Notice of Intent:

IMPROVEMENTS TO JAMAICA POND PARK PATHWAYS AND PERIMETER - PHASE 2

Boston, Massachusetts
November 7, 2018

SUBJECT PROPERTY:
Emerald Necklace: Jamaica Pond Park
Parcel ID: Ward 19, Parcel 1902186000
Boston, MA

OWNERS:
City of Boston/Department of Conservation and Recreation
Attn: Christopher Cook, Commissioner, Boston Parks and Recreation Department
Contact: christopher.cook@boston.gov, lauren.bryant@boston.gov

Image: Jamaica Pond Association

SUBMITTED TO:

City of Boston Conservation Commission & Massachusetts Department of Environmental Protection

PREPARED BY:

Kyle Zick Landscape Architecture, Inc. for City of Boston

kzla

IMPROVEMENTS TO JAMAICA POND PARK PATHWAYS AND PERIMETER - PHASE 2

Notice of Intent Attachment List

November 7, 2018

List of all plans and supporting documents submitted with this Notice of Intent

WPA Form 3 - Notice of Intent

Attachments

Attachment List

A (Attachment A)	Narrative / Site Photos / Diagrams
B (Attachment B)	Key Map/USGS Map
C (Attachment C)	FIRM Map
D (Attachment D)	Delineation Map
E (Attachment E)	Abutters' Information
F (Attachment F)	Plans & Details

kzla
Kyle Zick Landscape Architecture, Inc
36 Bromfield Street, Suite 202, Boston, MA 02108
t: 617-451-1018 e: kzick@kylezick.com www.kylezick.com

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

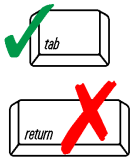
Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boston
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):

Perkins Street (a. Street Address) | Boston (b. City/Town) | 02130 (c. Zip Code)

Latitude and Longitude: 42 18' 56.78" N (d. Latitude) | 71 07' 02.43" W (e. Longitude)

9A-9C, Parcel: 1902186000 (f. Assessors Map/Plat Number) | 1902186000 (g. Parcel /Lot Number)

2. Applicant:

Christopher (a. First Name) | Cook (b. Last Name)

City of Boston Parks and Recreation Department (c. Organization)

1010 Massachusetts Avenue, 3rd Floor (d. Street Address)

Boston (e. City/Town) | MA (f. State) | 02118 (g. Zip Code)

617-635-4505 (h. Phone Number) | (i. Fax Number) | Christopher.Cook@boston.gov (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):

Kyle (a. First Name) | Zick (b. Last Name)

Kyle Zick Landscape Architecture, Inc. (c. Company)

36 Bromfield Street, Suite 202 (d. Street Address)

Boston (e. City/Town) | MA (f. State) | 02108 (g. Zip Code)

617-451-1018 (h. Phone Number) | (i. Fax Number) | kzick@kylezick.com (j. Email address)

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

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

A. General Information (continued)

6. General Project Description:

Resurfacing and minor regrading of asphalt pathways and entrances in Jamaica Pond Park, a change in materials for select social trails and access drives, and redevelopment of a runners' path, along with vegetation management and stormwater improvements. Resource areas are inland bank and buffer zone for Jamaica Pond.

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)

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

a. County	b. Certificate # (if registered land)
Suffolk	
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.

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	15 1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	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 3. cubic feet of flood storage lost	2. square feet 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.

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 _____

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

   10/17/2018 Oliver online viewer

   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.

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.

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.

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.

Improvements to Jamaica Pond Park Pathways and Entrances - Phase 2
a. Plan Title

Tracy Hudak
b. Prepared By

Kyle Zick
c. Signed and Stamped by

11/07/2018
d. Final Revision Date

see attachment
e. Scale

f. Additional Plan or Document Title

11/05/2018
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

D. Additional Information (cont'd)

D.5. Additional Property Owner:

Department of Conservation & Recreation
Main Office:
251 Causeway Street, 9th Floor
Boston, MA 02114

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant	2. Date: 10/29/18
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any)	6. Date: 11/07/2018

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

WPA Form 3 – Notice of Intent

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

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1. Signature of Applicant	2. Date 11.2.18
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any)	6. Date
Signature of Co-Owner (DCR)	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:
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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

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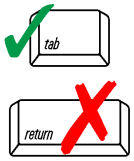


A. Applicant Information

EXEMPT FROM FEE

1. Location of Project:

a. Street Address | b. City/Town

c. Check number | d. Fee amount

2. Applicant Mailing Address:

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

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
EXEMPT FROM FEE			

Step 5/Total Project Fee: _____

Step 6/Fee Payments:

Total Project Fee: _____ 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.)

Improvements to Jamaica Pond Park Pathways and Perimeter - Phase 2
Description of Proposed Work
November 7, 2018

1.0 Project Narrative

The Boston Parks and Recreation Department is engaged in a phased project to resurface a series of park pathways in Jamaica Pond Park. This project requires ongoing coordination with the Department of Conservation and Recreation (DCR). Phase 2 of this project includes work on the perimeter pathways of Jamaica Pond Park and the adjacent landscape.

Jamaica Pond Park is roughly 110 acres, 68 acres of which is the Great Pond itself. The project site for this application is an area of approximately 5.5 acres focusing on the perimeter pathway and the adjacent landscape. The majority of the work within Jamaica Pond Park, approx. 137,500 sf, will occur within the 100' Buffer Zone (See Attachment F). The Buffer Zone is primarily parkland, including bituminous concrete pedestrian pathways, a stonedust path, various social trails, lawn and urban woodlands. The work within the buffer zone includes reconstruction and widening of existing pathways, surfacing eroded social trails, decompacting soil and restoring pathways edges, restoring vegetation, and various other landscape improvements as shown in the plans. The project also improves stormwater management within the park. Stormwater-related efforts include restoring and stabilizing areas within the buffer zone, retrofitting existing drainage to reduce sediment loads to the pond, and implementing new green infrastructure practices, such as a bioswale, sand filter, and stormwater planters.

- Approx. 137,500 sf of proposed work will occur within the 100'-Foot Buffer Zone.

- 15 lf of inland bank around Jamaica Pond is being disturbed to install new cobble swales to direct stormwater from the pathways around the pond.

- None of the proposed work will occur within Bordering Land Subject to Flooding. There will not be an alteration of the flood storage capacity of Jamaica Pond with the proposed work.

2.0 Existing Conditions

All of the existing bituminous pavement within the project scope is in fair to very poor condition and is in need of repaving to provide safe, accessible park use. Existing perimeter paths, excluding the Pond Street entrance, vary from approximately 8' to 15' wide, with the majority being 8'-10' wide.

The path around Jamaica Pond Park no longer drains as it was intended, due to compaction from heavy pedestrian/runner traffic along path edges, differential settling, and vehicular damage to the path edges and adjacent surfaces. These problems lead to erosion and uncontrolled stormwater flows, undermining the longevity of the pavement and diminishing the water quality of the pond.

Much of Jamaica Pond Park drains to the pond through surface flow or through the park's stormwater drainage system. In addition, the Emerald Necklace Master Plan notes that there are 16 storm drain lines (including surrounding roadway storm drains)that empty into the pond and one inlet from Sargent's Pond in Brookline.

Jamaica Pond is 68 acre glacial kettle pond. It is bordered by a mix of lawn and deciduous vegetation composed of trees and shrubs. Limited herbaceous vegetation is found due to heavy waterfowl grazing.

The pond is stocked with fish annually and is also habitat to small mammals, reptiles, waterfowl, and amphibians.

2.1 Wetland Resources
Wetland Boundary Determination Methodology

Per 310 CMR 10.54(2)(c), the upper boundary of a Bank is the first observable break in the slope or mean annual flood level, whichever is lower. Where stone riprap revetments exist around the pond's perimeter, the top of the bank for Jamaica Pond was determined to be the top of the stone rip rap where there is a defined break in the slope. Where no stone riprap revetment exists, delineation for the top of bank was completed by examining the area of transition between the pond itself and where there is a clear break in the topography. The approximate delineation limit of the Top of Bank is shown on the proposed plans (Attachment F) and Attachment D.

Inland Bank
Bank is defined in 310 CMR 10.54(2) as "the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or in the absence of these, it occurs between a water body and an upland." At Jamaica Pond, most of the bank is reinforced with blocks and boulders that act as a riprap revetment. Unreinforced, sandy areas exist at the northern and southwestern edges of the pond.

Buffer Zone from Inland Bank
The 100-Foot Buffer Zone from the Inland Bank in this project area is generally characterized by mature trees, low vegetation, lawn, and the existing asphalt perimeter paths, along with lighting and site furnishings. The buffer zone also includes the Boathouse and Bandstand structures.

Bordering Land Subject to Flooding
The boundary of Bordering Land Subject to Flooding (BLSF) is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm, as defined in 310 CMR 10.57(2)(a). Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the community within which the work is proposed under the National Flood Insurance Program (NFIP). See Attachment C., Flood Insurance Rate Map. No work is proposed in the 100-year frequency storm area.

3.0 Work Proposed Within 100-Foot Buffer Zone to Inland Bank

Paving
Repaving the pedestrian paths within Jamaica Pond Park falls largely within the 100-Foot Buffer Zone. Continuous erosion control will be installed between the work zone and the pond to control sedimentation during construction. Drainage structures will be protected with "silt sacks" throughout construction. The repaving largely involves replacing the existing pavement in kind, but utilizing a consistent 10' paved path width wherever feasible rather than the 8'-10' variable path width that exists now. There are also limited areas where path alignment is being adjusted to eliminate rutting or avoid mature tree roots, and areas where there is a proposed change in materials of select social trails and access drives to eliminate erosion and sediment sources and to improve park accessibility.

At the Eliot Street entrance a social trail has resulted in bare earth and will be paved. An 8-foot paved pathway is proposed to allow pedestrians entering from this location to access the perimeter pathway without causing erosion and damaging vegetation. The remaining compacted triangular area is proposed to be decompacted and paved with porous cobblestone paving.

A bare-earth social trail connecting the DCR multi-use path along the William F. Kelley Circle to Jamaica Pond's perimeter pathway will be formalized and made accessible with a bituminous surface and grades that are MAAB-compliant.

Two existing gravel/bare earth access drives—one located just to the south of the Boathouse connecting the perimeter path with the DCR multi-use pathway (within the resource buffer) and one connecting the DCR multi-use pathway across from Lochstead Avenue with an internal pathway (outside of the resource buffer) will be paved. Formalizing these access drives, which are used by park rangers and maintenance vehicles, will help to reduce erosion of the existing earth or gravel slopes and the subsequent sedimentation of the pond.

The formalized runners' path is proposed to be a 24-inch wide aggregate surface (a mix of gray crushed stone from 3/8 of an inch to fines) atop a 3-6" high vegetated berm, situated parallel to the perimeter path for about 1/2 the circumference of the pond. The runners' path is intended to provide an alternative path with a more desirable surface for runners to run on while protecting the planted and natural areas beyond the paved perimeter path, thereby reducing sedimentation of the pond. The berm itself will also help to direct stormwater longitudinally along the pathway to the existing cobble spillways in the park. (See 'Stormwater,' below, for more information).

As budget allows, the rehabilitation of the DCR multi-use path has been included as an add alternate in the project. The resurfacing has been divided into two separate alternates with the portions of the multi-use path in the worst condition (and the decompaction of associated soils) being prioritized.

Decompaction

Currently, pathway edges are heavily compacted due to foot traffic and vehicular damage. In addition, separate social trails have formed over time, and the soil in these areas is compacted and devoid of vegetation. The Perkins Street edge is also compacted due to foot traffic from the parking spaces along the street. The proposed work includes scarifying and replanting pathway edges, as well as installing boulder groupings and adding a running berm (see 'Stormwater'), where practicable, to protect against foot traffic and the resulting compaction and erosion. Heavily compacted social trails will either be paved for stabilization and improved accessibility (as noted in 'Paving'), or decompacted and replanted with native species or lawn.

The Perkins Street edge will be decompacted and replanted with native vegetation. Here, several decompaction methods will be trialed, to evaluate their effectiveness for future projects, and to provide an educational component to the work at Jamaica Pond Park. The trial methods include vertical mulching, drilling radishes, matrix decompaction, and freeze/thaw. Vertical mulching entails drilling holes at regular intervals and adding soil amendments to improve soil condition. Planting drilling radishes takes advantage of the radishes' large taproot to increase soil aeration and water infiltration. Matrix decompaction uses high pressure air or a mechanical auger to loosen soil. Excavated soil will be stockpiled for reuse after amendment. Freeze/thaw does not use any mechanical interventions, and relies on natural freeze-thaw cycles to decompact soils. Following decompaction, the slope will be revegetated with a grass seed mix with pockets of low shrubs around existing and proposed trees.

Most plantings will be protected with temporary fencing to ensure establishment. Along Perkins Street, the plantings will be protected with temporary fencing that has openings placed to allow for foot traffic from the parked vehicles. The temporary fencing along Perkins Street will be moved periodically to allow deteriorated areas to be restored. All temporary planting fences will be maintained for a minimum of a two-year period, to be assessed seasonally after that time. The fence will protect the new plantings and change the habits of visitors so that they establish new patterns of movement. The temporary plant establishment fence will be accompanied by informational signage for the public.

Vegetation

Much of the vegetation around the bank of Jamaica Pond is desirable and will not be impacted as a result of this work. Tree pruning will be limited to the removal of deadwood through crown cleaning, and crown raising in limited areas to provide safe clearance for pathway use. Tree removals will be limited to approximately 30 hazard trees. Where the trunks of mature trees are infringing on the existing path, the new pavement will be adjusted to account for the existing trunks. 32 existing stumps will be ground, and the areas will be backfilled with topsoil and seeded.

In addition to the necessary pruning work to keep park users safe, there are a number of invasive species that have taken hold along the bank and in upland areas within the 100' resource buffer. These species include: knotweed (Fallopia japonica), tree of heaven (Ailanthus altissima), norway maple (Acer platanoides), black locust (Robinia pseudoacacia), oriental bittersweet, (Celastrus orbiculatus), buckthorn (Rhamnus cathartica), and multiflora rose (Rosa multiflora). Approximately 42,720 square feet of invasive plant areas will be treated and/or removed. The project will also remove 2 Amur cork trees (Phellodendron amurense, 8" and 10" dbh), approximately 30 stand-alone invasive saplings, and approximately 12 stand-alone invasive shrubs.

Before any vegetation removal or herbicide application, an on-site conference will be held to review the scope of work, herbicide, application methods, and schedule. In general, oriental bittersweet vines, buckthorn shrubs, and multiflora rose shrubs will be cut just above finish grade and color-dyed herbicide will be applied to the cut stems. Knotweed stalks will be cut down to the second or third node of the stem and an herbicide will be applied into the stalks. The procedure will occur between July and September. This method will be more effective than using a foliar spray and will have a direct impact to the knotweed while being sensitive to the surroundings. All invasive species brush will be taken to an approved facility.

The proposed work also includes planting approximately 50 native trees and 400 native shrubs from Olmsted's Emerald Necklace plant list, seeding slopes for stability and erosion control, and the decompaction and revegetation of path edges. The primary targets for new plantings are areas degraded from foot traffic or erosion, pathway edges, areas of fallen trees, and areas where vegetation removals are planned. Vegetation is also being used to deter the re-emergence of social trails that are not being formalized, such as the social trail at the Chestnut & Perkins streets, and the side slopes of the Chestnut/Perkins and Pond Stairs (See Attachment F). Also, an existing stone dust pathway with granite stairs which was installed in 1989 and leads to the unreinforced sandy area on the southwestern corner of the pond is to be removed and seeded over.

Ornamental herbaceous plantings will be used in the Boathouse/Bandstand stormwater planters. The plantings selected for these planters need to be tolerant of variable soil conditions (inundated and dry) and there is historic precedent for a more ornamental plantings in this area. Therefore, the plant palette for these planters deviates from the Emerald Necklace plant list. Plant selections have been made that

provide for a full season of blooms and winter interest, that are predominantly Massachusetts native species, and that have showy blooms that will help draw in visitors to the rain garden to support the environmental education intent of the space.

Stormwater

The asphalt paths around Jamaica Pond Park will be minimally graded to allow for proper drainage off the path, and to meet accessibility regulations where feasible. The perimeter pathway will generally pitch towards the pond. In areas where steep uphill slopes were found to contribute to erosion or runoff across the perimeter pathways, shallow vegetated swales will be created on the uphill side of the pathway to intercept and infiltrate water coming from the slopes. Temporary fencing will ensure stabilization during establishment.

In general, runoff will either be controlled along the pathway with the runner's path low berm or a hardened edge until it reaches a swale, a cobblestone spillway, or other intervention described below. In limited areas along Perkins Street, water will sheet flow through vegetation before reaching the pond. Where there was not room for a runner's path berm, and a hardened edge was undesirable for historic reasons, longitudinal slopes of 1.0% to 2.0% will ensure positive drainage to existing and proposed stormwater management structures and to avoid puddling on the pathway.

Existing wood retaining walls, along Parkman Drive and Perkins Street, will be repaired with new timbers. The steel beams will remain in place and will receive new caps. Two short segment walls (approximately 10 feet long each) will be removed as they no longer provide a retaining function.

The runner's path low berm is proposed on the pond side of the perimeter path to separate the runners' path and the paved perimeter path. The berm will help control the movement of stormwater runoff. New hardened edges will be mortared cobblestone curbing. Select existing vertical granite curb and bituminous curbs will be replaced with cobblestone curbing as necessary and as funding allows. Hardened edges are only proposed along steep slopes where runoff could scour the side slopes of berms.

Three new cobblestone spillways are proposed to be installed, located along the Perkins Street perimeter pathway. The pathway along this side of the park receives water from the uphill slope and the vegetation on the pond side of the path has been obliterated by erosion and foot traffic. Existing spillways will be repaired, if necessary, to stablize the cobbles and ensure water can flow in them as intended. Riprap may be added to the base of the spillways where there is evidence of erosion. Exsting cobblestone spillways will be retrofitted with an inlet structure with a reusable sediment trap. The two new cobble spillways will also have these features. These inlet structures will be set in a bituminous concrete apron between the cobblestone spillway and the perimeter pathway. The existing cobblestone spillway at the Pond Stairs is no longer at an elevation where it conveys water. It will be removed and replaced with a recharge basin at the top of the stairs.

Several areas will receive particular stormwater improvements:

Bioswale

A bioswale is proposed near the Chestnut/Perkins Street entrance at the northern end of the pond. The bioswale shall be planted with appropriate shrubs selected from the Olmsted planting plans that are also native to Massachusetts. Coir logs will be incorporated into the bioswale to slow the flow of water, encourage infiltration, and accommodate grade changes.

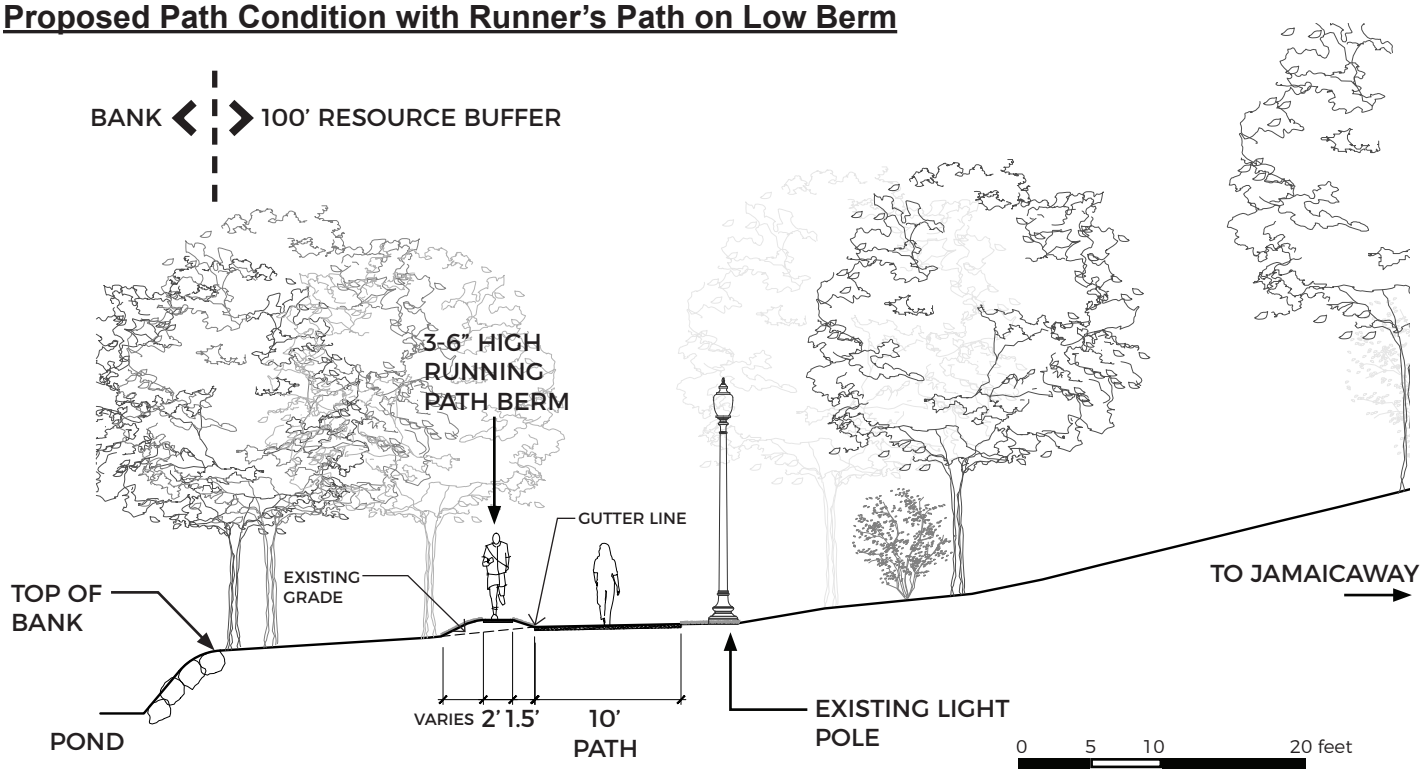
Sand Filter
A sand filter is proposed in an existing grassy basin at the eastern most extent of the park downhill from the intersection of the Jamaicaway and Lochstead Avenue. The sand filter with forebay will provide for infiltration, employ an earthen berm to slow water, and utilize an existing catch basin as an overflow structure.

Recharge Basin
A new recharge basin is proposed at the north side of the intersection of the DCR multi-use path and the Pond Street entrance to control runoff from the multi-use path.

Porous Pavement
Porous pavement is proposed at each of the three fitness equipment locations. (See Attachment F) In addition, cobblestone paving at the Eliot Street entrance, and at the Chestnut/Perkins enatrnce will be installed as porous cobblestone paving.

Boathouse/Bandstand Stormwater Planters
Existing planters will be retrofitted to act as stormwater planters, and to receive stormwater from the Boathouse and Bandstand roofs. The surrounding cast-in-place concrete plaza will be replaced and re-graded to move stormwater from the plaza into the renovated planters through trench drains. (For planter vegetation, see 'Vegetation' above and Attachment F)

Proposed Path Condition with Runner's Path on Low Berm



PROPOSED PATH CONDITIONS

Attachment A

Parallel Paths:
10-foot bituminous walking path with 2-foot runners' path (4,100 linear feet)

Shared Path:
10-foot wide bituminous walking path only (3,100 linear feet)

PROPOSED PATH CONDITIONS

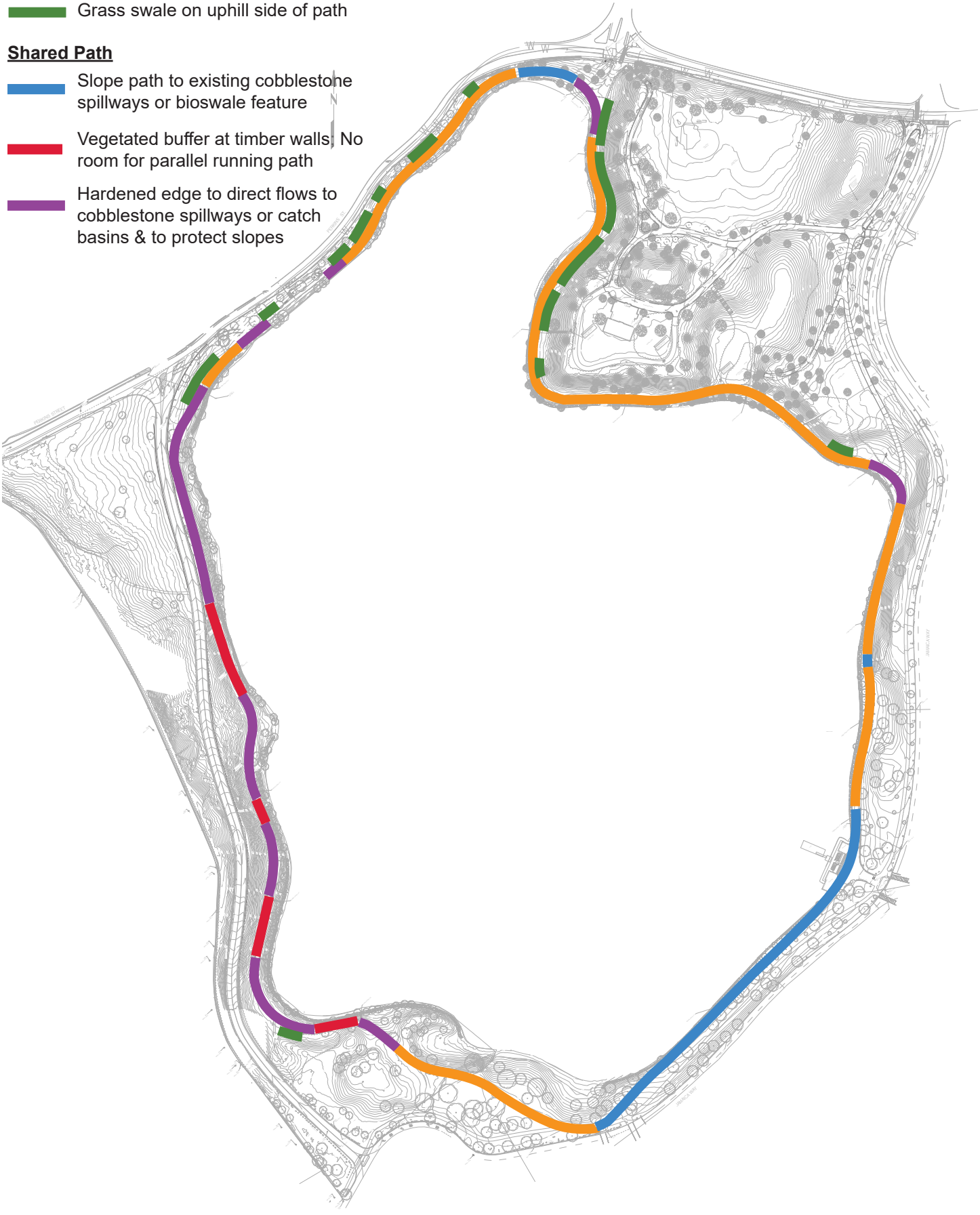
Attachment A

Parallel Path

- Pond side running berm
- Grass swale on uphill side of path

Shared Path

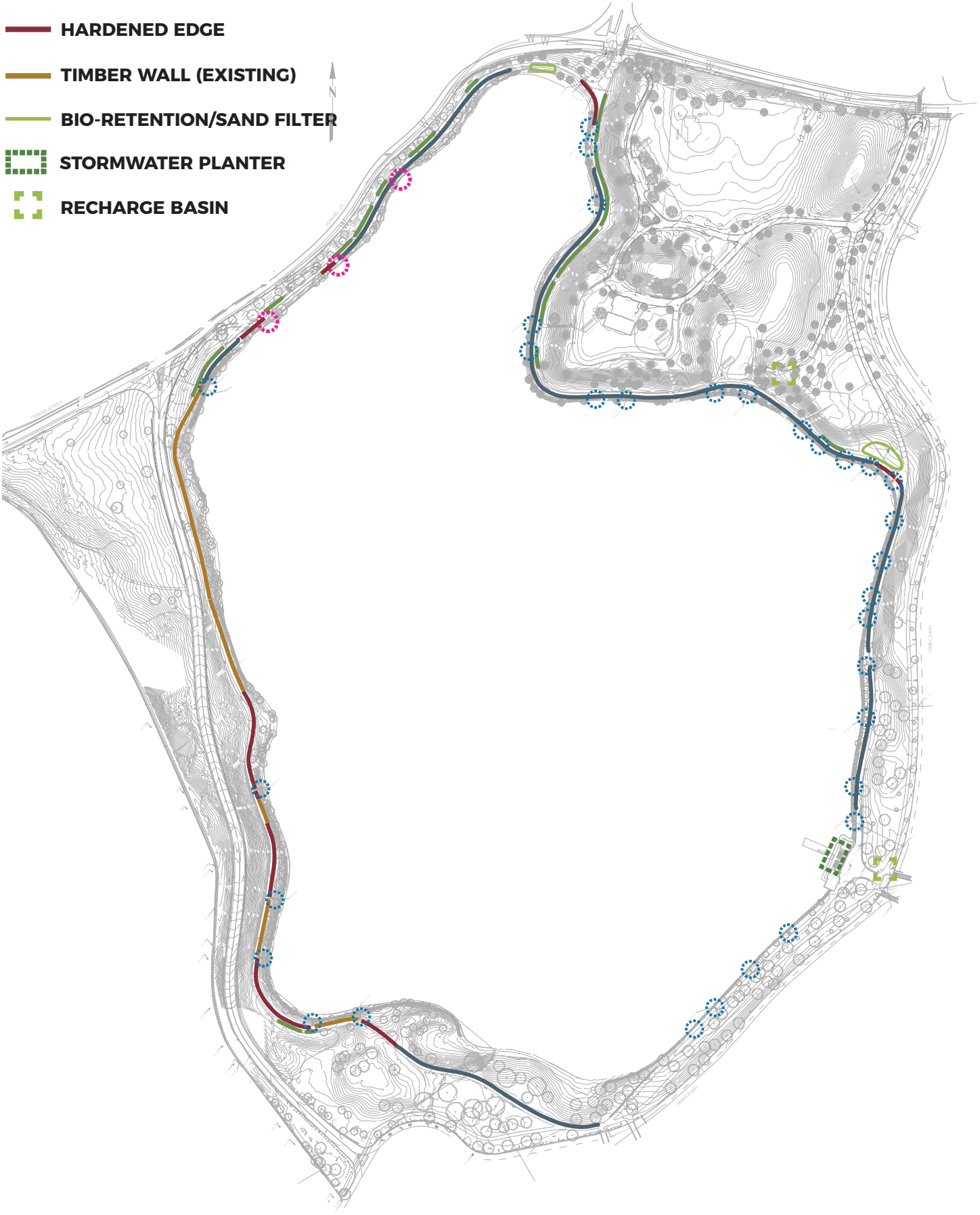
- Slope path to existing cobblestone spillways or bioswale feature
- Vegetated buffer at timber walls. No room for parallel running path
- Hardened edge to direct flows to cobblestone spillways or catch basins & to protect slopes



PROPOSED STORMWATER MANAGEMENT

Attachment A

- GRASS SWALE
- RUNNER'S BERM
- HARDENED EDGE
- TIMBER WALL (EXISTING)
- BIO-RETENTION/SAND FILTER
- STORMWATER PLANTER
- RECHARGE BASIN
- COBBLESTONE SPILLWAY (EXISTING)
- COBBLESTONE SPILLWAY (NEW)



SITE PHOTOS - GENERAL PARK CONDITIONS

Attachment A

Perimeter path (on left) and multi-use path (on right) along the Jamaicaway.

Degraded bank (on left) and social trail (coming from right) near Chestnut & Perkins streets.

Compaction and erosion from an informal running path behind the curb along the perimeter path below Pinebank.

Compacted social trail, narrow paved path, and stone wall along Francis Parkman Drive.

Paved path and degraded landscape along Perkins Street.

Timber wall and steep slopes along Francis Parkman Drive.

SITE PHOTOS - PATHWAY CONDITION

Attachment A

Path edge condition.

Degraded path edge and resulting erosion.

Pathway alignment and width contribute to vehicular damage and results in puddling and erosion.

Compaction and erosion leaves bituminous pavement several inches higher than the adjacent surface.

Patched area of bituminous path; Bituminous pavement cracking.

SITE PHOTOS - COMPACTION

Attachment A

Runners compact the path edge. The proposed formalized runners' path will provide an un-paved path option while protecting the planted and natural areas.

Where width permits, compacted trails currently form on both sides of paved path. A widened paved path, uphill swales ,and the pondside runners' path will curb this damage.

Compaction next to path edge makes cobblestone spillway ineffective. Grades will be adjusted to direct water to existing spillways, outfitted with sediment traps.

Social trail at Chestnut and Perkins results in compacted soil. Social trail will be decompacted and revegetated.

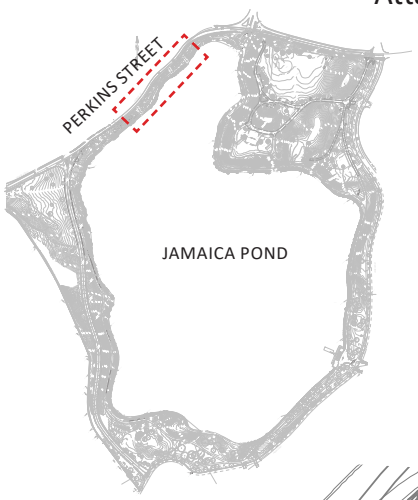
Visitors parking along Perkins compact the soil and degrade the slope with foot traffic. Slope will be decompacted and revegetated. Temporary fence will direct foot traffic to the most stable slopes.

DECOMPACTION PLAN ALONG PERKINS STREET

Attachment A

As described in the narrative, the vegetation along Perkins street is degraded and the soil is particularly compacted. The slope will be decompacted using a series of methods shown here .Followng decompaction, the slopes will be re-vegetated. Vegetation will include a grass seed mix along the slope with pockets of low shrubs around specimen trees—existing and proposed.

In addition to the Perkins Street edge, the edges of the paved pathways (and the DCR multi-use path if funds permit) will be scarified and seeded.



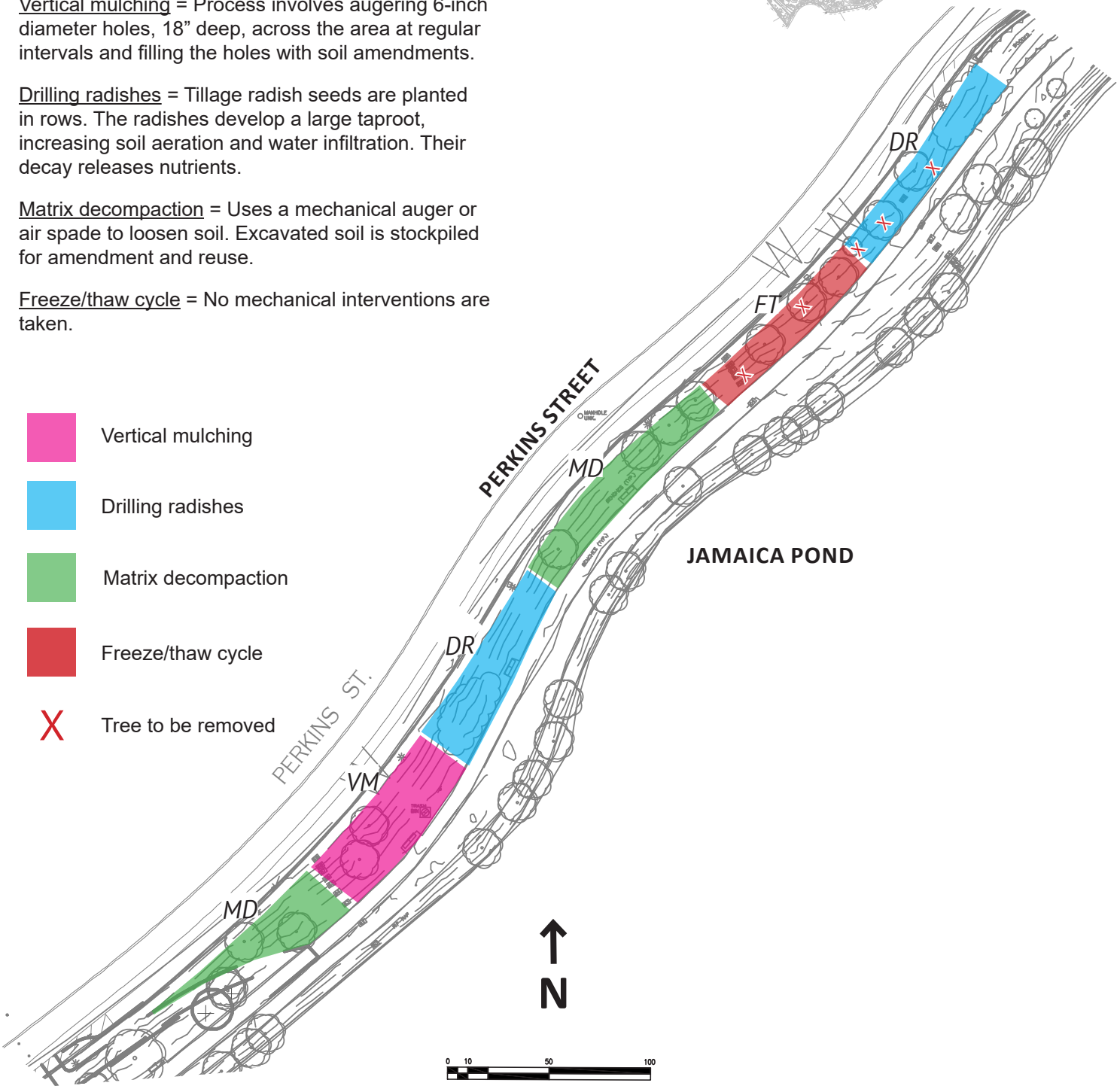
Proposed Decompaction Techniques

Vertical mulching = Process involves augering 6-inch diameter holes, 18” deep, across the area at regular intervals and filling the holes with soil amendments.

Drilling radishes = Tillage radish seeds are planted in rows. The radishes develop a large taproot, increasing soil aeration and water infiltration. Their decay releases nutrients.

Matrix decompaction = Uses a mechanical auger or air spade to loosen soil. Excavated soil is stockpiled for amendment and reuse.

Freeze/thaw cycle = No mechanical interventions are taken.



SITE PHOTOS - EROSION

Attachment A

Former pathway eroded. Slope will be restored and path will be revegetated.

Foot traffic from Perkins Street degrades the vegetation and accelerates erosion. Soil will be decompacted and revegetated. Temporary vegetation fence will protect new plantings.

Use of the gravel vehicular drive, just south of the Boathouse, between the DCR multi-use path and the pond perimeter path, degrades the pavement edge. Drive will be paved to stabilize the surface and eliminate a source of sediment.

Uphill runoff contributes to erosive flows across the perimeter path into the pond. An uphill vegetated swale will detain stormwater and encourage infiltration.

Gravel vehicular drive across from Lochstead Avenue between the DCR multi-use path and an internal park path. Gravel drive will be paved to stabilize the surface.

SITE PHOTOS - COBBLE SWALES

Attachment A

Example of the compaction typical along the perimeter pathway. The proposed formalized runners' path will provide an un-paved option for runners while protecting the planted and natural areas that are adjacent to the paths.

Degraded pavement and erosion around cobblestone spillway. Surface grades will be adjusted to direct water to the spillways, which will be retrofit with sediment traps.

Sediment collecting in cobblestone spillway. Inlets with sediment traps will be retrofit into existing spillways.

Compaction leaves spillways elevated above the adjacent ground. Water currently flows around the swale, furthering the erosion. A hardened cobble edge will protect the steep slope and direct water to the existing cobblestone spillway.

Example of cobblestone spillway that will be repaired and retrofit with a sediment trap inlet.

PROPOSED VEGETATION MANAGEMENT

Attachment A

Primary Targets for Removal:

- Knotweed
- Tree-of-heaven
- Norway maple
- Black locust
- Bittersweet
- Buckthorn
- Multiflora rose

Restoration

- Areas degraded from erosion or foot traffic
- Path edges
- Areas of fallen trees

SITE PHOTOS - VEGETATION MANAGEMENT

Attachment A

Stump and tree of heaven sapling to be removed.

Example of severely damaged tree that will be removed.

Example of vegetation encroaching on the perimeter path. This type of vegetation will be pruned back for safety.

Example of extensive knotweed patch in the park. Knotweed is one of the major invasive species that will be removed in this project.

Invasives species targeted for removal around the Puddingstone stairs.

SITE PHOTOS - VEGETATION MANAGEMENT

Attachment A

Side slopes of stairs will be planted with shrubs to hold slope and deter off-path walking.

New woody vegetation will minimize erosion and deter pedestrian shortcuts.

Degraded area adjacenet to the pond bank will be revegetated and protected with temporary fencing.

Perkins Street degraded slope and path edge will be decompacted and revegetated.

Hillside with fallen trees will be replanted.

Social trail from Francis Parkman Drive will be revegetated.

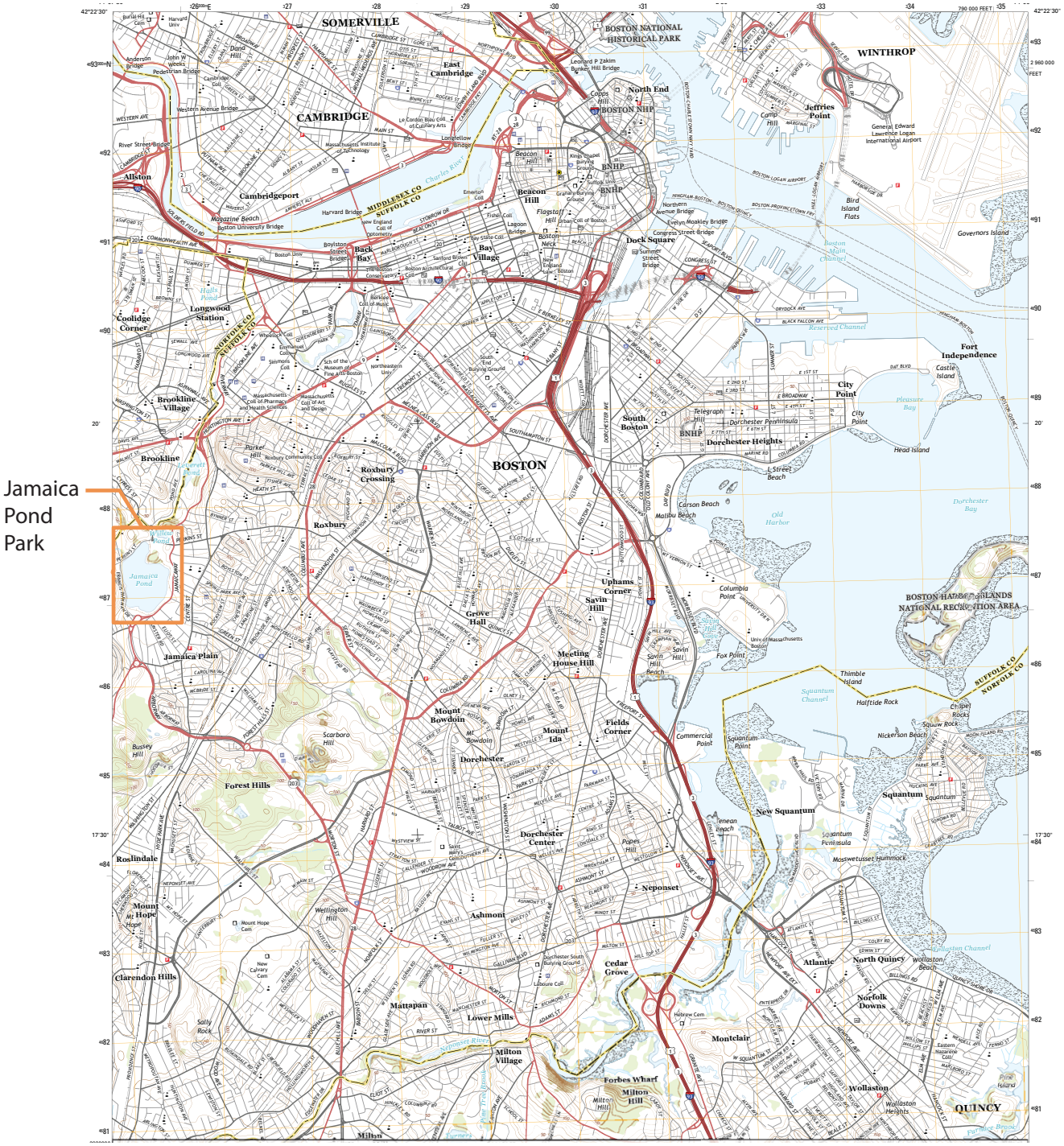
USGS MAP

Attachment B

October 22, 2018
City of Boston, MA

JAMAICA POND PARK
Notice of Intent

KEY MAP/USGS MAP



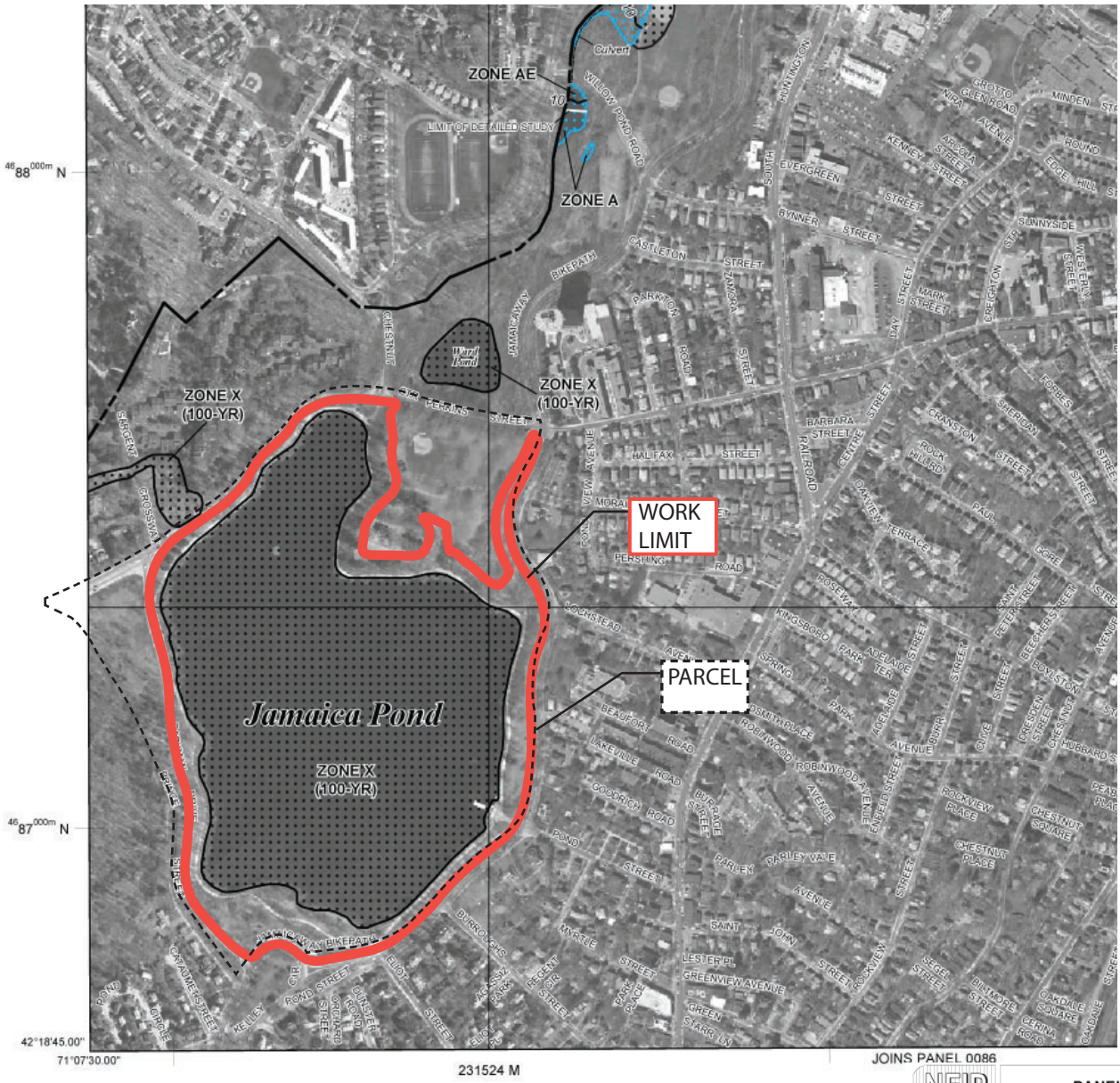
Source: USGS

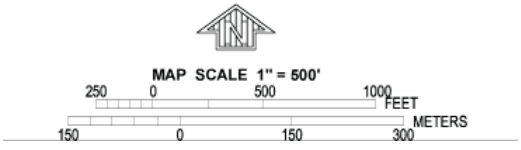
Scale: 1: 24 000

kzla
Kyle Zick Landscape Architecture, Inc
36 Bromfield Street, Suite 202, Boston, MA 02108
t: 617-451-1018 e: kzick@kylezick.com www.kylezick.com

FIRM MAP

Attachment C





NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0078G

FIRM

FLOOD INSURANCE RATE MAP

SUFFOLK COUNTY, MASSACHUSETTS

(ALL JURISDICTIONS)

PANEL 78 OF 151

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BOSTON, CITY OF	250286	0078	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
25025C0078G

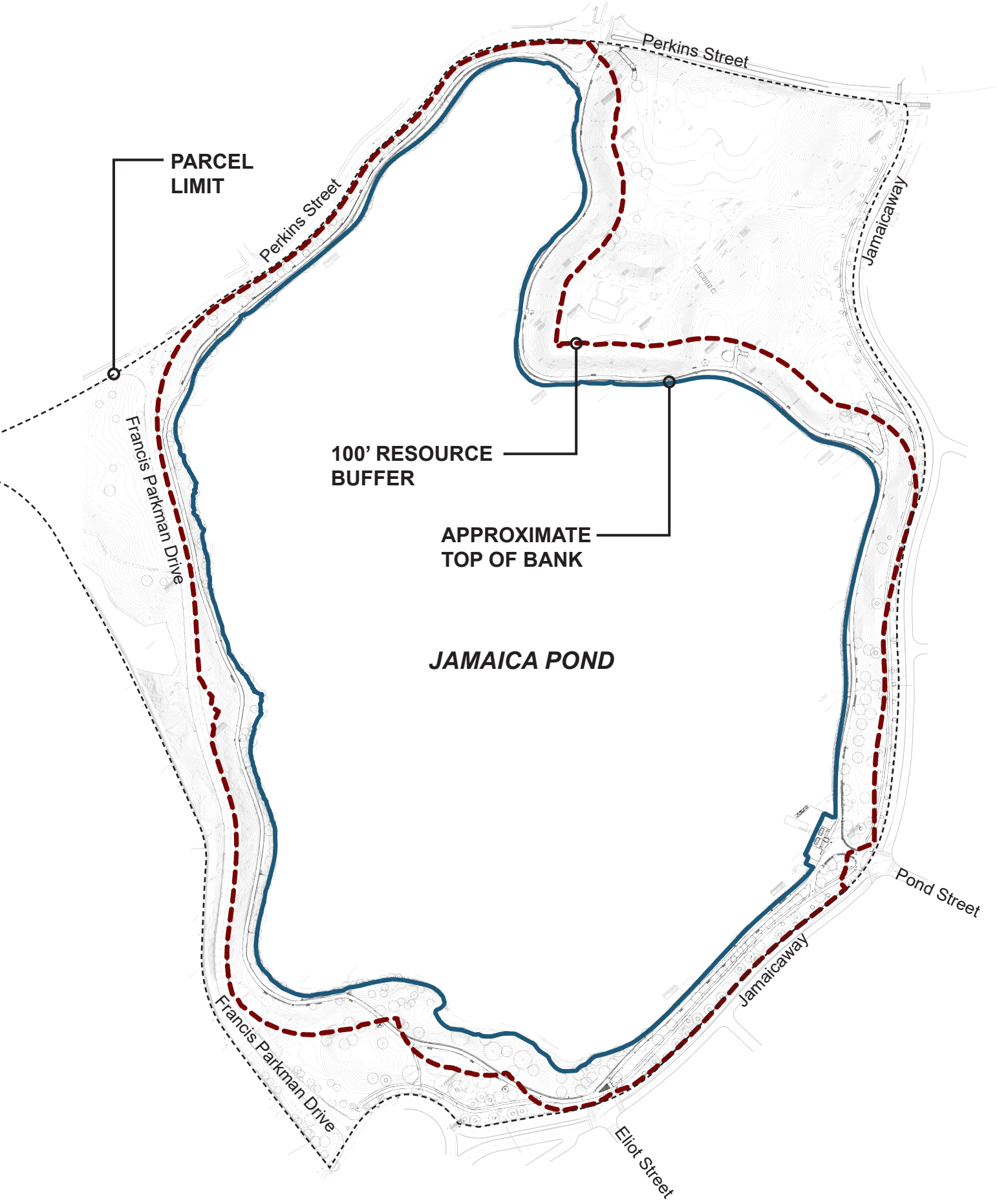
EFFECTIVE DATE
SEPTEMBER 25, 2009

Federal Emergency Management Agency

Community Panel No. 25025C0078G
Zone X : “Areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile.”

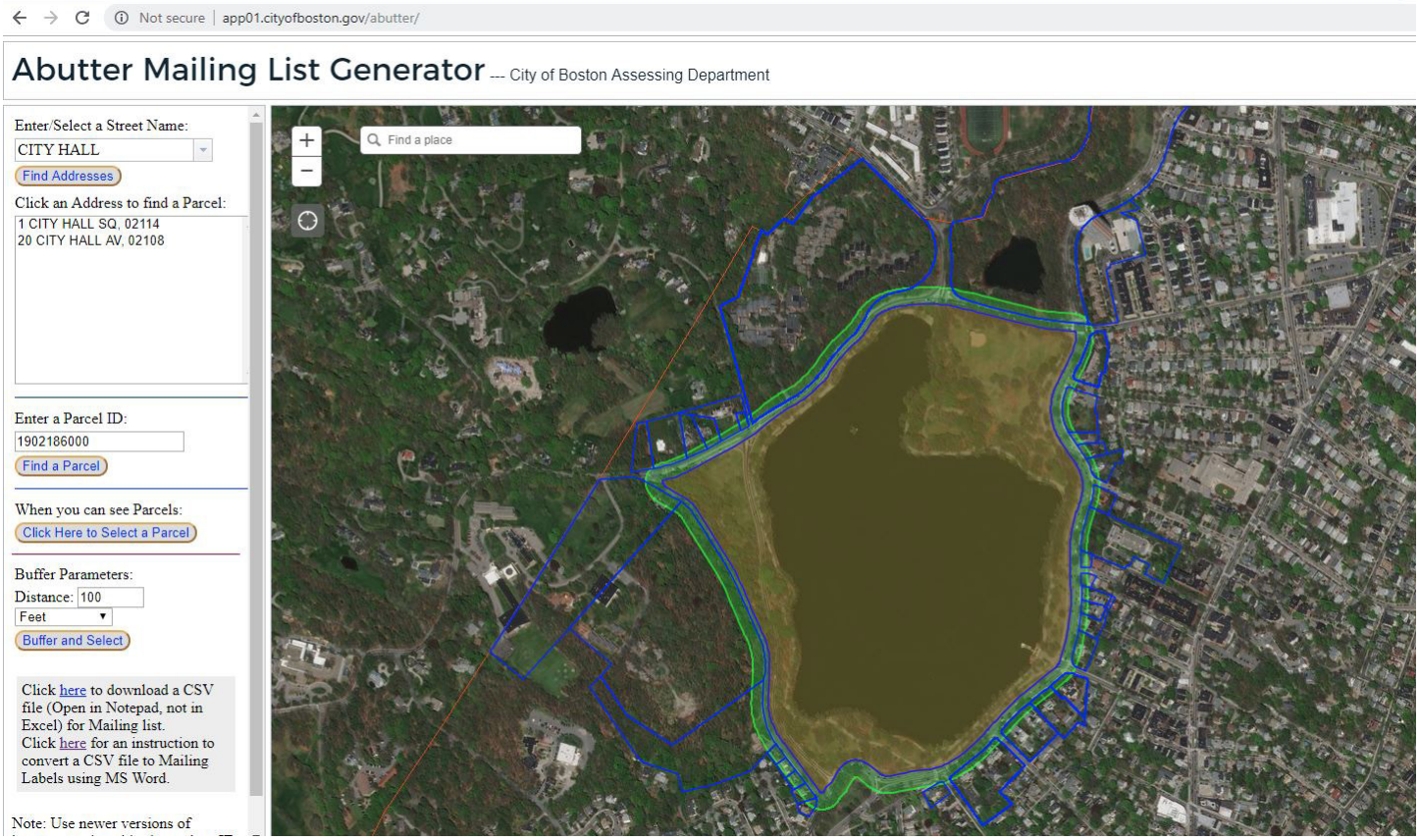
DELINEATION MAP

Attachment D



ABUTTERS' INFORMATION

Attachment E



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AFFIDAVIT OF SERVICE

Under the Wetland Protection Act

I, Kyle Zick, hereby certify under the pains and penalties of perjury that on November 7, 2018, I mailed a “Notification to Abutters” by certified mail to abutters in compliance with the second paragraph of Massachusetts General Laws, Chapter 131, Section 40, in connection with the following matter:

> A Notice of Intent filed under the Massachusetts Wetlands Protection Act by the City of Boston with the Boston Conservation Commission for property located along Jamaica Pond at Jamaica Pond Park.

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

11/07/2018

Signature Date

ABUTTER NOTIFICATION LETTERS TO BE SENT:

OWNER	ADDRESSEE	MLG_ADDRESS	MLG_CITYSTATE	MLG_ZIPC
COMMONWEALTH OF MASS		WILLOW POND RD	JAMAICA PLAIN MA	02130
JAMAICAWAY TOWER & TOWNHOUSE	JAMAICAWAY TOWER	111 PERKINS ST	JAMAICA PLAIN MA	02130
CITY OF BOSTON		217 JAMAICAWAY	JAMAICA PLAIN MA	02130
AHEARN KEVIN J TRSTS		51 ELIOT	JAMAICA PLAIN MA	02130
MANN ALAN M	C/O ALAN M MANN	100 POND ST #1	JAMAICA PLAIN MA	02130
MASS WILLIAM	C/O WILLIAM MASS	100 POND ST #4	JAMAICA PLAIN MA	02130
DAVID W CRELLIN FAMILY		100 POND ST #5	JAMAICA PLAIN MA	02130
COAKLEY ANN C		100 POND ST #6	JAMAICA PLAIN MA	02130
FRANK PAMELA	C/O PAMELA FRANK	100 POND ST #12	JAMAICA PLAIN MA	02130
WILLOWBANK CONDO TRUST		61 - 67 BURROUGHS ST	JAMAICA PLAIN MA	02130
RATLIFF AMELIE		65 BURROUGHS ST #C	JAMAICA PLAIN MA	02130
RYAN SARAH E	C/O SARAH E RYAN	67 BURROUGHS ST #D	JAMAICA PLAIN MA	02130
HELEN O BRAUN TRUST	C/O HELEN O BRAUN	71 BURROUGHS ST #E	JAMAICA PLAIN MA	02130
BAROCCI MONICA		77 BURROUGHS ST # I	JAMAICA PLAIN MA	02130
ELLIS HENRY F III	C/O HENRY F ELLIS III	79 BURROUGHS ST # K	JAMAICA [LAIN MA	02130
WILLOWBANK II CONDO	C/O PONDSIDE DEVELOPMENT CO LLC	80 POND ST	JAMAICA PLAIN MA	02130
BARBER MARYGRACE D	C/O MARYGRACE D BARBER	80 POND ST # L	JAMAICA PLAIN MA	02130
MIMS ABRA N	C/O ABRA N MIMS	76 POND STREET # P	JAMAICA PLAIN MA	02130
SIXTY POND ST CONDO TRUST	C/O JOHN SULLIVAN	215 BURROUGHS RD	BRAINTREE MA	02184
FISCHMAN LAURA B	C/O LAURA B FISCHMAN	61 BURROUGHS ST #A	JAMAICA PLAIN MA	02130
63 BURROUGHS STREET NOMINEE	C/O SUSANN C B HAMPTON TS	63 BURROUGHS ST #B	JAMAICA PLAIN MA	02130
MANTILLA JOSE		73 BURROUGHS ST #G	JAMAICA PLAIN MA	02130
RAMEY JOHN	C/O JOHN RAMEY	9 WREN ST	WEST ROXBURY MA	02130
BROOKS DEBORAH	C/O DEBORAH BROOKS	72 POND ST # M	JAMAICA PLAIN MA	02130
ZINDLER JERROLD	C/O JERROLD ZINDLER	80 POND ST # N	JAMAICA PLAIN MA	02130
PBYB HOLDINGS INC	C/O PBYB HOLDINGS INC	P O BOX 304520	ST THOMAS VI	00803
VINFEN CORPORATION	C/O VINFEN CORPORATION	424 JAMAICAWAY STREET	JAMAICA PLAIN MA	02130
JACKSON SHAWN	C/O SHAWN JACKSON	2 JAMAICAWAY CT	JAMAICA PLAIN MA	02130
470-472 JAMAICAWAY	C/O B & A CONTRACTING INC	52 GRAYFIELD AV	WEST ROXBURY MA	02132
WHITE ROBERT J	C/O ROBERT WHITE	478 JAMAICAWAY	BOSTON MA	02130
WHITE ROBERT	C/O ROBERT WHITE	478 JAMAICAWAY	BOSTON MA	02130
ROGERSON HOUSE INC		1 FLORENCE ST	BOSTON MA	02131
WHITE ROBERT	C/O ROBERT WHITE	478 JAMAICAWAY	BOSTON MA	02130
WHITE ROBERT J		478 JAMAICAWAY	JAMAICA PLAIN MA	02130
MCCARTHY REGINA	C/O REGINA MCCARTHY	100 POND ST #2	JAMAICA PLAIN MA	02130
KNIGHT HAROLD J ETAL		100 POND ST #3	JAMAICA PLAIN MA	02130
MARKOFF GARY D		100 POND ST #7	JAMAICA PLAIN MA	02130
FRACHTENBERG VIVIENNE		100 POND ST #8	JAMAICA PLAIN MA	02130
BUTWINICK BARBARA S	C/O BARBARA S BUTWINICK	100 POND ST #9	JAMAICA PLAIN MA	02130
BREDAR JOHN	C/O JOHN BREDAR	100 POND ST #10	JAMAICA PLAIN MA	02130
CARUSI DANIELA	C/O DANIELA CARUSI	100 POND ST #11	JAMAICA PLAIN MA	02130
PIGNATO WILLIAM J	C/O WILLIAM J PIGNATO	57 ELIOT ST #22	JAMAICA PLAIN MA	02130
MEHTA EVALYN		57 ELIOT ST #24	JAMAICA PLAIN MA	02130
HOLLAND PETER C	C/O PETER C HOLLAND	57 ELIOT ST # 25	JAMAICA PLAIN MA	02130
SCHNEIDER RAYMOND		55 ELIOT ST #42	JAMAICA PLAIN MA	02130
CROSBY STEPHEN	C/O STEPHEN CROSBY	60 POND STREET #1	JAMAICA PLAIN MA	02130
HANLY JAMES J	C/O JAMES J HANLY	60 POND ST #2	JAMAICA PLAIN MA	02130
CROSBY STEPHEN	C/O STEPHEN CROSBY	60 POND STREET #1	JAMAICA PLAIN MA	02130
HANLY JAMES J	C/O JAMES J HANLY	60 POND ST #2	JAMAICA PLAIN MA	02130
HANLY JAMES J	C/O JAMES J HANLY	60 POND ST #2	JAMAICA PLAIN MA	02130
CHEBOT ALAN B	C/O ALAN B CHEBOT	60 POND ST #3	JAMAICA PLAIN MA	02130
CHEBOT ALAN B	C/O ALAN B CHEBOT	60 POND ST #3	JAMAICA PLAIN MA	02130
MULLIGAN ROBERT A	C/O ROBERT A MULLIGAN	50 TOWHEE LANE	ORLEANS MA	02662
GRIFFIN BARRY	C/O BARRY GRIFFIN	55 ELIOT ST #44	JAMAICA PLAIN MA	02130
SALIMBENE FRANKLYN P	C/O FRANKLYN P SALIMBENE	51 ELIOT ST #52	JAMAICA PLAIN MA	02130
BERNS ALAN R	C/O ALAN R BERNS	60 BURROUGHS ST #31	JAMAICA PLAIN MA	02130
BIGBY JUDY ANN		60 BURROUGHS ST #35	JAMAICA PLAIN MA	02130
SIEBERT SUSAN E		55 ELIOT ST #45	JAMAICA PLAIN MA	02130
SALIMBENE FRANKLYN P		51 ELIOT ST	JAMAICA PLAIN MA	02130
POLAK JOSEPH F		60 BURROUGHS ST #32	JAMAICA PLAIN MA	02130
SOPP WILLIAM V		60 BURROUGHS ST #33	JAMAICA PLAIN MA	02130
WALKER ELIZABETH A	C/O ELIZABETH A WALKER	60 BUROUGHS ST #34	JAMAICA PLAIN MA	02130
KOSMIDIS ELPIDA ETAL		370 JAMAICAWAY	JAMAICA PLAIN MA	02130
CITY OF BOSTON		350 JAMAICAWAY ST	JAMAICA PLAIN MA	02130
GALL MATTHEW G	C/O MATTHEW G GALL	380 JAMAICAWAY ST	JAMAICA PLAIN MA	02130
HUTCHINSON KEVIN P		332 JAMAICAWAY #102	JAMAICA PLAIN MA	02130
NOWAK MICHAEL	C/O MICHAEL A NOWAK	247 HAMPSTEAD ST	METHUEN MA	01844
MANSION HOUSE		332 JAMAICAWAY	JAMAICA PLAIN MA	02130
MUEHE MICHAEL	C/O MICHAEL MUEHE	332 JAMAICAWAY #101	JAMAICA PLAIN MA	02130
FELDMAN STEVEN		332 JAMAICAWAY #106	JAMAICA PLAIN MA	02130
ERGUN ZEYNEP	C/O ZEYNEP ERGUN	332 JAMAICAWAY #201	JAMAICA PLAIN MA	02130
GUO HAO	C/O HAO GUO	10 PERKINS SQ APT #11	BOSTON MA	02130
PARETO MARCOS POMPEU	C/O MARCOS POMPEU PARETO	6 SARGENT ST	CAMBRIDGE MA	02140
NING PEI-CHEN		332 JAMAICAWAY #208	JAMAICA PLAIN MA	02130

ABUTTERS' INFORMATION Attachment E

ABUTTER NOTIFICATION LETTERS TO BE SENT:

MA YIJIE	C/O YIJIE MA	332 JAMAICAWAY #304	JAMAICA PLAIN MA	02130
BERARDUCCI VILMA		PO BOX 130315	BOSTON MA	02113
DELMA Y JARRETT REVOCABLE	C/O DELMAY JARRETT	332 JAMAICAWAY #402	JAMAICA PLAIN MA	02130
BUTANEY RANJAN		6 CYNTHIA RD	NEWTON MA	02459
WONG SIU LING	C/O SIU LING WONG	332 JAMAICAWAY #2	JAMAICA PLAIN MA	02130
332 JAMAICAWAY UNIT 3 REALTY	FARAHMAND REAL ESTATE LLC	6 GRAYSTONE CIR	WINCHESTER MA	01890
58 ELIOT STREET/108 POND	C/O HUGH PROPERTIES LLC	15 ALLERTON STREET SUITE #3	BOSTON MA	02119
CHILDRENS ORTHOPAEDIC	C/O CHILDRENS ORTHOPAEDIC SURGERY FDN, INC	332 JAMAICAWAY #4	JAMAICA PLAIN MA	02130
ZHANG HONGWEI	C/O HONGWEI ZHANG	332 JAMAICAWAY #203	JAMAICA PLAIN MA	02130
SHARIFI MAHNOOSH	C/O MAHNOOSH SHARIFI	332 JAMAICAWAY #204	JAMAICA PLAIN MA	02130
MCLEAN MARILYN	C/O MARILYN T MCLEAN	332 JAMAICAWAY #206	JAMAICA PLAIN MA	02130
JU AIHUA	C/O AIHUA JU	332 JAMAICAWAY #207	JAMAICA PLAIN MA	02130
DELANEY MIRIAM F		332 JAMAICAWAY #301	JAMAICA PLAIN MA	02130
PAPAZOVA PETYA T	C/O PETYA T PAPAZOVA	332 JAMAICAWAY #302	JAMAICA PLAIN MA	02130
SHANKAR RAVI N	C/O RAVI N SHANKAR	3 DOUGLAS RD	WESTFORD MA	01886
RAHIMI HAJIR	C/O HAJIR RAHIMI	332 JAMAICAWAY #306	JAMAICA PLAIN MA	02130
KILLORAN FRANCIS X		332 JAMAICAWAY #307	JAMAICA PLAIN MA	02130
SCAROLA MICHAEL	C/O MICHAEL SCAROLA	332 JAMAICAWAY #308	JAMAICA PLAIN MA	02130
CRAWFORD-GREY HEATHER		332 JAMAICAWAY #401	JAMAICA PLAIN MA	02130
LIN INVESTMENT LP	C/O LIN INVESTMENT LP	15550 S 5TH AV #227	PHOENIX AZ	85045
SMITH SHAWN		332 JAMAICAWAY #405	JAMAICA PLAIN MA	02130
DESANTIS-KINDER DOREEN		332 JAMAICAWAY # 406	JAMAICA PLAIN MA	02130
NING MINGMING	C/O MINGMING NING	332 JAMAICAWAY #1	JAMAICA PLAIN MA	02130
MINGUET FERNANDO BOSCH	C/O FERNANDO BOSCH MINGUET	332 JAMAICAWAY #5	JAMAICA PLAIN MA	02130
RUDIE CORAL	C/O CORAL RUDIE	137 PETERBOROUGH ST #32	BOSTON MA	02215
GELINAS ELAINE T	C/O ELAINE T GELINAS	241 PERKINS ST #H101	JAMAICA PLAIN MA	02130
VANDAM GERALD H		203 PERKINS ST #H102	JAMAICA PLAIN MA	02130
LERAT ANDREE		241 PERKINS H202	JAMAICA PLAIN MA	02130
GREENE ALAN G		209 PERKINS ST #H-401	JAMAICA PLAIN MA	02130
KOKOMO REALTY TRUST	C/O NANCY I BLUEWEISS TS	209 PERKINS ST #H-402	JAMAICA PLAIN MA	02130
ARNOLD ROBERT	C/O ROBERT ARNOLD	241 PERKINS ST #H501	JAMAICA PLAIN MA	02130
NGUYEN CHI HUU		213 PERKINS ST #H-601	JAMAICA PLAIN MA	02130
BERMAN SARA		241 PERKINS ST #H-602	JAMAICA PLAIN MA	02130
PHILIP A STYMFAL LIVING	C/O PHILIP A STYMFAL	241 PERKINS ST I-201	JAMAICA PLAIN MA	02130
FIRST CABOT LLC	C/O MARY ANN STEVENSON	130 LAGRANE ST	CHESTNUT HILL MA	02467
RENNKE HELMUT G	C/O HELMUT G RENNKE	241 PERKINS ST UNIT I-501	JAMAICA PLAIN MA	02130
HENDERSON TANYA E	C/O TANYA E HENDERSON	326 HARVARD ST	CAMBRIDGE MA	02139
MONROE DANI	C/O DANI MONROE	191 PERKINS ST UNIT I-602	BOSTON MA	02130
STUBBLEFIELD LINDA A TS	C/O LINDA STUBBLEFIELD TS	189 PERKINS ST #J-101	JAMAICA PLAIN MA	02130
BACHMAN KATHARINE E	C/O KATHARINE E BACHMAN	241 PERKINS ST J-202	JAMAICA PLAIN MA	02130
SHORT CHARLES L JR		185 PERKINS ST #J-301	JAMAICA PLAIN MA	02130
FIRST CABOT LLC	C/O MARY ANN STEVENSON	130 LAGRANGE ST	CHESTNUT HILL MA	02467
FREEMAN PHYLLIS	C/O PHILLIS S FREEMAN	241 PERKINS ST # J-501	JAMAICA PLAIN MA	02130
GLECKMAN BRENDA	C/O BRENDA GLECKMAN	241 PERKINS ST #J-502	JAMAICA PLAIN MA	02130
FREEDMAN CAROL D	C/O CAROL FREEDMAN	241 PERKINS ST #J-601	BOSTON MA	02130
GOLD BRUCE A	C/O BRUCE A GOLD	241 PERKINS ST #J-801	JAMAICA PLAIN MA	02130
THANOS ELEANOR	C/O JO-AN GLADSTONE	175 PERKINS ST #J-802	JAMAICA PLAIN MA	02130
GROSS-TORRES ROBERTA		283 PERKINS ST #B-701	JAMAICA PLAIN MA	02130
KEATING DANIEL J	C/O DANIEL J KEATING	285 PERKINS ST #B-602	JAMAICA PLAIN MA	02130
GOORIN ALLEN		241 PERKINS ST #B-501	JAMAICA PLAIN MA	02130
CITY OF BOSTON		PERKINS ST	JAMAICA PLAIN MA	02130
CABOT ESTATE CONDO TR		241 PERKINS ST	JAMAICA PLAIN MA	02130
SUDALTER ARLENE		205 PERKINS ST #H-201	JAMAICA PLAIN MA	02130
ZITTING KIRSI-MARJA	C/O KIRSI-MARJA ZITTING	207 PERKINS ST #H-301	JAMAICA PLAIN MA	02130
BAYLEY PATRICIA T	C/O PATRICIA TAGLIATELA	1621 STATE ST	NEW HAVEN CT	06511
FINKELSTEIN ALEXANDER	C/O ALEXANDER FINKELSTEIN	241 PERKINS ST #H-502	JAMAICA PLAIN MA	02130
PECKINS CHRISTOPHER S	C/O CHRISTOPHER PECKINS	241 PERKINS ST #I-101	JAMAICA PLAIN MA	02130
EAGLESON BEVERLY G		201 PERKINS ST #I-102	JAMAICA PLAIN MA	02130
PANTEKIDIS JOHN		199 PERKINS ST # I-202	JAMAICA PLAIN MA	02130
VOGEL TOBY P		241 PERKINS ST #I-301	JAMAICA PLAIN MA	02130
JACOBSON ARTHUR B ETAL		241 PERKINS ST #1-401	JAMAICA PLAIN MA	02130
NINO SUSANA VIRNA	C/O HERNAN KOPCOW	191 PERKINS ST #I 601	JAMAICA PLAIN MA	02130
MARKS MINDY	C/O MINDY MARKS	189 PERKINS ST # J-102	JAMAICA PLAIN MA	02130
BENOFF MITCHELL J	C/O MITCHELL J BENOFF	187 PERKINS ST #J-201	JAMAICA PLAIN MA	02130
DHEKNE RASIKA	C/O RASIKA DHEKNE	185 PERKINS # J-302	JAMAICA PLAIN MA	02130
BUKHMAN YEFIM		183 PERKINS ST #J-401	JAMAICA PLAIN MA	02130
BLANK HELAINE S		241 PERKINS ST #J-602	JAMAICA PLAIN MA	02130
EDELSON FAMILY REALTY TRUST	C/O RAE T EDELSON	177 PERKINS ST #J-701 #	JAMAICA PLAIN MA	02130
YOUN JENNY KIM	C/O JENNY KIM YOUN	177 PERKINS ST #J-702	JAMAICA PLAIN MA	02130
BENNETT MICHAEL I MD	C/O MICHAEL I BENNETT MD	241 PERKINS ST #B- 801	JAMAICA PLAIN MA	02130
LEVINE RICHARD E TS	C/O RICHARD E LEVINE TS	281 PERKINS ST B-802	JAMAICA PLAIN MA	02130
HERSCHBERG JUDITH		283 PERKINS ST #B-702	JAMAICA PLAIN MA	02130
WALSH CHRISTOPHER T	C/O CHRISTOPHER T WALSH HEMENWAY & BARNES LLP	75 STATE ST 16TH FL	BOSTON MA	02109
MITCHELL CHRISTINE I	C/O CHRISTINE I MITCHELL	241 PERKINS ST #B-502	JAMAICA PLAIN MA	02130
BARON JOEL H	C/O JOEL H BARON	241 PERKINS ST #B-401	JAMAICA PLAIN MA	02130

ABUTTERS' INFORMATION Attachment E

ABUTTER NOTIFICATION LETTERS TO BE SENT:

NEW ENG MERCHANTS NATL BANK	C/O HARDING & CARBONE INC	1235 NORTH LOOP WEST #205	HOUSTON TX	77008
LYONS WILLIAM C	C/O WILLIAM C. LYONS	291 PERKINS ST #B-302	JAMAICA PLAIN MA	02130
SOLER ANDREA C		293 PERKINS ST #B202	JAMAICA PLAIN MA	02130
LINK DAVID A	C/O DAVID A LINK	295 PERKINS ST #B-101	JAMAICA PLAIN MA	02130
BERGER-SWEENEY JOANNE	C/O JOANNE BERGER-SWEENEY	241 PERKINS ST #B-102	JAMAICA PLAIN MA	02130
OBRIEN JOHN	C/O JOHN OBRIEN	241 PERKINS ST #A-201	JAMAICA PLAIN MA	02130
FITZGERALD DANIEL J	C/O DANIEL J FITZGERALD	241 PERKINS ST UNIT B-402	BOSTON MA	02130
FRANCESCHINI EDI	C/O EDI FRANCESCHINI	241 PERKINS ST # B201	JAMAICA PLAIN MA	02130
KANTROVITZ SHERWIN L		297 PERKINS ST #A-101	JAMAICA PLAIN MA	02130
ROSS DEBRA A	C/O DEBRA A ROSS	241 PERKINS ST #A-102	JAMAICA PLAIN MA	02130
DANIEL J FINN TRUST		303 PERKINS ST #A-301	JAMAICA PLAIN MA	02130
MIZUNO IKUKO		305 PERKINS ST #A-402	JAMAICA PLAIN MA	02130
SCHAFF GLEN	C/O GLEN SCHAFF	307 PERKINS ST #A-501	JAMAICA PLAIN MA	02130
EIDELMAN GERALD P		307 PERKINS ST #A-502	JAMAICA PLAIN MA	02130
GREENES ROBERT A ETAL		11821 S TUZIGOOT CT	PHOENIX AZ	85044
UPTON LINDA		255 PERKINS ST #D-101	JAMAICA PLAIN MA	02130
FIREMAN ROBERT N		255 PERKINS ST #D-104	JAMAICA PLAIN MA	02130
MAURI GIACOMO	C/O GIACOMO MAURI	241 PERKINS STREET UNIT D-301	JAMAICA PLAIN MA	02130
BAYS SAMUEL D		241 PERKINS ST UN D-401	JAMAICA PLAIN MA	02130
GENSER JOAN		241 PERKINS ST #D402	JAMAICA PLAIN MA	02130
ASHTON JUDITH		241 PERKINS ST # D-501	JAMAICA PLAIN MA	02130
SHAEVEL WILLIAM H TS		255 PERKINS ST # D-502	JAMAICA PLAIN MA	02130
OSPREY REALTY TRUST	C/O CHARLES C CUNNINGHAM JR	241 PERKINS ST #D-601	JAMAICA PLAIN MA	02130
ALLEN HOWARD D TS	C/O HOWARD D ALLEN	241 PERKINS ST #D605	JAMAICA PLAIN MA	02130
LYNNE G SALZMAN TRUST 2010	C/O LYNNE G SALZMAN	241 PERKINS ST #C101	JAMAICA PLAIN MA	02130
AARONS PAMELA	C/O PAMELA AARONS	1 GROVE ISLE DR PH2	COCONUT GROVE FL	33133
DAWN B COLSIA REVOCABLE	C/O DAWN B COLSIA	241 PERKINS ST. UNIT C-202	JAMAICA PLAIN MA	02130
WEBB STEPHEN		241 PERKINS ST # C-204	BOSTON MA	02130
MORSE HERBERT E	C/O HERBERT E MORSE	241 PERKINS ST #C-205	JAMAICA PLAIN MA	02130
KINGSDALE JON	C/O JON KINGSDALE	241 PERKINS ST #C-210	JAMAICA PLAIN MA	02130
DHEKNE RASIKA	C/O RASIKA DHEKNE	241 PERKINS ST #C302	JAMAICA PLAIN MA	02130
GIBBS SANDRA KAY	C/O SANDRA KAY GIBBS	241 PERKINS ST # C-305	JAMAICA PLAIN MA	02130
HADAR GIORA	C/O GIORA HADAR	241 PERKINS ST UNIT C-306	JAMAICA PLAIN MA	02130
KASHKET SHELBY TS	C/O SHELBY KASHKET TS	275 PERKINS ST # C-403	JAMAICA PLAIN MA	02130
ROSENBLATT MALCOLM TS		275 PERKINS ST #C-405	JAMAICA PLAIN MA	02130
JONES ANN HOWARD	C/O ANN HOWARD JONES	241 PERKINS ST #C-406	JAMAICA PLAIN MA	02130
PORTER STEPHEN	C/O P KELLOGG & S PORTER	241 PERKINS ST C-505	BOSTON MA	02130
MILLER DAVID		241 PERKINS ST 3C-601	JAMAICA PLAIN MA	02130
HENNIG SUZANNE		241 PERKINS ST #E-101	JAMAICA PLAIN MA	02130
LEVIN SUSAN R	C/O SUSAN LEVIN	241 PERKINS ST #E-102	JAMAICA PLAIN MA	02130
LEHR DONNA H	C/O DONNA H LEHR	241 PERKINS ST #E-103	JAMAICA PLAIN MA	02130
KITCHEN NICHOLAS		217 PERKINS ST #E-202	JAMAICA PLAIN MA	02130
EL-CHEMALI ZEINA		241 PERKINS ST #E-203	JAMAICA PLAIN MA	02130
COPE RUTH S		241 PERKINS ST #E-204	JAMAICA PLAIN MA	02130
YANG EDWARD	C/O EDWARD YANG	241 PERKINS ST #E-303	JAMAICA PLAIN MA	02130
KRINSKY LESLIE		241 PERKINS ST #E-401	JAMAICA PLAIN MA	02130
FREILICH ANDREW		241 PERKINS ST # E404	JAMAICA PLAIN MA	02130
DEMAS VASILIKI	C/O VASILIKI DEMAS	241 PERKINS ST #E-504	JAMAICA PLAIN MA	02130
CAMILLERI JOHN C	C/O JOHN C CAMILLERI	241 PERKINS ST #A-202	JAMAICA PLAIN MA	02130
PORTNOY SYLVIA TS		241 PERKINS ST #A-302	JAMAICA PLAIN MA	02130
FREELEY ANN MARIE		305 PERKINS ST #A-401	JAMAICA PLAIN MA	02130
BERNSTEIN DAVID P		241 PERKINS ST #A-602	JAMAICA PLAIN MA	02130
DIANE R SCHODLATZ 2014	C/O DIANE R SCHODLATZ	241 PERKINS ST #D-201	JAMAICA PLAIN MA	02130
LOCHIATTO CONSTANCE BE	C/O CONSTANCE LOCHIATTO	255 PERKINS ST #D-204	JAMAICA PLAIN MA	02130
AL MUTABAGANI OSAMA M H	C/O HUGH STARKEY	50 CONGRESS SUITE 925	BOSTON MA	02109
MARKS EMILIE	C/O EMILIE MARKS	255 PERKINS ST #D-304	JAMAICA PLAIN MA	02130
DROOKER DAVID S TS	C/O EMILIE DROOKER	241 PERKINS ST #404D	BOSTON MA	02130
AXELROD BARUCH		241 PERKINS ST #D-405	JAMAICA PLAIN MA	02130
LAWS EDWARD JR	C/O EDWARD LAWS JR	241 PERKINS ST #D-503	JAMAICA PLAIN MA	02130
WEYERHAEUSER ROBERT M TS		332 MINNESOTA ST #2100	ST PAUL MN	55101
BLACKBURN SUSAN KELLY	C/O SUSAN KELLY BLACKBURN	241 PERKINS ST #D-602	JAMAICA PLAIN MA	02130
LITCHTENSTEIN NORMAN S	C/O NORMAN S LICHTENSTEIN	255 PERKINS ST #D604	JAMAICA PLAIN MA	02130
CLINE LUCILLE G		241 PERKINS ST	JAMAICA PLAIN MA	02130
BLOCK MOLLYE S	C/O FELDBERY FMY OFFICE/CINDY VALLEY	PO BOX 9195	FRAMINGHAM MA	01701
SCHWARTZ JANICE H		275 PERKINS ST #C-201	JAMAICA PLAIN MA	02130
LEVEY MITCHELL	C/O MITCHELL LEVEY	241 PERKINS #C-203	JAMAICA PLAIN MA	02130
HYMAN ANDREW A	C/O ANDREW A HYMAN	241 PERKINS ST #C-206	JAMAICA PLAIN MA	02130
BOINVEST SA	C/O PATRICK RILEY	117 KENDRICK ST STE 800	NEEDHAM MA	02494
MARTIN GORDON A JR	C/O GORDON A MARTIN JR	241 PERKINS ST #C-303	JAMAICA PLAIN MA	02130
BONIN ROBERT M	C/O ROBERT M BONIN	241 PERKINS ST	JAMAICA PLAIN MA	02130
MICHELSON JOSEPH S	C/O JOSEPH S MICHELSON	241 PERKINS ST #C-401	JAMAICA PLAIN MA	02130
RASKY LAWRENCE B	C/O LAWRENCE B RASKY	275 PERKINS ST UNIT C-402	JAMAICA PLAIN MA	02130
FARBER DAVID		241 PERKINS ST #C-404	JAMAICA PLAIN MA	02130
RINGVALD MIGUEL	C/O MIGUEL RINGVALD	275 PERKINS ST #C-407	JAMAICA PLAIN MA	02130
KATHERINE S TALLMAN TRUST	C/O KATHERINE S TALLMAN	241 PERKINS ST #C-504	JAMAICA PLAIN MA	02130

ABUTTERS' INFORMATION Attachment E

ABUTTER NOTIFICATION LETTERS TO BE SENT:

KETTELL JOHN D TS	C/O JOHN D KETTELL TS	241 PERKINS ST #C-603	JAMAICA PLAIN MA	02130
DUNKLESS JACK		241 PERKINS ST #C-605	JAMAICA PLAIN MA	02130
GLADYSHEVA INNA PAVLOVNA	C/O INNA PAVLOVNA GLADYSHEVA	215 PERKINS ST #E-104	JAMAICA PLAIN MA	02130
NUNEZ LOIS A		217 PERKINS ST #E-201	JAMAICA PLAIN MA	02130
RISSMAN BARBARA		219 PERKINS ST #E-301	JAMAICA PLAIN MA	02130
STEARNS ROBERT		241 PERKINS ST #E302	JAMAICA PLAIN MA	02130
FIRESTONE JACOLYN TS		241 PERKINS ST #E-304	JAMAICA PLAIN MA	02130
ASKIN SANDY X	C/O SANDY X ASKIN	241 PERKINS ST #E402	JAMAICA PLAIN MA	02130
LAI MICHELLE	C/O MICHELLE LAI	241 PERKINS ST #E-403	JAMAICA PLAIN MA	02130
CASSIDY MICHAEL P	C/O PAULA CASSIDY	223 PERKINS ST #E 501	JAMAICA PLAIN MA	02130
NUTTING PATRICIA R	C/O PATRICIA R NUTTING	223 PERKINS ST #E502	JAMAICA PLAIN MA	02130
LAPETS OKSANA	C/O OKSANA LAPETS	85 BRAINERD RD #2	ALLSTON MA	02134
GHAYUR-MOHSINI REALTY TRUST	C/O TARIQ GHAYUR	241 PERKINS ST #F-102	JAMAICA PLAIN MA	02130
REA PATRICIA A		241 PERKINS ST #F103	JAMAICA PLAIN MA	02130
HASIDA KORPER TRUST	C/O MALKA RAISZ	241 PERKINS ST #F-202	JAMAICA PLAIN MA	02130
RAWAL KADAMBARI	C/O KADAMBARI RAWAL	225 PERKINS ST #F-101	JAMAICA PLAIN MA	02130
LEVEY DREW	C/O DREW LEVEY	241 PERKINS ST #F-104	JAMAICA PLAIN MA	02130
SHUMAN ELIZABETH A	C/O ELIZABETH A SHUMAN	241 PERKINS ST #F-201	JAMAICA PLAIN MA	02130
KREINDEL EDUARDO D	C/O EDUARDO D KREINDEL	229 PERKINS ST #F-302	JAMAICA PLAIN MA	02130
DARVISH BIJAN		331B PERKINS ST	JAMAICA PLAIN MA	02130
HELENIC COLLEGE INC		262 PRINCE	JAMAICA PLAIN MA	02130
PACINI STEFANO A		65 OLD ENGLAND RD &	NEWTON MA	02467
KOTSIKONAS ANASTASIOS		241 PERKINS ST #F402	BOSTON MA	02130
SALEM REALTY VENTURES	C/O ALEXANDER A ARGIROS	700 PROVIDENCE HW	NORWOOD MA	02062
BODUR MURAT		241 PERKINS ST #F-403	JAMAICA PLAIN MA	02130
SINGH JYOTI	C/O JYOTI SINGH	241 PERKINS ST #F-504	JAMAICA PLAIN MA	02130
WEISTROP JONATHAN S	C/O JONATHAN S WEISTROP	241 PERKINS ST #G-101	JAMAICA PLAIN MA	02130
HELLENIC COLLEGE INC A MASS	C/O HELLENIC COLLEGE INC	156 PRINCE ST	JAMAICA PLAIN MA	02130
IDSON TODD L	C/O TODD L IDSON	331 A PERKINS ST	JAMAICA PLAIN MA	02130
GLASSMAN LAURIE		140 PRINCE ST	JAMAICA PLAIN MA	02130
MURRAY PAULINE A		1 ARBORWAY	JAMAICA PLAIN MA	02130
YOUNG OWEN C	C/O OWEN C YOUNG	130 PRINCE ST	JAMAICA PLAIN MA	02130
LEVINE ELAINE P		241 PERKINS ST #F-204	JAMAICA PLAIN MA	02130
LIMONIC ISAAC A		229 PERKINS ST #F-301	JAMAICA PLAIN MA	02130
PACINI ANGELA F		65 OLD ENGLAND RD &	NEWTON MA	02467
CARBAJAL ANJELICA	C/O ANJELICA CARBAJAL	233 PERKINS ST F-401	JAMAICA PLAIN MA	02130
MALKIN MACCABIT	C/O MACCABIT MALKIN	233 PERKINS ST #F-404	JAMAICA PLAIN MA	02130
POLITCH JOSEPH		241 PERKINS ST #F-501	JAMAICA PLAIN MA	02130
RIVERA RAMON A	C/O RAMON A RIVERA	241 PERKINS ST #F-502	JAMAICA PLAIN MA	02130
KITCHEN NICHOLAS J		241 PERKINS ST #503	JAMAICA PLAIN MA	02130
MARINO SERGIO		241 PERKINS ST #G-102	JAMAICA PLAIN MA	02130
HALL MARTIN A	C/O MARTIN A HALL	329 PERKINS ST	JAMAICA PLAIN MA	02130
JAMES G BOULOGIANE 2013	C/O JAMES BOULOGIANE	333 PERKINS ST	JAMAICA PLAIN MA	02130
HALL MARTIN A	C/O MARTIN A HALL	329 PERKINS ST	JAMAICA PLAIN MA	02130
GREEK ARCH HOLY CROSS		222 PRINCE	JAMAICA PLAIN MA	02130
DICENZO GERALD LEIGH		120 PRINCE ST	JAMAICA PLAIN MA	02130
ADCOCK LORI H	C/O LORI H. ADCOCK TRUSTEE	116 PRINCE ST	JAMAICA PLAIN MA	02130
KAUFMAN ALLAN J	C/O ALLAN KAUFMAN	57 ELIOT ST #21	JAMAICA PLAIN MA	02130
PIGNATO WILLIAM	C/O WILLIAM PIGNATO	57 ELIOT ST #23	JAMAICA PLAIN MA	02130
PEDRAM PARVA REVOCABLE TRUST	PEDRAM PARVA	57 ELIOT ST #26	JAMAICA PLAIN MA	02130
SPRINGS DONNA L		55 ELIOT ST #41	JAMAICA PLAIN MA	02130
CHEBOT ALAN B	C/O ALAN B CHEBOT	60 POND ST #3	JAMAICA PLAIN MA	02130
CROSBY STEPHEN	C/O STEPHEN CROSBY	60 POND STREET # 1	JAMAICA PLAIN MA	02130
CROSBY STEPHEN	C/O STEPHEN CROSBY	60 POND STREET # 1	JAMAICA PLAIN MA	02130
BUTRIMOWICZ VICTOR M		414 JAMAICAWAY	JAMAICA PLAIN MA	02130
HANLY JAMES J	C/O JAMES J HANLY	60 POND ST #2	JAMAICA PLAIN MA	02130
CHEBOT ALAN B	C/O ALAN B CHEBOT	60 POND ST #3	JAMAICA PLAIN MA	02130
BOBROFF CAREN K	C/O CAREN K BOBROFF	195 PERKINS ST #I-402	JAMAICA PLAIN MA	02130
SHPIGEL NATALIE	C/O NATALIE SHPIGEL	227 PERKINS ST #F-203	BOSTON MA	02130

ABUTTERS' INFORMATION Attachment E

kzla

Boston Conservation Commission
Notification of Abutters Under the Massachusetts Wetland Protection Act

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

The Boston Conservation Commission will hold a public hearing for a Notice of Intent for the City of Boston, 1 City Hall Square, Boston MA. The purpose of the hearing is to discuss Improvements to Jamaica Pond Park Pathways and Entrances – Phase 2, which includes rehabilitating pathways to a consistent width, surfacing eroded social trails and access drives, decompacting soil and restoring pathways edges, restoring vegetation, and various other landscape and stormwater improvements to Jamaica Pond Park. Affected resource areas are the inland bank and buffer zone for Jamaica Pond.

The project is located around Jamaica Pond and is subject to protection under the Wetlands Protection Act MGL c.131§40 and Boston Wetlands Protection & Conservation Ordinance. Hearing will be held November 21, 2018 at 6:00pm in the Boston City Hall, 1 City Hall Square, Piemonte Room.

For more information, contact Lauren Bryant at the Boston Parks and Recreation Department at 617-635-4505, or the City of Boston Conservation Commission at (617) 635-3850.

NOTE: Notice of the public hearing will be published at least five (5) days in advance by the City of Boston Conservation Department on their website and posted not less than 48 hours in advance at Boston City Hall. Visit www.boston.gov/public-notices to confirm hearing time and location.

Kyle Zick Landscape Architecture, Inc.
36 Bromfield Street, Suite 202, Boston, MA 02108
t: 617-451-1018 e: kzick@kylezick.com www.kylezick.com

November 07, 2018
City of Boston, MA

Improvements to Jamaica Pond Park
Pathways and Perimeter - Phase 2

Notice of Intent

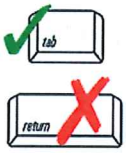
PLANS & DETAILS

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.

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[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.

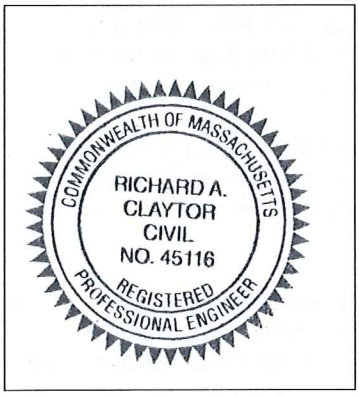
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



11-6-18

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): Cobblestone Spillway retrofits

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.

DRAINAGE ANALYSIS AND STORMWATER MANAGEMENT REPORT

Jamaica Pond Park Pathways & Entrances

Phase 2

Boston, Massachusetts

Prepared for:

BOSTON PARKS AND RECREATION

Prepared by:

Horsley Witten Group, Inc.

November 2018

Horsley Witten Group
Sustainable Environmental Solutions

TABLE OF CONTENTS

APPENDICES

1.0 STORMWATER AND DRAINAGE OVERVIEW

This report provides a summary of the recommended stormwater management approach for the proposed path improvements at Jamaica Pond Park. The recommendations are to be incorporated into the design plans entitled, "Jamaica Pond Park Pathways & Entrances Phase 2," dated November 7, 2018. This report describes the existing conditions and proposed stormwater improvements to be implemented to manage stormwater during and after construction.

The stormwater treatment system for the site improvements have been designed in accordance with the requirements of the Massachusetts Stormwater Standards ("MASWS" or "the Standards"). The proposed site improvements are a redevelopment of the existing paved pathways and stabilization of existing compacted-earth social paths. Therefore, the project has been designed to comply with the Standards by providing stormwater treatment to the maximum extent practicable. This report also provides guidance for the proposed new and retrofitted stormwater treatment practices so that they are maintained and operate appropriately during construction. A post-construction operation and maintenance plan is also provided to ensure that the stormwater facilities function as intended in the long-term.

1.1 Existing Conditions

1.1.1 Description

Jamaica Pond Park, part of Boston's Emerald Necklace, is an historic park centered around a 68-acre glacial kettle hole pond with recreational amenities designed in the late 19th century by Frederick Law Olmsted. These amenities include the Boathouse and Bandstand, and 1.5-mile bituminous asphalt recreational path surrounding the pond. It is the source of the Muddy River, which drains into the lower Charles River. The pathway, whose width varies from 8- to 12-feet, has degraded over time from use and is in relatively poor condition. The existing project areas totals approximately 5.75 acres (3.75 acres disturbed +/-) and includes formal paved pathways, informal unpaved pathways, the Boathouse and Bandstand, associated landscape and existing drainage infrastructure.

The pathway features 11 catch basins and approximately 31 mortared-cobblestone spillways along its inner perimeter to provide controlled stormwater outlets for runoff from the path to the pond. Over the years the path's grass shoulders have become a degraded, compacted dirt path, due to overuse from runners preferring to not run on the paved surface. This dirt path inadvertently conveys stormwater during rain events and the cobblestone spillways no longer function as they were intended. The path runoff by-passes many of the cobblestone spillways, running along the side of the spillway and causing erosion along the shoreline bank. The bare soil along the path also creates a sediment source, which discharges into the pond.

Many of the catch basins along the path are clogged or contain large amounts of sediment and debris that inhibit their ability to properly manage the stormwater.

In addition to the asphalt path directly bordering the pond, several upland paved and unpaved pathways within the park along with the Department of Conservation and Recreation (DCR) mutli-use path exist bordering the park. Some of these pathways drain to poorly-stabilized surfaces that experience erosion and contribute to the degraded condition.

Lastly, the two historic buildings that comprise the Boathouse facility currently send their rooftop runoff, via roof downspouts, directly to the pond. The hardscape plaza immediately adjacent to the Boathouse also drains directly to the pond via a closed pipe system.

It is important to note that all of the stormwater runoff within the project area is managed locally on site and is not connected to the DCR drainage network within the abutting roads or the Boston Water & Sewer drainage network.

1.1.2 Soils

According to the USDA Natural Resources Conservation Service's Soil Survey, the site comprises three soil types: Hinckley loamy sand (245C), Merrimac fine sandy loam (254B), and Newport silt loam (325D). Hinkley loam sand and Merrimac fine sandy loam are characterized as Hydrologic Soil Group C, and Newport silt loam is characterized as Hydrologic Soil Group B.

Hinckley loamy sand and Merrimac fine sandy loam are located at the northwest, north, east, and south of the pond; Newport silt loam is located along the southwest shore of the pond – See Appendix A. An on-site soil evaluation has not been performed at the site but will be conducted prior to construction to confirm the elevation of seasonal high groundwater. Estimated seasonal high groundwater (ESHGW) is currently assumed to be at elevation 57.80 +/-, based upon the approximate elevation of the pond.

1.1.3 FEMA Floodzone Designation

The FEMA Flood Insurance Rate Map (Community Panel No. 25025C0078G, dated September 25, 2009) identifies Jamaica Pond itself as falling within Zone X, "*Areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile.*"

1.1.4 Drainage

The project will include re-surfacing the existing asphalt recreational path surrounding the entire pond and repairing associated existing drainage infrastructure. Much of the work to be carried out as part of this project is within the 100' wetland buffer to Jamaica Pond.

Cobblestone Spillways There are approximately 31 existing cobblestone spillways immediately adjacent to the existing asphalt recreational path surrounding the pond that are generally in average to poor condition. These drainage flumes were designed to convey stormwater runoff originating from the bituminous asphalt pathways into the pond and prevent erosion and sediment transport and slope failure. Over many decades, partially as a result of compaction from runners that altered the localized drainage characteristics, these flumes are no longer the primary inflow and discharge points to convey stormwater from the path to the pond. Stormwater now travels primarily beside the asphalt path, carrying sediment and other debris,

and circumventing the existing, non-historic cobblestone spillways. The largest of these drainage areas is approximately 1,700 square feet (sf) of impervious cover and the smallest is approximately 500 sf. The average drainage area is 1,200 sf. Their drainage catchments are almost exclusively impervious.

Recharge Catch Basins There are five catch basins (assumed to be recharging basins) around the west and southwest sides of the pond, which receive primarily pathway runoff. The drainage area for the northernmost pair comprises 5,050 sf of pavement; the middle set comprises 800 sf. The last recharging catch basin, at the southwest corner of the pond, consists of 2,550 sf of impervious pathway drainage.

The project area had been divided into 15 subcatchments as described below:

- DA1 is centered on 400-foot-long portion of the asphalt pathway along the northwest edge of the pond that currently sheet flows off the pavement directly to the pond. The formal paved path itself is about eight feet wide at this location, and the inner shoulder consists of a two- to three-foot-wide strip of bare, highly compacted earth. The up-gradient slope is vegetated and stable, while the down-gradient slope is stabilized with granite blocks and features several clusters of trees along the water's edge. The catchment area is 16,185 sf, of which 4,220 sf is paved.
- DA2 is centered on a 500-foot segment of paved pathway that descends toward the pond from near the entrance to the park at Jamaica Way and Moraine Street. The asphalt is about twelve feet wide, and features a rolled bituminous berm, in average condition, along the downgradient (west) edge of the lower 140-feet of this path. There is also a 110-foot, 10-foot-wide gravel path which connects up to the shared-use DCR path along Jamaica Way. The sides of the path within this catchment consist of well-stabilized grass and vegetation with many large trees; of this drainage area's 61,970 sf, 7,195 sf are paved or compacted earth pathways.
- DA2a features a 140 linear-foot segment of eleven-foot-wide bituminous asphalt which leads to a set of stairs that descends to the pond. The stairs have a paved cobblestone spillway running along the south edge that is intended to convey stormwater but does not appear to be functioning as intended. There is an informal runner's shortcut near the stairs which currently consists of non-vegetated, unstabilized, compacted earth that has become an unintentional stormwater conveyance and source of sediment. Of the 6,570-square-foot drainage area, 1,375 sf are paved, with the remainder being heavily wooded.
- DA3 centers upon an 8-foot-wide section of asphalt pathway beginning at a high point near Lochstead Avenue, and running 850 linear feet along Jamaica Way to the entrance area to the Boathouse at Pond Street. The pavement itself is in good condition, but both edges are typified by sparsely-established grass and bare earth, which results in significant erosion and sediment transport. There are several large patches and linear piles of sediment readily apparent along most of this segment's length, culminating in a very large pile of sediment at the Pond Street entrance. Of this catchment's 16,710 sf, 7,310 sf are paved; the remainder is average-density grass and a handful of large trees.

- DA4 consists of the rooftops of the Boathouse and shelter buildings that pitch inward toward the hardscape plaza, and a portion of the plaza itself that drains inward, away from the pond. This catchment, of about 1,825 sf, is entirely impervious and is captured in gutters that discharge to downspout leaders that lead to one or more outfalls below the plaza, whose precise size and location are unknown.

1.2 Proposed Improvements

The primary purpose of this project is to improve recreational opportunities, accessibility, and to stabilize and formalize existing access ways and paths. As indicated on the plans, some of the dirt pathways are proposed to be formalized while others are revegetated. The majority of work to be performed will include re-surfacing and minor re-grading of the existing pond-side bituminous asphalt path. In some areas, impervious bituminous asphalt is being proposed in locations, which are currently either dirt or stone dust pathways. This work is being proposed to stabilize the compacted bare earth surface and eroded stone dust conditions that currently exists, and contribute to sediment accumulation in existing drainage structures and create and create an unstable walking surface for park users. This improvement will reduce the likelihood of future disturbance of vegetated areas, and will eliminate these informal pathways as sediment sources.

The proposed stormwater management improvements, as part of this work, will include the following three elements as the foundation of the approach:

1. Restore and enhance historic landscape and vegetated buffer around the pond, especially in the area between the path and the water's edge. This will also include the removal/management of invasive species within the project area.
2. Retrofit and enhance the existing stormwater infrastructure such as repairing the cobblestone spillways and providing additional recharge catch basins to reduce erosion and sedimentation as well as disconnect runoff from impervious cover and promote groundwater recharge. This program will also include filtration catch basin inserts to provide pre-treatment and help reduce TSS loading to the pond. See Figure 1
3. Construct three new stormwater best management practices to treat runoff from impervious areas and provide groundwater recharge. See Figure 1

In areas where pavement is being added, new recharging catch basins will be provided to capture and infiltrate the first inch of runoff.

1.2.1 Buffer Restoration

Targeted vegetative buffer enhancement and restoration will take place at several key areas around the pond, as indicated in the plan set. This will include seeding and /or the installation of groundcover, shrubs and trees.

The path, for much of its extent, is accompanied by unstabilized, un-vegetated, highly compacted soil immediately adjacent to the path. These areas, created by decades of use by

runners, vary in width from two to five feet, and act very much the same as a standard impervious surface, allowing very little runoff to infiltrate. These areas feature the added disadvantage of also contributing to the sediment pollution sent to the pond. As part of the re-grading and re-surfacing of the asphalt pathway, these compacted earth areas will be un-compacted and vegetated to facilitate greater infiltration capacity and reduce the erosion and sedimentation that currently takes place.

1.2.2 Drainage Retrofits

As part of the path improvements, the cobblestone spillways will be repaired and re-graded to ensure that all stormwater runoff coming from the path is directed to them. This will help reduce the risk of erosion and degradation of pond-side slopes and allow these areas to re-establish the vegetated buffer described above. Restoring the function of these existing, non-historic drainage structures will not only improve the aesthetic value of the pathway, but will also reduce the sediment discharge to the pond.

In addition to restoring the drainage spillways to their original condition, the project proposes to retrofit them with structural enhancements that will help improve the water quality prior to its discharge to the pond. This includes the installation of grated, perforated inlet structures immediately located at the inflow low point that will contain a filtering inlet protection insert that can be conveniently cleaned periodically by park maintenance staff. This arrangement will provide an opportunity for sand and gravel, and trash and organic debris to be captured before reaching the pond as well as provide additional infiltration and recharge during small rain events.

Two additional recharge basins are also proposed as part of the pathway improvements. One at the “pond stairs” (DA2a) to intercept and infiltrate runoff prior to the stairs and the second is located at the paved entrance to the Boathouse area (DA3) to prevent runoff from the existing DCR multi-use path draining onto the newly restored plaza. Both recharge basins are sized to manage up to the 25-year storm event.

Along the pathway at the western and southwestern edges of the pond are five recharging catch basins—two pairs and one stand-alone—which currently receive runoff from the pathway and also the path-side runner’s lane. These catch basins will be cleaned of debris and sediment, and the rim elevations re-set to ensure positive drainage. These structures will then be retrofitted with filtering inlet protection inserts that can be conveniently cleaned periodically by park maintenance staff. Preventing sediment build-up and the accumulation of organic material is critical to ensure that these systems’ infiltration capacity is maintained at the rate at which they were designed.

1.2.3 Green Infrastructure (GI)

Three new GI stormwater areas are being proposed as part of this project: a bioswale within DA1, a sand filter within DA2, and a pair of stormwater planters at the Boathouse (DA3).

Bioswale

DA1 includes a portion of bituminous asphalt pathway that will be re-graded and re-surfaced to direct the runoff from 4,220 sf of impervious surface to a proposed inlet flume. This inlet flume will convey runoff to a grass sediment forebay. The forebay will include a coir log check dam, over which pre-treated runoff will travel into a bioswale with bottom area of 130 sf, planted with native grasses. The outlet structure will be located to allow for a controlled overflow during larger rain events. The outfall will be stabilized to ensure that no scour or erosion occurs down-gradient.

The proposed bioswale has been sized to almost 75% of the WQv for the contributing drainage area. The system will have a bio filter depth of 24" with a maximum ponding depth of 3". The system will include a forebay to reduce sediment and debris inflow to the infiltrating area of the practice. The design parameters for this bioswale are provided in the table below:

Table 1: Bioswale Design Parameters

Impervious Area= 1.962 sf	Required	Design	% Provided
WQv (cf)	350	260	74%
Sediment Forebay (cf)**	35	12	34%
Minimum ESHWT Separation (ft)	2'	>2'	NA

Sand Filter

DA2 is centered upon 7,195 sf of pavement that will be re-graded and re-surfaced to direct the runoff an inlet flume near the bottom of the hill where this segment of pathway meets the pond side pathway. The stormwater that flows into the inlet flume will be directed to a forebay of 175 sf, constructed of reinforced turf. Runoff will be contained behind an earth-berm check dam, over which the pre-treated stormwater will discharge into a shallow sand filter which will be maintained as mowed grass. This sand filter is approximately 475 sf and has a ponding depth of 3"; after reaching this depth, stormwater will flow through a new 24" outlet structure that will connect to the existing catch basin just up-gradient of the practice, which then flows into the pond. Very large events that overwhelm the system and aren't able to be conveyed through the outlet structure may safely exit the BMP through the overflow spillway, which directs flow to the paved path and toward the retrofitted cobblestone spillways. This sand filter is designed to treat one inch of runoff from the impervious area of DA2.

The proposed sand filter has been sized to greater than 100% of the WQv for the contributing drainage area. The system will have a filter depth of 18" and a 4" layer of top soil above it for vegetation. Maximum ponding depth of the infiltration practice is 3". The system will include a sediment forebay, with 4" ponding depth, to handle 10% of the WQv. The design parameters are provided in the table below:

Table 2: Sand Filter Design Parameters

Impervious Area= 5,960 sf	Required	Design	% Provided

WQv (cf)	600	1800	300%
Sediment Forebay (cf)**	60	58	96%
Minimum ESHWT Separation (ft)	2’	>3’	NA

Stormwater (SW) Planters

DA4 consists of the inward-facing roof portions of the Bandstand and Boathouse buildings, which total 725 sf of impervious area, and the portion of the plaza from the top of the stairs to the back edge of the buildings. Rain that falls on this portion of the roof will flow into the existing gutters (which will be retrofitted), to trench drains which will direct runoff into the redesigned planters. Surface runoff from most of the plaza will also enter these trench drains. The existing landscape planters will be converted into stormwater planters, designed to accept, treat, and infiltrate stormwater runoff. Pre-treatment is not provided as it assumed the roof runoff will be relatively clean low sediment content. The practice will have a maximum ponding depth of 3”, with overflow from larger rain events directed through outlet structures and back to the roof downspout discharge.

The proposed stormwater planters provide far greater than the WQv for the contributing roof runoff. The planters will have a bio filter depth of 18” with a maximum ponding depth of 3”. The practice does not include a sediment forebay. The design parameters for this practice are provided in the table below:

Table 3: Stormwater Planters Design Parameters

Impervious Area= 735 sf	Required	Design	% Provided
WQv (cf)	175	520	297%
Sediment Forebay (cf)**	18	0	0%
Minimum ESHWT Separation (ft)	2’	>3’	NA

Figure 1 – Stormwater Locations

1.3 Drainage Design Methodology and Analysis

The stormwater management system for the proposed path improvements was designed in accordance with the MASWS and the applicable criteria within the City's Wetland Protection Bylaw. The proposed system will convey runoff to stormwater retrofits and new GI stormwater practices as described above. This will result in an improvement over the existing conditions, where stormwater currently discharges untreated to Jamaica Pond.

The stormwater management system has been designed to accomplish the following major objectives:

- To capture and treat to the maximum extent practicable stormwater runoff from the proposed improved impervious surfaces, where practicable, in order to maintain or improve runoff water quality when compared to existing conditions.
- Buffer restoration along Jamaica Pond through drainage improvements, designated running path, and invasive species management.

These objectives are met through the use of the following stormwater management measures:

- Sand filter sized to treat 1.0-inch of runoff from the proposed impervious path The sand filter is designed to filter runoff sediment and facilitate pollutant uptake through filtration through the sand media with secondary uptake by the vegetative cover.
- Bioswale sized to treat .74-inches of runoff from the impervious path. The bioswale is designed to filter runoff sediment and facilitate pollutant uptake through filtration through the sand media with secondary uptake by the vegetative cover.
- Stormwater planters to capture, treat, and infiltrate the Boathouse roof runoff.
- Recharge basins to capture and infiltrate stormwater runoff
- Retrofitted cobblestone spillways to collect and remove sediment from path runoff.
- Buffer restoration to stabilize the site, minimize erosion and control sediment.

In order to accomplish the proposed stormwater management goals, the proposed redevelopment maintains the existing drainage patterns with minor modifications to improve drainage to the cobblestone spillways.

The following general methodology was used to design the proposed stormwater retrofit and any associated drainage piping network. See Appendix G for calculations.

1. Determine the acreage of contributing drainage area and compute the Water Quality Volume (WQv), which ideally would be accommodated by the BMP. The proposed drainage area maps are provided in **Appendix B.**

2. Design the practice and sediment forebay to accommodate the WQv per the MASWS and the applicable criteria within the City's Wetland Protection Bylaw. Stormwater runoff water quality was evaluated to ensure that pollutant export from the project site was minimized to the maximum extent practicable. Sizing calculations for each practices can be found in **Appendix C & D**.

    a. Hydrograph modeling and routing was performed using HydroCAD software (version 2009), which combines USDA Soil Conservation Service hydrology and hydraulic techniques (commonly known as SCS TR-55 and TR-20) to generate hydrographs.

2. Route the WQv to the proposed practice and allowing higher flows from larger storm events to overflow and outlet the system to the pond.

1.4 Construction Activities and Sequence

The Plans identify the following:

- Drainage patterns and approximate slopes anticipated before and after major grading activities
- Areas of soil disturbance
- Areas that will not be disturbed
- Stormwater discharge locations
- Locations of structural and nonstructural controls identified in this report.

Construction activities will involve site preparation and earthwork necessary for construction of the proposed site redevelopment. These activities primarily include the following:

- Erosion and sedimentation control installation
- Excavation, hauling, and stockpiling of any excavated topsoil and subsoils
- Pavement milling and regrading, as necessary
- Installation of all stormwater treatment system
- Completion of site grading and pavement installation
- Finish grading
- Plantings and furnishings
- Final site stabilization

Erosion and sediment control measures will be installed per the plans, notes and details prior to commencement of any soil disturbing activities and will remain in place until final site stabilization is complete. Topsoil will be separated from the remaining soil and stockpiled on-site for reuse during site finish grading. The stockpiled topsoil will be protected to prevent erosion and sedimentation.

A summary of the general sequence of site work construction activities is as follows:

1. Installation of erosion and sediment control devices around perimeter of property and field marking of the limit of work
2. Site clearing for proposed work
3. Preliminary site grading
4. Excavation of all stormwater treatment areas
5. Installation of erosion and sediment control devices at surface stormwater management areas
6. Milling of pavement and re-grading
7. Surface stabilization (vegetation, pavement, gravel, stone, or other)
8. Completion of surface stormwater treatment areas
9. Installation of pavement top course
10. Topsoil placement and final site stabilization of disturbed areas
11. Removal of remaining erosion & sediment control devices and final cleanup

2.0 COMPLIANCE WITH MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS

The stormwater standards in the Massachusetts Stormwater Handbook (MA SW Handbook) were revised in 2008 to be in compliance with revisions to the Wetlands regulations, 310 CMR 10.00, and the Water Quality Regulations, 314 CMR 9.00, relating to stormwater. The proposed pathway improvements and stormwater management practices will occur within the 100 foot wetland buffer (from top of bank) and will require review and permitting through Boston Conservation Commission.

1. No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the commonwealth.

Existing outfalls will be rehabilitated and re-used as part of this project; many of these existing outfall locations are also being retrofitted with structural modifications such as filtration inserts or sumps to improve the quality of discharged water.

Three new stormwater outfalls (cobblestone spillways) are proposed as part of this project to improve drainage along the path near the Perkins Street entrance. Currently the runoff drains through the degraded shoreline buffer causing erosion and sediment discharges. The intent of the three new cobblestone spillways is to capture and discharge runoff to the pond in a controlled manner. This approach, combined with the path improvements will reduce erosion within the buffer as well as sedimentation.

2. Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

The primary objective of this project is to improve the existing recreational pathways and associated existing non-historic drainage infrastructure around the Pond. It is a redevelopment project, and no significant impervious surface additions are being proposed. Though the total area of paved surfaces will slightly increase as a result of this project, as indicated on the plans existing areas of highly-compacted, bare soil will be stabilized and revegetated, when applicable. Pre- and post-development rates were not evaluated for the proposed project. Due to the improvements to the degraded condition of the path shoulders and the improvements to the existing paved paths, along with the new GI practices proposed, any increase of impervious cover is negligible.

3. Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is defined to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

As described in Section 1.2, three GI stormwater practices along with three additional recharge basins are provided in the drainage design to increase infiltration and groundwater recharge. These practices will be an improvement to the existing stormwater management.

4. Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This standard is met when:
   a. Suitable practices for source control and pollution prevention are indentified in a long-term pollution prevention plan, and thereafter implemented and maintained;
   b. Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and
   c. Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.

The project satisfies all three of the above requirements. Source controls and pollution prevention will be controlled by the methods outlined in this report and the Operation and Maintenance Plan. The stormwater management treatment system for the site has been selected and sized to equal or exceed the required 80% average annual load of TSS, as follows:

Deep Sump Catchbasin:	For Pretreatment:	25% TSS Removal Rate
Catch Basin Inserts*:	For Pretreatment:	Additional 25% TSS Removal
Sediment Forebays:	For Pretreatment:	25% TSS Removal Rate
Bioswale:	Recommended design rate:	90% TSS Removal Rate
Sand Filter:	Recommended design rate:	80% TSS Removal Rate

Stormwater Planters: Recommended design rate: 90% TSS Removal Rate

*FlexStorm inlet filters are proposed. The manufacturer states 99% TSS, we have applied an 25% removal rate, when combined with a deep sump.

5. For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

No LUHPPL are part of this project or this site.

6. Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A “storm water discharge” is defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with the 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.

No public drinking water supply areas or other critical areas are near this project or this site. No Outstanding Resource Waters or Special Resource Waters exist near this project or this site.

7. A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

The project is considered a redevelopment and the stormwater management system has been designed to meet Standards 2, 3 and, 4 to the maximum extent practicable. Standards 1, 8, 9, and 10 are met fully.

8. A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.

A sedimentation barrier is recommended at all down-sloping areas surrounding the pond. Silt sack inserts are proposed at all existing catch basin structures within the proposed project area as well as in the proposed recharge basins to prevent sedimentation during construction activities. Above-ground stormwater BMPs must be surrounded with silt sock or silt fence during construction to prevent erosion and sedimentation until the site is established. Disturbed surfaces will be seeded and/or planted as soon as possible to stabilize them and prevent erosion and sedimentation.

9. A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.

A separate post-construction, long-term O&M plan will be provided as a stand alone document

10. All illicit discharges to the stormwater management system are prohibited.

There will be no illicit discharges to the stormwater management system. A Long-Term Pollution Prevention Plan is included in the O&M Plan to prevent illicit discharges.

3.0 POST-CONSTRUCTION STORMWATER MANAGEMENT

Stormwater treatment and conveyance for the newly constructed areas will be provided by the following proposed BMPs. See the Operation and Maintenance (O&M) Plan for a more detailed description of the post O&M requirements

3.1 Catch Basin and Inserts

Catch basins with filter inserts (FlexStorm) will be provided to capture and collect stormwater and sediment prior to discharge to the underground recharge basins. Bi-annual cleaning of the re-usable inserts is required, more frequently in sediment heavy locations. When properly maintained, the inserts should reduce the need to clean the catch basin and recharge/perforated basins.

3.2 Recharge Basins

Recharge basins capture and store stormwater collected from surrounding impervious areas. Riser pipes, curb-cuts, and/or drainage structures lead surface stormwater to subsurface interconnected storage units. When site conditions are appropriate, stored water is released

directly into the ground mimicking pre-development conditions. Use of stormwater recharge basins allows for stored water to infiltrate and recharge groundwater.

3.3 Bioswale and Stormwater Planters

The bioswale and stormwater planters are stormwater management practices designed to manage and treat stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression. The method combines physical filtering and adsorption with bio-geochemical processes to remove pollutants. The system consists of an inflow component, a pretreatment element, an overflow structure, a shallow ponding area (less than nine inches deep), a surface organic layer of mulch, a planting soil bed, and plant materials. General maintenance of the bioswale falls under landscaping practices.

3.4 Sand Filter

These filters treat stormwater by settling out larger particles in a sediment forebay and filter stormwater through an underground sand matrix covered with topsoil. This practice is ideal for lawn and meadow areas. General maintenance of the sand filter falls under landscaping practices.

4.0 EROSION AND POLLUTION CONTROLS

Perimeter controls and sediment settling devices will be installed during construction to minimize sediment movement in stormwater and to protect the adjacent wetland and any associated buffers on the property.

4.1 Structural Practices

The following are the structural practices that will be implemented as part of the construction activity.

4.1.1 Silt Fence, Straw Bales, Wattles, and/or Sediment Silt Sock Barrier: Installed prior to commencement of construction. This type of practice creates erosion control barriers to intercept sediment in diffuse runoff. The City will be informed upon installation so that they may inspect these barriers prior to construction. Portions of the erosion control barriers will be replaced and/or repaired as necessary to prevent erosion. Barriers will be installed parallel to land slope at the perimeter of the work site. In addition, silt fence or sock barriers will be installed around the rain sand filters areas during construction.

4.1.2 Silt Sacks (or approved equivalent): Installed at identified existing catch basins and following construction of the proposed catch basins to prevent sedimentation during the any additional construction. The Silt Sack will be replaced and disposed of off-site if damage is observed.

4.1.3 Sand Filter(s): Heavy equipment will not be allowed to operate on the surface location where the systems are planned because soil compaction would adversely impact their

long-term performance. Sediment silt sock or silt fencing will be utilized around the perimeter of the sand filters during construction. Light earth-moving equipment will be used for excavation and construction of the systems. All excavated materials from the area will be removed and disposed of in an approved location. All sand filter areas will be inspected at least once every seven calendar days and immediately after storm events by the Construction Manager.

4.1.4 Slope Stabilization: Installed immediately upon obtaining final grades as shown on the project site plans. Areas that fail to stabilize will be re-graded to final grade and stabilized as necessary. Amount of land disturbed will be minimized to reduce potential for erosion and sedimentation. Stabilization measures shall be initiated within 14 days following the end of construction at each portion of the site and as soon as practicable.

The entire stormwater management system will be inspected upon completion of construction. Sediment will be removed from all elements of the stormwater management system. All control measures must be installed and maintained in accordance with manufacturer's specifications, good engineering practices, and in accordance with this report (every seven calendar days and after storm events). If inspections show that a control has failed or been installed incorrectly, the Operator must replace or modify it within 24 hours.

4.2 Stabilization Practices

The amount of land disturbed during construction will be minimized to reduce the potential for erosion and sedimentation. Prompt surface stabilization will be practiced to control erosion in areas where disturbances cannot be avoided during construction. Stabilization measures shall be initiated within 14 days following the end of construction at each portion of the site. Exceptions to this requirement are allowable when snow cover prevents the initiation of stabilization within 14 days, in which case such measures shall be undertaken as soon as possible.

Stabilization measures that will be, or may be, used during construction are described below:

Temporary seeding or other soil stabilization measures will be provided where construction activities have ceased at the site. Topsoil stockpiles will be temporarily seeded to prevent erosion, and will be surrounded with silt fence. When the site's final grade has been established, permanent vegetation will be planted on the disturbed areas. The vegetation will consist of grass, perennial plants, shrubs, and trees.

4.3 Other Types of Controls

Additional controls/practices will be undertaken to reduce pollution in stormwater runoff flows which include, but are not limited to, control of off-site mud tracking from construction site, dust suppression, proper sanitary waste disposal, earthwork procedures timed and conducted in manners aimed to minimize erosion and sedimentation, snow removal plans, proper management of waste materials, proper management of hazardous waste, proper material stockpiling, and spill prevention and control measures.

4.3.1 Temporary Seeding: Temporary seeding of disturbed surfaces with fast-growing grasses (annual rye) to provide greater resistance to stormwater runoff and/or wind erosion for areas where construction has temporarily ceased.

4.3.2 Permanent Seeding: Permanent seeding of surfaces with vegetation, including but not limited to grass, trees, bushes, and shrubs, to stabilize the soil. Establishing a permanent and sustainable ground cover at a site stabilizes the soil while reducing the sediment content in runoff.

4.3.3 Permanent Planting: The contractor shall install and adequately establish all planting as required at the completion of the project.

4.3.4 Mulching: Materials, including, but not limited to straw, grass, woodchips, straw, and gravel will be placed on the soil surface to cover and hold in place disturbed soils.

4.3.5 Dust Suppression: Water sprays shall be used to control dust during extended dry periods during construction.

4.3.6 Sanitary Wastes: All sanitary wastes will be collected from the portable units by a licensed sanitary waste management contractor (as required by local regulations).

4.3.7 Earthwork: The exposure of disturbed surfaces to stormwater and potential stormwater erosion will be minimized by well organized earthwork procedures. Stabilization procedures shall be undertaken in accordance with this report. Grubbing during wet seasons will be avoided if feasible.

4.3.8 Snow Removal Plan: Snow will not be removed from the site. Snow may not be 'deposited" on structures or piled onto the stormwater management facilities. Plowed snow collected from the path will be deposited along the side of the path away from the site's drainage conveyance structures to maximize infiltration. Snowmelt runoff that is not infiltrated will be directed to the site's stormwater management system.

4.3.9 Waste Materials: Dumpsters rented from a licensed solid waste management company will be used to store solid waste and debris that cannot be recycled, reused or salvaged. The dumpsters will meet all local and state solid waste management regulations. Dumpsters will be covered when refuse is not being directly deposited or withdrawn from them. Potentially hazardous wastes will be separated from normal wastes, including segregation of storage areas and proper labeling of containers. Removal of all waste from the site will be performed by licensed contractors in accordance with applicable regulatory requirements and disposed of at either local or regional approved facilities. Waste materials will not be buried on-site. All site personnel will be instructed regarding the correct procedures for waste disposal. Notices stating these procedures will be posted at the site. Solvents and flushing materials used during construction and pre-operational cleaning will be provided, handled, managed, and removed by the contractor for appropriate off-site disposal.

4.3.10 Hazardous Waste Materials: Any disposal of hazardous materials will be completed using the required paperwork. Copies will be provided to the Engineer and to the Town.

4.3.11 Spill Prevention and Control Measures: To minimize the risk of spills or other accidental exposure of materials and substances to stormwater runoff, the following material management practices will be used throughout the project:

- An effort will be made to store only enough products required to do the job.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, the maximum amount of a product will be used before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will conduct daily inspections to ensure proper use and disposal of materials.

To reduce the risk associated with hazardous materials used on the site, the following practices will be used:

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data sheets will be retained and kept on-site; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

4.3.12 Materials List: Materials or substances listed below are expected to be present on-site during construction:

- Concrete
- Asphalt
- Paints (enamel and latex)
- Concrete
- Adhesives
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Wood
-- Sealants

The following product-specific practices will be followed on-site:

- Petroleum Products – All on-site vehicles will be monitored for leaks and receive preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which area clearly labeled. Any asphalt substances used on-site will be applied according to the manufacturers' recommendations.

- Fertilizers – Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. Products will be stored in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

- Paints – All containers will be tightly sealed and stored indoors when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to the manufacturers' instructions or state and local regulations.

- Concrete Trucks – Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted, and site personnel will be made aware of the procedures and location of the information and cleanup supplies.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, speedi-dry, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

- All spills will be cleaned up immediately after discovery. Spills large enough to reach the storm water system will be reported to the **National Response Center** at **1-800-424-8802**.

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.

- The site superintendent responsible for the day-to-day site operations will be the spill prevention and clean-up coordinator. This individual will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the on-site office trailer.

5.0 REFERENCES

1. ASTM (American Society of Testing and Materials). 2003. ASTM D3385-03 Standard test method for field measurement of infiltration rate of soils in field using double-ring infiltrometer.

2. Federal Emergency Management Agency (FEMA). See their homepage at: http://www.fema.gov/

3. Massachusetts Department of Environmental Protection. See their homepage at www.state.ma.gov/dep

4. Massachusetts Department of Environmental Protection. 2008. Massachusetts Stormwater Standards Manual.

5. Massachusetts Office of Geographic and Environmental Information (MassGIS). See their homepage at: http://www.mass.gov/mgis/.

APPENDIX A

Soils Map

Document Path: H:\Projects\2018\18009A Boston Parks Rec Jamaica Pond\GIS\Maps\Soils.mxd

Legend

- 1, Water, Null
- 103C, Charlton, B
- 104C, Hollis, C/D
- 245C, Hinckley, A
- 253D, Hinckley, A
- 254B, Merrimac, A
- 254C, Merrimac, A
- 260B, Sudbury, B
- 31A, Walpole, C
- 325B, Newport, C
- 325D, Newport, C
- 626B, Merrimac, A
- 627C, Udorthents, Null
- 628C, Canton, B
- 654, Udorthents, B

N

0 500

1" = 500 feet

Horsley Witten Group
Sustainable Environmental Solutions
90 Route 6A • Unit 1 • Sandwich, MA 02563
508-833-6600 • horsleywitten.com

NRCS SSURGO-Certified Soils
Jamaica Pond
Boston, MA

Date: 10/24/2018

*Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

APPENDIX B

Drainage Area Maps

0 80

SCALE IN FEET

LEGEND

DRAINAGE AREA BOUNDARY

IMP. AREA
TOTAL AREA
(SQUARE FEET)

5,000
15,000

WOODS
ROOFTOPS
GRASS
PAVEMENT

DA1 DRAINAGE AREA

SP1 STUDY POINT

SOIL BOUNDARY
TIME OF CONCENTRATION FLOW PATH
5' MAJOR CONTOUR
1' MINOR CONTOUR

SOIL TYPES

245C	HINCKLEY LOAMY SAND 8-15% SLOPES (HSG A)
254B	MERRIMAC FINE SANDY LOAM 3-8% SLOPES (HSG A)
325D	NEWPORT SILT LOAM 15-25% SLOPES (HSG B)

Revisions

Rev	Date	By	Appr	Description

Horsley Witten Group, Inc.
Sustainable Environmental Solutions
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

Date: 7/20/2018
Design By: MCL
Drawn By: MCL
Checked By: RAC

Plan Set: Jamaica Pond Park Pathways & Entrances Phase 2 ----

Plan Title: DA3 & DA4 BOATHOUSE & DCR PATH

Prepared For: — — — Phone: — Fax: —

Survey Provided By: GREEN SEAL ENV., INC. 114 STATE ROAD, BLDG B Phone:508-888-6034 Fax:— Dated: —

Registration:

Project Number: 18009A

Sheet Number: 3 of ----

0 40
SCALE IN FEET

DA2
7,195
61,970

DA2b
1,375
6,570

245C

48-BEECH"

40-ASH"

12-CHERRY"

LEGEND

DRAINAGE AREA BOUNDARY

IMP. AREA
TOTAL AREA
(SQUARE FEET)

5,000
15,000

WOODS
ROOFTOPS
GRASS
PAVEMENT

DA1 DRAINAGE AREA

SP1 STUDY POINT

SOIL BOUNDARY
TIME OF CONCENTRATION FLOW PATH
5' MAJOR CONTOUR
1' MINOR CONTOUR

SOIL TYPES

245C	HINCKLEY LOAMY SAND 8-15% SLOPES (HSG A)
254B	MERRIMAC FINE SANDY LOAM 3-8% SLOPES (HSG A)
325D	NEWPORT SILT LOAM 15-25% SLOPES (HSG B)

Revisions

Rev	Date	By	Appr	Description

Horsley Witten Group, Inc.
Sustainable Environmental Solutions
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

Date: 7/29/2018
Design By: MCL
Drawn By: MCL
Checked By: RAC

Plan Set: Jamaica Pond Park Pathways & Entrances
Phase 2

Plan Title: DA2 & DA2a SAND FILTER & POND STAIRS

Prepared For:

Phone: —
Fax: —

Survey Provided By:
GREEN SEAL ENV., INC.
114 STATE ROAD, BLDG B
Phone:508-888-6034
Fax:—
Dated: —

Registration:

Project Number: 18009A

Sheet Number: 2 of ----

0 30
SCALE IN FEET

245C

DA1

4,220
16,185

LEGEND

DRAINAGE AREA BOUNDARY

IMP. AREA
TOTAL AREA
(SQUARE FEET)

5,000
15,000

WOODS
ROOFTOPS
GRASS
PAVEMENT

DA1 DRAINAGE AREA

SP1 STUDY POINT

SOIL BOUNDARY
TIME OF CONCENTRATION FLOW PATH
5' MAJOR CONTOUR
1' MINOR CONTOUR

SOIL TYPES

245C	HINCKLEY LOAMY SAND 8-15% SLOPES (HSG A)
254B	MERRIMAC FINE SANDY LOAM 3-8% SLOPES (HSG A)
325D	NEWPORT SILT LOAM 15-25% SLOPES (HSG B)

Revisions

Rev	Date	By	Appr	Description

Horsley Witten Group, Inc.
Sustainable Environmental Solutions
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

Checked By: RAC
Drawn By: MCL
Design By: MCL
Date: 7/29/2018

Plan Set:
Jamaica Pond Park Pathways & Entrances
Phase 2

Plan Title:
DA 1 BIOSWALE

Prepared For:

Phone: ---
Fax: ---

Survey Provided By:
GREEN SEAL ENV., INC.
114 STATE ROAD, BLDG B
Phone:508-888-6034
Fax:---
Dated: ---

Registration:

Project Number:
18009A

Sheet Number:
1 of ----

APPENDIX C

Sizing Calculations

Project: Jamaica Pond
Project Location: Jamaica Plain
Project No: 18009a

Calculated By: MCL
Checked By: BRK
Date : 10/29/2018

Instructions: Enter values in [ ] cells only. All other cells are formulas or links and do not need to be edited. See cell comments for descriptions and formulas used.

Water Quality Volume (WQv)

WQv (cf) = (1" rainfall/12) * Imp. Area (sf)

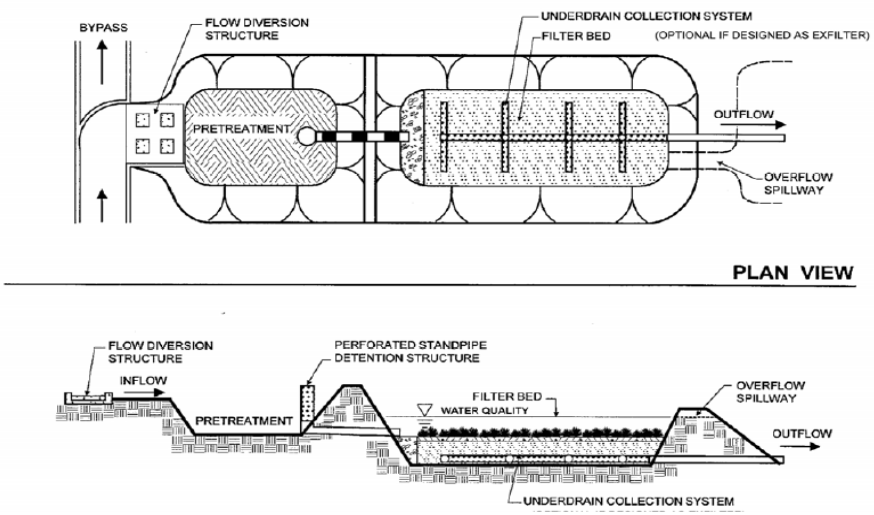
#	Project	% Imp.	Drainage Area		Imp. Area		WQv Required*	WQv provided	WQv provided
		%	sf	ac	ac	sf	cf	%	cf
DA2	Sand Filter	12%	61,970	1.42	0.17	7,195	600	300%	1,801

Surface Area (Af)

Af (sf) = WQv(df)/[(K)(hf+df)(tf)]

Sand Filter		
Water Quality Volume (WQv)	600	cf
Filter Bed Depth (df)	1.50	ft
Coefficient of permeability (K)	3.5	ft/day
height of water above filter	3	in
Average height of water (hf)	0.125	ft
Design Filter Drain Time (tf)	1	days
Surface Area Required	*158*	*sqft*
Surface Area Provided	475	sqft
WQv Provided	1801	cf
Treatment Provided	300%	%WQv

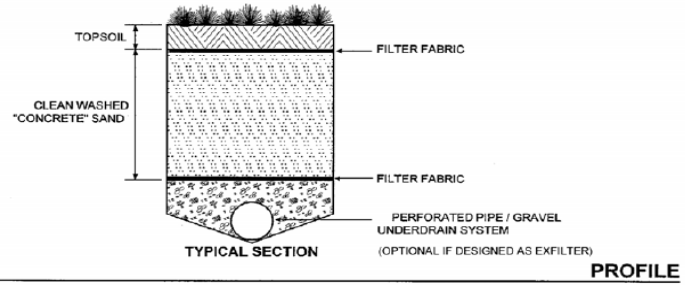
Figure 5-12 Sand Filter



Minimum Forebay Area

Sediment Forebay (10% of the WQv) [1]		
10% WQv	60	cf
depth	0.33	ft
Minimum Area Required (see formula above)	182	*sqft*
Length	23	*ft*
Width	9	*ft*
Length to Width ratio	2 5/9	*ft*
Surface Area Provided	175	sqft
Volume Provided	58	cuft

Forebay Volume Provided 96%



Horsley Witten Group
Sustainable Environmental Solutions

Project: JAMAICA POND **Project No:** 18009A
Project Location: Jamaica Pond, Boston, Massachusetts
Calculated By: MCL
Checked By: BRK
Date : 10/23/2018

Instructions: Enter values in [ ] cells only. All other cells are formulas or links and do not need to be edited. See cell comments for descriptions and formulas used.

Water Quality Volume (WQv)

Based upon 1-inch of runoff times the contributing impervious area contributing impervious area

WQv (cf) = (1" rainfall/12) * Imp. Area (sf)

Storm Type: 1 ***Inch***

DA	Description	% Imp.	Drainage Area		Imp. Area		WQv Required*	WQv required
		%	sf	ac	sf	ac	cf	af
DA4	WEST	100%	912	0.02	913	0.02	76	0.002
DA4	EAST	100%	913	0.02	913	0.02	76	0.002
	TOTALS		1825	0.02	1,826	0.02	152	0.003

Bioretention Sizing Calculations

Sizing Equations: Bioretention

Required Surface Area (sf) = (WQv) (df) / [(k) (hf + df) (tf)]

Where: df = Filter bed depth (ft) k = Coefficient of permeability of filter media (ft/day)
hf = Ave. height of water above filter bed (ft) tf = Design filter bed drain time (days)

BIORETENTION SIZING:

Bio Area	Drainage Area Name	WQv Required (af)	df (ft)	K (ft/day)	hmax-Height of water above filter (in.)	hf=avg of above (ft)	tf (days)	Surface Area Required (sf)	Surface Area Provided (sf)	Sediment Forebay Required 10% WQv (cf)	Sediment Forebay Provided (cf)	WQV Treatment Provided (af)	
1	DA4	0.002	1.50	1	3	0.125	1.67	42	145	8	0	0.006	262.329
2	DA4	0.002	1.50	1	3	0.125	1.67	42	145	8	0	0.006	
	TOTALS	0.003						84	290	15	0	0.012	
							Percentage of Treatment Provided		**345%**		**0%**	**345%**	

Horsley Witten Group
Sustainable Environmental Solutions

Project: Jamaica Pond **Project No:** 18009A
Project Location: Jamaica Plain, Boston, MA
Calculated By: MCL
Checked By: BRK
Date : 11/2/2018

Instructions: Enter values in [ ] cells only. All other cells are formulas or links and do not need to be edited. See cell comments for descriptions and formulas used.

Water Quality Volume (WQv)
Based upon 1-inch of rainfall times the contributing impervious area contributing impervious area

WQv (cf) = (1" rainfall/12) * Imp. Area (sf)

Storm Type: 1 ***Inch***

DA	Description	% Imp.	Drainage Area		Imp. Area		WQv Required*	WQv required
		%	sf	ac	sf	ac	cf	af
DA1	Pathway	26%	16,185	0.37	4,220	0.10	352	0.008
	TOTALS		16185	0.37	4,220	0.10	352	0.008

Bioswale Sizing Calculations

Sizing Equations: Bioretention

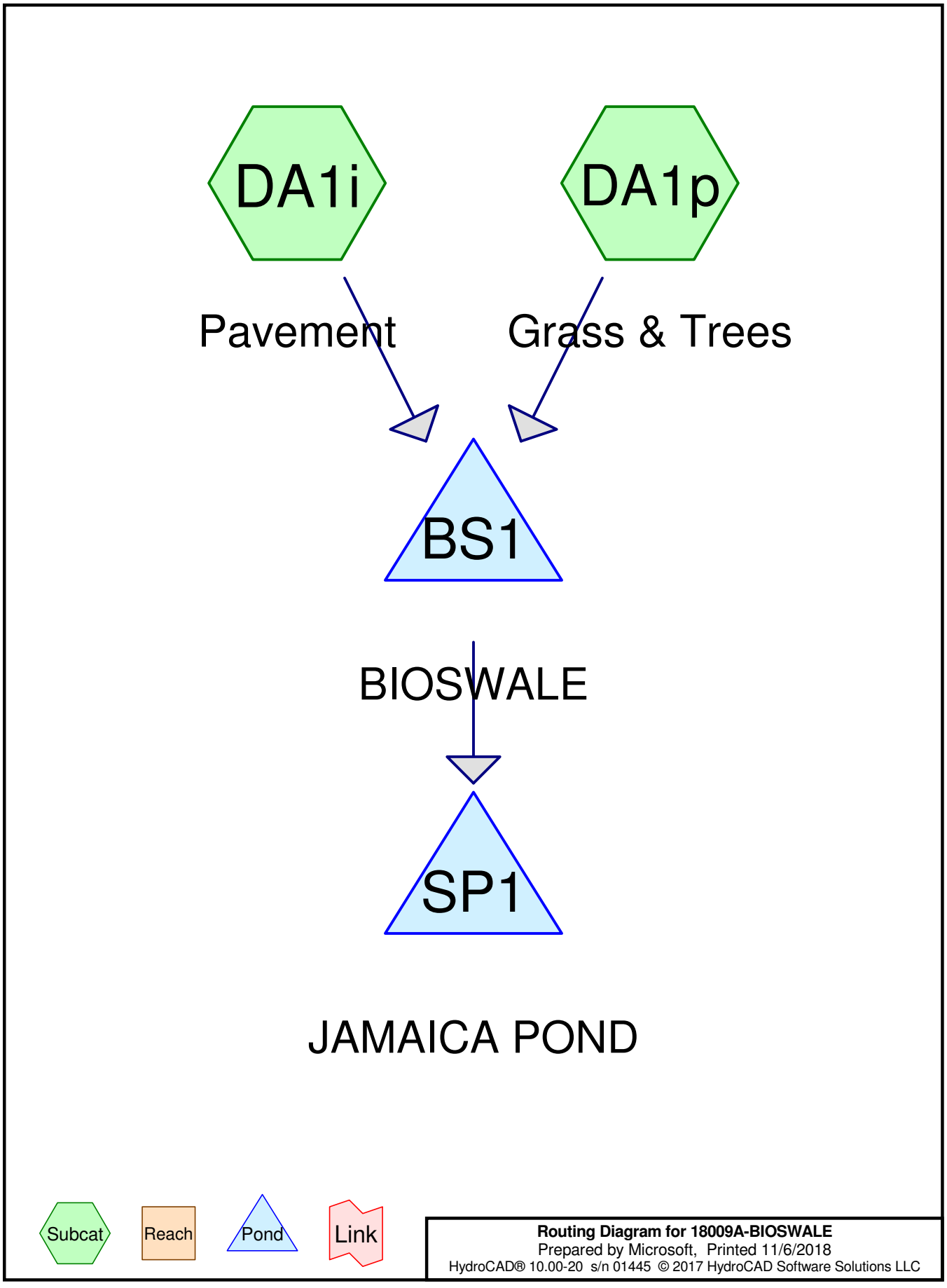
Required Surface Area (sf) = (WQv) (df) / [(k) (hf + df) (tf)]
Where: df = Filter bed depth (ft) k = Coefficient of permeability of filter media (ft/day)
hf = Ave. height of water above filter bed (ft) tf = Design filter bed drain time (days)

BIOSWALE SIZING:

Bio Area	Drainage Area Name	WQv Required (af)	df (ft)	K (ft/day)	hmax-Height of water above filter (in.)	hf=avg of above (ft)	tf (days)	Surface Area Required (sf)	Surface Area Provided (sf)	Sediment Forebay Required 10% WQv (cf)	Sediment Forebay Provided (cf)	WQV Treatment Provided (af)
1	DA1	0.008	2.00	1	3	0.125	1.95	170	128	35	12	0.006
	TOTALS	0.008						170	128	35	12	0.006
							Percentage of Treatment Provided		**75%**		**34%**	**75%**

APPENDIX D

HydroCAD® WQv Modeling Calculations



Routing Diagram for 18009A-BIOSWALE
Prepared by Microsoft, Printed 11/6/2018

Summary for Pond BS1: BIOSWALE

Inflow Area = 0.372 ac, 26.07% Impervious, Inflow Depth = 0.13" for .60WQv event
Inflow = 0.06 cfs @ 12.07 hrs, Volume= 0.004 af
Outflow = 0.02 cfs @ 12.43 hrs, Volume= 0.004 af, Atten= 74%, Lag= 21.5 min
Discarded = 0.01 cfs @ 12.43 hrs, Volume= 0.004 af
Primary = 0.00 cfs @ 12.43 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 60.75' @ 12.43 hrs Surf.Area= 239 sf Storage= 46 cf

Plug-Flow detention time= 23.1 min calculated for 0.004 af (100% of inflow)
Center-of-Mass det. time= 23.1 min (822.5 - 799.4)

Volume	Invert	Avail.Storage	Storage Description
#1	60.50'	119 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

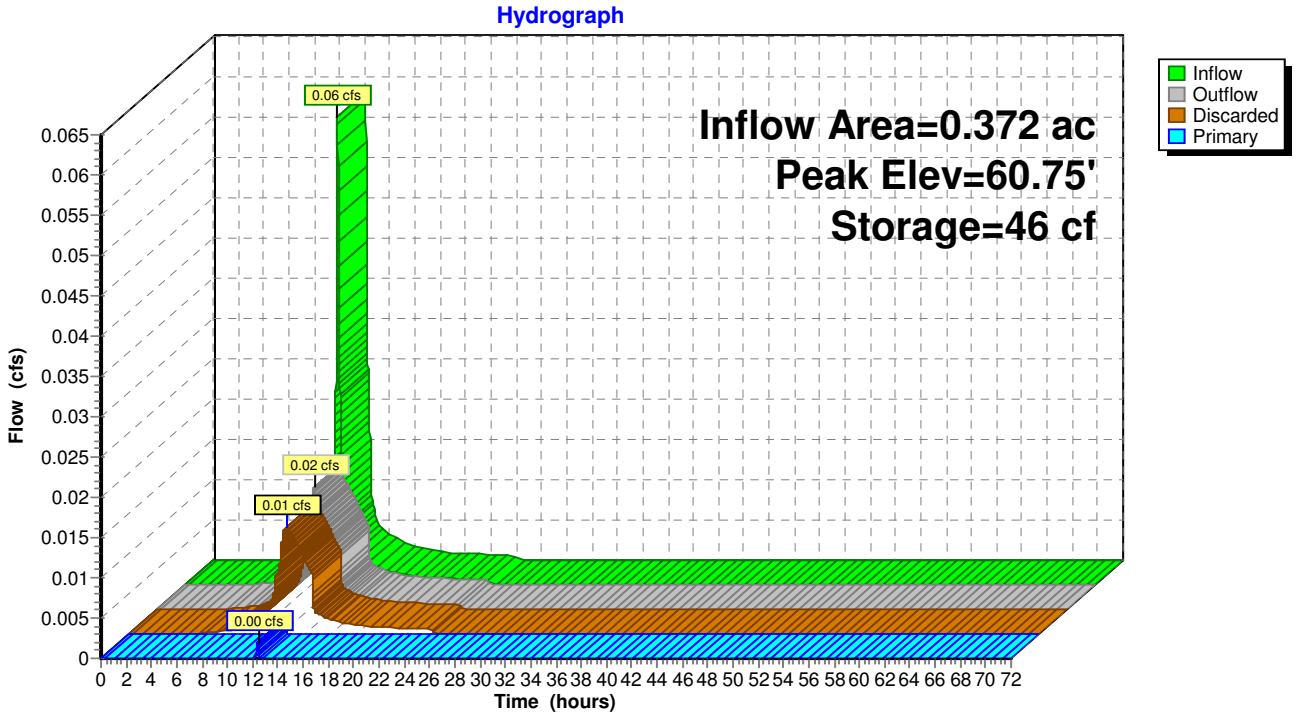
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
60.50	125	0	0
61.00	350	119	119

Device	Routing	Invert	Outlet Devices
#1	Primary	60.75'	**5.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	60.50'	**2.410 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.43 hrs HW=60.75' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 12.43 hrs HW=60.75' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.00 cfs @ 0.12 fps)

Pond BS1: BIOSWALE

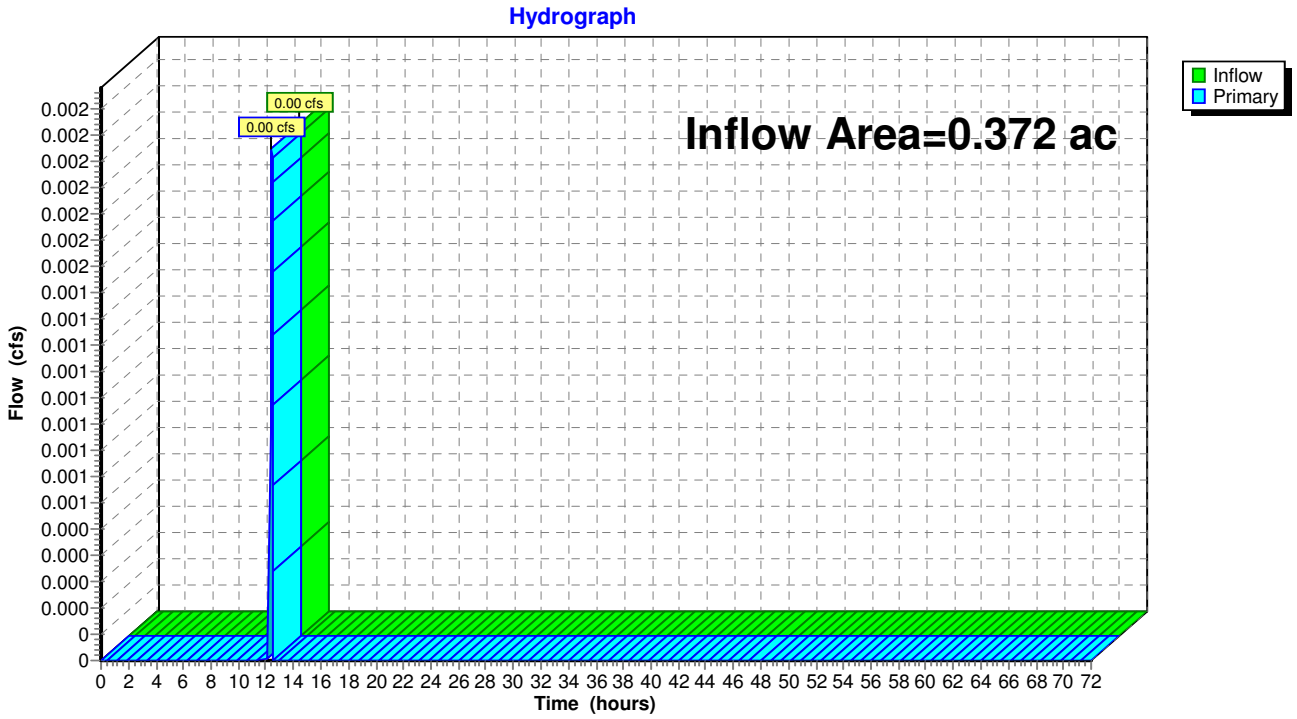


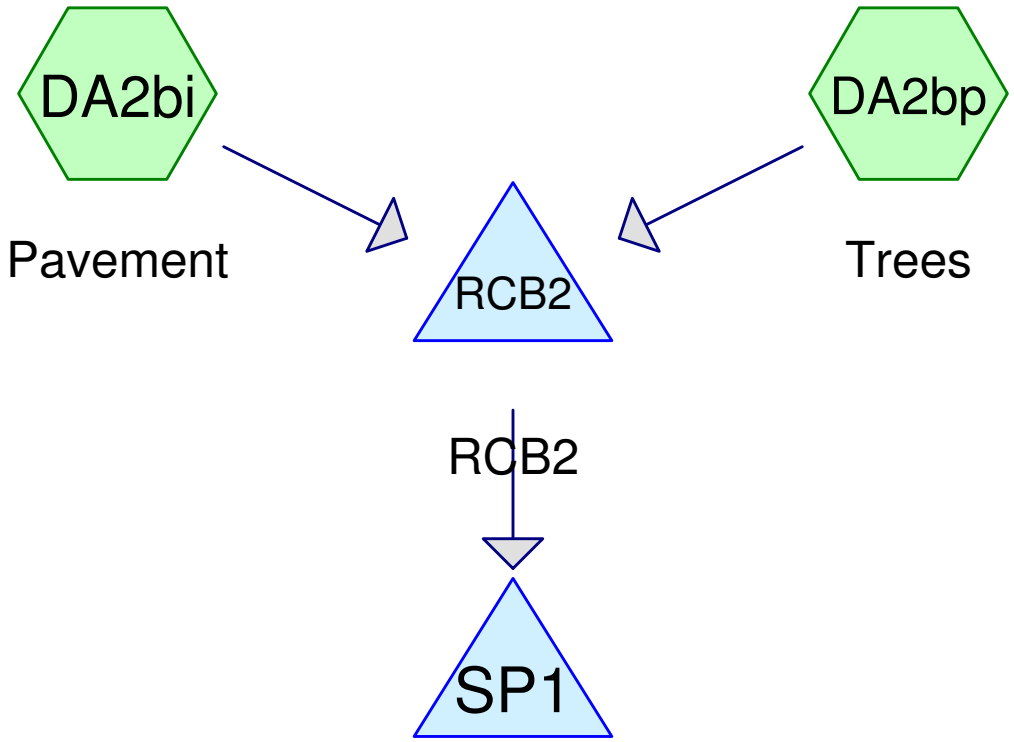
Summary for Pond SP1: JAMAICA POND

Inflow Area = 0.372 ac, 26.07% Impervious, Inflow Depth = 0.00" for .60WQv event
Inflow = 0.00 cfs @ 12.43 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 12.43 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: JAMAICA POND





Subcat Reach Pond Link

Routing Diagram for 18009A-POND STAIRS
Prepared by Microsoft, Printed 11/6/2018

Summary for Pond RCB2: RCB2

Inflow Area = 0.151 ac, 20.93% Impervious, Inflow Depth = 0.63" for 2YR event
Inflow = 0.10 cfs @ 12.07 hrs, Volume= 0.008 af
Outflow = 0.02 cfs @ 12.44 hrs, Volume= 0.008 af, Atten= 76%, Lag= 22.3 min
Discarded = 0.02 cfs @ 12.44 hrs, Volume= 0.008 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 69.68' @ 12.44 hrs Surf.Area= 50 sf Storage= 86 cf

Plug-Flow detention time= 23.4 min calculated for 0.008 af (100% of inflow)
Center-of-Mass det. time= 23.4 min (778.5 - 755.1)

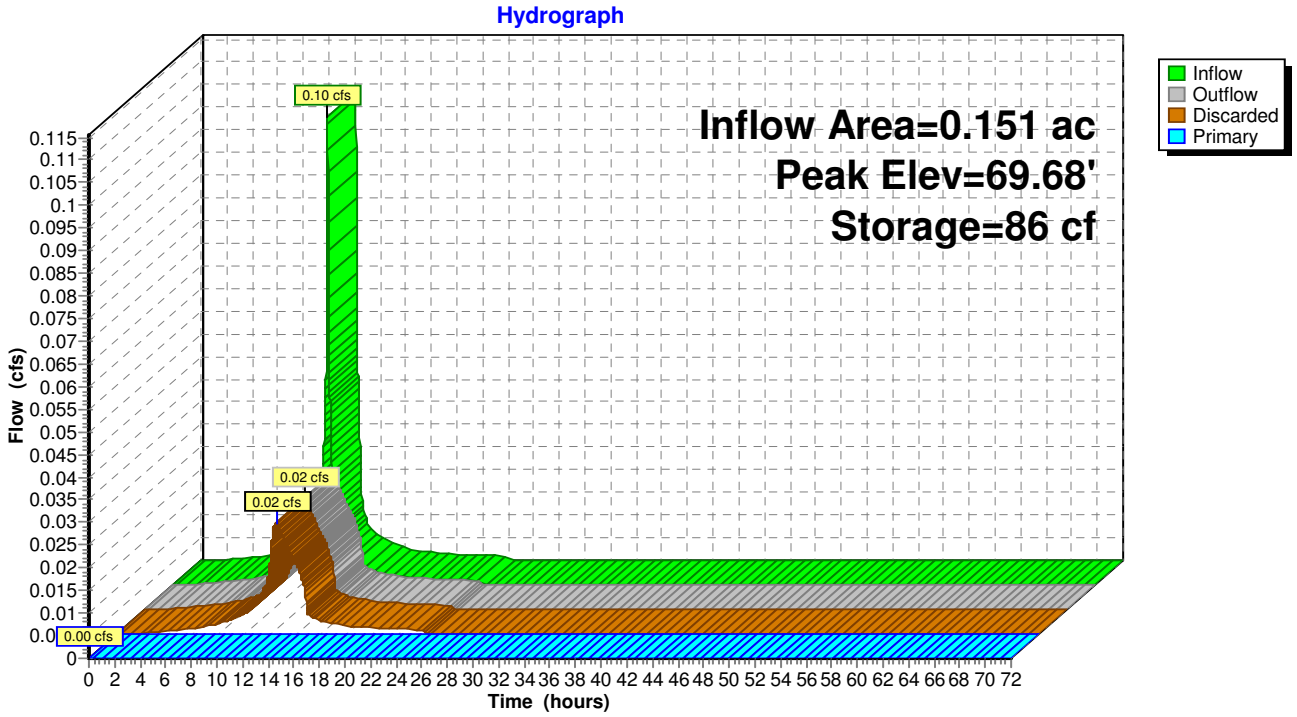
Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	64 cf	**8.00'D x 8.00'H GRAVEL AROUND RCB** 402 cf Overall - 209 cf Embedded = 193 cf x 33.0% Voids
#2	67.60'	170 cf	**6.00'D x 6.00'H RCB** Inside #1 209 cf Overall - 4.0" Wall Thickness = 170 cf
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	66.60'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	74.59'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 12.44 hrs HW=69.68' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=66.60' (Free Discharge)
↑—**2=Grate** (Controls 0.00 cfs)

Pond RCB2: RCB2

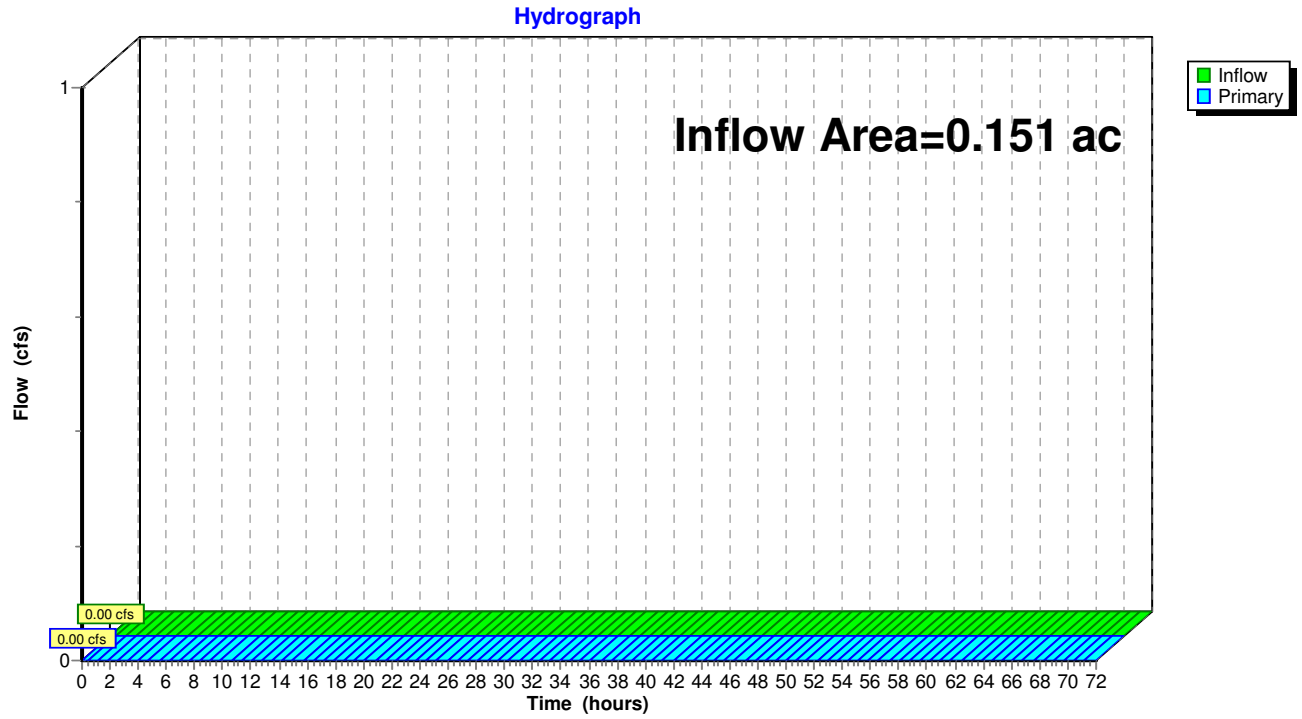


Summary for Pond SP1: JAMAICA POND

Inflow Area = 0.151 ac, 20.93% Impervious, Inflow Depth = 0.00" for 2YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: JAMAICA POND



Summary for Pond RCB2: RCB2

Inflow Area = 0.151 ac, 20.93% Impervious, Inflow Depth = 0.98" for 10YR event
Inflow = 0.16 cfs @ 12.07 hrs, Volume= 0.012 af
Outflow = 0.03 cfs @ 12.47 hrs, Volume= 0.012 af, Atten= 79%, Lag= 23.8 min
Discarded = 0.03 cfs @ 12.47 hrs, Volume= 0.012 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 71.57' @ 12.47 hrs Surf.Area= 50 sf Storage= 149 cf

Plug-Flow detention time= 33.4 min calculated for 0.012 af (100% of inflow)
Center-of-Mass det. time= 33.4 min (782.0 - 748.5)

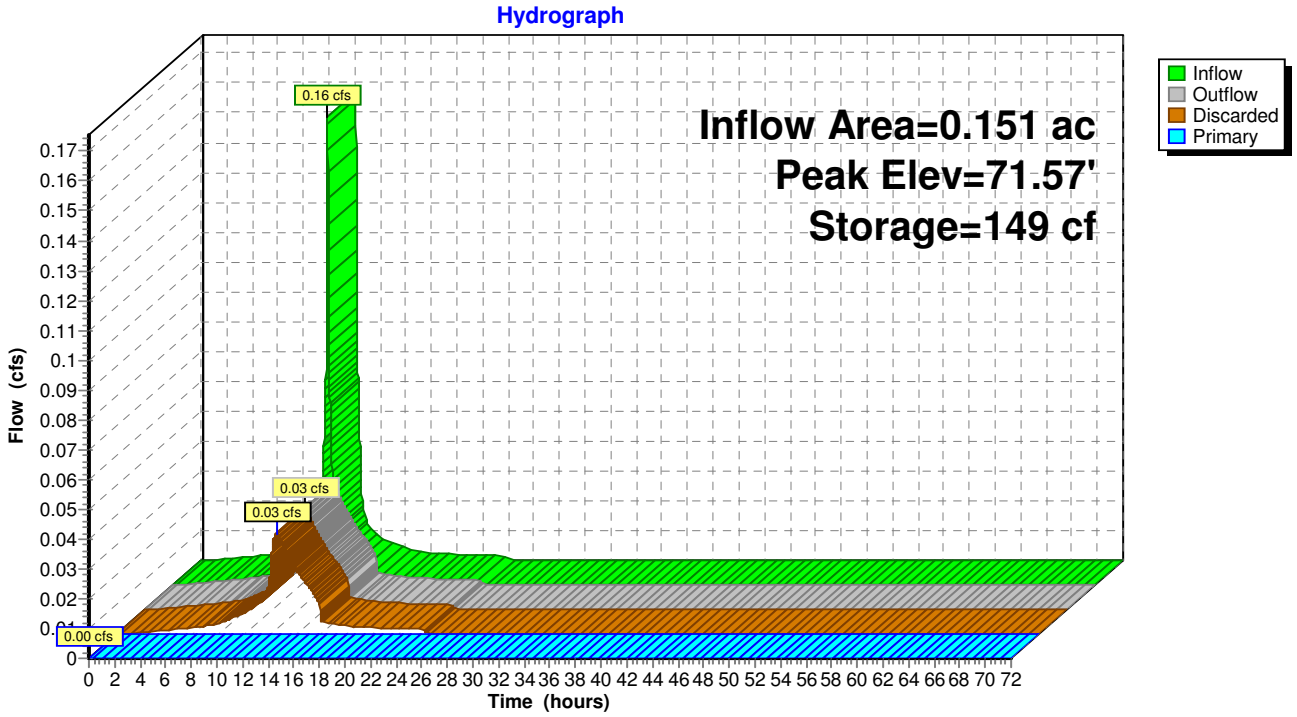
Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	64 cf	**8.00'D x 8.00'H GRAVEL AROUND RCB** 402 cf Overall - 209 cf Embedded = 193 cf x 33.0% Voids
#2	67.60'	170 cf	**6.00'D x 6.00'H RCB** Inside #1 209 cf Overall - 4.0" Wall Thickness = 170 cf
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	66.60'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	74.59'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 12.47 hrs HW=71.57' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=66.60' (Free Discharge)
↑**2=Grate** (Controls 0.00 cfs)

Pond RCB2: RCB2

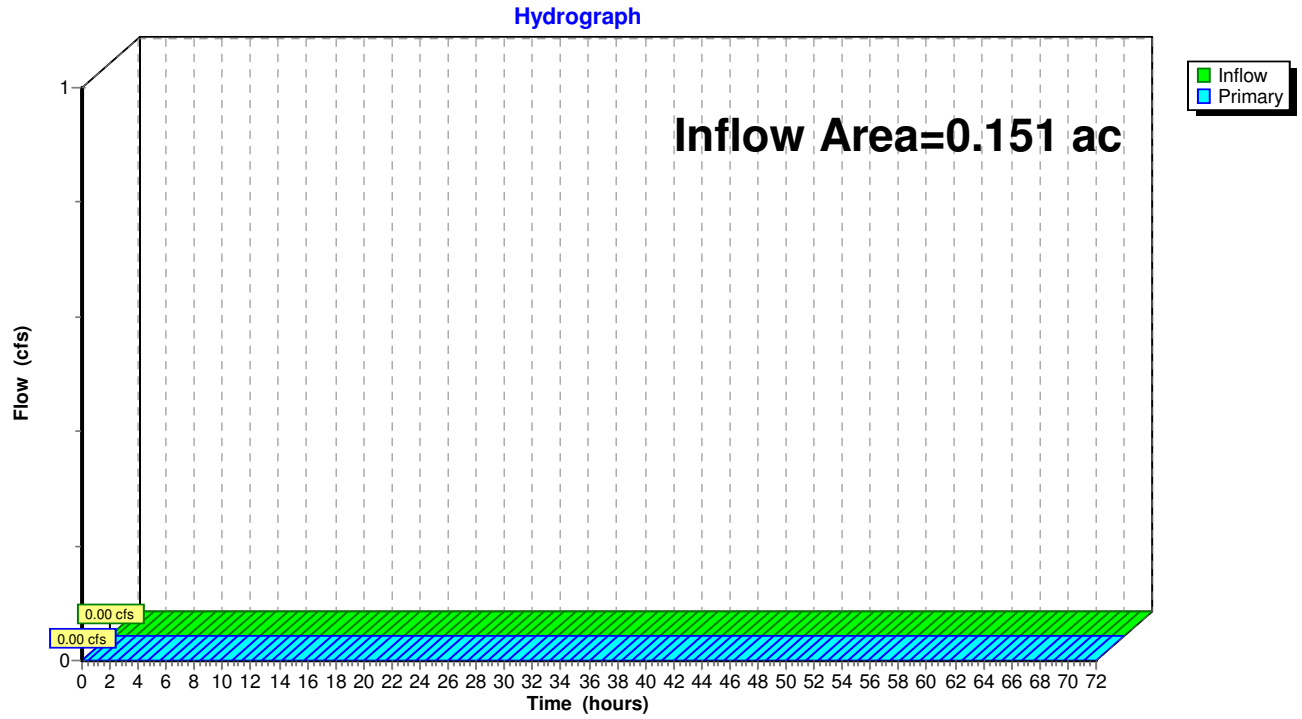


Summary for Pond SP1: JAMAICA POND

Inflow Area = 0.151 ac, 20.93% Impervious, Inflow Depth = 0.00" for 10YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: JAMAICA POND



Summary for Pond RCB2: RCB2

Inflow Area = 0.151 ac, 20.93% Impervious, Inflow Depth = 1.33" for 25YR event
Inflow = 0.20 cfs @ 12.07 hrs, Volume= 0.017 af
Outflow = 0.04 cfs @ 12.48 hrs, Volume= 0.017 af, Atten= 79%, Lag= 24.4 min
Discarded = 0.04 cfs @ 12.48 hrs, Volume= 0.017 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 73.14' @ 12.48 hrs Surf.Area= 50 sf Storage= 201 cf

Plug-Flow detention time= 38.9 min calculated for 0.017 af (100% of inflow)
Center-of-Mass det. time= 38.9 min (802.7 - 763.8)

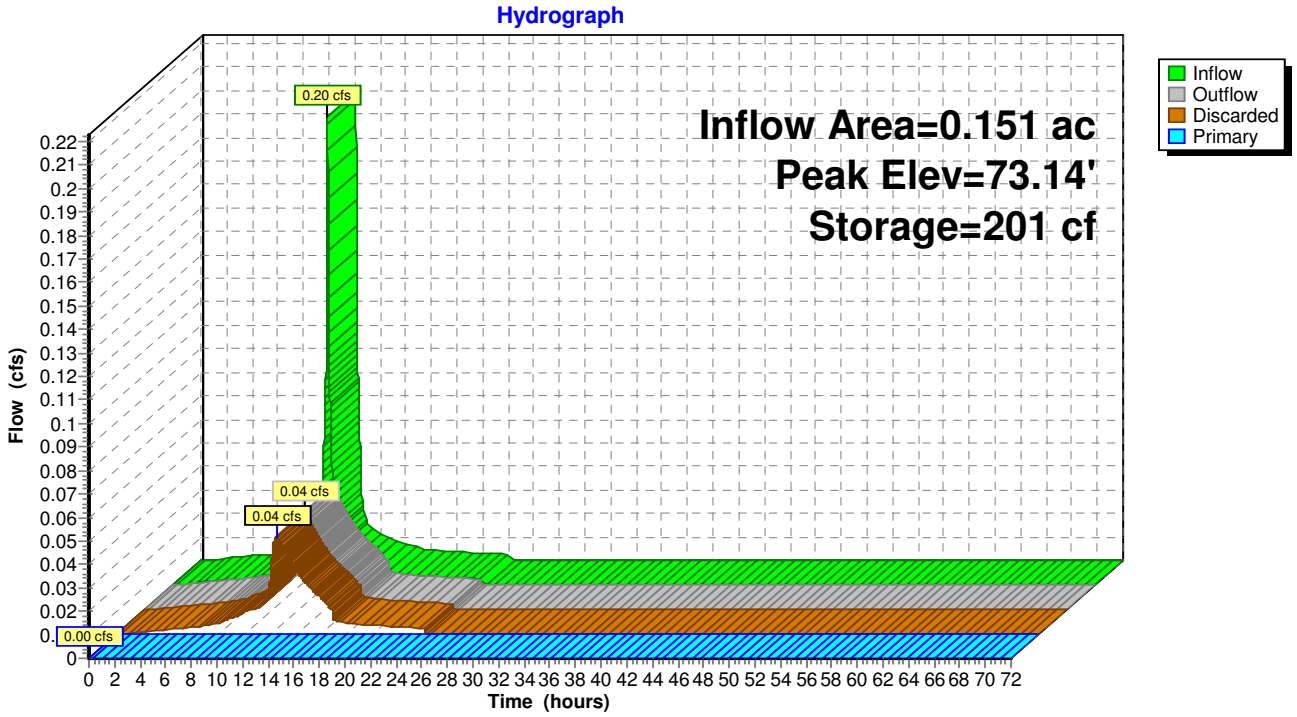
Volume	Invert	Avail.Storage	Storage Description
#1	66.60'	64 cf	**8.00'D x 8.00'H GRAVEL AROUND RCB** 402 cf Overall - 209 cf Embedded = 193 cf x 33.0% Voids
#2	67.60'	170 cf	**6.00'D x 6.00'H RCB** Inside #1 209 cf Overall - 4.0" Wall Thickness = 170 cf
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	66.60'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	74.59'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 12.48 hrs HW=73.14' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=66.60' (Free Discharge)
2=Grate (Controls 0.00 cfs)

Pond RCB2: RCB2

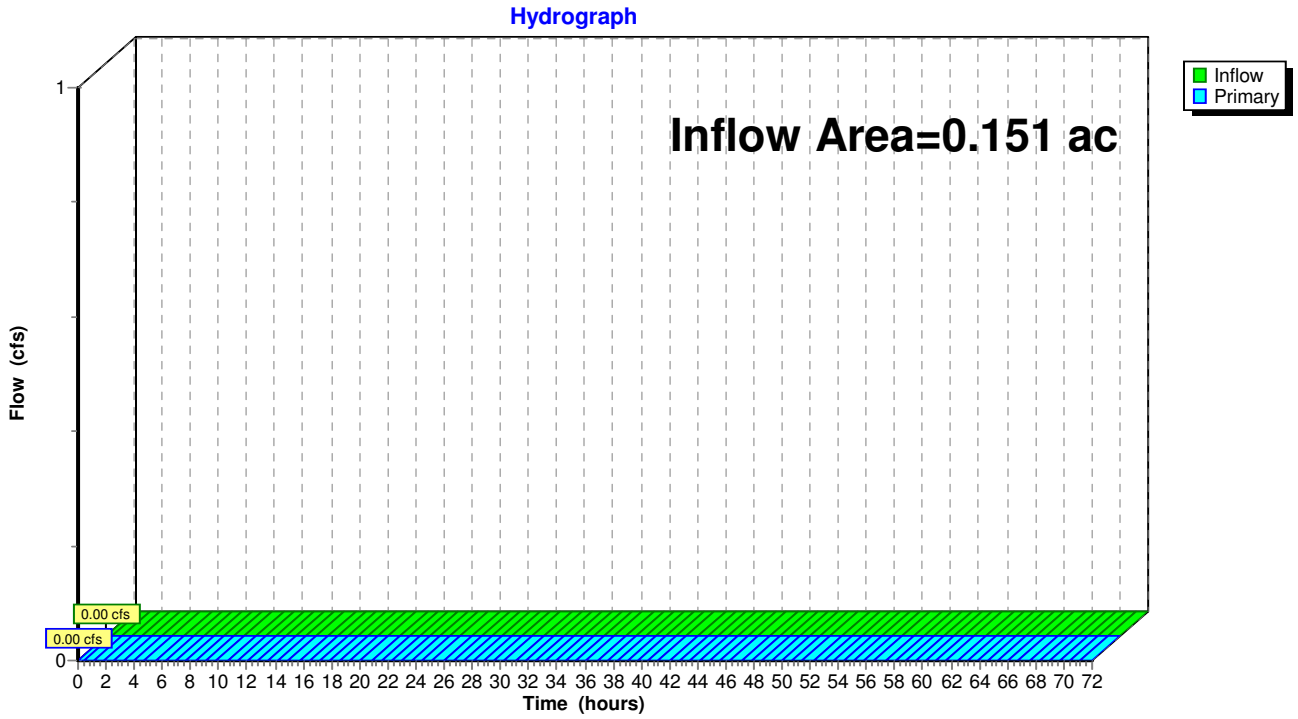


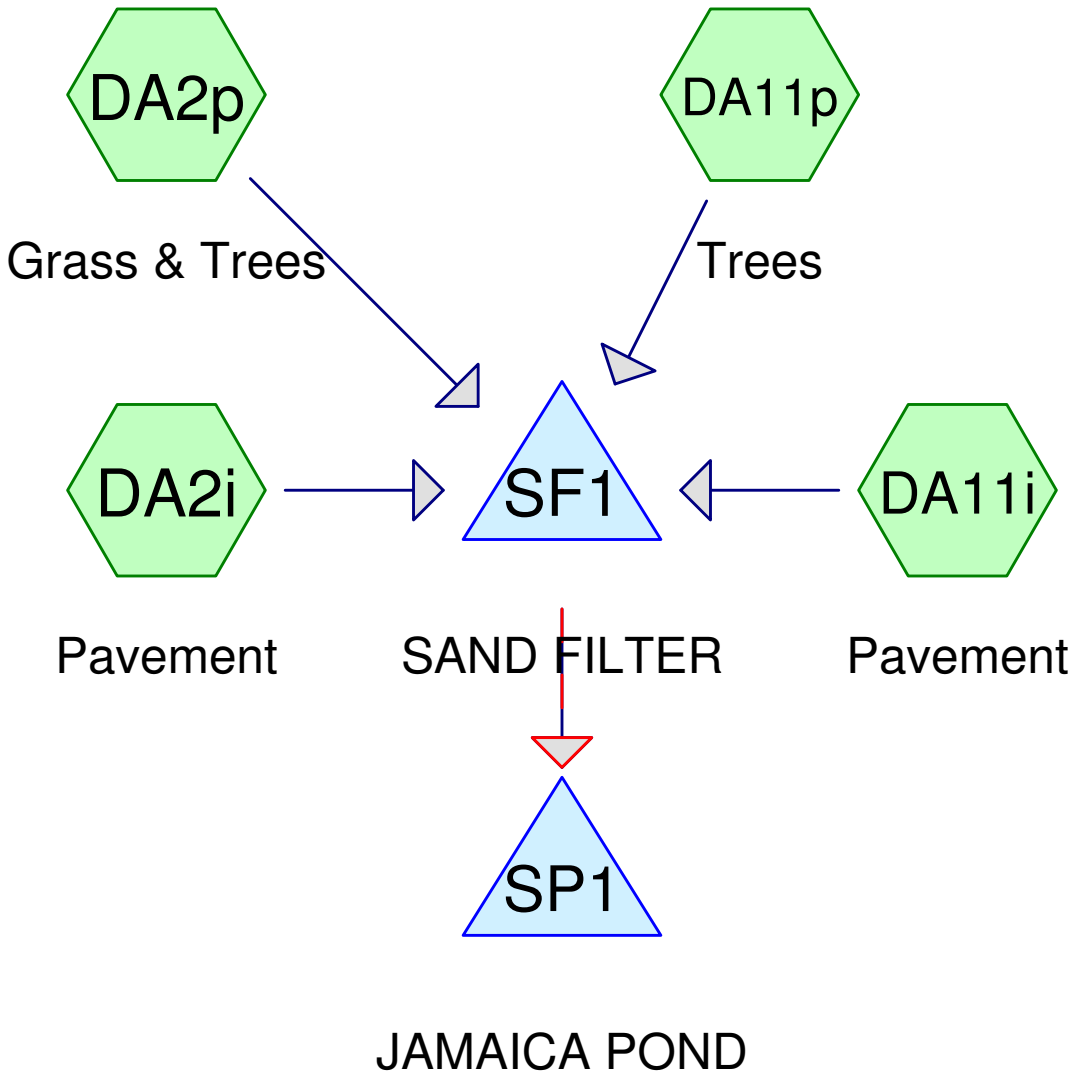
Summary for Pond SP1: JAMAICA POND

Inflow Area = 0.151 ac, 20.93% Impervious, Inflow Depth = 0.00" for 25YR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: JAMAICA POND





Subcat Reach Pond Link

Routing Diagram for 18009A-SAND FILTER
Prepared by Microsoft, Printed 11/6/2018

Summary for Pond SF1: SAND FILTER

Inflow Area = 1.423 ac, 11.62% Impervious, Inflow Depth = 0.12" for WQv event
Inflow = 0.19 cfs @ 12.07 hrs, Volume= 0.014 af
Outflow = 0.13 cfs @ 12.15 hrs, Volume= 0.014 af, Atten= 34%, Lag= 4.9 min
Primary = 0.13 cfs @ 12.15 hrs, Volume= 0.014 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 63.28' @ 12.15 hrs Surf.Area= 445 sf Storage= 118 cf

Plug-Flow detention time= 23.1 min calculated for 0.014 af (100% of inflow)
Center-of-Mass det. time= 23.1 min (803.9 - 780.8)

Volume	Invert	Avail.Storage	Storage Description
#1	63.00'	368 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

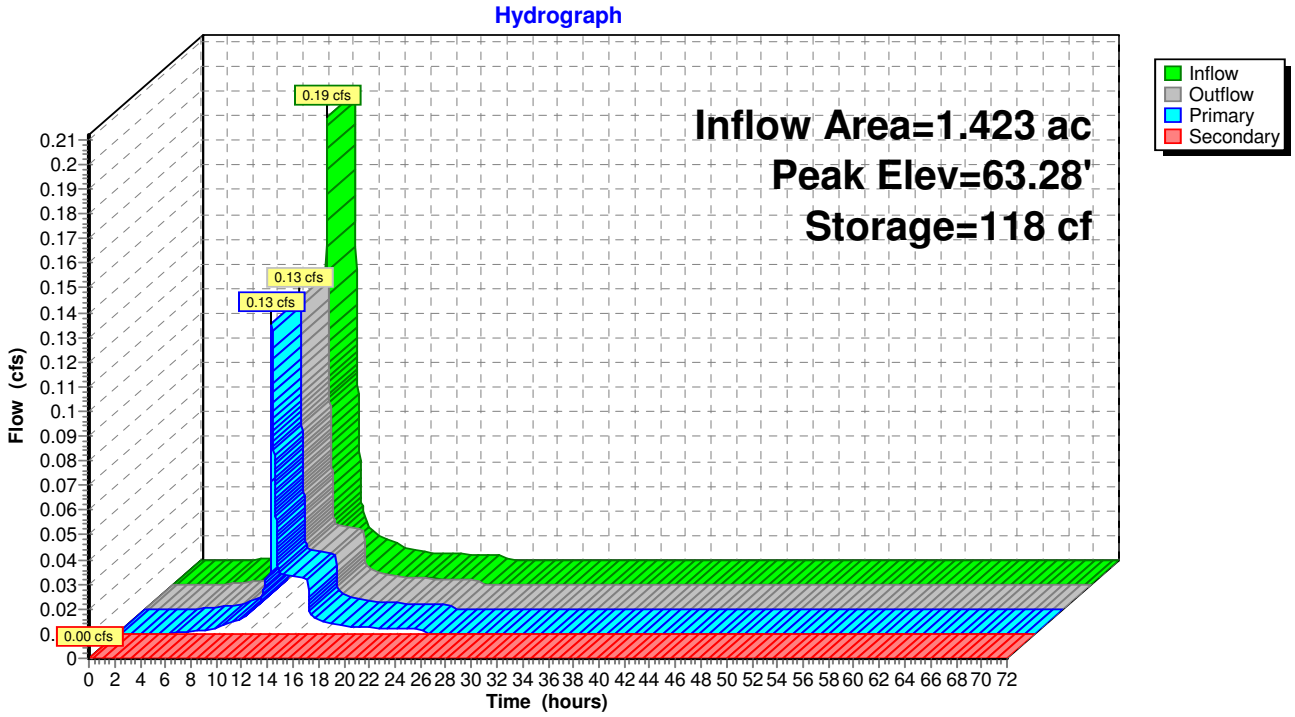
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
63.00	400	0	0
63.50	480	220	220
63.75	700	148	368

Device	Routing	Invert	Outlet Devices
#1	Primary	60.17'	**8.0" Round Culvert** L= 23.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 60.17' / 60.05' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf
#2	Device 1	63.00'	**2.410 in/hr Exfiltration over Surface area**
#3	Device 1	63.25'	**24.0" Horiz. 24" Outlet Structure** C= 0.600 Limited to weir flow at low heads
#4	Secondary	63.50'	**4.0' long x 3.0' breadth TRM Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.12 cfs @ 12.15 hrs HW=63.28' (Free Discharge)
└**1=Culvert** (Passes 0.12 cfs of 2.47 cfs potential flow)
  └**2=Exfiltration** (Exfiltration Controls 0.02 cfs)
  └**3=24" Outlet Structure** (Weir Controls 0.10 cfs @ 0.55 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=63.00' (Free Discharge)
└**4=TRM Weir** (Controls 0.00 cfs)

Pond SF1: SAND FILTER

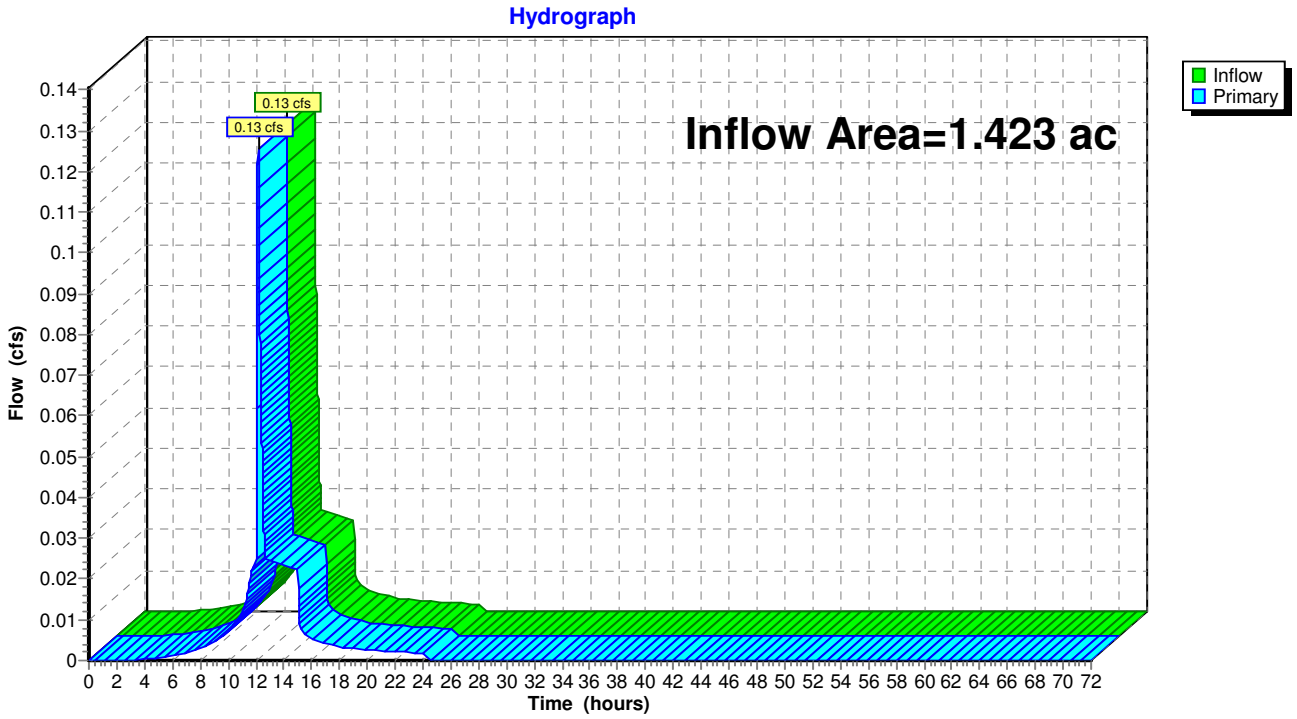


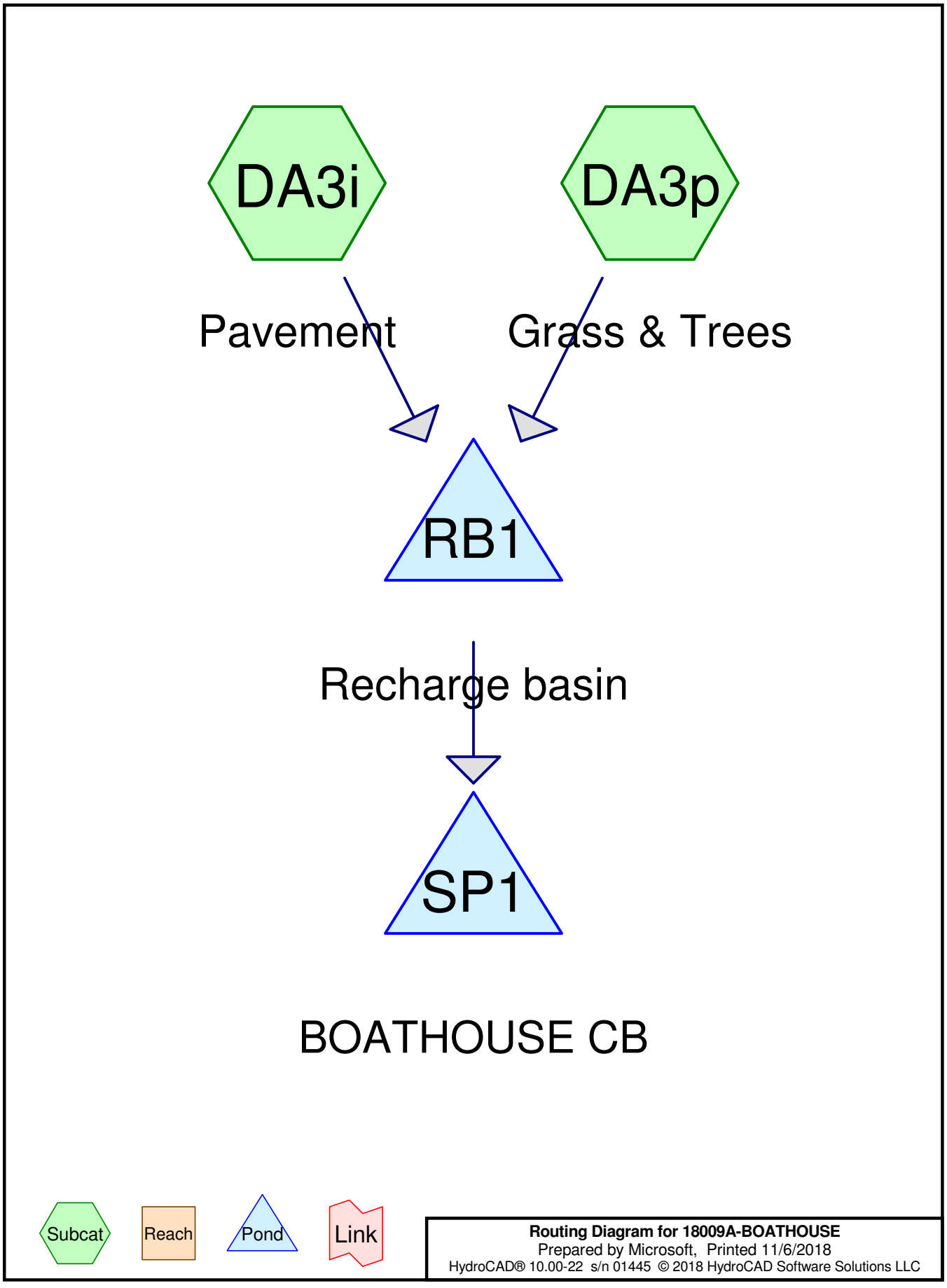
Summary for Pond SP1: JAMAICA POND

Inflow Area = 1.423 ac, 11.62% Impervious, Inflow Depth = 0.12" for WQv event
Inflow = 0.13 cfs @ 12.15 hrs, Volume= 0.014 af
Primary = 0.13 cfs @ 12.15 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: JAMAICA POND





Routing Diagram for 18009A-BOATHOUSE
Prepared by Microsoft, Printed 11/6/2018

Summary for Subcatchment DA3i: Pavement

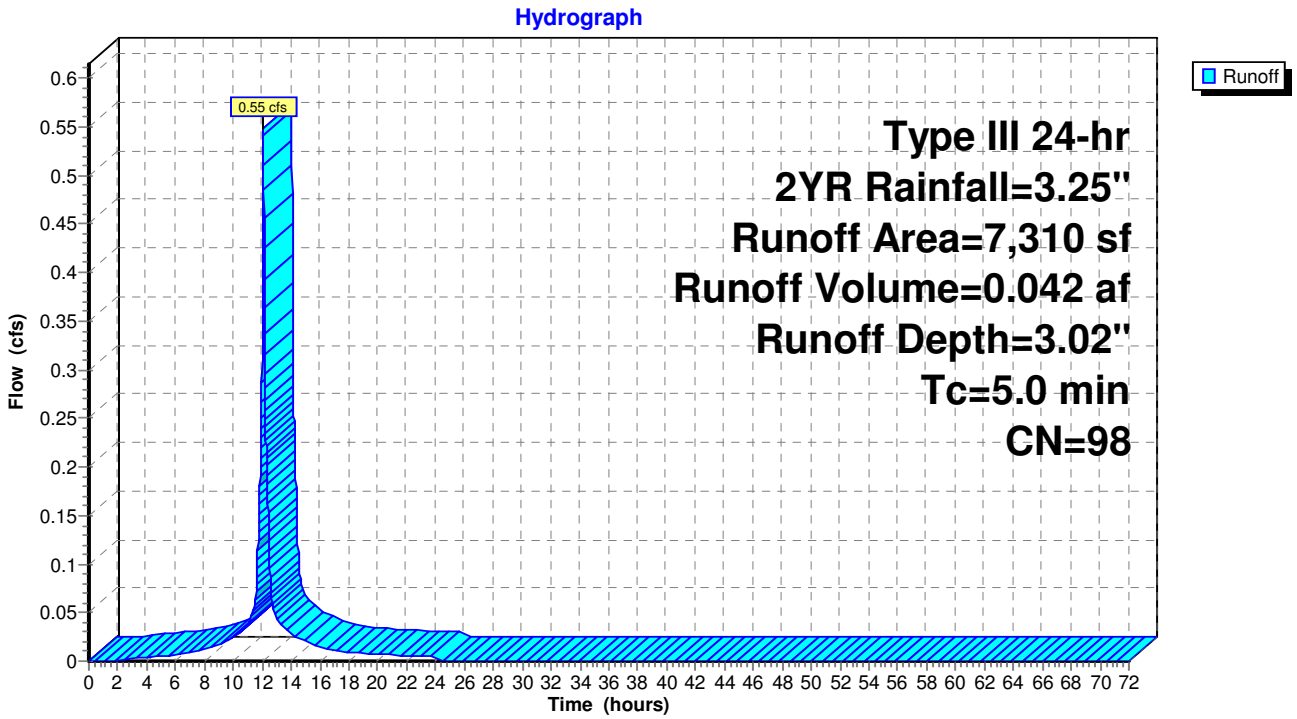
Runoff = 0.55 cfs @ 12.07 hrs, Volume= 0.042 af, Depth= 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2YR Rainfall=3.25"

Area (sf)	CN	Description
7,310	98	Unconnected pavement, HSG A
7,310		100.00% Impervious Area
7,310		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 MIN**

Subcatchment DA3i: Pavement



Summary for Subcatchment DA3p: Grass & Trees

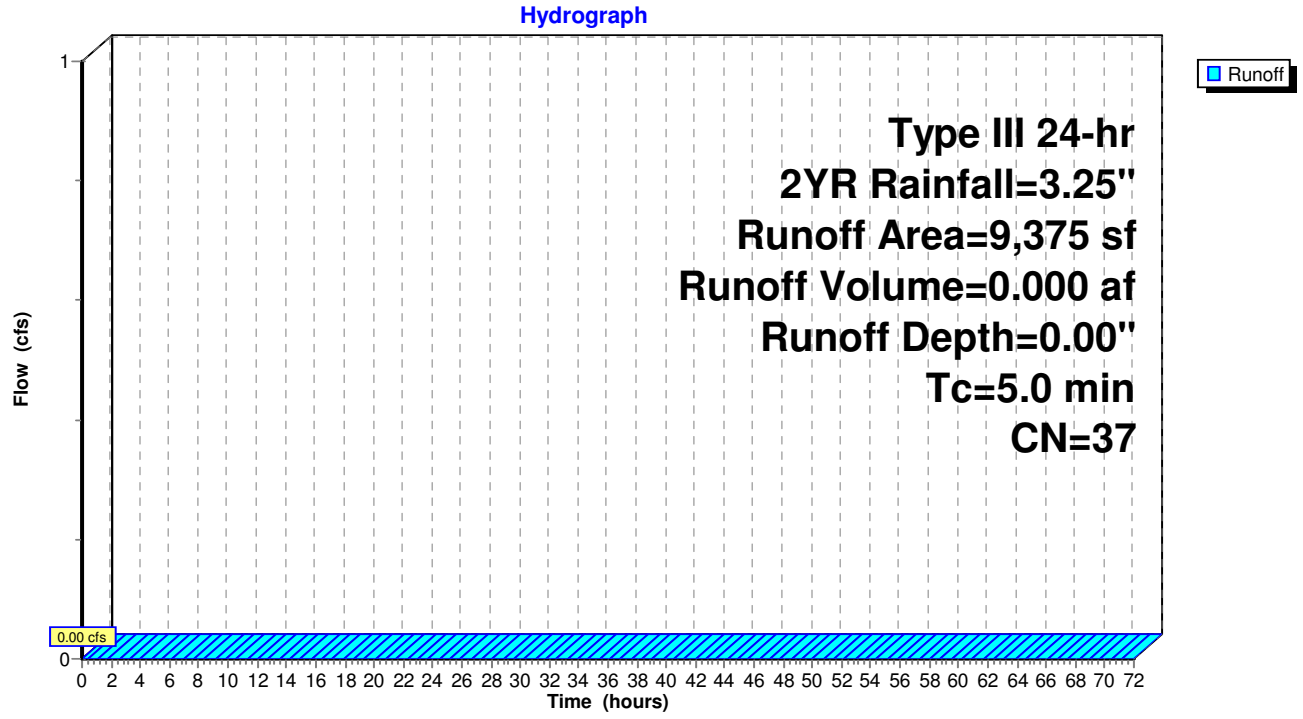
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2YR Rainfall=3.25"

Area (sf)	CN	Description
7,495	39	>75% Grass cover, Good, HSG A
1,880	30	Woods, Good, HSG A
9,375	37	Weighted Average
9,375		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 MIN**

Subcatchment DA3p: Grass & Trees



Summary for Pond RB1: Recharge basin

Inflow Area = 0.383 ac, 43.81% Impervious, Inflow Depth = 1.32" for 2YR event
Inflow = 0.55 cfs @ 12.07 hrs, Volume= 0.042 af
Outflow = 0.52 cfs @ 12.07 hrs, Volume= 0.041 af, Atten= 5%, Lag= 0.0 min
Discarded = 0.05 cfs @ 11.89 hrs, Volume= 0.030 af
Primary = 0.47 cfs @ 12.07 hrs, Volume= 0.010 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.47' @ 12.07 hrs Surf.Area= 50 sf Storage= 233 cf

Plug-Flow detention time= 63.5 min calculated for 0.041 af (96% of inflow)
Center-of-Mass det. time= 39.6 min (794.8 - 755.1)

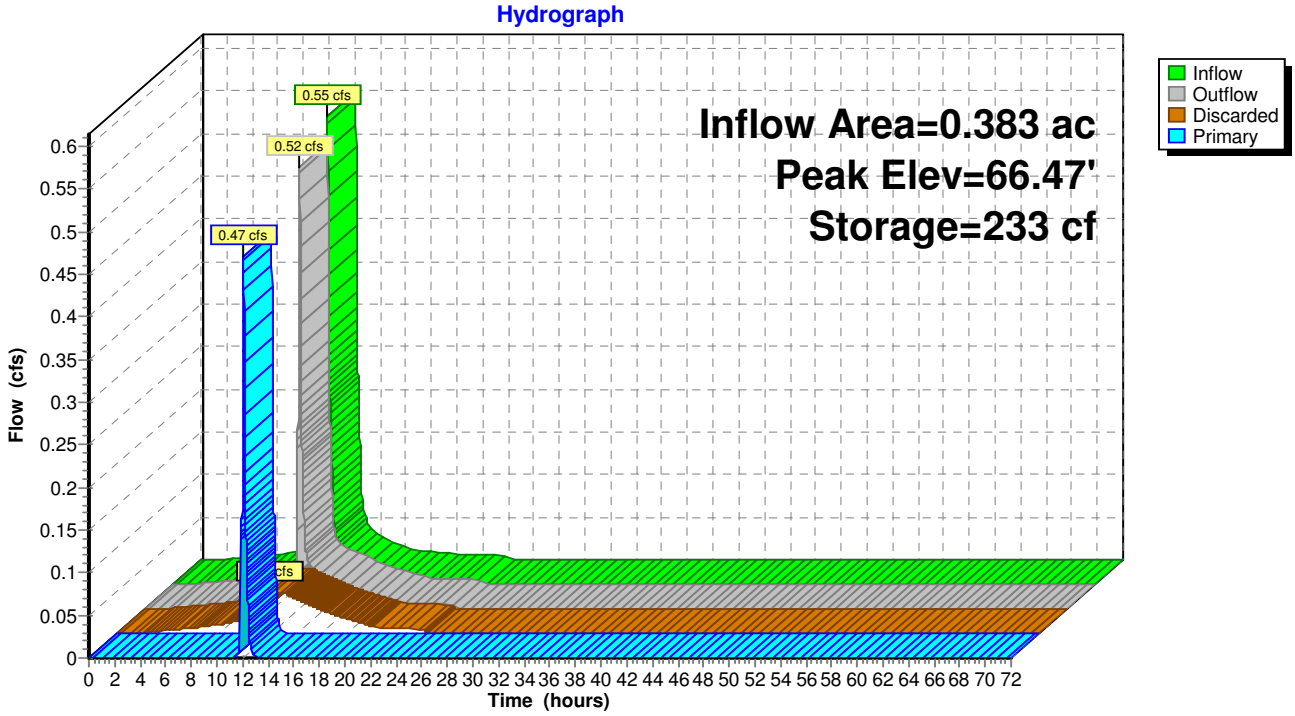
Volume	Invert	Avail.Storage	Storage Description
#1	58.40'	64 cf	**8.00'D x 8.00'H GRAVEL AROUND RCB** 402 cf Overall - 209 cf Embedded = 193 cf x 33.0% Voids
#2	59.40'	170 cf	**6.00'D x 6.00'H RCB** Inside #1 209 cf Overall - 4.0" Wall Thickness = 170 cf
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	58.40'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	66.39'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 11.89 hrs HW=66.42' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.44 cfs @ 12.07 hrs HW=66.47' (Free Discharge)
↑**2=Grate** (Weir Controls 0.44 cfs @ 0.91 fps)

Pond RB1: Recharge basin

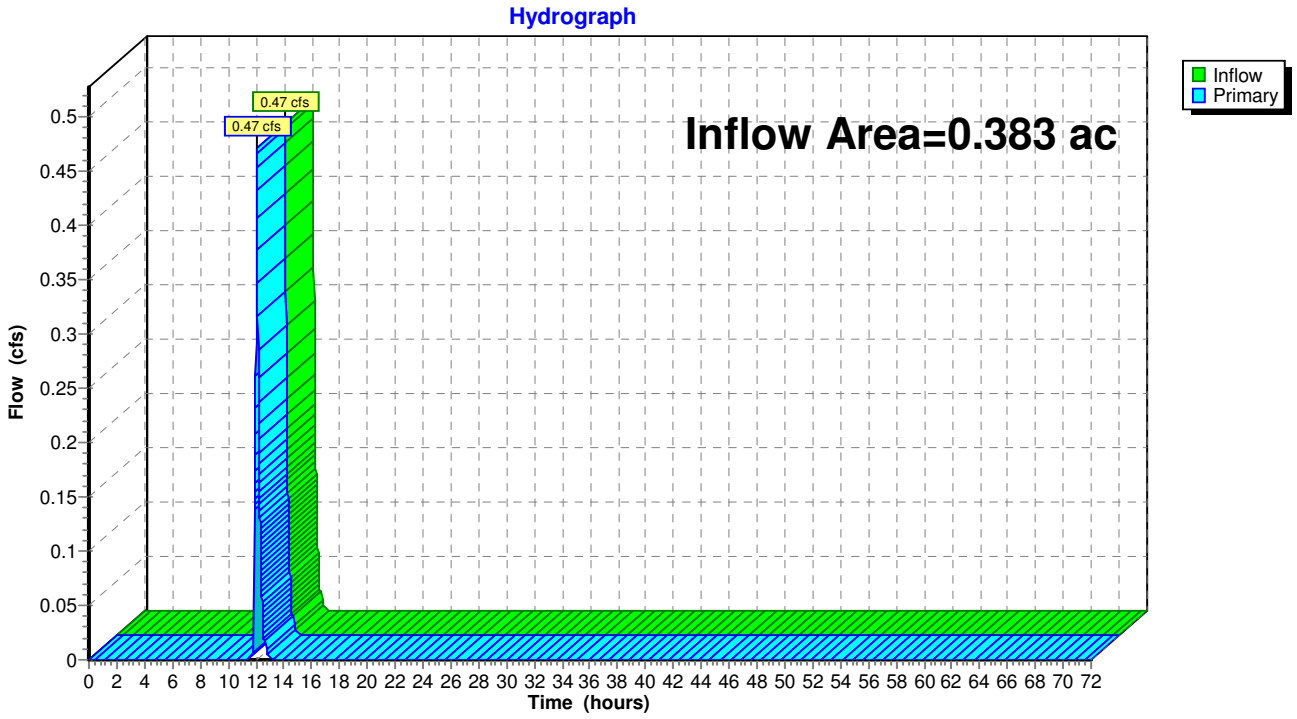


Summary for Pond SP1: BOATHOUSE CB

Inflow Area = 0.383 ac, 43.81% Impervious, Inflow Depth = 0.33" for 2YR event
Inflow = 0.47 cfs @ 12.07 hrs, Volume= 0.010 af
Primary = 0.47 cfs @ 12.07 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: BOATHOUSE CB



Summary for Subcatchment DA3i: Pavement

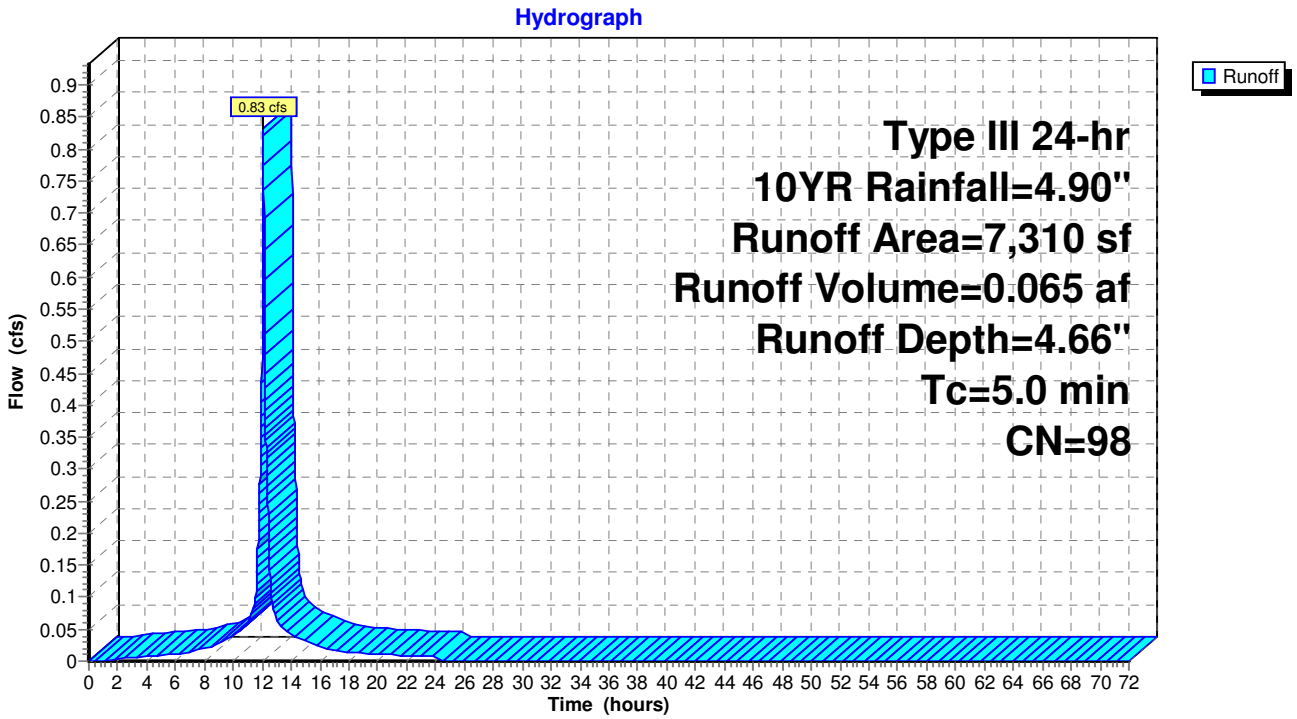
Runoff = 0.83 cfs @ 12.07 hrs, Volume= 0.065 af, Depth= 4.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10YR Rainfall=4.90"

Area (sf)	CN	Description
7,310	98	Unconnected pavement, HSG A
7,310		100.00% Impervious Area
7,310		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 MIN**

Subcatchment DA3i: Pavement



Summary for Subcatchment DA3p: Grass & Trees

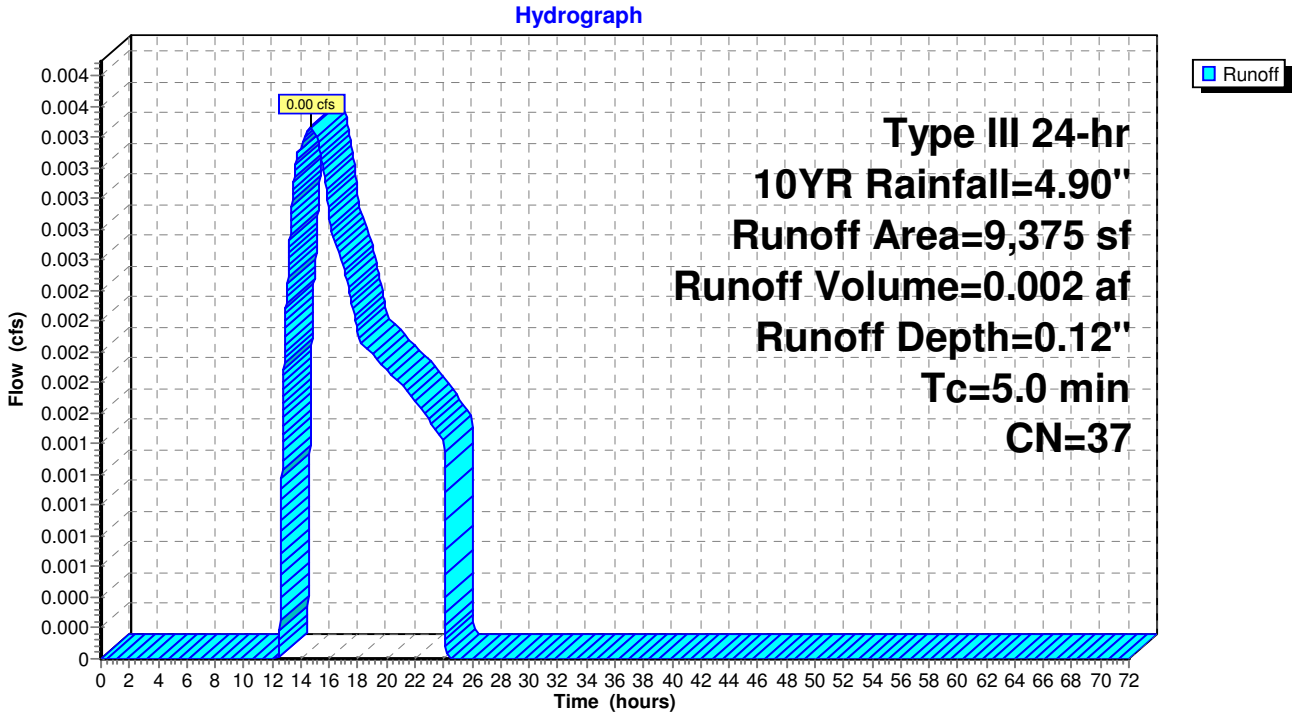
Runoff = 0.00 cfs @ 14.68 hrs, Volume= 0.002 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10YR Rainfall=4.90"

Area (sf)	CN	Description
7,495	39	>75% Grass cover, Good, HSG A
1,880	30	Woods, Good, HSG A
9,375	37	Weighted Average
9,375		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 MIN**

Subcatchment DA3p: Grass & Trees



Summary for Pond RB1: Recharge basin

Inflow Area = 0.383 ac, 43.81% Impervious, Inflow Depth = 2.11" for 10YR event
Inflow = 0.83 cfs @ 12.07 hrs, Volume= 0.067 af
Outflow = 0.88 cfs @ 12.07 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.05 cfs @ 11.59 hrs, Volume= 0.042 af
Primary = 0.83 cfs @ 12.07 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.50' @ 12.07 hrs Surf.Area= 50 sf Storage= 233 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 33.2 min (790.5 - 757.2)

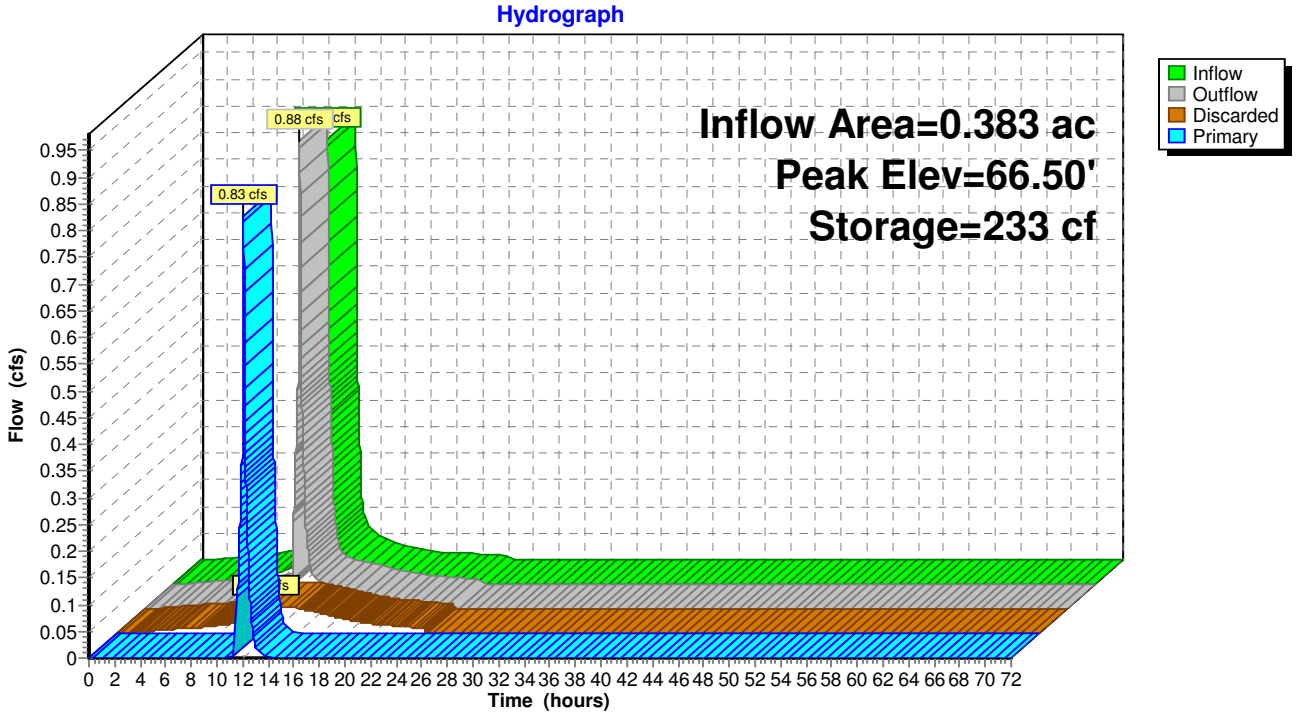
Volume	Invert	Avail.Storage	Storage Description
#1	58.40'	64 cf	**8.00'D x 8.00'H GRAVEL AROUND RCB** 402 cf Overall - 209 cf Embedded = 193 cf x 33.0% Voids
#2	59.40'	170 cf	**6.00'D x 6.00'H RCB** Inside #1 209 cf Overall - 4.0" Wall Thickness = 170 cf
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	58.40'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	66.39'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 11.59 hrs HW=66.41' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.80 cfs @ 12.07 hrs HW=66.50' (Free Discharge)
↑**2=Grate** (Weir Controls 0.80 cfs @ 1.11 fps)

Pond RB1: Recharge basin

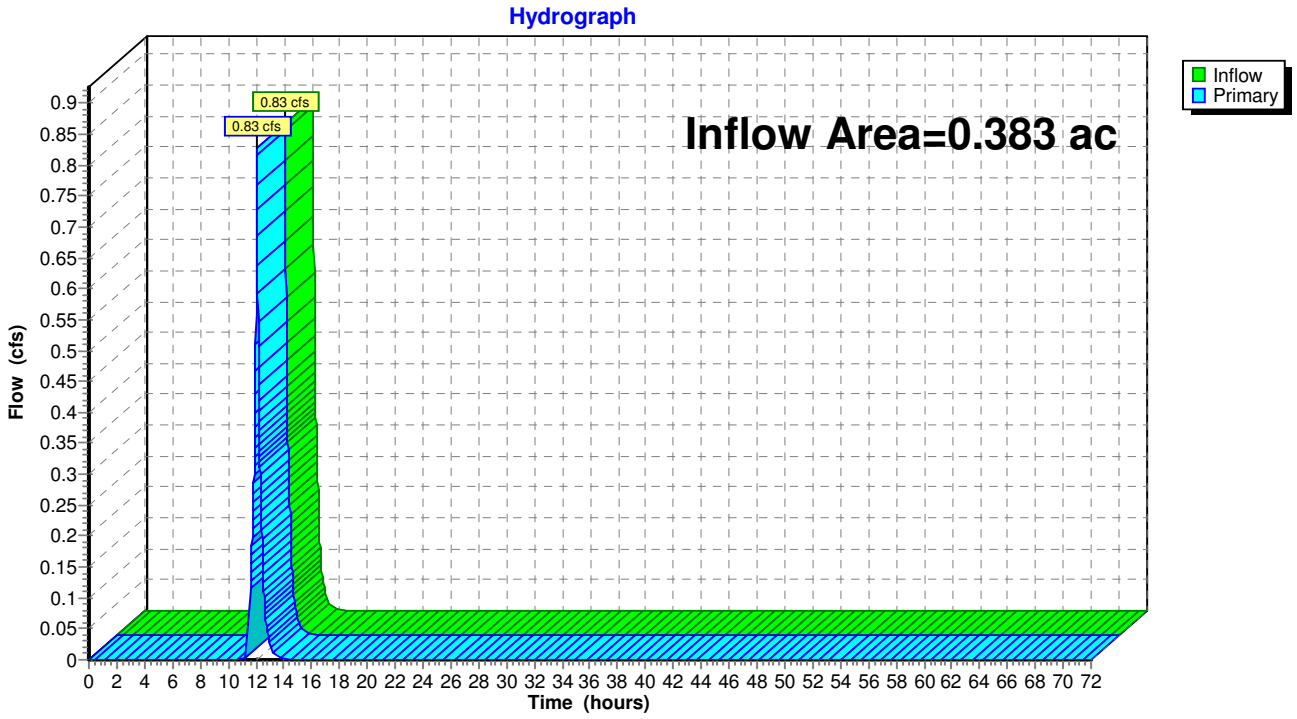


Summary for Pond SP1: BOATHOUSE CB

Inflow Area = 0.383 ac, 43.81% Impervious, Inflow Depth = 0.92" for 10YR event
Inflow = 0.83 cfs @ 12.07 hrs, Volume= 0.029 af
Primary = 0.83 cfs @ 12.07 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: BOATHOUSE CB



Summary for Subcatchment DA3i: Pavement

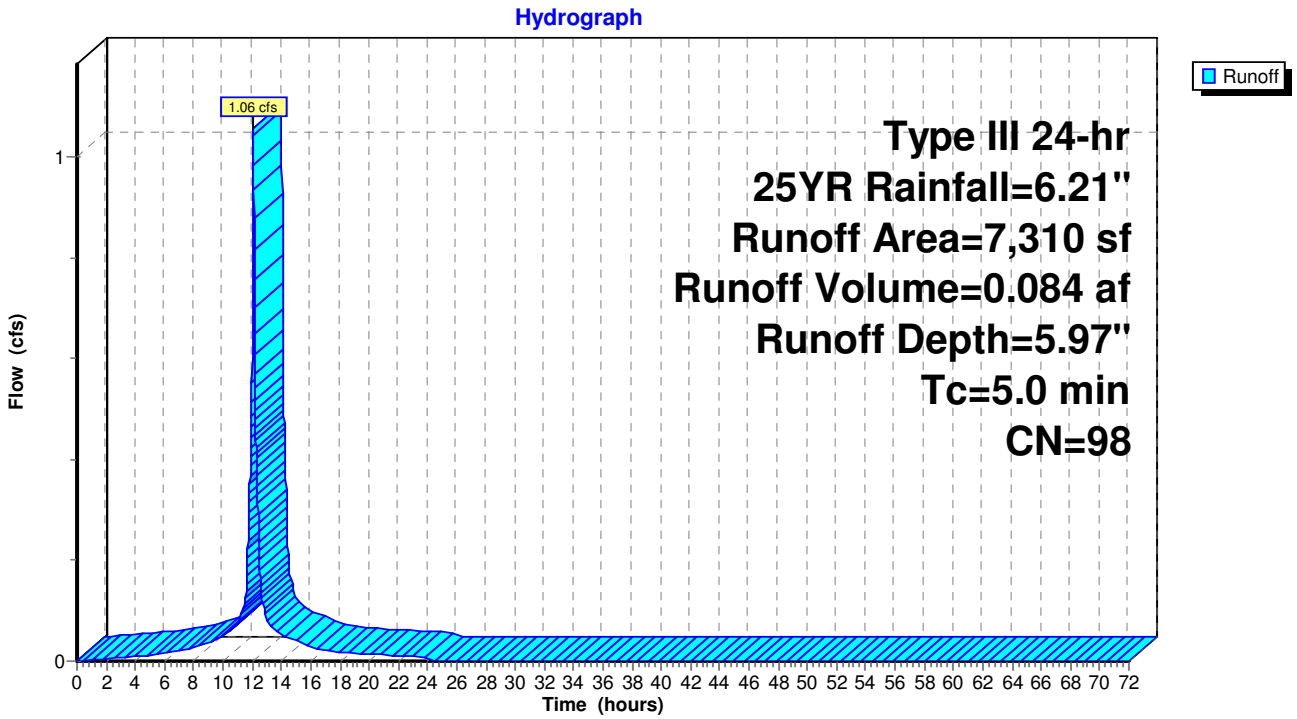
Runoff = 1.06 cfs @ 12.07 hrs, Volume= 0.084 af, Depth= 5.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=6.21"

Area (sf)	CN	Description
7,310	98	Unconnected pavement, HSG A
7,310		100.00% Impervious Area
7,310		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 MIN**

Subcatchment DA3i: Pavement



Summary for Subcatchment DA3p: Grass & Trees

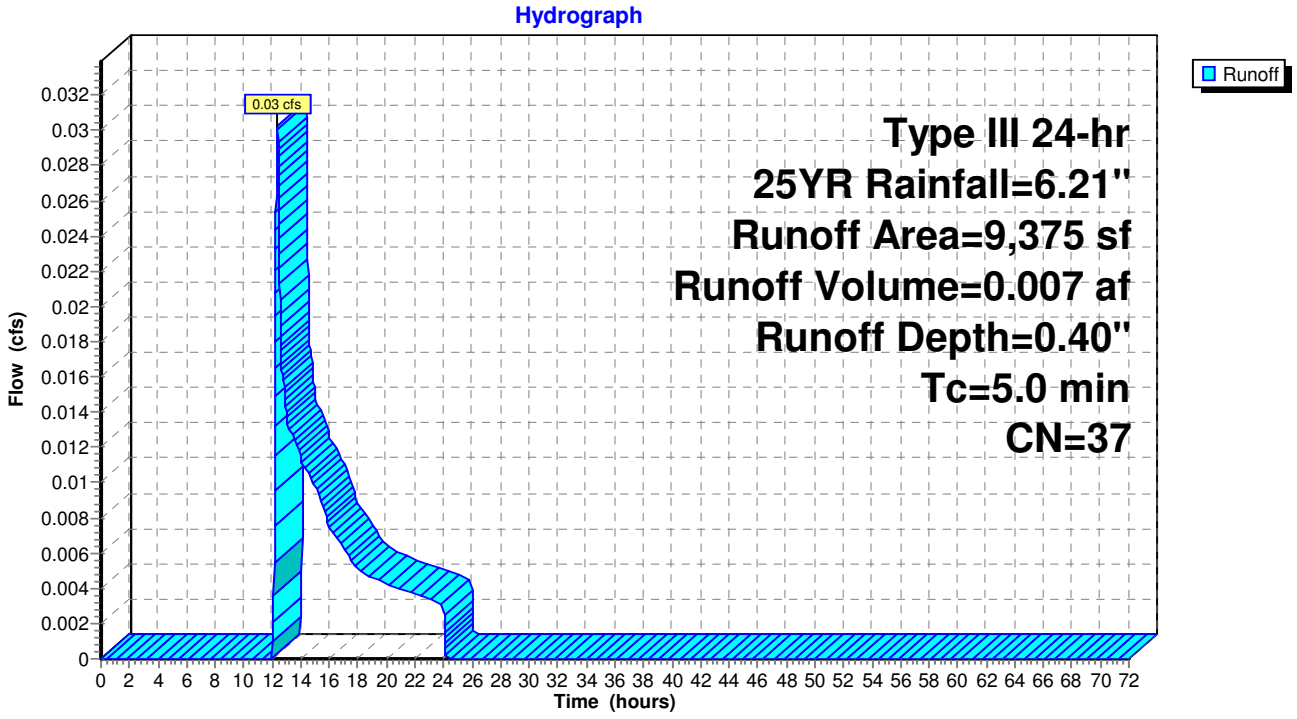
Runoff = 0.03 cfs @ 12.36 hrs, Volume= 0.007 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=6.21"

Area (sf)	CN	Description
7,495	39	>75% Grass cover, Good, HSG A
1,880	30	Woods, Good, HSG A
9,375	37	Weighted Average
9,375		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, 5 MIN**

Subcatchment DA3p: Grass & Trees



Summary for Pond RB1: Recharge basin

Inflow Area = 0.383 ac, 43.81% Impervious, Inflow Depth = 2.84" for 25YR event
Inflow = 1.06 cfs @ 12.07 hrs, Volume= 0.091 af
Outflow = 1.06 cfs @ 12.07 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.05 cfs @ 11.11 hrs, Volume= 0.051 af
Primary = 1.01 cfs @ 12.07 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 66.52' @ 12.07 hrs Surf.Area= 50 sf Storage= 233 cf

Plug-Flow detention time= 36.9 min calculated for 0.091 af (100% of inflow)
Center-of-Mass det. time= 36.1 min (797.6 - 761.5)

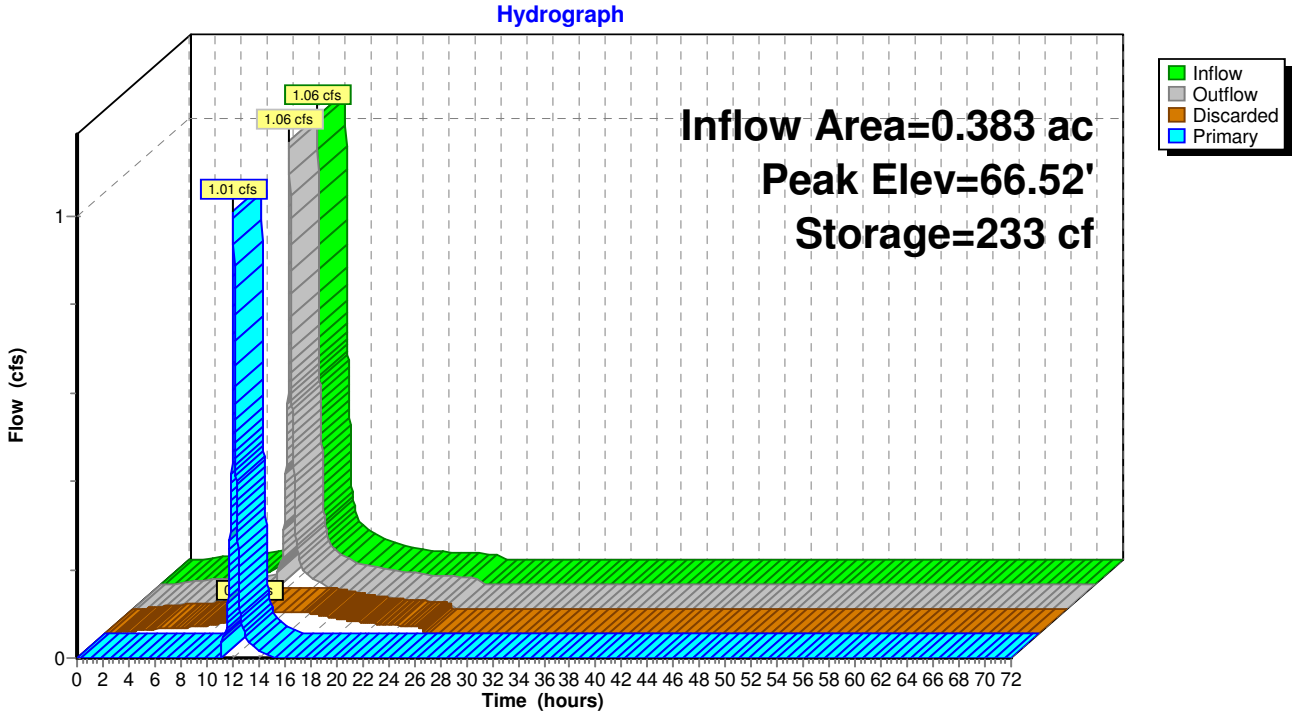
Volume	Invert	Avail.Storage	Storage Description
#1	58.40'	64 cf	**8.00'D x 8.00'H GRAVEL AROUND RCB** 402 cf Overall - 209 cf Embedded = 193 cf x 33.0% Voids
#2	59.40'	170 cf	**6.00'D x 6.00'H RCB** Inside #1 209 cf Overall - 4.0" Wall Thickness = 170 cf
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	58.40'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	66.39'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 11.11 hrs HW=66.40' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.98 cfs @ 12.07 hrs HW=66.52' (Free Discharge)
↑—**2=Grate** (Weir Controls 0.98 cfs @ 1.18 fps)

Pond RB1: Recharge basin

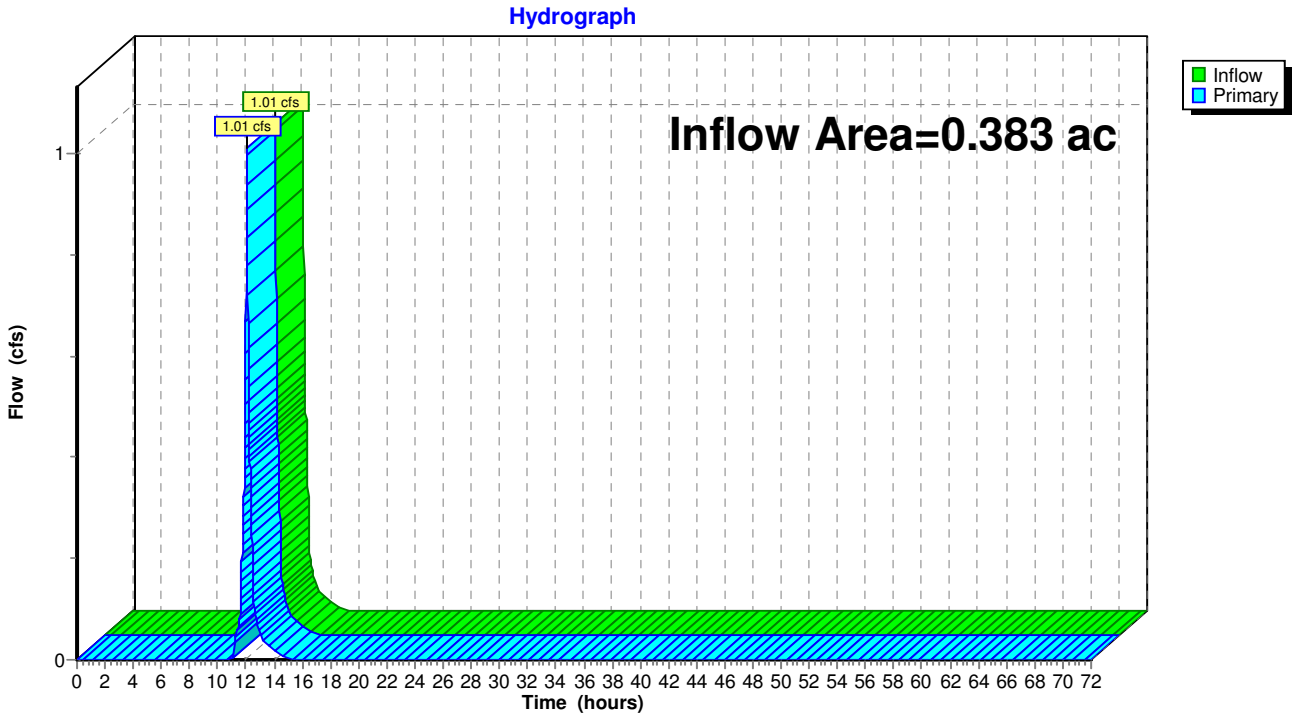


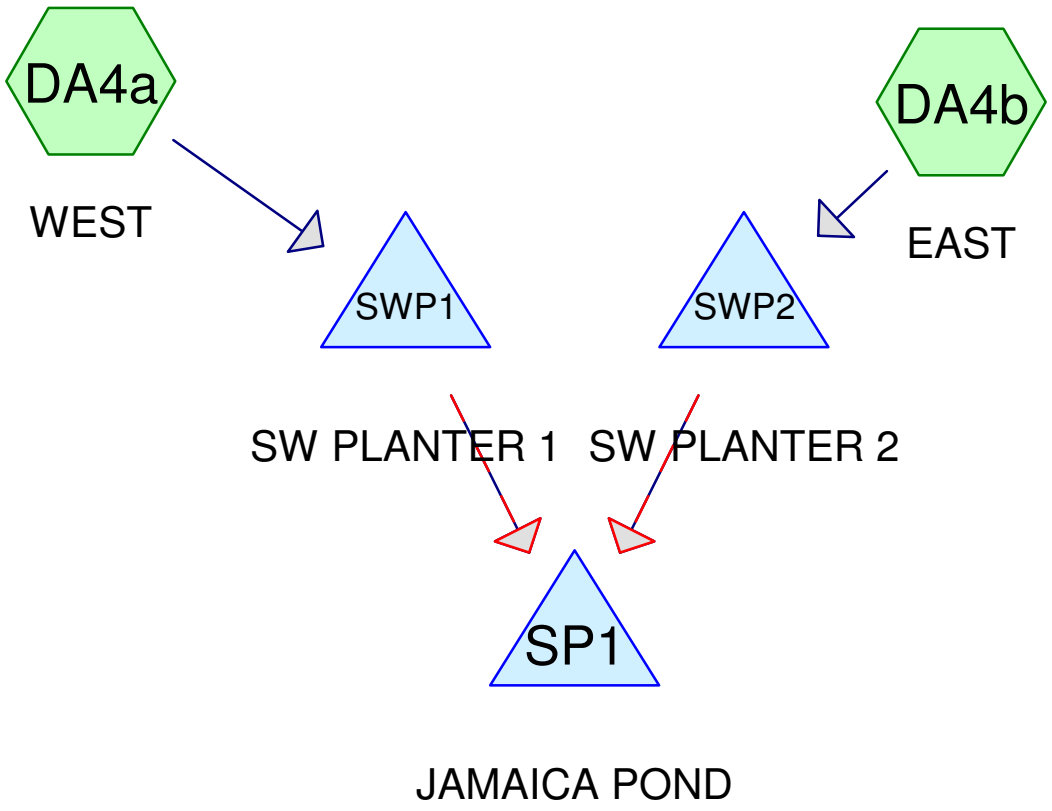
Summary for Pond SP1: BOATHOUSE CB

Inflow Area = 0.383 ac, 43.81% Impervious, Inflow Depth = 1.24" for 25YR event
Inflow = 1.01 cfs @ 12.07 hrs, Volume= 0.040 af
Primary = 1.01 cfs @ 12.07 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: BOATHOUSE CB





Subcat Reach Pond Link

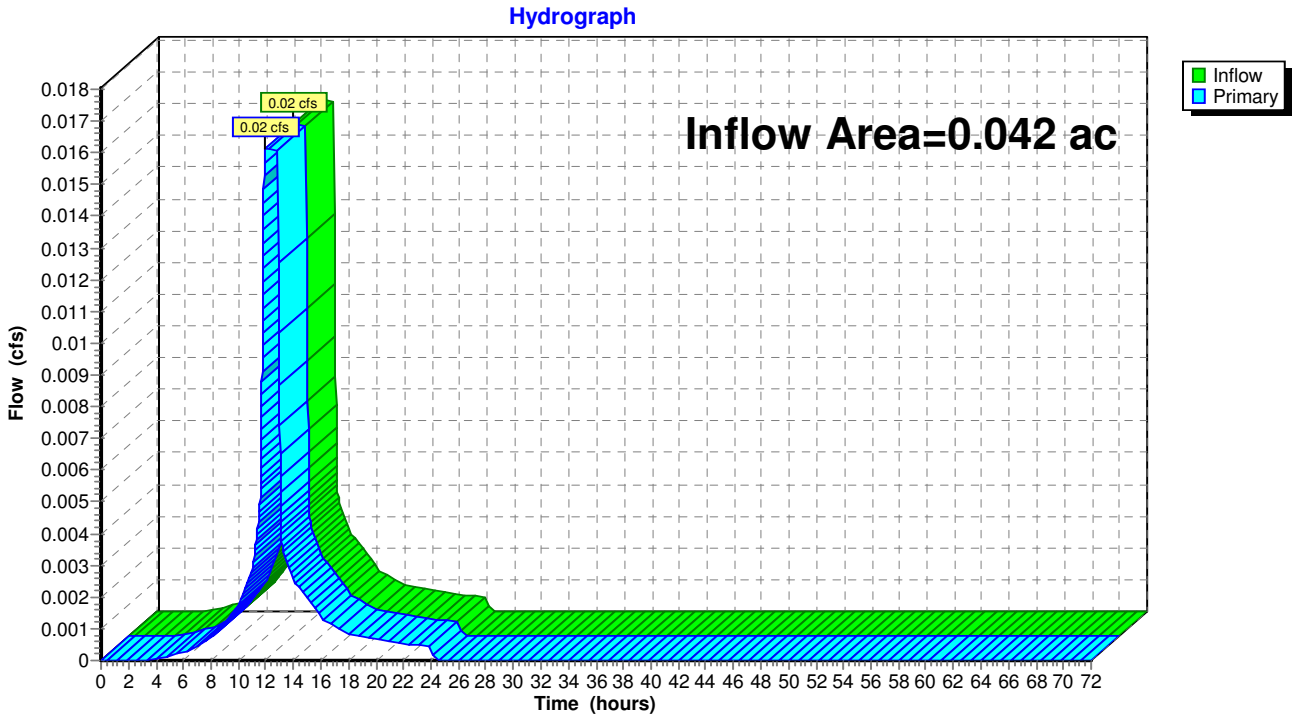
Routing Diagram for 18009A-SW PLANTERS
Prepared by Microsoft, Printed 11/6/2018

Summary for Pond SP1: JAMAICA POND

Inflow Area = 0.042 ac,100.00% Impervious, Inflow Depth = 1.00" for WQv event
Inflow = 0.02 cfs @ 11.89 hrs, Volume= 0.003 af
Primary = 0.02 cfs @ 11.89 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: JAMAICA POND



Summary for Pond SWP1: SW PLANTER 1

Inflow Area = 0.021 ac,100.00% Impervious, Inflow Depth = 1.00" for WQv event
Inflow = 0.02 cfs @ 12.07 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 11.88 hrs, Volume= 0.002 af, Atten= 66%, Lag= 0.0 min
Primary = 0.01 cfs @ 11.88 hrs, Volume= 0.002 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 62.03' @ 12.34 hrs Surf.Area= 144 sf Storage= 11 cf

Plug-Flow detention time= 7.1 min calculated for 0.002 af (100% of inflow)
Center-of-Mass det. time= 7.1 min (787.9 - 780.8)

Volume	Invert	Avail.Storage	Storage Description
#1	61.95'	96 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

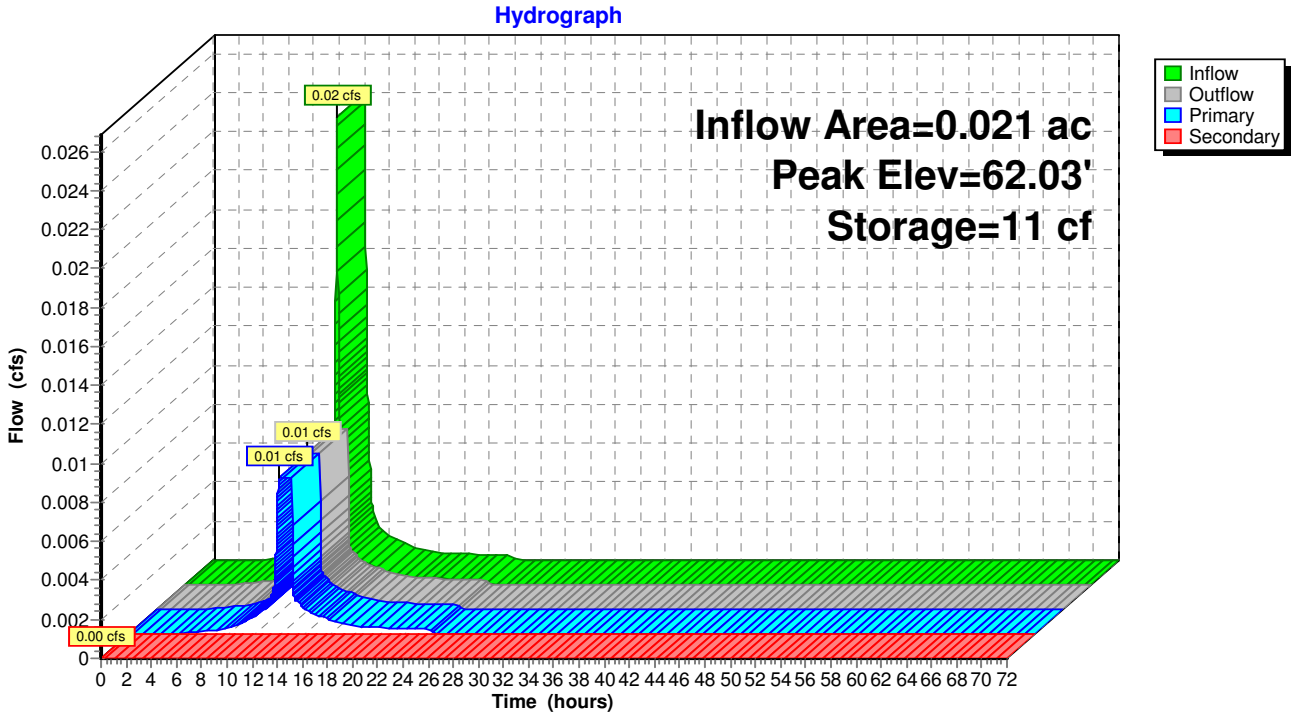
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
61.95	144	0	0
62.45	144	72	72
62.62	144	24	96

Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**6.0" Round Culvert** L= 15.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 59.25' / 59.10' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 1	62.20'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	59.33'	**4.0" Round Culvert** L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.33' / 59.25' S= 0.0053 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 3	61.95'	**2.410 in/hr Exfiltration over Surface area**
#5	Secondary	62.62'	**5.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.01 cfs @ 11.88 hrs HW=61.96' (Free Discharge)
└─**1=Culvert** (Passes 0.01 cfs of 1.48 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Culvert** (Passes 0.01 cfs of 0.52 cfs potential flow)
    └─**4=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=61.95' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond SWP1: SW PLANTER 1



Summary for Pond SWP2: SW PLANTER 2

Inflow Area = 0.021 ac,100.00% Impervious, Inflow Depth = 1.00" for WQv event
Inflow = 0.02 cfs @ 12.07 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 11.89 hrs, Volume= 0.002 af, Atten= 66%, Lag= 0.0 min
Primary = 0.01 cfs @ 11.89 hrs, Volume= 0.002 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 62.03' @ 12.34 hrs Surf.Area= 145 sf Storage= 11 cf

Plug-Flow detention time= 7.0 min calculated for 0.002 af (100% of inflow)
Center-of-Mass det. time= 7.0 min (787.8 - 780.8)

Volume	Invert	Avail.Storage	Storage Description
#1	61.95'	97 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

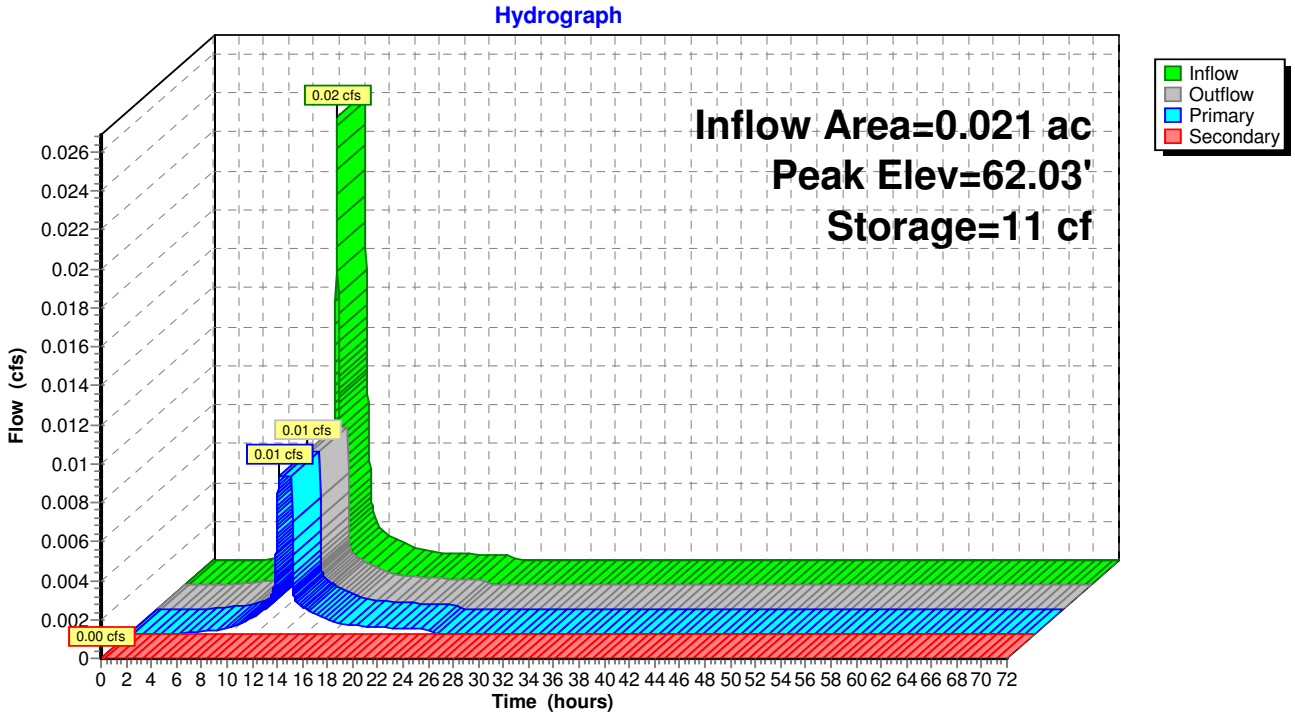
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
61.95	145	0	0
62.45	145	73	73
62.62	145	25	97

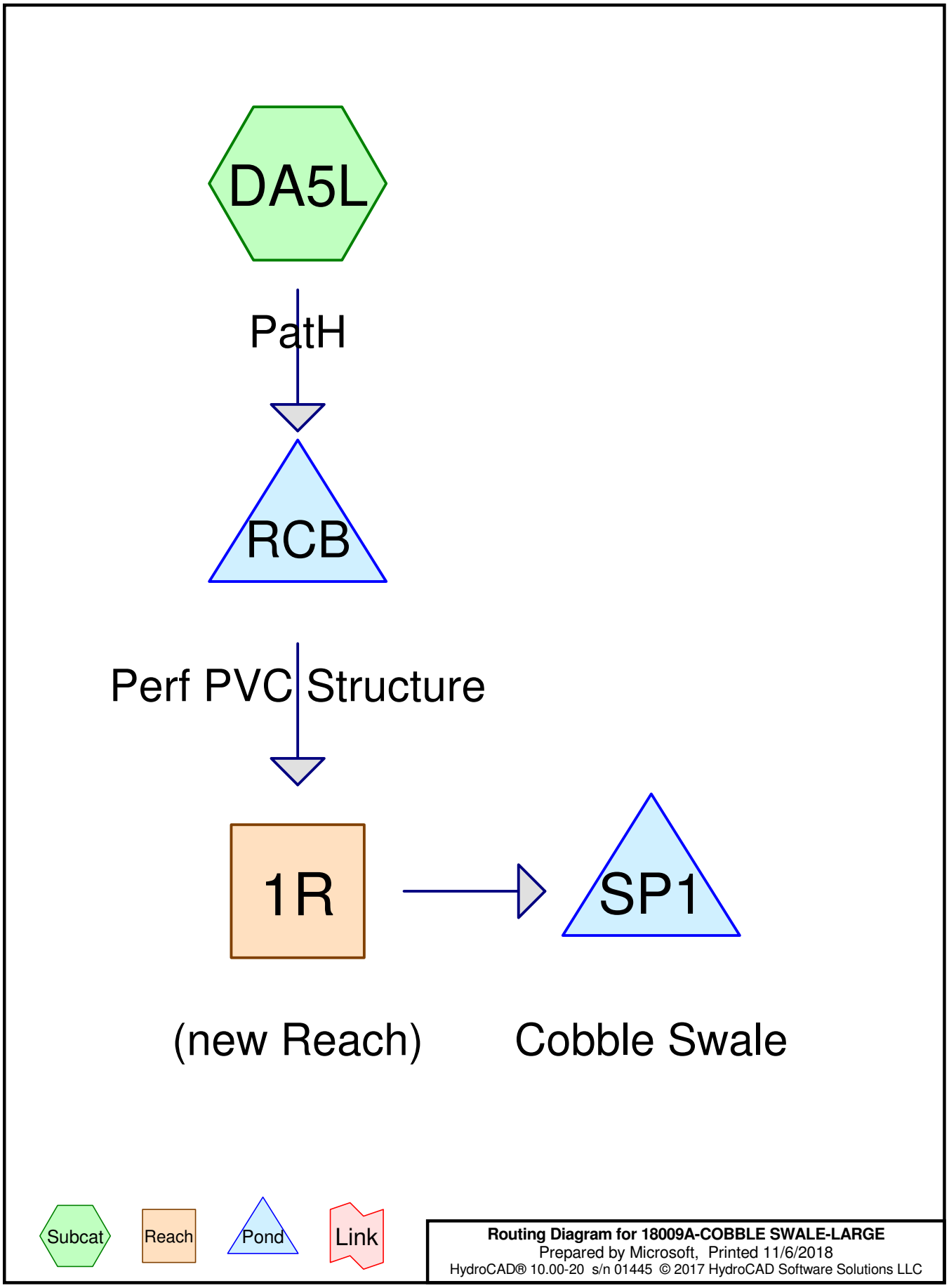
Device	Routing	Invert	Outlet Devices
#1	Primary	59.25'	**6.0" Round Culvert** L= 15.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 59.25' / 59.10' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 1	62.20'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	59.33'	**4.0" Round Culvert** L= 15.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.33' / 59.25' S= 0.0053 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 3	61.95'	**2.410 in/hr Exfiltration over Surface area**
#5	Secondary	62.62'	**5.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.01 cfs @ 11.89 hrs HW=61.96' (Free Discharge)
└─**1=Culvert** (Passes 0.01 cfs of 1.48 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Culvert** (Passes 0.01 cfs of 0.52 cfs potential flow)
    └─**4=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=61.95' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond SWP2: SW PLANTER 2





Routing Diagram for 18009A-COBBLE SWALE-LARGE
Prepared by Microsoft, Printed 11/6/2018

Summary for Pond RCB: Perf PVC Structure

Inflow Area = 0.039 ac,100.00% Impervious, Inflow Depth = 0.41" for .5WQv event
Inflow = 0.02 cfs @ 12.07 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.22 hrs, Volume= 0.001 af, Atten= 53%, Lag= 9.1 min
Discarded = 0.01 cfs @ 12.22 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 59.25' @ 12.22 hrs Surf.Area= 7 sf Storage= 10 cf

Plug-Flow detention time= 9.4 min calculated for 0.001 af (100% of inflow)
Center-of-Mass det. time= 9.4 min (814.6 - 805.2)

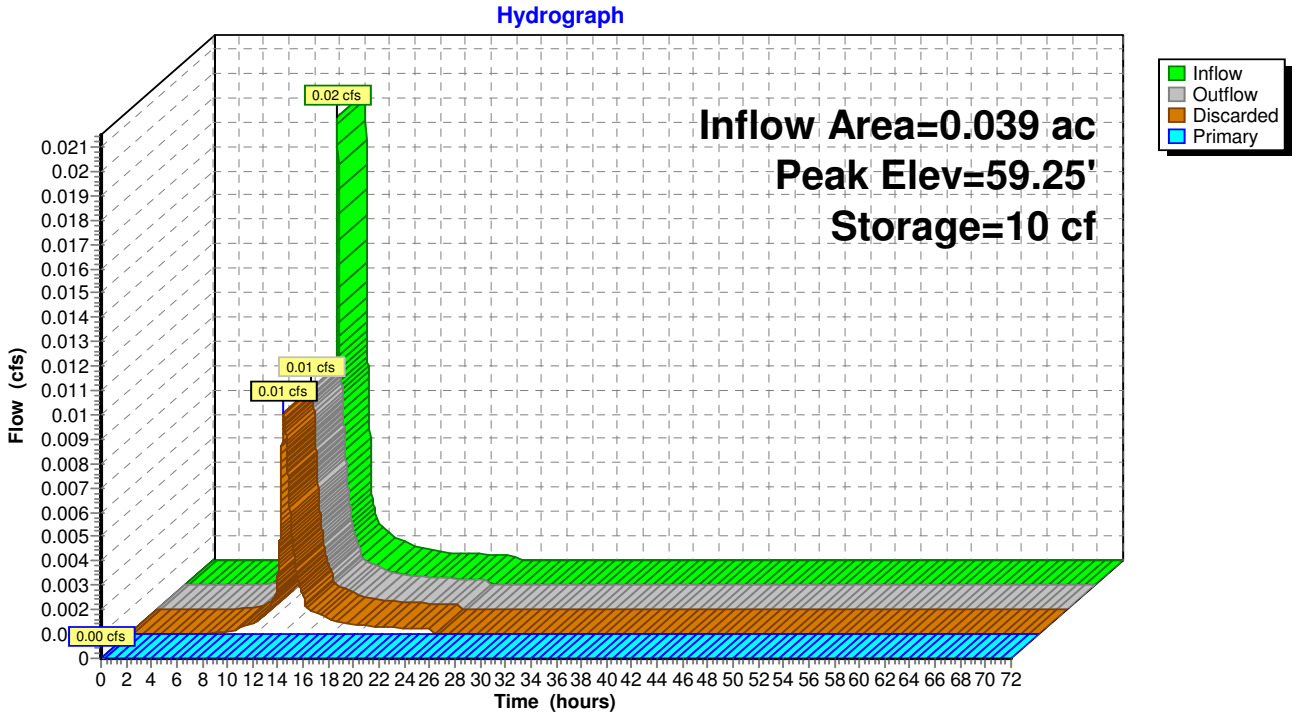
Volume	Invert	Avail.Storage	Storage Description
#1	55.00'	9 cf	**3.00'D x 5.00'H GRAVEL AROUND RCB** 35 cf Overall - 9 cf Embedded = 27 cf x 33.0% Voids
#2	56.00'	3 cf	**1.00'D x 4.00'H RCB** Inside #1 9 cf Overall - 4.0" Wall Thickness = 3 cf
		12 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	55.00'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	60.00'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 12.22 hrs HW=59.25' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=55.00' (Free Discharge)
↑**2=Grate** (Controls 0.00 cfs)

Pond RCB: Perf PVC Structure

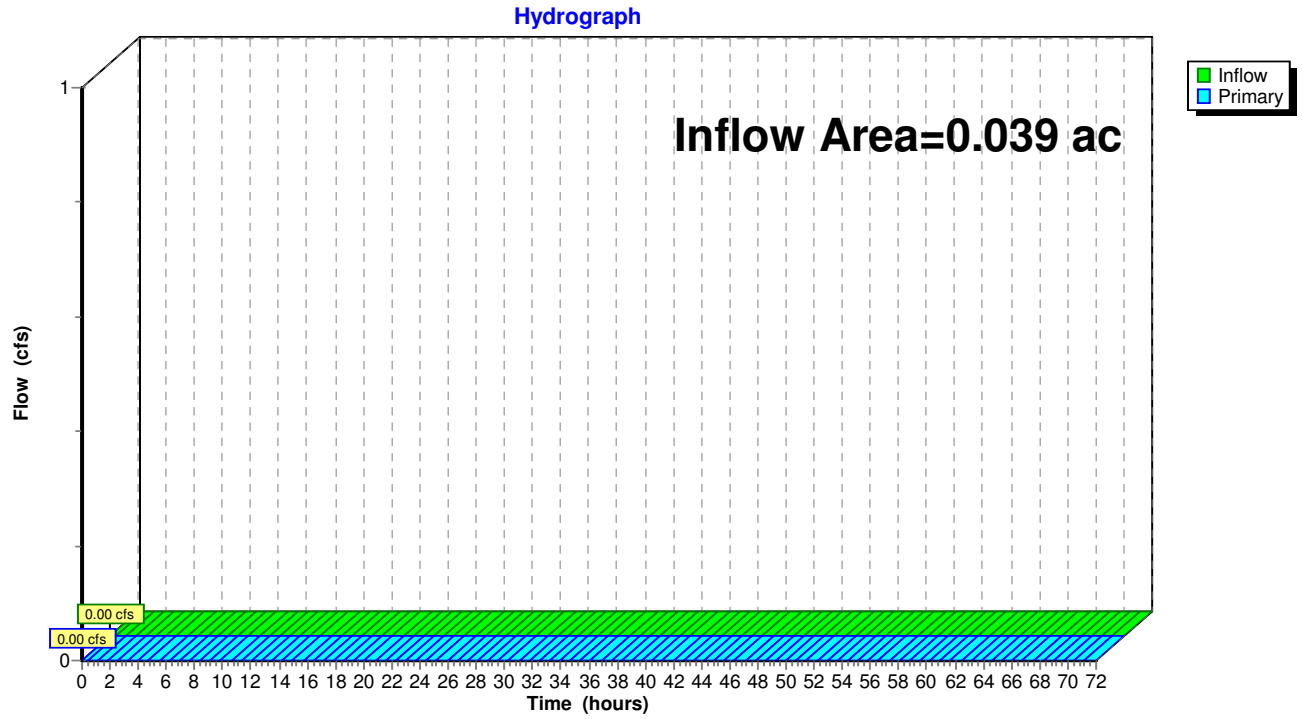


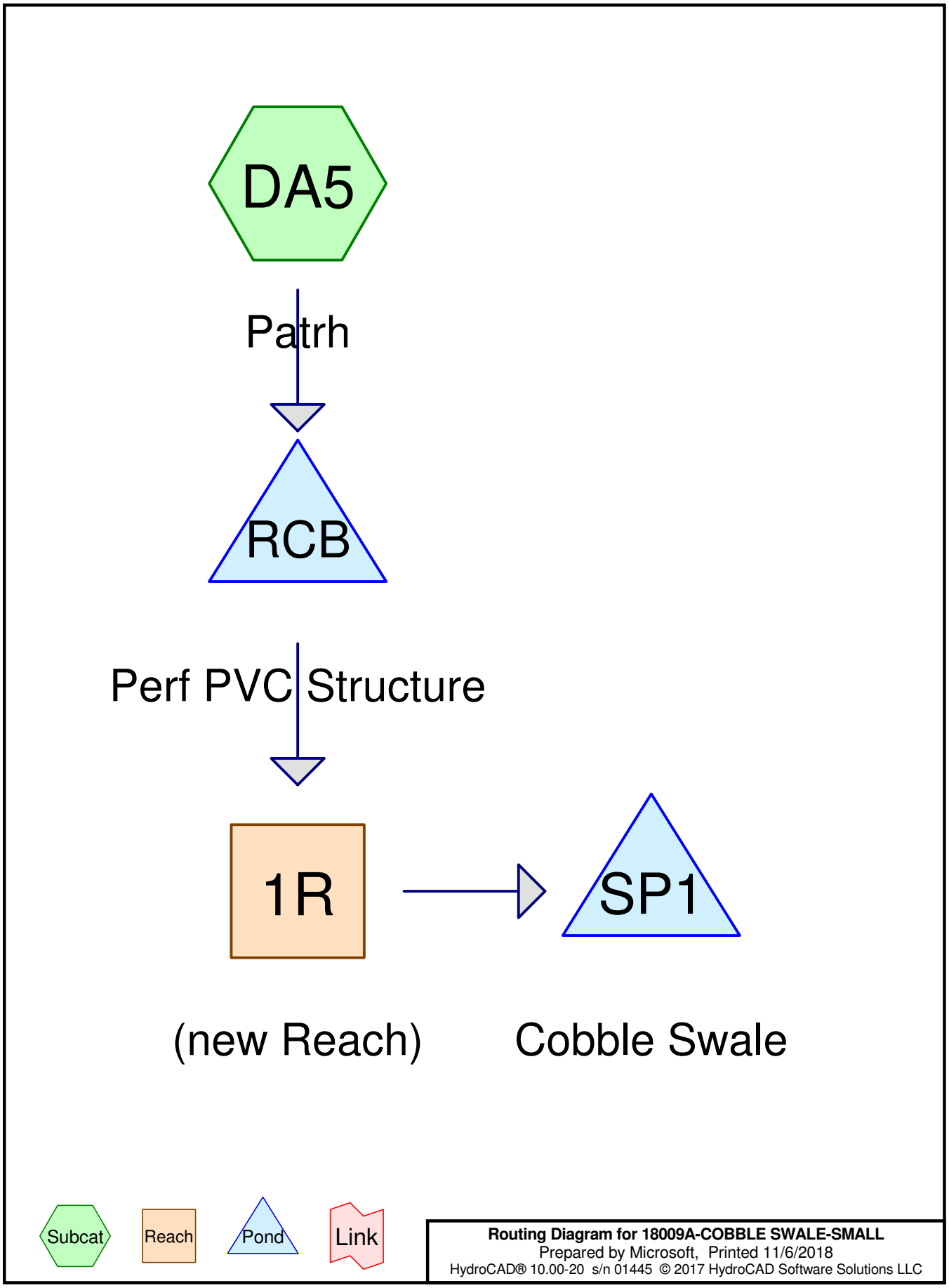
Summary for Pond SP1: Cobble Swale

Inflow Area = 0.039 ac,100.00% Impervious, Inflow Depth = 0.00" for .5WQv event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: Cobble Swale





Routing Diagram for 18009A-COBBLE SWALE-SMALL
Prepared by Microsoft, Printed 11/6/2018

Summary for Pond RCB: Perf PVC Structure

Inflow Area = 0.016 ac,100.00% Impervious, Inflow Depth = 1.00" for WQv event
Inflow = 0.02 cfs @ 12.07 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.21 hrs, Volume= 0.001 af, Atten= 52%, Lag= 8.4 min
Discarded = 0.01 cfs @ 12.21 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 59.12' @ 12.21 hrs Surf.Area= 7 sf Storage= 10 cf

Plug-Flow detention time= 9.0 min calculated for 0.001 af (100% of inflow)
Center-of-Mass det. time= 9.0 min (789.8 - 780.8)

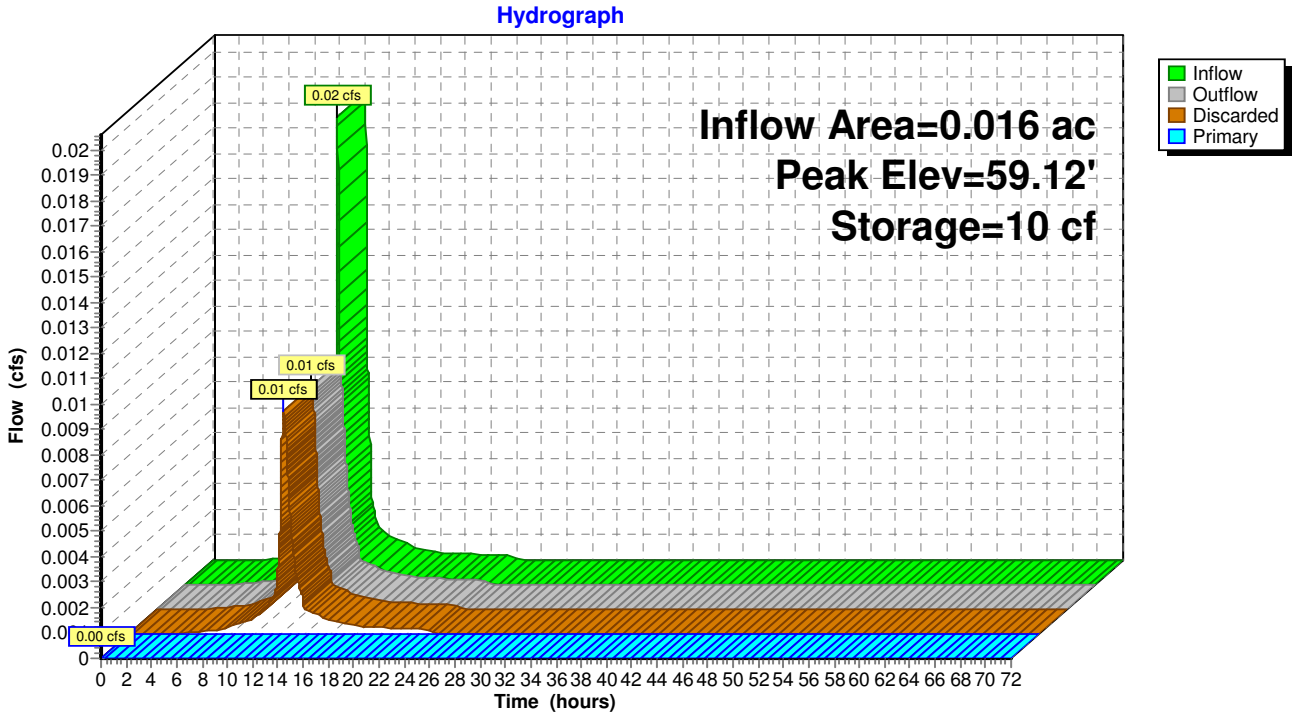
Volume	Invert	Avail.Storage	Storage Description
#1	55.00'	9 cf	**3.00'D x 5.00'H GRAVEL AROUND RCB** 35 cf Overall - 9 cf Embedded = 27 cf x 33.0% Voids
#2	56.00'	3 cf	**1.00'D x 4.00'H RCB** Inside #1 9 cf Overall - 4.0" Wall Thickness = 3 cf
		12 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	55.00'	**8.270 in/hr Exfiltration over Wetted area** Phase-In= 0.01'
#2	Primary	60.00'	**24.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 12.21 hrs HW=59.12' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=55.00' (Free Discharge)
↑**2=Grate** (Controls 0.00 cfs)

Pond RCB: Perf PVC Structure

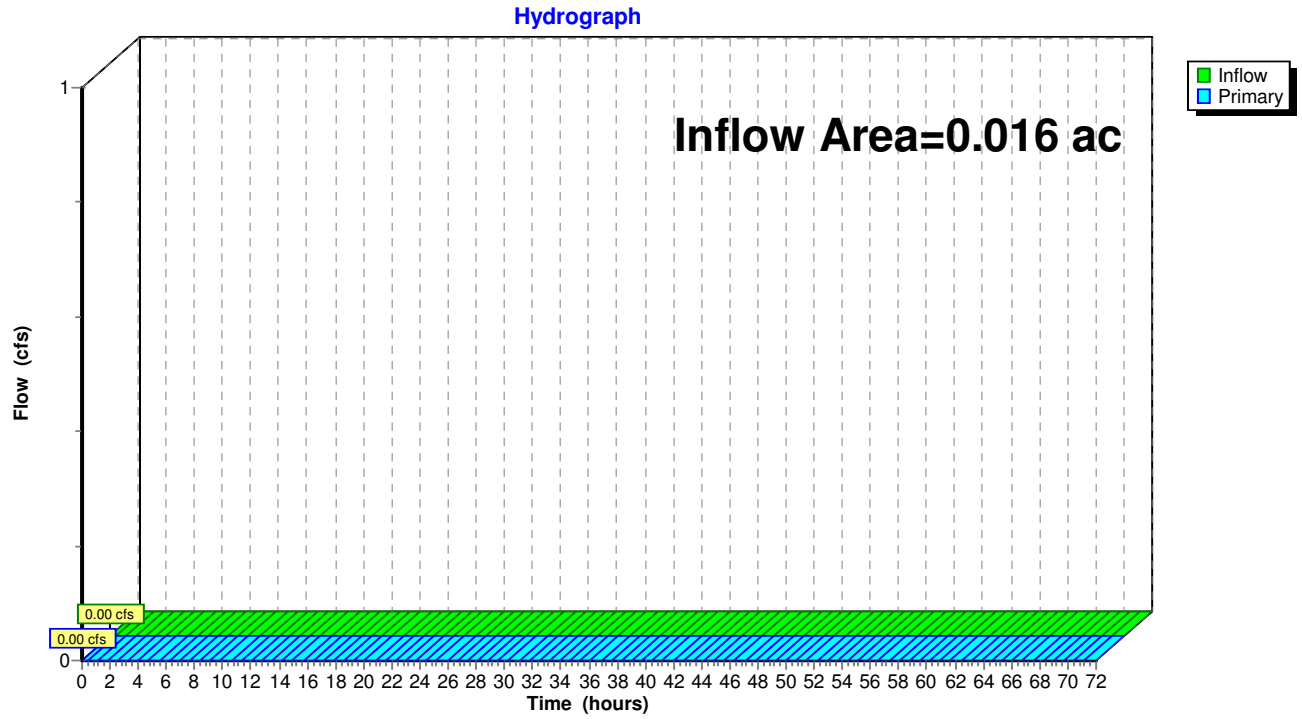


Summary for Pond SP1: Cobble Swale

Inflow Area = 0.016 ac,100.00% Impervious, Inflow Depth = 0.00" for WQv event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond SP1: Cobble Swale



APPENDIX E

TSS Calculations

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: Sand Filter

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Sediment Forebay	**0.25**	**1.00**	**0.25**	**0.75**
Sand Filter	**0.80**	**0.75**	**0.60**	**0.15**
	0.00	**0.15**	**0.00**	**0.15**
	0.00	**0.15**	**0.00**	**0.15**
	0.00	**0.15**	**0.00**	**0.15**

Total TSS Removal = **85%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Jamaica Pond

Prepared By: BRK

Date: 10/24/2018

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: Boathouse Planters

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Bioretention Area	**0.90**	**1.00**	**0.90**	**0.10**
	0.00	**0.10**	**0.00**	**0.10**
	0.00	**0.10**	**0.00**	**0.10**
	0.00	**0.10**	**0.00**	**0.10**
	0.00	**0.10**	**0.00**	**0.10**

Total TSS Removal = **90%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: **Jamaica Pond**

Prepared By: **BRK**

Date: **10/24/2018**

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Bioswale

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Sediment Forebay	**0.25**	**1.00**	**0.25**	**0.75**
Bioretention Area	**0.90**	**0.75**	**0.68**	**0.08**
	0.00	**0.08**	**0.00**	**0.08**
	0.00	**0.08**	**0.00**	**0.08**
	0.00	**0.08**	**0.00**	**0.08**

Total TSS Removal = **93%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Jamaica Pond
Prepared By: BRK
Date: 10/24/2018

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed
1. From MassDEP Stormwater Handbook Vol. 1

INSTRUCTIONS:

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Cobblestone Spillway Retrofits

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**
Deep Sump and Hooded Catch Basin	**0.25**	**0.75**	**0.19**	**0.56**
	0.00	**0.56**	**0.00**	**0.56**
	0.00	**0.56**	**0.00**	**0.56**
	0.00	**0.56**	**0.00**	**0.56**

Total TSS Removal = **44%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: Jamaica Pond

Prepared By: BRK

Date: 10/24/2018

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

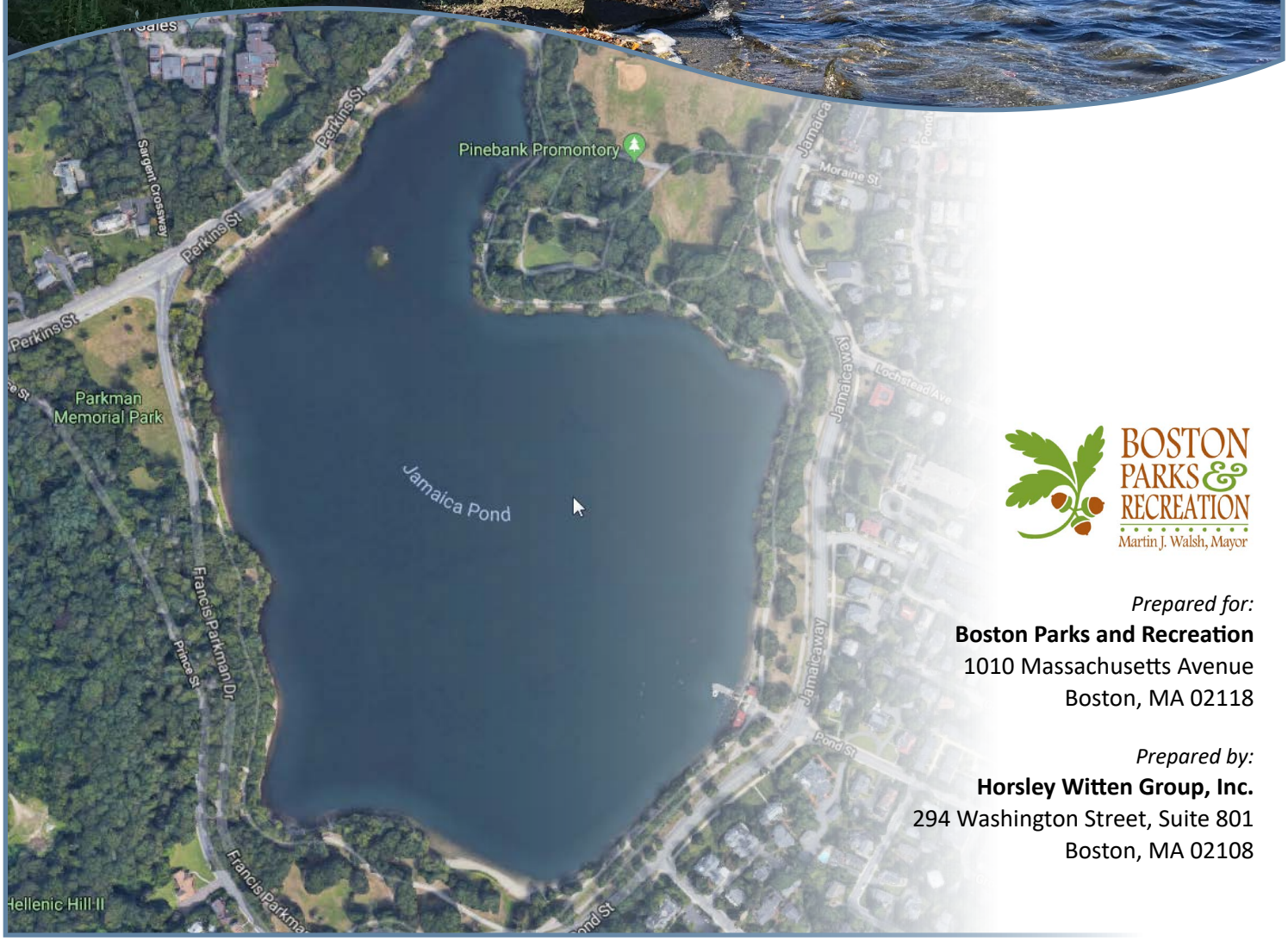
1. From MassDEP Stormwater Handbook Vol. 1

Horsley Witten Group
Sustainable Environmental Solutions
294 Washington Street • Suite 801 • Boston, MA 02108
857-263-8193 • horsleywitten.com

Operation and Maintenance Plan

Stormwater Retrofits Jamaica Pond Park

November, 2018



BOSTON PARKS & RECREATION
Martin J. Walsh, Mayor

Prepared for:
Boston Parks and Recreation
1010 Massachusetts Avenue
Boston, MA 02118

Prepared by:
Horsley Witten Group, Inc.
294 Washington Street, Suite 801
Boston, MA 02108

Operation & Maintenance Plan
Stormwater Retrofits
Jamaica Pond Park

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Stormwater Retrofits
Jamaica Pond Park

1.0 INTRODUCTION

The following landscaped stormwater management areas for the proposed Jamaica Pond Park improvements were designed to treat stormwater runoff prior to discharge:

- Vegetated Sand Filters
  - Landscaped depression deigned to hold, treat and infiltrate stormwater by filtering through an underground sand matrix covered with loamy sand topsoil.
- Bioswale
  - Open vegetated channels designed to hold, treat and convey small amounts of stormwater, while promoting filtration of runoff into an underlying manufactured soil matrix to remove both nitrogen and phosphorus, and reduce the pathway runoff stormwater runoff through infiltration.
- Stormwater Planters
  - Stormwater planters a loamy sand blended soil filter media and vegetation to remove both nitrogen and phosphorus, and reduce stormwater runoff from the Boathouse runoff.

All three are types of Green Infrastructure (GI) storm practices have a proven track record of better pollutant removal capabilities than more conventional drainage systems. The stormwater practices implemented with the Park also includes cobblestone spillway repair and retrofit with a 12” diameter perforated drainage structures with an inlet filters. The small perforated PVC basins are designed to capture and infiltrate the water quality volume prior to discharging to the pond. An inlet filter is installed just below the grate to capture sediment, debris and litter prior to entering the basin.

Proper operation and maintenance (O&M) are vital to their long-term success. The regularly scheduled maintenance as outlined in this guide is critical to ensure proper function, maintain infiltration rates and storage capacity and preserve the pollutant removal capabilities as well as the visual integrity. The maintenance provider shall provide, inspect, and maintain all measures as outlined in this maintenance guide throughout the year. Regularly scheduled maintenance can prevent deficiencies in the effectiveness of the systems, due to sediment build-up, damage, or deterioration.

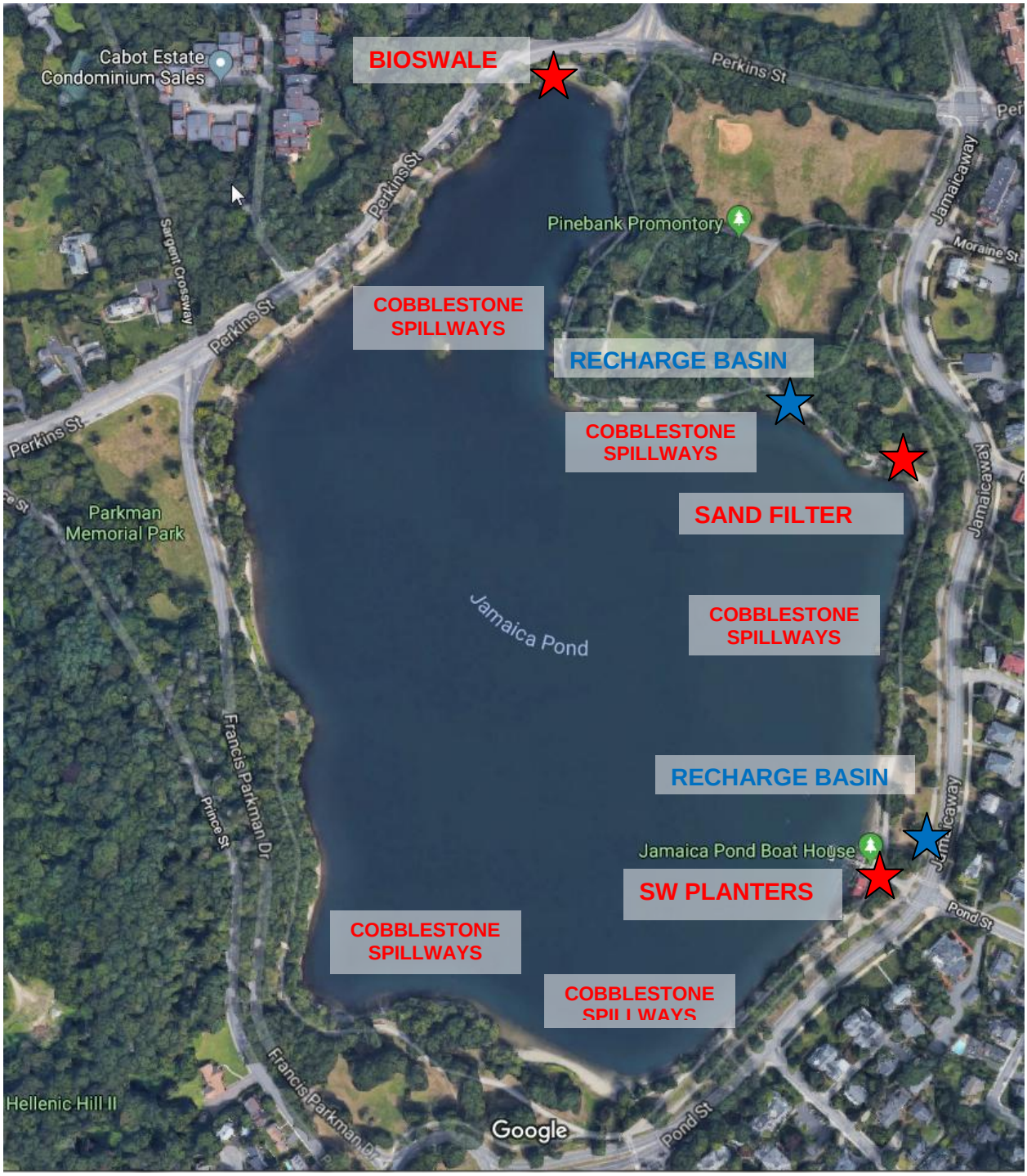


Figure 1 – Stormwater Locations

2.0 RESPONSIBILITY FOR OPERATION AND MAINTENANCE

Owner: Boston Parks and Recreation Department

Contact: Christopher Cook
Commissioner
Boston Parks and Recreation Department
101 Massachusetts Avenue
Boston, MA 02118
Phone: 617-635-4505

The owner is responsible for the continuous operation and maintenance of the stormwater BMPs and associated drainage areas. Maintenance on Site 7B will be shared between the RIDOT and the Department of Parks and Recreation

3.0 MAINTENANCE SCHEDULE

The maintenance includes the following:

- Maintaining the hydraulic and pollutant removal capacity of the systems
- Maintaining healthy native, vegetative cover.

This document describes the required O&M measures for each site. Also included is a plan showing the location of the items to be inspected and maintained, as well as a specific O&M checklist that Boston Parks and Recreation Department staff can use during inspections.

During the six months immediately after construction, all BMP retrofit practices should be inspected monthly and after precipitation events of at least 1" to ensure that the system is functioning properly as described below.

Thereafter, inspections shall be conducted on an annual basis and after major storm events (2" or greater). The following tasks are recommended, as specified, or on an "as needed basis" and divided into four main categories as identified on the inspection form (Appendix A).

As part of the general landscape work, the maintenance provider should walk the area monthly without specific intent, but to look for clogging, standing water, sediment accumulation, erosion, invasive species, and general plant health.

3.1 Vegetated Sand Filter

General maintenance of the vegetated sand filter falls under landscaping practices. A general inspection of the area shall be conducted annually and after storm events 2" of greater.

Maintenance work consists of the following:

General Maintenance		
General Maintenance		
Task	**Frequency**	**Time of the Year**
Site Inspection	Min. once per year & after major storm events.	Spring thru Fall
Debris removal	Min. once per year & after major storm events.	Spring thru Fall
Sediment removal	Min. once per year or when sediment is > 3" sediment forebay; Ensure sediment does not cause clogging	April
Landscape Maintenance		
Task	**Frequency**	**Time of the Year**
Mowing	Min. Twice per year or as necessary. Maintain 12" grass height	Spring thru fall
Overseeding	As required	Spring or Fall preferred
Sand Filter Maintenance		
Task	**Frequency**	**Time of the Year**
Tilling	As needed	If standing water does not drain after 48 hours
Soil Media Replacement	As needed	If standing water does not drain after tilling (see above)
Snow Removal	Not required	Not required

3.2 Bioswale and Stormwater Planters

By design, plants in the bioswale and stormwater planters are meant to flourish throughout the growing season leaving dry standing stalks during the dormant months. The plants do not require fertilizers, watering and/or mowing. Remove and replace vegetation as necessary, using the appropriate species as shown on the Construction Plans, see Appendix B. The best time to plant is in early to mid-fall or early to mid-spring.

Maintenance requirements fall under general landscaping. Conduct an inspection of the area a minimum twice a year - Spring and Fall and after major storm events (2" of rain or greater). Regular general maintenance work consists of the following:

General Maintenance		
Sediment Removal		
Task	**Frequency**	**Time of the Year**
Site Inspection	Min. twice per year & after major storm events.	Spring thru Fall
Debris & Trash Removal	Once a month & after major storm events.	Spring thru Fall
Sediment Removal	Min. once per year or when sediment is > 3" in stone-lined swale/sediment forebay; Ensure sediment does not cause blockage of inlets	April and September
Bioretention Soil		
Task	**Frequency**	**Time of the Year**
Tilling	As needed	If standing water does not drain after 48 hours
Soil Media Replacement	As needed	If standing water does not drain after tilling (see above)
Snow Removal	Not required	Not required

Plant Maintenance		
Task	**Frequency**	**Time of the Year**
Plant Cutting/Thinning	Cut back grasses, sedges, and rushes annually in the spring. Separation of herbaceous vegetation rootstock should occur when over-crowding is observed, or approximately once every 3 years.	Early Spring
Mowing	DO NOT MOW	NA
Weeding	Weeding should be limited to invasive and exotic species, which can overwhelm the desired plant community. Non-chemical methods (hand pulling and hoeing) are preferable; chemical herbicides should be avoided.	April-October
Plant Replacement	As required	Spring or Fall preferred
Fertilizing	NOT REQUIRED	NA
Watering	During drought conditions, plants should be watered a minimum of once every seven to ten days.	July-August

Specific landscape maintenance for the bioswale includes the following:

Bioswale Additional Maintenance		
Task	**Frequency**	**Time of the Year**
Seed	Loam and reseed bare spots with the specified low mow seed mix as shown on the Construction Plan and seed mix in **Appendix A & B**.	Early Spring
Mowing	Side slopes only	Spring and Fall
Erosion	Repair areas of scouring/erosion along the bottom of the swale and re-seed	Spring or Fall preferred
Fertilizing	NOT REQUIRED	NA

3.3 Cobblestone Spillway & Inlet Filter

General maintenance of the spillways falls under general landscaping. An inspection of the area practices should be conducted bi-annually and after storm events 2" of greater.

Maintenance work consists of the following:

General Maintenance		
Task	**Frequency**	**Time of the Year**
Inspection	Min. once per year & after major storm events.	Spring thru Fall
Debris /Leaf Litter removal	Quarterly & after major storm events.	Spring thru Fall
Filter cleaning - Sediment removal	Quarterly & after major storm events. Ensure sediment does not cause clogging	March, June, September, November
Landscape Maintenance		
Task	**Frequency**	**Time of the Year**
Erosion	Repair areas of scouring/erosion along the bottom of the swale and re-seed	Spring or Fall preferred
Overseeding (side slopes)	As required	Spring or Fall preferred
Cobble Maintenance		
Task	**Frequency**	**Time of the Year**
Repair concrete/cobbles	As needed	April-October
Snow Removal	Not required	Not required

3.4 Recharge Basin

General maintenance of the recharge basins falls under storm drain cleaning and may need to be provided by an independent contractor. An inspection of the basin should be conducted bi-annually and after storm events 2" of greater.

Maintenance work consists of the following:

General Maintenance		
Task	**Frequency**	**Time of the Year**
Inspection	Min. once per year & after major storm events.	Spring thru Fall
Debris /Leaf Litter removal	Quarterly & after major storm events.	Spring thru Fall
Sediment removal	Quarterly & after major storm events. Ensure sediment does not cause clogging	March, June, September, November

3.5 Routine Maintenance

Other routine maintenance should include the following:

- Removal of trash and litter from paved and perimeter areas.
- Check for erosions problems and sediment source(s) if excessive, frequent sediment accumulation occurs
- Street sweeping:
  - Minimum of once per year after the spring thaw.
- Contributing drainage pipes:
  - Inspected annually for proper operation.
- Pet Waste Removal:
  - Pet waste should be picked up and disposed of properly to reduce bacteria levels in stormwater.
- Snow Removal
  - Plowed or shoveled snow piles should not block the catch basin structure.
  - Snow removal from the practice is not necessary
- De-Icing
  - Excessive salting of roads should be avoided. Use of large amounts of sand should also be avoided to avoid obstructing/clogging the conveyance system.

4.0 LONG-TERM POLLUTION PREVENTION PLAN

Long-term pollution prevention measures implemented at the each project site will further reduce pollutants in stormwater discharges after construction.

4.1 Lawn/Landscaping Maintenance

Lawn and landscaping maintenance will be conducted with minimal use of fertilizers and pesticides to protect the nearby wetland and water resources. The practices discharge to a phosphorus impaired water body and phosphate based fertilizers are not t be used.

4.2 Pet Waste Management

Park users and visitors will be encouraged to pick up after their pets with signage along lawn areas.

4.3 Snow Management/Removal Plan

Plowed snow collected from the roadway will not be directed to the stormwater management system. Winter road salt and/or sand will not be stored on-site and will be used minimally as necessary for safe driving conditions at the site.

4.4 Pavement Sweeping Schedules

The roadway and parking area will be swept annually after spring snowmelt.

4.5 Illicit Discharges

No illicit discharge connections will be made to the drainage network.

4.6 Personnel Training

All staff/ personnel responsible for maintaining the practices will be given a copy of this Plan and will receive training in the applicable practices and implementation described in the Plan.

5.0 ESTIMATED OPERATION AND MAINTENANCE BUDGET

The estimated average annual operating and maintenance budget for the proposed system is shown below:

Sand Filter and Associated Structure: **$ 1,500**
(3% of preliminary construction cost)

Bioswale: **$ 500**
(3% of preliminary construction cost)

Cobblestone Spillway (per spillway): **$ 100**

Recharge Basin Cleaning (2) **$ 250**

Other Routine Maintenance: **$ 1,000**

- Removal of trash and litter
- Annual street sweeping
- Pipe network/outfall inspections

It should be noted that the maintenance costs provided are estimates only and some of the maintenance will be completed during the routine park maintenance program and incorporated into the existing park maintenance budget.

APPENDIX A

Inspection Form

Sand Filter - Maintenance Checklist
Stormwater Retrofits
Jamaica Pond Park

Date:

Time:

Inspector:

Maintenance Item	Description	Maintenance Req'd (Y/N)
1. Drainage Inlet **Includes: Curb Inlet** **Inspect annually and after major storm events (2" of rain or greater)**		
Inlet	Remove all trash, leaf litter and inlet clogging. Remove sediment regularly or when accumulation impedes proper inflow and/or outflow.	
Actions to be taken:		
2. Sediment Forebay **Inspect bi-annually and after major storm events the first year; then annually and after major storm events (2" of rain or greater)**		
Debris Cleanout	Remove trash and debris from the surface.	
Sediment/Organic Debris Removal	Signs of erosion gullies, animal burrowing, overtopping or slumping are observed. Repair as necessary.	
Bottom and Side Slopes	Remove sediment accumulation and properly dispose when accumulation is greater than or equal to 3 inches or you cannot see stones.*	
Actions to be taken:		
3. Sand Filter **Inspect bi-annually and after major storm events the first year; then annually and after major storm events (2" of rain or greater)**		
Debris Cleanout	Remove trash and debris from the surface.	
Side Slopes	Signs of erosion gullies, animal burrowing, overtopping or slumping are observed. Repair as necessary.	
Sediment/Organic Debris Removal	Remove sediment accumulation and properly dispose when accumulation is greater than or equal to 3 inches or you cannot see stones.*	
Vegetation Maintenance Replacement	Area mowed twice per year minimum (12" grass height). Over seed bare or thin grass growth areas.	

Maintenance Item	Description	Maintenance Req'd (Y/N)
Water Draining properly	If standing water is observed for more than 48 hours after a storm event, check clenout of underdrain clogging. If necessary, rototill or aerate the bottom 6 inches to breakup any hard-packed sediment, and re-seed	
Actions to be taken:		
4. Overflow Structures/Spillways **Includes: Outlet structures and emergency/overflow spillways** **Inspect annually and after major storm events (2" of rain or greater)**		
Emergency Spillways	Check for settling gulling, erosion damage, settling & clogging. Repair as necessary and return to design grades.	
Spillway Overflow	Look for areas of erosion in the overflow swale between. Repair as necessary.	
Overflow Structure	Check for sediment accumulation that impacts inflow. If sediment accumulation. Schedule cleaning. Check for leaf litter, debris and inlet clogging.	
Actions to be taken:		
5. Routine Grounds Maintenance **Inspect annually**		
Debris Removal	Remove trash from perimeter areas.	
Pavement Sweeping	Sweep contributing paved surfaces minimum once a year after spring thaw.	
Drainage Network	Ensure proper operation.	
Contributing drainage area	Contributing drainage area stabilized. Look for erosion and other sediment sources	
Actions to be taken:		

*Sediment shall be disposed of offsite in a pre-approved location.

Bioswale - Maintenance Checklist
Stormwater Retrofits
Jamaica Pond Park

Date:

Time:

Inspector:

Maintenance Item	Description	Maintenance (Y/N)
1. Drainage Inlet: **Includes: Inlet Flumes** **Inspect annually and after major storm events (2" of rain or greater)**		
Surface Debris Cleaning	Remove all trash, leaf litter and inlet clogging.	
Inlet Flumes	Check for clogging and sediment accumulation that impacts inflow. If sediment/debris accumulation	
Actions to be taken:		
2. Sediment Forebay **Inspect bi-annually and after major storm events the first year; then annually and after major storm events (2" of rain or greater)**		
Debris Cleanout	Remove trash and debris from the surface.	
Side Slopes	Signs of erosion gullies, animal burrowing, overtopping or slumping are observed. Repair as necessary.	
Sediment/Organic Debris Removal	Remove sediment accumulation and properly dispose when accumulation is greater than or equal to 3 inches or you cannot see stones.*	
Actions to be taken:		
3. Bioswale **Inspect bi-annually and after major storm events the first year; then annually and after major storm events (2" of rain or greater)**		
Debris Cleanout	Remove trash and debris from the surface.	
Side Slopes	Signs of erosion gullies, animal burrowing, overtopping or slumping are observed. Repair as necessary.	
Sediment/Organic Debris Removal	Remove sediment accumulation and properly dispose when accumulation is greater than or equal to 3 inches or you cannot see stones.*	
Vegetation Maintenance Replacement	Area mowed twice per year minimum (12" grass height). Over seed bare or thin grass growth areas.	

Maintenance Item	Description	Maintenance (Y/N)
Water Draining properly	If standing water is observed for more than 48 hours after a storm event, check clenout of underdrain clogging. If necessary, rototill or aerate the bottom 6 inches to breakup any hard-packed sediment, and re-seed	
Actions to be taken:		
4. Overflow Spillways **Includes: Overflow spillway** **Inspect annually and after major storm events (2" of rain or greater)**		
Emergency Spillways	Check for settling gulling, erosion damage, settling & clogging. Repair as necessary and return to design grades.	
Spillway Overflow	Look for areas of erosion in the overflow swale between. Repair as necessary.	
Overflow Structure	Check for sediment accumulation that impacts inflow. If sediment accumulation. Schedule cleaning. Check for leaf litter, debris and inlet clogging.	
Actions to be taken:		
5. Surrounding Grounds Maintenance – Inspect frequently		
Debris Removal	Remove trash from perimeter areas.	
Pavement Sweeping	Sweep pathway minimum once a year after spring thaw.	
Drainage Network	Ensure proper operation.	
Contributing drainage area	Contributing drainage area stabilized	
Actions to be taken:		

*Sediment shall be disposed of offsite in a pre-approved location.

Stormwater Planter - Maintenance Checklist
Stormwater Retrofits
Jamaica Pond Park

Date:

Time:

Inspector:

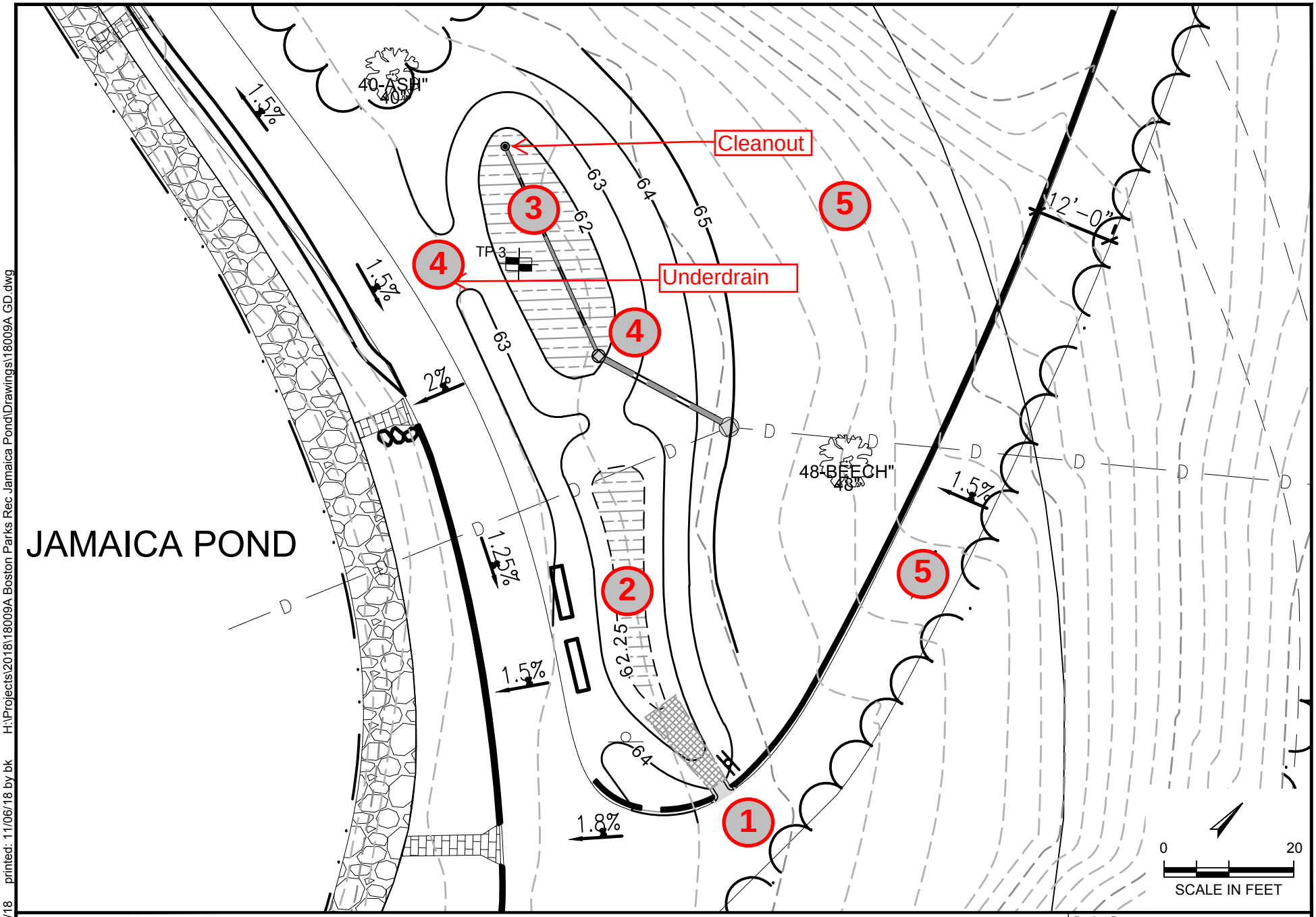
Maintenance Item	Description	Maintenance (Y/N)
1. Drainage Inlet **Includes: Downspout connection and trench drain** **Inspect annually and after major storm events (2" of rain or greater)**		
Downspout	Check for leaf clogging and that may impede inflow. Clean gutter and downspouts	
Trench Drain	Remove all trash, leaf litter and inlet clogging.	
Actions to be taken:		
2. Stormwater Planter **Inspect bi-annually and after major storm events the first year; then annually and after major storm events (2" of rain or greater)**		
Debris Cleanout	Remove trash and debris from the surface.	
Sediment/Organic Debris Removal	Remove sediment accumulation and properly dispose when accumulation is greater than or equal to 3 inches or you cannot see stones.*	
Vegetation Maintenance Replacement	Area mowed twice per year minimum (12" grass height). Over seed bare or thin grass growth areas.	
Water Draining properly	If standing water is observed for more than 48 hours after a storm event, rototill or aerate the bottom 6 inches to breakup any hard-packed sediment, and replenished with mulch.*	
Actions to be taken:		
3. Overflow Structures/Spillways **Includes: Bio outlet structures** **Inspect annually and after major storm events (2" of rain or greater)**		
Overflow Structure	Check for sediment accumulation that impacts inflow. If sediment accumulation. Schedule cleaning. Check for leaf litter, debris and inlet clogging.	
Actions to be taken:		

Maintenance Item	Description	Maintenance (Y/N)
4. Surrounding Grounds Maintenance – Inspect frequently		
Debris Removal	Remove trash from perimeter areas.	
Pavement Sweeping	Sweep parking lot minimum once a year after spring thaw.	
Drainage Network	Ensure proper operation.	
Contributing drainage area	Contributing drainage area stabilized	
Actions to be taken:		

*Sediment shall be disposed of offsite in a pre-approved location.

APPENDIX B

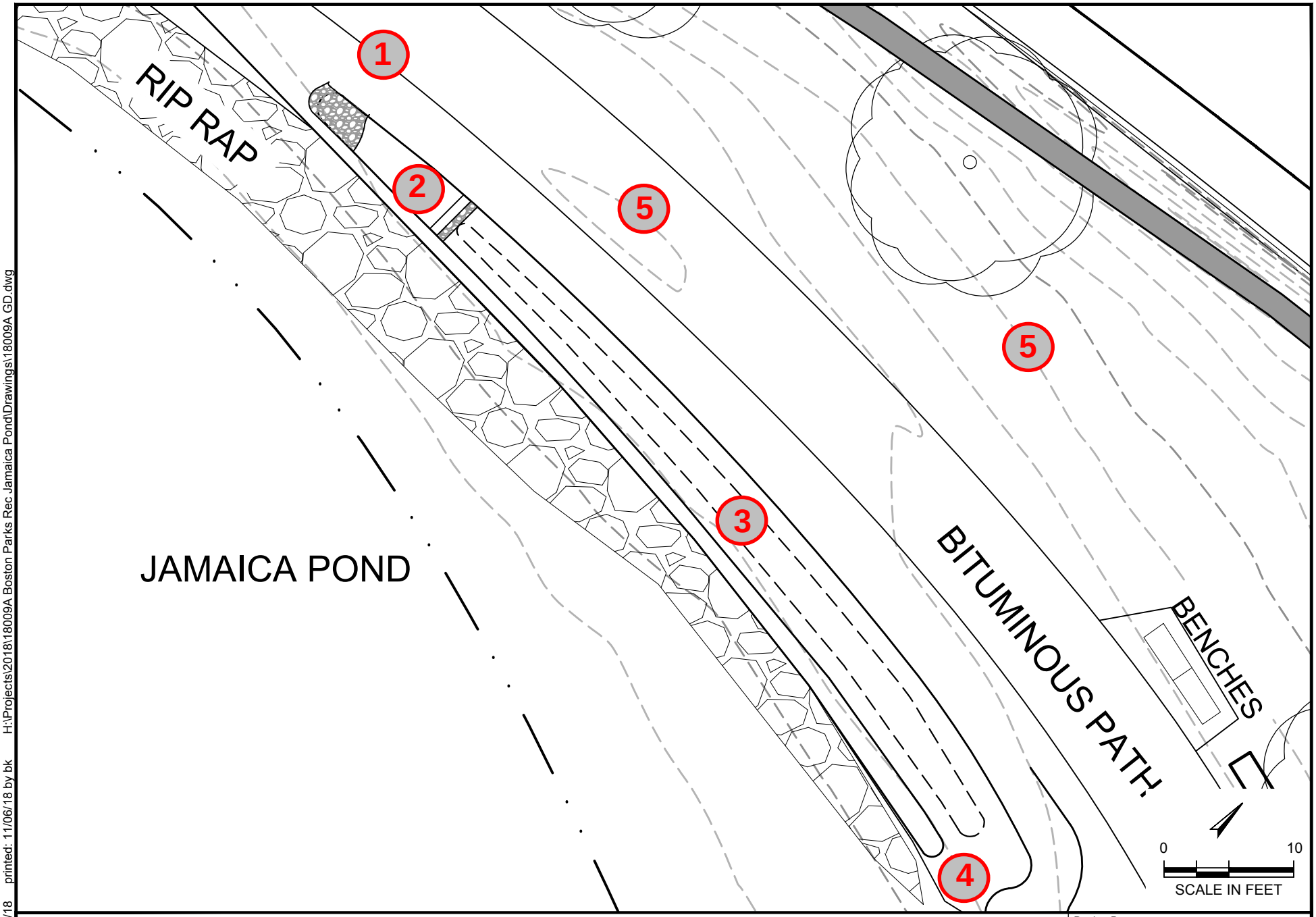
Maintenance Plans



JAMAICA POND PARK
SAND FILTER MAINTENANCE

Design By:
Horsley Witten Group, Inc.
Sustainable Environmental Solutions
www.horsleywitten.com
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

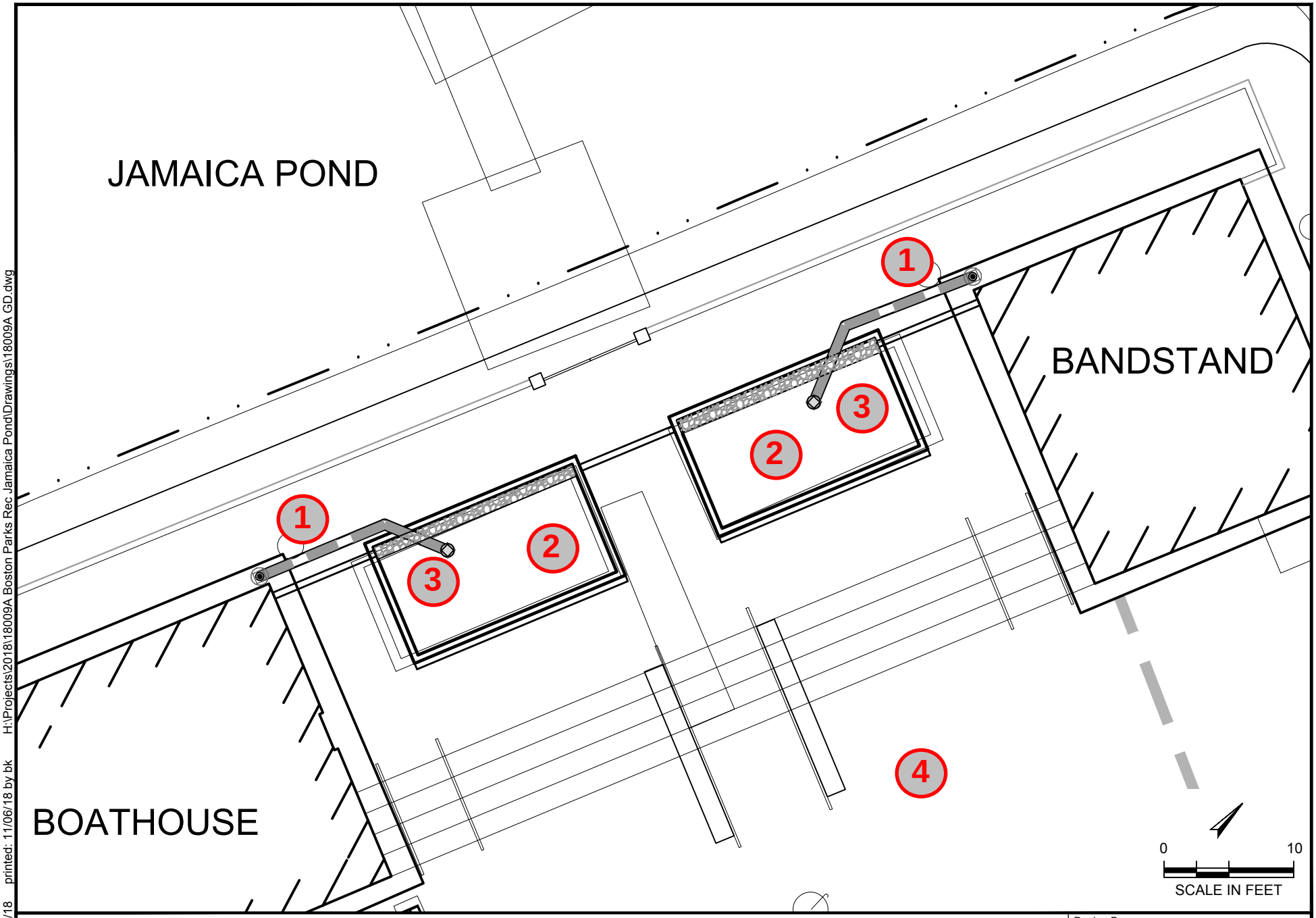
last modified: 11/06/18 printed: 11/06/18 by bk H:\Projects\2018\18009A Boston Parks Rec Jamaica Pond\Drawings\18009A GD.dwg



JAMAICA POND PARK
BIOSWALE MAINTENANCE

Design By:
Horsley Witten Group, Inc.
Sustainable Environmental Solutions
www.horsleywitten.com
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

last modified: 11/06/18 printed: 11/06/18 by bk H:\Projects\2018\18009A Boston Parks Rec Jamaica Pond\Drawings\18009A GD.dwg



JAMAICA POND PARK BOATHOUSE
STORMWATER PLANTERS MAINTENANCE

Design By:
Horsley Witten Group, Inc.
Sustainable Environmental Solutions
www.horsleywitten.com
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3150 fax

last modified: 11/06/18 printed: 11/06/18 by bk H:\Projects\2018\18009A Boston Parks Rec Jamaica Pond\Drawings\18009A GD.dwg

APPENDIX C

Inlet Filter Maintenance

FLEXSTORM OPERATION AND MAINTENANCE PLAN

OPERATION & MAINTENANCE PLAN

Installation Instructions:

1. Remove grate from the drainage structure
2. Clean stone and dirt from ledge (lip) of drainage structure
3. Drop the FLEXSTORM inlet filter through the clear opening such that the hangers rest firmly on the lip of the structure.
4. Replace the grate and confirm it is not elevated more than 1/8", the thickness of the steel hangers.

Frequency of Inspections:

1. Inspection should occur following any rain event >½".
2. Post construction inspections should occur 4 times per year. In snowfall affected regions additional inspections should take place before and after snowfall season.
3. Industrial application site inspections (loading ramps, wash racks, maintenance facilities) should occur on a regularly scheduled basis no less than 3 times/year.

Maintenance Guidelines:

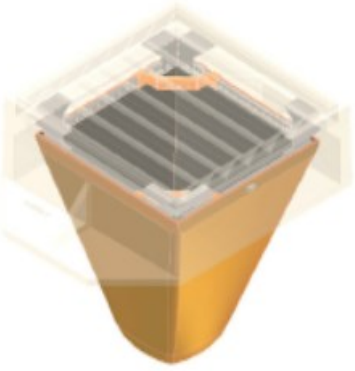
1. Empty the sediment bag if more than half filled with sediment and debris, or as directed.
2. Remove the grate, engage the lifting bars with the FLEXSTORM Removal Tool, and lift from drainage structure.
3. Dispose of sediment or debris as directed by the Engineer or Maintenance contract.
4. An industrial vacuum can be used to collect sediment.
5. Remove caked on silt from sediment bag and flush with Medium spray with optimal filtration.
6. Replace bag if torn or punctured to >½" diameter on lower half of bag.

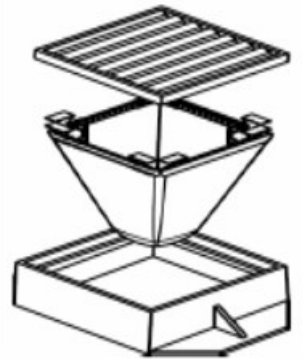
Post Construction PC Bag Maintenance:

1. At 50% saturation the average 2'x2' Adsorb-it lined PC filter will retain approximately 75 oz (4.2 lbs) of oil and should be serviced. To recover the oils the filter can be centrifuged or passed through a wringer.
2. Oil skimmer pouches start to turn black when saturated, indicating time for replacement. Each ClearTec Rubberizer pouch will absorb ~62oz (4 lbs) of oil before needing replacement.
3. Dispose of all oil contaminated products in accordance with EPA guidelines. ClearTec Rubberizer, since a solidifier, will not leach under pressure and can be disposed of in most landfills, recycled for industrial applications, or burned as fuel.

Sediment Bag Replacement:

1. Remove the bag by loosening or cutting off clamping bag.
2. Take new sediment bag and secure worm drive clamping band to the frame channel.
3. Ensure Bag is secure and there is no slack around perimeter.





STRUCTURE ID#/LOCATION:

DATE	TASK PERFORMED	INSPECTOR

CITY OF BOSTON

THE HONORABLE MARTIN WALSH, MAYOR

PREPARED BY:

Kyle Zick Landscape Architecture, Inc.
36 Bromfield Street, Suite 202
Boston, MA 02108
617-451-1018 Tel
www. kylezick.com

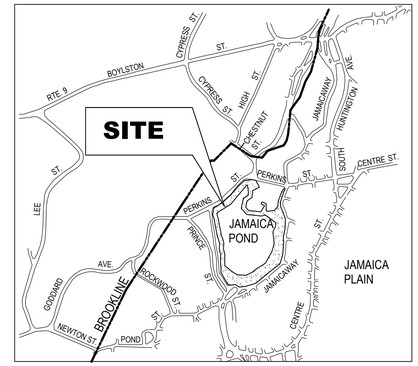
Horsley Witten Group Inc.
90 Route 2A
Sandwich, MA 02563
508-833-6600 Tel
www.horsleywitten.com

PARKS & RECREATION DEPARTMENT
CHRIS COOK, COMMISSIONER

Improvements to Jamaica Pond Park Pathways and Entrances Phase 2

FUNDED BY THE CITY OF BOSTON
CAPITAL IMPROVEMENT PROGRAM

Boston, Massachusetts
NOVEMBER 07, 2018



NORTH

LOCATION MAP
Perkins Street/Jamaicaway
Boston, MA

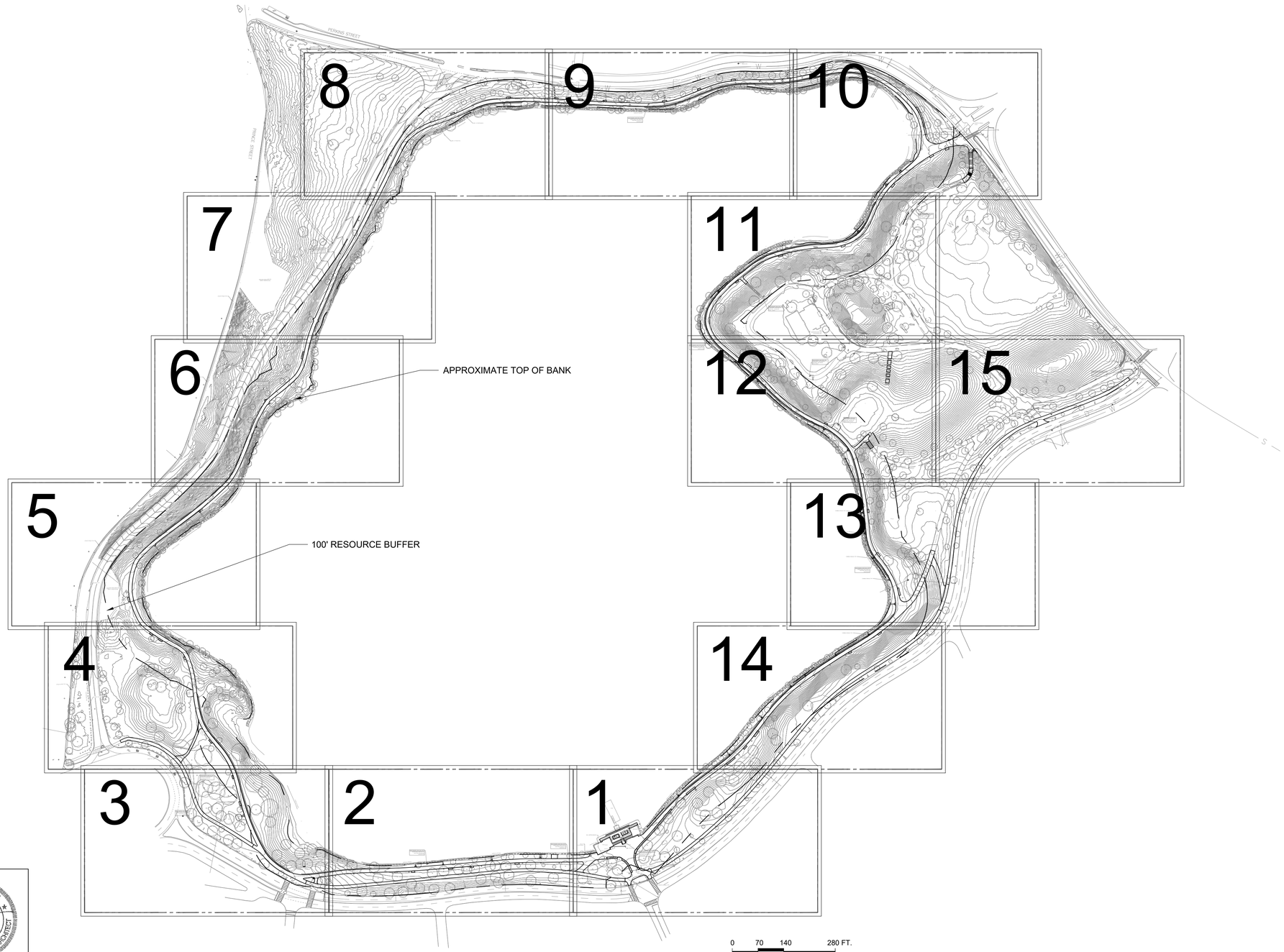
DRAWING INDEX

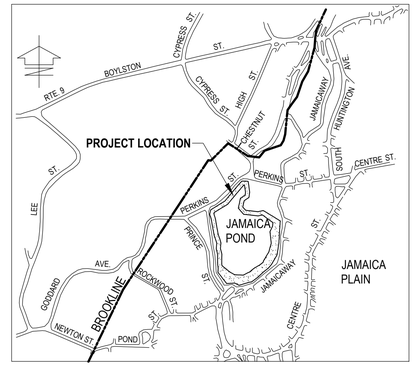
Sheet No.: C

Sheet Name.: Cover Sheet

BPRD Project No.
Date 11/07/2018
Scale N/A
Drawn DRAWN BY JLM/DTH
Checked CHECKED BY KZ

Project Name.: Improvements to Jamaica Pond Park Pathways and Entrances Phase 2, Boston, MA





LOCUS MAP

GENERAL NOTES:

1. CONTRACTOR SHALL BE FAMILIAR WITH DRAWINGS AND SPECIFICATIONS BEFORE BIDDING.
2. DRAWINGS SHALL SUPERSEDE SPECIFICATIONS FOR ANY DISCREPANCIES.
3. CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES, INCLUDING CMR521/ADA.
4. NO SMOKING IS ALLOWED WITHIN THE PARK AT ANY TIME.

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:

kzla

36 Bromfield Street Suite 202
Boston, MA 02108

617 451-1018 Tel
www.kylezick.com

Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
Date	11/07/2018
Scale	AS SHOWN
Drawn	JL
Checked	KZ

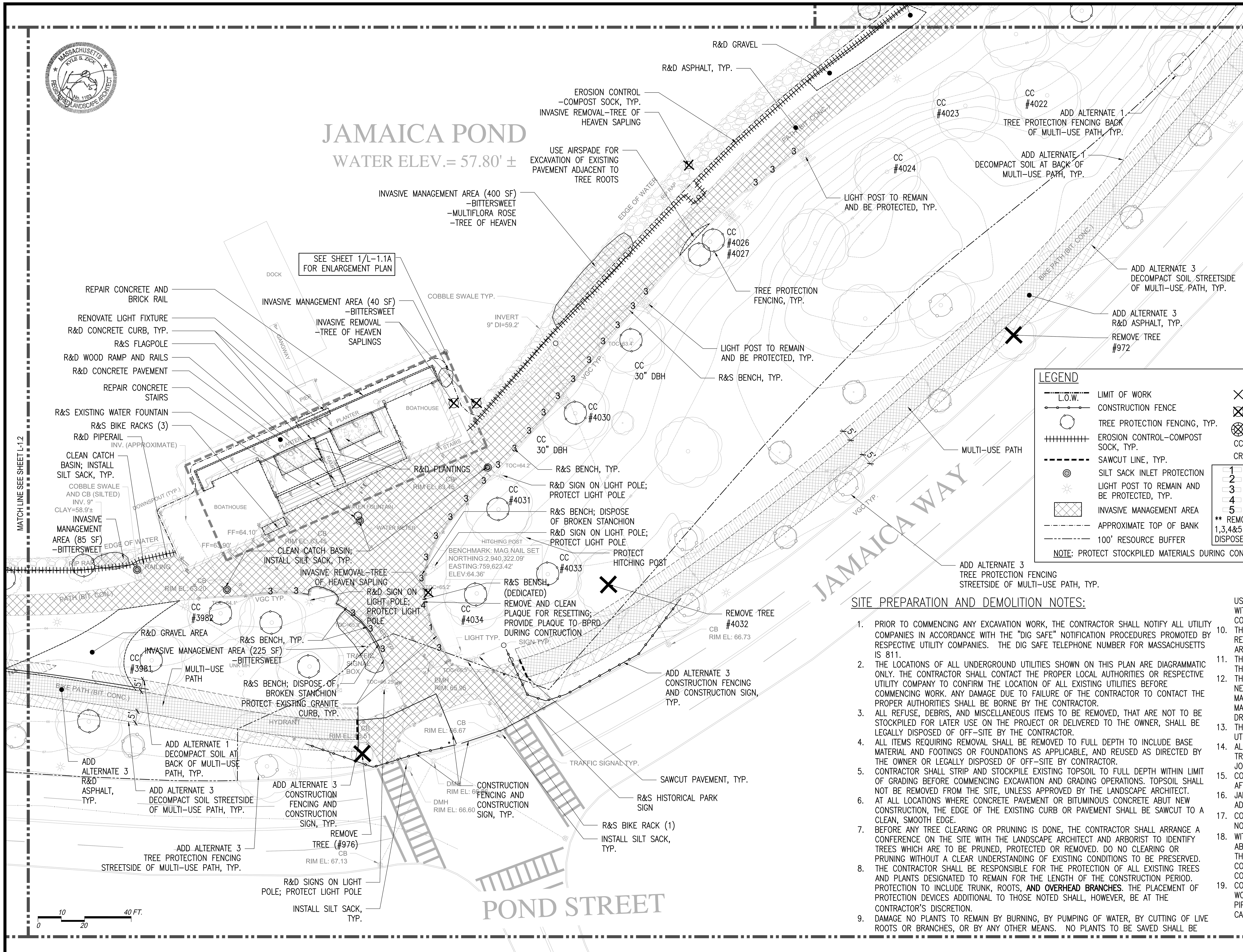
Sheet Name.:

Key Plan

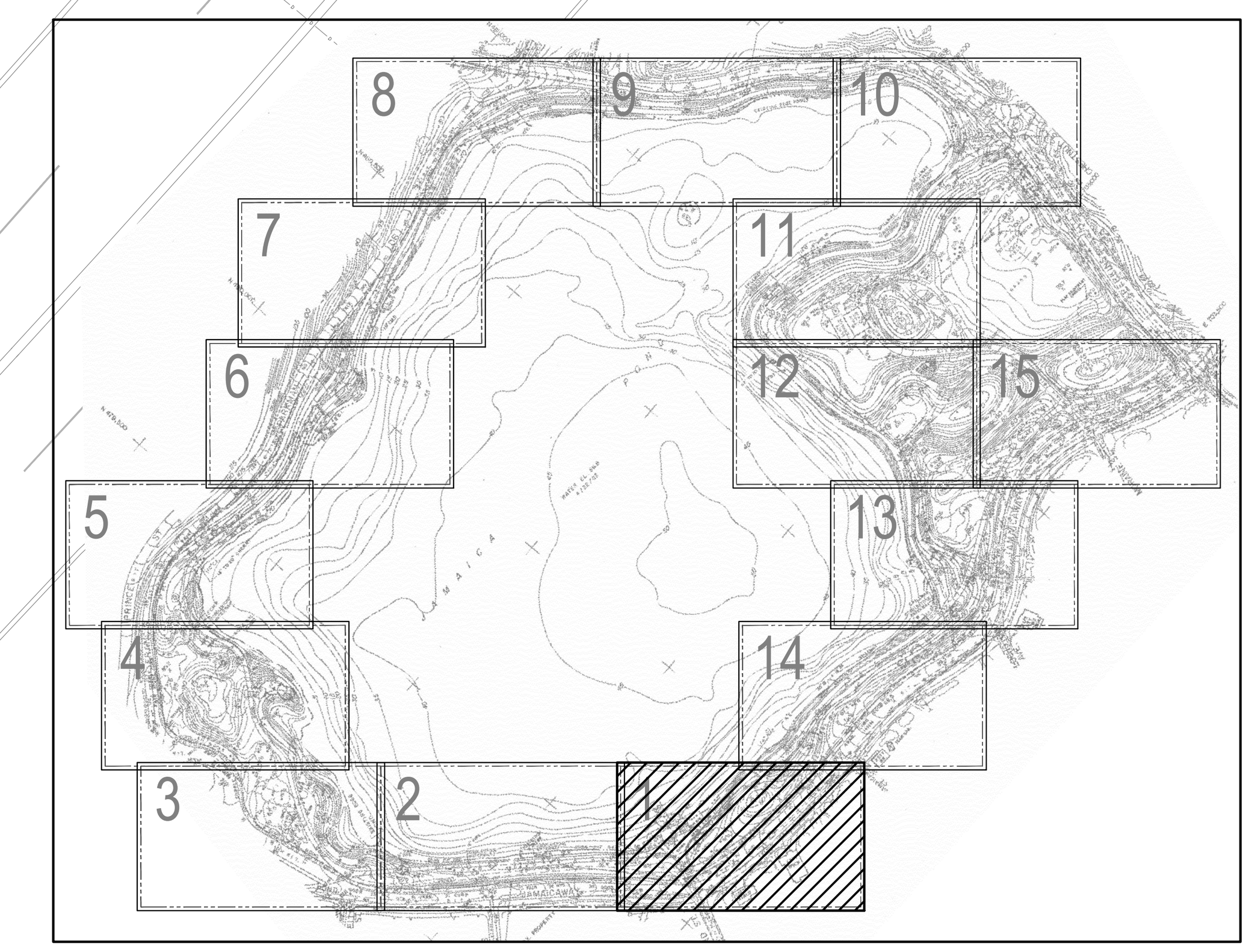
Sheet:

L-0

MATCH LINE SEE SHEET L-1.14



JAMAICA POND
WATER ELEV.= 57.80' ±
JAMAICA WAY
POND STREET
MATCH LINE SEE SHEET L-1.2
R&D GRAVEL
R&D ASPHALT, TYP.
EROSION CONTROL -COMPOST SOCK, TYP.
INVASIVE REMOVAL-TREE OF HEAVEN SAPLING
USE AIRSPADE FOR EXCAVATION OF EXISTING PAVEMENT ADJACENT TO TREE ROOTS
INVASIVE MANAGEMENT AREA (400 SF) -BITTERSWEET -MULTIFLORA ROSE -TREE OF HEAVEN
SEE SHEET 1/L-1.1A FOR ENLARGEMENT PLAN
REPAIR CONCRETE AND BRICK RAIL
RENOVATE LIGHT FIXTURE
R&D CONCRETE CURB, TYP.
R&S FLAGPOLE
R&D WOOD RAMP AND RAILS
R&D CONCRETE PAVEMENT
REPAIR CONCRETE STAIRS
R&S EXISTING WATER FOUNTAIN
R&S BIKE RACKS (3)
R&D PIPERAIL
CLEAN CATCH BASIN; INSTALL SILT SACK, TYP.
INVASIVE MANAGEMENT AREA (85 SF) -BITTERSWEET
INVASIVE MANAGEMENT AREA (40 SF) -BITTERSWEET
INVASIVE REMOVAL -TREE OF HEAVEN SAPLINGS
CLEAN CATCH BASIN; INSTALL SILT SACK, TYP.
INVASIVE REMOVAL-TREE OF HEAVEN SAPLING
R&D SIGN ON LIGHT POLE; PROTECT LIGHT POLE
R&D GRAVEL AREA
INVASIVE MANAGEMENT AREA (225 SF) -BITTERSWEET
MULTI-USE PATH
R&S BENCH, TYP.
R&S BENCH; DISPOSE OF BROKEN STANCHION
PROTECT EXISTING GRANITE CURB, TYP.
ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI-USE PATH, TYP.
ADD ALTERNATE 3 R&D ASPHALT, TYP.
ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI-USE PATH, TYP.
ADD ALTERNATE 3 CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.
REMOVE TREE (#976)
ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI-USE PATH, TYP.
R&D SIGNS ON LIGHT POLE; PROTECT LIGHT POLE
INSTALL SILT SACK, TYP.
R&D PLANTINGS
R&S BENCH, TYP.
R&D SIGN ON LIGHT POLE; PROTECT LIGHT POLE
R&S BENCH; DISPOSE OF BROKEN STANCHION
R&D SIGN ON LIGHT POLE; PROTECT LIGHT POLE
PROTECT HITCHING POST
R&S BENCH (DEDICATED)
REMOVE AND CLEAN PLAQUE FOR RESETTING; PROVIDE PLAQUE TO BPRD DURING CONTRUCTION
CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.
SAWCUT PAVEMENT, TYP.
R&S HISTORICAL PARK SIGN
R&S BIKE RACK (1)
INSTALL SILT SACK, TYP.
REMOVE TREE #4032
LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
TREE PROTECTION FENCING, TYP.
R&S BENCH, TYP.
CC 30" DBH
CC #4023
CC #4022
CC #4024
CC #4026 #4027
CC #4030
CC #4031
CC #4033
CC #4034
CC #3982
CC #3981
ADD ALTERNATE 1 TREE PROTECTION FENCING BACK OF MULTI-USE PATH, TYP.
ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI-USE PATH, TYP.
ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI-USE PATH, TYP.
ADD ALTERNATE 3 R&D ASPHALT, TYP.
REMOVE TREE #972
MULTI-USE PATH
ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI-USE PATH, TYP.
CB RIM EL: 75.86
CB RIM EL: 66.73
BENCHMARK: MAG NAIL SET NORTHING:2,940,322.09' EASTING:759,623.42' ELEV:64.36'
BOATHOUSE
DOCK
COBBLE SWALE TYP.
EDGE OF WATER
BIKE PATH (BIT. CONC.)
TRAFFIC SIGNAL TYP.
HYDRANT
10 40 FT.
0 20



KEY PLAN

LEGEND

L.O.W.	LIMIT OF WORK		REMOVE TREE OR SHRUB, TYP.	R&D	REMOVE AND DISPOSE
	CONSTRUCTION FENCE		REMOVE INVASIVE TREE OR SHRUB, TYP.	R&S	REMOVE AND STOCKPILE
	TREE PROTECTION FENCING, TYP.		REMOVE STUMP		REMOVE AND DISPOSE ASPHALT, TYP.
	EROSION CONTROL-COMPOST SOCK, TYP.	CC	CROWN CLEANING		STRIP AND STOCKPILE LOAM, TYP.
	SAWCUT LINE, TYP.	CR	CROWN RAISING		ADD ALT - REMOVE AND DISPOSE ASPHALT, TYP.
	SILT SACK INLET PROTECTION	1	BENCH TYPE-1, TYP.		ADD ALT 1 - SCARIFY SOIL, TYP.
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.	2	BENCH TYPE-2, TYP.		ADD ALT 2 - SCARIFY SOIL, TYP.
	INVASIVE MANAGEMENT AREA	3	BENCH TYPE-3, TYP.		ADD ALT 3 - SCARIFY SOIL, TYP.
	APPROXIMATE TOP OF BANK	4	BENCH TYPE-4, TYP.		
	100' RESOURCE BUFFER	5	BENCH TYPE-5, TYP.		

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE-2.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

SITE PREPARATION AND DEMOLITION NOTES:

1. PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE "DIG SAFE" NOTIFICATION PROCEDURES PROMOTED BY RESPECTIVE UTILITY COMPANIES. THE DIG SAFE TELEPHONE NUMBER FOR MASSACHUSETTS IS 811.
2. THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL CONTACT THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANY TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
3. ALL REFUSE, DEBRIS, AND MISCELLANEOUS ITEMS TO BE REMOVED, THAT ARE NOT TO BE STOCKPILED FOR LATER USE ON THE PROJECT OR DELIVERED TO THE OWNER, SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
4. ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS APPLICABLE, AND REUSED AS DIRECTED BY THE OWNER OR LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
5. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL TO FULL DEPTH WITHIN LIMIT OF GRADING BEFORE COMMENCING EXCAVATION AND GRADING OPERATIONS. TOPSOIL SHALL NOT BE REMOVED FROM THE SITE, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
6. AT ALL LOCATIONS WHERE CONCRETE PAVEMENT OR BITUMINOUS CONCRETE ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
7. BEFORE ANY TREE CLEARING OR PRUNING IS DONE, THE CONTRACTOR SHALL ARRANGE A CONFERENCE ON THE SITE WITH THE LANDSCAPE ARCHITECT AND ARBORIST TO IDENTIFY TREES WHICH ARE TO BE PRUNED, PROTECTED OR REMOVED. DO NO CLEARING OR PRUNING WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND PLANTS DESIGNATED TO REMAIN FOR THE LENGTH OF THE CONSTRUCTION PERIOD. PROTECTION TO INCLUDE TRUNK, ROOTS, **AND OVERHEAD BRANCHES**. THE PLACEMENT OF PROTECTION DEVICES ADDITIONAL TO THOSE NOTED SHALL, HOWEVER, BE AT THE CONTRACTOR'S DISCRETION.
9. DAMAGE NO PLANTS TO REMAIN BY BURNING, BY PUMPING OF WATER, BY CUTTING OF LIVE ROOTS OR BRANCHES, OR BY ANY OTHER MEANS. NO PLANTS TO BE SAVED SHALL BE USED FOR CRANE STAYS, GUYS OR OTHER FASTENINGS. VEHICLES SHALL NOT BE PARKED WITHIN THE DRIP LINE OR WHERE DAMAGE MAY RESULT TO TREES TO BE SAVED. CONSTRUCTION MATERIALS SHALL NOT BE STORED BENEATH TREES TO BE SAVED.
10. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK.
11. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS THAT ARE DUE TO CONTRACTOR OPERATIONS.
12. THE GENERAL CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADE AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POLES, MANHOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED ON THE UTILITY DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT.
13. THE GENERAL CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
14. ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS. ANY MUD ON PUBLIC WAYS ORIGINATING FROM THE JOB SITE SHALL BE CLEANED BY THE CONTRACTOR.
15. CONTRACTOR SHALL SECURE ALL PERMITS THAT MAY BE REQUIRED FROM ALL JURISDICTIONS AFFECTED BY THIS WORK.
16. JAMAICA POND PARK IS A LANDMARK PARK. BECAUSE OF ITS HISTORIC SIGNIFICANCE, ADDITIONAL CARE IS REQUIRED TO PROTECT THE FEATURES OF THIS PARK.
17. CONTRACTOR'S EQUIPMENT AND VEHICLES SHALL BE PARKED ON PAVED SURFACES ONLY. NO PARKING ON LAWN OR LANDSCAPED AREAS.
18. WITHIN THE LIMIT OF WORK, CONTRACTOR SHALL IDENTIFY ALL TREE LIMBS LOWER THAN 10' ABOVE THE GROUND SURFACE THAT MAY BE VULNERABLE TO EQUIPMENT DAMAGE. NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK BENEATH ANY OF THESE LIMBS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO TREE LIMBS THAT ARE DUE TO CONTRACTOR OPERATIONS.
19. CONTRACTOR TO CLEAN ALL DRAINAGE STRUCTURES WITHIN LIMIT OF WORK BEFORE SITE WORK BEGINS, AND AT THE END OF THE PROJECT. CONTRACTOR TO CLEAN DRAINAGE PIPES, WHERE IDENTIFIED ON THE PLANS. CONTRACTOR TO PROVIDE SILT SACKS FOR ALL CATCH BASINS WITHIN LIMIT OF WORK.

BOSTON PARKS & RECREATION

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Consultant Project No. PROJECT NO.

NORTH

No.	Date	Revision

Approved By: Date:

Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
Date	11/07/2018
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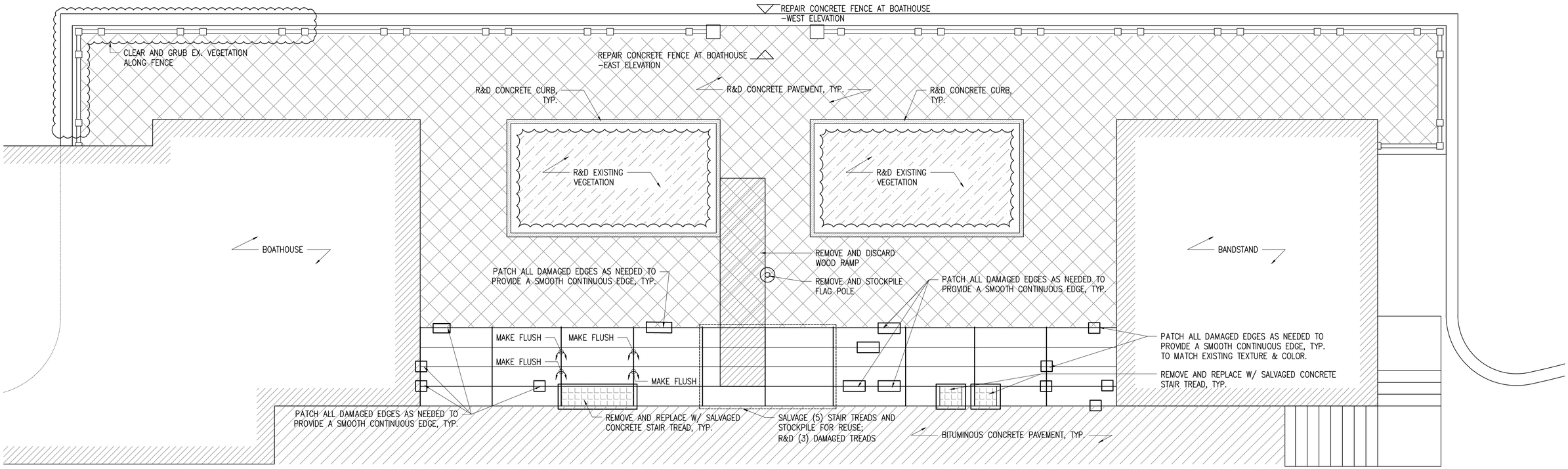
Drawn	RB/TH/YL
Checked	KZ

Sheet Name.:
Site Preparation Plan

Sheet:
L-1.1



1 ENLARGEMENT PLAN

SCALE: 1/4"=1'–0"

ENLARGEMENT SITE PREPARATION AND DEMOLITION NOTES:

1. ONE WEEK PRIOR TO DEMOLITION OF THE PLANTER CURB OR REMOVAL OF EXISTING VEGETATION IN THE PLANTERS, NOTIFY BPRD TO FACILITATE REMOVAL OF DESIRED PLANTS FROM PLANTERS. PLANTER CURBS AND VEGETATION WITHIN PLANTERS SHALL NOT BE DEMOLISHED UNTIL BPRD HAS REMOVED DESIRED PLANTS.

LEGEND

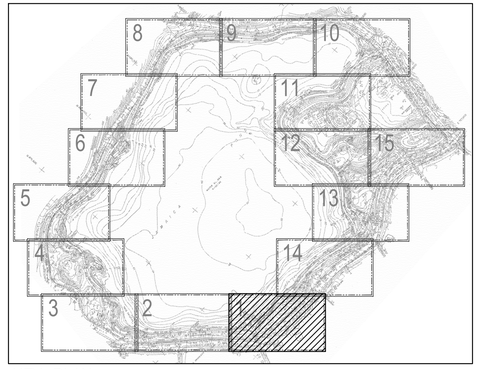
- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC — CROWN CLEANING
- CR — CROWN RAISING
- 1 BENCH TYPE–1, TYP.
- 2 BENCH TYPE–2, TYP.
- 3 BENCH TYPE–3, TYP.
- 4 BENCH TYPE–4, TYP.
- 5 BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

- R&D — REMOVE AND DISPOSE
- R&S — REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION



KEY PLAN

MASSACHUSETTS KYLE S. ZICK No. 1165 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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L-1.1A

LEGEND

L.O.W.	LIMIT OF WORK
	CONSTRUCTION FENCE
	TREE PROTECTION FENCING, TYP.
	EROSION CONTROL–COMPOST SOCK, TYP.
	SAWCUT LINE, TYP.
	SILT SACK INLET PROTECTION
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
	INVASIVE MANAGEMENT AREA
	APPROXIMATE TOP OF BANK
	100' RESOURCE BUFFER

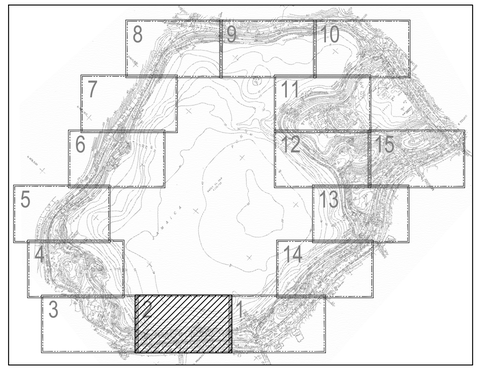
X	REMOVE TREE OR SHRUB, TYP.
	REMOVE INVASIVE TREE OR SHRUB, TYP.
	REMOVE STUMP
CC	CROWN CLEANING
CR	CROWN RAISING

1	BENCH TYPE–1, TYP.
2	BENCH TYPE–2, TYP.
3	BENCH TYPE–3, TYP.
4	BENCH TYPE–4, TYP.
5	BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
	REMOVE AND DISPOSE ASPHALT, TYP.
	STRIP AND STOCKPILE LOAM, TYP.
	ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
	ADD ALT 1 – SCARIFY SOIL, TYP.
	ADD ALT 2 – SCARIFY SOIL, TYP.
	ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION



KEY PLAN

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

MATCH LINE SEE SHEET L-1.3

MATCH LINE SEE SHEET L-1.1

R&D GRAVEL PATHWAY

REMOVE SEDIMENT AND DEBRIS FROM SWALE

EROSION CONTROL –COMPOST SOCK, TYP.

CLEAN CATCH BASIN AND INSTALL SILT SACK, TYP.

R&D STONEDUST AREA TYP.

INVASIVE MANAGEMENT AREA (145 SF) –BITTERSWEET

BENCHMARK: MAG NAIL SET
NORTHING:2,939,918.72'
EASTING:759,258.93'
ELEV:62.78'

R&D BENCH TYPE–2, TYP.

R&D ASPHALT, TYP.

R&D STONEDUST AREA TYP.

COBBLE SWALE TYP.

JAMAICA POND
WATER ELEV.= 57.80' ±

USE AIRSPADE FOR EXCAVATION OF EXISTING PAVEMENT ADJACENT TO TREE ROOTS

TREE PROTECTION FENCING, TYP.

INVASIVE MANAGEMENT AREA (75 SF) –KNOTWEED

INVASIVE REMOVAL–BUCKTHORN

CLEAR AND GRUB, TYP.

BENCHMARK: MAG NAIL SET
NORTHING:2,940,163.44'
EASTING:759,563.72'
ELEV:65.12'

EDGE OF WATER

RIP RAP

COBBLE SWALE TYP.

PATH (BIT. CONC.)

BIKE PATH (BIT. CONC.)

CC #3455

CC #3957

CC #3961

CC #3960

CC #3810

CC #3806

CC #3973

CC #3976

CC #983

CC #982

CC #989

CC #992

ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI–USE PATH, TYP.

CB RIM EL: 64.6

R&S BENCH, TYP.

LIGHT POST TO REMAIN AND BE PROTECTED, TYP.

CC #3968, 3969, 3970, 3971, 3972

LIGHT TYP.

MULTI–USE PATH

HYDRANT

VGC TYP.

CB RIM EL: 71.5

REMOVE TREE (#3977)

REMOVE TREE (#980)

REMOVE TREE

REMOVE TREE (#3978)

R&D SIGN ON LIGHT POLE; PROTECT LIGHT POLE

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

ADD–ALTERNATE 3 CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.

ADD ALTERNATE 3 R&D ASPHALT, TYP.

ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI–USE PATH, TYP.

0 10 20 40 FT.

BOSTON PARKS & RECREATION

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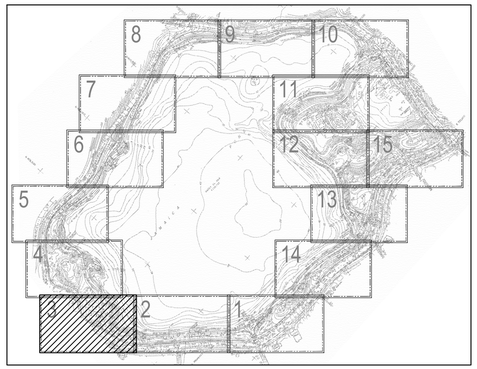
L-1.2

MATCH LINE SEE SHEET L-1.4



KEY PLAN

LEGEND

L.O.W.	LIMIT OF WORK	X	REMOVE TREE OR SHRUB, TYP.
	CONSTRUCTION FENCE		REMOVE INVASIVE TREE OR SHRUB, TYP.
	TREE PROTECTION FENCING, TYP.		REMOVE STUMP
	EROSION CONTROL–COMPOST SOCK, TYP.	CC	CROWN CLEANING
	SAWCUT LINE, TYP.	CR	CROWN RAISING
	SILT SACK INLET PROTECTION	1	BENCH TYPE–1, TYP.
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.	2	BENCH TYPE–2, TYP.
	INVASIVE MANAGEMENT AREA	3	BENCH TYPE–3, TYP.
	APPROXIMATE TOP OF BANK	4	BENCH TYPE–4, TYP.
	100' RESOURCE BUFFER	5	BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

R&D	REMOVE AND DISPOSE		ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
R&S	REMOVE AND STOCKPILE		ADD ALT 1 – SCARIFY SOIL, TYP.
	REMOVE AND DISPOSE ASPHALT, TYP.		ADD ALT 2 – SCARIFY SOIL, TYP.
	STRIP AND STOCKPILE LOAM, TYP.		ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

ARBORWAY

BENCHMARK: MAG NL SET
NORTHING:2,939,635.44'
EASTING:758,665.85'
ELEV:76.58'

R&D BENCH TYPE–2, TYP.

R&D CONCRETE PAD

CC #3937, 3938, 3941, 3943, 3944, 3945, 3946

ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI–USE PATH, TYP.

ADD ALTERNATE 1 TREE PROTECTION FENCING BACK OF MULTI–USE PATH, TYP.

R&S BENCH, TYP.

R&D EXERCISE EQUIPMENT, INCLUDING FOOTINGS, TYP.

EXERCISE EQUIPMENT

STRIP AND STOCKPILE LOAM, TYP.

DMH
RIM EL: 76.64

BENCHMARK: MAG NL SET
NORTHING:2,939,635.44'
EASTING:758,665.85'
ELEV:76.58'

CC #1000

ADD ALTERNATE 3 R&D ASPHALT, TYP.

MULTI–USE PATH

BIKE PATH (1ST CONC)

PATH (1ST CONC)

ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI–USE PATH, TYP.

LIGHT TYP.

VGC TYP.

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

CC #997

CC #996

CB
RIM EL: 75.15

SAWCUT PAVEMENT, TYP.

AREA ADD ALT

STONE BOLLARD TYP.

POND STREET

REMOVE AND STOCKPILE GRANITE BLOCKS; REMOVE AND DISPOSE CONCRETE BLOCKS, TYP.

CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.

CC #994

CC #993

CB
RIM EL: 74.23

SAWCUT PAVEMENT, TYP.

STRIP AND STOCKPILE LOAM, TYP.

USE AIRSPADE FOR EXCAVATION WITHIN DRIPLINE OF TREES

ADD ALTERNATE 3 R&D ASPHALT, TYP.

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

CC #3831

INVASIVE MANAGEMENT AREA (140 SF) –BITTERSWEET

REMOVE METAL TREE STAKES, TYP.

REMOVE STUMP

CC #3830

CC #3829

TREE PROTECTION FENCING, TYP.

INVASIVE MANAGEMENT AREA (935 SF) –KNOTWEED

EDGE OF WATER

CC #3827

JAMAICA POND
WATER ELEV.= 57.80' ±

CC #3824

EROSION CONTROL –COMPOST SOCK, TYP.

R&D STONEDUST PATHWAY

R&D GRANITE STEPS

R&D ASPHALT, TYP.

GRANITE BLOCK (TYP.)

RIP RAP

CC #3822

TREE PROTECTION FENCING, TYP.

CC #3821

REMOVE TREE (#3818)

R&D SIGN ON LIGHT POLE; R&S LIGHT POLE FOR RELOCATION

COBBLE SWALE TYP.

REMOVE SEDIMENT AND DEBRIS FROM SWALE

PATH (1ST CONC)

TRAFFIC SIGNAL TYP.

CC #3955

AREA ADD ALT

PATH (1ST CONC)

10 0 20 40 FT.

MATCH LINE SEE SHEET L-1.2

MASSACHUSETTS KYLE A. ZICK No. 11853 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Sheet Name.:
Site Preparation Plan

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L-1.3

MATCH LINE SEE SHEET L-1.5

WOODS

REMOVE STUMP

R&S GRANITE CURB, TYP.

INVASIVE MANAGEMENT AREA (100 SF) –BITTERSWEET

R&D TIMBER FROM TIMBER WALL; PROTECT METAL POSTS

COBBLE SWALE TYP.

R&S GRANITE CURB, TYP.

BENCH TYP.

PATH BIT CONC.

RIP RAP

CC #3866

CC #3865

R&S BENCH, TYP.

REMOVE STUMP

TRASH BIN

CC #3862

R&D CONCRETE PAD

R&D BENCH TYPE–2, TYP.

R&D ASPHALT, TYP.

R&D REMNANT LIGHT POST, TYP. VERIFY LOCATION IN FIELD

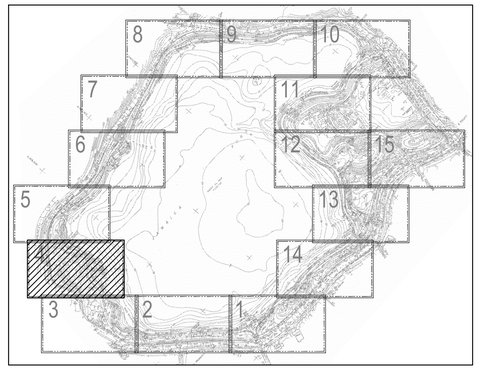
CC #3860

CC #3859

CC #3858

CC #3857 19" DBH 16" DBH

KEY PLAN



JAMAICA POND

WATER ELEV.= 57.80' ±

DMH RIM EL: 80.48

UTILITY POLE TYP.

SMH

VGC TYP.

CC #3927 #3928

CC #3930

CC #3841

CC #3842 #3843

CC #3847 #3855

EDGE OF WATER

EXERCISE EQUIPMENT

R&D EXERCISE EQUIPMENT AND FOOTINGS, TYP. STRIP AND STOCKPILE LOAM, TYP.

INVASIVE MANAGEMENT AREA (100 SF) –BITTERSWEET

R&D REMNANT LIGHT POLE BASE, VERIFY LOCATION IN FIELD

CC #3931

TREE PROTECTION FENCING, TYP.

REMOVE TREE; 5" DBH

CC #3836

EROSION CONTROL –COMPOST SOCK, TYP.

RIP RAP

PATH BIT CONC.

AREA A

R&D BENCH TYPE–2, TYP.

CB RIM EL: 78.98

CB RIM EL: 79.01

ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI–USE PATH, TYP.

CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.

ADD ALTERNATE 3 R&D ASPHALT, TYP.

STRIP AND STOCKPILE LOAM, TYP.

DRIFTAWAY

REMOVE STUMP

INVASIVE MANAGEMENT AREAS (1300, 145 SF) –KNOTWEED

ADD ALTERNATE 1 TREE PROTECTION FENCING BACK OF MULTI–USE PATH, TYP.

R&S GRANITE BLOCKS, TYP.

CC #3936

5'

5'

CB RIM EL: 78.27

CB RIM EL: 79.80

R&S HISTORIC PARK RULES SIGN

10 0 20 40 FT.

DMH RIM EL:78.68

SMH RIM EL:78.4

SMH RIM EL:78.6

R&S GRANITE BLOCKS; R&D CONCRETE BLOCKS, TYP.

ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI–USE PATH, TYP.

MULTI–USE PATH

SIGN TYP.

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

PROTECT ADJACENT PAVEMENT

AREA B

AREA ADD ALT

TRASH BIN

R&D SIGN

MASSACHUSETTS KYLE S. ZICK REGISTERED LANDSCAPE ARCHITECT No. 1162

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC CROWN CLEANING
- CR CROWN RAISING

1 BENCH TYPE–1, TYP.
2 BENCH TYPE–2, TYP.
3 BENCH TYPE–3, TYP.
4 BENCH TYPE–4, TYP.
5 BENCH TYPE–5, TYP.
** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

- R&D REMOVE AND DISPOSE
- R&S REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

MATCH LINE SEE SHEET L-1.3

BOSTON PARKS & RECREATION

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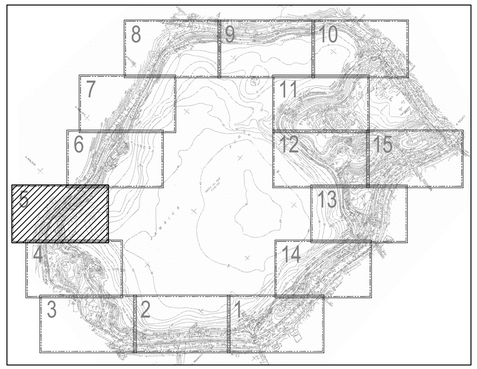

KEY PLAN

MATCH LINE SEE SHEET L-1.6

SMH
RIM EL:109.11

SMH
RIM EL:106.9

DMH
RIM EL: 105.30

DMH
RIM EL: 96.24

DMH
RIM EL: 88.64

CB
RIM EL:N/A

DMH
RIM EL: 85.61

SMH
RIM EL:84.54

DMH
RIM EL: 77.79

CB
RIM EL:77.24

CB
RIM EL:76.81

CB
RIM EL:65.54'

WOODS

GUARD RAIL

RETENTION WALL

STONE WALL

RIP RAP

PATHWAY CONT.

EDGE OF WATER

VGC TYP.

UTILITY POLE TYP.

HYDRANT TYP.

LIGHT TYP.

GROUND DISGUISED BY HEAVY VEGETATION

TRASH BIN

COBBLE SWALE TYP.

CC #7155

CC #7153

CC #7145

CC #7139

CC #7136

CC #7130

CC #7126

CC #7120

CC #7108

CC 12" DBH

R&D EROSION CONTROL NETTING

REMOVE 45 SF OF COBBLE SWALE; CLEAN COBBLE AND STOCKPILE FOR REUSE ON SITE

PROTECT STONE WALL, TYP.

INVASIVE MANAGEMENT AREA (125 SF) –KNOTWEED

REMOVE STUMP BEHIND WALL; PROTECT WALL

INVASIVE REMOVAL–TREE OF HEAVEN SAPLINGS

TREE PROTECTION FENCING, TYP.

R&D TIMBER FROM TIMBER WALL; PROTECT METAL POSTS

REMOVE STUMP BEHIND WALL; PROTECT WALL

R&S GRANITE CURB, TYP.

INVASIVE REMOVAL–BUCKTHORN

PROTECT STONE WALL, TYP.

EROSION CONTROL –COMPOST SOCK, TYP.

SINKHOLE; REMOVE BASE MATERIAL TO MIN. DEPTH OF 30", TYP.

R&D ASPHALT, TYP.

INVASIVE MANAGEMENT AREA (1765 SF) –BITTERSWEET –TREE OF HEAVEN –NORWAY MAPLE SAPLINGS

INVASIVE MANAGEMENT AREA (130 SF) –KNOTWEED

REMOVE TREE; 2" DBH

TREE PROTECTION FENCING, TYP.

REMOVE TREE (#7104)

CLEAN CATCH BASIN AND INSTALL SILT SACK, TYP.

INVASIVE MANAGEMENT AREA, CONTINUED –BITTERSWEET

JAMAICA POND

WATER ELEV.= 57.80' ±

LEGEND

L.O.W.	LIMIT OF WORK
	CONSTRUCTION FENCE
	TREE PROTECTION FENCING, TYP.
	EROSION CONTROL–COMPOST SOCK, TYP.
	SAWCUT LINE, TYP.
	SILT SACK INLET PROTECTION
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
	INVASIVE MANAGEMENT AREA
	APPROXIMATE TOP OF BANK
	100' RESOURCE BUFFER
X	REMOVE TREE OR SHRUB, TYP.
	REMOVE INVASIVE TREE OR SHRUB, TYP.
	REMOVE STUMP
CC	CROWN CLEANING
CR	CROWN RAISING

1	BENCH TYPE–1, TYP.
2	BENCH TYPE–2, TYP.
3	BENCH TYPE–3, TYP.
4	BENCH TYPE–4, TYP.
5	BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
	REMOVE AND DISPOSE ASPHALT, TYP.
	STRIP AND STOCKPILE LOAM, TYP.
	ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
	ADD ALT 1 – SCARIFY SOIL, TYP.
	ADD ALT 2 – SCARIFY SOIL, TYP.
	ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

0 10 20 40 FT.

MATCH LINE SEE SHEET L-1.4

MASSACHUSETTS TITLE 5, 262 CMR REGISTERED LANDSCAPE ARCHITECT No. 1169

BOSTON PARKS & RECREATION

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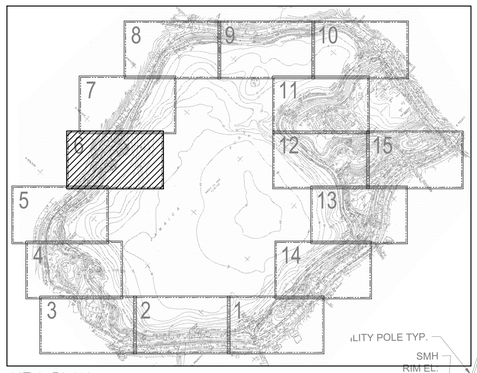
Sheet:
L-1.5



KEY PLAN

MATCH LINE SEE SHEET L-1.7

INVASIVE MANAGEMENT AREA (16,130 SF)
–KNOTWEED
–BITTERSWEET
–NORWAY MAPLE SAPLINGS
–MULTIFLORA ROSE

INVASIVE MANAGEMENT AREA, CONTINUED
–KNOTWEED

R&D BENCH TYPE–2, TYP.;
R&S DEDICATION PLAQUE
ON BENCH

REMOVE AND CLEAN
PLAQUE FOR RESETTING;
PROVIDE PLAQUE TO BPRD
DURING CONTRUCTION

R&D EXERCISE
EQUIPMENT FOOTINGS

INVASIVE MANAGEMENT AREA (170 SF)
–KNOTWEED

R&D ASPHALT, TYP.

INVASIVE REMOVAL
–CORK TREE (8" DBH)
–CORK TREE (10" DBH)

CLEAN CATCH BASIN AND
INSTALL SILT SACK, TYP.

INVASIVE MANAGEMENT AREA (705 SF)
–KNOTWEED

COBBLE SWALE TYP.

R&S HISTORIC PARK
RULES SIGN

REMOVE TREE; 12" DBH

REMOVE FALLEN
TREE

REMOVE STUMP

INVASIVE MANAGEMENT AREA (120 SF)
–KNOTWEED

EROSION CONTROL
–COMPOST SOCK, TYP.

R&D TIMBER FROM TIMBER
WALL; PROTECT METAL POSTS

R&D EROSION CONTROL
NETTING

JAMAICA POND
WATER ELEV.= 57.80' ±

LIGHT TYP.
CB
RIM EL: 88.27
BENCHMARK: MAG NAIL SET
NORTHING: 2,940,595.10
EASTING: 329,196.90
ELEV: 90.23
CB
RIM EL: 79.59
CB
RIM EL: 79.64
DMH
RIM EL:
UTILITY POLE TYP.
SMH
RIM EL:
DMH
RIM EL: 112.25
SMH
RIM EL:112.41
SMH
RIM EL:97.74
SMH
RIM EL:109.11
CC
#7160
CC
#7165
CC
#7155
EQUIPMENT FOUNDATIONS
BENCHES TYP.
EDGE OF WATER
WOODS
RETENTION WALL
GUARD RAIL
STONE WALL
PATHWAY CURB

MATCH LINE SEE SHEET L-1.5

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC CROWN CLEANING
- CR CROWN RAISING
- 1 BENCH TYPE–1, TYP.
- 2 BENCH TYPE–2, TYP.
- 3 BENCH TYPE–3, TYP.
- 4 BENCH TYPE–4, TYP.
- 5 BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

- R&D REMOVE AND DISPOSE
- R&S REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1183 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

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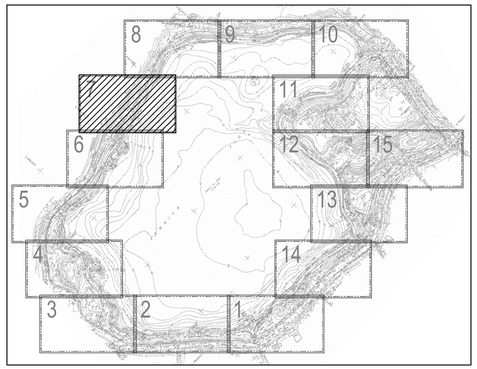
Site Preparation Plan

Sheet:
L-1.6



KEY PLAN

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC CROWN CLEANING
- CR CROWN RAISING

- 1 BENCH TYPE–1, TYP.
- 2 BENCH TYPE–2, TYP.
- 3 BENCH TYPE–3, TYP.
- 4 BENCH TYPE–4, TYP.
- 5 BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

- R&D REMOVE AND DISPOSE
- R&S REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

MATCH LINE SEE SHEET L-1.8

CC #7223
CC #7221
CC #7212
#7214
CB RIM EL:72.05
CB RIM EL:72.02
R&S PUDDINGSTONE
R&D SIGN ON LIGHT POLE; PROTECT LIGHT POLE
BOULDER TYP.
INVASIVE MANAGEMENT AREA, CONTINUED –KNOTWEED
INVASIVE REMOVAL–TREE OF HEAVEN SAPLINGS
R&D EROSION CONTROL NETTING
R&D TIMBER WALL; DISPOSE OF TIMBER AND METAL POSTS
REMOVE STUMPS
TREE PROTECTION FENCING, TYP.
R&D TIMBER WALL; DISPOSE OF TIMBER AND METAL POSTS
R&D EROSION CONTROL NETTING
EDGE OF WATER
BIT CONC. SIDEWALK
PATHFLOW
BENCHMARK: MAG NAIL SET
NORTHING:2,941,014.51'
EASTING:757,946.93'
ELEV:74.82'
REMOVE 10"H STUMP
VGC TYP.
GUARD RAIL
CB RIM EL: 77.77
CB RIM EL: 77.79
REMOVE TREE (#7198)
INVASIVE MANAGEMENT AREA, CONTINUED –KNOTWEED –BITTERSWEET –NORWAY MAPLE SAPLINGS –MULTIFLORA ROSE
INVASIVE MANAGEMENT AREA (3525 SF) –KNOTWEED
SINKHOLE; REMOVE BASE MATERIAL TO MIN. DEPTH OF 30", TYP.
R&D ASPHALT, TYP.
INVASIVE REMOVAL –TREE OF HEAVEN SAPLINGS
R&D TIMBER FROM TIMBER WALL; PROTECT METAL POSTS
EROSION CONTROL –COMPOST SOCKS, TYP.
CB RIM EL: 65.15
CB RIM EL: 65.79
CLEAN CATCH BASIN AND INSTALL SILT SACK, TYP.
UTILITY POLE TYP.
RETENTION WALL
DMH RIM EL: 117.64
LIGHT TYP.
WOODS

JAMAICA POND
WATER ELEV.= 57.80' ±

10 0 20 40 FT.

MATCH LINE SEE SHEET L-1.6

MASSACHUSETTS KYLE S. ZICK No. 1405 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

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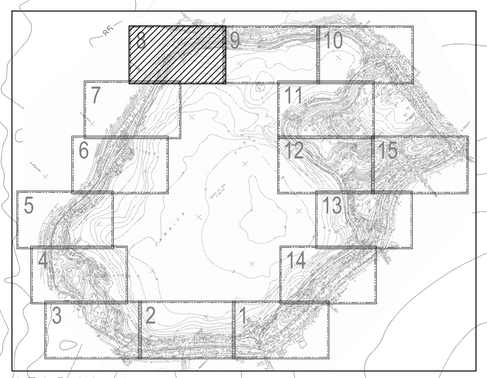
L-1.7



KEY PLAN

LAWN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC — CROWN CLEANING
- CR — CROWN RAISING

- 1 — BENCH TYPE–1, TYP.
- 2 — BENCH TYPE–2, TYP.
- 3 — BENCH TYPE–3, TYP.
- 4 — BENCH TYPE–4, TYP.
- 5 — BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

- R&D — REMOVE AND DISPOSE
- R&S — REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

CB RIM EL: 79.40
VGC TYP.
SMH RIM EL:74.97
CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.
SAWCUT PAVEMENT, TYP.
LAWN
WOODS
BENCHES TYP. 1
CR #3398
AREA C
AREA B
CULVERT
SIGN TYP.
R&S HISTORIC PARK RULES SIGN, TYP.
REMOVE AND STOCKPILE BENCH, TYP.
BENCHES TYP. 1
CB RIM EL: 69.30
DMH RIM EL: 69.40
CB RIM EL: 69.05
CR #3523
REMOVE TREE #3520
VGC TYP.
8' PATHBIT CONC.
COBBLE SWALE TYP.
INVASIVE MANAGEMENT AREA (55 SF) –BITTERSWEET
INV. 14" RCP=60.0'±
REMOVE 4'H STUMP
INVASIVE MANAGEMENT AREA –TREE OF HEAVEN SAPLINGS
R&D CHAIN LINK FENCE
CLEAR AND GRUB WITHIN 3' OF GRANITE BLOCKS
INVASIVE MANAGEMENT AREA (100SF) –BITTERSWEET
CC #3519
TREE PROTECTION FENCING, TYP.
GUARD RAIL
CR 38" DBH
CR 48" DBH
EDGE OF WATER
RIP RAP
INVASIVE MANAGEMENT AREA (130 SF) –BITTERSWEET
INV. 12" DI=57.0'±
INVASIVE MANAGEMENT AREA (1815 SF) –BITTERSWEET –KNOTWEED –MULTIFLORA ROSE
CC #7231
LIGHT TYP.
WOODS
REMOVE 5'H STUMP
CR #7230
GUARD RAIL
8' PATHBIT CONC.
R&D ASPHALT, TYP.
INVASIVE REMOVAL–MULTIFLORA ROSE
EROSION CONTROL –COMPOST SOCK, TYP.
REMOVE TREE; 14" DBH
R&D CONCRETE FOOTINGS
REMOVE STUMP
INVASIVE MANAGEMENT AREA (970 SF) –KNOTWEED
BOULDER TYP.
CC #7208

JAMAICA POND
WATER ELEV.= 57.80' ±

MATCH LINE SEE SHEET L-1.7

MATCH LINE SEE SHEET L-1.9

0 10 20 40 FT.

MASSACHUSETTS KYLE B. ZICK 15 No. 1165 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:
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Consultant Project No. | PROJECT NO.

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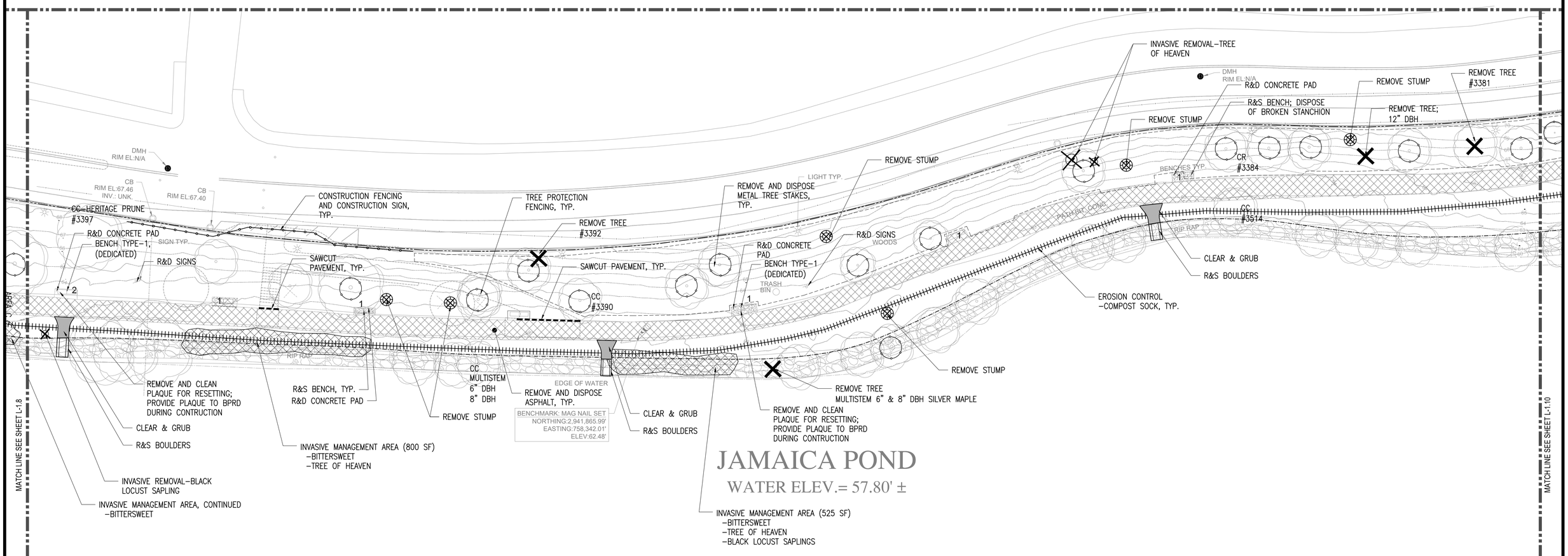

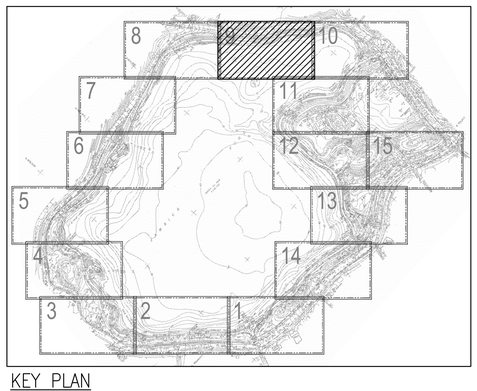

KEY PLAN

0 10 20 40 FT.

LEGEND

L.O.W.	LIMIT OF WORK
	CONSTRUCTION FENCE
	TREE PROTECTION FENCING, TYP.
	EROSION CONTROL-COMPOST SOCK, TYP.
	SAWCUT LINE, TYP.
	SILT SACK INLET PROTECTION
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
	INVASIVE MANAGEMENT AREA
	APPROXIMATE TOP OF BANK
	100' RESOURCE BUFFER

X	REMOVE TREE OR SHRUB, TYP.
	REMOVE INVASIVE TREE OR SHRUB, TYP.
	REMOVE STUMP
CC	CROWN CLEANING
CR	CROWN RAISING

1	BENCH TYPE-1, TYP.
2	BENCH TYPE-2, TYP.
3	BENCH TYPE-3, TYP.
4	BENCH TYPE-4, TYP.
5	BENCH TYPE-5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE-2.

R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
	REMOVE AND DISPOSE ASPHALT, TYP.
	STRIP AND STOCKPILE LOAM, TYP.
	ADD ALT - REMOVE AND DISPOSE ASPHALT, TYP.
	ADD ALT 1 - SCARIFY SOIL, TYP.
	ADD ALT 2 - SCARIFY SOIL, TYP.
	ADD ALT 3 - SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

MASSACHUSETTS
KYLE S. ZICK
No. 1183
REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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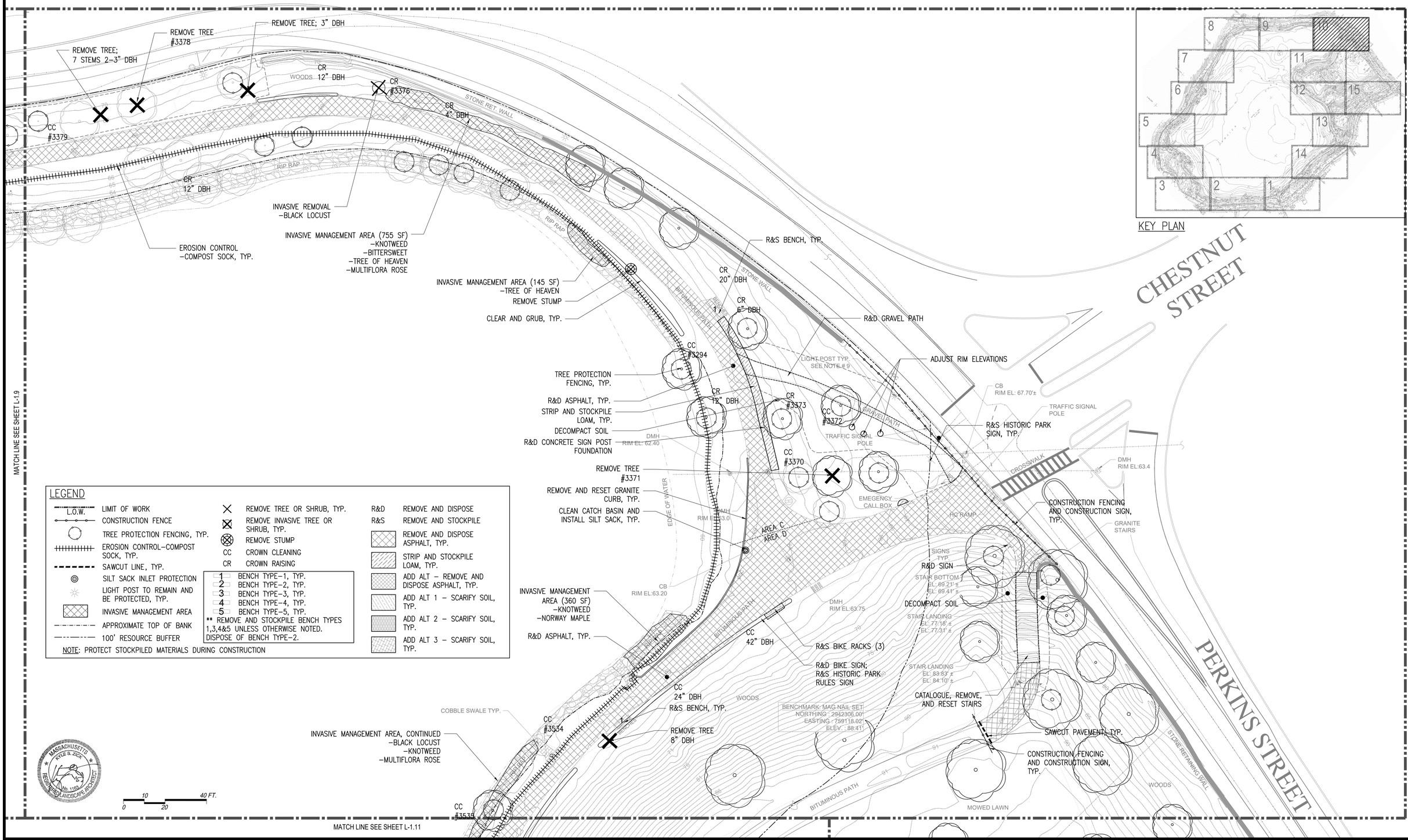
L-1.9



KEY PLAN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC — CROWN CLEANING
- CR — CROWN RAISING

- 1 BENCH TYPE–1, TYP.
- 2 BENCH TYPE–2, TYP.
- 3 BENCH TYPE–3, TYP.
- 4 BENCH TYPE–4, TYP.
- 5 BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

- R&D — REMOVE AND DISPOSE
- R&S — REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

BOSTON PARKS & RECREATION

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Sheet Name.:
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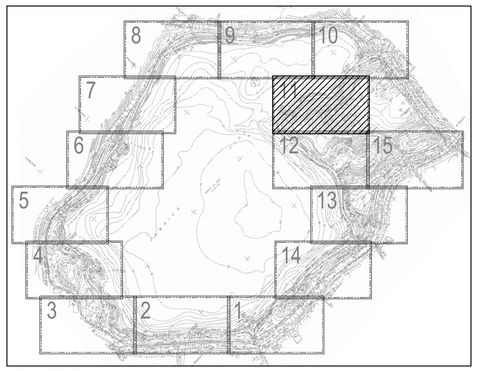
Sheet:
L-1.10

MATCH LINE SEE SHEET L-1.10



KEY PLAN

MASSACHUSETTS
KYLE S. ZICK
No. 1195
REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

CC #3535
CC #3536
INVASIVE MANAGEMENT AREA (1100 SF)
–BLACK LOCUST
–KNOTWEED
–MULTIFLORA ROSE
REMOVE TREE #3539
COBBLE SWALE TYP.
R&S GRANITE CURB, TYP.
INVASIVE REMOVAL
–BLACK LOCUST
R&D ASPHALT, TYP.
TREE PROTECTION FENCING, TYP.
RIP RAP
BITUMINOUS PATH
CR 14" DBH
CC 36" DBH
CC 20" DBH
EROSION CONTROL
–COMPOST SOCK, TYP.
CC #3543
#3544
REMOVE TREE 6" DBH
REMOVE TREE 3" DBH
REMOVE TREE 3" DBH
REMOVE TREE 8" DBH
INVASIVE MANAGEMENT AREA (275 SF)
–BLACK LOCUST
INVASIVE MANAGEMENT AREA (6225 SF)
–BLACK LOCUST
–KNOTWEED
CC 36" DBH
CC 16" DBH
WOODS
R&S PINEBANK
PROMONTORY SIGN
R&S BENCH, TYP.
BENCH TYPE–1,
(DEDICATED)
CC #3546
REMOVE AND CLEAN
PLAQUE FOR RESETTING;
PROVIDE PLAQUE TO BPRD
DURING CONTRUCTION
CR 12" DBH
STAIR BOTTOM
EL. 63.67' ±
EL. 64.33' ±
INVASIVE REMOVAL
–NORWAY MAPLE
SAPLINGS
RAILING TYP.
REMOVE
FALLEN TREE
INVASIVE MANAGEMENT AREA (555 SF)
–NORWAY MAPLE
PROTECT EXISTING
STAIRS
SHIM/STABILIZE ROCKING
TREADS (5) – 1ST,
8TH, 12TH, 13TH, AND
14TH TREADS FROM THE
BOTTOM OF STAIR
STAIR LANDING
EL. 76.45' ±
EL. 76.64' ±
STAIR LANDING
EL. 78.40' ±
EL. 78.49' ±
BENCHES
CONSTRUCTION FENCING
AND CONSTRUCTION SIGN,
TYP.
BENCHMARK: MAG NAIL SET
NORTHING: 2,941,681.42'
EASTING : 758,922.83'
ELEV. : 86.02'
MOWED LAWN
CB
RIM EL.84.34'(R)
INV. IN: 82.54'
INV. OUT: 81.74'
CB
RIM EL.84.43'(R)
10" CLAY
CB
RIM EL:85.70'
INV. OUT: 83.50'
WMH
RIM EL.88.40'
TRASH TYP.
SMH
RIM EL.88.10'±
INV.: 77.38'
PAVERS
EMH
UNDERGROUND LINE
LOCATIONS UNK.
BENCHMARK: MAG NAIL SET
NORTHING: 2,942,125.22'
EASTING : 759,068.92'
ELEV. : 90.36'
PARKING
LIGHT POLE (NOT IN SERVICE)
8" CLAY

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC CROWN CLEANING
- CR CROWN RAISING

1 BENCH TYPE–1, TYP.
2 BENCH TYPE–2, TYP.
3 BENCH TYPE–3, TYP.
4 BENCH TYPE–4, TYP.
5 BENCH TYPE–5, TYP.
** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED.
DISPOSE OF BENCH TYPE–2.

- R&D REMOVE AND DISPOSE
- R&S REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

MATCH LINE SEE SHEET L-1.12

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

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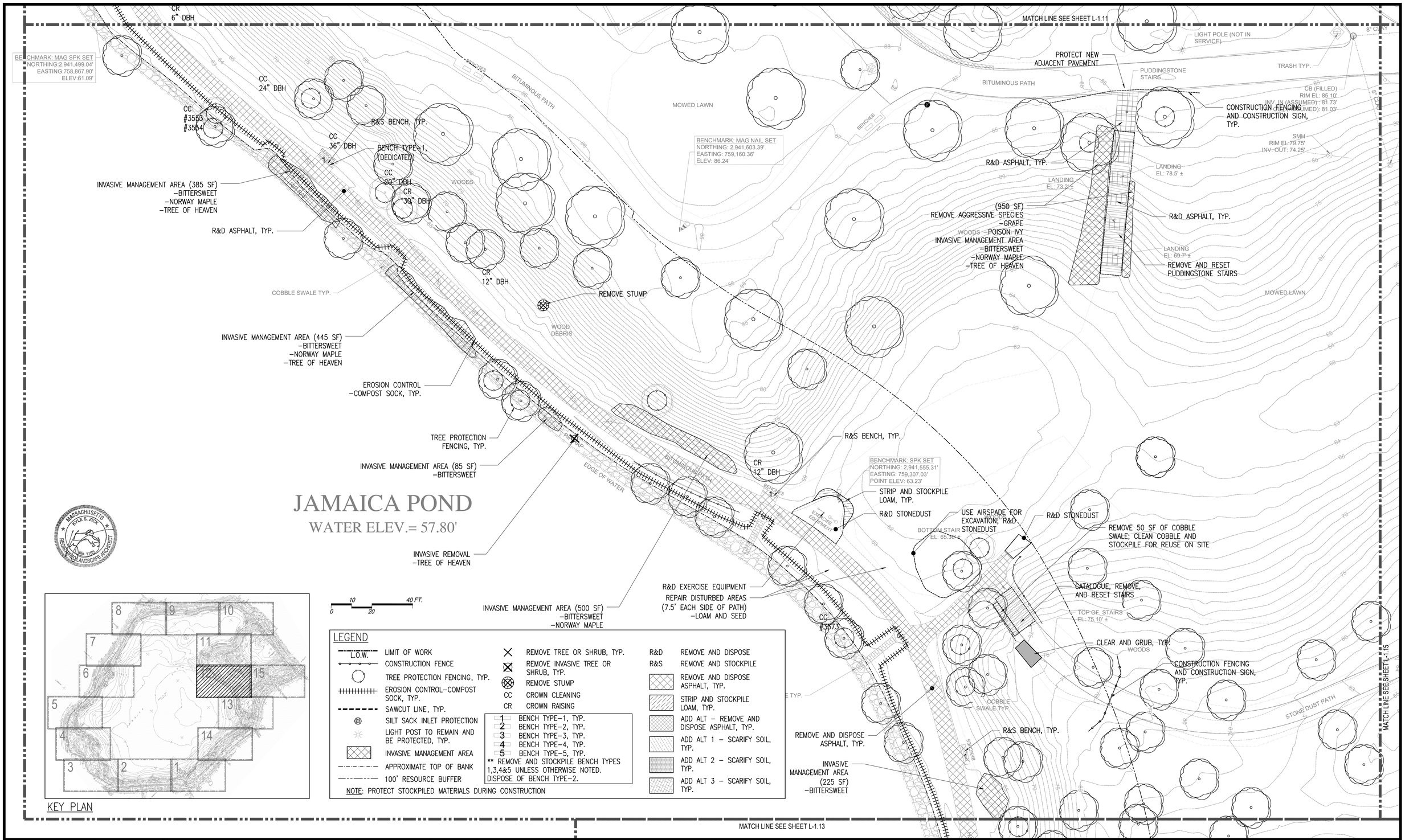

JAMAICA POND

WATER ELEV.= 57.80'

KEY PLAN

0 10 20 40 FT.

LEGEND

L.O.W.	LIMIT OF WORK	X	REMOVE TREE OR SHRUB, TYP.
	CONSTRUCTION FENCE		REMOVE INVASIVE TREE OR SHRUB, TYP.
	TREE PROTECTION FENCING, TYP.		REMOVE STUMP
	EROSION CONTROL–COMPOST SOCK, TYP.	CC	CROWN CLEANING
	SAWCUT LINE, TYP.	CR	CROWN RAISING
	SILT SACK INLET PROTECTION	1	BENCH TYPE–1, TYP.
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.	2	BENCH TYPE–2, TYP.
	INVASIVE MANAGEMENT AREA	3	BENCH TYPE–3, TYP.
	APPROXIMATE TOP OF BANK	4	BENCH TYPE–4, TYP.
	100' RESOURCE BUFFER	5	BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
	REMOVE AND DISPOSE ASPHALT, TYP.
	STRIP AND STOCKPILE LOAM, TYP.
	ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
	ADD ALT 1 – SCARIFY SOIL, TYP.
	ADD ALT 2 – SCARIFY SOIL, TYP.
	ADD ALT 3 – SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:
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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
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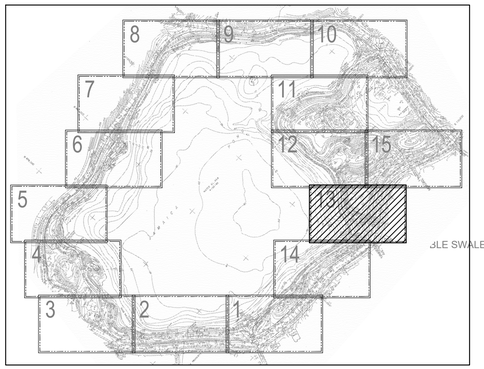
Sheet Name.:
Site Preparation Plan

Sheet:
L-1.12



KEY PLAN

MATCH LINE SEE SHEET L-1.12

MATCH LINE SEE SHEET L-1.15

JAMAICA WAY

LIGHT POLE TYP. SEE NOTE # 9

ADD ALTERNATE 1
TREE PROTECTION FENCING BACK
OF MULTI-USE PATH, TYP.

ADD ALTERNATE 1
DECOMPACT SOIL AT BACK OF
MULTI-USE PATH, TYP.

MULTI-USE PATH

ADD ALTERNATE 3
TREE PROTECTION FENCING
STREETSIDE OF MULTI-USE PATH, TYP.

ADD ALTERNATE 3
DECOMPACT SOIL STREETSIDE OF
MULTI-USE PATH, TYP.

ADD ALTERNATE 3
R&D ASPHALT, TYP.

ADD ALTERNATE 2
CONSTRUCTION FENCING AND
CONSTRUCTION SIGN, TYP.

ADD ALTERNATE 2
DECOMPACT SOIL STREETSIDE OF
MULTI-USE PATH, TYP.

ADD ALTERNATE 2
R&D ASPHALT, TYP.

ADD ALTERNATE 2
CONSTRUCTION FENCING AND
CONSTRUCTION SIGN, TYP.

BENCHES TYP.

COBBLE SWALE TYP.

REMOVE STUMP AND
WOOD DEBRIS

INVASIVE REMOVAL
-BURNING BUSH

EROSION CONTROL
-COMPOST SOCK, TYP.

TREE PROTECTION
FENCING, TYP.

PROTECT NEW
ADJACENT PAVEMENT

CONSTRUCTION FENCING AND
CONSTRUCTION SIGN, TYP.

SAWCUT PAVEMENT, TYP.

CLEAN CATCH BASIN
AND CONNECTING
PIPES; INSTALL SILT
SACK, TYP.

R&D ASPHALT, TYP.

STRIP AND STOCKPILE LOAM

REMOVE AND RESET GRANITE CURB,
TYP.

OUTFALL UNDERWATER

R&D GRAVEL AREA

R&D APPROX. 162LF
BITUMINOUS CURB

CONSTRUCTION FENCING AND
CONSTRUCTION SIGN, TYP.

R&S HISTORIC
PARK RULES
SIGN

INVASIVE REMOVAL
-BUCKTHORN

ADD ALTERNATE 1
DECOMPACT SOIL AT BACK OF
MULTI-USE PATH, TYP.

INVASIVE REMOVAL-NORWAY
MAPLE SAPLINGS

REMOVE TREE
#957

CC #3800
CC #3759
CC #3579
CC #3763
CC #3584
CC #3765
CC #3764
CC #3766
CC #4002
CC #4003
CC #4005
CC #4008
CC #956

WOODS
MOWED LAWN
BITUMINOUS PATH
PATH (BIT. CONC.)
EDGE OF WATER
RIP RAP
BITUMINOUS PATH
VGC TYP.
EHH TYP.
AREA 5
AREA ADD. ALT. (CONC.)
AREA D
AREA E
CB RIM EL. 85.10
CB RIM EL. 79.35
5'

BENCHMARK: MAG NAIL SET
NORTHING:2,941,356.41'
EASTING:759,616.01
ELEV:62.42'

JAMAICA POND
WATER ELEV.= 57.80' ±

MATCH LINE SEE SHEET L-1.14

0 10 20 40 FT.

LEGEND

L.O.W.	LIMIT OF WORK
	CONSTRUCTION FENCE
	TREE PROTECTION FENCING, TYP.
	EROSION CONTROL-COMPOST SOCK, TYP.
	SAWCUT LINE, TYP.
	SILT SACK INLET PROTECTION
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
	INVASIVE MANAGEMENT AREA
	APPROXIMATE TOP OF BANK
	100' RESOURCE BUFFER

	REMOVE TREE OR SHRUB, TYP.
	REMOVE INVASIVE TREE OR SHRUB, TYP.
	REMOVE STUMP
CC	CROWN CLEANING
CR	CROWN RAISING
1	BENCH TYPE-1, TYP.
2	BENCH TYPE-2, TYP.
3	BENCH TYPE-3, TYP.
4	BENCH TYPE-4, TYP.
5	BENCH TYPE-5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE-2.

R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
	REMOVE AND DISPOSE ASPHALT, TYP.
	STRIP AND STOCKPILE LOAM, TYP.
	ADD ALT - REMOVE AND DISPOSE ASPHALT, TYP.
	ADD ALT 1 - SCARIFY SOIL, TYP.
	ADD ALT 2 - SCARIFY SOIL, TYP.
	ADD ALT 3 - SCARIFY SOIL, TYP.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

MASSACHUSETTS KYLE S. ZICK REGISTERED LANDSCAPE ARCHITECT No. 1160

BOSTON PARKS & RECREATION

Prepared By:
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Consultant Project No. PROJECT NO.

NORTH

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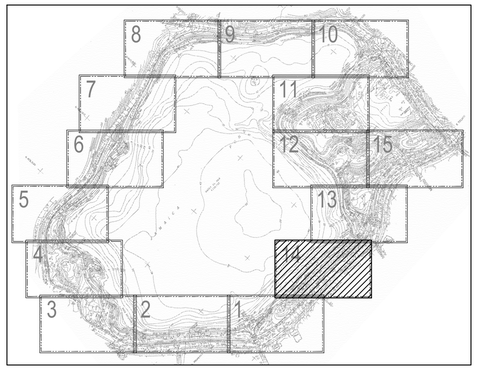
Site Preparation Plan

Sheet:
L-1.13



KEY PLAN

MATCH LINE SEE SHEET L-1.13

JAMAICA POND

WATER ELEV.= 57.80' ±

INVASIVE REMOVAL –BUCKTHORN

INVASIVE REMOVAL –NORWAY MAPLE SAPLINGS

COBBLE SWALE TYP.

R&S BENCH, TYP.

R&D SIGN ON LIGHT POLE; PROTECT LIGHT POLE

LIGHT POLE TO REMAIN AND BE PROTECTED, TYP.

CC #4009

REMOVE TREE MULTISTEM 62" DBH

CC 8" DBH

RIP RAP

PATHWAY CONC.

CC 28" DBH

CC 30" DBH

CC 24" DBH

CC (6) 8" DBH

ADD ALTERNATE 1 TREE PROTECTION FENCING BACK OF MULTI–USE PATH, TYP.

CC #4010

INVASIVE REMOVAL –BUCKTHORN

REMOVE TREE 16" DBH

BIKE PATH (BIT. CONC.)

CC #3591, 3592, 3593, 3594

ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI–USE PATH, TYP.

INVASIVE REMOVAL–NORWAY MAPLE SAPLINGS

INVASIVE REMOVAL –BUCKTHORN

COBBLE SWALE TYP.

ADD ALTERNATE 3 R&D ASPHALT, TYP.

REMOVE TREE #3595

TREE PROTECTION FENCING, TYP.

INVASIVE REMOVAL–NORWAY MAPLE SAPLING

R&D ASPHALT, TYP.

EDGE OF WATER

EHH TYP.

LIGHT TYP.

MULTI–USE PATH

VGC TYP.

CC 8" DBH

CC #4012

CC #4013

R&S BENCH

R&D CONCRETE PAD

CC #4015

LIGHT POST TO REMAIN AND BE PROTECTED, TYP.

ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI–USE PATH, TYP.

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

EROSION CONTROL –COMPOST SOCK, TYP.

CC #3600

PIPE INVERT MATERIAL UNKNOWN INVERT UNKNOWN

REPAIR BROKEN PIPE; R&D PIPE REMNANT

REMOVE AND RESET BENCH (DEDICATED); PROTECT ARTWORK

ART

CC #4019

ART INSTALLATION BENCH

COBBLE SWALE TYP.

R&D GRAVEL

R&S BENCH, TYP.

CC 10" DBH.

CC #968

JAMAICA WAY

MATCH LINE SEE SHEET L-1.1

0 10 20 40 FT.

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE PROTECTION FENCING, TYP.
- EROSION CONTROL–COMPOST SOCK, TYP.
- SAWCUT LINE, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
- INVASIVE MANAGEMENT AREA
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- REMOVE TREE OR SHRUB, TYP.
- REMOVE INVASIVE TREE OR SHRUB, TYP.
- REMOVE STUMP
- CC CROWN CLEANING
- CR CROWN RAISING
- 1 BENCH TYPE–1, TYP.
- 2 BENCH TYPE–2, TYP.
- 3 BENCH TYPE–3, TYP.
- 4 BENCH TYPE–4, TYP.
- 5 BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

- R&D REMOVE AND DISPOSE
- R&S REMOVE AND STOCKPILE
- REMOVE AND DISPOSE ASPHALT, TYP.
- STRIP AND STOCKPILE LOAM, TYP.
- ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
- ADD ALT 1 – SCARIFY SOIL, TYP.
- ADD ALT 2 – SCARIFY SOIL, TYP.
- ADD ALT 3 – SCARIFY SOIL, TYP.

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:

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Consultant Project No. | PROJECT NO.

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Jamaica Pond Park Pathways & Entrances Phase 2

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Checked	KZ

Sheet Name.:

Site Preparation Plan

Sheet:

L-1.14

LEGEND

L.O.W.	LIMIT OF WORK
	CONSTRUCTION FENCE
	TREE PROTECTION FENCING, TYP.
	EROSION CONTROL–COMPOST SOCK, TYP.
	SAWCUT LINE, TYP.
	SILT SACK INLET PROTECTION
	LIGHT POST TO REMAIN AND BE PROTECTED, TYP.
	INVASIVE MANAGEMENT AREA
	APPROXIMATE TOP OF BANK
	100' RESOURCE BUFFER

X	REMOVE TREE OR SHRUB, TYP.
	REMOVE INVASIVE TREE OR SHRUB, TYP.
	REMOVE STUMP
CC	CROWN CLEANING
CR	CROWN RAISING

1	BENCH TYPE–1, TYP.
2	BENCH TYPE–2, TYP.
3	BENCH TYPE–3, TYP.
4	BENCH TYPE–4, TYP.
5	BENCH TYPE–5, TYP.

** REMOVE AND STOCKPILE BENCH TYPES 1,3,4&5 UNLESS OTHERWISE NOTED. DISPOSE OF BENCH TYPE–2.

NOTE: PROTECT STOCKPILED MATERIALS DURING CONSTRUCTION

R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
	REMOVE AND DISPOSE ASPHALT, TYP.
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	ADD ALT – REMOVE AND DISPOSE ASPHALT, TYP.
	ADD ALT 1 – SCARIFY SOIL, TYP.
	ADD ALT 2 – SCARIFY SOIL, TYP.
	ADD ALT 3 – SCARIFY SOIL, TYP.

PERKINS STREET

JAMAICA WAY

MORAINE STREET

BITUMINOUS PATH

MOWED LAWN

WOODS

ADD ALTERNATE 1 TREE PROTECTION FENCING BACK OF MULTI–USE PATH, TYP.

ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI–USE PATH, TYP.

ADD ALTERNATE 1 PROTECT GATE AND GRANITE POSTS

ADD ALTERNATE 1 PROTECT SIGN

ADD ALTERNATE 3 CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.

ADD ALTERNATE 1 PROTECT NEW ADJACENT PAVEMENT

ADD ALTERNATE 3 PROTECT NEW ADJACENT PAVEMENT

ADD ALTERNATE 3 SAWCUT PAVEMENT, TYP.

ADD ALTERNATE 3 CONSTRUCTION FENCING AND CONSTRUCTION SIGN, TYP.

ADD ALTERNATE 3 R&D ASPHALT, TYP.

ADD ALTERNATE 3 SAWCUT PAVEMENT, TYP.

ADD ALTERNATE 3 TREE PROTECTION FENCING STREETSIDE OF MULTI–USE PATH, TYP.

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

ADD ALTERNATE 1 DECOMPACT SOIL AT BACK OF MULTI–USE PATH, TYP.

ADD ALTERNATE 3 DECOMPACT SOIL STREETSIDE OF MULTI–USE PATH, TYP.

MULTI–USE PATH

5'

5'

EMH RIM: 83.00'±

DMH RIM EL:75.06' INV: IN: 73.73' INV: OUT: NOT FND SUMP: 68.93

LIGHT POLE TYP. SEE NOTE # 9

TRASH TYP.

BOLLARD TYP.

GRANITE BOULDER TYP.

MH UNKNOWN RIM EL: 84.65

GATE

LIGHT POLE TYP.

SIGN TYP.

EMH RIM:

SMH

LIGHT POLE & HANDHOLE TYP.

DMH

WMH RIM EL:80.25

WMH RIM EL:80.06

CB RIM EL:79.30

CB RIM EL:80.11

SMH RIM EL:80.40±

WATER FOUNTAIN TYP.

TRASH TYP

BOLLARD TYP.

BENCH

CONC.

BITUMINOUS PAVEMENT

SIGN TYP.

CROSSWALK

HC RAMP TYP.

EMH RIM:

ELEC. HANDHOLE TYP.

CROSSWALK

TRAFFIC SIGNAL POLE TYP.

MANHOLE UNK. (TYP.)

SIGN TYP.

DMH

MANHOLE UNK. (TYP.)

NAIL SET EASTING: 759,806.65 ELEV. : 80.57'

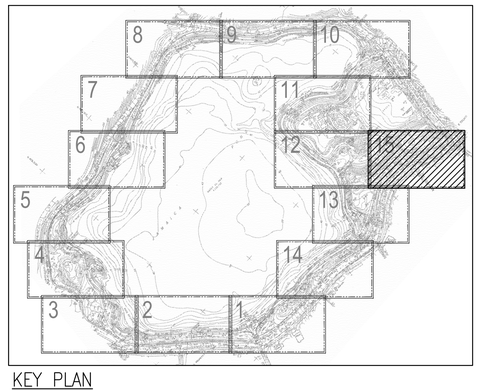
MATCH LINE SEE SHEET L-1.12

MATCH LINE SEE SHEET L-1.13

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1162 REGISTERED LANDSCAPE ARCHITECT

KEY PLAN



BOSTON PARKS & RECREATION

Prepared By:
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Checked	KZ

Sheet Name.:
Site Preparation Plan

Sheet:
L-1.15

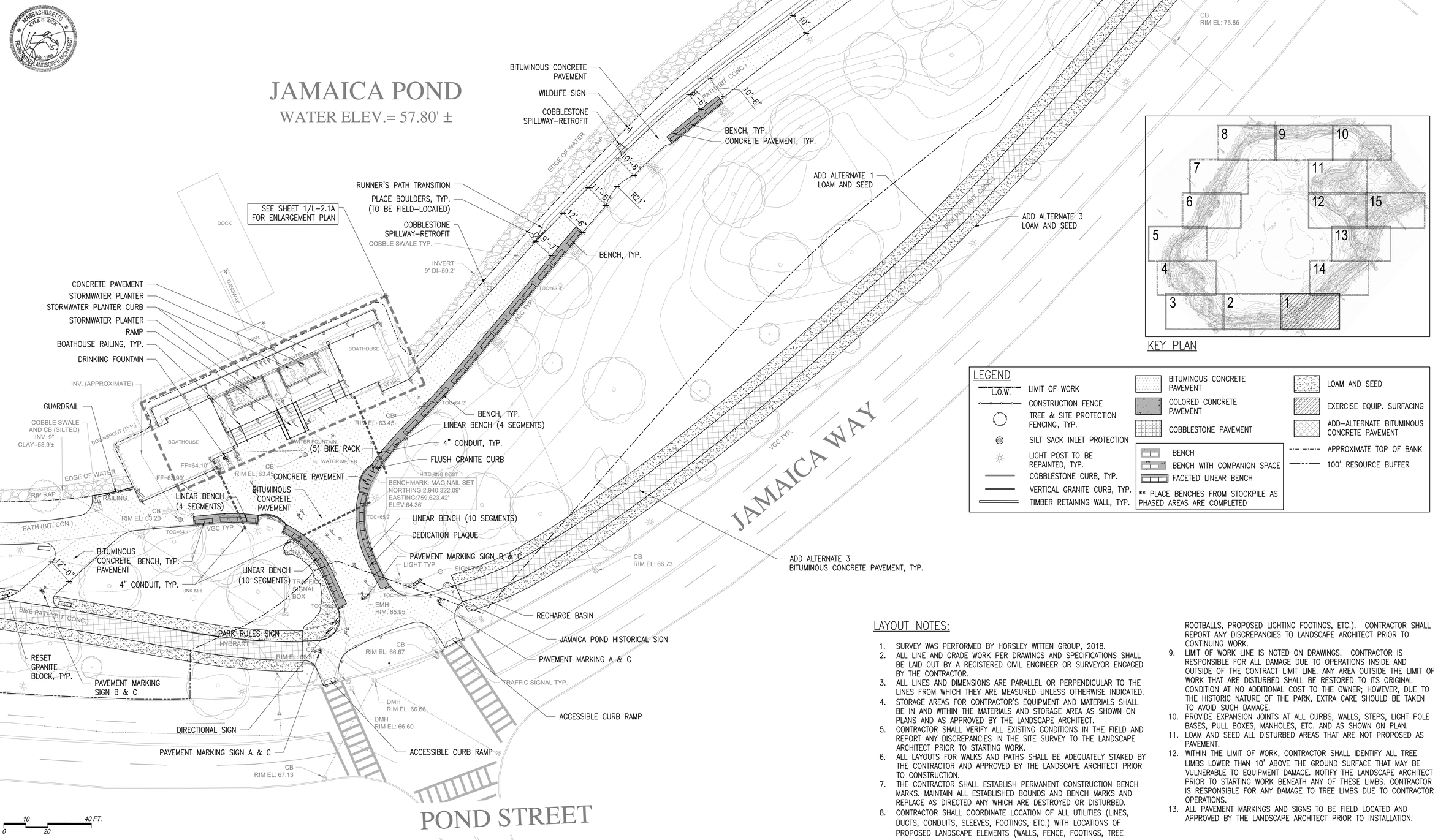
MATCH LINE SEE SHEET L-2.14

MATCH LINE SEE SHEET L-2.2

MASSACHUSETTS
KYLE S. ZICK
No. 1409
REGISTERED LANDSCAPE ARCHITECT

JAMAICA POND

WATER ELEV.= 57.80' ±



KEY PLAN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH

** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED

- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD–ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

LAYOUT NOTES:

1. SURVEY WAS PERFORMED BY HORSLEY WITTEN GROUP, 2018.
2. ALL LINE AND GRADE WORK PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.
3. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
4. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE IN AND WITHIN THE MATERIALS AND STORAGE AREA AS SHOWN ON PLANS AND AS APPROVED BY THE LANDSCAPE ARCHITECT.
5. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK.
6. ALL LAYOUTS FOR WALKS AND PATHS SHALL BE ADEQUATELY STAKED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL ESTABLISH PERMANENT CONSTRUCTION BENCH MARKS. MAINTAIN ALL ESTABLISHED BOUNDS AND BENCH MARKS AND REPLACE AS DIRECTED ANY WHICH ARE DESTROYED OR DISTURBED.
8. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCE, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONTINUING WORK.
9. LIMIT OF WORK LINE IS NOTED ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREA OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER; HOWEVER, DUE TO THE HISTORIC NATURE OF THE PARK, EXTRA CARE SHOULD BE TAKEN TO AVOID SUCH DAMAGE.
10. PROVIDE EXPANSION JOINTS AT ALL CURBS, WALLS, STEPS, LIGHT POLE BASES, PULL BOXES, MANHOLES, ETC. AND AS SHOWN ON PLAN.
11. LOAM AND SEED ALL DISTURBED AREAS THAT ARE NOT PROPOSED AS PAVEMENT.
12. WITHIN THE LIMIT OF WORK, CONTRACTOR SHALL IDENTIFY ALL TREE LIMBS LOWER THAN 10' ABOVE THE GROUND SURFACE THAT MAY BE VULNERABLE TO EQUIPMENT DAMAGE. NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK BENEATH ANY OF THESE LIMBS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO TREE LIMBS DUE TO CONTRACTOR OPERATIONS.
13. ALL PAVEMENT MARKINGS AND SIGNS TO BE FIELD LOCATED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

BOSTON PARKS & RECREATION

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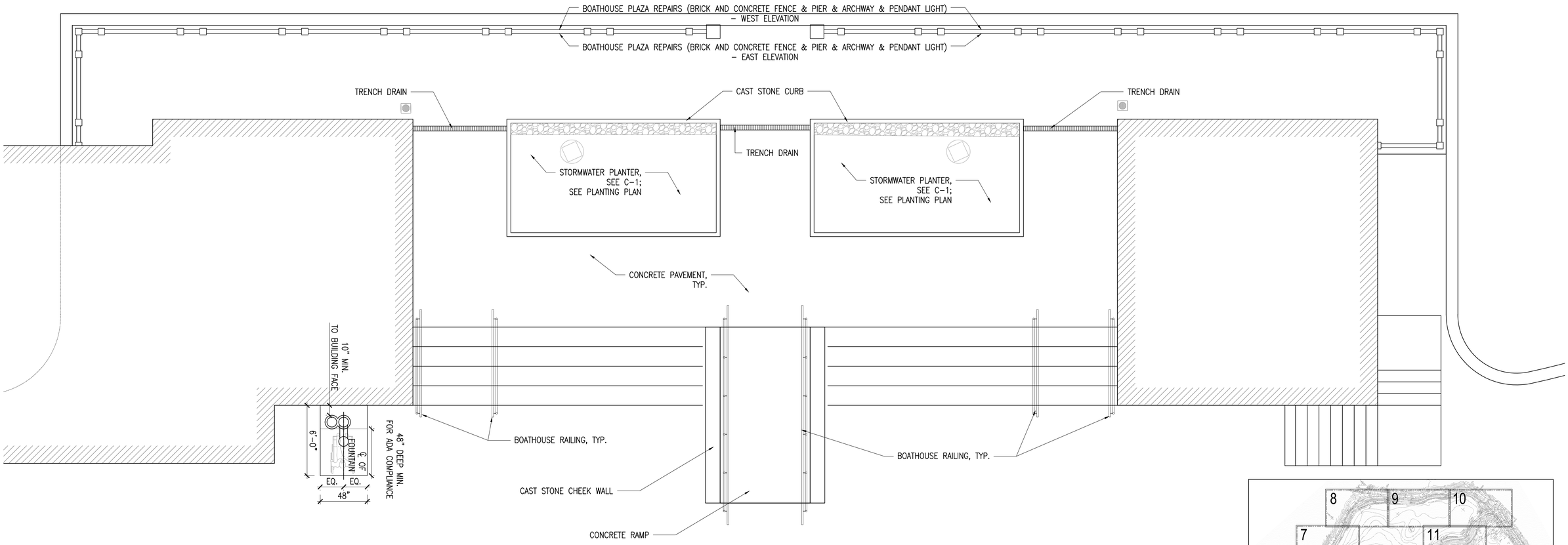
Checked	KZ

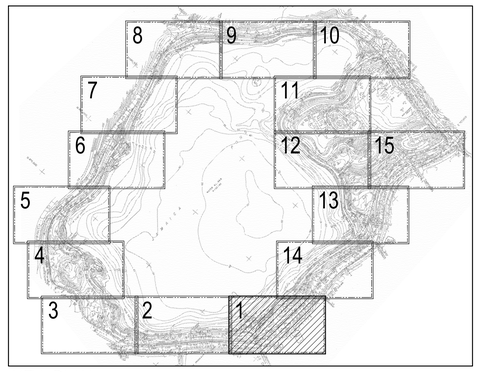
Sheet Name.:
Layout And Material Plan

Sheet:
L-2.1



1 ENLARGEMENT PLAN

SCALE: 1/4"=1'-0"



KEY PLAN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

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Layout And Material Plan

Sheet:

L-2.1A

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
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- COBBLESTONE PAVEMENT
- BENCH
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** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED

- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
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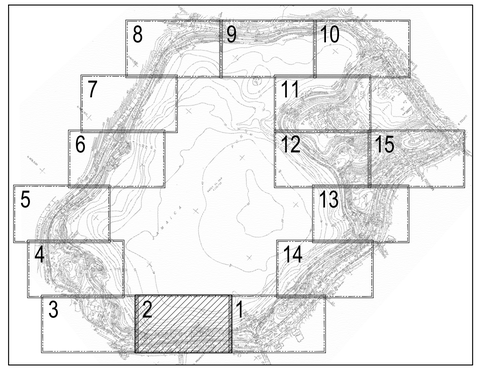
MASSACHUSETTS · KYLE S. ZICK · No. 1169 · REGISTERED LANDSCAPE ARCHITECT



KEY PLAN

MATCH LINE SEE SHEET L-2.3

MATCH LINE SEE SHEET L-2.1

PLACE BOULDERS, TYP. (TO BE FIELD-LOCATED)

COBBLESTONE SPILLWAY-RETROFIT

JAMAICA POND

WATER ELEV.= 57.80' ±

PARK RULES SIGN

ACCESSIBLE FISHING LANDING: COLORED CONCRETE PAVEMENT

BENCHMARK: MAG NAIL SET
NORTHING:2,940,163.44'
EASTING:759,563.72'
ELEV:65.12'

COBBLESTONE SPILLWAY-RETROFIT

GUARDRAIL

BENCH

BENCHMARK: MAG NAIL SET
NORTHING:2,939,918.72'
EASTING:759,258.93'
ELEV:62.78'

COBBLE SWALE TYP.

BITUMINOUS CONCRETE PAVEMENT

WILDLIFE SIGN

EDGE OF WATER

RIP RAP

TEMPORARY VEGETATION PROTECTION FENCE, TYP.

COBBLESTONE SPILLWAY-RETROFIT

EDGE OF WATER

RIP RAP

PATH (BIT. CONC)

16'-10 1/2"

COBBLE SWALE TYP.

I.E. 10.0"

PATH (BIT. CONC)

BENCH, TYP.

CONCRETE PAVEMENT, TYP.

BIKE PATH (BIT. CONC.)

ADD ALTERNATE 1 LOAM AND SEED

CB
RIM EL: 64.6

LIGHT TYP.

BIKE PATH (BIT. CONC)

HYDRANT

LOAM AND SEED, TYP.

VGC TYP.

LOAM AND SEED, TYP.

ADD ALTERNATE 3 LOAM AND SEED

CB
RIM EL: 71.5

ADD ALTERNATE 3 BITUMINOUS CONCRETE PAVEMENT

ING

10 40 FT.
0 20

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
Date	11/07/2018
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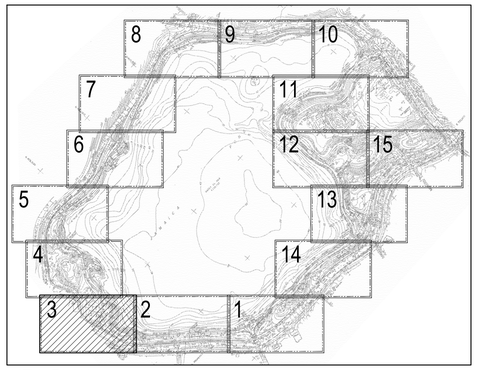
Drawn	JL
Checked	KZ

Sheet Name.:
Layout And Material Plan

Sheet:
L-2.2

MATCH LINE SEE SHEET L-2.4



KEY PLAN

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

SEED

APPROXIMATE AREA OF DEPRESSIONS – 14 DEPRESSIONS FILL DEPRESSIONS; LOAM AND SEED

ADD ALTERNATE 3 BITUMINOUS CONCRETE PAVEMENT

ARBORWAY

BENCHMARK: MAG NL SET
NORTHING:2,939,635.44'
EASTING:758,665.85'
ELEV.:76.58'

BENCH

FIILL DEPRESSION; LOAM AND SEED

ADD ALTERNATE 1 LOAM AND SEED

CONCRETE PAVEMENT, TYP.

BENCH

DMH
RIM EL: 76.64

BENCHMARK: MAG N SET
NORTHING:2,939,693.44'
EASTING:758,665.35'
ELEV.:76.58'

BITUMINOUS CONCRETE PAVEMENT

EXERCISE EQUIPMENT

EXERCISE EQUIPMENT B

BIKE PATH (BIT. CONC)

PATH (BIT. CONC)

ADD ALTERNATE 3 LOAM AND SEED

LIGHT TYP.

VGC TYP.

FIILL DEPRESSION; LOAM AND SEED

10'-0"

RUNNER'S PATH

CB
RIM EL: 75.15

LOAM AND SEED, TYP.

GRANITE BLOCK (TYP.)

RIP RAP

EDGE OF WATER

JAMAICA POND
WATER ELEV.= 57.80' ±

POND STREET

PLACE BOULDERS, TYP. (TO BE FIELD-LOCATED)

DIRECTIONAL SIGN

PAVEMENT MARKING SIGN B & C

PAVEMENT MARKING SIGN A & C

PAVEMENT MARKING SIGN B & C

PARK RULES SIGN

RESET LIGHT POST

TRAFFIC SIGNAL TYP.

8'-10"

8'-0"

PATH (BIT. CONC)

BIKE PATH (BIT. CONC)

ALIGN RESET GRANITE BLOCKS, TYP.

RUNNER'S PATH TRANSITION

PAVEMENT MARKING SIGN A & C

CB
RIM EL: 74.23

DIRECTIONAL SIGN

JAMAICA POND HISTORICAL SIGN

PERMEABLE COBBLESTONE PAVING

ADD ALTERNATE 3 BITUMINOUS CONCRETE PAVEMENT

DIRECTIONAL SIGN

PAVEMENT MARKING SIGN A & C

10 0 20 40 FT.

MATCH LINE SEE SHEET L-2.2

MASSACHUSETTS KYLE S. ZICK No. 1152 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Consultant Project No.
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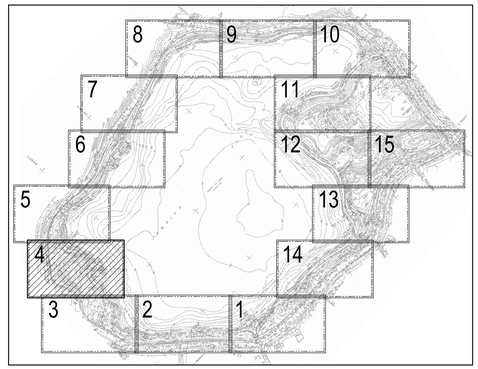
L-2.3

MATCH LINE SEE SHEET L-2.5

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

0 10 20 40 FT.



KEY PLAN

JAMAICA POND

WATER ELEV.= 57.80' ±

GRASS SWALE
CONCRETE PAVEMENT, TYP.
BENCH
BENCHES TYP.
BENCH
COBBLESTONE SPILLWAY–RETROFIT
TIMBER RETAINING WALL REPAIR
WOOD WALL
METAL POSTS
RIP RAP
COBBLE SWALE TYP.
COBBLESTONE CURB, TYP.
PATH BIT CONC
10'
COBBLESTONE SPILLWAY–RETROFIT
BENCH
TRASH BIN
BITUMINOUS CONCRETE PAVEMENT
COBBLESTONE CURB, TYP.
FIILL DEPRESSION; LOAM AND SEED
EDGE OF WATER
PLACE BOULDERS, TYP. (TO BE FIELD–LOCATED)
EXCERCISE EQUIPMENT
RUNNER'S PATH TRANSITION
EXERCISE EQUIPMENT A
RUNNER'S PATH
RIP RAP
PATH BIT CONC
CONCRETE BLOCKS
10'
DIRT PATH
6'
BENCHES TYP.
BENCH
BITUMINOUS CONCRETE PAVEMENT
ADD ALTERNATE 1 LOAM AND SEED
CB RIM EL: 78.27
CB RIM EL: 79.80
ADD ALTERNATE 3 BITUMINOUS CONCRETE PAVEMENT
ADD ALTERNATE 3 LOAM AND SEED
SIGN TYP.
APPROXIMATE AREA OF DEPRESSIONS, CONTINUED FILL DEPRESSIONS; LOAM AND SEED
TRASH BIN
PARK RULES SIGN
DMH RIM EL: 80.48
UTILITY POLE TYP.
SMH RIM EL:79.77
CONG BLOCK TYP.
VGL TYP.
LIGHT TYP.
LAWN
SMH RIM EL:79.45
SMH RIM EL:79.46
CB RIM EL: 78.98
CB RIM EL: 79.01
DMH RIM EL:78.68
SMH RIM EL:78.4
SMH RIM EL:78.6

MATCH LINE SEE SHEET L-2.3

BOSTON PARKS & RECREATION

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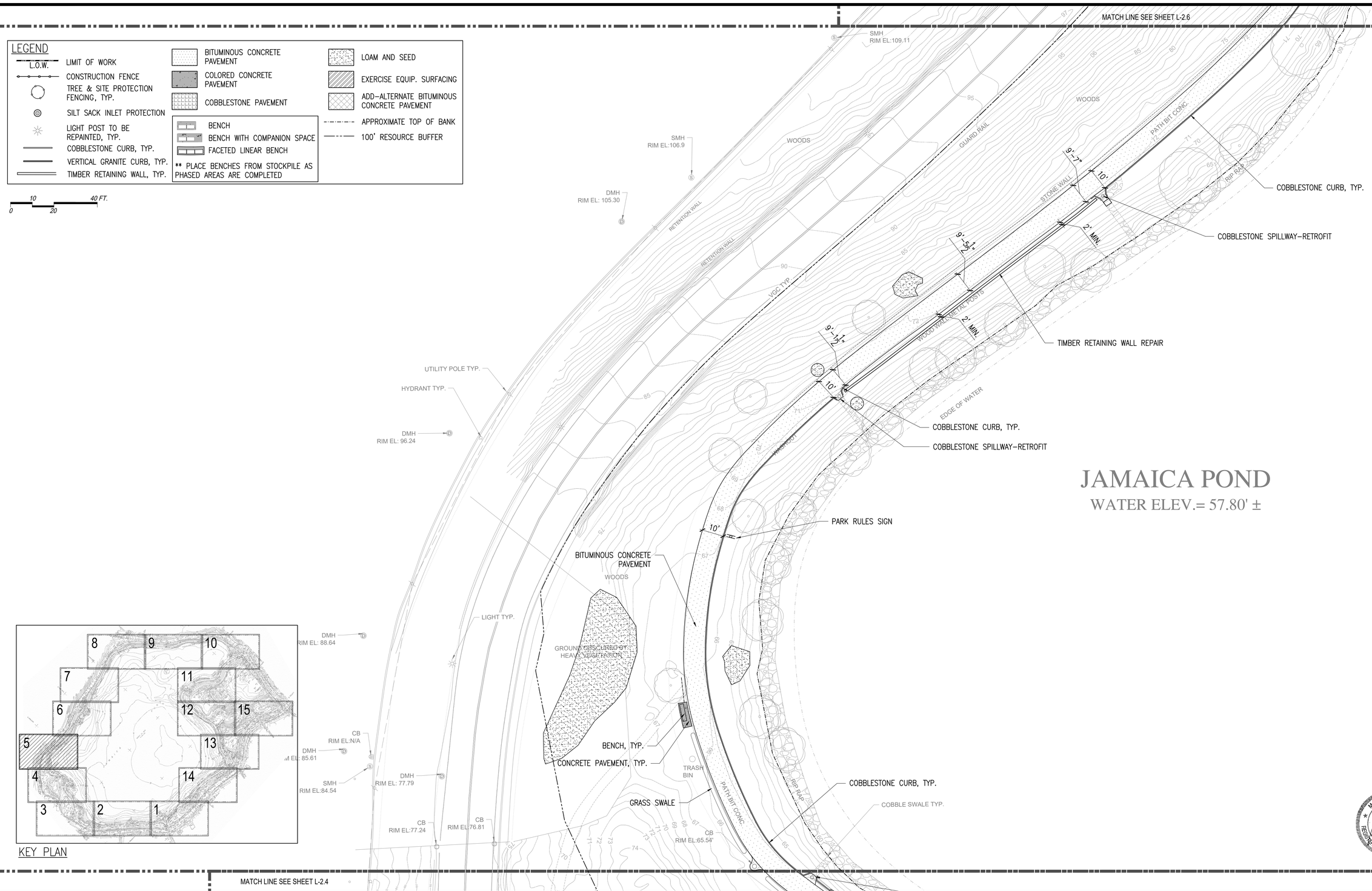
Sheet: **L-2.4**

MASSACHUSETTS KYLE S. ZICK No. 1158 REGISTERED LANDSCAPE ARCHITECT



JAMAICA POND

WATER ELEV.= 57.80' ±

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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L-2.5


MATCH LINE SEE SHEET L-2.7
KEY PLAN
8
9
10
7
11
6
12
15
5
13
4
14
3
2
1
BENCH, TYP.
CONCRETE PAVEMENT, TYP.
COBBLESTONE CURB, TYP.
BITUMINOUS CONCRETE PAVEMENT
BENCHES TYP.
EXERCISE EQUIPMENT FOUNDATIONS
PATH BIT CONC.
LIGHT TYP.
CB RIM EL: 88.27
DMH RIM EL:
EDGE OF WATER
VGC TYP.
WOODS
COBBLE SWALE TYP.
COBBLESTONE SPILLWAY-RETROFIT
COBBLESTONE CURB, TYP.
JAMAICA POND
WATER ELEV.= 57.80' ±
STONE WALL
RETENTION WALL
9'-3"
10'
2' MIN.
TIMBER RETAINING WALL REPAIR
WOOD WALL METAL POSTS
GUARD RAIL
DMH RIM EL: 112.25
SMH RIM EL:112.41
SMH RIM EL:97.74
PATH BIT CONC.
COBBLESTONE CURB, TYP.
SMH RIM EL:109.11
MATCH LINE SEE SHEET L-2.5
0 10 20 40 FT.
LEGEND
L.O.W. LIMIT OF WORK
CONSTRUCTION FENCE
TREE & SITE PROTECTION FENCING, TYP.
SILT SACK INLET PROTECTION
LIGHT POST TO BE REPAINTED, TYP.
COBBLESTONE CURB, TYP.
VERTICAL GRANITE CURB, TYP.
TIMBER RETAINING WALL, TYP.
BITUMINOUS CONCRETE PAVEMENT
COLORED CONCRETE PAVEMENT
COBBLESTONE PAVEMENT
BENCH
BENCH WITH COMPANION SPACE
FACETED LINEAR BENCH
** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
LOAM AND SEED
EXERCISE EQUIP. SURFACING
ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
APPROXIMATE TOP OF BANK
100' RESOURCE BUFFER

BOSTON PARKS & RECREATION

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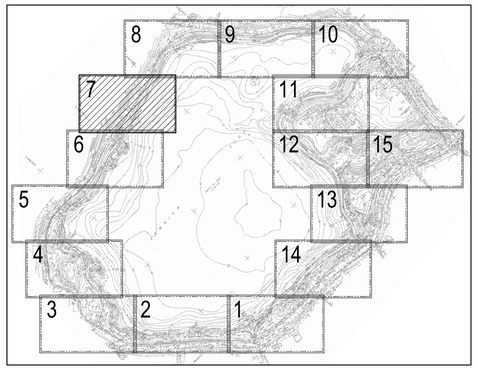
Sheet:
L-2.6



KEY PLAN

MATCH LINE SEE SHEET L-2.8

CB
RIM EL:72.05

BOULDER TYP.

CB
RIM EL:72.00

WOOD WALL METAL POSTS

BITUMINOUS CONCRETE PAVEMENT

PATH BIT CONC.

WOOD WALL METAL POSTS

BIT CONC. SIDEWALK

PARK RULES SIGN

10'

COBBLESTONE CURB, TYP.

9'-9"

EDGE OF WATER

BENCHMARK: MAG NAIL SET
NORTHING:2,941,014.51'
EASTING:757,946.93'
ELEV:74.82'

9'-6"

VGC TYP.

GUARD RAIL

10'

CB
RIM EL: 77.77

CB
RIM EL: 77.79

10'

JAMAICA POND

WATER ELEV.= 57.80' ±

TIMBER RETAINING WALL REPAIR

GROUND OBSCURED BY
HEAVY VEGETATION

UTILITY POLE TYP.

RETENTION WALL

DMH
RIM EL: 117.64

LIGHT TYP.

WOODS

WOODS

PATH BIT CONC.

WOOD WALL METAL POSTS

CB
RIM EL: 65.79

CB
RIM EL: 65.79

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

MASSACHUSETTS
KYLE S. ZICK
No. 1169
REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

MATCH LINE SEE SHEET L-2.6

BOSTON PARKS & RECREATION

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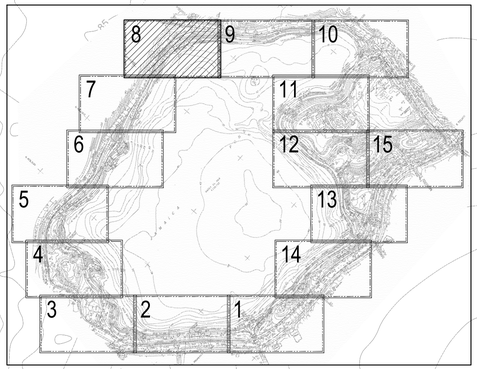

KEY PLAN

MATCH LINE SEE SHEET L-2.9

MATCH LINE SEE SHEET L-2.7

CB
RIM EL: 79.40

VGC TYP.

SMH
RIM EL:74.97

PAVEMENT MARKING SIGN B & C

DIRECTIONAL SIGN

LAWN

RUNNER'S PATH TRANSITION

WOODS

GRASS SWALE

BENCHES TYP.

BENCH

RUNNER'S PATH TRANSITION

CB
RIM EL: 69.30

DMH
RIM EL: 69.40

SIGN TYP.

CONCRETE PAVEMENT, TYP.

BENCH, TYP.

CB
RIM EL: 69.05

WOODS

BENCHES TYP.

RIP-RAP

PLACE BOULDERS, TYP.
(TO BE FIELD-LOCATED)

JAMAICA POND HISTORICAL SIGN

PAVEMENT MARKING SIGN B & C

WILDLIFE SIGN

RUNNER'S PATH

GUARDRAIL
APPROX. 33LF

PARK RULES SIGN

DIRECTIONAL SIGN

VGC TYP.

PATH BIT CONC.

COBBLE SWALE TYP.

PLACE BOULDERS, TYP.
(TO BE FIELD-LOCATED)

INV. 14" RCP=60.0'±

SEDIMENT TRAP AT
COBBLE SWALE

EDGE OF WATER

BITUMINOUS CONCRETE
PAVEMENT

GUARD RAIL

RIP RAP

INV. 12" DI=57.0'±

LIGHT TYP.

10'

WOODS

GUARD RAIL

PATH BIT CONC.

GUARD RAIL

BITUMINOUS CONCRETE
PAVEMENT

COBBLESTONE CURB, TYP.

RIP RAP

BOULDER TYP.

JAMAICA POND

WATER ELEV.= 57.80' ±

0 10 20 40 FT.

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

MASSACHUSETTS
KYLE S. ZICK
REGISTERED LANDSCAPE ARCHITECT
NO. 1103

BOSTON PARKS & RECREATION

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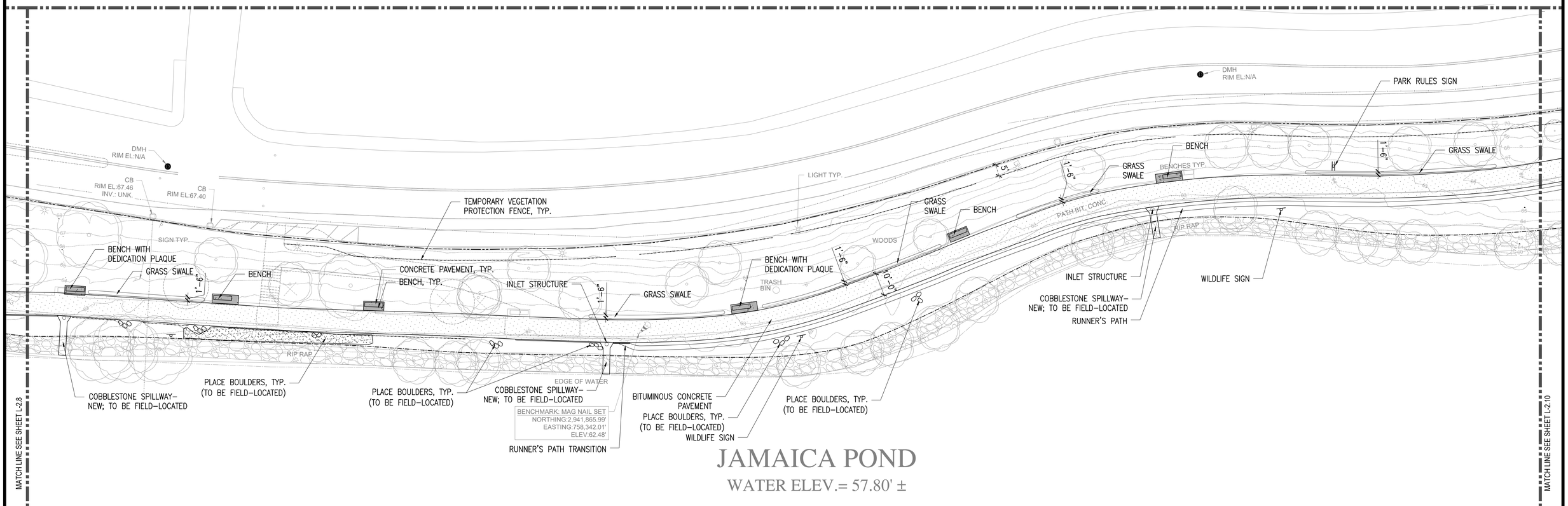
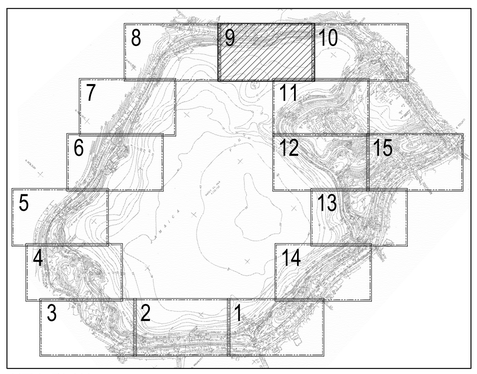
L-2.8





KEY PLAN

0 10 20 40 FT.

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD–ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

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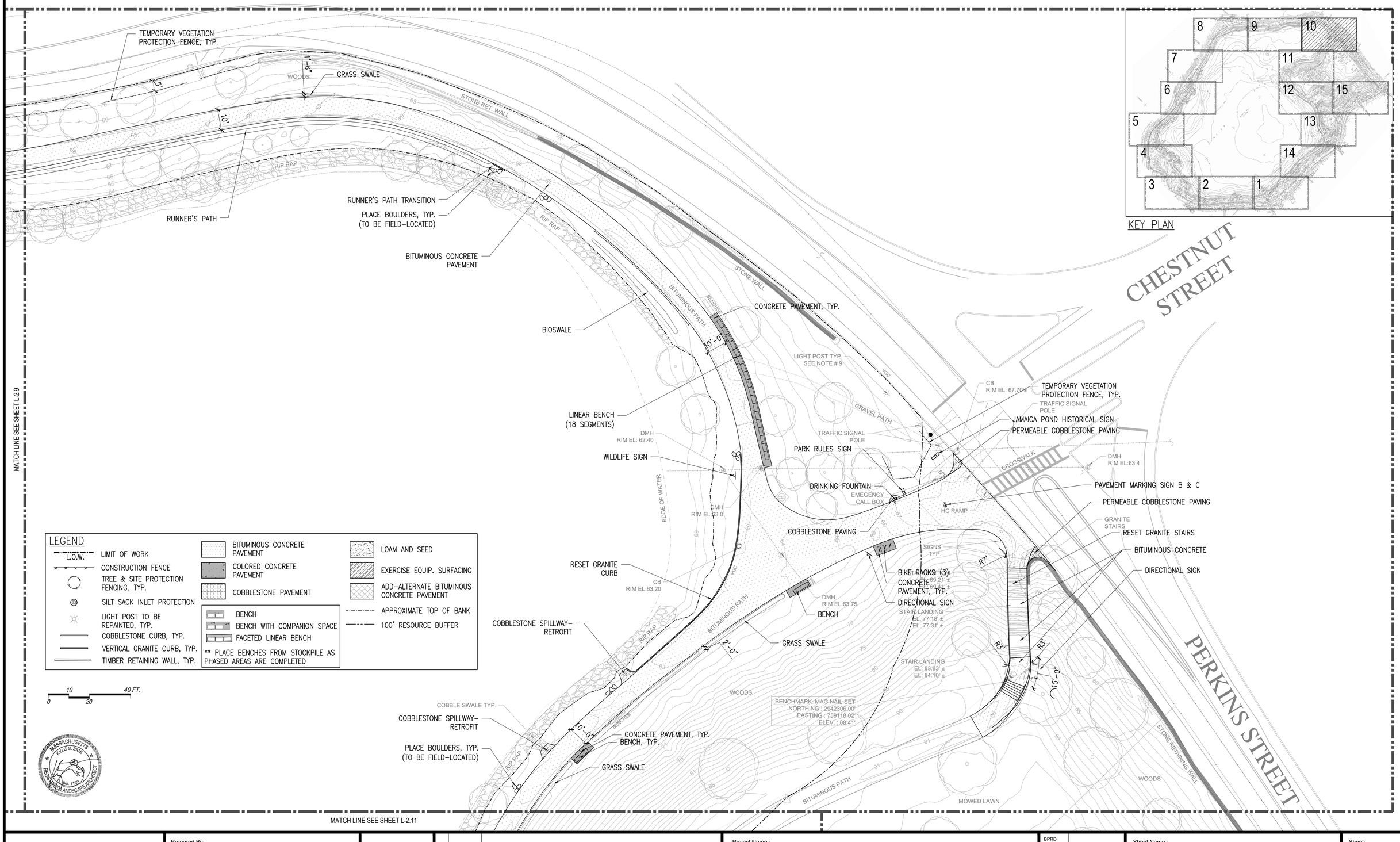
L-2.9



KEY PLAN

MATCH LINE SEE SHEET L-2.9

MATCH LINE SEE SHEET L-2.11

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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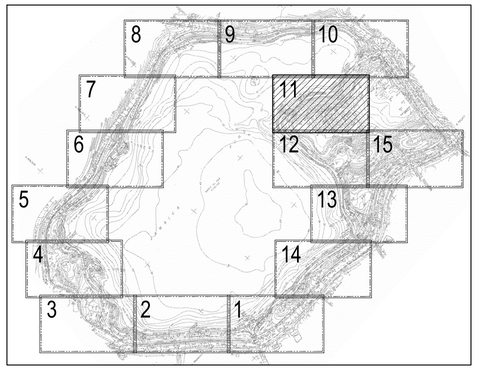
L-2.10

MATCH LINE SEE SHEET L-2.10



KEY PLAN

MASSACHUSETTS
KYLE S. ZICK
No. 1182
REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

PLACE BOULDERS, TYP.
(TO BE FIELD–LOCATED)

BENCHMARK: MAG NAIL SET
NORTHING: 2,942,125.22'
EASTING : 759,068.92'
ELEV. : 90.36'

COBBLE SWALE TYP.

COBBLESTONE SPILLWAY–
RETROFIT

BITUMINOUS CONCRETE
PAVEMENT

WILDLIFE SIGN

GRASS SWALE

BITUMINOUS CONCRETE
PAVEMENT

BENCH, TYP.
CONCRETE PAVEMENT, TYP.

RIP RAP

BITUMINOUS PATH

10'–0"

2'–0"

GRASS SWALE

BENCH

GRASS
SWALE

COBBLE SWALE TYP.

COBBLESTONE SPILLWAY–
RETROFIT

PARK RULES SIGN

CB(R)
RIM EL.:84.34(R)
INV. IN: 82.54'
INV. OUT: 81.74'

CB
RIM EL.:85.70'
INV. OUT: 83.50'

10" CLAY

DMH(R)
RIM EL.:84.43'(R)

WMH
RIM EL.:86.40'

BENCHES

STAIR BOTTOM
EL.: 83.67' ±
EL.: 84.33' ±

RAILING TYP.

COBBLESTONE SPILLWAY–
RETROFIT

BENCH WITH
DEDICATION PLAQUE

PINEBANK
PROMONTORY SIGN

STAIR LANDING
EL.: 76.45' ±
EL.: 76.64' ±

STAIR LANDING
EL.: 78.40' ±
EL.: 78.49' ±

2'–0"

GRASS SWALE

RIP RAP

BENCHES

BITUMINOUS PATH

BENCHMARK: MAG NAIL SET
NORTHING: 2,941,681.42'
EASTING : 758,922.83'
ELEV. : 86.02'

MOWED LAWN

WOODS

SIGNS

TRASH TYP.

PAVERS

SIDEWALK

SMH
RIM EL.:88.10'±
INV.: 77.36'

EMH
UNDERGROUND LINE
LOCATIONS UNK.

BITUMINOUS PATH

PAVERS

WOODS

BITUMINOUS PATH

PARKING

BITUMINOUS PATH

WOODS

MOWED LAWN

LIGHT POLE (NOT IN
SERVICE)

8" CLAY

LEGEND

L.O.W.	LIMIT OF WORK
	CONSTRUCTION FENCE
	TREE & SITE PROTECTION FENCING, TYP.
	SILT SACK INLET PROTECTION
	LIGHT POST TO BE REPAINTED, TYP.
	COBBLESTONE CURB, TYP.
	VERTICAL GRANITE CURB, TYP.
	TIMBER RETAINING WALL, TYP.
	BITUMINOUS CONCRETE PAVEMENT
	COLORED CONCRETE PAVEMENT
	COBBLESTONE PAVEMENT
	BENCH
	BENCH WITH COMPANION SPACE
	FACETED LINEAR BENCH
	** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
	LOAM AND SEED
	EXERCISE EQUIP. SURFACING
	ADD–ALTERNATE BITUMINOUS CONCRETE PAVEMENT
	APPROXIMATE TOP OF BANK
	100' RESOURCE BUFFER

MATCH LINE SEE SHEET L-2.12

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
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Checked	KZ

Sheet Name.:

Layout And Material Plan

Sheet:

L-2.11

MATCH LINE SEE SHEET L-2.11

BENCHMARK: MAG SPK SET
NORTHING:2,941,499.04'
EASTING:758,867.90'
ELEV:61.09'

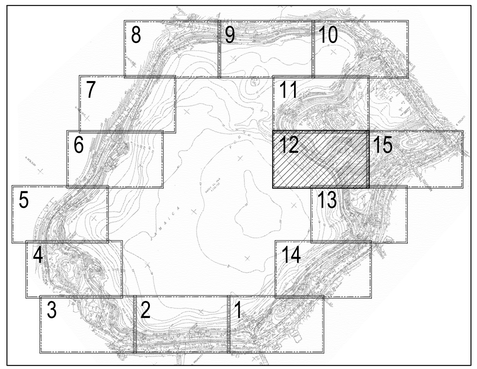
BENCHMARK: MAG NAIL SET
NORTHING: 2,941,603.39'
EASTING: 759,160.36'
ELEV: 86.24'

BENCHMARK: SPK SET
NORTHING: 2,941,555.31'
EASTING: 759,307.03'
POINT ELEV: 63.23'

BENCHES
BITUMINOUS PATH
MOWED LAWN
WOODS
WOOD DEBRIS
RIP RAP
EDGE OF WATER
BENCH WITH DEDICATION PLAQUE
BITUMINOUS CONCRETE PAVEMENT
COBBLESTONE SPILLWAY– RETROFIT
COBBLE SWALE TYP.
10'-0"
TEMPORARY VEGETATION PROTECTION FENCE, TYP.
WILDLIFE SIGN
BENCH
EXERCISE EQUIPMENT C
WOOD CHIPS
BOTTOM STAIR EL. 65.38' ±
STONE DUST SURFACE
BITUMINOUS CONCRETE PAVEMENT
RESET PONDS STAIRS
TOP OF STAIRS EL. 75.10' ±
RECHARGE BASIN
TEMPORARY VEGETATION PROTECTION FENCE, TYP.
COBBLE SWALE TYP.
LOAM AND SEED, TYP.
STONE DUST PATH
LIGHT POLE (NOT IN SERVICE)
TRASH TYP.
PUDDINGSTONE STAIRS
CB (FILLED)
RIM EL: 85.10'
INV. IN (ASSUMED) : 81.73'
INV. OUT (ASSUMED): 81.03'
SMH
RIM EL:79.75'
INV. OUT: 74.25'
BITUMINOUS CONCRETE LANDING, TYP.
LANDING EL: 78.5' ±
LANDING EL: 73.2' ±
RESET PUDDINGSTONE STAIRS
LANDING EL: 69.7' ±
MOWED LAWN
MATCH LINE SEE SHEET L-2.15

JAMAICA POND
WATER ELEV.= 57.80'

MASSACHUSETTS
KYLE S. ZICK
No. 1182
REGISTERED LANDSCAPE ARCHITECT



KEY PLAN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD–ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

0 10 20 40 FT.

NORTH

BOSTON PARKS & RECREATION

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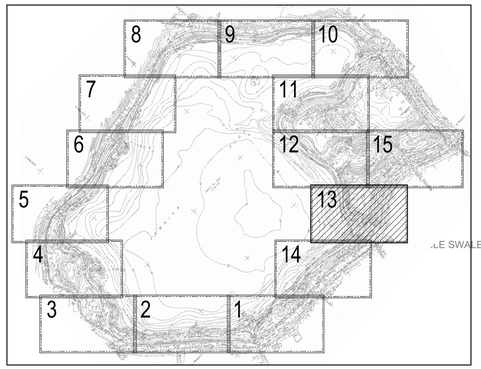
L-2.12



KEY PLAN

MATCH LINE SEE SHEET L-2.12

MATCH LINE SEE SHEET L-2.15

MATCH LINE SEE SHEET L-2.14

JAMAICA WAY

JAMAICA POND

WATER ELEV.= 57.80' ±

BENCHMARK: MAG NAIL SET
NORTHING:2,941,356.41'
EASTING:759,616.01
ELEV:62.42'

EDGE OF WATER
RIP RAP
BITUMINOUS PATH
PATH (BIT. CONC.)
WOODS
MOWED LAWN
LIGHT POLE TYP. SEE NOTE # 9
BENCH
BENCHES TYP.
TEMPORARY VEGETATION PROTECTION FENCE, TYP.
RUNNER'S PATH
COBBLESTONE SPILLWAY– RETROFIT
COBBLE SWALE TYP.
GRASS SWALE
2'-0"
10'-0"
12'-0"
ADD ALTERNATE 1 LOAM AND SEED
ADD ALTERNATE 3 LOAM AND SEED
EDGE OF PAVEMENT MEET EXISTING PAVEMENT FLUSH
BITUMINOUS CONCRETE PAVEMENT
CONCRETE PAVEMENT, TYP.
BENCH, TYP.
SAND FILTER
RIM EL. 65.10
VGC TYP.
ADD ALTERNATE 3 BITUMINOUS CONCRETE PAVEMENT
PLACE BOULDERS, TYP. (TO BE FIELD–LOCATED)
OUTFALL UNDERWATER
BENCH, TYP.
COBBLESTONE CURB
CB RIM EL. 79.35
VGC
BIKE PATH (BIT. CONC.)
PARK RULES SIGN
EHH TYP.
ADD ALTERNATE 2 LOAM AND SEED
ADD ALTERNATE 2 BITUMINOUS CONCRETE PAVEMENT
RUNNER'S PATH TRANSITION
WILDLIFE SIGN
PATH (BIT. CONC.)
CURB INLET
ADD ALTERNATE 3 LOAM AND SEED

0 10 20 40 FT.

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD–ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

MASSACHUSETTS KYLE G. ZICK No. 1162 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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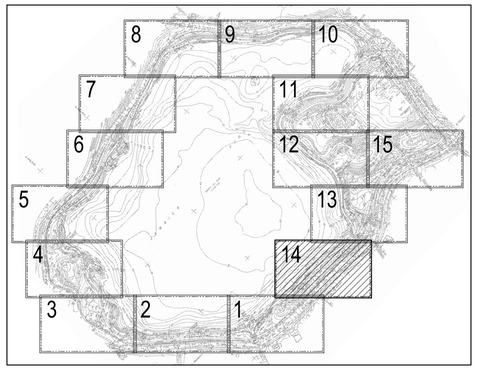
L-2.13

MATCH LINE SEE SHEET L-2.13



KEY PLAN

JAMAICA POND

WATER ELEV.= 57.80' ±

JAMAICA WAY

COBBLE SWALE TYP.

BENCH

WOODS

RUNNER'S PATH

RIP RAP

PATH (BIT. CONC.)

CONCRETE PAVEMENT, TYP.

BENCH, TYP.

LOAM AND SEED, TYP.

BIKE PATH (BIT. CONC.)

COBBLESTONE SPILLWAY– RETROFIT

COBBLESTONE SPILLWAY– RETROFIT

COBBLE SWALE TYP.

ADD ALTERNATE 1 LOAM AND SEED

ADD ALTERNATE 3 LOAM AND SEED

RUNNER'S PATH TRANSITION

PLACE BOULDERS, TYP. (TO BE FIELD–LOCATED)

BITUMINOUS CONCRETE PAVEMENT

EDGE OF WATER

EHH TYP.

LIGHT TYP.

VGC TYP.

COBBLESTONE SPILLWAY– RETROFIT

RUNNER'S PATH TRANSITION

10'

ADD ALTERNATE 3 BITUMINOUS CONCRETE PAVEMENT

RUNNER'S PATH

PIPE INVERT MATERIAL UNKNOWN INVERT UNKNOWN

RIP RAP

PATH (BIT. CONC.)

BENCH

CONCRETE PAVEMENT, TYP.

LAWN

COBBLESTONE SPILLWAY– RETROFIT

COBBLE SWALE TYP.

CONCRETE PAVEMENT, TYP.

RESET ART INSTALLATION BENCH AND ADD DEDICATION PLAQUE

ART INSTALLATION BENCH

CONCRETE PAVEMENT, TYP.

BENCH

BIKE PATH (BIT. CONC.)

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD–ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

MATCH LINE SEE SHEET L-2.1

BOSTON PARKS & RECREATION

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Sheet:

L-2.14

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REPAINTED, TYP.
- COBBLESTONE CURB, TYP.
- VERTICAL GRANITE CURB, TYP.
- TIMBER RETAINING WALL, TYP.
- BITUMINOUS CONCRETE PAVEMENT
- COLORED CONCRETE PAVEMENT
- COBBLESTONE PAVEMENT
- BENCH
- BENCH WITH COMPANION SPACE
- FACETED LINEAR BENCH
- ** PLACE BENCHES FROM STOCKPILE AS PHASED AREAS ARE COMPLETED
- LOAM AND SEED
- EXERCISE EQUIP. SURFACING
- ADD-ALTERNATE BITUMINOUS CONCRETE PAVEMENT
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER

NOTE # 9

8" CMP

MOWED LAWN

BITUMINOUS PATH

SMH (ASSUMED)
RIM EL: 70.00 ±
FILLED WITH
DEBRIS/SEDIMENT

BENCHMARK: MAG NAIL SET
NORTHING: 942,203.99'
EASTING: 759,808.63'
ELEV.: 80.57'

WOODS

WMH
RIM EL:80.25

CB
RIM EL:79.30

WMH
RIM EL:80.06

WATER FOUNTAIN
TYP.

CB
RIM EL:80.11

SMH
RIM EL:80.40±

TRASH TYP.

BOLLARD TYP.

BENCHES

CONC.

BITUMINOUS
PAVEMENT

SIGN TYP.

CROSSWALK

HC RAMP
TYP.

EMH
RIM:

ELEC.
HANDHOLE TYP.

CROSSWALK

TRAFFIC SIGNAL
POLE TYP.

MANHOLE
UNK. (TYP.)

SIGN TYP.

PERKINS
STREET

BITUMINOUS PATH

GRANITE
BOULDER TYP.

TRASH TYP.

ADD ALTERNATE 1
LOAM AND SEED

MOWED LAWN

BOLLARD TYP.

MH UNKNOWN
RIM EL:84.65

GATE

MOWED LAWN

DMH

MANHOLE
UNK. (TYP.)

LIGHT POLE
TYP.

SIGN TYP.

EMH
RIM:

JAMAICA WAY

ADD ALTERNATE 3
BITUMINOUS CONCRETE PAVEMENT

ADD ALTERNATE 3
LOAM AND SEED

WOODS

ADD ALTERNATE 1
LOAM AND SEED

MOWED LAWN

SMH

SMH

MORAINE STREET

LIGHT POLE &
HANDHOLE TYP.

DMH

ADD ALTERNATE 3
LOAM AND SEED

ADD ALTERNATE 3
BITUMINOUS CONCRETE PAVEMENT

BITUMINOUS PATH

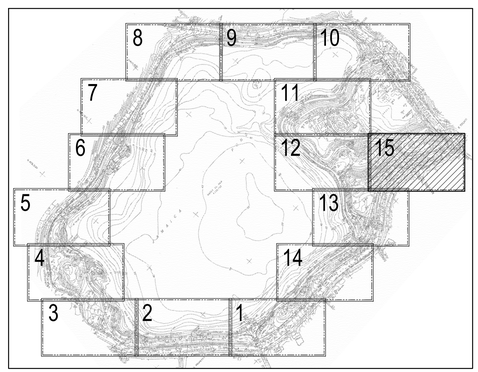
MATCH LINE SEE SHEET L-2.12

MATCH LINE SEE SHEET L-2.13

0 10 20 40 FT.

MASSACHUSETTS
KYLE S. ZICK
No. 1159
REGISTERED LANDSCAPE ARCHITECT

KEY PLAN



BOSTON PARKS & RECREATION

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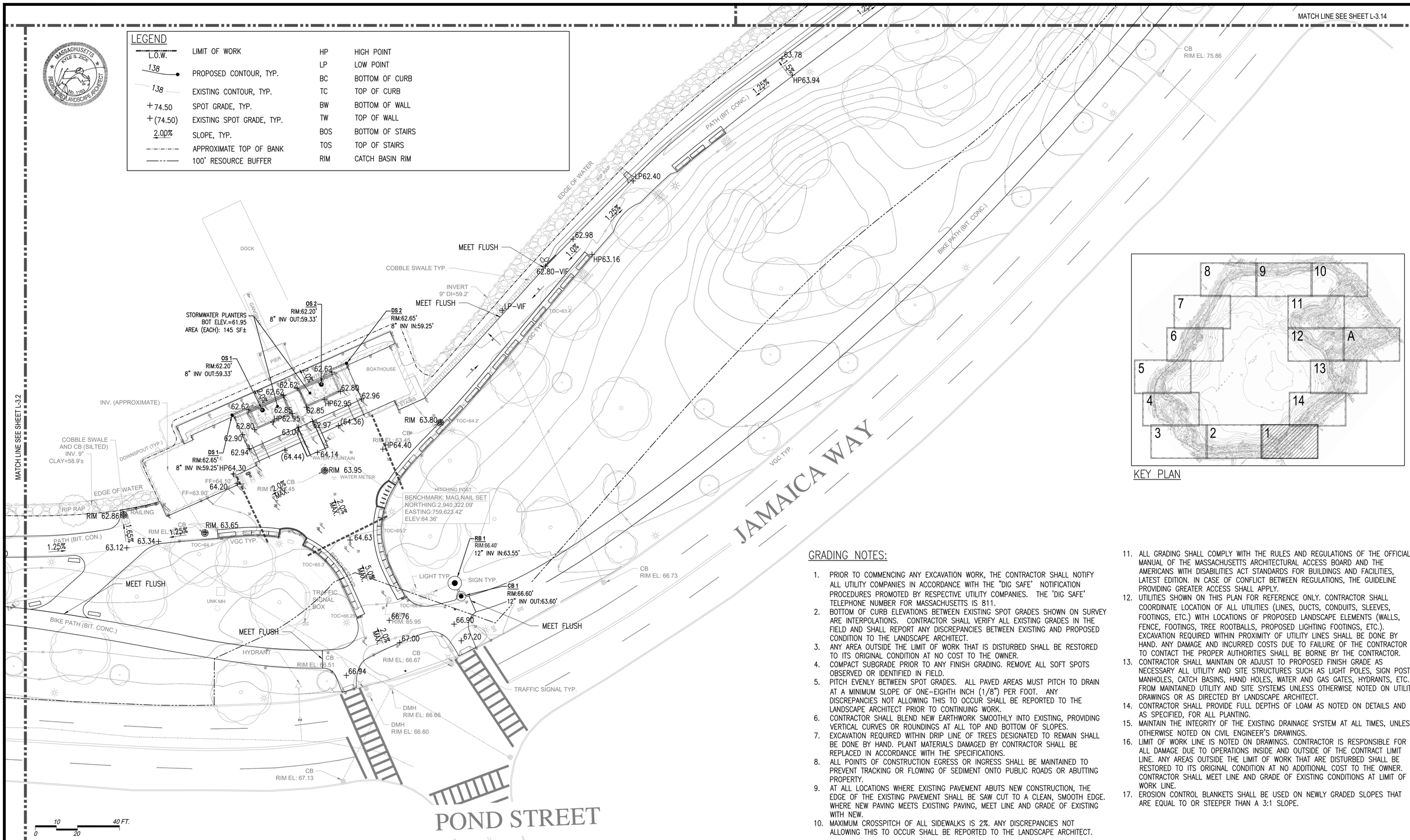
L-2.15

MATCH LINE SEE SHEET L-3.14

MATCH LINE SEE SHEET L-3.2



KEY PLAN

GRADING NOTES:

1. PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE "DIG SAFE" NOTIFICATION PROCEDURES PROMOTED BY RESPECTIVE UTILITY COMPANIES. THE 'DIG SAFE' TELEPHONE NUMBER FOR MASSACHUSETTS IS 811.
2. BOTTOM OF CURB ELEVATIONS BETWEEN EXISTING SPOT GRADES SHOWN ON SURVEY ARE INTERPOLATIONS. CONTRACTOR SHALL VERIFY ALL EXISTING GRADES IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES BETWEEN EXISTING AND PROPOSED CONDITION TO THE LANDSCAPE ARCHITECT.
3. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
4. COMPACT SUBGRADE PRIOR TO ANY FINISH GRADING. REMOVE ALL SOFT SPOTS OBSERVED OR IDENTIFIED IN FIELD.
5. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-EIGHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT PRIOR TO CONTINUING WORK.
6. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDINGS AT ALL TOP AND BOTTOM OF SLOPES.
7. EXCAVATION REQUIRED WITHIN DRIP LINE OF TREES DESIGNATED TO REMAIN SHALL BE DONE BY HAND. PLANT MATERIALS DAMAGED BY CONTRACTOR SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS.
8. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS OR ABUTTING PROPERTY.
9. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING WITH NEW.
10. MAXIMUM CROSSPITCH OF ALL SIDEWALKS IS 2%. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT.
11. ALL GRADING SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE OFFICIAL MANUAL OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR BUILDINGS AND FACILITIES, LATEST EDITION. IN CASE OF CONFLICT BETWEEN REGULATIONS, THE GUIDELINE PROVIDING GREATER ACCESS SHALL APPLY.
12. UTILITIES SHOWN ON THIS PLAN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCE, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). EXCAVATION REQUIRED WITHIN PROXIMITY OF UTILITY LINES SHALL BE DONE BY HAND. ANY DAMAGE AND INCURRED COSTS DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
13. CONTRACTOR SHALL MAINTAIN OR ADJUST TO PROPOSED FINISH GRADE AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POSTS, MANHOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED ON UTILITY DRAWINGS OR AS DIRECTED BY LANDSCAPE ARCHITECT.
14. CONTRACTOR SHALL PROVIDE FULL DEPTHS OF LOAM AS NOTED ON DETAILS AND AS SPECIFIED, FOR ALL PLANTING.
15. MAINTAIN THE INTEGRITY OF THE EXISTING DRAINAGE SYSTEM AT ALL TIMES, UNLESS OTHERWISE NOTED ON CIVIL ENGINEER'S DRAWINGS.
16. LIMIT OF WORK LINE IS NOTED ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL MEET LINE AND GRADE OF EXISTING CONDITIONS AT LIMIT OF WORK LINE.
17. EROSION CONTROL BLANKETS SHALL BE USED ON NEWLY GRADED SLOPES THAT ARE EQUAL TO OR STEEPER THAN A 3:1 SLOPE.

BOSTON PARKS & RECREATION

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Checked	KZ

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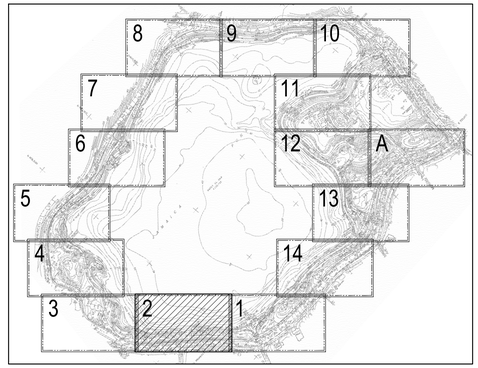
Grading Plan

Sheet:
L-3.1

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+(74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

MASSACHUSETTS KYLE S. ZICK REGISTERED LANDSCAPE ARCHITECT No. 1193



KEY PLAN

MATCH LINE SEE SHEET L-3.3

JAMAICA POND

WATER ELEV.= 57.80' ±

BENCHMARK: MAG NAIL SET
NORTHING:2,939,918.72'
EASTING:759,258.93'
ELEV:62.78'

BENCHMARK: MAG NAIL SET
NORTHING:2,940,163.44'
EASTING:759,563.72'
ELEV:65.12'

COBBLE SWALE TYP.
RIP RAP
EDGE OF WATER
PATH (BIT. CONC)
BIKE PATH (BIT. CONC.)
RIM 64.92
+65.00
RIM 65.08
CB
RIM EL: 64.6
1.5%
64.00
1.25%
LP63.25
1.1%
HP63.80
LP63.40
63.65
LP63.23
1%
63.80
HP63.95
LP63.05
63.71
HP63.86
LP63.13
63.28
HP63.78
63.62
63.77
HP64.00
LIGHT TYP.
HYDRANT
VGC TYP.
CB
RIM EL: 71.5

0 10 20 40 FT.

MATCH LINE SEE SHEET L-3.1

BOSTON PARKS & RECREATION

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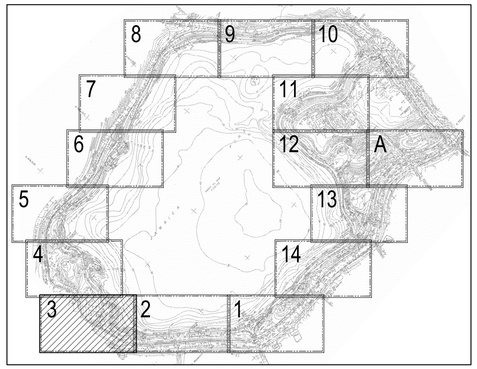
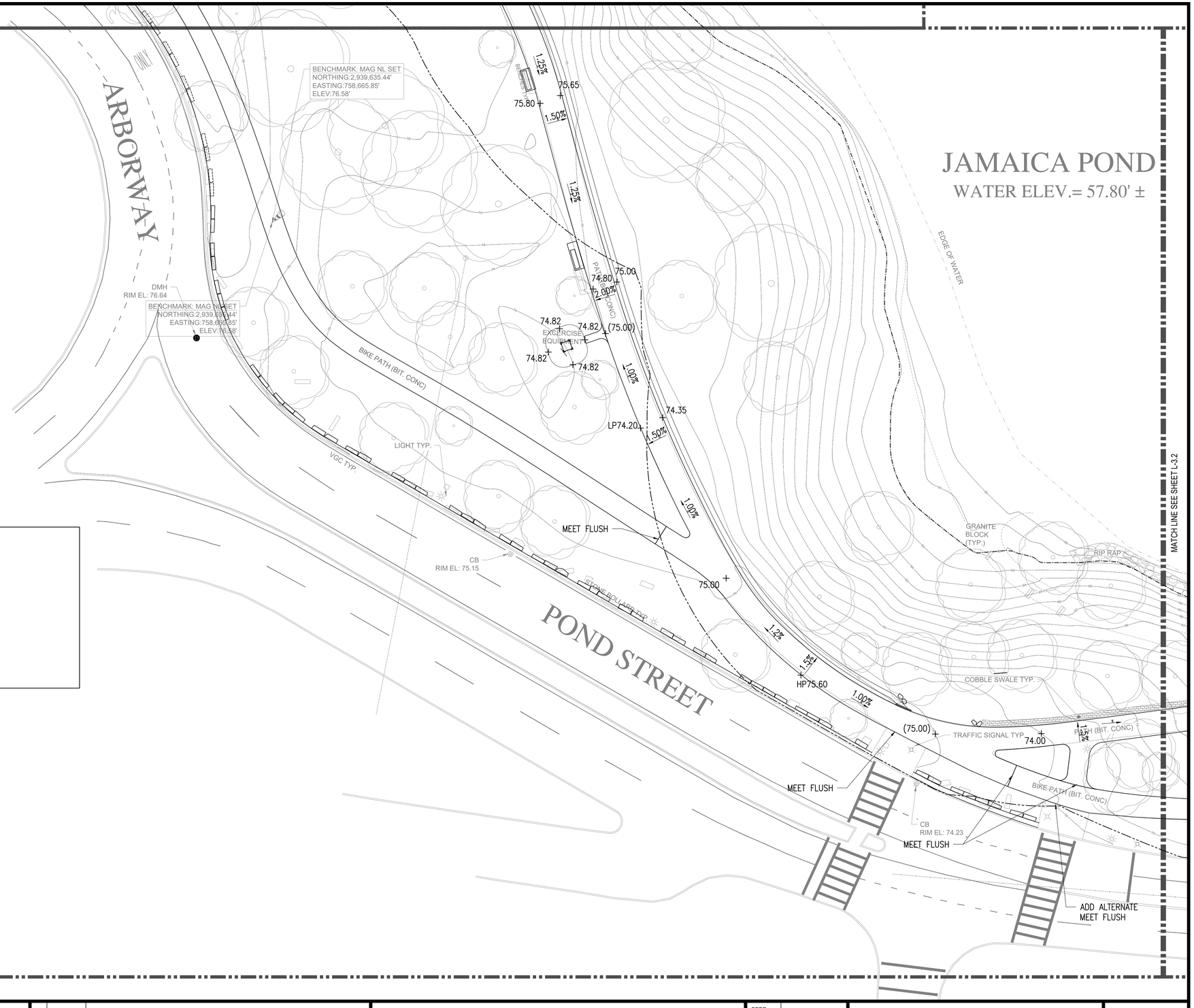
Sheet:
L-3.2

MATCH LINE SEE SHEET L-3.4



KEY PLAN



MATCH LINE SEE SHEET L-3.2

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
		LP	LOW POINT
138	PROPOSED CONTOUR, TYP.	BC	BOTTOM OF CURB
138	EXISTING CONTOUR, TYP.	TC	TOP OF CURB
+ 74.50	SPOT GRADE, TYP.	BW	BOTTOM OF WALL
+ (74.50)	EXISTING SPOT GRADE, TYP.	TW	TOP OF WALL
2.00%	SLOPE, TYP.	BOS	BOTTOM OF STAIRS
	APPROXIMATE TOP OF BANK	TOS	TOP OF STAIRS
	100' RESOURCE BUFFER	RIM	CATCH BASIN RIM

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1163 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
Date	11/07/2018
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Drawn	JL
Checked	KZ

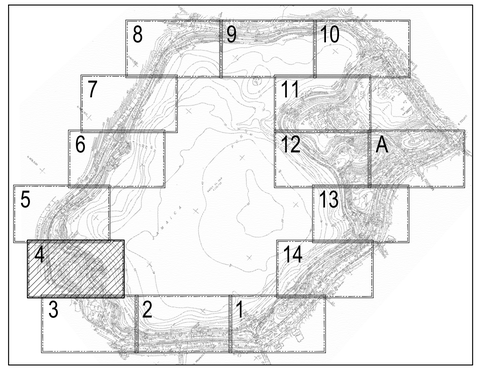
Sheet Name.:

Grading Plan

Sheet:

L-3.3

MATCH LINE SEE SHEET L-3.5



KEY PLAN

JAMAICA POND

WATER ELEV.= 57.80' ±

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
		LP	LOW POINT
138	PROPOSED CONTOUR, TYP.	BC	BOTTOM OF CURB
138	EXISTING CONTOUR, TYP.	TC	TOP OF CURB
+ 74.50	SPOT GRADE, TYP.	BW	BOTTOM OF WALL
+ (74.50)	EXISTING SPOT GRADE, TYP.	TW	TOP OF WALL
2.00%	SLOPE, TYP.	BOS	BOTTOM OF STAIRS
	APPROXIMATE TOP OF BANK	TOS	TOP OF STAIRS
	100' RESOURCE BUFFER	RIM	CATCH BASIN RIM

WOODS
WOODS
65.40
RIM65.20
LP65.02
65.22
1.67%
2.00%
BENCHES TYP.
66.00
1.5%
WOOD WALL METAL POSTS
RIP RAP
PATH BIT CONC. 1.5%
COBBLE SWALE TYP.
LP67.00
TRASH BIN
67.20
2.00%
67.80
(68.00)
68.80
(69.00)
69.80
(70.00)
70.80
(71.00)
2.00%
71.80
(72.00)
72.69
72.69
72.69
EXCERCISE EQUIPMENT
72.85
72.69
74.00
1.50%
73.85
1.50%
PATH BIT CONC.
74.60
74.85
75.00
CONCRETE BLOCKS
DIRT PATH
5.0% MAX.
BENCHES TYP.
1.25%
75.85
76.00
1.25%
76.22
HP76.37
RIP RAP
EDGE OF WATER
DMH
RIM EL: 80.48
UTILITY POLE TYP.
SMH
RIM EL:79.77
CONC BLOCK TYP.
VGT TYP.
LIGHT TYP.
CB
RIM EL: 79.01
ADD ALTERNATE
MEET FLUSH
CB
RIM EL: 78.27
CB
RIM EL: 79.80
SIGN TYP.
TRASH BIN
DMH
RIM EL:78.68
SMH
RIM EL:78.4
SMH
RIM EL:78.6

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1153 REGISTERED LANDSCAPE ARCHITECT

MATCH LINE SEE SHEET L-3.3

BOSTON PARKS & RECREATION

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NORTH

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Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

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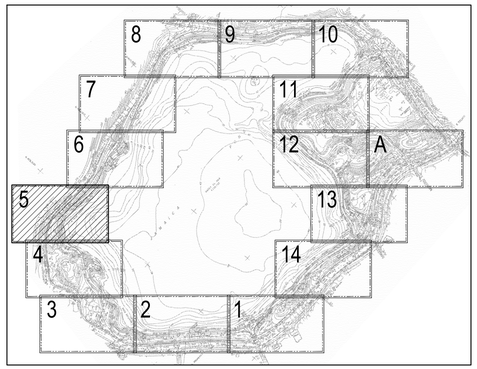
Drawn	JL
Checked	KZ

Sheet Name.:

Grading Plan

Sheet:

L-3.4



KEY PLAN

MATCH LINE SEE SHEET L-3.6

MATCH LINE SEE SHEET L-3.4

SMH
RIM EL:109.11

SMH
RIM EL:106.9

DMH
RIM EL: 105.30

DMH
RIM EL: 96.24

DMH
RIM EL: 88.64

CB
RIM EL:N/A

DMH
RIM EL: 85.61

SMH
RIM EL:84.54

DMH
RIM EL: 77.79

CB
RIM EL:77.24

CB
RIM EL:76.81

CB
RIM EL:65.54'

RETENTION WALL

RETENTION WALL

WOODS

WOODS

WOODS

GUARD RAIL

STONE WALL

WOOD RAIL/METAL POSTS

VGC TYP.

UTILITY POLE TYP.

HYDRANT TYP.

LIGHT TYP.

GROUND OBSCURED BY HEAVY VEGETATION

TRASH BIN

PATH BIT CONC.

PATH BIT CONC.

RIP RAP

RIP RAP

EDGE OF WATER

COBBLE SWALE TYP.

HP73.00
BC72.85
72.58
BC72.44
72.18
LP71.94
HP72.75
72.54
72.18
72.00
BW72.25
70.95
71.00
BW71.25
LP70.85
(70.00)
69.00
68.00
67.00
BC66.85
65.85
66.00
65.25
65.40
RIM65.20
LP65.02

1.0%
1.5%
1.5%
1.0%
1.5%
1.5%
1.5%
1.25%
1.1%
1.1%
2.0%

0 10 20 40 FT.

JAMAICA POND

WATER ELEV.= 57.80' ±

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+ 74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+ (74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

MASSACHUSETTS
KYLE S. ZICK
No. 1193
REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

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Jamaica Pond Park Pathways & Entrances Phase 2

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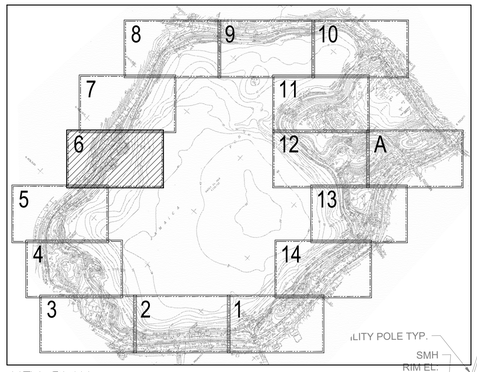
Grading Plan

Sheet:

L-3.5

MATCH LINE SEE SHEET L-3.7



KEY PLAN

MASSACHUSETTS KYLE S. ZICK REGISTERED LANDSCAPE ARCHITECT NO. 1169

JAMAICA POND

WATER ELEV.= 57.80' ±

LEGEND			
L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+ 74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+ (74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

0 10 20 40 FT.

MATCH LINE SEE SHEET L-3.5

BOSTON PARKS & RECREATION

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NORTH

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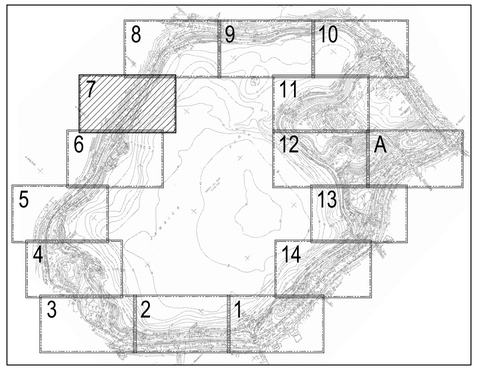
Drawn	JL
Checked	KZ

Sheet Name.:

Grading Plan

Sheet:

L-3.6



KEY PLAN

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
		LP	LOW POINT
138	PROPOSED CONTOUR, TYP.	BC	BOTTOM OF CURB
138	EXISTING CONTOUR, TYP.	TC	TOP OF CURB
+74.50	SPOT GRADE, TYP.	BW	BOTTOM OF WALL
+(74.50)	EXISTING SPOT GRADE, TYP.	TW	TOP OF WALL
2.00%	SLOPE, TYP.	BOS	BOTTOM OF STAIRS
	APPROXIMATE TOP OF BANK	TOS	TOP OF STAIRS
	100' RESOURCE BUFFER	RIM	CATCH BASIN RIM

MATCH LINE SEE SHEET L-3.8

MATCH LINE SEE SHEET L-3.6

JAMAICA POND
WATER ELEV.= 57.80' ±

BENCHMARK: MAG NAIL SET
NORTHING:2,941,014.51'
EASTING:757,946.93'
ELEV:74.82'

71.20
BC71.00
BOULDER TYP.
CB
RIM EL:72.05
CB
RIM EL:72.05
HP72.15
BC72.00
71.18
BC71.00
CB
RIM EL: 77.77
CB
RIM EL: 77.79
RIM66.05
RIM65.86
CB
RIM EL: 66.13
CB
RIM EL: 65.79
66.00
BW66.25
DMH
RIM EL: 117.64
UTILITY POLE TYP.
RETENTION WALL
GROUND OBSCURED BY
HEAVY VEGETATION
BIT CONC SIDEWALK
PATH BIT CONC
WOOD WALL METAL POSTS
EDGE OF WATER
VGC TYP.
GUARD RAIL
HDPE PIPE
LIGHT TYP.
WOODS
WOODS
1.25%
1.00%
1.80%

MASSACHUSETTS
KYLE S. ZICK
No. 1163
REGISTERED LANDSCAPE ARCHITECT

10 40 FT.
0 20

BOSTON PARKS & RECREATION

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NORTH

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Jamaica Pond Park Pathways & Entrances Phase 2

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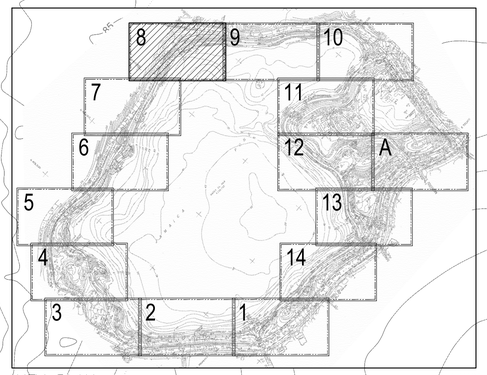
Grading Plan

Sheet:
L-3.7



KEY PLAN

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+(74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

MATCH LINE SEE SHEET L-3.9

MATCH LINE SEE SHEET L-3.7

CB RIM EL: 79.40
VGC TYP.
SMH RIM EL:74.97
CB RIM EL: 69.30
DMH RIM EL: 69.40
CB RIM EL: 69.05
WOODS
SIGN TYP.
BENCHES TYP.
LAWN
MEET FLUSH
HP64.34
(63.90)
(63.30)
HP64.19
63.70
63.30
1.25%
1.4%
1.2%
63.00
LP62.40
BC63.00
BC64.00
BC65.00
BC66.00
BC67.00
BC68.00
BC69.00
BC70.00
68.15
69.15
70.15
3.5%
2.5%
1.00%
PATH BIT CONC.
RIP-RAP
COBBLE SWALE TYP.
INV. 14" RCP=60.0'±
EDGE OF WATER
INV. 12" DI=57.0'±
GUARD RAIL
LIGHT TYP.
BOULDER TYP.
CONTOUR

JAMAICA POND

WATER ELEV.= 57.80' ±

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1150 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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NORTH

No.	Date	Revision

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Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

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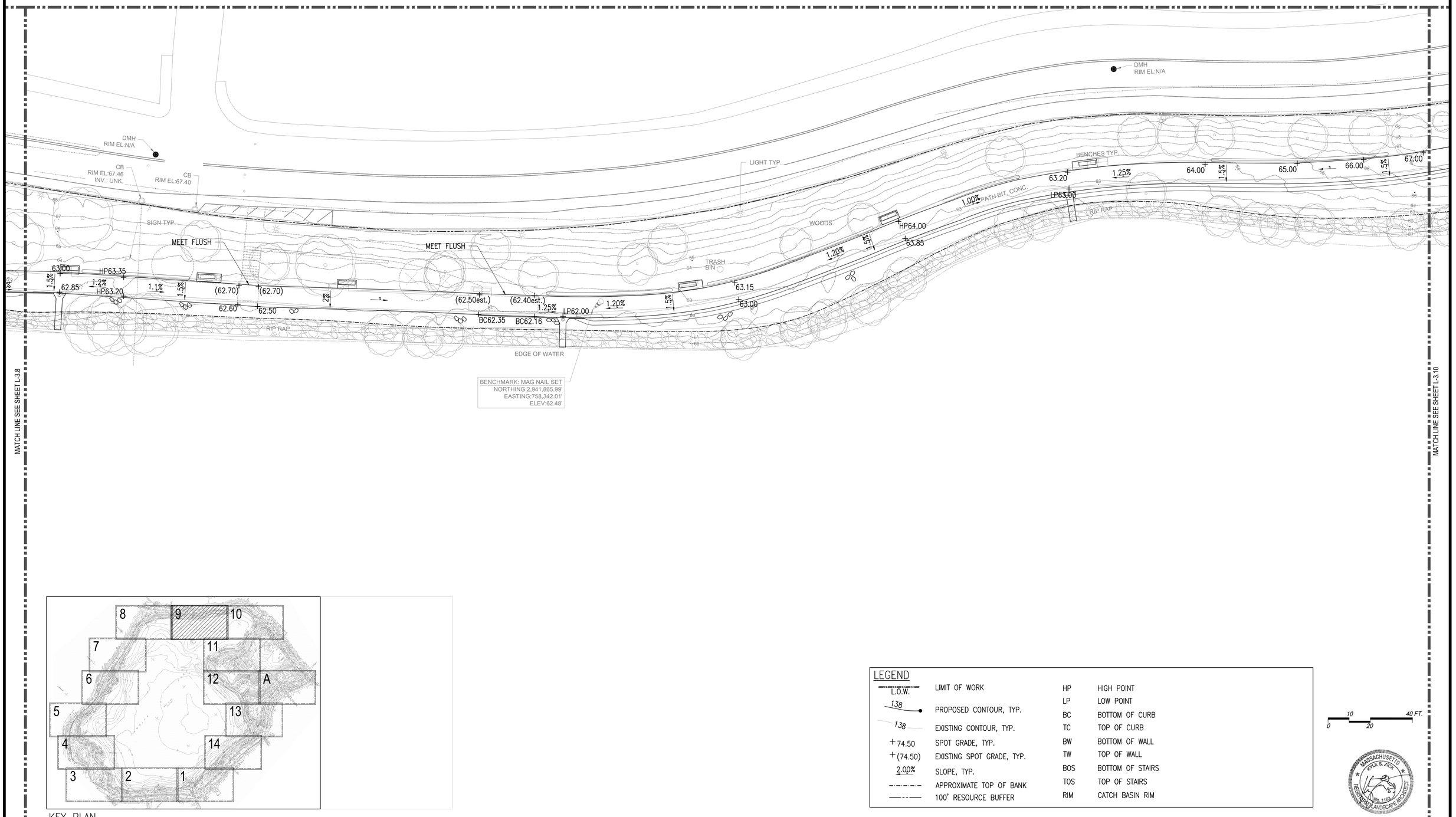
Grading Plan

Sheet:
L-3.8



BENCHMARK: MAG NAIL SET
NORTHING:2,941,865.99'
EASTING:758,342.01'
ELEV:62.48'

KEY PLAN

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
		LP	LOW POINT
138	PROPOSED CONTOUR, TYP.	BC	BOTTOM OF CURB
138	EXISTING CONTOUR, TYP.	TC	TOP OF CURB
+74.50	SPOT GRADE, TYP.	BW	BOTTOM OF WALL
+(74.50)	EXISTING SPOT GRADE, TYP.	TW	TOP OF WALL
2.00%	SLOPE, TYP.	BOS	BOTTOM OF STAIRS
	APPROXIMATE TOP OF BANK	TOS	TOP OF STAIRS
	100' RESOURCE BUFFER	RIM	CATCH BASIN RIM

0 10 20 40 FT.

MASSACHUSETTS
KYLE S. ZICK
REGISTERED LANDSCAPE ARCHITECT
No. 1109

BOSTON PARKS & RECREATION

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Consultant Project No.
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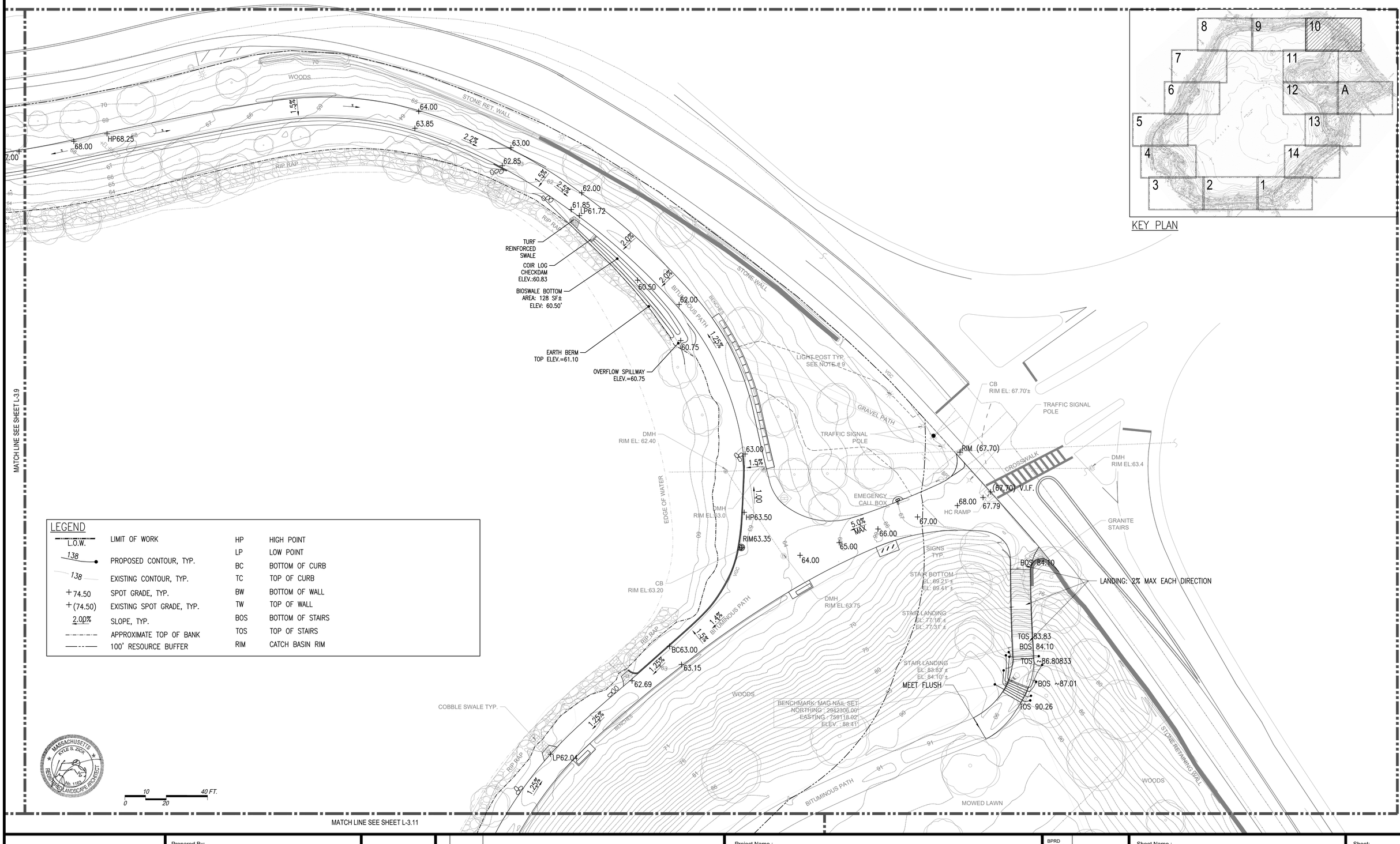
Grading Plan

Sheet:
L-3.9



KEY PLAN

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+(74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

MASSACHUSETTS KYLE S. ZICK No. 11634 REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

BOSTON PARKS & RECREATION

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BPRD Project No.	----
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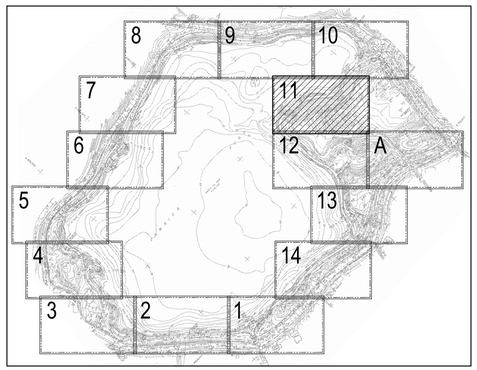
Sheet Name.:

Grading Plan

Sheet:

L-3.10



KEY PLAN

MASSACHUSETTS
KYLE S. ZICK
No. 1189
REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

MATCH LINE SEE SHEET L-3.10

BENCHMARK: MAG NAIL SET
NORTHING: 2,942,125.22'
EASTING : 759,068.92'
ELEV. : 90.36'

BENCHMARK: MAG NAIL SET
NORTHING: 2,941,681.42'
EASTING : 758,922.83'
ELEV. : 86.02'

COBBLE SWALE TYP.

RIP RAP

BITUMINOUS PATH

PARKING

WOODS

MOWED LAWN

PAVERS

BENCHES

TRASH TYP.

RAILING TYP.

STAIR LANDING
EL. 76.45' ±
EL. 76.64' ±

STAIR LANDING
EL. 78.40' ±
EL. 78.49' ±

STAIR BOTTOM
EL. 63.17' ±
EL. 64.33' ±

MATCH EXISTING BOTTOM OF STAIR ELEVATION

CB(R)
RIM EL.84.34(R)
INV. IN: 82.54'
INV. OUT: 81.74'

CB
RIM EL.85.70'
INV. OUT: 83.50'

DMH(R)
RIM EL.84.43'(R)

WMH
RIM EL.86.40'

SMH
RIM EL.88.10'±
INV.: 77.38'

EMH
UNDERGROUND LINE
LOCATIONS UNK.

10" CLAY

LIGHT POLE (NOT IN SERVICE)

8" CLAY

HP63.80
HP63.10
HP62.70
LP62.02
62.95
62.23
63.95
62.55
63
64

1.00%
1.25%
1.5%
2.0%

MATCH LINE SEE SHEET L-3.12

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+(74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

BOSTON PARKS & RECREATION

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Drawn	JL
Checked	KZ

Sheet Name.:
Grading Plan

Sheet:
L-3.11

MATCH LINE SEE SHEET L-3.11

BENCHMARK: MAG SPK SET
NORTHING:2,941,499.04'
EASTING:758,867.90'
ELEV:61.09'

HP63.58 FILL

1.0%

LP62.86

BENCHES

HP63.49

63.36

RIP-RAP

2.0%

LP62.86

COBBLE SWALE TYP.

WOODS

BITUMINOUS PATH

MOWED LAWN

BENCHMARK: MAG NAIL SET
NORTHING: 2,941,603.39'
EASTING: 759,160.36'
ELEV: 86.24'

WOOD DEBRIS

1.0%

1.5%

HP64.15

64.00

RIP-RAP

EDGE OF WATER

1.0%

BITUMINOUS PATH

BENCHMARK: SPK SET
NORTHING: 2,941,555.31'
EASTING: 759,307.03'
POINT ELEV: 63.23'

(63.23)

(63.23)

(63.23)

LP62.94

63.23

EXERCISE EQUIPMENT

1.5%

BOTTOM STAIR
EL: 65.38 ±

WOODS

HP63.88

1.5%

LP63.75

RB 2
RIM:74.75'

TOP OF STAIRS
EL: 75.10' ±

MEET FLUSH

WOODS

RIM 74.75

COBBLE SWALE TYP.

STONE DUST PATH

VEGETATED SWALE
L=50'± S=6%

BENCHES

HP36.10

62.90

LIGHT POLE (NOT IN SERVICE)

TRASH TYP.

PUDDINGSTONE STAIRS

MEET FLUSH

BITUMINOUS PATH

CB (FILLED)
RIM EL: 85.10'
INV. IN (ASSUMED): 81.73'
INV. OUT (ASSUMED): 81.03'

SMH
RIM EL:79.75'
INV. OUT: 74.25'

LANDING
EL: 78.5' ±

LANDING
EL: 73.2' ±

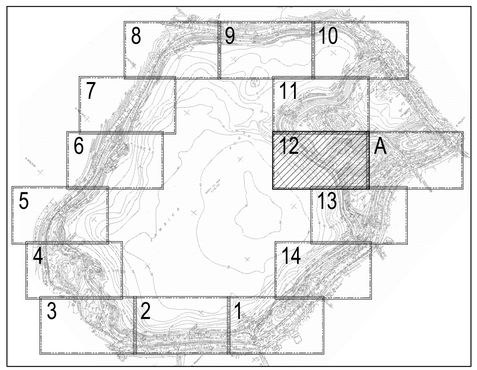
LANDING
EL: 69.7' ±

MOWED LAWN

MATCH LINE SEE SHEET L-3.15

MASSACHUSETTS
KYLE S. ZICK
No. 1153
REGISTERED LANDSCAPE ARCHITECT

KEY PLAN



LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
		LP	LOW POINT
138	PROPOSED CONTOUR, TYP.	BC	BOTTOM OF CURB
138	EXISTING CONTOUR, TYP.	TC	TOP OF CURB
+74.50	SPOT GRADE, TYP.	BW	BOTTOM OF WALL
+(74.50)	EXISTING SPOT GRADE, TYP.	TW	TOP OF WALL
2.00%	SLOPE, TYP.	BOS	BOTTOM OF STAIRS
	APPROXIMATE TOP OF BANK	TOS	TOP OF STAIRS
	100' RESOURCE BUFFER	RIM	CATCH BASIN RIM

0 10 20 40 FT.

BOSTON PARKS & RECREATION

Prepared By:

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
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Sheet Name.:

Grading Plan

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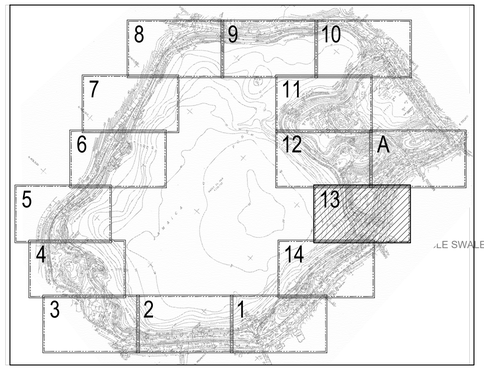
L-3.12



KEY PLAN

JAMAICA POND

WATER ELEV.= 57.80' ±

BENCHMARK: MAG NAIL SET
NORTHING:2,941,356.41'
EASTING:759,616.01
ELEV:62.42'

MATCH LINE SEE SHEET L-3.12

MATCH LINE SEE SHEET L-3.15

MATCH LINE SEE SHEET L-3.14

EDGE OF WATER

RIP-RAP

BITUMINOUS PATH

WOODS

MOWED LAWN

LIGHT POLE TYP. SEE NOTE # 9

COBBLE SWALE TYP.

BENCHES TYP.

LP62.05

1.5%

PATH (BIT. CONC.)

62.54

HP62.69

LP62.16

HP62.85

62.70

LP62.20

1.5%

HP62.92

62.77

63.30

RIM EL. 63.30

4" PERF PIPE L=24' S=0.50%

OVERFLOW SPILLWAY ELEV.=62.75

CLEANOUT
RIM:62.05'
4" INV OUT:59.50'

SAND FILTER
BOT ELEV.=63.00
AREA: 475 SF±

OS 3
RIM:62.25'
4" INV IN:59.40'
8" INV OUT:59.30'

CONNECT TO EXISTING STRUCTURE
INV.=59.20' ±

8" HDPE L=21' S=0.50%

RIM 63.00

2%

62.42

LP62.22

1.5%

EARTH BERM CHECKDAM

OVERFLOW SPILLWAY ELEV.=62.50

GRASS SEDIMENT FOREBAY
BOT. ELEV.=62.25'
175 SF±

TURF REINFORCED SWALE

CURB INLET
INV.=64.25' ±

BERM
TOP ELEV.=64.20

EARTH BERM
TOP ELEV.=63.20

1.25%

1.5%

VGC

1.8%

63.50

LP63.10

PATH (BIT. CONC.)

HP63.54

1.5%

HP63.74

1.25%

OUTFALL UNDERWATER

MEET FLUSH

PATH (BIT. CONC.)

BITUMINOUS PATH

MOWED LAWN

BITUMINOUS PATH

WOODS

VGC TYP.

EHH TYP.

BIKE PATH (BIT. CONC.)

CB
RIM EL: 79.35

ADD ALTERNATE 3
MEET FLUSH

ADD ALTERNATE 3
MEET FLUSH

76.00

77.00

78.00

79.00

80.00

81.00

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+(74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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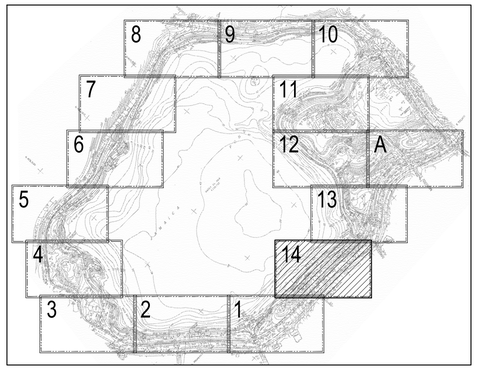

KEY PLAN

JAMAICA POND

WATER ELEV.= 57.80' ±

MATCH LINE SEE SHEET L-3.13

COBBLE SWALE TYP.
LP62.42
62.62
1.25%
2%
1.5%
WOODS
HP63.15
HP63.30
RIP RAP
PATH (BIT. CONC.)
LP62.46
62.66
1.50%
BIKE PATH (BIT. CONC.)
LP60.96
61.16
COBBLE SWALE TYP.
LP61.68
61.83
EDGE OF WATER
LIGHT TYP.
EHH TYP.
VGC TYP.
JAMAICA WAY
HP62.90
HP63.05
LP62.48
62.68
PIPE INVERT
MATERIAL UNKNOWN
INVERT UNKNOWN
HP63.37
HP63.52
1.00%
LAWN
COBBLE SWALE TYP.
LP62.74
ART
INSTALLATION
BENCH
MATCH LINE SEE SHEET L-3.1

0 10 20 40 FT.

LEGEND

L.O.W.	LIMIT OF WORK	HP	HIGH POINT
138	PROPOSED CONTOUR, TYP.	LP	LOW POINT
138	EXISTING CONTOUR, TYP.	BC	BOTTOM OF CURB
+74.50	SPOT GRADE, TYP.	TC	TOP OF CURB
+(74.50)	EXISTING SPOT GRADE, TYP.	BW	BOTTOM OF WALL
2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

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L-3.14

LEGEND

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2.00%	SLOPE, TYP.	TW	TOP OF WALL
	APPROXIMATE TOP OF BANK	BOS	BOTTOM OF STAIRS
	100' RESOURCE BUFFER	TOS	TOP OF STAIRS
		RIM	CATCH BASIN RIM

EMH RIM: 83.00'±

DMH RIM EL:75.06' INV: IN: 73.73' INV: OUT: NOT FND SUMP: 68.93

LIGHT POLE TYP. SEE NOTE # 9

BITUMINOUS PATH

MOWED LAWN

WOODS

CATCH BASIN RIM EL: 70.00 ± FILLED WITH DEBRIS/SEDIMENT

BENCHMARK: MAG NAIL SET NORTHING: 942,203.99' EASTING: 759,808.63' ELEV. : 80.57'

WMH RIM EL:80.25

CB RIM EL:79.30

WMH RIM EL:80.06

WATER FOUNTAIN TYP.

CB RIM EL:80.11

SMH RIM EL:80.40±

TRASH TYP.

BOLLARD TYP.

BENCH

CONC.

SIGN TYP.

CROSSWALK

HC RAMP TYP.

BITUMINOUS PAVEMENT

EMH RIM:

ELEC. HANDHOLE TYP.

TRAFFIC SIGNAL POLE TYP.

MANHOLE UNK. (TYP.)

ADD ALTERNATE 3 MEET FLUSH

GRANITE BOULDER TYP.

MH UNKNOWN RIM EL:84.65

GATE

DMH

LIGHT POLE TYP.

EMH RIM:

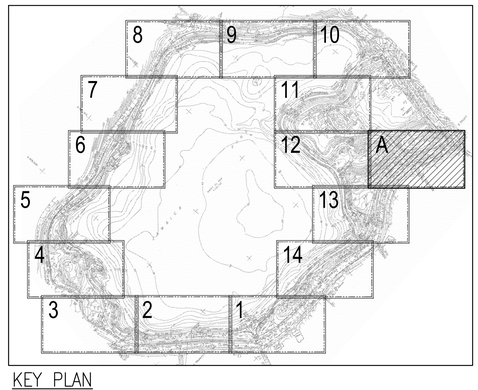
SMH

LIGHT POLE & HANDHOLE TYP

MATCH LINE SEE SHEET L-3.12

MATCH LINE SEE SHEET L-3.13

0 10 20 40 FT.



KEY PLAN

MASSACHUSETTS KYLE S. ZICK No. 1153 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Checked	KZ

Sheet Name.:

Grading Plan

Sheet:

L-3.15

MATCH LINE SEE SHEET L-3.14

MATCH LINE SEE SHEET L-3.2

JAMAICA POND

WATER ELEV.= 57.80' ±

REPAIR DISTURBED AREAS (7.5' EACH SIDE OF PATHS) –LOAM AND SEED

ADD ALTERNATE 1 –LOAM AND SEED

ADD ALTERNATE 2 –LOAM AND SEED

COBBLE SWALE TYP.

INVERT 9" DI=59.2'

SEE SHEET 1/L–4.1A FOR PLANTING ENLARGEMENT PLAN

COBBLE SWALE AND CB (SILTED)

CB RIM EL: 63.45

CB RIM EL: 63.45

CB RIM EL: 63.20

BENCHMARK: MAG NAIL SET
NORTHING:2,968,322.09'
EASTING:759,622.42'
ELEV:64.36'

QC

UNK MH

HYDRANT

CB RIM EL: 66.51

CB RIM EL: 66.67

SEE SHEET 2/L–4.1A FOR PLANTING ENLARGEMENT PLAN

DMH RIM EL: 66.86

DMH RIM EL: 66.60

CB RIM EL: 67.13

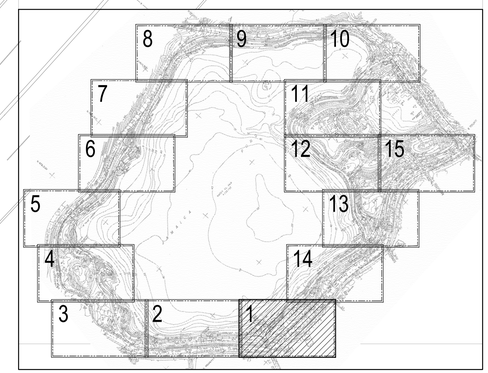
CB RIM EL: 66.73

CB RIM EL: 75.86

JAMAICA WAY

POND STREET

0 10 20 40 FT.



KEY PLAN

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L–4.2 FOR PLANT SCHEDULE

PLANTING NOTES:

1. IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT LIST, THE PLANTING PLAN SHALL GOVERN.
2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
3. ALL NEW PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER–GROWN, UNLESS OTHERWISE NOTED ON THE PLANT SCHEDULE.
4. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
5. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND MUST BE NATIVE PLANTS ON THE OLMSTED PLANTING LIST. ALL SUBSTITUTIONS SHALL REQUIRE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
6. ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.
7. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
8. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
9. TREES SHALL BE SET 3" HIGHER THAN PREVIOUS GRADE. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING.
10. ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT. THE PLACEMENT OF PROTECTION DEVICES ADDITIONAL TO THOSE NOTED SHALL, HOWEVER, BE AT THE CONTRACTOR'S DISCRETION.
11. CONTRACTOR SHALL PROVIDE FULL DEPTHS OF LOAM AS NOTED ON DETAILS AND AS SPECIFIED, FOR ALL PLANTING.
12. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCES, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONTINUING WORK.
13. LIMIT OF WORK LINE IS NOTED ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
14. IN AREAS WHERE EXISTING PAVEMENTS ARE REMOVED AND ARE PROPOSED AS LAWN, THE CONTRACTOR SHALL REMOVE THE PAVEMENT AND BASE, PROVIDE FILL AND 6" TOPSOIL PRIOR TO SEEDING.
15. CONTRACTOR SHALL PROVIDE PRUNING BY CERTIFIED ARBORIST. PRUNING SHALL BE REVIEWED WITH BOSTON PARKS AND RECREATION DEPARTMENT AND LANDSCAPE ARCHITECT PRIOR TO WORK.
16. ANY IDENTIFIED DEPRESSION SHALL BE FILLED WITH LOAM, SUFFICIENT TO ENSURE THAT SOIL IS LEVEL WITH SURROUNDING GRADE AFTER SETTLEMENT, AND SEEDED. REFER TO DETAIL 6 ON SHEET LD–3.
17. LOAM AND SEED ALL DISTURBED AREAS THAT ARE NOT PROPOSED AS PAVEMENT, INCLUDING AREAS OF INVASIVE REMOVAL AND STUMP REMOVAL.
18. EROSION CONTROL BLANKETS SHALL BE USED ON NEWLY GRADED SLOPES THAT ARE EQUAL TO OR STEEPER THAN A 3:1 SLOPE.

MASSACHUSETTS KYLE S. ZICK No. 1183 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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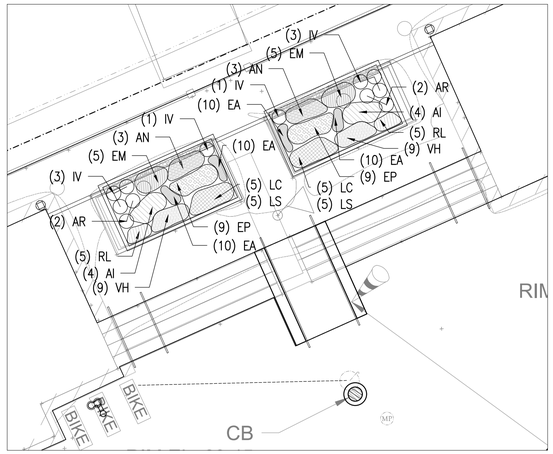
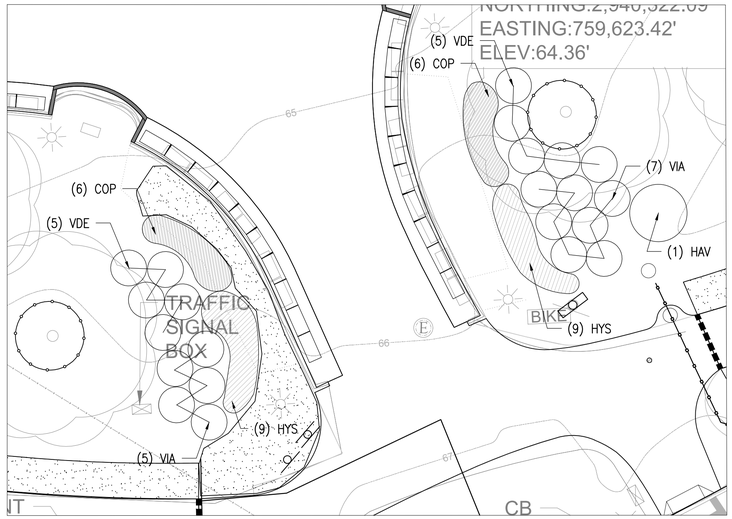
Sheet Name.:
Planting Plan

Sheet:
L-4.1



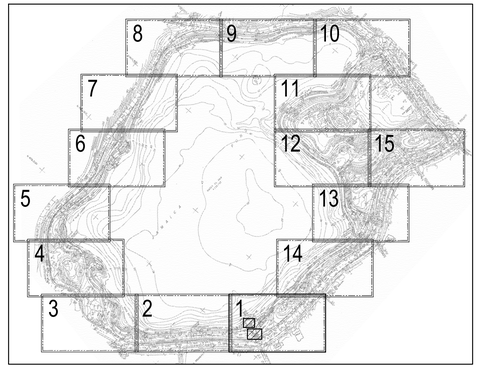
1 PLANTING ENLARGEMENT PLAN

SCALE: 1"=10'-0"



2 PLANTING ENLARGEMENT PLAN

SCALE: 1"=10'-0"



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LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

MASSACHUSETTS KYLE S. ZICK No. 1418 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:

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Planting Plan

Sheet:

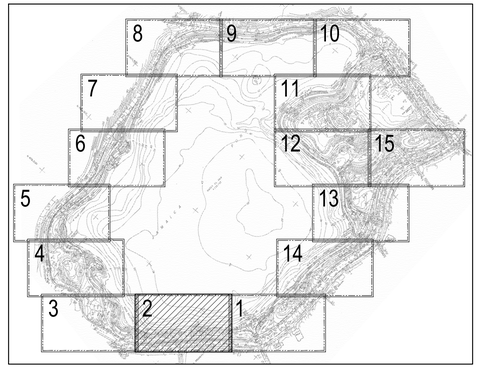
L-4.1A

PLANT SCHEDULE

SYMBOL	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DECIDUOUS TREES						
AP	3	ACER PENSYLVANICUM	STRIPED MAPLE	1" CAL. B&B		
AR	3	ACER RUBRUM	RED MAPLE	3" CAL. B&B		
BPA	2	BETULA PAPYRIFERA	PAPER BIRCH	8' HT. B&B		
BPO	4	BETULA POPULIFOLIA	GRAY BIRCH	8' HT. B&B		
CC	2	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2" CAL. B&B		
CCG	2	CRATAEGUS CRUS-GALLI 'INERMIS'	THORNLESS COCKSPUR HAWTHORN	3" CAL.		
CO	2	CELTIS OCCIDENTALIS	HACKBERRY	3" CAL.		
LL	1	LIRIODENDRON TULIPIFERA	TULIP TREE	3" CAL.		
MA	3	MAGNOLIA ACUMINATA	CUCUMBER TREE	3" CAL.		
NS	6	NYSSA SYLAVATICA	BLACK GUM	3" CAL.		
OV	1	OSTRYA VIRGINIANA	EASTERN HOP HORNBEAM	3" CAL.		
PD	6	POPULUS DELTOIDES	EASTERN COTTONWOOD	3" CAL.		
QC	4	QUERCUS COCCINEA	SCARLET OAK	1" CAL.		CONTAINER GROWN
QM	4	QUERCUS MACROCARPA	BUR OAK	10 GAL. B&B		
QP	2	QUERCUS PALUSTRIS	PIN OAK	2" CAL.		CONTAINER GROWN
QR	1	QUERCUS RUBRA	NORTHERN RED OAK	3" CAL. B&B		
SA	2	SALIX ALBA	WHITE WILLOW	3" CAL.		CONTAINER GROWN
UA	1	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	3" CAL. B&B		
SHRUBS						
AAR	58	ARONIA ARBUTIFOLIA	CHOKEBERRY	3 GAL.	48" O.C.	
CAH	61	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	3 GAL.	24" O.C.	
CAM	28	CORNUS AMOMUM	SILKY DOGWOOD	3 GAL.		
CEA	10	CEANOTHUS AMERICANUS	NEW JERSEY TEA	1 GAL.	36" O.C.	

SYMBOL	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
SHRUBS						
COP	62	COMPTONIA PEREGRINA	SWEET FERN	2 GAL.	36" O.C.	
HAV	13	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	2 GAL.	42" O.C.	
HYS	43	HYPERICUM PROLIFICUM	ST. JOHN'S WORT	1 GAL.	36" O.C.	
ILV	26	ILEX VERTICILLATA 'BERRY POPPINS'	WINTERBERRY	3 GAL.	30" O.C.	
RHA	171	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	3 GAL.	60" O.C.	
ST	7	SPIRAEA TOMENTOSA	STEEPLEBUSH	3 GAL.	30" O.C.	
VDE	20	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM		60" O.C.	
VIA	35	VIBURNUM OPULUS VAR. AMERICANUM	AMERICAN CRANBERRYBUSH	3 GAL.	60" O.C.	
PERENNIALS						
AR	4	ACTAEA RACEMOSA	BUGBANE	1 GAL.	24" O.C.	
AN	6	ASTER NOVAE-ANGLICAE	NEW ENGLAND ASTER	1 GAL.	18" O.C.	
AI	8	ASCLEPIAS INCARNATA	MILKWEED	1 GAL.	24" O.C.	
EA	40	ERYTHRONIUM AMERICANUM	TROUT LILY	1 GAL.	4" O.C.	
EM	10	EUPATORIUM MACULATUM/ PURPUREUM 'LITTLE JOE'	DWARF JOE-PYE WEED	1 GAL.	24" O.C.	
EP	18	EUPATORIUM PERFOLIATUM	BONESET	1 GAL.	30" O.C.	
LC	10	LOBELIA CARDINALIS	CARDINAL FLOWER	1 GAL.	12" O.C.	
LS	10	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	1 GAL.	12" O.C.	
RL	10	RUDBECKIA LACINIATA	CUT-LEAFED CONEFLOWER	1 GAL.	18" O.C.	
VH	18	VERBENA HASTATA	BLUE VERVAIN	1 GAL.	18" O.C.	
IV	8	ILEX VERTICILATA 'NANA RED SPRITE'	COMPACT WINTERBERRY	1 GAL.	24" O.C.	

MASSACHUSETTS KYLE S. ZICK No. 1193 REGISTERED LANDSCAPE ARCHITECT



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- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

MATCH LINE SEE SHEET L-3.3

MATCH LINE SEE SHEET L-3.1

JAMAICA POND

WATER ELEV.= 57.80' ±

BENCHMARK: MAG NAIL SET
NORTHING:2,939,918.72'
EASTING:759,258.93'
ELEV:62.78'

BENCHMARK: MAG NAIL SET
NORTHING:2,940,163.44'
EASTING:759,563.72'
ELEV:65.12'

PLANT ESTABLISHMENT FENCE, TYP.

COBBLE SWALE TYP.

REPAIR DISTURBED AREAS (7.5' EACH SIDE OF PATHS) -LOAM AND SEED

QM

(2) QM

AP

CB
RIM EL: 64.6

LOAM AND SEED

HYDRANT

(2) QC

LOAM AND SEED

ADD ALTERNATE 1 -LOAM AND SEED

CB
RIM EL: 71.5

ADD ALTERNATE 2 -LOAM AND SEED

10 0 20 40 FT.

BOSTON PARKS & RECREATION

Prepared By:

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

Approved By: | Date:

Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
Date	11/07/2018
Scale	1"=20'-0"
Drawn	RB/TH/YL
Checked	KZ

Sheet Name.:

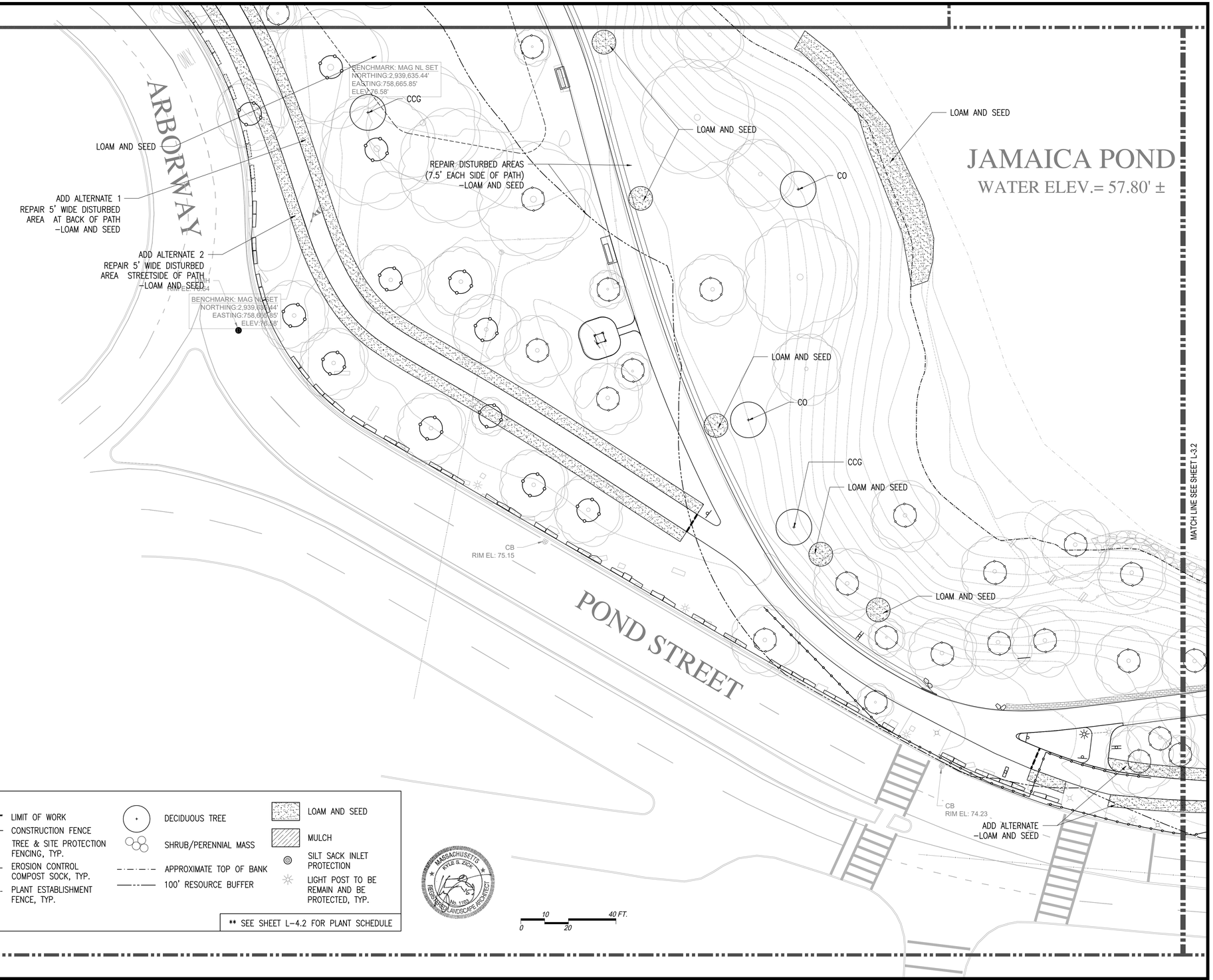
Planting Plan

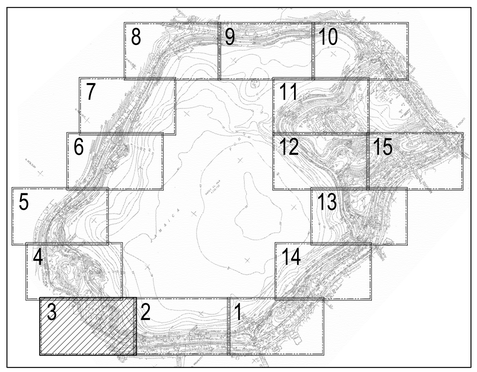
Sheet:

L-4.2

MATCH LINE SEE SHEET L-3.4

MATCH LINE SEE SHEET L-3.2





KEY PLAN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L–4.2 FOR PLANT SCHEDULE

MASSACHUSETTS KYLE S. ZICK No. 1183 REGISTERED LANDSCAPE ARCHITECT

0 10 20 40 FT.

BOSTON PARKS & RECREATION

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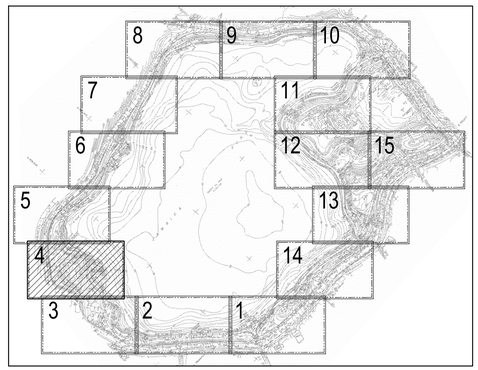
Sheet Name.:

Planting Plan

Sheet:

L-4.3

MATCH LINE SEE SHEET L-3.5



KEY PLAN

JAMAICA POND

WATER ELEV.= 57.80' ±

WOODS
WOODS
PLANT ESTABLISHMENT FENCE, TYP.
QR
BENCHES TYP
WOOD WALL METAL POSTS
RIP RAP
PATH BIT CONC.
COBBLE SWALE TYP.
TRASH BIN
LOAM AND SEED
REPAIR DISTURBED AREAS (7.5' EACH SIDE OF PATHS) –LOAM AND SEED
EDGE OF WATER
DMH RIM EL: 80.48
UTILITY POLE TYP.
SMH RIM EL:79.77
CONC BLOCK TYP.
VGC TYP.
LIGHT TYP.
LAWN
SMH RIM EL:79.45
SMH RIM EL:79.46
CB RIM EL: 78.98
CB RIM EL: 79.01
EXCERCISE EQUIPMENT
(3) PD
QC
ADD ALTERNATE 1 –LOAM AND SEED
PATH BIT CONC.
CONCRETE BLOCKS
DIRT PATH
BENCHES TYP
RIP RAP
LOAM AND SEED
CB 78.27
CB RIM EL: 79.80
LOAM AND SEED AREAS OF FILLED DEPRESSIONS (SEE L–1.4)
RIM EL:78.6

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L–4.2 FOR PLANT SCHEDULE

0 10 20 40 FT.

MATCH LINE SEE SHEET L-3.3

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

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Consultant Project No. | PROJECT NO.

NORTH

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Jamaica Pond Park Pathways & Entrances Phase 2

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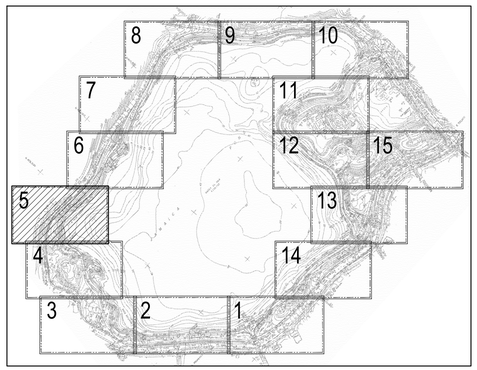
L-4.4



KEY PLAN

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

MATCH LINE SEE SHEET L-3.6

SMH RIM EL:109.11
SMH RIM EL:106.9
DMH RIM EL: 105.30
DMH RIM EL: 96.24
DMH RIM EL: 88.64
DMH RIM EL: 85.61
SMH RIM EL:84.54
DMH RIM EL: 77.79
CB RIM EL:N/A
CB RIM EL:77.24
CB RIM EL:76.81
CB RIM EL:65.54'
UTILITY POLE TYP.
LIGHT TYP.
WOODS
RETENTION WALL
GUARD RAIL
STONE WALL
PATH BIT CONC.
RIP RAP
VGC TYP.
WOOD WALL METAL POSTS
UA
LOAM AND SEED
REPAIR DISTURBED AREAS (7.5' EACH SIDE OF PATHS) LOAM AND SEED
EDGE OF WATER
WATER OUT
GROUND OBSCURED BY HEAVY VEGETATION
PLANT ESTABLISHMENT FENCE, TYP.
(3) PD
TRASH BIN
COBBLE SWALE TYP.

JAMAICA POND

WATER ELEV.= 57.80' ±

0 10 20 40 FT.

MATCH LINE SEE SHEET L-3.4

MASSACHUSETTS KYLE A. ZICK REGISTERED LANDSCAPE ARCHITECT No. 1185

BOSTON PARKS & RECREATION

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NORTH

No.	Date	Revision

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Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

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Sheet Name.:
Planting Plan

Sheet:
L-4.5

BOSTON PARKS & RECREATION

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No.	Date	Revision

Approved By: Date:

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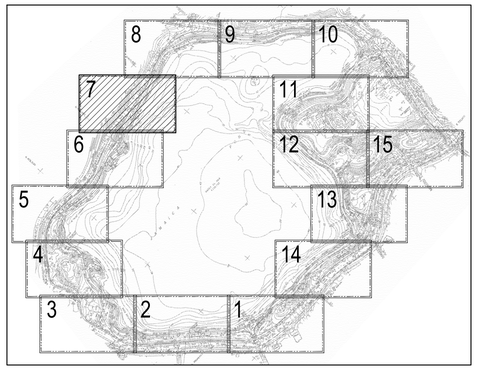
Sheet Name.: **Planting Plan**

Sheet: **L-4.6**



KEY PLAN

MATCH LINE SEE SHEET L-3.8

CB
RIM EL:72.05

BOULDER TYP.

CB
RIM EL:72.05

WOOD WALL METAL POSTS

PATH BIT CONC

WOOD WALL METAL POSTS

SA

EDGE OF WATER

BIT CONC. SIDEWALK

REPAIR DISTURBED AREAS
(7.5' EACH SIDE OF PATHS)
-LOAM AND SEED

BENCHMARK: MAG NAIL SET
NORTHING:2,941,014.51'
EASTING:757,946.93'
ELEV:74.82'

VGC TYP

GUARD RAIL

CB
RIM EL: 77.77

CB
RIM EL: 77.79

GROUND OBSCURED BY
HEAVY VEGETATION

JAMAICA POND
WATER ELEV.= 57.80' ±

UTILITY POLE TYP.

RETENTION WALL

DMH
RIM EL: 117.64

LIGHT TYP.

WOODS

WOODS

CB
RIM EL: 65.13'

CB
RIM EL: 65.79

WOOD WALL METAL POSTS

PATH BIT CONC

LOAM AND SEED

0 10 20 40 FT.

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

MASSACHUSETTS
KYLE S. ZICK
No. 1159
REGISTERED LANDSCAPE ARCHITECT

MATCH LINE SEE SHEET L-3.6

BOSTON PARKS & RECREATION

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NORTH

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Jamaica Pond Park Pathways & Entrances Phase 2

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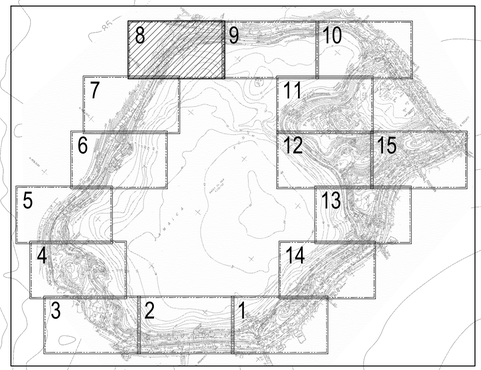
Sheet Name.:
Planting Plan

Sheet:
L-4.7



KEY PLAN

LAWN

CB
RIM EL: 79.40

VGC TYP.

SMH
RIM EL:74.97

MATCH LINE SEE SHEET L-3.9

REPAIR DISTURBED AREAS
(7.5' EACH SIDE OF PATHS)
–LOAM AND SEED

CB
RIM EL: 69.30

DMH
RIM EL: 69.40

SIGN TYP.

WOODS

(2) BPO

BENCHES TYP.

LAWN

RIP-RAP

CLEANOUT

LOAM AND SEED

CB
RIM EL: 69.05

WOODS

BENCHES TYP.

VGC TYP.

PATH BIT CONC.

COBBLE SWALE TYP.

INV. 14" RCP=60.0'±

EDGE OF WATER

GUARD RAIL

RIP RAP

INV. 12" DI=57.0'±

LIGHT TYP.

LOAM AND SEED

WOODS

GUARD RAIL

GUARD RAIL

PATH BIT CONC.

BOULDER TYP.

LOAM AND SEED

MATCH LINE SEE SHEET L-3.7

JAMAICA POND

WATER ELEV.= 57.80' ±

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L–4.2 FOR PLANT SCHEDULE

0 10 20 40 FT.

BOSTON PARKS & RECREATION

Prepared By:

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Jamaica Pond Park Pathways & Entrances Phase 2

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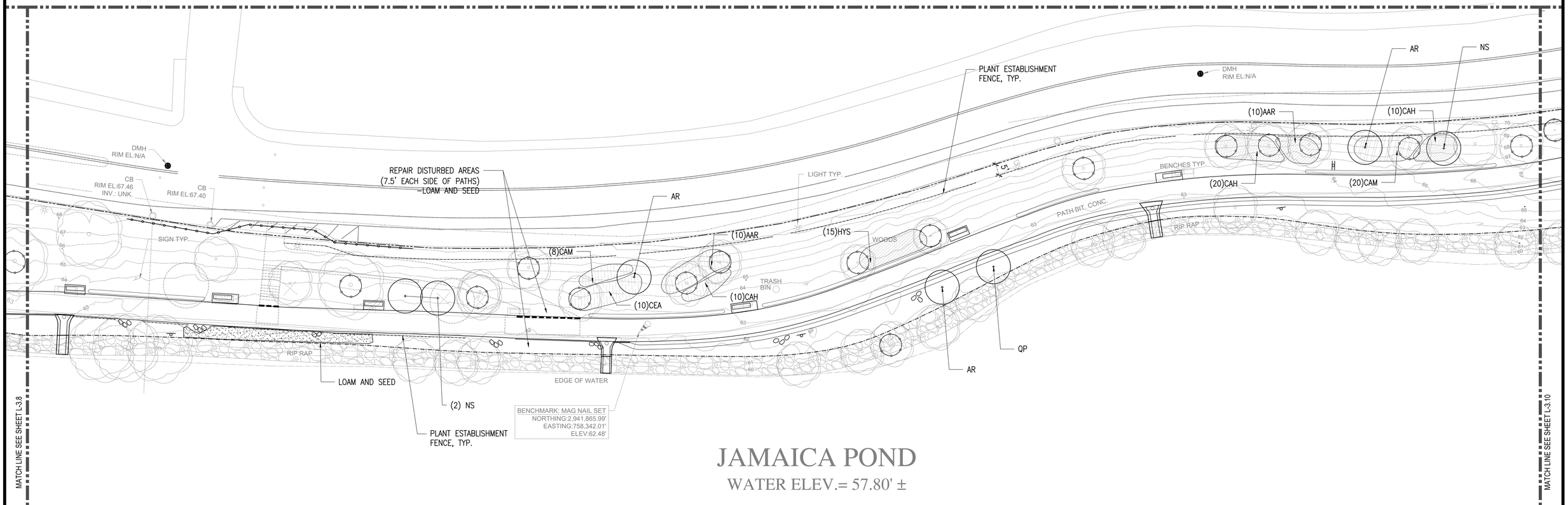
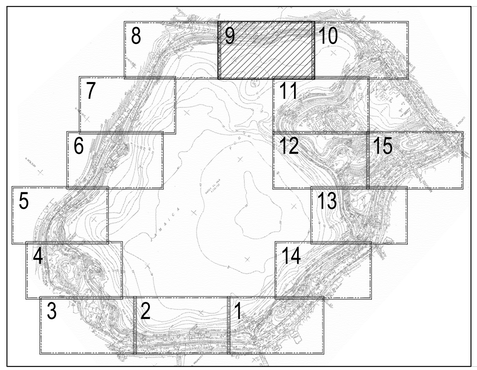
Sheet:

L-4.8



JAMAICA POND

WATER ELEV.= 57.80' ±



KEY PLAN

0 10 20 40 FT.

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

MASSACHUSETTS
KYLE S. ZICK
No. 1193
REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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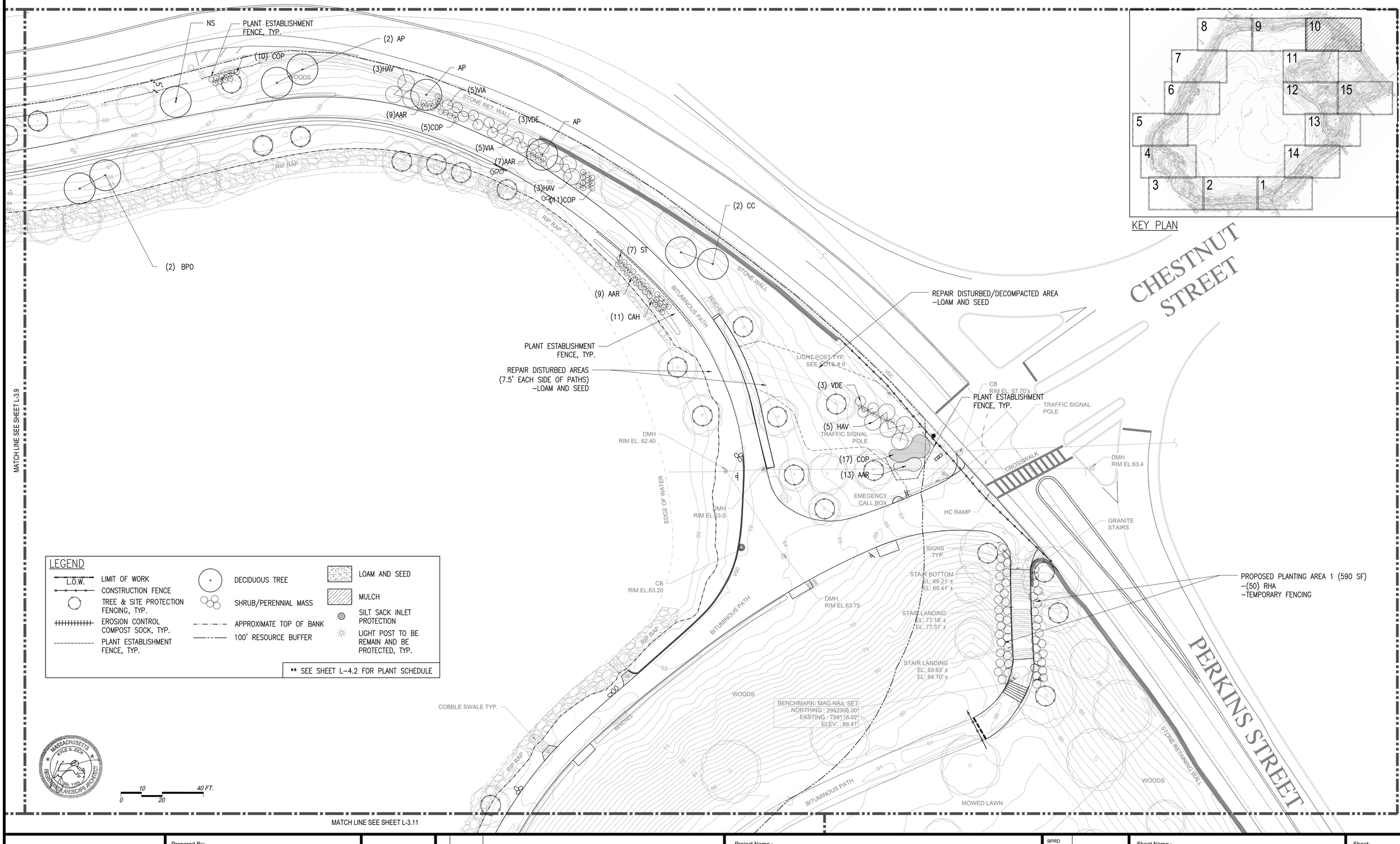
Sheet Name.:
Planting Plan

Sheet:
L-4.9



KEY PLAN

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L–4.2 FOR PLANT SCHEDULE

0 10 20 40 FT.

BOSTON PARKS & RECREATION

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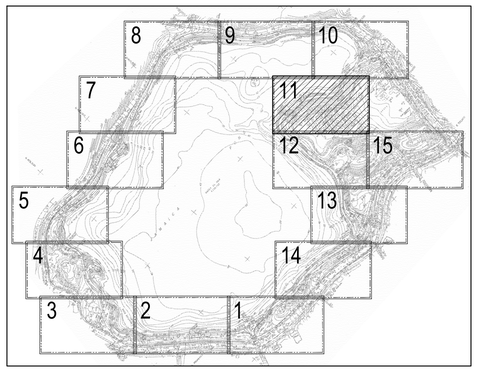
Sheet:
L-4.10



KEY PLAN

MATCH LINE SEE SHEET L-3.10

REPAIR DISTURBED AREAS (7.5' EACH SIDE OF PATHS) –LOAM AND SEED

10 0 20 40 FT.

COBBLE SWALE TYP.

RIP RAP

BITUMINOUS PATH

LOAM AND SEED

WOODS

BENCHMARK: MAG NAIL SET
NORTHING: 2,942,125.22'
EASTING : 759,068.92'
ELEV. : 90.36'

BITUMINOUS PATH

PARKING

CB(R)
RIM EL.84.34(R)
INV. IN: 82.54'
INV. OUT: 81.74'

CB
RIM EL.85.70'
INV. OUT: 83.50'

10" CLAY

DMH(R)
RIM EL.84.43'(R)

BENCHES

WMH
RIM EL.86.40'

MA

STAIR BOTTOM
EL. 63.07' ±
EL. 64.33' ±

RAILING TYP.

STAIR LANDING
EL. 76.45' ±
EL. 76.64' ±

STAIR LANDING
EL. 78.40' ±
EL. 78.49' ±

BENCHMARK: MAG NAIL SET
NORTHING: 2,941,681.42'
EASTING : 758,922.83'
ELEV. : 86.02'

MOWED LAWN

SIGNS

TRASH TYP.

PAVERS

SMH
RIM EL.88.10'±
INV.: 77.36'

EMH
UNDERGROUND LINE
LOCATIONS UNK.

COBBLE SWALE TYP.

LIGHT POLE (NOT IN SERVICE)

8" CLAY

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L–4.2 FOR PLANT SCHEDULE

MATCH LINE SEE SHEET L-3.12

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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Consultant Project No.

PROJECT NO.

NORTH

No.	Date	Revision

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Date:

Project Name.:

Jamaica Pond Park Pathways & Entrances Phase 2

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Date	11/07/2018
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Sheet Name.:

Planting Plan

Sheet:

L-4.11

MATCH LINE SEE SHEET L-3.11

BENCHMARK: MAG SPK SET
NORTHING:2,941,499.04'
EASTING:758,867.90'
ELEV:61.09'

MA

BENCHES

BITUMINOUS PATH

RIP-RAP

WOODS

MOWED LAWN

BENCHMARK: MAG NAIL SET
NORTHING: 2,941,603.39'
EASTING: 759,160.36'
ELEV: 86.24'

COBBLE SWALE TYP.

(1)MA
(7)VIA
(3)HAV
(1)UAP
(7)COP
(5)CAH
(7)ILV
(2)VDE

WOOD DEBRIS

PLANT ESTABLISHMENT FENCE, TYP.

CANOPY GAP 1, NEW PLANTING (1645 SF)
-REMOVE AND DISPOSE OF FALLEN TREES
-(3) TREES
-(26) RHA
-SEEDING
-TEMPORARY FENCING

LOAM AND SEED

EDGE OF WATER

BENCHMARK: SPK SET
NORTHING: 2,941,555.31'
EASTING: 759,307.03'
POINT ELEV: 63.23'

EXERCISE EQUIPMENT

PROPOSED PLANTING AREA 2 (570 SF)
-(28) RHA
-SEEDING
-TEMPORARY FENCING

LIGHT POLE (NOT IN SERVICE)

TRASH TYP.

PUDDINGSTONE STAIRS

CB (FILLED)
RIM EL: 85.10'
INV. IN (ASSUMED): 81.73'
INV. OUT (ASSUMED): 81.03'

SMH
RIM EL:79.75'
INV. OUT: 74.25'

LANDING
EL: 78.5' ±

LANDING
EL: 73.2' ±

LANDING
EL: 69.7' ±

LOAM AND SEED

PROPOSED PLANTING (950 SF)
-(67) RHA
-TEMPORARY FENCING

PLACE WOODCHIPS

BOTTOM STAIR
EL: 65.35' ±

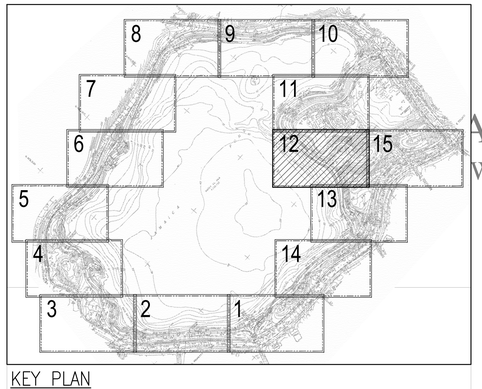
TOP OF STAIRS
EL: 75.0' ±

STONE DUST PATH

MATCH LINE SEE SHEET L-3.15

MATCH LINE SEE SHEET L-3.13

MASSACHUSETTS
KYLE S. ZICK
No. 1169
REGISTERED LANDSCAPE ARCHITECT



KEY PLAN

JAMAICA POND
WATER ELEV.= 57.80'

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

0 10 20 40 FT.

MATCH LINE SEE SHEET L-3.13

BOSTON PARKS & RECREATION

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Consultant Project No. | PROJECT NO.

NORTH

No.	Date	Revision

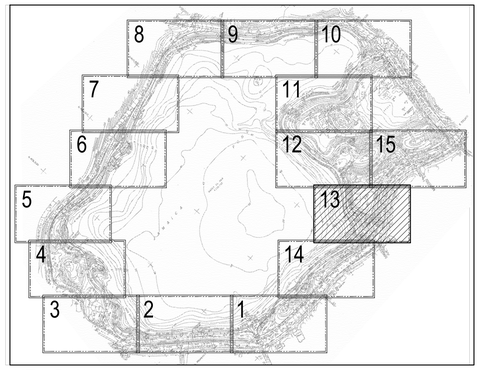
Approved By: | Date:

Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.	----
Date	11/07/2018
Scale	1"=20'-0"
Drawn	RB/TH/YL
Checked	KZ

Sheet Name.:
Planting Plan

Sheet:
L-4.12



KEY PLAN

MATCH LINE SEE SHEET L-3.12

MATCH LINE SEE SHEET L-3.15

JAMAICA WAY

EDGE OF WATER

RIP RAP

BITUMINOUS PATH

WOODS

MOWED LAWN

LIGHT POLE TYP. SEE NOTE # 9

CANOPY GAP 2, NEW PLANTING (655 SF)
–REMOVE STUMP
–SEEDING
–TEMPORARY FENCING

(5)CAH

(6)VIA

(7)ILV

(2)VDE

ADD ALTERNATE 1
–LOAM AND SEED

ADD ALTERNATE 3
–LOAM AND SEED

JAMAICA POND

WATER ELEV.= 57.80' ±

(2) NS

MA

(12)ILV

(10)HYS

BENCHMARK: MAG NAIL SET
NORTHING:2,941,356.41'
EASTING:759,616.01
ELEV:62.42'

REPAIR DISTURBED AREAS
(7.5' EACH SIDE OF PATHS)
–LOAM AND SEED

OUTFALL UNDERWATER

LOAM AND SEED

CB
RIM EL: 79.35

SA

(2) BPA

ADD ALTERNATE 2
–LOAM AND SEED

MATCH LINE SEE SHEET L-3.14

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

0 10 20 40 FT.

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

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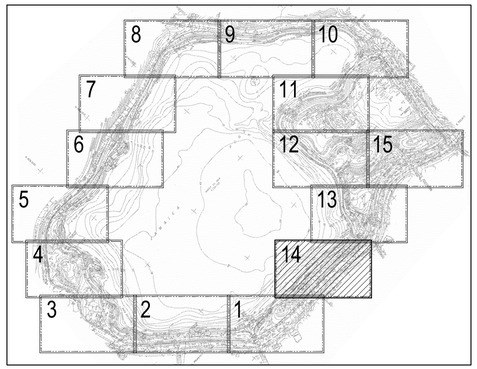
Checked	KZ

Sheet Name.:
Planting Plan

Sheet:
L-4.13



KEY PLAN

MATCH LINE SEE SHEET L-3.13

JAMAICA POND

WATER ELEV.= 57.80' ±

REPAIR DISTURBED AREAS (7.5' EACH SIDE OF PATHS) –LOAM AND SEED

OV

QP

LOAM AND SEED

COBBLE SWALE TYP.

ADD ALTERNATE 1 –LOAM AND SEED

ADD ALTERNATE 3 –LOAM AND SEED

JAMAICA WAY

(2) QM

PIPE INVERT MATERIAL UNKNOWN INVERT UNKNOWN

COBBLE SWALE TYP.

0 10 20 40 FT.

LEGEND

- L.O.W. — LIMIT OF WORK
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

MASSACHUSETTS KYLE S. ZICK REGISTERED LANDSCAPE ARCHITECT No. 1439

MATCH LINE SEE SHEET L-3.1

BOSTON PARKS & RECREATION

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Checked	KZ

Sheet Name.:

Planting Plan

Sheet:

L-4.14

LEGEND

- LIMIT OF WORK (L.O.W.)
- CONSTRUCTION FENCE
- TREE & SITE PROTECTION FENCING, TYP.
- EROSION CONTROL COMPOST SOCK, TYP.
- PLANT ESTABLISHMENT FENCE, TYP.
- DECIDUOUS TREE
- SHRUB/PERENNIAL MASS
- APPROXIMATE TOP OF BANK
- 100' RESOURCE BUFFER
- LOAM AND SEED
- MULCH
- SILT SACK INLET PROTECTION
- LIGHT POST TO BE REMAIN AND BE PROTECTED, TYP.

** SEE SHEET L-4.2 FOR PLANT SCHEDULE

PERKINS STREET

JAMAICA WAY

MORAINE STREET

BENCHMARK: MAG NAIL SET
NORTHING: 942,203.99'
EASTING: 759,808.63'
ELEV.: 80.57'

ADD ALTERNATE 1
REPAIR 5' WIDE DISTURBED AREA AT BACK OF PATH –LOAM AND SEED

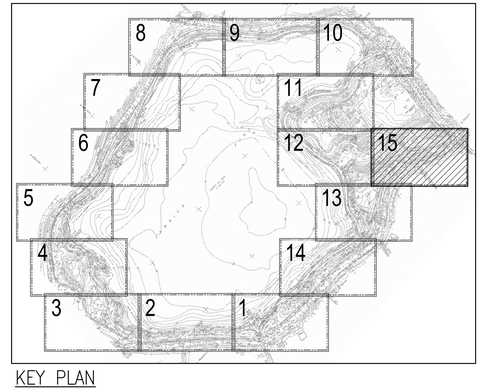
ADD ALTERNATE 3
REPAIR 5' WIDE DISTURBED AREA STREETSIDE OF PATH –LOAM AND SEED

MATCH LINE SEE SHEET L-3.12

MATCH LINE SEE SHEET L-3.13

10 0 20 40 FT.

KEY PLAN



MASSACHUSETTS KYLE B. ZICK No. 1163 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS & RECREATION

Prepared By:
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Consultant Project No. PROJECT NO.

NORTH

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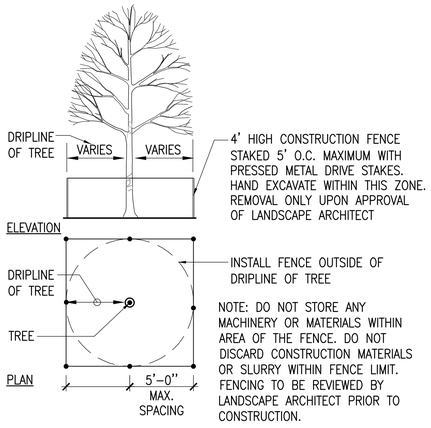
Checked	KZ

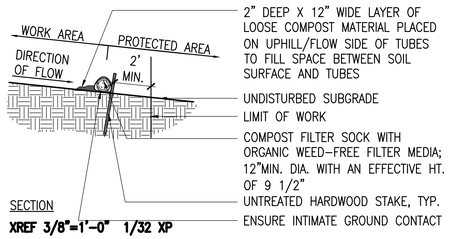
Sheet Name.:
Planting Plan

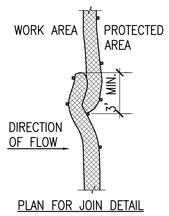
Sheet:
L-4.15



1 TREE & SITE PROTECTION FENCING

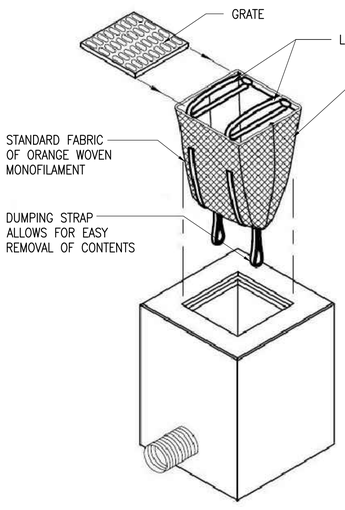
SCALE: 3/16" = 1'-0"





2 EROSION CONTROL - COMPOST FILTER SOCK

SCALE: 3/8" = 1'-0"



INSTALLATION AND MAINTENANCE:

INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO CATCH BASIN INSERT SO THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

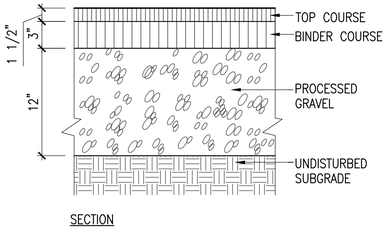
MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH BASIN INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURAION.

UNACCEPTABLE INLET PROTECTION METHOD:

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

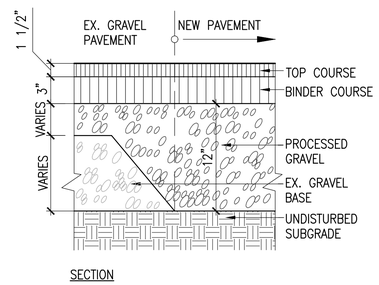
3 SILT SACK INLET PROTECTION

SCALE: 1" = 1'-0"



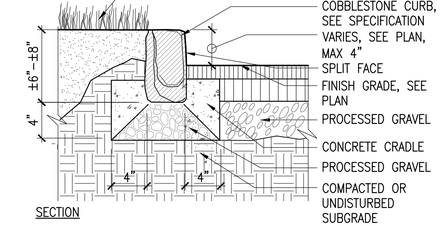
4 BITUMINOUS CONCRETE PAVEMENT

SCALE: 1 1/2" = 1'-0"



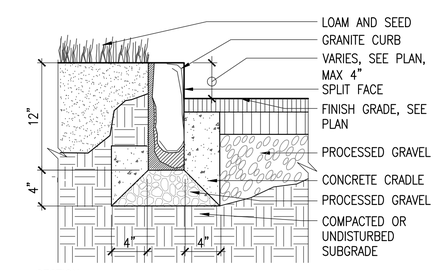
5 BIT. CON.PAVEMENT - TRANSITION-A

SCALE: 1 1/2" = 1'-0"



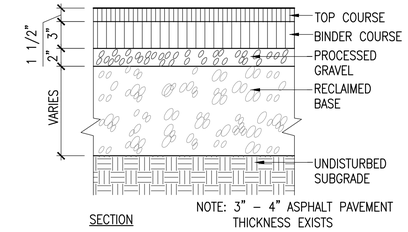
6 COBBLESTONE CURB

SCALE: 1 1/2" = 1'-0"



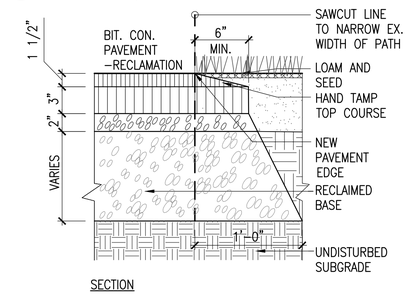
7 GRANITE CURB - TYPE 1

SCALE: 1 1/2" = 1'-0"



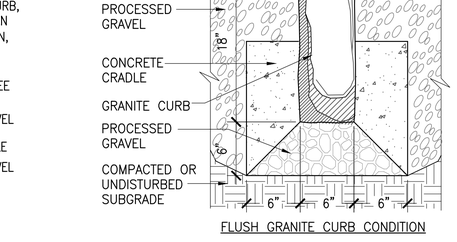
8 BIT. CON.PAVEMENT - RECLAMATION

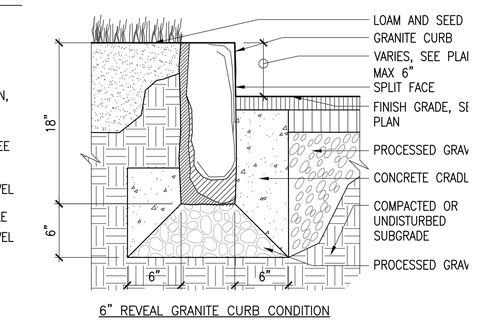
SCALE: 1 1/2" = 1'-0"



9 BIT. CON.PAVEMENT - TRANSITION-B

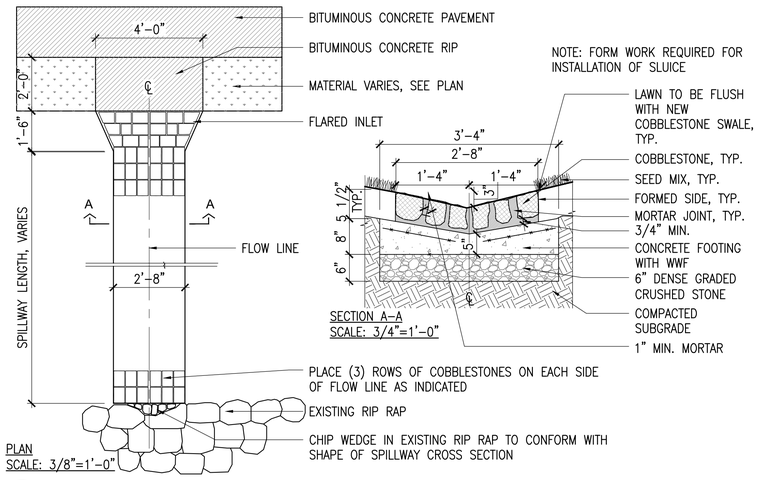
SCALE: 1 1/2" = 1'-0"





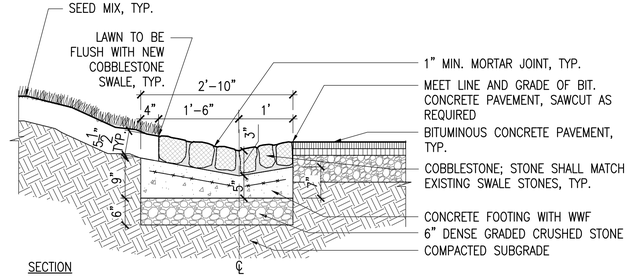
10 GRANITE CURB - TYPE 2

SCALE: 1 1/2" = 1'-0"



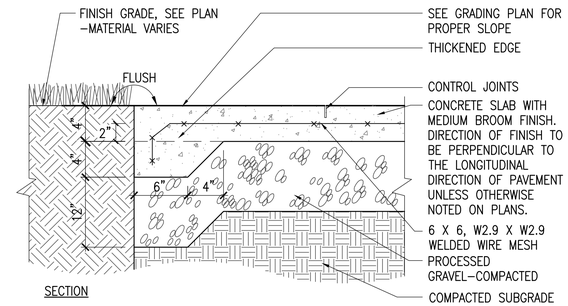
11 COBBLESTONE SPILLWAY

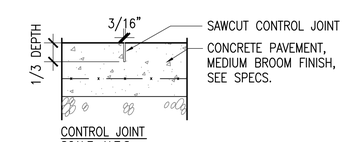
SCALE: 3/8" = 1'-0"



12 COBBLESTONE SWALE

SCALE: 3/4" = 1'-0"





NOTE: REFER TO SPECIFICATION FOR CONCRETE COLOR

INSTALLATION NOTES:
CONTROL JOINTS 5'-0" O.C. UNLESS SHOWN OTHERWISE

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

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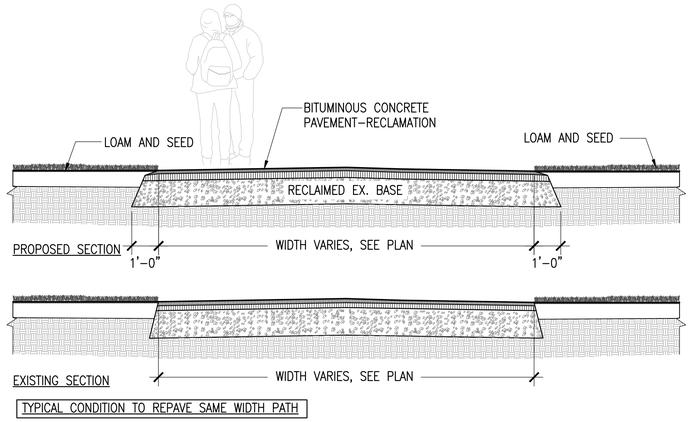
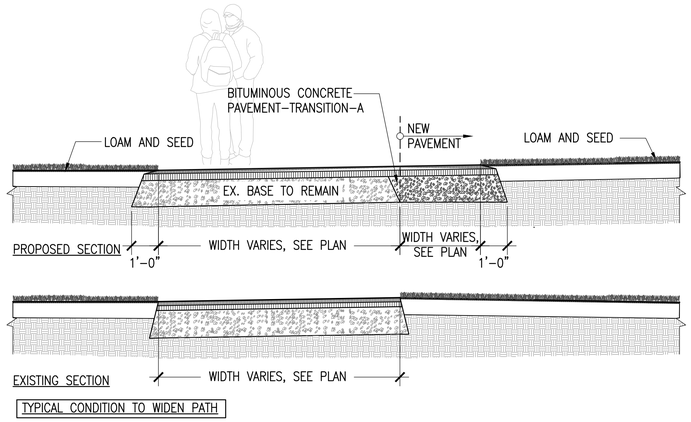
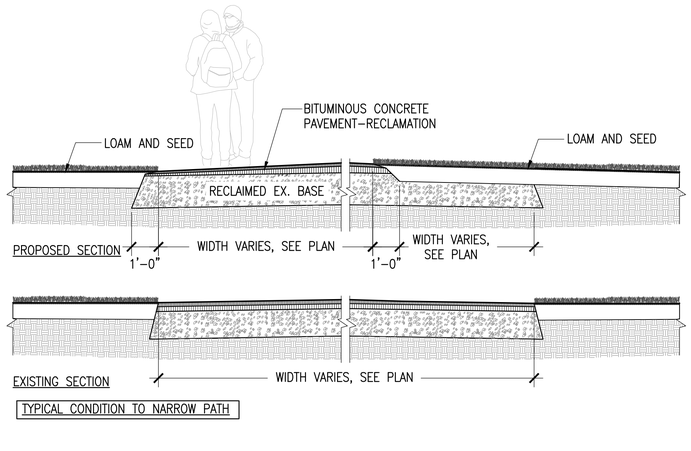
Sheet:

LD-1

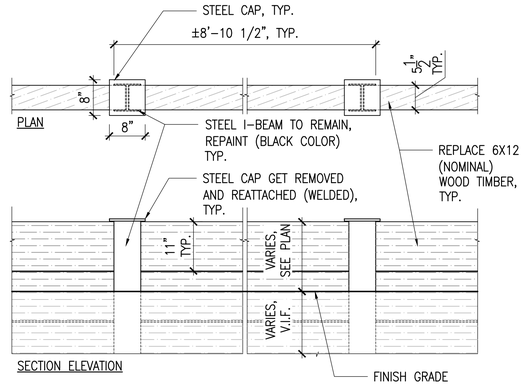






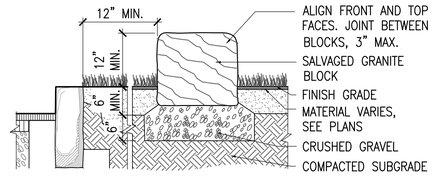
1 TYPICAL CROSS SECTIONS

SCALE: 3/8" = 1'–0"



2 WOOD RETAINING WALL

SCALE: 3/4" = 1'–0"

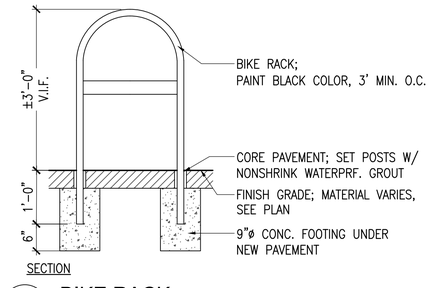


3 RESET GRANITE BLOCK

SCALE: 3/4" = 1'–0"

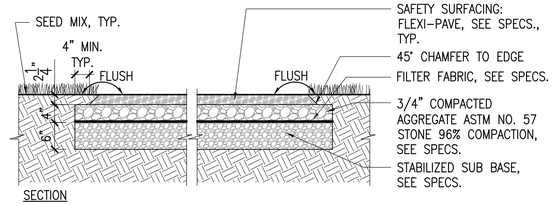
4 BARRIER BOULDER

SCALE: 3/4" = 1'–0"



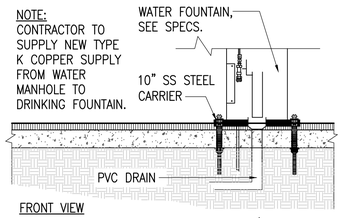
5 BIKE RACK

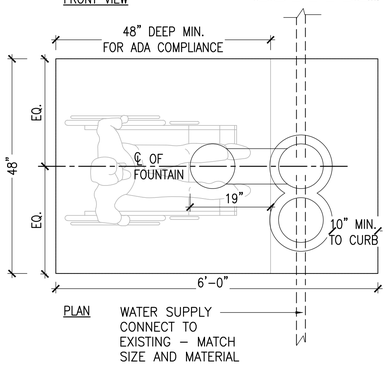
SCALE: 3/4" = 1'–0"



6 SAFETY SURFACING

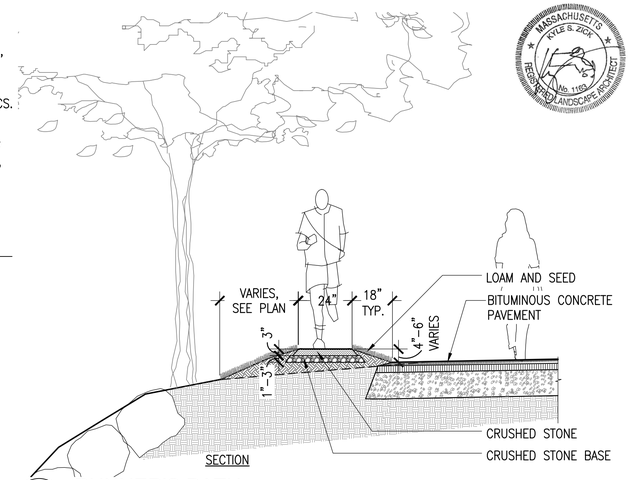
SCALE: 3/4" = 1'–0"





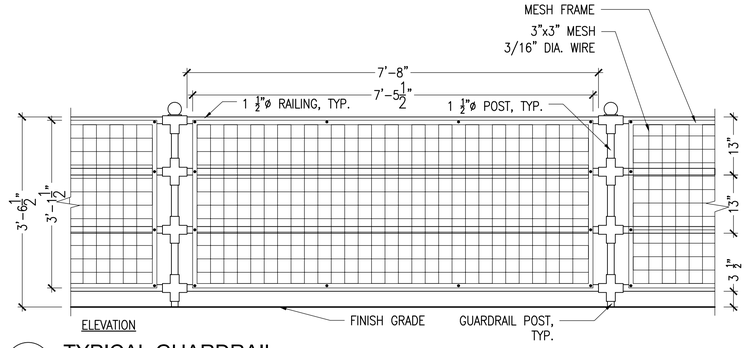
7 DRINKING FOUNTAIN

SCALE: 3/4" = 1'–0"



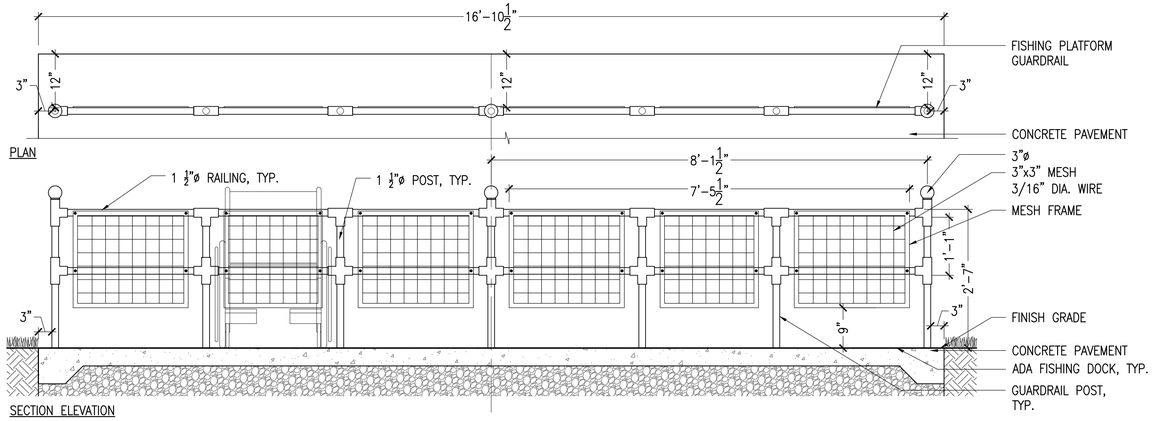
10 RUNNER'S PATH

SCALE: 3/8" = 1'–0"



9 TYPICAL GUARDRAIL

SCALE: 3/4" = 1'–0"



8 FISHING PLATFORM GUARDRAIL

SCALE: 3/4" = 1'–0"

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

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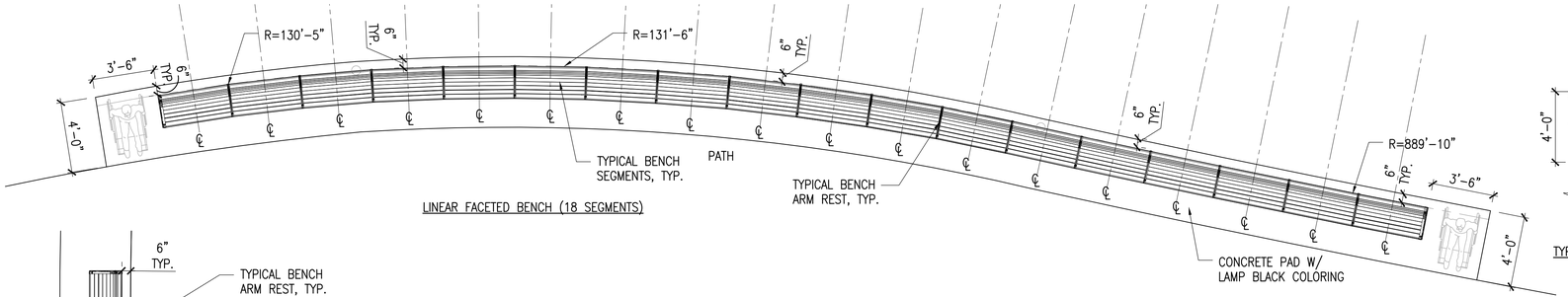
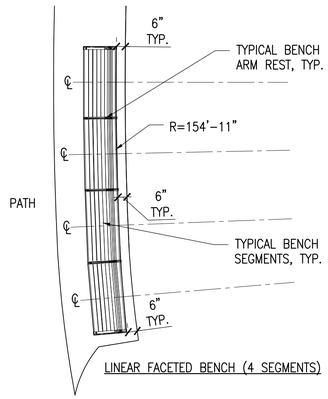
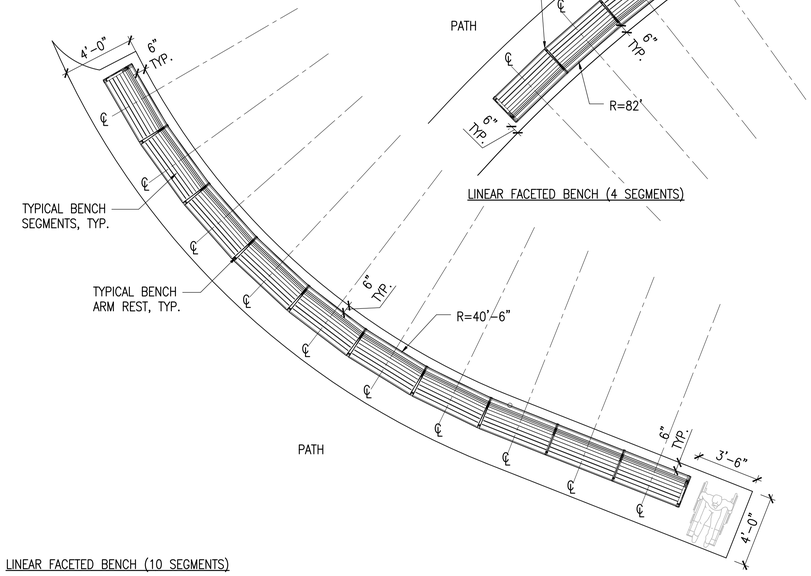
Sheet:
LD-2



LINEAR FACETED BENCH (18 SEGMENTS)

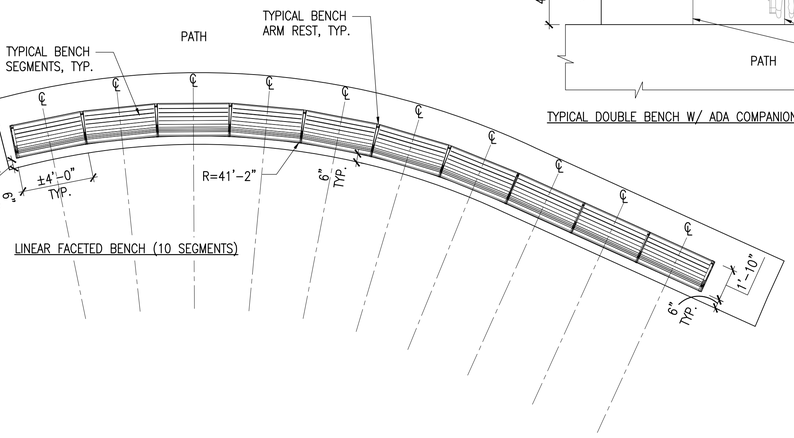


LINEAR FACETED BENCH (4 SEGMENTS)

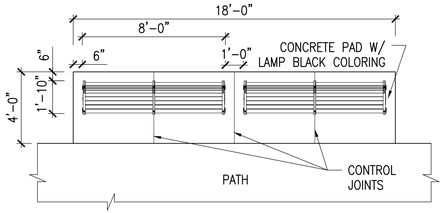


LINEAR FACETED BENCH (10 SEGMENTS)

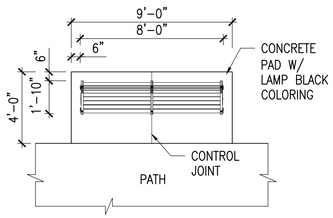
LINEAR FACETED BENCH (4 SEGMENTS)



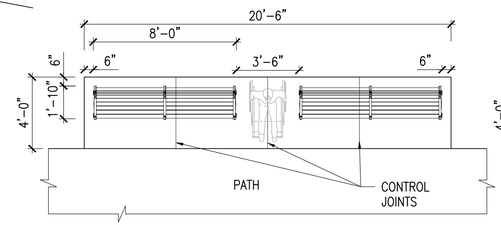
LINEAR FACETED BENCH (10 SEGMENTS)



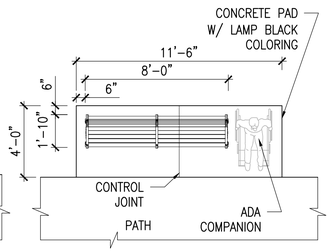
TYPICAL DOUBLE BENCH



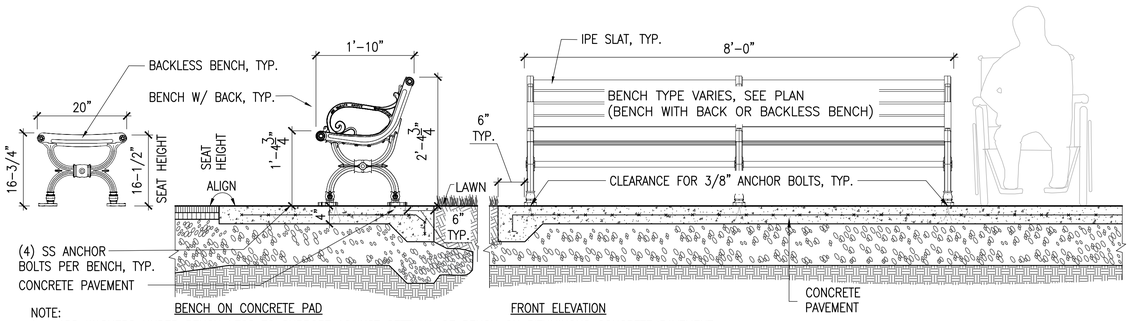
TYPICAL SINGLE BENCH



TYPICAL DOUBLE BENCH W/ ADA COMPANION



TYPICAL SINGLE BENCH W/ ADA COMPANION



BENCH ON CONCRETE PAD

FRONT ELEVATION

NOTE:
1. ADD WASHERS UNDER BENCH LEGS TO SUPPORT AGAINST SETTLING OF BENCH ON BITUMINOUS CONCRETE PAVEMENT.
2. ALL OUTSIDE SLATS SHALL HAVE A ROUNDED EDGE WITH A CUSTOM ¾" RADIUS FOR BOTH BACKED AND BACKLESS BENCH.
3. CONCRETE FOR BENCH PADS TO HAVE LAMP BLACK COLORING.

1 TYPICAL BENCH TYPES

SCALE: 1/4" = 1'-0"

2 BENCH

SCALE: 3/4" = 1'-0"

BOSTON PARKS AND RECREATION

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Consultant Project No. | PROJECT NO.

No.	Date	Revision

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Sheet Name.:

Landscape Details

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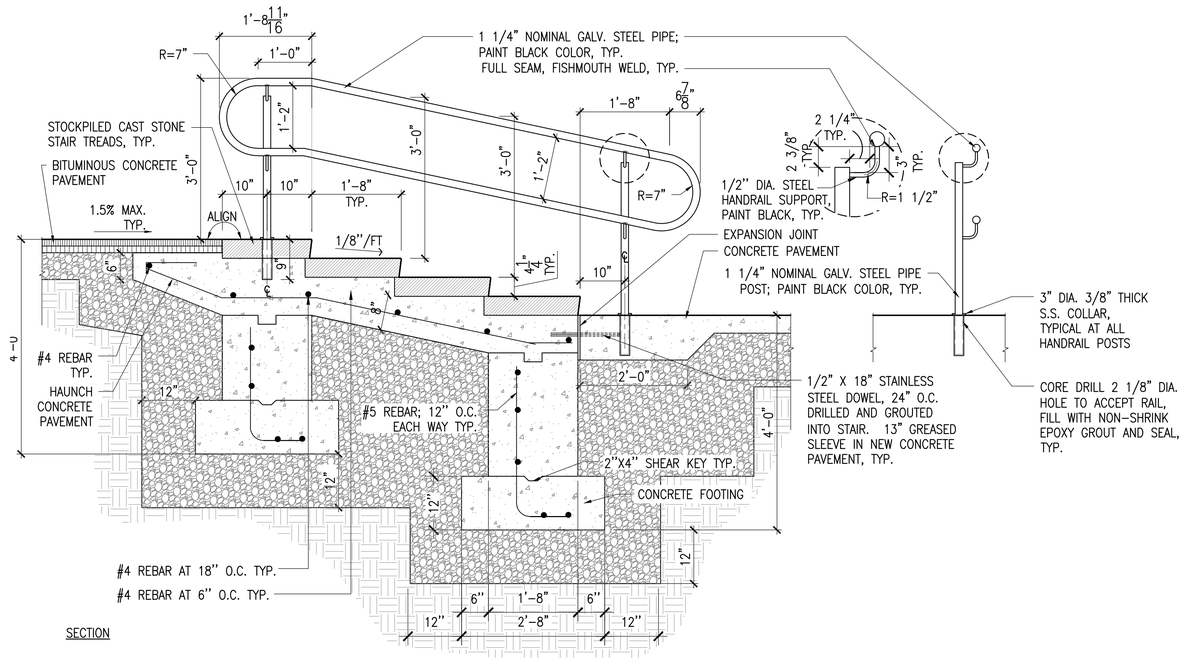
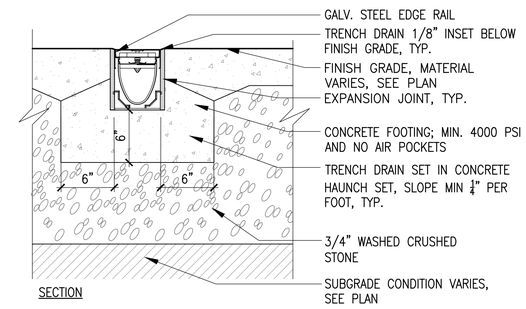


1 CONCRETE STAIR WITH HANDRAIL AT BOATHOUSE

SCALE: 3/4" = 1'-0"



2 TRENCH DRAIN

SCALE: 1 1/2" = 1'-0"

BOSTON PARKS AND RECREATION

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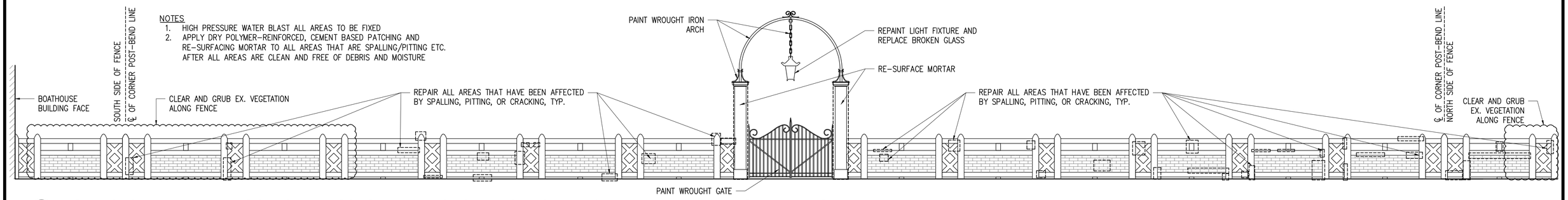
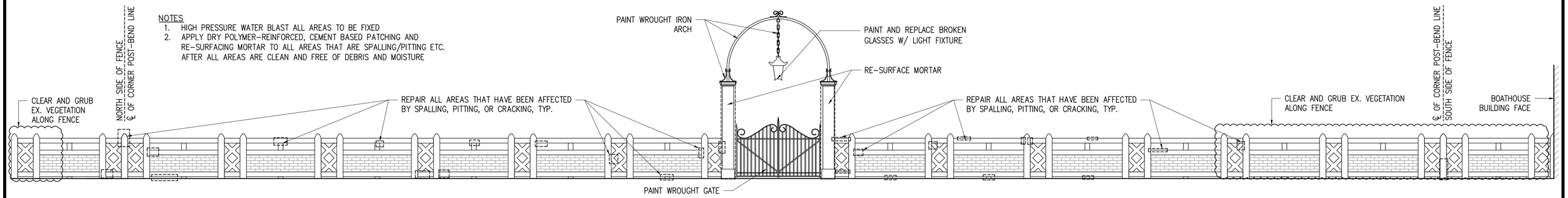


1 BOATHOUSE PLAZA REPAIRS (BRICK AND CONCRETE FENCE & PIER & ARCHWAY & PENDANT LIGHT) - EAST ELEVATION

SCALE: 1/4" = 1'-0"



2 BOATHOUSE PLAZA REPAIRS (BRICK AND CONCRETE FENCE & PIER & ARCHWAY & PENDANT LIGHT) - WEST ELEVATION

SCALE: 1/4" = 1'-0"

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS AND RECREATION

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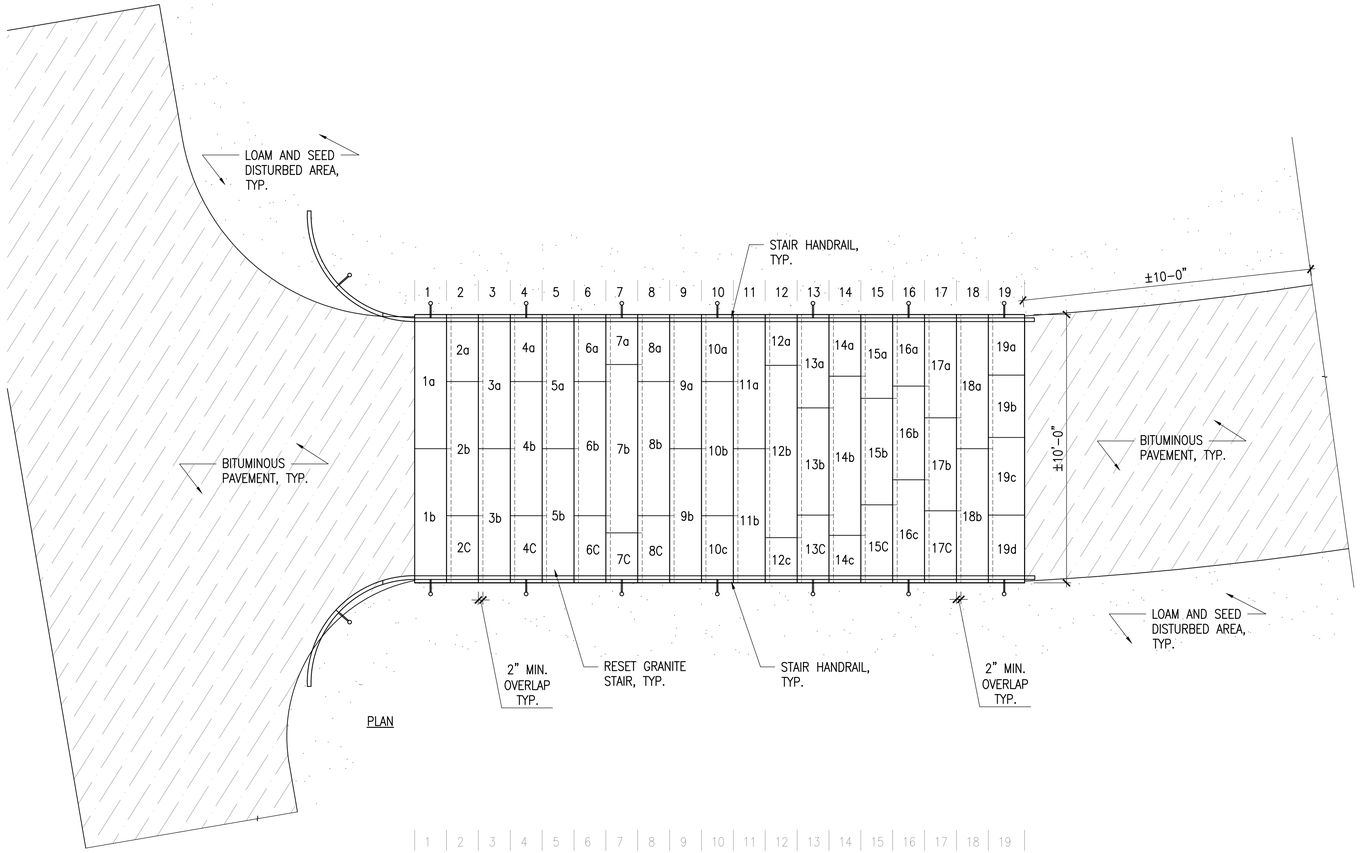
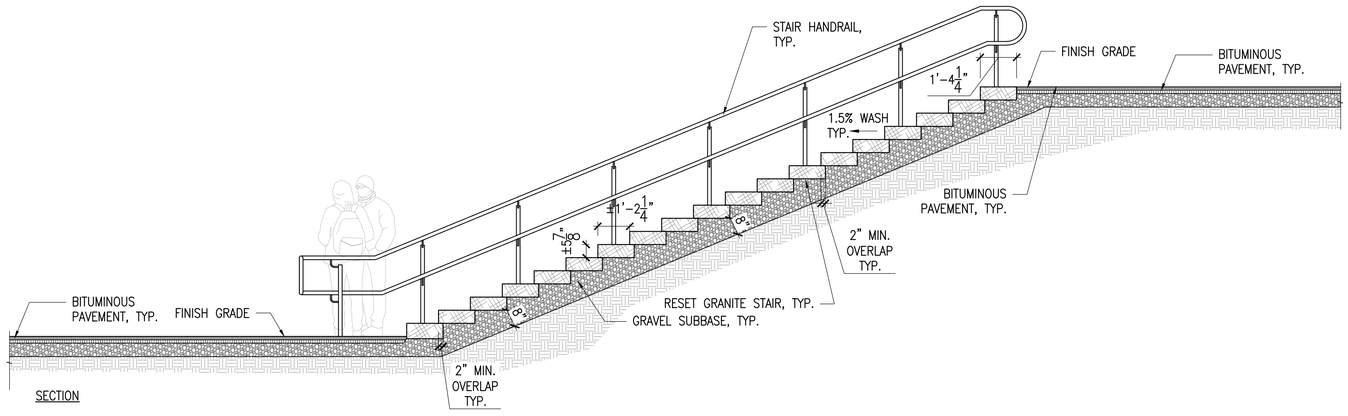


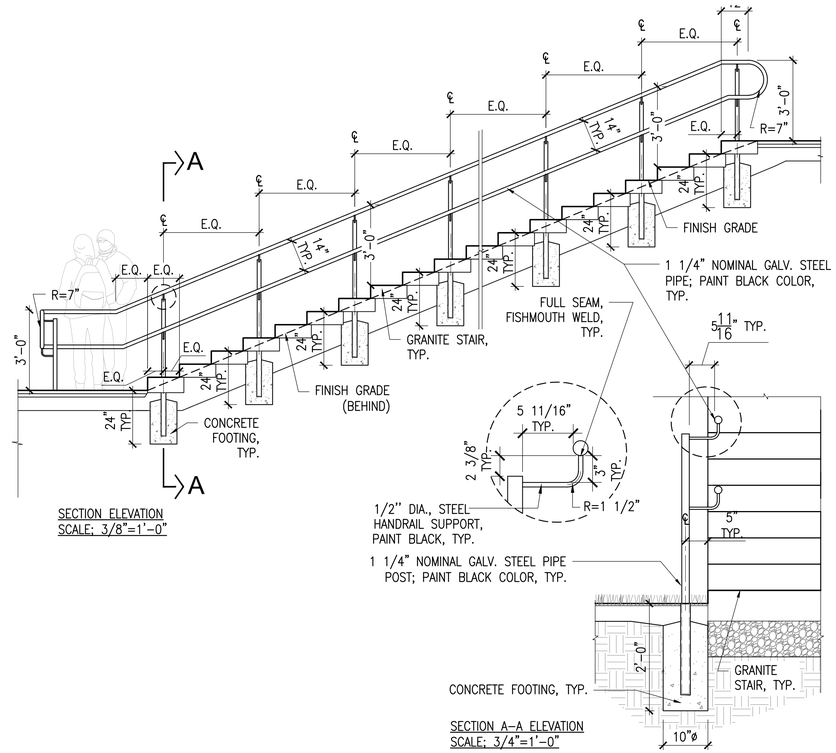
PLAN



SECTION

1 STAIR NEAR POND

SCALE: 3/8" = 1'-0"



SECTION ELEVATION
SCALE: 3/8"=1'-0"

SECTION A-A ELEVATION
SCALE: 3/4"=1'-0"

2 TYPICAL STAIR HANDRAIL

SCALE: AS SHOWN

MASSACHUSETTS KYLE B. ZICK No. 1162 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS AND RECREATION

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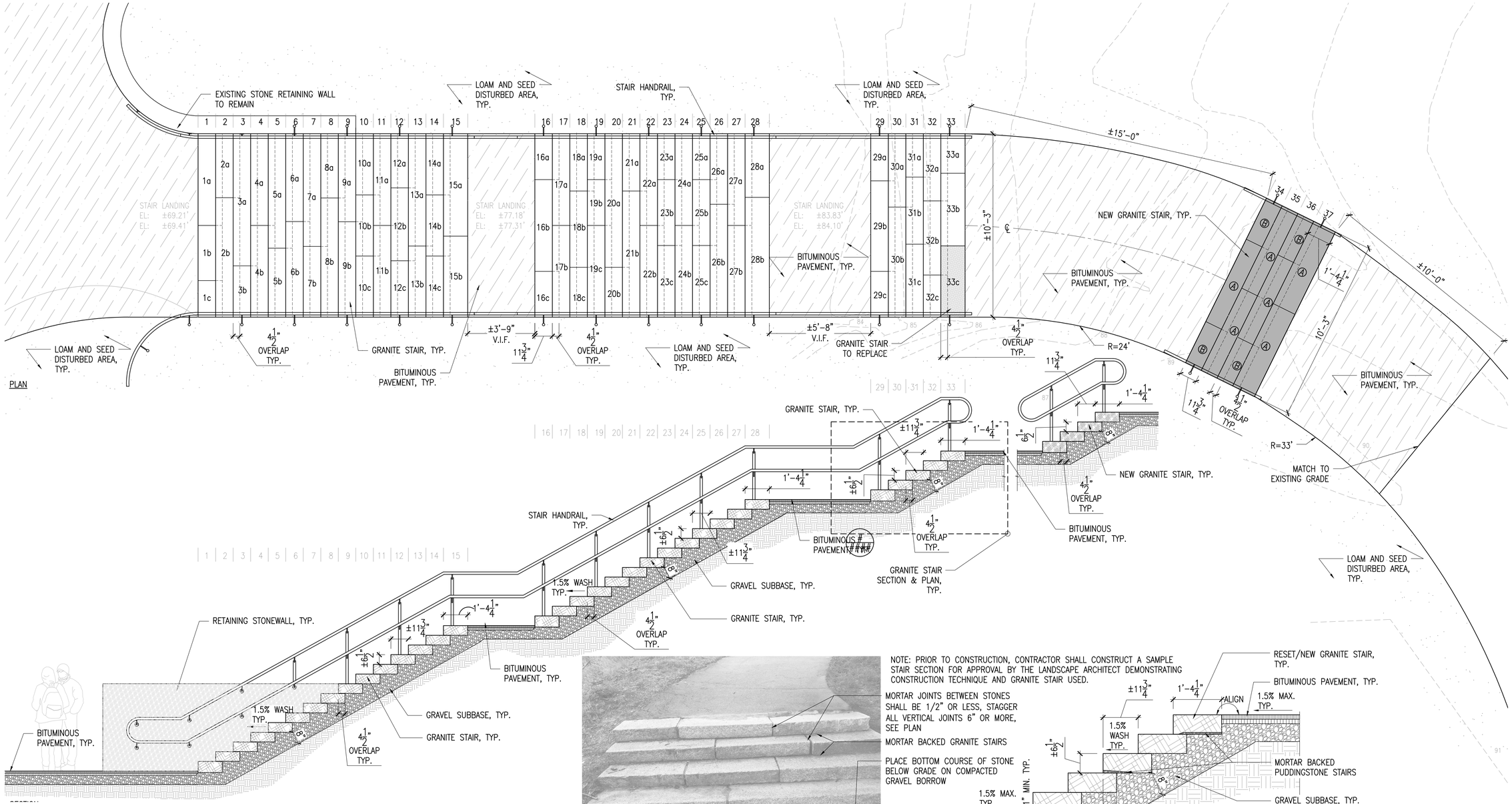

1 STAIR NEAR CHESTNUT AND PERKINS STREET

SCALE: 3/8" = 1'-0"

PHOTO OF EXISTING GRANITE STAIRS IN TYPICAL CONDITIONS

NOTE: PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONSTRUCT A SAMPLE STAIR SECTION FOR APPROVAL BY THE LANDSCAPE ARCHITECT DEMONSTRATING CONSTRUCTION TECHNIQUE AND GRANITE STAIR USED.

MORTAR JOINTS BETWEEN STONES SHALL BE 1/2" OR LESS, STAGGER ALL VERTICAL JOINTS 6" OR MORE, SEE PLAN

MORTAR BACKED GRANITE STAIRS

PLACE BOTTOM COURSE OF STONE BELOW GRADE ON COMPACTED GRAVEL BORROW

SECTION

2 TYPICAL GRANITE STAIR SECTION

SCALE: 3/4" = 1'-0"

MASSACHUSETTS KYLE S. ZICK No. 1159 REGISTERED LANDSCAPE ARCHITECT

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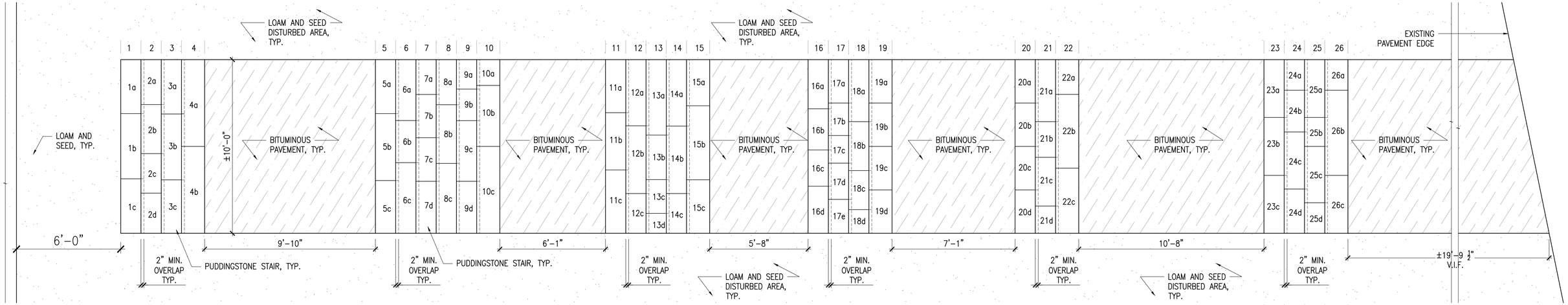
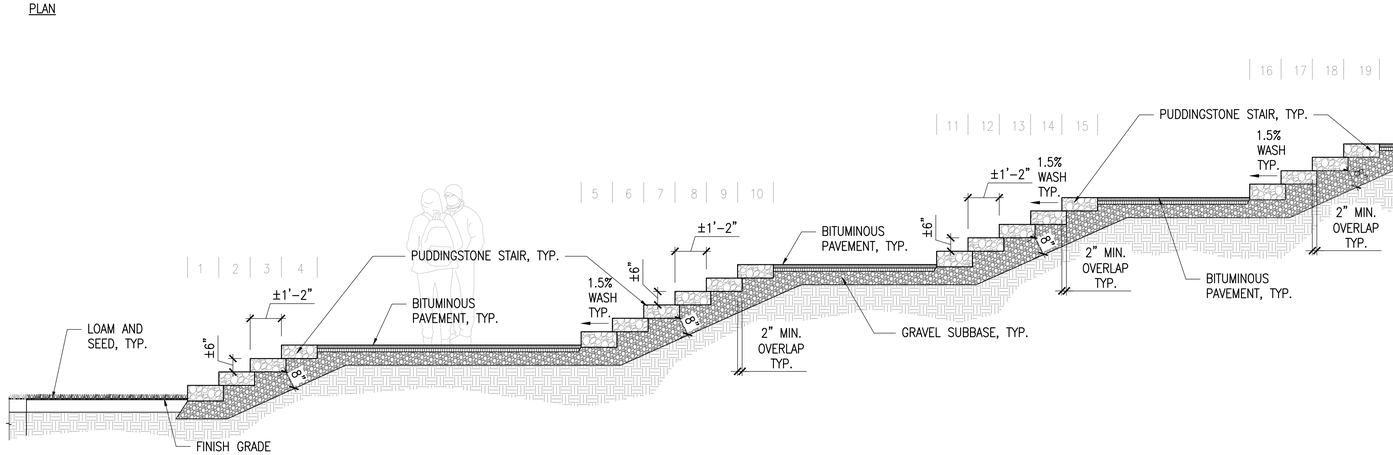


PLAN



SECTION

1 PUDDINGSTONE STAIR

SCALE: 3/8" = 1'-0"

NOTE: PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONSTRUCT A SAMPLE STAIR SECTION FOR APPROVAL BY THE LANDSCAPE ARCHITECT DEMONSTRATING CONSTRUCTION TECHNIQUE AND PUDDINGSTONE STAIR USED.

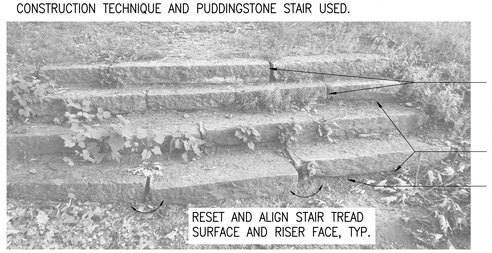
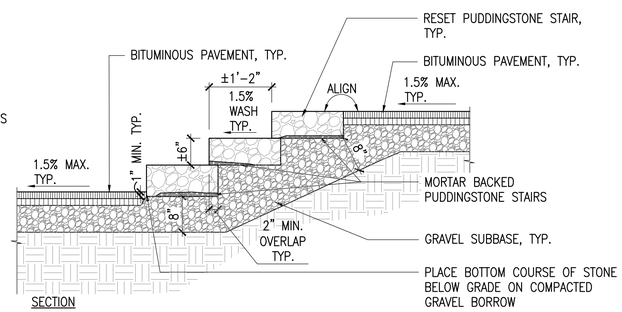


PHOTO OF EXISTING PUDDINGSTONE STAIRS IN TYPICAL CONDITIONS



SECTION

PLAN

2 TYPICAL PUDDINGSTONE STAIR SECTION

SCALE: 3/4" = 1'-0"

MASSACHUSETTS KYLE S. ZICK No. 1169 REGISTERED LANDSCAPE ARCHITECT

BOSTON PARKS AND RECREATION

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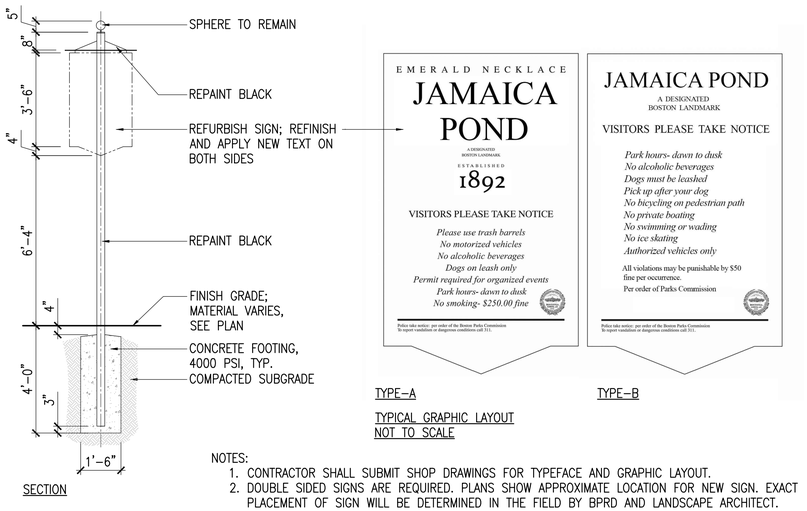


TYPE-A

TYPE-B

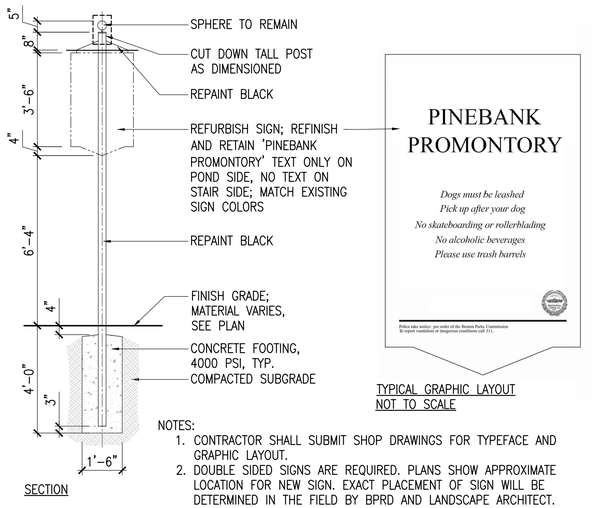
TYPICAL GRAPHIC LAYOUT
NOT TO SCALE

SECTION

NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR TYPEFACE AND GRAPHIC LAYOUT.
2. DOUBLE SIDED SIGNS ARE REQUIRED. PLANS SHOW APPROXIMATE LOCATION FOR NEW SIGN. EXACT PLACEMENT OF SIGN WILL BE DETERMINED IN THE FIELD BY BPRD AND LANDSCAPE ARCHITECT.

1 JAMAICA POND HISTORICAL SIGN

SCALE: 3/8" = 1'-0"



TYPICAL GRAPHIC LAYOUT
NOT TO SCALE

SECTION

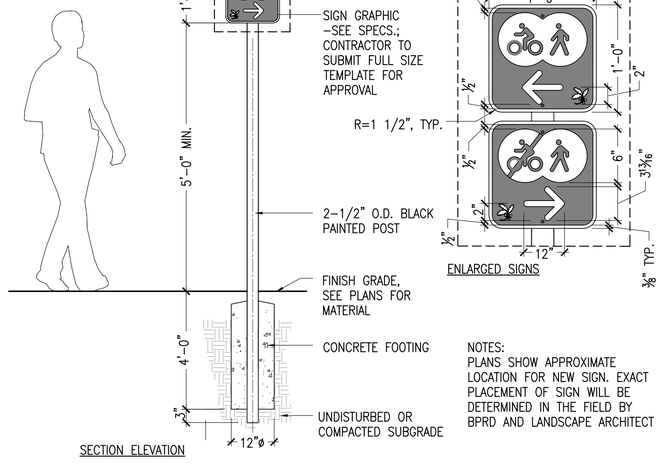
NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR TYPEFACE AND GRAPHIC LAYOUT.
2. DOUBLE SIDED SIGNS ARE REQUIRED. PLANS SHOW APPROXIMATE LOCATION FOR NEW SIGN. EXACT PLACEMENT OF SIGN WILL BE DETERMINED IN THE FIELD BY BPRD AND LANDSCAPE ARCHITECT.

6 PINEBANK PROMONTORY SIGN

SCALE: 3/8" = 1'-0"

SIGNAGE SCHEDULE

SIGNAGE TYPES	MESSAGE	SIGNAGE TYPES	MESSAGE
A		C	
B		D	
		E	



SECTION ELEVATION

NOTES:
PLANS SHOW APPROXIMATE LOCATION FOR NEW SIGN. EXACT PLACEMENT OF SIGN WILL BE DETERMINED IN THE FIELD BY BPRD AND LANDSCAPE ARCHITECT

7 DIRECTIONAL SIGN

SCALE: 3/4" = 1'-0"

PLAN

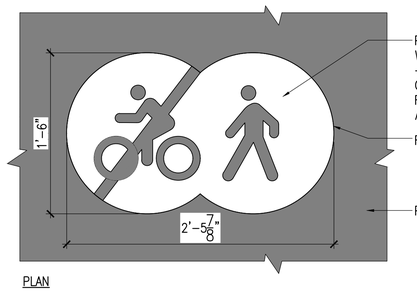
2 PAVEMENT MARKING SIGN A

SCALE: 1 1/2" = 1'-0"

PLAN

4 PAVEMENT MARKING SIGN C

SCALE: 1 1/2" = 1'-0"



PLAN

3 PAVEMENT MARKING SIGN B

SCALE: 1 1/2" = 1'-0"

NOTES:
1. EACH PARK RULES SIGN SHALL CONSIST OF A RULES SIGN-ENGLISH AND A RULES SIGN-SPANISH ON EITHER SIDE OF THE SAME POST.
2. PLANS SHOW APPROXIMATE LOCATION FOR NEW SIGNS. EXACT PLACEMENT OF SIGNS WILL BE DETERMINED IN THE FIELD BY BPRD AND LANDSCAPE ARCHITECT.

5 PARK RULES SIGN

SCALE: 1 1/2" = 1'-0"

BOSTON PARKS AND RECREATION

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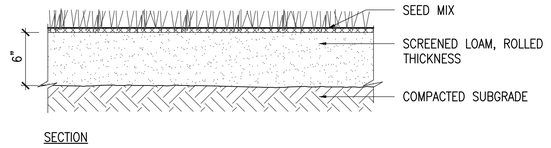
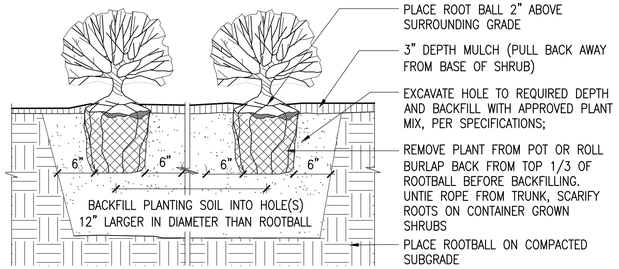


SECTION

1 SEED MIX

SCALE: 1 1/2" = 1'-0"



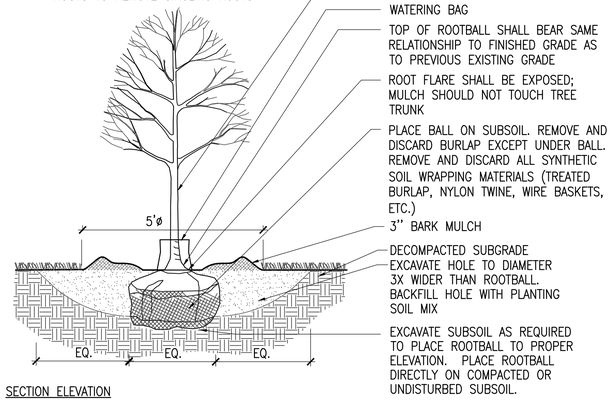
SECTION

2 SHRUB PLANTING

SCALE: 1 1/2" = 1'-0"

NOTES

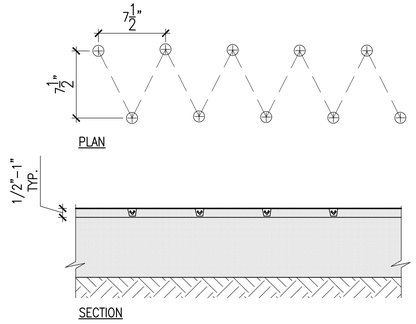
1. IF CONTAINER GROWN, SCARIFY SOIL AND ROOTS TO REMOVE CIRCLING ROOTS



SECTION ELEVATION

3 DECIDUOUS TREE

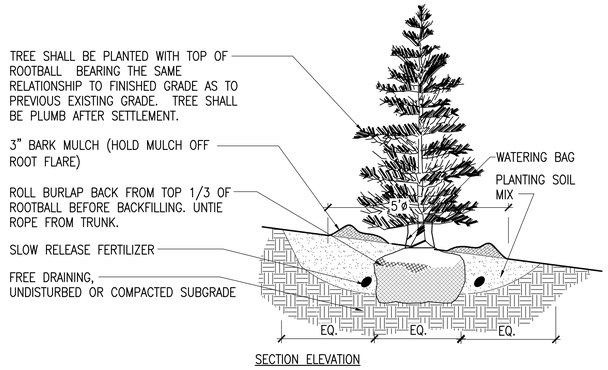
SCALE: N.T.S.



SECTION

4 DRILLING RADISH SEEDING

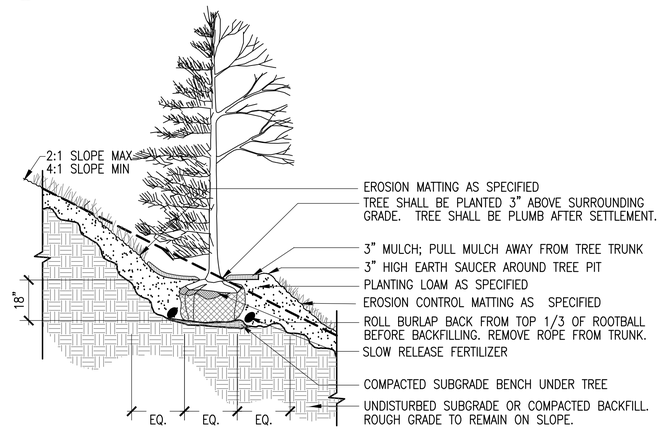
SCALE: 1 1/2" = 1'-0"



SECTION ELEVATION

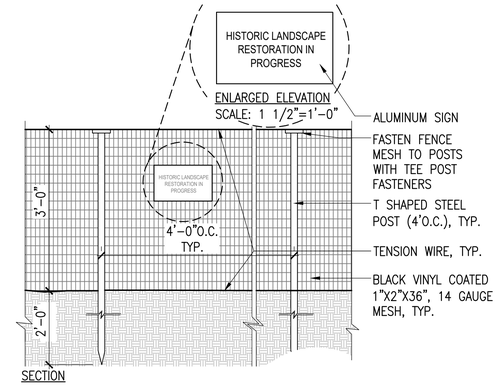
5 EVERGREEN TREE

SCALE: N.T.S.



6 TREE PLANTING ON SLOPE

SCALE: N.T.S.



SECTION

7 PLANT ESTABLISHMENT FENCE

SCALE: 3/4" = 1'-0"

BOSTON PARKS AND RECREATION

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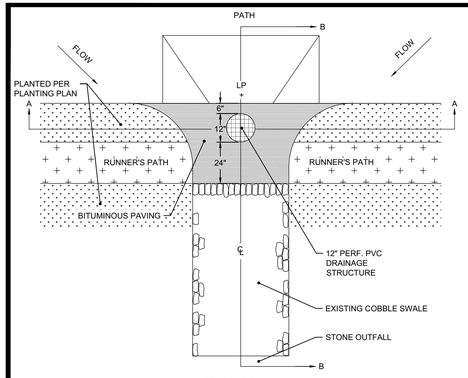
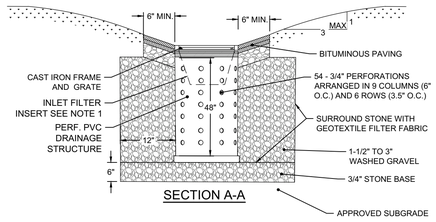
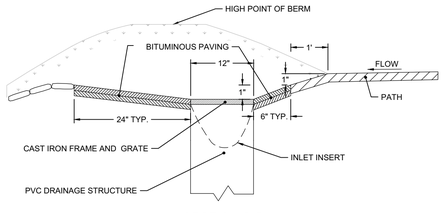


PLAN VIEW



SECTION A-A

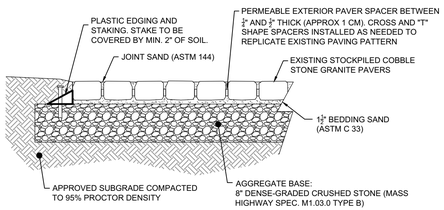


SECTION B-B

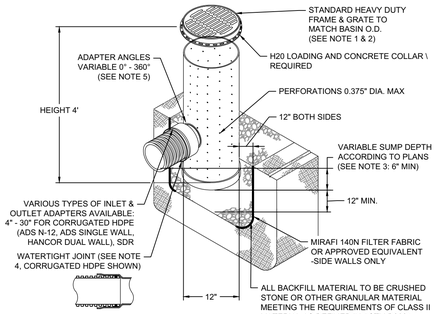
NOTE:
1. INLET FILTER INSERT SHALL BE FLEXSTORM CATCH IT (ROUND) OR APPROVED EQUIVALENT.

COBBLESTONE SPILWWAY RETROFIT
NOT TO SCALE

NOTES:
1. EXCAVATE ANY UNSUITABLE, UNSTABLE OR UNCONSOLIDATED MATERIAL FROM SUBGRADE.
2. COMPACT BASE TO 95% STANDARD PROCTOR DENSITY.
3. FILL ANY DEPRESSIONS IN BASE WITH BASE MATERIAL.
4. SCREEN BEDDING SAND LEVEL TO AN EVEN THICKNESS OF 1½ INCHES.



PERMEABLE COBBLESTONE
NOT TO SCALE



NOTES:
1. GRATES/SOLID COVER TO BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05,
2. FRAMES TO BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS SEE DRAWING NO. 7001-110-065
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS TO CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012, 7001-110-013, & 7001-110-014
6. TO PREVENT BLOCKAGE OF PERFORATIONS, BASIN SHOULD BE WRAPPED IN AN ENGINEER APPROVED GEO-TEXTILE FABRIC

Nyloplast
3132 VERONA AVE
BUFORD, GA 30518
800-821-6710
FAX (770) 932-2490
www.nyloplast-us.com

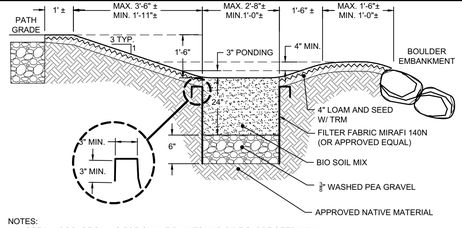
PERFORATED PVC. DRAINAGE STRUCTURE
NOT TO SCALE
BY "NYLOPLAST" OR APPROVED EQUIVALENT

NOTES:
GEOTEXTILE FILTER FABRIC SHALL BE MIRAFI 140N OR EQUIVALENT

SECTION A-A

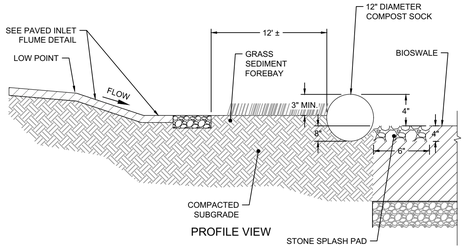
SECTION B-B

STONE OUTFALL
NOT TO SCALE

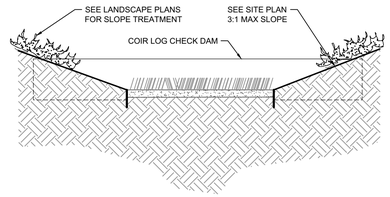


NOTES:
1. SEE LANDSCAPE PLANS FOR SWALE PLANTS AND SIDE SLOPE SEED MIX.
2. SEE SPECIFICATIONS FOR SOIL MIX.
3. TURF REINFORCED MATTING (TRM) TO BE BIODEGRADABLE AND INSTALLED PER MANUFACTURER'S REQUIREMENTS
4. INSTALL JUTE NETTING ALONG THE BOTTOM OF THE SWALE

BIO SWALE SECTION
SCALE: ¾" = 1'-0"



PROFILE VIEW

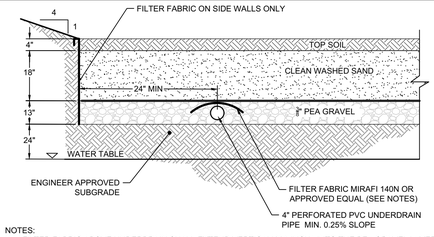


SECTION VIEW

NOTES:

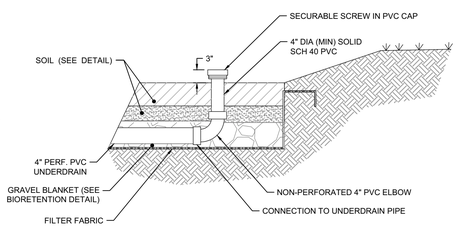
1. SHAPE FOREBAY AS REQUIRED WITH MIN. 6" SIDE SLOPE DEPTH.
2. SEE PLANS FOR DIMENSIONS GRADING AND ELEVATIONS FOR SEDIMENT FOREBAY

BIOSWALE SEDIMENT FOREBAY
NOT TO SCALE

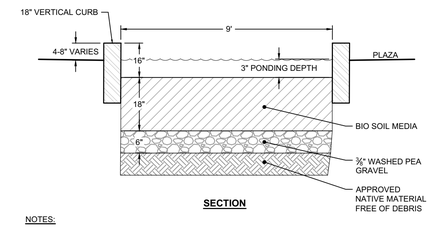


NOTES:
1. FILTER FABRIC ABOVE UNDERDRAIN SHALL EXTEND VERTICALLY 1-INCH± INTO THE PEA GRAVEL LAYER & HORIZONTALLY 1-FOOT OFF THE CENTER OF THE UNDERDRAIN PIPE.

SAND FILTER SECTION
NOT TO SCALE



CLEANOUT
NOT TO SCALE

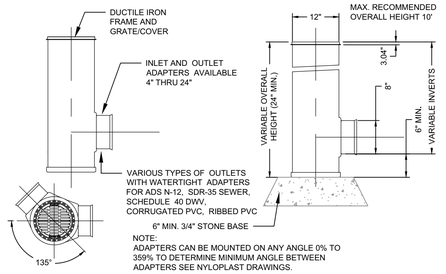


SECTION

NOTES:

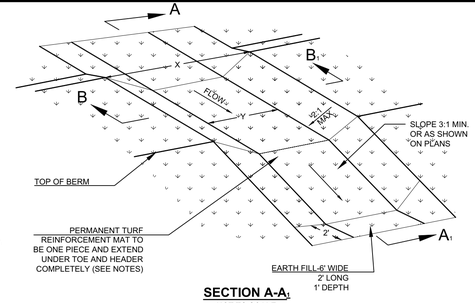
1. LONGITUDINAL SLOPE: 0 to 2% MAXIMUM.
2. CROSS SLOPE: 0%
3. SEE BIO SWALE SOIL AND PLANTING REQUIREMENTS.
4. SEE LANDSCAPE PLANS FOR PLANTING DETAILS.

STORMWATER PLANTER
NOT TO SCALE

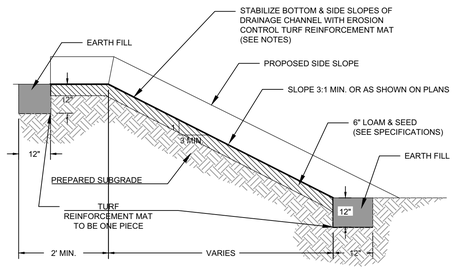


NOTE:
ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0% TO 359% TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE NYLOPLAST DRAWINGS.

OVERFLOW STRUCTURE
NOT TO SCALE
BY "NYLOPLAST" OR APPROVED EQUIVALENT



SECTION A-A1
NOT TO SCALE



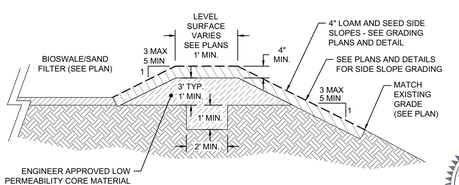
SECTION B-B
NOT TO SCALE

NOTES:
1. SUBGRADE TO BE UNIFORM AND SMOOTH. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBJECTS.
2. LOAM & HAND SEED PRIOR TO MAT INSTALLATION.
3. BOTTOM AND SIDE SLOPES WITHIN THE GRASS CHANNEL TO BE STABILIZED RUF REINFORCEMENT MATTING OR ENGINEER APPROVED EQUAL.
4. TURF REINFORCMENT MAT TO BE T-REC® OR APPROVED EQUIVALENT.
5. TURF REINFORCEMENT MAT TO BE INSTALLED PER MANUFACTURERS GUIDELINES & DETAILS.
6. SPREAD ONE-HALF INCH OF TOPSOIL EVENLY OVER MATTING. MAT TO HAVE DIRECT CONTACT WITH THE SOIL SURFACE.
7. APPLY HYDROSEED WITH BONDED FIBER MATRIX PER THE PLANS & SPECIFICATIONS.

SPILLWAY WITH PERMANENT TURF REINFORCED MATTING
NOT TO SCALE

PERMANENT TURF REINFORCED MATTING SPILLWAY SCHEDULE

LOCATION	A	B	X	Y	Z
BIOSWALE OUTFALL	61.10'	60.75'	8.00'	4.00'	0.35'
SAND FILTER FOREBAY	63.20'	62.50'	8.00'	4.00'	0.70'
SAND FILTER OUTFALL	63.20'	62.75'	12.00'	8.00'	0.45'



EARTHEN BERM
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
RICHARD A. CLAYTOR
CIVIL
NO. 45116
REGISTERED PROFESSIONAL ENGINEER

11-6-18

BOSTON PARKS AND RECREATION

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Consultant Project No. 18009A

NORTH

No.	Date	Revision

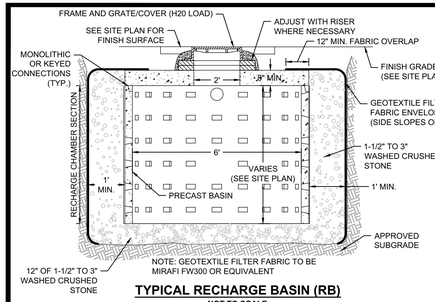
Approved By: Date:

Project Name.:
Jamaica Pond Park Pathways & Entrances Phase 2

BPRD Project No.
Date November 7, 2018
Scale AS SHOWN
Drawn MCL
Checked BRK

Sheet Name.:
Construction Details (1)

Sheet:
C-1

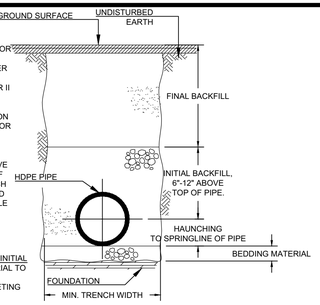


TYPICAL RECHARGE BASIN (RB)

NOT TO SCALE

NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR TO EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS." LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.



2. BEDDING, HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL TO CONSIST OF CLEAN, HARD, PARTICLES OF GRAVEL MEETING THE FOLLOWING:

SIEVE SIZE	% PASSING
3/8"	85-95
NO. 4	5-15
NO. 8	0-2

MATERIAL TO BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

MINIMUM BEDDING THICKNESS TO BE 4" (100mm) FOR 4"-24" (100-600mm) AND 4"-48"(1050-1200mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-36" (750-900mm) CPEP.

3 MINIMUM TRENCH WIDTHS TO BE AS FOLLOWS:

NOMINAL Ø in (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
8 (200)	10 (250)
12 (300)	15 (375)
18 (450)	25 (630)
	28 (710)
	31 (790)
	34 (860)
	39 (990)

4. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED * COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT) E80	12 (300)
RAILWAY HEAVY CONSTRUCTION	24 (610)
	48 (1220)

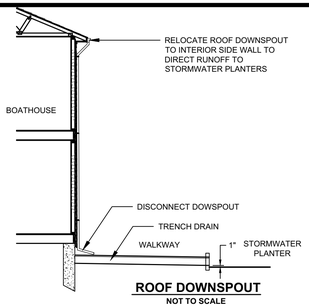
* TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT

THE MINIMUM COVER FOR A HDPE PIPE IS 1'-0" FOR H-20 TRAFFIC LOADS IF INSTALLED IN ACCORDANCE WITH AASHTO SECTION 30. THIS IS BASED ON EMPIRICAL CALCULATION OF LOAD RESPONSE, MANUFACTURER'S TESTING AND FIELD EXPERIENCE WITH THE PIPE. AASHTO SPECIFICATIONS SECTION 18.4.1.5 DEFINES THE MINIMUM COVER AS "ID/8 BUT NOT LESS THAN 12 INCHES". THIS COVER IS MEASURED FROM THE PIPE OD TO THE TOP OF A RIGID (CONCRETE) PAVEMENT OR THE BOTTOM OF A FLEXIBLE (BITUMINOUS) PAVEMENT. BOTH AASHTO AND ASTM, AS WELL AS MOST MANUFACTURERS, REQUIRE ADDITIONAL (TEMPORARY COVER, MOUNDED OVER THE PIPE AND REMOVED FOR FINAL GRADING AND PAVING, IS SUFFICIENT FOR LARGE CONSTRUCTION VEHICLE LOADS.

DETAIL PROVIDED BY ADVANCED DRAINAGE SYSTEMS, INC.

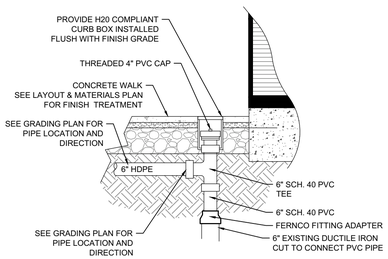
TYPICAL DRAINAGE PIPE TRENCH DETAIL

NOT TO SCALE



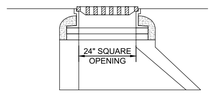
ROOF DOWNSPOUT

NOT TO SCALE

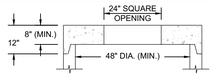


DOWNSPOUT RETROFIT (DS)

NOT TO SCALE



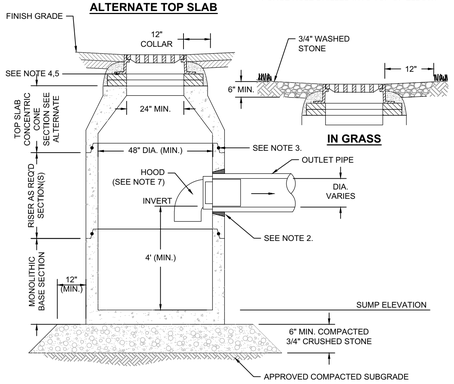
ALTERNATE ECCENTRIC CONE SECTION



ALTERNATE TOP SLAB

NOTES:

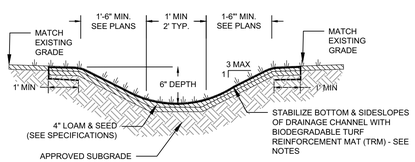
1. ALL SECTIONS TO BE DESIGNED FOR H-20 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS TO BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE TO BE SET IN FULL 12" WIDE MORTAR BED. ADJUST TO GRADE WITH PRECAST CONCRETE RISER OR BRICK.
5. DO NOT PLACE MORTAR BED AROUND STRUCTURE UNTIL IT IS AT THE REQUIRED FINISH ELEVATION AND ALIGNMENT.
6. FRAME AND COVER TO CONFORM TO MASSACHUSETTS STANDARDS HEAVY DUTY (EAST JORDAN, NEENAH, OR APPROVED EQUIVALENT).
7. HDPE PIPE HOOD TO BE 90° BEND FASTENED TO PIPE WITH SEALANT. BEND TO HAVE 1 INCH PURGE HOLE DRILLED INTO TOP OF ELBOW.



PRECAST CONCRETE CATCH BASIN (CB) WITH HOOD

NOT TO SCALE

IN GRASS

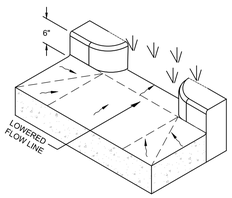


NOTES:

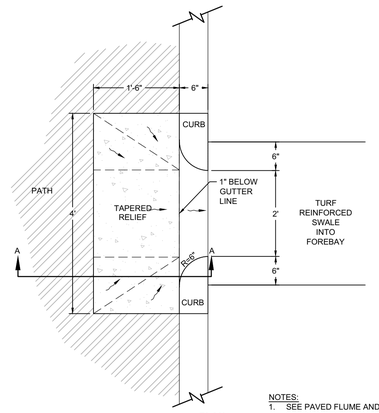
1. CONTRACTOR TO SHAPE THE CHANNEL FINISHED GRADE IN A PARABOLIC MANNER.
2. LOAM & SEED SOIL PRIOR TO MAT INSTALLATION.
3. TURF REINFORCMENT MAT TO BE NORTH AMERICAN GREEN SC 150 ® OR APPROVED EQUIVALENT.
4. TURF REINFORCMENT MAT TO BE INSTALLED PER MANUFACTURERS GUIDELINES & DETAILS.
5. SPREAD ONE INCH OF TOPSOIL EVENLY OVER MATTING. MAT TO HAVE DIRECT CONTACT WITH THE SOIL SURFACE.
6. SUBGRADE TO BE UNIFORM AND SMOOTH. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBJECTS.

TURF REINFORCED MATTING VEGETATED SWALE

NOT TO SCALE



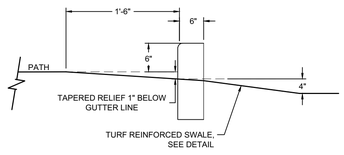
ISOMETRIC



PLAN

NOTES:

1. SEE PAVED FLUME AND SEDIMENT FOREBAY DETAIL.



SECTION A-A

CURB INLET

NOT TO SCALE

BOSTON PARKS AND RECREATION

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Consultant Project No.: 18009A

NORTH

No.	Date	Revision

Approved By: Date:

Project Name.: **Jamaica Pond Park Pathways & Entrances Phase 2**

BPRD Project No.:

Date: November 7, 2018
Scale: AS SHOWN
Drawn: MCL
Checked: BRK

Sheet Name.: **Construction Details (2)**

Sheet: **C-2**