best extent practicable and the proposed permanent impacts will be replicated according to the state regulations.

The Applicant requests that the Conservation Commission finds that the project as described in this Notice of Intent successfully upholds the interest of the Wetlands Protection Act and subsequently issues an Order of Conditions for the proposed improvements.

2 WETLAND DELINEATION REPORT

Wetland Resource Delineation Report
Parker Street Bike Path
Newburyport, MA
October 22, 2019

The project area is the location of a proposed bike path extension along Parker Street from State Road extending approximately 500 feet east. The project location is indicated in Figure 1 below.

Fig. 1: USGS Site Locus

Rimmer Environmental Consulting (REC) conducted a field inspection of the project area on October 8, 2019 during which time wetland resources subject to jurisdiction under the Massachusetts Wetlands Protection Act (MGL Ch 131 §. 40) within 100 feet of the project area were identified. Wetlands were delineated in accordance with the procedures established in the Mass. Wetlands Protection Act Regulations (310 CMR 10.00).
The following is a description of resource areas present:

Bordering Vegetated Wetland:

On the north side of Parker Street, to the east and west sides of the access drive to the commercial building at 4 Parker Street, is a freshwater marsh dominated by common reed (*Phragmites australis*) as well as purple loosestrife (*Lythrum salicaria*) and broadleaf cattail (*Typha latifolia*). The wetland vegetation extends up to the road shoulder. The wetland is connected by culverts under the road to wetlands on the south side of Parker Street. Hydric soil and evidence of seasonal flooding were evident. This wetland system was delineated by flags A1-A7 on the east side of the access drive and A8-A14 on the west side.

Directly across Parker Street is another freshwater marsh dominated almost entirely by purple loosestrife. This system connects to a pond located off site to the south and eventually drains to the Little River.

Other Resources:

The site is not located within Estimated Habitat of Rare Wetland Wildlife nor Priority Habitat as established by the Division of Fisheries and Wildife Natural Heritage and Endangered Species Program and mapped by MassGIS. It is also not located within a FEMA 100-year flood zone and therefore is presumed not contain Bordering Land Subject to Flooding.

3 NEWBURYPORT WETLANDS PROTECTION ORDINANCE VARIANCE REQUEST

146 Dascomb Road
Andover, MA 01810
978.794.1792
TheEngineeringCorp.com
Create | Design | Innovate

Mr. Joe Teixeira, Chair
Newburyport Conservation Commission
60 Pleasant Street
Newburyport, MA 01950

May 15, 2020

Re: Parker Street Improvements – Notice of Intent
Request for Variance from Wetlands Protection Ordinance

Dear Mr. Teixeira:

On behalf of the City of Newburyport, TEC, Inc. respectfully submits this request for variance from the City of Newbury Wetlands Protection Ordinance for the proposed Parker Street Improvements project. The purpose of the project is to provide a new recreational, multi-use path alongside Parker Street, and to provide transportation improvements to the intersection of Parker Street and State Street.

Specifically, the project requires a variance from Section 6.5-34(B) related to work within the 25-foot No-Disturbance Zone and to allow permanent impacts of 1,020 square feet and temporary impacts of 150 square feet to a bordering vegetated wetland (BVW).

Section 6.5-30 of the Ordinance allows the Commission to grant a variance when an overriding public interest is demonstrated. In this case, the construction of a new off-road multi-use path that will promote public safety and create an extension and connection to the Clipper City Rail Trail is of high public interest. The project will provide a multi-use path that can be enjoyed by residents of Newburyport and visitors to the City.

Alternatives Analysis
Several alternatives were considered in development of the project. Below is a summary of the alternatives:

Alternative 1 – no build
The no build alternative is not preferred because it does not meet the purpose of the project. A multi-use recreational path serves the public good and provides much needed outdoor recreation opportunities. No path requires pedestrians and cyclists to enter into Parker Street traffic and ride along the road shoulder which is a public safety concern. The no build alternative is not preferred and unsafe.

Alternative 2 - construct multi-use path outside of 25-foot No-Disturb buffer
Alternative 2 evaluates the construction of the path outside the no-disturb buffer. Unfortunately, locating the multi-use path outside the buffer is not feasible at the project location. The A-series wetland (north of the street) is located just 5-feet from the current edge of Parker Street. The B-series wetland (south of the street) is located 7-feet from the edge of Parker Street. As shown on the project plans, the 25-foot No-Disturb buffer encompasses the entire width of Parker Street. Alternative 2 is not feasible.

Alternative 3 – construct multi-use path without permanent impacts
This alternative evaluates the construction of the multi-use path adjacent to Parker Street, but without permanent impacts to wetland areas. At the tightest section of Parker Street, the paved

width of the roadway is only 24-feet. If a 10-foot path were constructed directly adjacent to the edge of Parker Street, it would result in 650 square feet of permanent impacts to the A-series wetlands, meaning this alternative is not feasible. In addition to these impacts, the path would not be separated from Parker Street traffic by any form of guard rail or landscape strip, which is a public safety concern. It is not feasible to construct the multi-use path without permanent impacts, and a buffer should be provided from traffic. This alternative is not preferred.

Alternative 4 – construction multi-use path with permanent impacts and replication
Alternative 4 represents the current proposal in front of the Commission. This alternative proposes the multi-use path north of Parker Street, resulting in 1,020 square feet of permanent BVW impacts, and 150 square feet of temporary BVW impacts. This alternative also proposes 1,070 square feet of replicated BVW adjacent to the B-series wetlands, directly across the street from the proposed impacts. In this specific case, alteration to wetlands is unavoidable for the project, although it has been minimized as much as possible.

Alternative 4 proposes the safest and best location for the multi-use trail. The path is 10-feet wide in most locations in order to meet the standard for multi-use trails for bicyclists and pedestrians, however it is narrowed to 8-feet where the wetland impacts are proposed in order to minimize and reduce overall impacts. A timber guard rail and landscaped strip is proposed between the path and Parker Street, creating the safest possible condition for the public.

The impacted wetlands are in poor condition and are dominated by phragmites and purple loosestrife which are invasive plants. The impacted area was likely created as a roadside drainage swale, and over time slowly turned to a jurisdictional resource area according to the Wetlands Protection Act. A replication area of 1,070 square feet is proposed on the south of Parker Street, where less phragmites currently exist. This replication area will represent an improvement in overall condition of the wetlands at the site, and an additional 50 square feet will be created compared to existing conditions. Overall, the replication area will improve wetland conditions, increase wetland size, is directly connected to the impacted area (hydraulic culvert connection), and meets the performance standards outlined in Section 10.55(4)(b)1 thru 7 of the Wetlands Protection Act.

Mitigating Measures
As described above, several measures were taken to minimize and mitigate impacts to the wetland areas. First, the path was designed to narrow to 8-feet, reducing overall impacts. Because impacts were unavoidable in this specific case, wetland replication is proposed in close proximity to the impacted area. The replicated wetlands will be in better condition that the impacted area, which is overcome with phragmites and purple loosestrife (invasive plants).

Overriding Public Interest
The purpose of the project is to provide a publicly available multi-use path that can be utilized for outdoor recreation and promote public safety. It is an extension to the Clipper City Rail Trail and the project provides a vital roadway crosswalk across State Street that doesn't currently exist. The path can be used by walking, cycling, and outdoor enthusiasts for generations.

Overall, the main purpose of the project is to provide a safer condition and a public amenity for the public good.

Conclusion

The project will provide a multi-use path that encourages outdoor recreation. There are no reasonable alternatives available that would allow the project to completely avoid impacts to the resource areas. Mitigating measure have been proposed, including design alterations to narrow the path, and providing a larger replication area that will be of the highest quality. The project is necessary and serves the public interest. For these reasons, TEC respectfully requests that the Commission issue a variance from Section 6.5-34(B) of the Newburyport Wetlands Protection Ordinance to allow work within the 25-foot No-Disturb zone.

Please do not hesitate to contact me directly if you have any questions concerning our request for variance at 978-794-1792.Thank you for your consideration.

Sincerely,
TEC, Inc.
*"**T**he **E**ngineering **C**orporation"*

Peter F. Ellison, PE
Director of Strategic Land Planning

4 STORMWATER REPORT

146 Dascomb Road
Andover, MA 01810
978.794.1792
TheEngineeringCorp.com
Create | Design | Innovate

TO: Mr. Joe Teixeira, Chair
Newburyport Conservation Commission
60 Pleasant Street
Newburyport, MA 01950

DATE: May 15, 2020

FROM: Peter F. Ellison, P.E.

PROJECT NO.: T0936

RE: Notice of Intent – Stormwater Report
Parker Street Improvements, Newburyport, MA

This report serves to accompany the Stormwater Checklist and describes the scope of the project, including existing conditions and proposed work as it pertains to stormwater management.

Project Description

The City of Newburyport proposes improvements to Parker Street and State Street as part of a roadway improvement project. The purpose of the project is to provide a new recreational, multi-use path alongside Parker Street, and to provide transportation improvements to the intersection of Parker Street and State Street. The project also includes minor modifications and improvements to the stormwater system currently in place along Parker Street.

Scope of Work

The work consists of construction of a multi-use path, mill and overlay of existing pavement, construction of a new signalized crosswalk across State Street, conversion of impervious paved area to landscaping, wetland replication, and improvements to the existing closed drainage system.

All work done under this contract shall be in conformance with the *Massachusetts Department of Transportation 2020 Standard Specification for Highways and Bridges*, the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)* with revisions; the 1990 *Standard Drawings for Signs and Supports;* the latest edition of *American Standard for Nursery Stock (ANSI Z-60. 1-1986);* and the Construction Plans.

Existing Conditions

The project site is a City of Newburyport owned public roadway. There are two areas of Bordering Vegetated Wetlands at the project site, located on the north and south side of Parker Street within the project limits. The existing roadway pavement is degrading, and should be repaired. The intersection of Parker Street and State Street is currently unsafe for pedestrians and cyclists, with wide paved areas and no marked crosswalks.

The drainage system along Parker Street is comprised of catch basins and drain manholes. The age of the catch basins is unknown, and there were no record plans of the drainage available in this area. It is assumed that the closed drainage system outlets to nearby wetland areas, however an outlet location was not identified by the field survey. Because the catch basins are aged and do not conform to the Massachusetts Stormwater Handbook, no TSS removal is currently provided. In some areas along Parker Street, stormwater discharges directly to wetland resource areas without receiving treatment. The hardware store located at 163 State Street (Kelly's Home Center) currently utilizes a paved area for parking, directly adjacent to the building.

Proposed Conditions

The project will result in an improvement to the collection and treatment of stormwater. Overall, the project will result in a reduction of impervious area by converting impervious parking to landscaped area. Impervious area will be reduced by 1,666 square feet, resulting in reduced peak flows to nearby wetland areas. The treatment of stormwater will be improved by the project by providing new deep sump and hooded catch basins that meet the requirements of the Massachusetts Stormwater Handbook. A mill and overlay is proposed to all pavement within the project limits. The new paved area will eliminate any existing low spots, and will improve collection of stormwater by directing water to the drainage structures.

Stormwater Standards

Standard 1: No New Untreated Discharges

There are no new untreated discharges. The existing drainage patterns will continue as they currently exist today, with stormwater flowing to the existing municipal system located or to the roadside swales/resource areas.

Standard 2: Peak Rate Attenuation

The impervious area, surface material, and conveyance system are to remain unchanged from pre to post development conditions; therefore, the proposed peak runoff rate will not exceed the existing peak runoff rate.

Using the rational method: Q=ciA
Q=flow rate (cubic feet per second)
C=percent impervious
I=rainfall intensity
A=project area

Pre-development:
Q = ciA C=0.74 (impervious) i=3.1 in/hr A=35,775 SF
Q = 0.74 * 3.1 in/hr * 35,775 SF = 1.89 cfs

Post-development:
Q = ciA C=0.69 (impervious) i=3.1 in/hr A=35,775 SF
Q = 0.69 * 3.1 in/hr * 35,775 SF = 1.77 cfs

Using the rational method, the project will results in an approximate 9% decrease in runoff peak flow rates for all storm events.

Standard 3: Recharge

Currently, there are catch basins and drainage swales for stormwater collection. There is no area within the project limits that could feasibly be used to propose infiltrating BMP's. The proposed conditions will match the existing, this is a redevelopment project with a limited scope and size. No groundwater recharge BMP has been proposed, although additional pervious greenspace will be created by the project. Because this is a redevelopment project and a limited project, this standard is met to the maximum extent practicable.

Standard 4: Water Quality

The project will improve current water quality of stormwater runoff by providing new deep sump and hooded catch basins. Overall, a 25% increase in TSS removal will be achieved. Because this is a redevelopment project and a limited project, this standard is met to the maximum extent practicable.

Standard 5: Land Uses with Higher Potential Pollutant Loads

The land use is not considered a land use with a higher potential pollutant load.

Standard 6: Critical Areas

Stormwater will not discharge to any critical areas.

Standard 7: Redevelopment Projects

This project is considered a redevelopment project, and as such meets Standards 2, 3, 4, and 6, only to the maximum extent practicable. The project is considered a limited project as it consists of roadway widening less than one lane, and improvements to the geometry of a substandard intersection.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

This project will disturb less than one acre of land, and therefore the project is not covered by a NPDES Construction General Permit.

Sedimentation controls will be in place during construction between the proposed work areas and resource areas. Compost filter tubes will create a clear separation between the work zone and the no-disturb zones. Silt sacks will be placed in existing and proposed catch basins.

Standard 9: Operation and Maintenance Plan

The roadway will be maintained by the City of Newburyport, consistent with all other public roadways within the City. The Operation & Maintenance Plan for this project matches the standard of the Department of Public Works.

Standard 10: Illicit Discharges

No illicit discharges are expected or will be permitted.

Conclusion

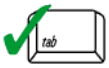
The project will reduce peak flows of runoff and create additional pervious green space compared to existing conditions. Stormwater treatment will be improved over current conditions by the installation of deep sump and hooded catch basins. Existing drainage patterns will be retained and no new outlets are proposed. As a redevelopment and limited project, the stormwater standards have been addressed to the maximum extent practicable. On behalf of the City of Newburyport, TEC respectfully requests that the Commission issue an approval and Order of Conditions for the project.

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

Checklist for Stormwater Report

A. Introduction

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



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

---

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

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

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

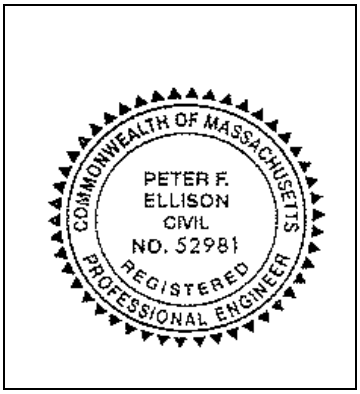
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



5-15-2020

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☒ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☒ Reduced Impervious Area (Redevelopment Only)
- ☐ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☒ Use of “country drainage” versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☐ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☐ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☐ The BMP is sized (and calculations provided) based on:

- ☐ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☒ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☒ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☒ Bike Path and/or Foot Path
- ☒ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☒ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☒ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☒ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☐ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

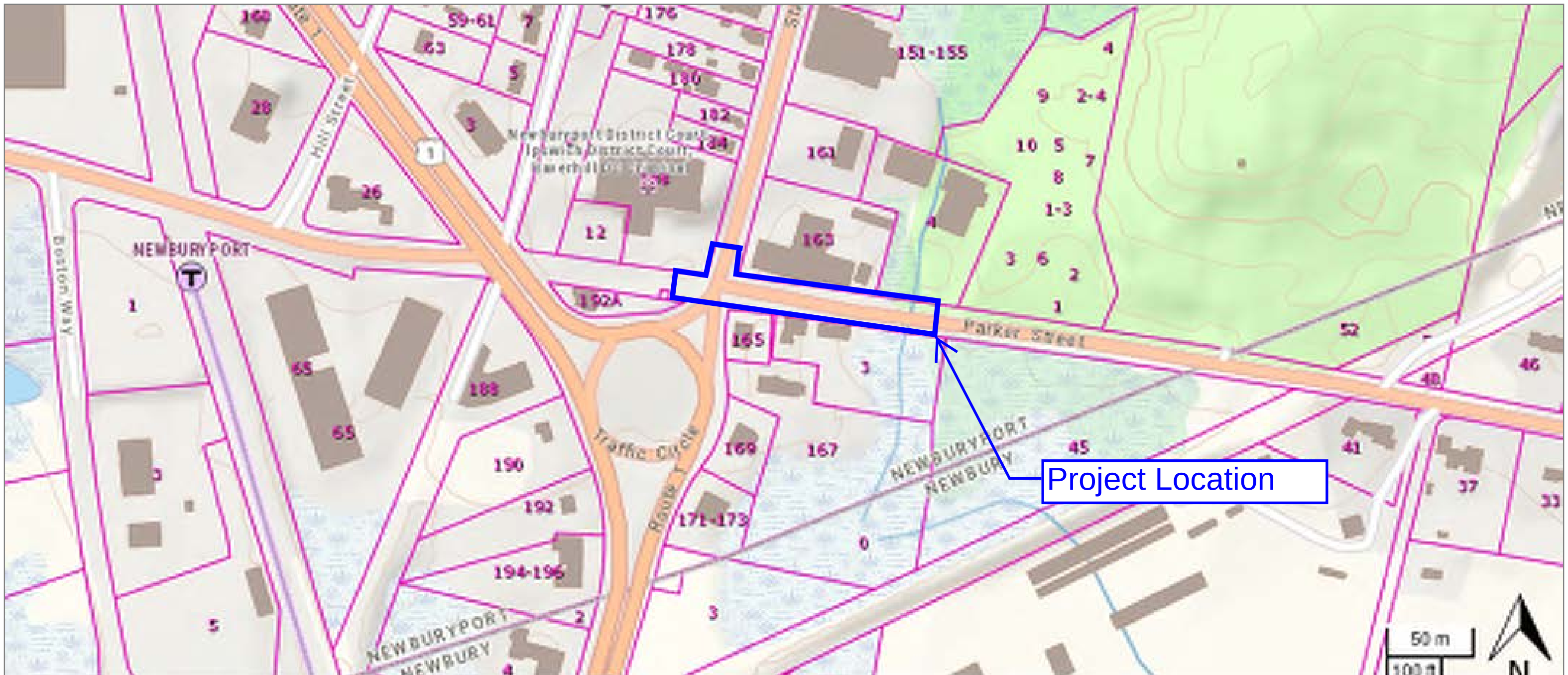
☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

5 SUPPORTING MAPS AND DATA

Parker st



Tax Parcels for Query

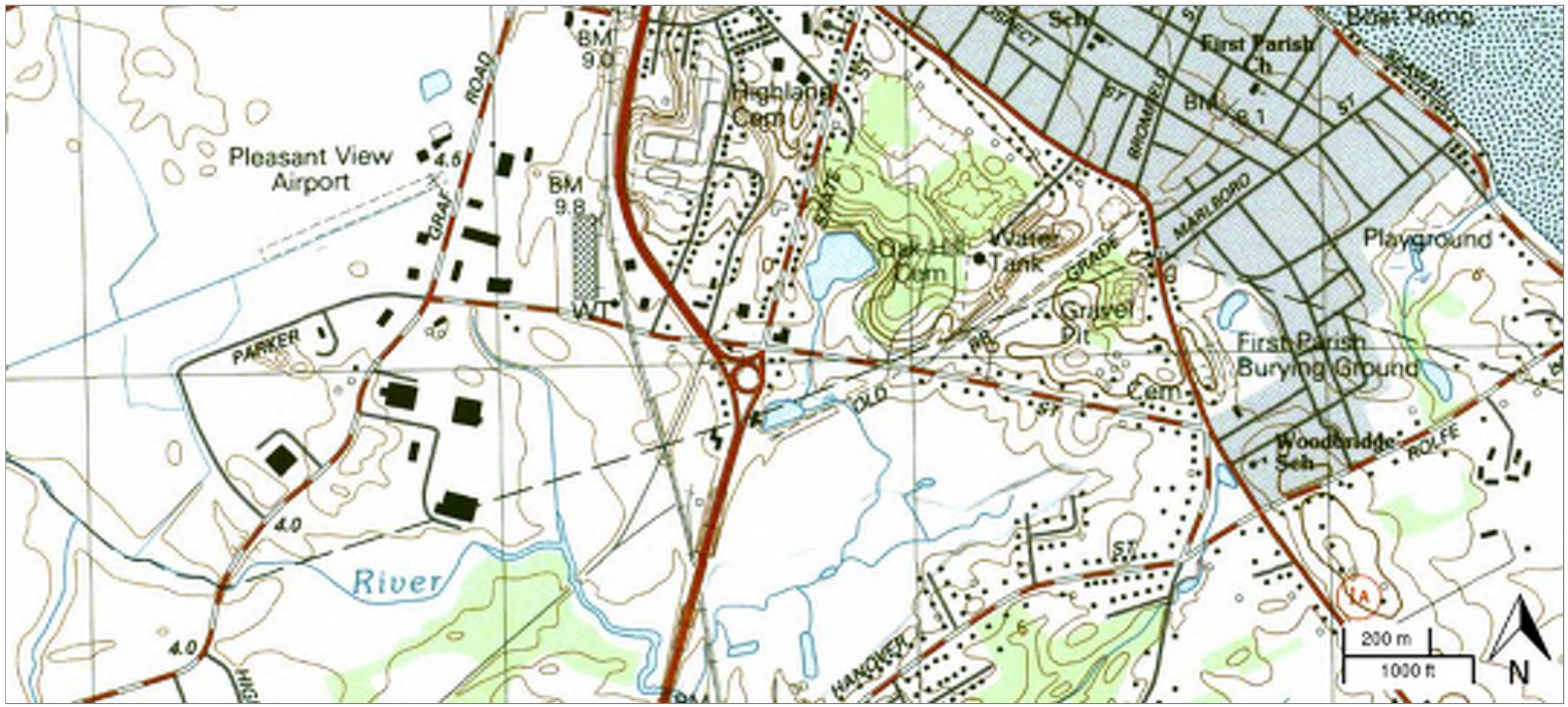
Detailed Features

Tax Parcels for Display

Structures

MassGIS Statewide Basemap
MassGIS Topographic Features Basemap

USGS Topo



USGS Topographic Maps

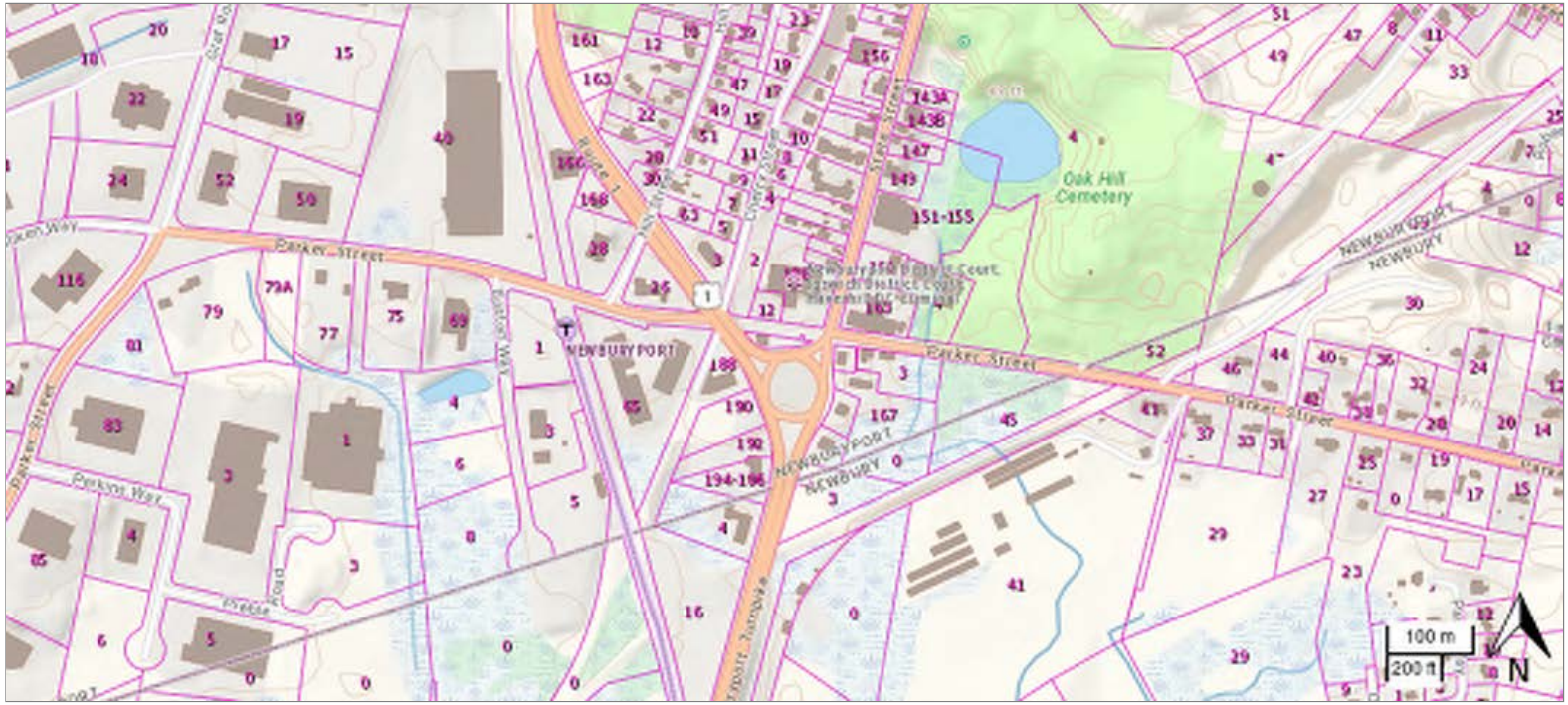
Tax Parcels for Query

Detailed Features

Tax Parcels for Display

MassGIS Statewide Basemap
MassGIS Topographic Features Basemap

NHESP Priority Habitat



Potential Vernal Pools

NHESP Estimated Habitats of Rare Wildlife

NHESP Priority Habitats of Rare Species

Tax Parcels for Query

Detailed Features

Tax Parcels for Display

Structures

MassGIS Statewide Basemap
MassGIS Topographic Features Basemap

National Flood Hazard Layer FIRMette

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 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 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.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/23/2020 at 9:22:18 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

6 SITE PHOTOGRAPHS

Site Photos

Figure 1: Parker Street, looking west

Figure 2: Bordering wetland on the north side of Parker Street

Figure 3: Drainage outlet into the bordering wetland

Figure 4: End of sidewalk on State Street

Figure 5: Traffic island and surrounding buildings on Parker Street, Looking east

Figure 6: Sidewalk along State Street

7 ABUTTER INFORMATION

CITY OF NEWBURYPORT

OFFICE OF THE ASSESSOR

JILL BRENNAN
CITY ASSESSOR

NEWBURYPORT CITY HALL

60 PLEASANT STREET

NEWBURYPORT, MA 01950

TEL: 978-465-4403
FAX: 978-462-8495

WWW.CITYOFNEWBURYPORT.COM

APRIL 22, 2020

TO: CONSERVATION COMMISSION

FROM: BOARD OF ASSESSORS

RE: ABUTTERS LIST FOR: **PORTION OF PARKER STREET**

THE ATTACHED ARE THE ABUTTERS OF THE ABOVE MENTIONED PROPERTY:

Jill Brennan

BY CERTIFYING THAT THE PERSONS LISTED IN THE FOREGOING LIST OF ABUTTERS ARE THE OWNERS OF RECORD OF THE FOREGOING PROPERTIES AS OF JANUARY 1ST, 2020, THE CITY ASSESSOR IS NOT CERTIFYING THAT THE PERSONS SO LISTED ARE THE PERSONS WHO ARE REQUIRED TO RECEIVE NOTIFICATION UNDER APPLICABLE LAW.

34/ 4/ / /
SARDINHA MANUEL & HELENA TRS
MELISSA REALTY TRUST
PO BOX 725
WEST NEWBURY, MA 01985

34/ 5/ / /
SARDINHA MANUEL & HELENA TRS
NEWBURYPORT REALTY TRUST
70 STOREY AVE
NEWBURYPORT, MA 01950

34/ 6/ / /
LABRECQUE KENNETH R TRUSTEE
3 PARKER STREET NOMINEE TRUST
PO BOX 162
NEWBURYPORT, MA 01950

34/ 8/B 1/ /
ROSCOE JULIE
1 HINES WAY
NEWBURYPORT, MA 01950

34/ 8/B 3/ /
TUBBRITT DAMIEN
3 HINES WAY
NEWBURYPORT, MA 01950

34/ 9/A / /
SHEPARD DAVID L & CAROLYN TRS
C & D REALTY TRUST
14 PINE STREET
NEWBURYPORT, MA 01950

34/ 11/ / /
KELLY PETER G & LISA L TRS
HARDWARE NOMINEE TRUST
163 STATE ST
NEWBURYPORT, MA 01950

36/ 36/ / /
NIKOLAKOPOULOS PETER G TRS
MAD REALTY TRUST
5 SAGE RD
GEORGETOWN, MA 01833

36/ 36/A / /
CITY OF NEWBURYPORT
SEWER PUMP STATION
60 PLEASANT ST
NEWBURYPORT, MA 01950

36/ 37/ / /
COMMONWEALTH OF MASSACHUSETTS
DIV OF PLAN & OPERATIONS
1 ASHBURTON PLACE
BOSTON, MA 02108

8 TRANSPORTATION IMPROVEMENT PLANS

(PROVIDED UNDER SEPARATE COVER)

AFFIDAVIT OF SERVICE
Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of Environmental Protection and the Conservation Commission when filing a Notice of Intent)

I, Peter Ellison, hereby certify under the pains and penalties of perjury that on May 15, 2020 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the **DEP Guide to Abutter Notification** dated April 8, 1994, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act and the Newburyport Wetlands Ordinance by City of Newburyport with the City of Newburyport on May 15, 2020 for property located at Parker Street at State Street.

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

Signature

May 15, 2020
Date

T0936 HD1 TITLE SHEET.DWG Plotted on 14-May-2020 9:40 AM

TRANSPORTATION IMPROVEMENT PROJECT

PLAN AND PROFILE OF

PARKER STREET

IN THE CITY

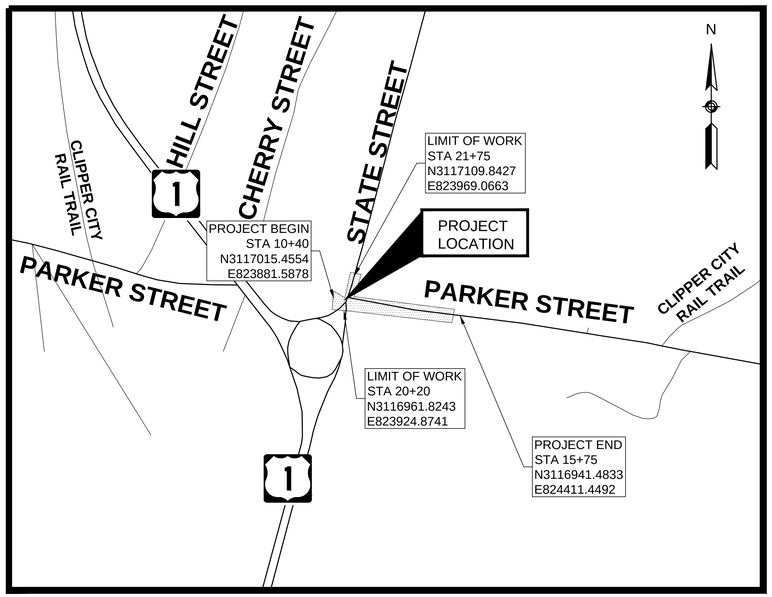
NEWBURYPORT

ESSEX COUNTY

NOI SUBMITTAL

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

INDEX



0 300 600 900 1200

SCALE: 1" = 300'

LENGTH OF PROJECT (PARKER STREET) = 535 FEET = 0.101 MILES
LENGTH OF PROJECT (STATE STREET) = 155 FEET = 0.029 MILES
TOTAL LENGTH OF PROJECT = 690 FEET = 0.131 MILES

DESIGN DESIGNATION

	PARKER STREET	STATE STREET
DESIGN SPEED	40 MPH	40 MPH
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL	URBAN PRINCIPAL ARTERIAL

DATE	DESCRIPTION	REV #
05/15/2020	NOI SUBMITTAL	-
04/15/2020	50% SUBMITTAL	-

TEC The Engineering Corp

146 Dascomb Road
Andover, MA 01810
978-794-1792

311 Main Street
2nd Floor
Worcester, MA 01608
508-868-5104

169 Ocean Blvd, Unit 3
PO Box 249
Hampton, NH 03842
603-601-8154

www.TheEngineeringCorp.com

COMMONWEALTH OF MASSACHUSETTS
PETER F. ELLISON
CIVIL
NO. 52981
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY	CHECKED BY	DATE
RLC	LSA	05/15/2020
DRAWN BY	**APPROVED BY**	**PROJECT NO.**
DPS	LSA	T0936

NEWBURYPORT
PARKER STREET TRAIL
LEGEND & ABBREVIATIONS
SHEET 2 OF 18

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB/GI	CATCH BASIN OR GUTTER INLET
	CBCI/GICI	CATCH BASIN OR GUTTER INLET W/ CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
WSO	WSO	WATER SHUTOFF/CURB STOP
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		EDGE OF PAVEMENT
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF MICROMILLING AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER CABINET, FOUNDATION
		CONTROLLER CABINET, FOUNDATION, CONC. PAD
		MAST ARM FOUNDATION (SCALE OF BLOCK = DIAMETER IN INCHES)
		MAST ARM (LENGTH NOTED)
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD
		MAST ARM OR TS POLE MOUNTED SIGN
		EMERGENCY PRE-EMPTION RECEIVER
		EMERGENCY PRE-EMPTION CONFIRMATION STROBE
		PEDESTRIAN PUSH BUTTON
		YAGI ANTENNA
		BICYCLE WIRE LOOP DETECTOR (SIZE AS NOTED)
		WIRE LOOP DETECTOR (SIZE AND TYPE NOTED)
		TRAFFIC SIGN (1 POST)
		TRAFFIC SIGN (2 POST)
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
ONLY	ONLY	BIKE LANE LEGEND - WHITE
		STOP LINE
	SL	CROSSWALK
	CW	SOLID WHITE LINE
	SWL	SOLID YELLOW LINE
	SYL	BROKEN WHITE LINE
	BWL	BROKEN YELLOW LINE
	BYL	DOTTED WHITE LINE
	DWL	DOTTED YELLOW LINE
	DYL	DOTTED WHITE LINE EXTENSION
	DWLEx	DOTTED YELLOW LINE EXTENSION
	DYLEx	DOUBLE WHITE LINE
	DBWL	DOUBLE YELLOW LINE
	DBYL	

CONSTRUCTION NOTES:

1. EXISTING CONDITIONS INFORMATION COMPILED FROM SURVEY BY HANCOCK SURVEY ASSOCIATES, BOSTON, MA PERFORMED IN OCTOBER, 2019.

   HORIZONTAL DATUM = NAD83 (MASSACHUSETTS STATE PLANE COORDINATES)
   VERTICAL DATUM = NAVD88

2. ALL EXISTING STATE, COUNTY, AND TOWN LOCATION LINES HAVE BEEN ESTABLISHED FROM AN ACTUAL ON-THE-GROUND SURVEY. ALL PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.

3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT DIGSAFE (1-888-DIGSAFE) A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

4. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

5. ALL MUNICIPALLY OWNED UTILITY STRUCTURES (CATCH BASINS, DRAIN MANHOLES, WATER GATES, ETC.) SHALL BE ADJUSTED BY THE CONTRACTOR TO FINISHED GRADE UNLESS DIRECTED OTHERWISE.

6. ALL PRIVATELY OWNED UTILITY STRUCTURES (GAS GATES, ELECTRIC /TELEPHONE MANHOLES, ETC.) SHALL BE ADJUSTED TO FINISHED GRADE BY THE PRIVATE UTILITY COMPANY, UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE ALTERATION AND ADJUSTMENT, AS NECESSARY.

7. PROPOSED LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 2.0% (TYP) / 0.5% (MINIMUM) UNLESS OTHERWISE NOTED.

8. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE.

9. ALL DISTURBED AREAS OUTSIDE THE CURBLINE SHALL BE STABILIZED WITH 4" LOAM AND SEED, UNLESS OTHERWISE NOTED.

10. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R), AS APPROVED BY THE ENGINEER.

11. THE TERM "MEET EXIST" MEANS TO MEET BOTH THE EXISTING ALIGNMENT AND ELEVATION.

12. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" (EXCLUDING THE WIDTH OF CURB) SHALL BE MAINTAINED PAST ALL OBSTRUCTIONS (UTILITY POLES, LIGHT POLES, SIGNS, MAILBOXES, ALONG DRIVEWAY OPENINGS, ETC.)

13. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED WHEELCHAIR RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.

14. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) CURB RAMP, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACES.

15. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

ABBREVIATIONS

GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS

ABBREVIATIONS (Cont.)

GENERAL	
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GC	GRANITE CURB
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL

ABBREVIATIONS (Cont.)

GENERAL	
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LOG	LIMIT OF GRADING
LP	LIGHT POLE
L&S	LOAM AND SEED
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION

ABBREVIATIONS (cont.)

GENERAL	
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATERWAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
RRFB	RECTANGULAR RAPID FLASHING BEACON
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

T0936 HD2 LEGEND AND ABBREVIATIONS.DWG Plotted on 14-May-2020 10:25 AM

NEWBURYPORT
PARKER STREET TRAIL
CONSTRUCTION PLAN
SHEET 4 OF 18

T0936 HD4 CON PLAN.DWG Plotted on 14-May-2020 12:08 PM

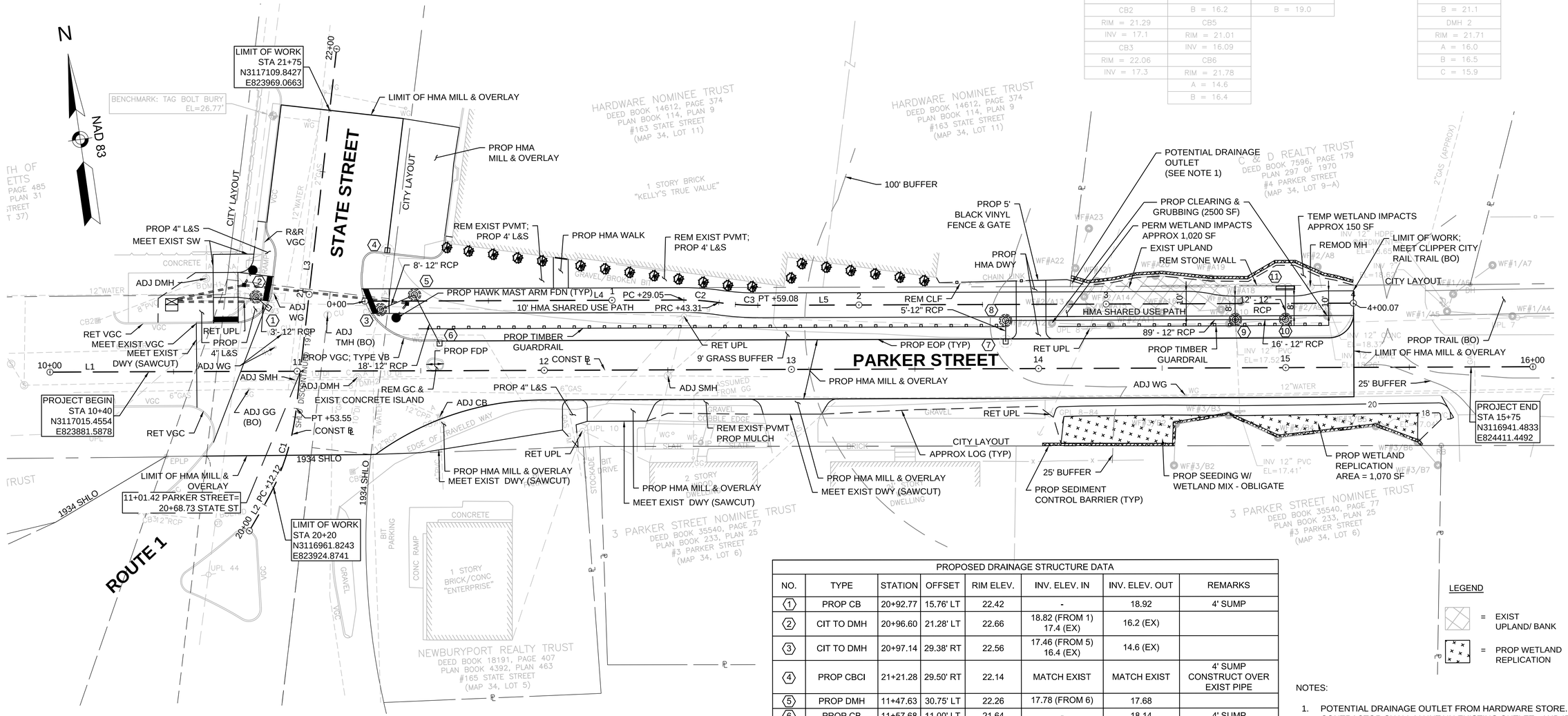
PARKER STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	3117020.986	823841.972		S82°03'09"E 600.00'	16+00.00	3116938.027	824436.209

STATE ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L2	20+00.00	3116945.941	823912.729		N38°17'36"E 12.12'	20+12.12	3116955.455	823920.240
C1	20+12.12	3116955.455	823920.240	R=100.00' Δ=23°44'19" L=41.43' T=21.02'		20+53.55	3116992.293	823938.546
L3	20+53.55	3116992.293	823938.546		N14°33'17"E 146.45'	22+00.00	3117134.040	823975.349

SHARED USE PATH CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	0+00.00	3117031.334	823972.169		S82°03'09"E 129.05'	1+29.05	3117013.490	824099.981
C2	1+29.05	3117013.490	824099.981	R=95.00' Δ=8°36'09" L=14.26' T=7.15'		1+43.31	3117010.467	824113.906
C3	1+43.31	3117010.467	824113.906	R=105.00' Δ=8°36'09" L=15.76' T=7.90'		1+59.08	3117007.126	824129.298
L5	1+59.08	3117007.126	824129.298		S82°03'07"E 240.99'	4+00.07	3116973.803	824367.970

EXISTING DRAINAGE TABLE		
CB1	CB4	CB7
RIM = 21.03	RIM = 22.06	RIM = 20.97
SUMP = 15.7	A = 17.4	A = 17.2
CB2	B = 16.2	B = 19.0
RIM = 21.29	CB5	
INV = 17.1	RIM = 21.01	
CB3	INV = 16.09	
RIM = 22.06	CB6	
INV = 17.3	RIM = 21.78	
	A = 14.6	
	B = 16.4	

EXISTING DRAINAGE TABLE
DMH 1
RIM = 22.72
A = 17.2
B = 21.1
DMH 2
RIM = 21.71
A = 16.0
B = 16.5
C = 15.9



PROPOSED PLANTING TABLE					
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
	20		SHRUB		-

PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
1	PROP CB	20+92.77	15.76' LT	22.42	-	18.92	4' SUMP
2	CIT TO DMH	20+96.60	21.28' LT	22.66	18.82 (FROM 1) 17.4 (EX)	16.2 (EX)	
3	CIT TO DMH	20+97.14	29.38' RT	22.56	17.46 (FROM 5) 16.4 (EX)	14.6 (EX)	
4	PROP CBCI	21+21.28	29.50' RT	22.14	MATCH EXIST	MATCH EXIST	4' SUMP CONSTRUCT OVER EXIST PIPE
5	PROP DMH	11+47.63	30.75' LT	22.26	17.78 (FROM 6)	17.68	
6	PROP CB	11+57.68	11.00' LT	21.64	-	18.14	4' SUMP
7	PROP GI	13+86.72	11.00' LT	20.56	-	18.06	
8	PROP CB W/ MH COVER	13+86.72	19.50' LT	21.62	18.03	18.03	4' SUMP
9	PROP DMH	14+79.72	19.50' LT	20.92	17.59 (FROM 8) 17.59 (FROM 10)	17.52 (EX)	SHALLOW
10	PROP DMH	15+00.00	19.50' LT	20.77	17.91	17.91	SHALLOW
11	PROP HEADWALL	15+00.00	33.00' LT	-	18.51	-	

LEGEND

= EXIST UPLAND/ BANK

= PROP WETLAND REPLICATION

NOTES:

1. POTENTIAL DRAINAGE OUTLET FROM HARDWARE STORE. CONTRACTOR SHALL MAINTAIN EXISTING OUTLET, AND IF NECESSARY EXTEND OUTLET TO NEW LOCATION TO BE COORDINATED WITH THE ENGINEER AND CITY.

0 20 50 100

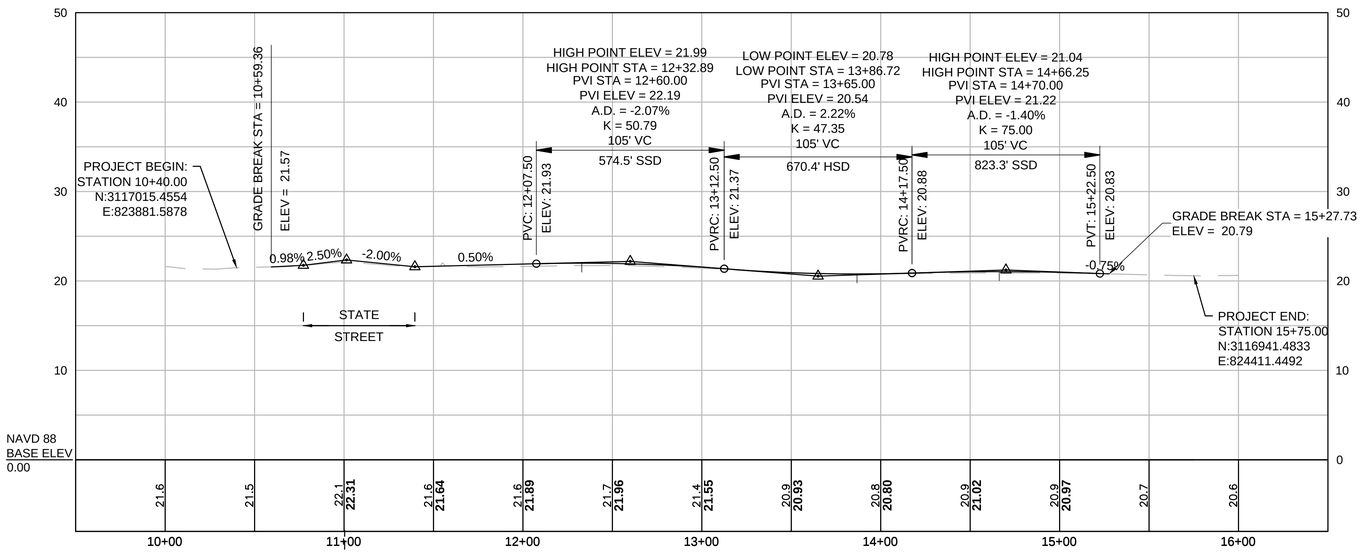
SCALE: 1" = 20'

FOR PROFILE SEE SHEET 5

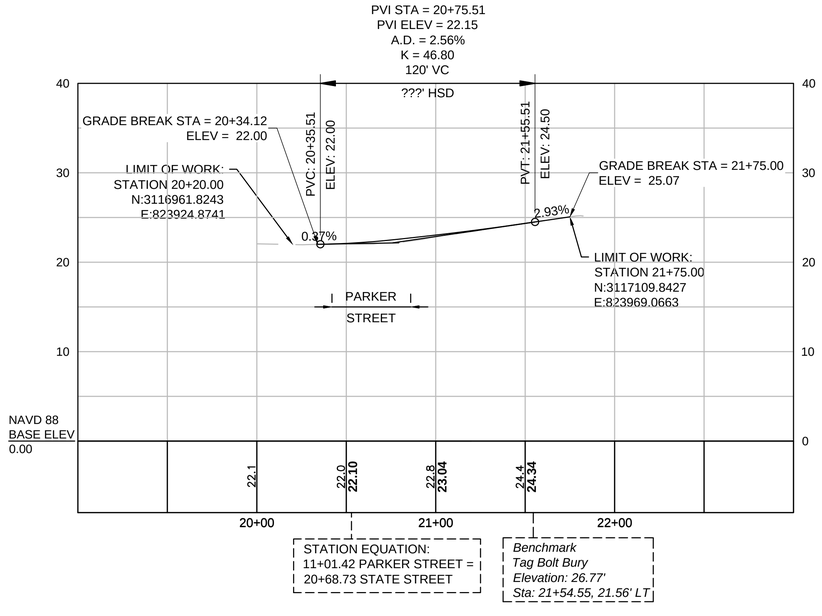
NEWBURYPORT
PARKER STREET TRAIL
CONSTRUCTION PROFILES
SHEET 5 OF 18

T0936 HDS PROFILE.DWG Plotted on 14-May-2020 10:26 AM

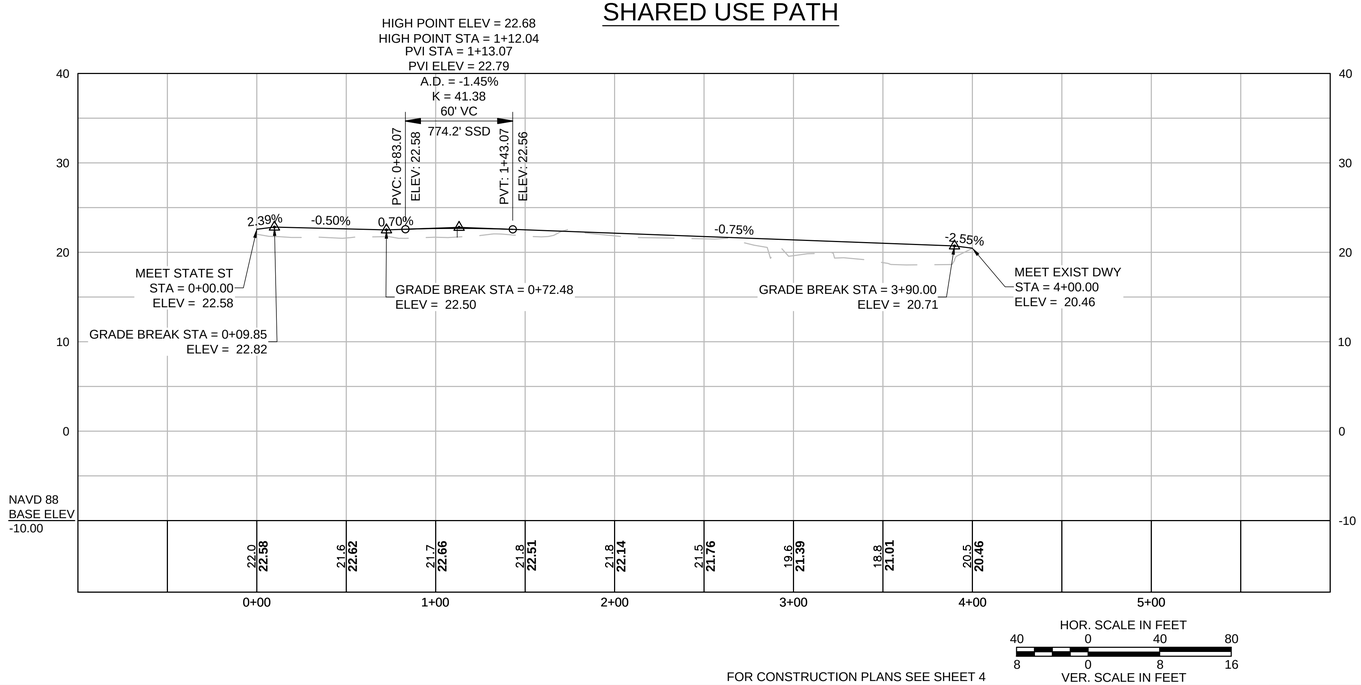
PARKER STREET



STATE ST



SHARED USE PATH



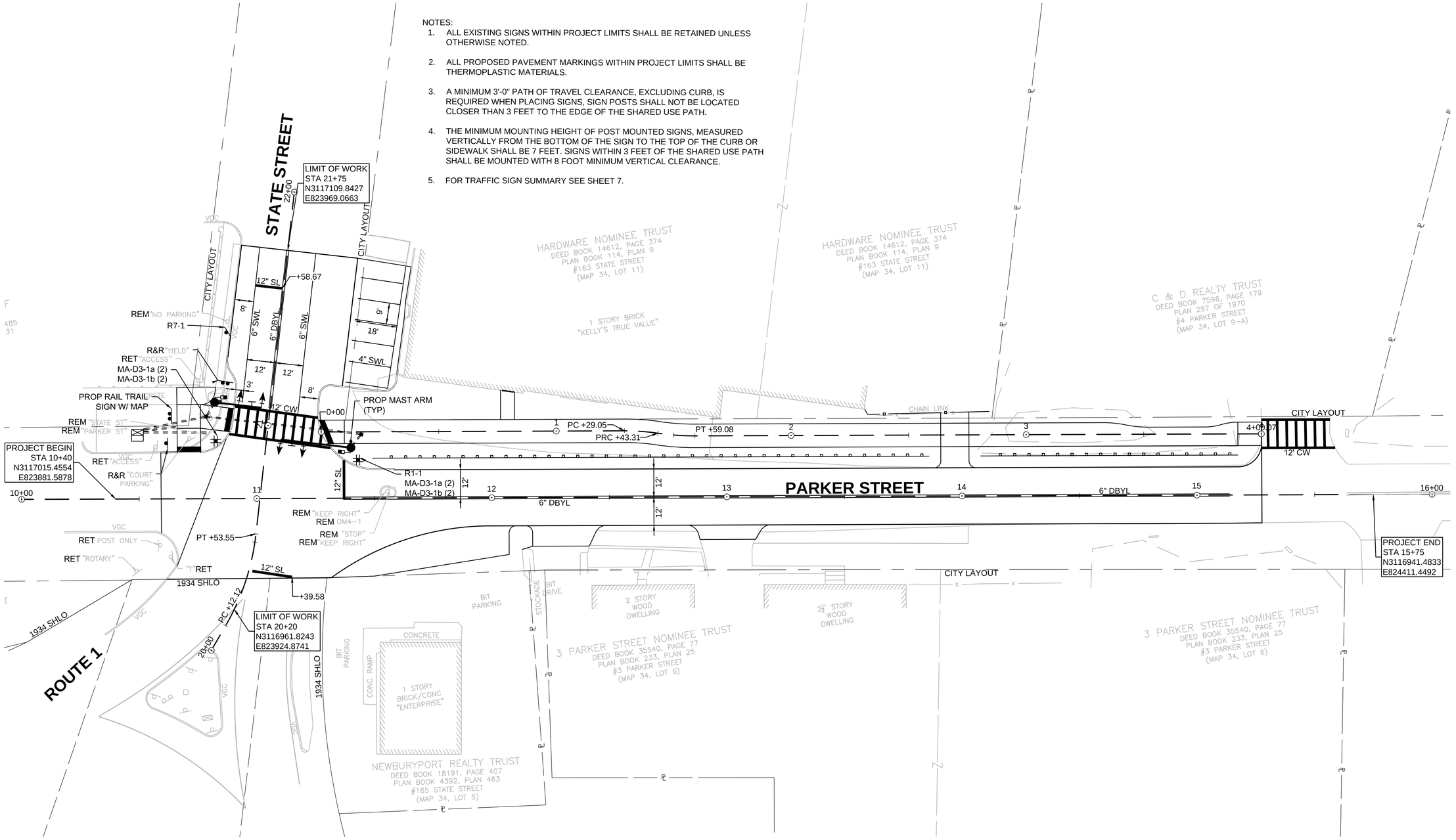
FOR CONSTRUCTION PLANS SEE SHEET 4

NEWBURYPORT
PARKER STREET TRAIL
TRAFFIC SIGN & PAVEMENT MARKING PLAN
SHEET 6 OF 18

T0936 HD6 TS&PM PLAN.DWG Plotted on 14-May-2020 10:26 AM

NOTES:

1. ALL EXISTING SIGNS WITHIN PROJECT LIMITS SHALL BE RETAINED UNLESS OTHERWISE NOTED.
2. ALL PROPOSED PAVEMENT MARKINGS WITHIN PROJECT LIMITS SHALL BE THERMOPLASTIC MATERIALS.
3. A MINIMUM 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS, SIGN POSTS SHALL NOT BE LOCATED CLOSER THAN 3 FEET TO THE EDGE OF THE SHARED USE PATH.
4. THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK SHALL BE 7 FEET. SIGNS WITHIN 3 FEET OF THE SHARED USE PATH SHALL BE MOUNTED WITH 8 FOOT MINIMUM VERTICAL CLEARANCE.
5. FOR TRAFFIC SIGN SUMMARY SEE SHEET 7.

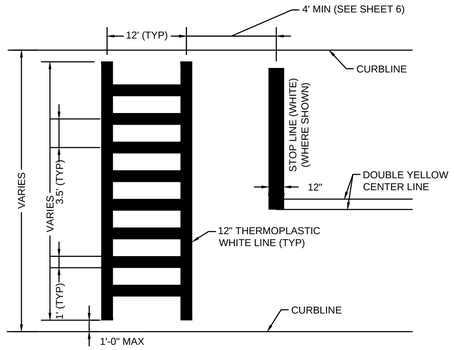


0 20 50 100

SCALE: 1" = 20'

NEWBURYPORT
PARKER STREET TRAIL
CONSTRUCTION DETAILS - 1 OF 2
SHEET 12 OF 18

T0936 HD7 CON DETAILS.DWG Plotted on 14-May-2020 10:29 AM

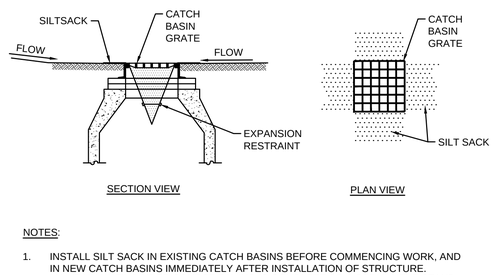


NOTES:

1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.
2. LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.

CROSSWALK PAVEMENT MARKING

N.T.S.

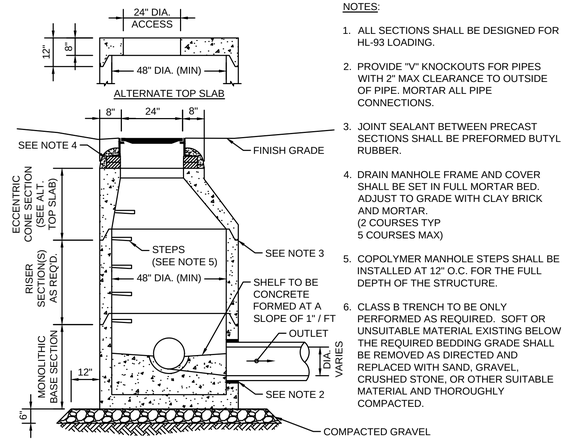


NOTES:

1. INSTALL SILT SACK IN EXISTING CATCH BASINS BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

INLET PROTECTION SILT SACK IN CATCH BASIN

N.T.S.



NOTES:

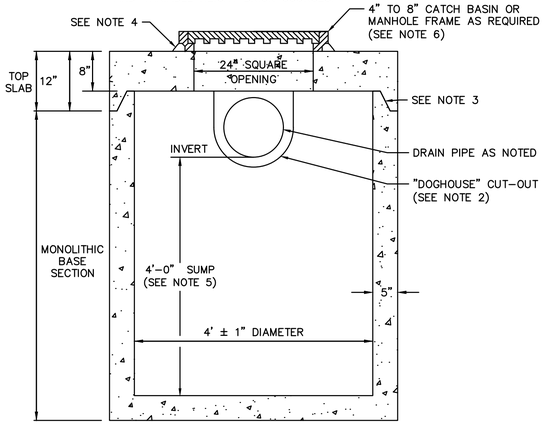
1. ALL SECTIONS SHALL BE DESIGNED FOR HL-93 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. (2 COURSES TYP 5 COURSES MAX)
5. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
6. CLASS B TRENCH TO BE ONLY PERFORMED AS REQUIRED. SOFT OR UNSUITABLE MATERIAL EXISTING BELOW THE REQUIRED BEDDING GRADE SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SAND, GRAVEL, CRUSHED STONE, OR OTHER SUITABLE MATERIAL AND THOROUGHLY COMPACTED.

DRAIN MANHOLE

N.T.S.

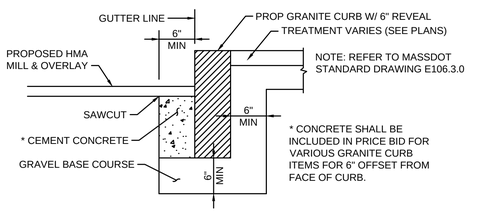
NOTES:

1. ALL SECTIONS SHALL BE DESIGNED FOR HL-93 LOADING.
2. PROVIDE DOGHOUSE OPENING FOR PIPE WITH 2" MAX CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS WITH NON-SHRINK GROUT.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN AND MANHOLE FRAMES SHALL BE SET IN FULL MORTAR BED.
5. OMIT 4' SUMP FOR MANHOLE STRUCTURES.
6. FRAME ELEVATION SHALL BE INSTALLED AT FINISH GRADE USING VARIABLE FRAME DEPTHS AND VARIABLE HEIGHT BRICK COURSES.



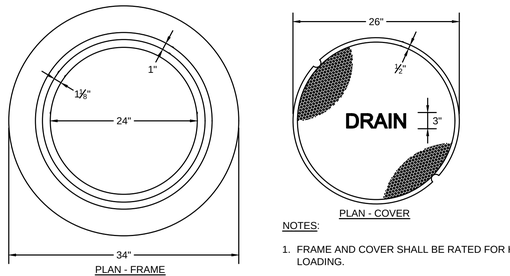
SPECIAL CATCH BASIN/MANHOLE (SHALLOW)

N.T.S.



GRANITE CURB IN HMA MILL & OVERLAY

N.T.S.

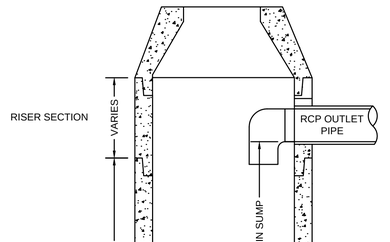


NOTES:

1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.
2. MATERIAL - CAST IRON.
3. MINIMUM MASS - 265 LBS.
4. ALL MH FRAMES AND COVERS SHALL BE ADA AND AAB COMPLIANT.
5. MANHOLE COVERS SHALL HAVE A DIAMOND PATTERN, PICK HOLES, AND THE WORD "DRAIN" OR "SEWER" CAST IN 3-INCH LETTERS.
6. MANHOLE COVERS WITHIN SHLO SHALL COMPLY WITH CONSTRUCTION STANDARD E202.6.0.

MANHOLE FRAME & COVER (MUNICIPAL STANDARD)

N.T.S.

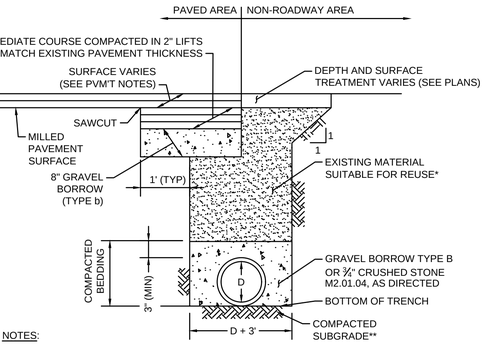


NOTE:

ALL CATCH BASINS SHALL CONFORM TO MASSDOT CONSTRUCTION STANDARD E 201.4.0 EXCEPT FOR 4' SUMP DEPTH AS SHOWN

DEEP SUMP CATCH BASIN WITH HOOD

N.T.S.



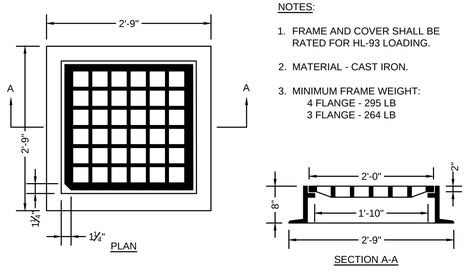
NOTES:

* EXISTING MATERIAL OBTAINED FROM EXCAVATION THAT IS DETERMINED TO BE SUITABLE, AND APPROVED BY THE ENGINEER SHALL BE USED. BACKFILL SHALL BE PLACED IN LAYERS NO MORE THAN 6" IN DEPTH AND THOROUGHLY COMPACTED. BACKFILLING TO A POINT 2' OVER THE PIPE SHALL CONTAIN NO STONES LARGER THAN 3".

**SOFT OR UNSUITABLE MATERIAL EXISTING BELOW THE REQUIRED BEDDING GRADE SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SAND, GRAVEL, CRUSHED STONE OR OTHER SUITABLE MATERIAL AND THOROUGHLY COMPACTED.

UTILITY TRENCH

N.T.S.

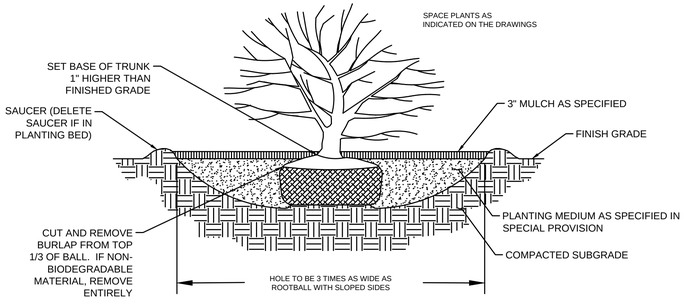


NOTES:

1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.
2. MATERIAL - CAST IRON.
3. MINIMUM FRAME WEIGHT:
   4 FLANGE - 295 LB
   3 FLANGE - 264 LB

CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)

N.T.S.

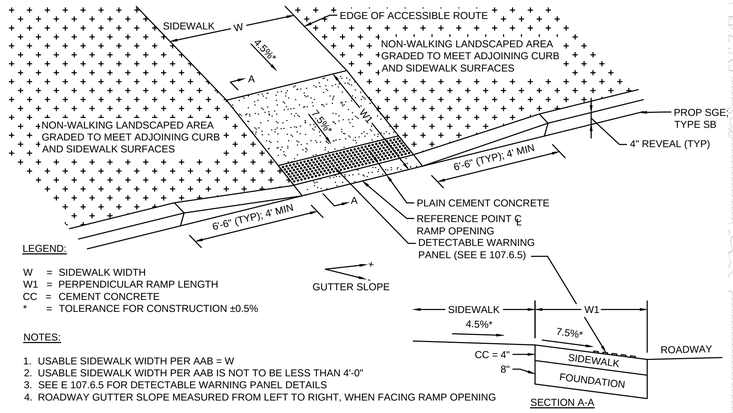


SHRUB PLANTING

N.T.S

NEWBURYPORT
PARKER STREET TRAIL
CONSTRUCTION DETAILS - 2 OF 2
SHEET 13 OF 18

T0936 HD7 CON DETAILS.DWG Plotted on 14-May-2020 10:30 AM



LEGEND:

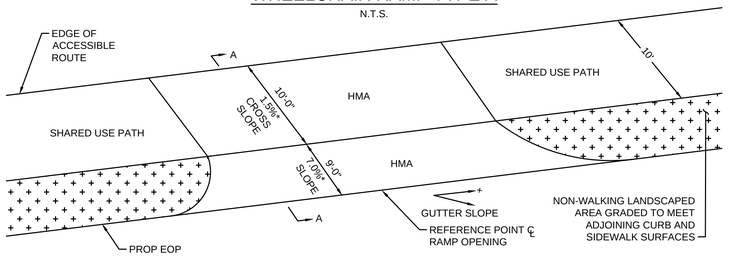
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
4. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT, WHEN FACING RAMP OPENING

WHEELCHAIR RAMP TYPE A

N.T.S.

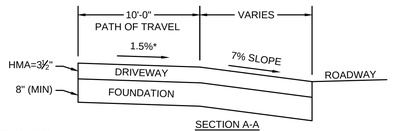


LEGEND:

W = SIDEWALK WIDTH
HMA = HOT MIX ASPHALT
* = TOLERANCE FOR CONSTRUCTION ±0.5%

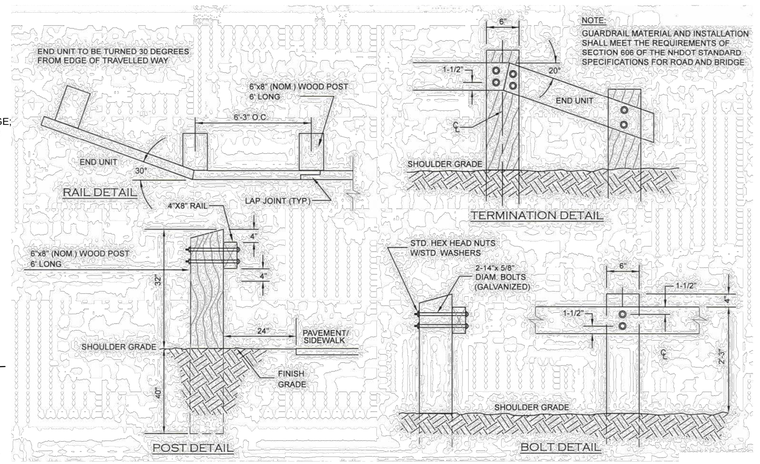
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED IN UPSTATION DIRECTION
4. SURFACE TREATMENT VARIES; SEE PLANS



SIDEWALK THROUGH DRIVEWAY TYPE A

N.T.S.



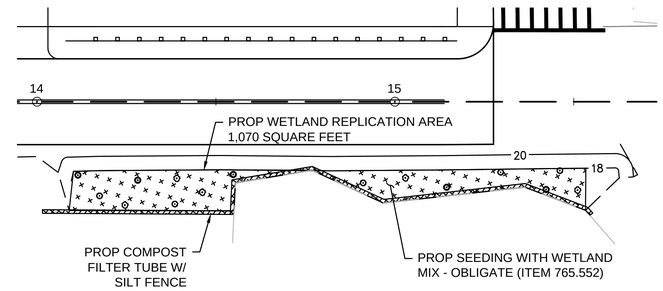
TIMBER GUARDRAIL

N.T.S.

PROPOSED PLANTING SUMMARY TABLE					
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
	5	AZALEA VISCOSUM	AZALEA - SWAMP	18" - 24"	CONTAINER
	5	VIBURNUM DENTATUM	ARROWWOOD	18" - 24"	CONTAINER
	5	CORNUS AMOMUM	SILKY DOGWOOD	24" - 36"	CONTAINER

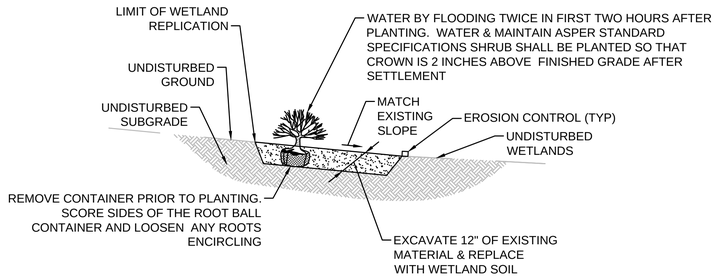
PLANTING NOTES:

1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
2. FINAL LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO PLANTING.
3. ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME & SIZE.
4. ALL PLANTS WILL BE MULCHED PER THE PLANTING SPECIFICATIONS AND DETAILS.
5. WETLAND SOIL OR LOAM SHALL BE APPLIED TO ALL DISTURBED AREAS AND SEEDED WITH THE CORRESPONDING SEED MIX PER THE APPLICABLE DETAIL.
6. WETLAND SEED MIX SHALL BE IN ACCORDANCE WITH MASSDOT STANDARDS. SEED MIX SHALL BE SITE SPECIFIC THAT IS NATIVE TO THE CITY OF NEWBURYPORT.



REPLICATION AREA - PLAN VIEW

SCALE: 1"=20'



NOTES:

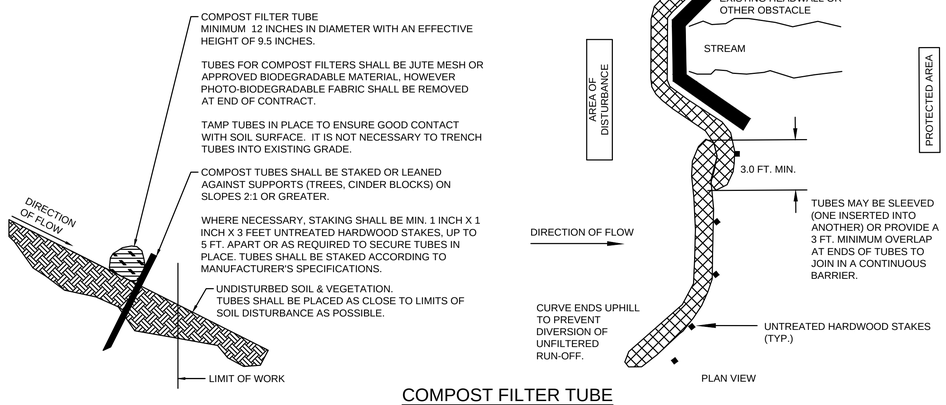
1. ALL DISTURBED AREAS TO BE SEEDED WITH WETLAND MIX - OBLIGATE (ITEM 765.552).

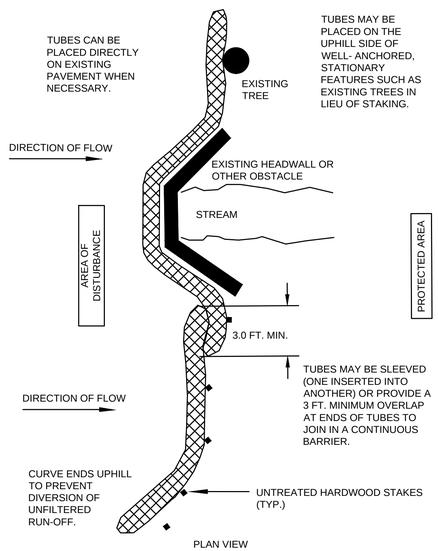
WETLAND REPLICATION DETAIL

N.T.S.

NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. TUBE LOCATION MAY BE SHIFTED TO ADJUST TO LANDSCAPE FEATURES, BUT SHALL PROTECT UNDISTURBED AREA AND VEGETATION TO MAXIMUM EXTENT POSSIBLE.
4. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
5. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
6. ADDITIONAL STAKING SHALL BE USED AT THE DIRECTION OF THE ENGINEER.





COMPOST FILTER TUBE

N.T.S.

WETLAND REPLICATION SPECIFICATIONS & GENERAL NOTES:

REPLICATION SITE SELECTION

THE WETLAND REPLICATION AREA ABUTS EXISTING BORDERING VEGETATED WETLAND. THE PROPOSED WETLAND REPLICATION IS 1,070 S. F. REPRESENTING A MITIGATION IMPAT RATIO OF 1:1. THE REPLICATION AREA WILL CONSIST OF WETLAND SHRUBS AND WETLAND SEED MIX AS SHOWN IN THE ATTACHED TABLE. REPLICATION SHALL BE SUPERVISED BY A PROFESSIONAL WETLAND SCIENTIST. THE PROXIMITY OF THE EXISTING WETLAND TO THE REPLICATION AREA WILL IMPROVE THE LIKELIHOOD OF SUCCESSFUL RESTORATION AND AID IN THE RECRUITMENT OF THE AREA BY OTHER WETLAND PLANTS. THE REPLICATED WETLAND ONCE ESTABLISHED WITH NATIVE PLANTINGS WILL PROVIDE SIGNIFICANTLY IMPROVED HABITAT FUNCTION FROM THE IMPACTED WETLAND.

HYDROLOGY

WETLAND HYDROLOGY WITHIN THE REPLICATION AREA WILL BE ACHIEVED BY ESTABLISHING AN UNRESTRICTED HYDRAULIC CONNECTION BETWEEN THE REPLICATED WETLAND AND THE EXISTING WETLAND, AND BY INTERCEPTING THE SEASONAL HIGH GROUNDWATER TABLE. SUPPLEMENTAL HYDROLOGY WILL BE PROVIDED BY SURFACE RUNOFF FROM PARKER STREET. FINISHED GRADES OF THE REPLICATION AREA SHALL BE ADJUSTED IN THE FIELD TO ASSURE PROPER HYDROLOGIC CONNECTION WITH ADJACENT WETLAND AND PROPER RELATION TO GROUNDWATER ELEVATIONS TO ASSURE THE AREA WILL PERMANENTLY FUNCTION AS WETLAND.

SOILS

SOIL TRANSLOCATION FROM THE IMPACTED WETLAND IS TYPICALLY THE PREFERRED METHODOLOGY FOR OBTAINING REPLICATION SOILS, HOWEVER TRANSLOCATION SHOULD BE AVOIDED FOR THIS PROJECT AS THE IMPACTED WETLAND IS DOMINATED BY NON-NATIVE AND INVASIVE PLANTS (PHRAGMITES AND PURPLE LOOSESTRIFE). TRANSLOCATION OF THIS SOIL WOULD RESULT IN COLONIZATION IN THE REPLICATED WETLAND, THEREFORE IMPORTED SOIL IS PROPOSED TO BE USED.

IMPORTED OIL SHALL CONSIST OF EQUAL PARTS ORGANIC MATTER (LEAF COMPOST IS PREFERRED) AND CLEAN LOAM OR ORGANIC RICH LOAM WITH A MINIMUM 20% ORGANIC CARBON BY DRY WEIGHT. IMPORTED SOIL WILL BE APPROVED BY A WETLAND SCIENTIST PRIOR TO PLACEMENT IN THE REPLICATION AREA AND SHALL BE INSTALLED TO A MINIMUM DEPTH OF 12 INCHES. SURVEYING OF SUBGRADES AND FINISHED ELEVATIONS SHOULD BE CONDUCTED FREQUENTLY DURING CONSTRUCTION. SOILS TO BE USED AT THE MITIGATION SITE SHOULD BE USED IMMEDIATELY IF POSSIBLE AND STOCKPILED FOR AS LITTLE TIME AS POSSIBLE. WHILE STOCKPILED THE SOILS SHOULD BE KEPT WET AND NOT BE ALLOWED TO DRY OUT.

COMTAMINATION OF THESE SOILS SHOULD BE PREVENTED. THEY SHOULD BE TRANSPORTED IN VEHICLES THAT HAVE BEEN WASHED SO THAT NO EXOTIC/INVASIVE SEEDS FROM OTHER SITES GET MIXED IN WITH THEM.

PLANTING REQUIREMENTS

SHRUBS SHOULD BE PLANTED 8-10 FEET ON CENTER IN A RANDOM PATTERN OR IN CLUSTERS TO MIMIC NATURAL CONDITIONS.

INVASIVE SPECIES

TRUCKS THAT HAVE PREVIOUSLY BEEN ON OTHER SITES SHOULD BE WASHED PRIOR TO INTRODUCTION TO THE REPLICATION SITE SO THAT MUD/DIRT WITH EXOTIC/INVASIVE SEEDS IS NOT INADVERTENTLY BROUGHT TO THE REPLICATION SITE.

TIMING OF PLANTINGS

ALL PLANTING SHOULD OCCUR AT THE BEGINNING OR END OF THE GROWING SEASON. FALL PLANTINGS SHOULD BE DONE BEFORE THE FIRST FROST, BUT NO LATER THAN NOVEMBER 15.

EROSION CONTROL

EROSION CONTROLS WILL BE PLACED ALONG THE BOUNDARY OF THE WETLAND REPLICATION AREA. UPON COMPLETION OF THE REPLICATION AREA, INSTALLATION OF SILTATION FENCING AND COMPOST FILTER TUBES BETWEEN THE REPLICATION AREA AND THE ADJACENT UPLAND WILL BE PROVIDED TO PREVENT SILT FROM ENTERING THE REPLICATION AREA. PRIOR TO PERMANENT ESTABLISHMENT OF VEGETATION IN THE REPLICATION AREA, SOILS WILL BE TEMPORARILY STABILIZED TO PREVENT IMPACTS FROM EROSION BY MULCHING AND SEEDING WITH A WETLAND SEED MIXTURE UNTIL RE-ESTABLISHMENT OF WETLAND VEGETATION OCCURS. ALL EMBANKMENT SLOPES ADJACENT TO WETLAND REPLICATION AREAS SHOULD HAVE SLOPES NO GREATER THAN 2H:1V UNLESS STABILIZED BY STRUCTURAL MEANS. BIOENGINEERING STABILIZATION METHODS ARE RECOMMENDED FOR SLOPE STABILIZATION. ORGANIC SOILS AND WETLAND VEGETATION SHOULD NOT BE PLACED IN THE REPLICATION AREA UNTIL IT IS VERIFIED THAT THE FINAL EXCAVATED GRADE FOR THE REPLICATION AREA WILL ALLOW THE FINISHED GRADE OF THE REPLICATION SITE TO MEET THE DESIGN SPECIFICATIONS. FOLLOWING EXCAVATION WORK, FINAL GRADING AND LANDSCAPING SHOULD BE COMPLETED AS SOON AS POSSIBLE TO MINIMIZE EROSION. ALL EXPOSED SOIL WILL BE STABILIZED USING SEED-FREE MULCH OR OTHER APPROPRIATE EROSION CONTROL MEASURES IN THE EVENT THAT SEASONAL CONDITIONS RESULT IN A DELAY IN PLANTING. IF THE SITE IS EXCAVATED TO THE SUBGRADE IN THE FALL AND A DELAY IS INEVITABLE, CONSIDERATION SHOULD BE GIVEN TO STABILIZING THE SITE FOR WINTER, AND CONDUCTING FINAL GRADING IN THE SPRING.