Notice of Intent

Foxboro Learning
Early Childhood Education Center

January 2026

“0” Cambridge Street
Burlington, Massachusetts

Prepared For:
Foxboro Learning, LLC
Cambridge Street
Burlington, Massachusetts

Prepared By:
TRC Environmental Corporation
650 Suffolk Street
Lowell, Massachusetts 01854

650 Suffolk St., Suite 200
Lowell, MA 01854

T. 978.970.5600
TRCcompanies.com

January 5, 2026

Burlington Conservation Commission
29 Center Street
Burlington, MA 01803

RE: Notice of Intent (NOI)
Foxboro Learning Early Childhood Education Center
"0" Cambridge Street, Burlington, MA

Dear Commissioners:

On behalf of Foxboro Learning, LLC, (FLL), TRC Environmental Corporation (TRC) is pleased to submit the enclosed Notice of Intent (NOI) to develop the site located at "0" Cambridge Street in Burlington, Massachusetts (the Site; Parcel 35-115-0) into an early childhood education center, including an associated building and site appurtenances (the Project).

This NOI is being filed with the Burlington Conservation Commission (BCC) because a portion of Project is within wetland resource areas including the 100-foot Buffer Zone under the Wetlands Protection Act (WPA; 310 CMR 10.00 *et seq.*), as well as streams, bank, land under water bodies (LUW) and the associated 100-foot Buffer Zone and 20-foot No Disturb/Erosion Control Boundary under the Bylaw (Article XIV and its implemented regulations). The Project, as proposed, will involve the rerouting of three streams jurisdictional under the Bylaw only.

We trust that the enclosed information meets the requirements of the BCC to issue an Order of Conditions (OOC) for the proposed Project and appreciate your review of this information. If you should have any questions about this NOI, please do not hesitate to contact Jeremy Foote at 401-578-1708 or via email at JFoote@trccompanies.com or Ryan Clapp at 781-701-1353 or via email at RClapp@trccompanies.com.

Sincerely,

TRC Environmental Corporation

Jeremy Foote
Senior Wetland Scientist/Project Manager

Ryan Clapp
Wetland Scientist

TABLE OF CONTENTS

TABLES

ATTACHMENTS

ACRONYM AND ABBREVIATIONS LIST

ACEC	Areas of Critical Environmental Concern
BCC	Burlington Conservation Commission
BLSF	Bordering Land Subject to Flooding
BMP	Best Management Practice
BVW	Bordering Vegetated Wetland
CMR	Code of Massachusetts Regulations
EPA	Environmental Protection Agency
ESS	ESS Group, LLC
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FLL	Foxboro Learning, LLC
LF	Linear Feet
LUW	Land Under Wetlands and Waterbodies
MA	Massachusetts
MAHW	Mean Annual High Water
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MassGIS	Massachusetts Geographic Information System
MCP	Massachusetts Contingency Plan
M.G.L.	Massachusetts General Laws
NHESP	Natural Heritage and Endangered Species Program
NOI	Notice of Intent
NOR	Notice of Responsibility
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OMM	Operation, Maintenance, and Monitoring
OOC	Order of Conditions
ORW	Outstanding Resource Water
O&M	Operation and Maintenance
Project	Development of “0” Cambridge Street
RA	Riverfront Area
SF	Square Feet
Site	“0” Cambridge Street, Burlington, MA
SWPPP	Stormwater Pollution Prevention Plan
TRC	TRC Environmental Corporation
US	United States
WPA	Wetlands Protection Act

WPA FORM 3 – 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

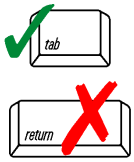
Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

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



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

A. General Information

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

a. Street Address	b. City/Town	c. Zip Code
"0" Cambridge Street	Burlington	01803

Latitude and Longitude:

d. Latitude	e. Longitude
42.497842 N	71.195023 W

f. Assessors Map/Plat Number	g. Parcel /Lot Number
35-115-0	

2. Applicant:

a. First Name	b. Last Name
Manoj	Gandhi

c. Organization: Foxboro Learning, LLC

d. Street Address: 21671 Brone Place

e. City/Town	f. State	g. Zip Code
Ashburn	VA	20147

h. Phone Number	i. Fax Number	j. Email Address
703-856-5240		manoj@nvklearning.com

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

a. First Name	b. Last Name
(same)	

c. Organization

d. Street Address

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

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

4. Representative (if any):

a. First Name	b. Last Name
Ryan	Clapp

c. Company: TRC Environmental Corporation

d. Street Address: 404 Wyman Street, Suite 375

e. City/Town	f. State	g. Zip Code
Waltham	MA	02451

h. Phone Number	i. Fax Number	j. Email address
781-701-1353		rclapp@trccompanies.com

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

a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid
$2,050	$1,012.50	$1,037.50

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

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A. General Information (continued)

6. General Project Description:

Construction of an early childhood education center, including utilities and associated facilities. Several streams will need to be rerouted as a part of this project.

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)
Middlesex	
c. Book	d. Page Number
72987	370

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

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

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ■ Bank	936 1. linear feet	936 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.

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

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

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

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

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C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

a. ☐ Yes ■ No

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

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

August 2021
b. Date of map

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

c. Submit Supplemental Information for Endangered Species Review*

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

(a) within wetland Resource Area _____ percentage/acreage

(b) outside Resource Area _____ percentage/acreage

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

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

(a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) ☐ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review).
Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.
** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

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

(c) ☐ MESA filing fee (fee information available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review).
Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

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

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

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

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

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

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☐ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

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

South Shore - Bourne 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@mass.gov

North Shore - Plymouth to New Hampshire border:

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

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

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

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

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City/Town

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

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

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

b. ACEC

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

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

a. ☐ Yes ☒ No

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

a. ☐ Yes ☒ No

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

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

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

2. ☐ A portion of the site constitutes redevelopment

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

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

1. ☐ Single-family house

2. ☐ Emergency road repair

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

D. Additional Information

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

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

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

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

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

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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.

See attached narrative for a full list of plans and documents
a. Plan Title

b. Prepared By

c. Signed and Stamped by

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

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

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

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

8. ■ Attach NOI Wetland Fee Transmittal Form

9. ■ Attach Stormwater Report, if needed.

E. Fees

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

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

1304423
2. Municipal Check Number

1/28/2026
3. Check date

1304422
4. State Check Number

1/28/2026
5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
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F. Signatures and Submittal Requirements

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

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

Manoj Gandhi	1/26/2026
1. Signature of Applicant	2. Date
3. Signature of Property Owner (if different)	4. Date
	1/26/2026
5. Signature of Representative (if any)	6. Date

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

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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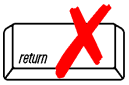

A. Applicant Information

1. Location of Project:

"0" Cambridge Street	Burlington
a. Street Address	b. City/Town
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Manoj	Gandhi	
a. First Name	b. Last Name	
Foxboro Learning, LLC		
c. Organization		
21671 Brone Place		
d. Mailing Address		
Ashburn	VA	20147
e. City/Town	f. State	g. Zip Code
703-856-5240		manoj@nvklearning.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

(same)		
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.

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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
2.B.: Parking Lot	1	$500	$500
3.A.: Each building (for development) including site	1	$1,050	$1,050
2.J.: Each project source discharge	1	$500	$500

Step 5/Total Project Fee:

Step 6/Fee Payments:

Total Project Fee:	$2,050
State share of filing Fee:	a. Total Fee from Step 5 $1,037.50
City/Town share of filling Fee:	b. 1/2 Total Fee **less $**12.50 $1,012.50
	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.)

ABUTTER INFORMATION

Current Owner
108 CAMBRIDGE ST
BURLINGTON, MA 1803

Current Owner
200 WEST CUMMINGS PK
WOBURN, MA 1801

Current Owner
109 CAMBRIDGE ST
BURLINGTON, MA 1803

Current Owner
1 ANNA RD
BURLINGTON, MA 1803

Current Owner
3 ANNA RD
BURLINGTON, MA 1803

Current Owner
7 ANNA RD
BURLINGTON, MA 1803

Current Owner
30 ARLINGTON RD
BURLINGTON, MA 1803

Current Owner
28 ARLINGTON RD
BURLINGTON, MA 1803

Current Owner
29 CENTER ST
BURLINGTON, MA 1803

Current Owner
539 SOUTH MAIN ST
FINDLAY, OH 45840

Notification to Abutters

By Hand Delivery, Certified Mail (return receipt requested), or Certificates of Mailing

This is a notification required by law. You are receiving this notification because you have been identified as the owner of land abutting another parcel of land for which certain activities are proposed. Those activities require a permit under the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40).

In accordance with the second paragraph of the Massachusetts Wetlands Protection Act, and 310 CMR 10.05(4)(a) of the Wetlands Regulations, you are hereby notified that:

A. A Notice of Intent was filed with the Burlington Conservation Commission on _____ seeking permission to remove, fill, dredge, or alter an area subject to protection under M.G.L. c. 131 §40. The following is a description of the proposed activity/activities:

Construction of an early childhood education center, including associated utilities.

B. The name of the applicant is: Foxboro Learning, LLC.

C. The address of the land where the activity is proposed is: "0" Cambridge Street (Parcel ID: 35-115-0), Burlington, MA.

D. Copies of the Notice of Intent may be examined or obtained at the office of the Burlington Conservation Commission, located at 29 Center Street, Burlington, MA. The regular business hours of the Commission are Monday, Tuesday, Thursday: 8:30 AM – 4:30 PM; Wednesday: 8:30 AM – 7:00 PM; Friday: 8:30 AM – 1:00 PM, and the Commission may be reached at 781-270-1655.

E. Copies of the Notice of Intent may be obtained from the applicant or their representative by calling Ryan Clapp, TRC Environmental Corporation at 781-701-1353. An administrative fee may be applied for providing copies of the NOI and plans.

F. Information regarding the date, time, and location of the public hearing regarding the Notice of Intent may be obtained from the Burlington Conservation Commission. Notice of the public hearing will be published at least five business days in advance, in a locally-circulated newspaper.

Notification provided pursuant to the above requirement does not automatically confer standing to the recipient to request Departmental Action for the underlying matter. See 310 CMR 10.05(7)(a)4.

PROJECT NARRATIVE

1.0 INTRODUCTION

On behalf of Foxboro Learning, LLC, (FLL) TRC Environmental Corporation (TRC) is submitting a Notice of Intent (NOI) to the Burlington Conservation Commission (BCC) for site development in support of an early childhood education center, including an associated building and site appurtenances. The Project is expected to occur within the property boundary of "0" Cambridge Street in Burlington, Massachusetts (Project Site; Burlington Parcel ID No. 35-115-0).

1.1 Project History

1.1.1 Site Location and Description

The Project Site consists of one parcel with a land area of approximately 3.7 acres, located in Burlington, Massachusetts. The Project Site is bordered by single-family residences along Anna Road to the north, Cambridge Street to the east, a business park to the south, and a business park to the west. (**Attachment A**, **Figure 1**). According to a Town of Burlington zoning map, the Project Site is zoned as "RO" (one-family dwelling).

The Project Site is currently undeveloped woodland, with no buildings or site improvements built upon it.

1.1.2 Resource Area Degradation and Restoration

In early 2025, unauthorized heavy machinery was brought onto the Site, heavily disturbing and degrading several resource areas jurisdictional under the Act and Bylaw, as well as the 100-foot Buffer Zone to wetlands. Accordingly, the BCC issued an Enforcement Order, requiring that the resource areas (not Buffer Zone), be restored by hand without the use of additional machinery.

On August 5, 2025, TRC staff under the supervision of a TRC wetland scientist accessed the site to support FLL in resolving the resource area degradation. Using hand tools, the team excavated portions of the stream bed, as well as filled in and restored the banks and channels of the various disturbed streams. Following this work, the area was seeded with New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites, provided by New England Wetland Plants, Inc., and straw was placed down for stabilization. As of the date of this NOI, the Enforcement Order is still in effect, pending final inspection by the BCC.

1.2 Conservation Commission Jurisdiction

FLL is filing this NOI with the BCC pursuant to the Massachusetts Wetland Protection Act (WPA; M.G.L. c. 131, § 40) and its Regulations (310 CMR 10.00) and the Town of Burlington Wetland Bylaw (Article XIV and its implemented regulations). While the Project has been designed to limit impacts to wetland resource areas to the maximum extent practicable, the proposed Work is located within Inland Bank, Streams and 20-foot No Disturb/Erosion Control Boundary (Article XIV) as well as the associated 100-foot Buffer Zone (Article XIV; WPA).

2.0 PROJECT SITE DESCRIPTION AND EXISTING CONDITIONS

The Project Site spans a portion of one parcel, where the focus of Work is towards the east of the parcel. The Project Site is undeveloped with no buildings or site improvements upon it. To the west and south of the parcel is a Bordering Vegetated Wetland (BVW) identified as W-RPC-01. This wetland is a Palustrine Forested Wetland (PFO) as defined by the ACOE. Flowing into this wetland, resulting from culverting and sheet flow from Cambridge Street to the east, are four intermittent streams identified as S-RPC-01, S-RPC-02, S-RPC-03 and S-RPC-04. These streams largely lack structure and alternate between a semi-defined stream channel and sheet flow throughout their course.

The surrounding land has been highly developed for commercial and residential use, with various residences and businesses to the north, south, east and west. The Project Site is mapped as a mix of Montauk Fine Sandy Loam, 3 to 8 percent slopes (300B) and Udorthents – Urban land complex (656) by the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2023[1]). The Project Site is located within the Shawsheen River watershed, which drains to the north towards the Merrimack River (MassMapper 2023[2]).

According to Federal Emergency Management Area (FEMA) Flood Insurance Rate Map (FIRM) Panel 25017C0402F (effective date July 8, 2025), the Project Site is not located within any flood hazard layers. Therefore, Bordering Land Subject to Flooding (BLSF) is not located within the Project Site (**Attachment A, Figure 3**).

2.1 Jurisdictional Resource Areas

Multiple resource areas, as defined in the WPA and described in the following sections, exist at the Project Site. In October of 2018, Oxbow Associates (OA) delineated the BVW present onsite. An Order of Resource Area Delineation (ORAD) was issued by the BCC in October 2018, which has since been extended and still is valid. At the time of issuance of the ORAD, marginal references were made to the streams present onsite, but not formally delineated. On May 20, 2025, these streams were delineated by TRC following the unauthorized site disturbance. Notably, these streams were significantly different from the references made in 2018. Whether that is the result of natural change over time or the site disturbance is unknown.

Wetland W-RPC-01 receives a 100-Foot Buffer Zone under the WPA and a 20-Foot No Disturbance Zone under the Bylaw. Streams S-RPC-(01-04) receive a 100-Foot Buffer Zone and 20-Foot No Disturbance Zone.

See **Attachment A, Figure 3** for a Resources Map. Refer to Section 4.0 herein for further details about impacts to each resource area associated with the proposed Project.

2.1.1 Bank and Stream

Per 310 CMR 10.54(2), Bank is "*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*

[1] NRCS (Natural Resources Conservation Service). 2023. Soil Survey Staff, United States Department of Agriculture, Web Soil Survey.
[2] Commonwealth of Massachusetts, MassGIS Bureau of Geographic Information. 2023. MassMapper. https://maps.massgis.digital.mass.gov/MassMapper/MassMapper.html

flood plain, or, in the absence of these, it occurs between a water body and an upland."

Per 310 CMR 10.04, a stream is defined as: *"A body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydraulic gradient, and which flows within, into or out of an Area Subject to Protection under MGL c. 131 s. 40…"*

Bank at the Project Site is associated with delineated intermittent streams S-RPC-01, 02, 03, and 04. These streams have limited flow and are generally considered historic drainage channels through the site. At several locations, these streams lose definition and become sheet flow before coalescing back into a channel.

2.1.2 Buffer Zones

Per 310 CMR 10.02, a buffer zone extends 100 feet outward from Bank and BVW, whichever abuts the upland portion of the Project Site.

Buffer zone exists along the Inland Bank and BVW throughout the Project Site as shown in **Attachment A, Figure 3**.

The proposed Project includes impacts to buffer zone associated with the stabilization measure installation, temporary access and other ground disturbances for stormwater management, as described in Section 4.2.

2.1.3 20-foot No Disturbance/Erosion Control Distance (Town of Burlington Wetland Bylaw)

Per Section 21.9 of the Town of Burlington Wetland Protection Regulations, the inner 20' of the 100-foot Buffer Zone is regulated as a No-Disturbance Distance. The 20-foot No-Disturbance Distance exists along the Bank and BVW throughout the project as shown in **Attachment A**. The proposed Project includes impacts to the 20-foot no disturbance distance.

Per Section 21.9(c)(2), "These presumptions are rebuttable and may be overcome upon a clear showing that the nature of the proposed work, special design measures, construction controls, or site conditions will prevent alteration of the resource area. Furthermore, per Section 21.9(c)(4), "These presumptions are rebuttable and may be overcome when the nature of the work or site conditions will result in alteration of the resource area unless special preventative measures are taken." While alteration of the resource areas will be permanently altered by the Project as designed, special preventative measures including the 1:1 restoration of altered resource area will be taken, as described in Section 3.2.3 below.

2.1.4 Additional Regulatory Information

The Project Site is not located within an Outstanding Resource Water (ORW), an Area of Critical Environmental Concern (ACEC), Natural Heritage Endangered Species Program (NHESP) Estimated or Priority Habitats of Rare Species, or proximal to any Certified or Potential Vernal Pools according to MassGIS (**Attachment A, Figure 3**).

3.0 PROPOSED PROJECT DESCRIPTION

Details of the proposed Project and Project Work are provided below. Project Work will be performed by a contractor (the Contractor) retained by FLL. TRC will oversee the Work and provide direction, as necessary.

3.1 Site Access, Construction Entrances, & Staging Areas

Access to the Project Site will be from Cambridge Street to the east. The proposed Project will need to remove trees and alter the grade to allow for machinery to access the Site (**Attachment B**).

Erosion and sediment controls will be established prior to any earthwork and will involve siltation fencing, straw wattles and river dewatering. See Section 5.1 for further details on the erosion and sediment controls proposed.

During this phase of the proposed Project, all erosion and sediment controls, soil stabilization materials, drainage, and geotextile fabrics will be installed by the selected Contractor.

3.2 Proposed Work Description

3.2.1 Land Clearing, Grubbing & Demolition

Significant grading, land clearing and demolition are necessary to provide access to the Site, as well as to prepare the Site for suitable use as an early childhood education center. The proposed limits of soil disturbance are outlined in the Project Plans (**Attachment B**).

All efforts will be made to locate soil stockpiles outside of the 100-Foot Buffer Zone. In the event that stockpiling must be performed in the Buffer Zone, the stockpiles will be surrounded by erosion control barriers for stabilization and protection of resource areas when not in use.

3.2.2 Learning Center (Building, Ancillary Structures, Landscaping)

Once Site preparation is completed, work will begin to construct the learning center. This center will be composed of a 2-story building with an approximately 5,500 SF footprint. Additionally, there will be an asphalt parking area with approximately 33 spaces, a trash enclosure, and retaining wall and guardrails. Also proposed is an approximately 3,480 SF playground and associated concrete walkway, gates and fencing.

The Site will also have electrical, gas, sewer and other utilities installed to serve the center.

A stormwater management system consisting of a plunge pool, the rerouted stream, and rip-rap aprons designed to filter and slow stormwater entering and leaving the site will also be constructed within the Buffer Zone.

3.2.3 Stream Rerouting

To make use of the Site, FLL will need to reroute the four streams onsite to create suitable upland for the proposed building, play area, and ancillary structures. In order to do so, a new stream bed

will be excavated to meet an equivalent square footage of stream to be filled. The soils from the stream will be screened and tested for contaminants before being used to fill the existing stream beds.

The newly excavated stream bed will be seeded with an appropriate seed mix and stabilized. All work to reroute the streams onsite will be performed under the supervision of a wetland scientist or other such professional under the guidance and in accordance with the requirements of the BCC.

3.3 Construction Timeline

1. **Pre-Construction and Environmental Protection Measures**

   Prior to the commencement of any land disturbing activities, the General Contractor will conduct a pre-construction coordination meeting with the project team to review approved plans, erosion and sedimentation control requirements, and construction sequencing.

   All required erosion and sedimentation controls will be installed and inspected in accordance with the approved Order of Conditions prior to earth disturbance.

2. **Construction Access and Site Logistics**

   A designated construction access point will be established and maintained throughout the project, including a stabilized construction entrance with track pad.

3. **Earthwork, Excavation and Utilities**

   Earthwork and utility installation will proceed in a phased manner to limit exposed soils.

4. **Building Construction Activities**

   Vertical construction will commence following completion of foundations and underground work.

5. **Site Improvements and Final Stabilization**

   Final grading, paving, landscaping and permanent stabilization will be completed per approved plans.

6. **Inspection, Maintenance and Compliance**

   Erosion controls will be inspected weekly and after significant rainfall events.

7. **Site Demobilization**

   Temporary controls will be removed following permanent stabilization and Conservation approval.

4.0 PROJECT IMPACTS AND PERFORMANCE STANDARDS

The proposed Project will result in temporary and permanent impacts to jurisdictional resource areas as described in Table 1:

Table 1. Project Impacts

RESOURCE AREA	IMPACTS	IMPACT DESCRIPTION
Inland Bank	936 LF	• Permanent impacts from the grading and site preparation, as well as construction of Early Childhood Education Center and associated structures and utilities. • Rerouting of intermittent streams.
Stream	468 LF	• Permanent impacts from the grading and site preparation, as well as construction of Early Childhood Education Center and associated structures and utilities. • Rerouting of intermittent streams.
20-foot Undisturbed Buffer	46,380 SF	• Permanent impacts from the grading and site preparation, as well as construction of Early Childhood Education Center and associated structures and utilities. • Rerouting of intermittent streams.
50-foot Buffer Zone	46,712 SF	• Permanent impacts from the grading and site preparation, as well as construction of Early Childhood Education Center and associated structures and utilities. • Rerouting of intermittent streams.
100-foot Buffer Zone	54,075	• Permanent impacts from the grading and site preparation, as well as construction of Early Childhood Education Center and associated structures and utilities. • Rerouting of intermittent streams.

4.1 Inland Bank

While the Project has been designed to limit impacts to the Inland Bank to the maximum extent possible, unavoidable permanent impacts to the Bank of the four intermittent streams are required due to site constraints. TRC has evaluated the performance standards assuming the rerouting of the four intermittent streams into one large channel offsets the impacts from the loss of the four streams by meeting the performance standards in the newly established stream. The proposed Work complies to the maximum extent practicable with the WPA performance standards for Bank as described in Table 2 below:

Table 2. WPA Performance Standards for Inland Bank*

PERFORMANCE STANDARDS 310 CMR 10.54(4)	PROJECT'S COMPLIANCE WITH PERFORMANCE STANDARD
(a) Where the presumption set forth in 310 CMR 10.54(3) is not overcome, any proposed Work on a Bank shall not impair the following: 1. the physical stability of the Bank; 2. the water carrying capacity of the existing channel within the Bank; 3. ground water and surface water quality; 4. the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries; 5. the capacity of the Bank to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. In the case of a bank of a river or an intermittent stream, the impact shall be measured on each side of the stream or river. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60. 6. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.54(4)(a) provided the Work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirement of 310 CMR 10.54(4)(a)5., the impact on bank caused by the installation of a stream crossing is exempt from the requirement to perform a	(a) The proposed Work on Bank will abide by the performance standards to the greatest extent practicable: 1. The proposed Work will not impair the physical stability of the Bank and will improve the stability of the Bank. 2. The proposed Work will not impair the water carrying capacity of the existing channel within the Bank. 3. The proposed Work will not impair the ground water and surface water quality of the Bank. 4. The proposed Work will not impair the capacity of the Bank to provide important wildlife functions. See **Attachment D** for wildlife habitat evaluation. 5. See previous. The proposed Work will not impair the capacity of the Bank to provide important wildlife functions. 6. There are no proposed permanent stream crossings and our construction methodology addresses temporary stream access.

Table 2. WPA Performance Standards for Inland Bank*

PERFORMANCE STANDARDS 310 CMR 10.54(4)	PROJECT'S COMPLIANCE WITH PERFORMANCE STANDARD
habitat evaluation in accordance with the procedures contained in 310 CMR 10.6.	
(b) Notwithstanding the provisions of 310 CMR 10.54(4)(a), structures may be permitted in or on a Bank when required to prevent flood damage to facilities, buildings and roads constructed prior to the effective date of 310 CMR 10.51 through 10.60 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983), including the renovation or reconstruction (but not substantial enlargement) of such facilities, buildings and roads, provided that the following requirements are met: 1. The proposed protective structure, renovation or reconstruction is designed and constructed using best practical measures so as to minimize adverse effects on the characteristics and functions of the resource area; 2. The applicant demonstrates that there is no reasonable method of protecting, renovating or rebuilding the facility in question other than the one proposed.	(b) Structures proposed as a part of this Project are not required to prevent flood damage. Therefore, this standard is not applicable.
(c) Notwithstanding the provisions of 310 CMR 10.54(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59.	(c) There are no NHESP Priority or Estimated habitat areas mapped at the Project Site. Therefore, the proposed Project does not anticipate adverse effects on rare species habitat.
*Note that there are no performance standards for streams, as they do not qualify as Land Under Water. It is assumed that by meeting Bank standards, any standards for streams are also met. The definition of an intermittent stream is associated with the mean annual low water level, which for an intermittent stream is 0.	

4.2 Buffer Zone

While the WPA recognizes the importance of the buffer zone, it does not include specific performance standards. The Bylaw, however, provides several performance standards, as outlined in Table 3.

Table 3. Bylaw Performance Standards for Buffer Zone

PERFORMANCE STANDARDS 310 CMR 10.54(4)	PROJECT'S COMPLIANCE WITH PERFORMANCE STANDARD
1. Work within the Buffer Zone shall result in either no alteration of a resource area, or in	The work proposed by this Project will result in an alteration of Bank and Streams. However, by

Table 3. Bylaw Performance Standards for Buffer Zone

PERFORMANCE STANDARDS 310 CMR 10.54(4)	PROJECT'S COMPLIANCE WITH PERFORMANCE STANDARD
alteration permitted by the Commission that complies with the applicable performance standards for the resource area and any other conditions the Commission may require to enforce those performance standards	rerouting these streams, the performance standards will be met by the newly established stream.
2. All new construction projects shall meet the resource area no-disturb and building setbacks listed in the presumptions above unless the presumption is overcome.	FLL is seeking a waiver of the no-disturbance zone due to site constraints.
3. Vegetation, particularly mature trees, shall be preserved to the maximum extent possible. Where trees within the buffer zone are cut, the Commission may require plantings of new trees as mitigation	FLL will comply with revegetation of trees per the requirements of the Commission. This site is proposed as an Early Childhood Education Center, and will need a yard area for use, however, potentially limiting the amount of tree revegetation.
4. Cutting of trees in the buffer zone, other than removal of dead limbs or vista pruning, shall require the prior approval of the Conservation Department.	In filing the Notice of Intent, FLL is seeking approval for the cutting of trees.
5. Lots that were developed prior to the adoption of the 2013 Wetland Bylaw may not meet the no-disturb or building setbacks required by these regulations. The Commission may require any applicant for projects on pre-existing lots that do not meet the setbacks to increase the naturally vegetated buffer to a resource area as part of the permitting process for new construction on the lot	This lot was established in 1947, predating the 2013 Wetland Bylaw. As such, FLL is seeking a waiver of the no-disturbance zone and building setbacks.
6. The Commission may require that an applicant mitigates any tree cutting in the buffer zone by planting native tree species in at least a 1:1 ratio.	FLL is willing to offset the tree cutting proposed in this Project. However, as noted above, with the need for a yard area this may limit the amount of tree revegetation.
7. For small projects such as single-family lots, point discharge of surface runoff within or through a Buffer Zone shall be controlled to minimize increase in peak flow in the watercourse downstream of the discharge point for the runoff, as determined for the 2-year, 10-year, and 100-year storms, and to cause no increase in flood elevations outside the project site. Massachusetts DEP stormwater management standards shall apply to non-residential projects and residential projects over four lots	This standard is not applicable.
8. Runoff from any new impervious surface within the buffer zone shall be infiltrated on site to the maximum extent possible.	Runoff is being managed accordingly. For more details, refer to the Stormwater Report in **Attachment C**.

Proposed Work within the buffer zone includes up to approximately 54,075 SF, encompassing the entire Site. Buffer zone will be stabilized and seeded per Section 6.0 herein following Project activities.

4.3 20-Foot Undisturbed Buffer

While the Wetlands Protection Act recognizes the importance of the buffer zone, it does not include specific performance standards. Specific standards for the 20-Foot Undisturbed Buffer are not provided in the Bylaw either. Impacts to the 20-foot Undisturbed Buffer are permanent, including up to 25,140 SF of disturbance.

Due to the site constraints and special mitigation efforts involved in rerouting the streams, TRC is requesting that the BCC grant a variance to allow Work closer than 20-feet from the Inland Bank and Bordering Vegetated Wetlands.

4.4 Stormwater Management

Erosion and sediment controls are proposed to limit disturbance to wetland resource areas. During construction, overland flow from disturbed areas will be filtered by perimeter erosion and sediment controls, and any pumped water from upgradient areas will be discharged through filter bags. A Stormwater Report is attached to this NOI as **Attachment C**, detailing compliance with the Massachusetts Stormwater Management Standards.

5.0 CONSTRUCTION BEST MANAGEMENT PRACTICES

Work at the Project Site has been designed to minimize impacts to resource areas. These BMPs are described in the following sections.

5.1 Erosion and Sediment Controls

The Contractor will be required to install erosion and sediment controls throughout the Project Site, as specified on the Project Plans in **Attachment B**. These include, but are not limited to, the following:

- Prior to the start of Work, perimeter silt fencing or similar will be installed around the perimeter of the Work area per the Project Plans.
- All soil stockpiles will be surrounded by erosion control barriers and will be temporarily seeded and mulched if stockpiled for a period of more than seven days.
- Fueling and maintenance of equipment will occur outside the resource area and away from any drainage basins.

Locations of proposed erosion and sediment control features are displayed in the Project Plans in **Attachment B**. Erosion and sediment controls will be inspected regularly and after significant precipitation events.

Field changes based on site-specific conditions and availability may be required and will be reviewed by TRC and/or the BCC prior to implementation.

5.2 Site Access

Site access will be from Cambridge Street to the east of the Project Site. This access will be outfitted with a construction entrance of crushed stone to prevent sediment trackout into the street. Vehicles and machinery entering and exiting the Site will be inspected and washed to prevent the spread of invasive species.

6.0 PROJECT SITE STABILIZATION AND RESTORATION

Once construction associated with the Project is completed, the Site will be reestablished with an erosion control seed mix suitable for the Site. Erosion control barriers will remain in place until final stabilization is completed and will be removed only with the prior authorization of the BCC.

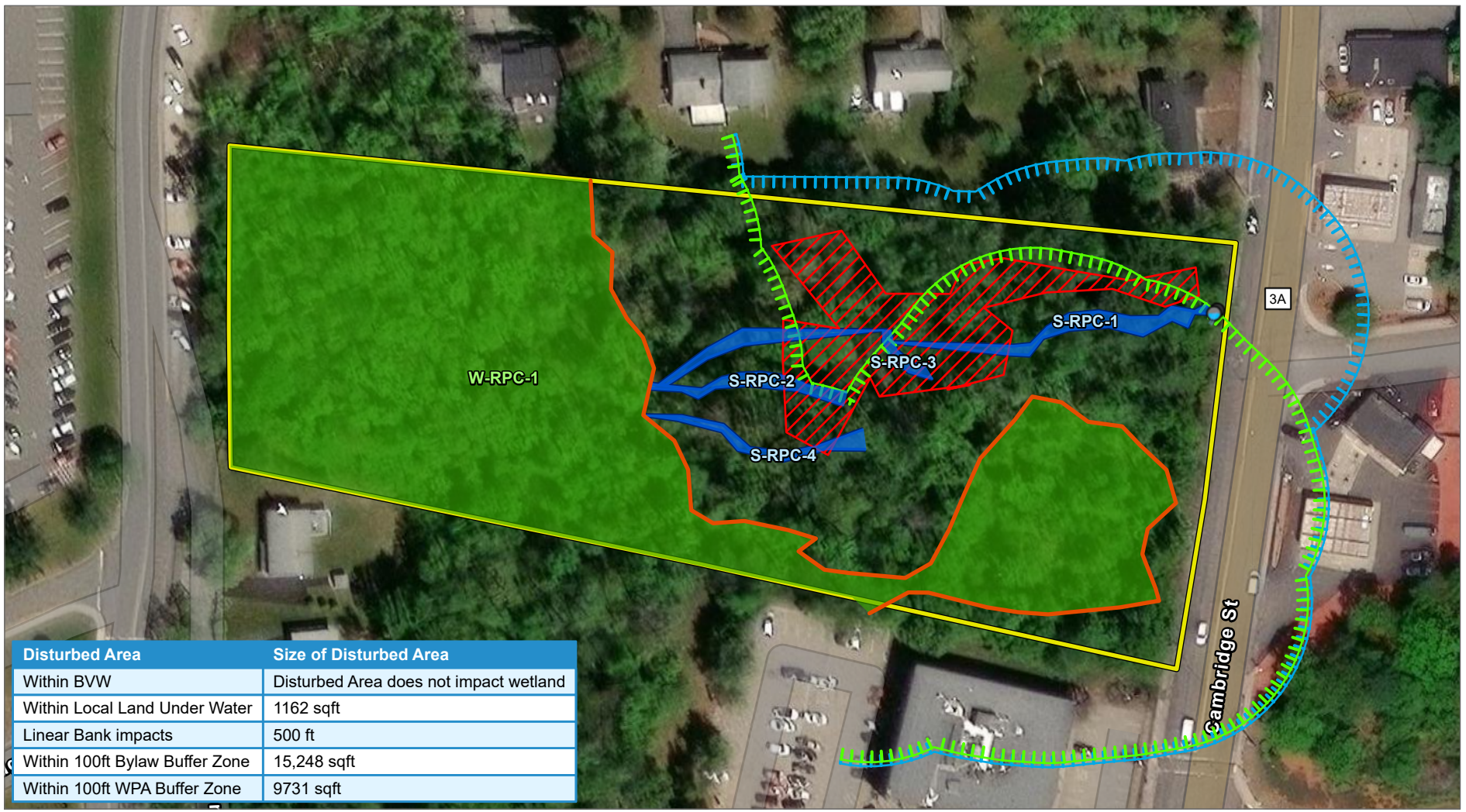
The Site will be monitored to avoid the establishment of invasive species, with targeted removal (mechanical and/or chemical) to be performed on an as-needed basis.

The newly established stream will be revegetated with an appropriate seed mix, such as that mix used for the site restoration in August 2025.

7.0 CONCLUSION

Foxboro Learning, LLC, proposes to develop the Site at “0” Cambridge Street in Burlington, MA, into an early childhood education center, including a building, play area, and other ancillary structures. While some impacts are permanent, stabilization serves as mitigation to future erosion and degradation of the streams and BVW. The streams will be rerouted and re-established and stabilized as a part of this Work.

ATTACHMENT A – FIGURES



Disturbed Area	Size of Disturbed Area
Within BVW	Disturbed Area does not impact wetland
Within Local Land Under Water	1162 sqft
Linear Bank impacts	500 ft
Within 100ft Bylaw Buffer Zone	15,248 sqft
Within 100ft WPA Buffer Zone	9731 sqft

PROJECT BOUNDARY
CULVERT
STREAM BANK/EDGE
DELINEATED STREAM
WETLAND BOUNDARY
DELINEATED WETLAND
AREA OF DISTURBANCE
100' WPA BUFFER ZONE
100' BYLAW BUFFER ZONE

PROJECT: **FOXBORO LEARNING LLC**
CAMBRIDGE STREET
BURLINGTON, MA

TITLE: **DELINEATED RESOURCES**

DRAWN BY:	J. CORSO	PROJ. NO.:	662119.0000.0000
CHECKED BY:	J. FREDENBURG		
APPROVED BY:	J. SHUSTER		**FIGURE 2**
DATE:	MAY 2025		

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N

0 50 100 FEET

1:1,200 1" = 100'

TRC
650 SUFFOLK STREET
SUITE 200
LOWELL, MA 01854
PHONE: 978.970.5600

FILE: 662119_CAMBRIDGEST

ATTACHMENT B – Project Plans

PROPOSED SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED

CHILD CARE FACILITY

LOCATION OF SITE

CAMBRIDGE STREET, TOWN OF BURLINGTON

MIDDLESEX COUNTY, MASSACHUSETTS

PARCEL ID: 35-115-0

REFERENCES AND CONTACTS

REFERENCES

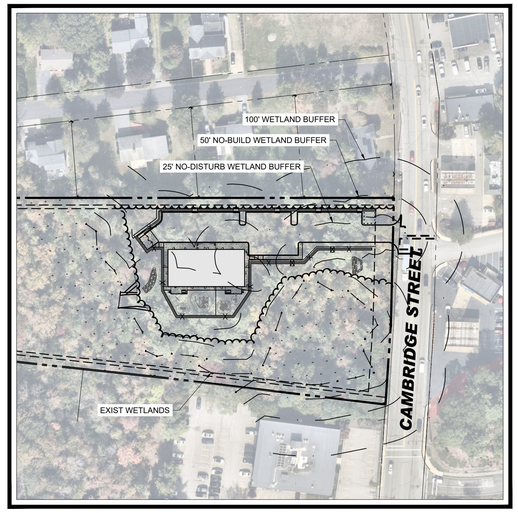
♦BOUNDARY & TOPOGRAPHIC SURVEY:
FELDMAN GEOSPATIAL
152 HAMPDEN STREET
BOSTON, MA 02119
DATED: 03/07/2025
SURVEY JOB #2500110
ELEVATIONS: NAVD 1988

♦GEOTECHNICAL INVESTIGATION REPORT:
WHITESTONE ASSOCIATES, INC.
352 TURNPIKE ROAD, SUITE 105
SOUTHBOROUGH, MA 01772
DATED: 04/01/2025

♦ARCHITECTURAL PLAN:
JARMEL KUZEL ARCHITECTS AND ENGINEERS, INC.
42 OCKNER PARKWAY
LIVINGSTON, NH 07039
DATED: MM/DD/YY

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

TAX MAP
SCALE: 1" = 1,000'
SOURCE: USGS



AERIAL MAP
SCALE: 1" = 1,000'
SOURCE: NEARMAP AERIAL IMAGERY

SHEET INDEX

PREPARED BY

BOHLER

CONTACT: NICK DEWHURST

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

Dec 16, 2025
\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-MAA250027.00-0E----LAYOUT(C-101 CCVR

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

811
Know what's below.
Call before you dig.
ALWAYS CALL 811
It's fast. It's free. It's the law.

FOR CONCEPT PURPOSES ONLY

THIS DRAWING IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

JOHN KUCEWICZ
CIVIL
No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS No. 41530
NEW HAMPSHIRE No. 19476
CONNECTICUT No. 26177
RHODE ISLAND No. 9616
MAINE LICENSE No. 12853

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

C-101

ORG. DATE - 12/16/2025

GENERAL NOTES

(Rev. 1/2023)

1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER, LLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH THE PROFESSIONAL OF RECORD AND BOHLER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER , IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
2. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS, THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.
3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE PROFESSIONAL OF RECORD AND BOHLER THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCES ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDA TO SAME.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.
7. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE RE-DONE OR REPAIRED DUE TO DIMENSIONS, MEASUREMENTS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR GIVING PROFESSIONAL OF RECORD AND BOHLER WRITTEN NOTIFICATION OF SAME AND (B) PROFESSIONAL OF RECORD AND BOHLER, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
10. THE OWNER AND CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PROCEEDING WITH ANY FURTHER WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THIS PROJECT.
12. PROFESSIONAL OF RECORD AND BOHLER ARE NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
13. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.
14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
17. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR MUST, PROMPTLY, DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
18. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR AND HAVE NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITIES FOR JOB SITE SAFETY JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME. THE PROFESSIONAL OF RECORD AND BOHLER HAVE NOT BEEN RETAINED TO PERFORM OR TO BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF PROFESSIONAL OF RECORD'S AND BOHLER SERVICES AS RELATED TO THE PROJECT. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES OR ANY JOB SITE CONDITIONS, AT ANY TIME.
19. THE CONTRACTOR MUST IMMEDIATELY IDENTIFY IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER , ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF THE CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER WRITTEN NOTIFICATION AS DESCRIBED ABOVE, IT WILL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, THE CONTRACTOR MUST INDEMNIFY, DEFEND AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER FOR ANY AND ALL DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM OR ARE IN ANY WAY RELATED TO SAME INCLUDING, BUT NOT LIMITED TO, ANY THIRD PARTY AND FIRST PARTY CLAIMS.
20. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT CODES, RULES, STATUTES AND THE LIKE. IF THE CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, RULES, STATUTES, CODES AND THE LIKE, THE CONTRACTOR AND/OR OWNER AGREE TO AND MUST JOINTLY, INDEPENDENTLY, SEPARATELY, AND SEVERALLY INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER HARMLESS FOR AND FROM ALL INJURIES, CLAIMS AND DAMAGES THAT PROFESSIONAL OF RECORD AND BOHLER SUFFER AND ANY AND ALL COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS RELATED TO SAME.
21. ALL CONTRACTORS MUST CARRY AT LEAST THE MINIMUM AMOUNT OF THE SPECIFIED AND COMMERCIALLY REASONABLE STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) INCLUDING ALSO ALL UMBRELLA COVERAGES. ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER , AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE (DEFEND, IF APPLICABLE) AND HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED AND AGREED TO BY THE CONTRACTOR HEREIN. ALL CONTRACTORS MUST FURNISH BOHLER WITH CERTIFICATIONS OF INSURANCE OR CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE COVERAGES PRIOR TO COMMENCING ANY WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR TWO YEARS AFTER THE COMPLETION OF CONSTRUCTION AND AFTER ALL PERMITS ARE ISSUED, WHICHEVER DATE IS LATER. IN ADDITION, ALL CONTRACTORS AGREE THAT THEY WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. THE CONTRACTOR MUST NOTIFY PROFESSIONAL OF RECORD, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
22. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS IN SCOPE AND REVISIONS THAT RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
23. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER, NOR THE PRESENCE OF BOHLER AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN "BOHLER PARTIES"), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER PARTIES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER (OR ANY RESPONSIBILITY FOR) ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND ANY AND ALL HEALTH AND SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER PARTIES FOR AND FROM ANY LIABILITY TO BOHLER PARTIES RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR VIOLATIONS OF THIS NOTE, THESE NOTES OR ANY NOTES IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.
24. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME. BOHLER WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE PROMPTNESS, AS CONDITIONS PERMIT. ANY DOCUMENT, DOCUMENTING BOHLER'S REVIEW OF A SPECIFIC ITEM OR LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER'S ATTENTION. BOHLER IS NOT REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
25. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE PROFESSIONAL OF RECORD AND BOHLER FOR ALL DEVIATIONS WITHIN PROFESSIONAL OF RECORD'S SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY, PROTECT, AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
26. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
27. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN; AND, FURTHER, THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER PARTIES, HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS A RESULT OF SAID FAILURE OR FAILURE TO PRESERVE.
28. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
29. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. PROFESSIONAL OF RECORD AND BOHLER HAS NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES AND WORK.
30. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD PROFESSIONAL OF RECORD AND BOHLER PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT PROFESSIONAL OF RECORD SUFFERS AND COSTS THAT PROFESSIONAL OF RECORD INCURS AS A RESULT OF SAID FAILURE.
31. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
32. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED DOCUMENTS PREPARED BY THE PROFESSIONAL OF RECORD AND BOHLER, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION' CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE PROFESSIONAL OF RECORD'S AND BOHLER KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

DEMOLITION NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY(IES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
3. WHEN DEMOLITION-RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. THE DEMOLITION (AND/OR REMOVALS) PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION AND TO IDENTIFY ONLY CONDITIONS REGARDING ITEMS TO BE DEMOLISHED, REMOVED, AND/OR TO REMAIN.
   A. THE CONTRACTOR MUST ALSO REVIEW ALL CONSTRUCTION DOCUMENTS AND INCLUDE WITHIN THE DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
   B. THIS PLAN IS NOT INTENDED TO AND DOES NOT PROVIDE DIRECTION REGARDING THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE EMPLOYED TO ACCOMPLISH THE WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE AND CONFORMANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC.
5. THE CONTRACTOR MUST PROVIDE ALL "METHODS AND MEANS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR, AT THE CONTRACTOR'S SOLE COST, MUST REPAIR ALL DAMAGE TO ALL ITEMS AND FEATURES THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIRS MUST INCLUDE THE RESTORATION OF ALL ITEMS AND FEATURES REPAIRED TO THEIR PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR MUST PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.
6. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. THE CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, COMPLYING WITH ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY AND SAFETY TO ALL PROPERTY ON THE SITE OR ADJACENT OR NEAR TO THE SAME.
7. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, OTHER APPROPRIATE AND/OR NECESSARY SAFETY FEATURES AND ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF ALL UNAUTHORIZED PERSONS AT ANY TIME, TO OR NEAR THE DEMOLITION AREA.
8. PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY, THE CONTRACTOR MUST, IN WRITING, RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS AND/OR SPECIFICATIONS, ALL CONCERNS OR QUESTIONS REGARDING THE APPLICABLE SAFETY STANDARDS, AND/OR THE SAFETY OF THE CONTRACTOR AND/OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT. ANY SUCH CONCERNS MUST BE CONVEYED TO THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING AND MUST ADDRESS ALL ISSUES AND ITEMS RESPONDED TO, BY THE PROFESSIONAL OF RECORD AND BY BOHLER, IN WRITING. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
9. THE CONTRACTOR MUST BECOME FAMILIAR WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AND/OR DISCONNECTION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED, REMOVED AND/OR ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
10. PRIOR TO COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST:
   A. OBTAIN ALL REQUIRED PERMITS AND MAINTAIN THE SAME ON SITE FOR REVIEW BY THE PROFESSIONAL OF RECORD AND ALL PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION WORK.
   B. NOTIFY, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION JURISDICTION, AT LEAST 72 BUSINESS HOURS PRIOR TO THE COMMENCEMENT OF WORK.
   C. INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE, AND MAINTAIN SAID CONTROLS UNTIL SITE IS STABILIZED
   D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT, IN ADVANCE OF ANY EXCAVATION.
   E. LOCATE AND PROTECT ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
   F. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ANY DEMOLITION ACTIVITIES.
   G. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS REGARDING THE METHODS AND MEANS TO CONSTRUCT SAME. THESE ARE NOT THE PROFESSIONAL OF RECORD'S OR BOHLER RESPONSIBILITY. IN THE EVENT OF ABANDONMENT, THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WITH IMMEDIATE WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
   H. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS NECESSARY OR AS REQUIRED TO MINIMIZE THE IMPACT ON, OF, AND TO THE AFFECTED PARTIES. WORK REQUIRED TO BE PERFORMED "OFF-PEAK" IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
   I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS OR THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK IN THE AREA OF DISCOVERY, AND IMMEDIATELY NOTIFY, IN WRITING AND VERBALLY, THE OWNER, PROFESSIONAL OF RECORD AND BOHLER, THE DISCOVERY OF SUCH MATERIALS TO PURSUE PROPER AND COMPLIANT REMOVAL OF SAME.
11. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE, UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, OR PURSUANT TO THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
12. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE OR INCLUDE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT SPECIFIC WRITTEN PERMISSION AND AUTHORITY OF AND FROM THE OWNER AND ALL GOVERNMENTAL AGENCIES WITH JURISDICTION.
13. THE CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT ALL NEW IMPROVEMENTS AND MUST BE PERFORMED IN COMPLIANCE WITH THE RECOMMENDATIONS AND GUIDANCE ARTICULATED IN THE GEOTECHNICAL REPORT. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES AND MUST BE PERFORMED SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE. THE CONTRACTOR IS RESPONSIBLE FOR COMPACTION TESTING AND MUST SUBMIT SUCH REPORTS AND RESULTS TO THE PROFESSIONAL OF RECORD AND THE OWNER.
14. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT FROM BOTH THE OWNER AND ALL APPLICABLE, NECESSARY AND REQUIRED GOVERNMENTAL AUTHORITIES. PRIOR TO COMMENCING ANY EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION ACTIVITIES, THE CONTRACTOR MUST ENSURE AND OVERSEE THE INSTALLATION OF ALL OF THE REQUIRED PERMIT AND EXPLOSIVE CONTROL MEASURES THAT THE FEDERAL, STATE, AND LOCAL GOVERNMENTS REQUIRE. THE CONTRACTOR IS ALSO RESPONSIBLE TO CONDUCT AND PERFORM ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES AND THE LIKE.
15. IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS, THE CONTRACTOR MUST USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR. AFTER THE DEMOLITION IS COMPLETE, THE CONTRACTOR MUST CLEAN ALL ADJACENT STRUCTURES AND IMPROVEMENTS TO REMOVE ALL DUST AND DEBRIS WHICH THE DEMOLITION OPERATIONS CAUSE. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION AT CONTRACTOR'S SOLE COST.
16. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS OUTSIDE OF APPROVED AREAS WILL NOT BE PERMITTED, INCLUDING BUT NOT LIMITED TO, THE PUBLIC RIGHT-OF-WAY.
17. THE CONTRACTOR MUST MAINTAIN A RECORD SET OF PLANS WHICH INDICATES THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
18. THE CONTRACTOR MUST EMPTY, CLEAN AND REMOVE FROM THE SITE ALL UNDERGROUND STORAGE TANKS, IF ENCOUNTERED, IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS, PRIOR TO CONTINUING CONSTRUCTION IN THE AREA AROUND THE TANK WHICH EMPTYING, CLEANING AND REMOVAL ARE AT THE CONTRACTOR'S SOLE COST.

SOIL EROSION & SEDIMENT CONTROL PLAN NOTES

(Rev. 12/2024)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN AND CONTRACTOR MUST REFER TO THEM. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF ENGINEER OR JURISDICTIONAL AGENCY SO REQUIRES, TO PREVENT THE DISCHARGE OF SEDIMENT LADEN RUNOFF FROM EXITING THE SITE.
4. THE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT STABILIZATION IS ESTABLISHED UNLESS INDICATED OTHERWISE IN LOCAL, STATE AND/OR FEDERAL PROJECT APPROVALS. THE COST OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.

SITE LAYOUT NOTES

(Rev. 1/2020)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF GENERAL CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH APPLICABLE AND/OR APPROPRIATE AGENCIES' GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE DEBRIS FROM WASHING ONTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS AND THE LIKE.
4. THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE RELOCATION OF TRAFFIC SIGNS WITH THE ENTITY WITH JURISDICTION OVER THE PROJECT.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.

GRADING NOTES

(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE PROFESSIONAL OF RECORD, BOHLER AND THE OWNER PRIOR TO THE CONTRACTOR COMMENCING ANY WORK.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING.
5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR MUST COMPACT ALL EXCAVATED OR FILLED AREAS IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED. THIS REPORT MUST VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES WHICH ARE IN EFFECT AND WHICH ARE APPLICABLE TO THE PROJECT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL, COMPACTED AS THE GEOTECHNICAL REPORT DIRECTS. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.
6. IN THE EVENT OF A DISCREPANCY(IES) AND/OR A CONFLICT(S) BETWEEN PLANS, OR RELATIVE TO OTHER PLANS, THE GRADING PLAN TAKES PRECEDENCE AND CONTROLS. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCY(IES) AND/OR CONFLICT(S).
7. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO CONFORM TO THE PROPOSED GRADING, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS.

ACCESSIBILITY DESIGN GUIDELINES

(Rev. 1/2023)

1. ALL ACCESSIBLE (A.K.A. ADA) COMPONENTS AND ACCESSIBLE ROUTES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF: (A) THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 ET SEQ. AND 42 U.S.C. § 4151 ET SEQ.); AND (B) ANY APPLICABLE LOCAL AND STATE GUIDELINES, AND ANY AND ALL AMENDMENTS TO BOTH, WHICH ARE IN EFFECT WHEN THESE PLANS WERE COMPLETED.
2. THE CONTRACTOR MUST REVIEW ALL DOCUMENTS REFERENCED IN THESE NOTES FOR ACCURACY, COMPLIANCE AND CONSISTENCY WITH INDUSTRY GUIDELINES.
3. THE CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ACCESSIBLE (ADA) COMPONENTS AND ACCESSIBLE ROUTES FOR THE SITE. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACES, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, AND INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THE ACCESSIBLE GUIDELINES AND REQUIREMENTS WHICH INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   A. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SLOPES MUST NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
   B. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE MUST PROVIDE A 36-INCHES MINIMUM WIDTH (48-INCHES PREFERRED), OR AS SPECIFIED BY THE GOVERNING AGENCY. UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS) MUST NOT REDUCE THIS MINIMUM WIDTH. THE SLOPE MUST NOT EXCEED 1:20 (5.0%) IN THE DIRECTION OF TRAVEL AND MUST NOT EXCEED 1:50 (2.0%) IN CROSS SLOPE. WHERE ACCESSIBLE PATH OF TRAVEL IS GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP MUST BE PROVIDED. ALONG THE ACCESSIBLE PATH OF TRAVEL, OPENINGS MUST NOT EXCEED 1/2-INCH IN WIDTH. VERTICAL CHANGES OF UP TO 1/2-INCH ARE PERMITTED ONLY IF THEY INCLUDES A 1/4-INCH BEVEL AT A SLOPE NOT STEEPER THAN 1:2. NO VERTICAL CHANGES OVER 1/4-INCH ARE PERMITTED.
   C. ACCESSIBLE RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%) AND A RISE OF 30-INCHES. LEVEL LANDINGS MUST BE PROVIDED AT EACH END OF ACCESSIBLE RAMPS. LANDING MUST PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES, AND MUST NOT EXCEED 1:50 (2.0%) SLOPE IN ANY DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS MUST HAVE A CLEAR LANDING OF A MINIMUM OF 60-INCHES BY 60-INCHES. HAND RAILS ON BOTH SIDES OF THE RAMP MUST BE PROVIDED ON AN ACCESSIBLE RAMP WITH A RISE GREATER THAN 6-INCHES.
   D. ACCESSIBLE CURB RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%). WHERE FLARED SIDES ARE PROVIDED, THEY MUST NOT EXCEED 1:10 (10%) SLOPE. LEVEL LANDING MUST BE PROVIDED AT RAMPS TOP AT A MINIMUM OF 36-INCHES LONG (48-INCHES PREFERRED). IN ALTERATIONS, WHEN THERE IS NO LANDING AT THE TOP, FLARE SIDES SLOPES MUST NOT EXCEED A SLOPE OF 1:12 (8.3%).
   E. DOORWAY LANDINGS AREAS MUST BE PROVIDED ON THE EXTERIOR SIDE OF ANY DOOR LEADING TO AN ACCESSIBLE PATH OF TRAVEL. THIS LANDING MUST BE SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO FEWER THAN 60-INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE CLEARLY PERMITTED BY ACCESSIBLE STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2009 AND OTHER REFERENCES INCORPORATED BY CODE).
   F. WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ACCESSIBLE COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, THE CONTRACTOR MUST VERIFY ALL EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR IN ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS BEFORE COMMENCING ANY WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ACCESSIBLE GUIDELINES.
   G. THE CONTRACTOR MUST VERIFY ALL OF THE SLOPES OF THE CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE EXISTS OR IS OBSERVED OR DISCOVERED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, PRIOR TO POURING CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND/OR REPLACE NON-CONFORMING CONCRETE AND/OR PAVEMENT SURFACES.
4. IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION TO ENSURE SAME IS CONSISTENT WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCING CONSTRUCTION.

DRAINAGE AND UTILITY NOTES

(Rev. 3/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE, AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THOSE LOCATIONS AND SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM ALL SANITARY CONNECTION POINTS AND ALL OTHER UTILITY SERVICE CONNECTION POINTS IN THE FIELD, PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER.
3. THE CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
4. THE CONTRACTOR MUST FIELD VERIFY THE PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO CONFIRM EXACT DEPTH, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS, SIZE, AND MATERIAL OF SAME BASED UPON FINAL ARCHITECTURAL PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS; GREASE TRAP REQUIREMENTS; AND DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, AND PRIOR TO CONSTRUCTION, MUST RESOLVE SAME.
7. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST COMPLY WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR DESIGN OF TRENCH BACKFILL OR FOR COMPACTION REQUIREMENTS
8. DURING THE INSTALLATION OF SANITARY, STORM, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE, IN ANY RESPECT, FROM THE INFORMATION CONTAINED IN THESE PLANS. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE APPROPRIATE PLAN(S), WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF WORK.
9. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SANITARY, WATER AND STORM SYSTEMS, ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND OR STATE DOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
10. FINAL LOCATIONS OF PROPOSED UTILITY POLES, AND/ OR POLES TO BE RELOCATED ARE AT THE SOLE DISCRETION OF THE RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.
11. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. THE CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR TO COMMENCING CONSTRUCTION.
12. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

OUTSIDE SOURCE NOTES

(Rev. 11/2023)

ANY INFORMATION, DRAWINGS, DATA, PLANS, SPECIFICATIONS, MATERIALS, FIGURES, DOCUMENTATION, REPORTS, AND THE LIKE WHICH IS INDICATED TO HAVE BEEN PREPARED "BY OTHERS" (HEREIN, "BY OTHERS REPORTS, DOCUMENTS AND DETAILS") HAS BEEN OR WILL BE CREATED, DEVELOPED, PREPARED, PERFORMED, AND ANALYZED BY AN ENTITY OR PARTY OTHER THAN THE "BOHLER" ENTITY INVOLVED WITH THIS PROJECT. THE "BOHLER" ENTITY IS NOT IN ANY WAY RESPONSIBLE FOR THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS EVEN IF/WHERE INCLUDED IN THE "BOHLER" ENTITY'S PLANS, REPORTS, ETC. SAME HAS BEEN INCLUDED ON THIS PLAN FOR THE CONVENIENCE, ONLY, OF THE PROJECT OWNER, DEVELOPERS, CONTRACTORS AND CONSULTANTS AND IN ORDER TO COORDINATE THE "BOHLER" ENTITY'S DESIGN WITH THAT OF "OTHERS". THE "BOHLER" ENTITY HAS ASSUMED, FOR PURPOSES OF THIS PLAN, THAT THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS ARE CURRENT AND, IF APPLICABLE, PREPARED IN STRICT ACCORDANCE WITH ALL APPLICABLE COUNTY, STATE, FEDERAL AND OTHER STATUTES, LAWS, RULES, REGULATIONS, ORDINANCES AND THE LIKE. THE "BOHLER" ENTITY SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY AND RESPONSIBILITY FOR BY OTHERS REPORTS, DOCUMENTS AND DETAILS. THE ENTITY OR PERSON WHO CREATED THE INFORMATION CONTAINED IN THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS (EXCLUDING INFORMATION AND/OR DETAILS SOLELY SUPPLIED BY A JURISDICTION AND/OR GOVERNING BODY) AGREES BY PARTICIPATING IN THIS PROJECT, RECEIVING, REVIEWING, USING AND/OR RELYING UPON THIS DOCUMENT, AND/OR BY AGREEING TO THE PROJECT OWNER/DEVELOPER'S CONTRACT DOCUMENTS, TO DEFEND, INDEMNIFY, PROTECT AND HOLD HARMLESS THE "BOHLER" ENTITY THAT PREPARED THIS DOCUMENT AND ITS EMPLOYEES FOR ANY AND ALL DAMAGES, INJURIES, COSTS, EXPENSES AND THE LIKE, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, WHICH THE "BOHLER" ENTITY AND/OR ITS EMPLOYEES SUFFER OR INCUR AS A RESULT OF INCLUDING ANY BY OTHERS REPORTS, DOCUMENTS AND DETAILS IN AND ON OR IN THIS PLAN. ANYONE OR ANY ENTITY WHO RECEIVED, RELIES UPON AND/OR USES THIS PLAN, AGREES TO HOLD THE "BOHLER" ENTITY AND ITS EMPLOYEES HARMLESS FROM ANY CLAIMS, DAMAGES, INJURIES, COSTS AND EXPENSES, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR ANY DAMAGES, INJURIES, COSTS, EXPENSES AND THE LIKE, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, WHICH IT OR THEY SUFFER OR INCUR AS A RESULT OF THE ANY BY OTHERS REPORTS, DOCUMENTS AND DETAILS INCORPORATED IN THE PLAN, AND EXPRESSLY CONFIRMS THAT BY RECEIVING, RELYING UPON AND/OR USING SAME, THE "BOHLER" ENTITY SHALL HAVE NO LIABILITY RELATED TO SAME. WITH RESPECT TO ALL BY OTHERS REPORTS, DOCUMENTS AND DETAILS, CONTRACTOR MUST VERIFY ALL INFORMATION CONTAINED IN THE SCOPE OF ALL PARTIES INVOLVED IN PREPARING THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS PRIOR TO COMMENCING ANY CONSTRUCTION AND MUST VERIFY THAT THE INFORMATION IS THE LATEST, THE MOST RECENT AND THE MOST CURRENT REPORT, DOCUMENT AND DETAIL. REFERENCES ON THIS PLAN TO INFORMATION PREPARED OR CONTAINED IN BY OTHERS REPORTS, DOCUMENTS AND DETAILS DEPICTING AN OFF-SITE AREA WHERE NO DETAIL IS INCLUDED IS A REFERENCE TO AN AREA, DETAIL, SPECIFICATION OR DESIGN THAT HAS NOT BEEN DESIGNED OR CONSTRUCTED BY THE "BOHLER" ENTITY AND REGARDING WHICH THE "BOHLER" ENTITY HAS NO CONTROL OVER OR LIABILITY REGARDING, BUT IS ADDED TO THIS PLAN FOR INFORMATIONAL PURPOSES, ONLY.

STANDARD ABBREVIATIONS

FOR ENTIRE PLAN SET

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ACRE / ACRES
AD	AREA DRAIN
ADA	ACCESSIBLE / AMERICANS WITH DISABILITIES ACT
AG	ABOVE GROUND
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ASSF	AREA SUBJECT TO STORMWATER FLOWAGE
ASSOC	ASSOCIATION
BC	BOTTOM OF CURB
BF	BASEMENT FLOOR
BIO	BIOGARDEN
BIT	BITUMINOUS
BK	BLOCK
BL	BASELINE
BLDG	BUILDING
BM	BENCH MARK
BRL	BUILDING RESTRICTION LINE
BVW	BORDERING VEGETATIVE WETLAND
CB	CATCH BASIN
CF	CUBIC FEET
CI	CURB INLET
CIT	CHANGE IN TYPE
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
C/O	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
COORD	COORDINATE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DEC	DECORATIVE
DEP	DEPARTMENT OF ENVIRONMENTAL PROTECTION
DET	DETENTION
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
DOM	DOMESTIC
DOT	DEPARTMENT OF TRANSPORTATION
DP	DESIGN POINT
DWL	DASHED WHITE LINE
DYL	DOUBLE YELLOW LINE
EG	EXISTING GRADE
ELEC	ELECTRIC
ELEV	ELEVATION
EOR	ENGINEER OF RECORD
EP / EOP	EDGE OF PAVEMENT
ES / EOS	EDGE OF SHOULDER
EW	END WALL
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FES	FLARED END SECTION
FF	FINISH / FIRST FLOOR
FFE	FINISH / FIRST FLOOR ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FM	FORCE MAIN
FO	FIBER OPTIC
G	GRADE
GC	GENERAL CONTRACTOR
GEO	GEOTECH/GEOTECHNICAL
GF / GFE	GARAGE FLOOR ELEVATION (AT DOOR)
GFA	GROSS FLOOR AREA
GH	GRADE HIGH (WALL)
GL	GRADE LOW (WALL)
GRT	GRATE
GT	GREASE TRAP
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HOR	HORIZONTAL
HP	HIGH POINT
HW	HEADWALL
ICS	INLET CONTROL STRUCTURE
INF	INFILTRATION
INT	INTERSECTION
INV	INVERT
LF	LINEAR FOOT
LOC	LIMIT OF CLEARING
LOD	LIMIT OF DISTURBANCE
LOS	LINE OF SIGHT
LOW	LIMIT OF WORK
LP	LOW POINT
LS	LANDSCAPE
LSA	LANDSCAPE AREA
MAX	MAXIMUM
ME	MATCH EXISTING
MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NRCS	NATIONAL RESOURCE CONSERVATION SERVICE
O&M	OPERATIONS AND MAINTENANCE
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
OGS	OIL AND GRIT SEPARATOR
ORD	ORDINANCE
PA / POA	POINT OF ANALYSIS
PC	POINT OF CURVATURE
PCCR	POINT OF CURVATURE, CURB RETURN
PERF	PERFORATED
PG	PROPOSED GRADE
PI	POINT OF INTERSECTION
POG	POINT OF GRADE
PP	POLYPROPYLENE PIPE
PROP	PROPOSED
PT	POINT OF TANGENCY
PTCR	POINT OF TANGENCY, CURB RETURN
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS / RADII
R/W	RIGHT-OF-WAY / RIGHTS-OF-WAY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REGS	REGULATIONS
RELO	TO BE RELOCATED
REQ	REQUIRED
RET	RETENTION
RET WALL	RETAINING WALL
RETO	TO BE RETURNED TO OWNER
RG	RAIN GARDEN
S	SLOPE
SAN	SANITARY SEWER
SESC	SOIL EROSION AND SEDIMENT CONTROL
SF	SQUARE FEET
SHLO	STATE HIGHWAY LAYOUT
SMH	SANITARY MANHOLE
STA	STATION
STM	STORM WATER / STORM SEWER
SWL	SINGLE/SOLID WHITE LINE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TBA	TO BE ABANDONED
TBR	TO BE REMOVED
TBV	TO BE VACATED
TC	TOP OF CURB
Tc	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TELE	TELECOMMUNICATIONS / TELEDATA
TPF	TREE PROTECTION FENCE
TR	TO REMAIN
TRANS	TRANSITION
TYP	TYPICAL
UG	UNDERGROUND
UP	UTILITY POLE
USGS	UNITED STATES GEOLOGICAL SURVEY
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WIDE / WIDTH
W/L	WATER LINE
WM	WATER METER
WQU	WATER QUALITY UNIT
YD	YARD DRAIN
#	NUMBER
#:#	SLOPE EXPRESSED IN HORIZONTAL:VERTICAL IN FEET
±	PLUS OR MINUS
°	DEGREE
Ø	DIAMETER
'	FEET/FOOT
"	INCHES

PROP LINE LEGEND

PROPERTY LINE	━━ ━ ━ ━━
RIGHT-OF-WAY LINE	━━━ ━ ━ ━━━
INTERIOR PROPERTY LINE	──── ─ ─ ────
LEASE LINE	──── ─ ────
EASEMENT LINE	── ── ── ──
SETBACK LINE	── ── ── ──
LIMIT OF WORK	▬▬LOW▬▬
LIMIT OF DISTURBANCE	▬▬LOD▬▬
SAWCUT LINE	━ ━ · ━ ━ · ━
OVERHEAD WIRE	──OH──
ELECTRIC LINE	──E──
TELEPHONE LINE	──T──
CABLE LINE	──C──
GAS LINE	──G──
STORM SEWER	▬▭▬▭▬▭▬
SANITARY MAIN 12" OR GREATER	▬▬▭▭▬▬
SANITARY MAIN	──S──
SANITARY LATERAL	──SL──
SANITARY FORCE MAIN	──FM──
WATER MAIN 12" OR GREATER	▬▬▬▬
WATER MAIN	──W──
WATER LATERAL	──WL──
WATER FIRE LINE	──F──

PROP SYMBOL LEGEND

TYPICAL SIGN	▽
TYPICAL BOLLARD	∘
UTILITY POLE WITH LIGHT	●──○
UTILITY POLE	●
TYPICAL LIGHT	◐▭
FIRE HYDRANT	▽
CLEANOUT	°C/O
SANITARY MANHOLE	Ⓢ
STORM MANHOLE	Ⓓ
WATER METER	⊗WM
WATER VALVE	⋈
GAS VALVE	□GV
TEST PIT	▚ T-#
BORING	◐ B-#

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REVISIONS

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FOR CONCEPT PURPOSES ONLY

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PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-CNDS

PROJECT:

**PROP.
SITE PLAN
DOCUMENTS**
FOR
**FOXBORO
LEARNING,
LLC**

PROPOSED
CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

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MAINE LICENSE No. 12853

SHEET TITLE:
**GENERAL
NOTES
AND
LEGEND**

SHEET NUMBER:
C-102

ORG. DATE - 12/16/2025

Dec 16, 2025
\\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-MAA250027.00-0E----->LAYOUT: C-102 NOTE
JT

MASSACHUSETTS DEMOLITION NOTES

(Rev. 10/2025)

1. THE CONTRACTOR MUST LOCATE AND CLEARLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED AND/OR REMAIN. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
2. CONTRACTOR MUST FIELD LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION AND IF REQUIRED, DIG EXPLORATORY TEST PITS TO CONFIRM EXACT LOCATION AND DEPTH OF UTILITIES. CONTRACTOR MUST NOTIFY DESIGN ENGINEER WITH ANY CONFLICTS AS NEEDED TO COORDINATE FINAL LOCATION OF ALL PROPOSED IMPROVEMENTS.
3. CONTRACTOR MUST INSPECT ALL EXISTING UTILITY STRUCTURES THAT ARE TO REMAIN FOR THE PROJECTS RE-USE TO VERIFY SUITABILITY FOR SAME. IF STRUCTURES CAN NOT BE REUSED THEN THE CONTRACTOR MUST PROVIDE A NEW STRUCTURE. THE CONTRACTOR MUST COORDINATE SUCH WORK WITH THE APPLICABLE UTILITY PROVIDER.
4. CONTRACTOR TO REMOVE ANY BUILDING FOUNDATION REMAINS OR ASSOCIATED IMPROVEMENTS, DELETERIOUS MATERIALS, AND/OR DEBRIS THAT IMPEDE THE WORK SHOWN ON THESE PLANS.
5. THE CONTRACTOR MUST REVIEW THE PLANS VERSUS THE LOCATION OF EXISTING STRUCTURES, UTILITIES AND APPURTENANCES IN THE FIELD TO CONFIRM ACCURACY OF SAME AND VERIFY ITEMS TO BE REMOVED. THE CONTRACTOR MUST CARRY COSTS FOR REMOVAL OF ANY EXISTING STRUCTURES, APPURTENANCES, AND UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO, DRAIN, WATER, SEWER, STEAM, IRRIGATION, GAS, TELECOM AND ELECTRIC.
6. THE CONTRACTOR MUST MAINTAIN, ADJUST OR ABANDON EXISTING MONITORING WELLS IN ACCORDANCE WITH THE DIRECTION OF THE ENVIRONMENTAL CONSULTANT (TYP).
7. WHERE THE LIMIT OF WORK COINCIDES WITH PROPERTY LINE, TREE LINE, PROPOSED SAWCUT OR COMBINATION THEREOF IT IS SHOWN ADJACENT TO THESE FEATURES FOR GRAPHICAL CLARITY.
8. EXISTING TREES TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION UNLESS CLEARLY INDICATED OTHERWISE. REASONABLE CARE AND CAUTION MUST BE TAKEN DURING CONSTRUCTION TO PREVENT DAMAGE AND SELECTIVE PRUNING MAY BE REQUIRED TO ENSURE THAT TREES DO NOT CONFLICT WITH THE DEVELOPMENT.
9. CONTRACTOR MUST REPAIR/REPLACE ANY TRAFFIC LOOP DETECTORS THAT ARE DAMAGED DURING CONSTRUCTION WITHIN EXISTING OR PROPOSED RIGHTS OF WAYS. ANY SUCH WORK MUST BE PERFORMED BY A LICENSED / DOT APPROVED SIGNAL CONTRACTOR. ANY DAMAGED LOOPS OR OTHER SIGNAL EQUIPMENT MUST BE REPAIRED IMMEDIATELY AFTER THE WORK IS COMPLETE. THE SIGNAL CONTRACTOR MUST BE AVAILABLE TO MAKE ANY TEMPORARY SIGNAL CHANGES IF REQUESTED BY DOT AND/OR THE MUNICIPALITY.
10. THE CONTRACTOR MUST FIELD VERIFY THE LOCATIONS WHERE PROPOSED UTILITIES CROSS EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO DETERMINE THE EXACT SIZE, DEPTH AND LOCATION, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. CONTRACTOR MUST LOCATE ANY EXISTING UTILITY SERVICES THAT ARE TO BE TERMINATED AT THE EXISTING MAIN AND/OR PROPERTY LINE. THESE SERVICES ARE TO BE TERMINATED IN ACCORDANCE WITH MUNICIPAL / STATE TRANSPORTATION DEPARTMENT REQUIREMENTS.

MASSACHUSETTS SITE NOTES

(Rev. 10/2025)

1. WHEN APPLICABLE, OWNER/ OPERATOR MUST FILE THE NOI FOR NPDES PERMITS AT APPROPRIATE AND/OR REQUIRED TIME FRAMES BASED UPON THE DESIRED START OF CONSTRUCTION. LAND DISTURBING ACTIVITIES MUST NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED FROM GOVERNING AUTHORITIES (INCLUDING STORMWATER POLLUTION PREVENTION PLAN). THE CONTRACTOR MUST STRICTLY ADHERE TO THE APPROVED SWPPP PLAN DURING CONSTRUCTION OPERATIONS (IF PROVIDED).
2. ALL CONCRETE MUST BE AIR ENTRAINED AND INCLUDE THE MINIMUM COMPRESSIVE STRENGTH OF JURISDICTIONAL STANDARD PSI AT 28 DAYS (OR 4,000 PSI) UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS, DETAILS AND GEOTECHNICAL REPORT THEN THE GEOTECHNICAL REPORT MUST GOVERN.
3. THE CONTRACTOR MUST FILE SITE SIGNAGE APPLICATION OR PERMIT UNDER SEPARATE APPLICATION UNLESS DONE SO AS PART OF JURISDICTIONAL PERMITTING PROCEDURES.
4. THE CONTRACTOR MUST REPAIR OR REPLACE IN KIND, AT THE CONTRACTOR'S SOLE COST AND EXPENSE, ALL SIDEWALKS, CURBS, PAVEMENT MARKINGS, AND PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES WHETHER SPECIFIED ON THIS PLAN OR NOT.
5. WORK WITHIN THE RIGHT-OF-WAY MUST BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS AND STANDARDS OF THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING DEPARTMENT, HIGHWAY DIVISION, AND/OR STATE DOT HIGHWAY DEPARTMENT.
6. WHERE RETAINING WALLS ARE IDENTIFIED ON THE PLANS, TOP AND BOTTOM OF WALL WIDTHS DO NOT REPRESENT THE ACTUAL WIDTH OF THE PROPOSED WALL, RATHER THEY ARE AN ASSUMPTION BASED ON WALL TYPE AND WALL HEIGHT. WALL FOOTINGS AND /OR FOUNDATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR OR WALL DESIGNER, AND MUST BE SET BASED UPON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE CONTRACTOR MUST ENSURE THAT AN APPROPRIATELY LICENSED PROFESSIONAL DESIGNS ALL WALLS SHOWN HEREON AND PRIOR TO CONSTRUCTION. REFER TO GRADING NOTES REGARDING RETAINING WALL DESIGN.
7. CONTRACTOR IS CAUTIONED OF EXISTING UTILITY SERVICES TO REMAIN IN PROXIMITY TO PROPOSED BOLLARDS AND SIGNS. CONTRACTOR MUST PROVIDE FIELD MODIFICATION LOCATIONS OF BOLLARDS AND BOLLARDS WITH SIGNAGE AS NEEDED TO AVOID CONFLICTS WITH EXISTING UTILITY SERVICES TO REMAIN.

MASSACHUSETTS GRADING NOTES

(Rev. 10/2025)

1. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY SIX (6) INCHES ABOVE PAVEMENT GRADE UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR MUST CONFIRM AND ENSURE THAT AS CONSTRUCTED IMPROVEMENTS CREATE THE FOLLOWING MINIMUM SLOPES (EXCEPT WHERE ADA REQUIREMENTS LIMIT THEM): 1.0% ON ALL CONCRETE SURFACES, 1.5% ON ASPHALT SURFACES, 1.5% IN LANDSCAPED AREAS AND 0.75% SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS TO PROVIDE POSITIVE DRAINAGE.
3. WHERE RETAINING WALLS ARE IDENTIFIED ON THE PLANS, TOP AND BOTTOM OF WALL ELEVATIONS (GH & GL) REPRESENT THE PROPOSED FINISHED GRADE AT THE FACE OF THE TOP AND THE BOTTOM OF THE WALL AND DO NOT REPRESENT THE OVERALL HEIGHT OF THE WALL TO ITS EXTENTS (I.E. ANY CAP UNITS OR COURSES BELOW GRADE INCLUDING FOOTINGS ARE EXCLUDED). WALL FOOTINGS/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR OR WALL DESIGNER, AND MUST BE SET BASED UPON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE CONTRACTOR MUST ENSURE THAT THERE ARE NO UTILITIES ON THE PASSIVE SIDE OF THE RETAINING WALL. NO EXCAVATION MAY BE PERFORMED ON THE PASSIVE SIDE OF THE RETAINING WALL WITHOUT APPROPRIATELY AND SAFELY SUPPORTING THE WALL IN ACCORDANCE WITH THE STANDARD OF CARE AND ALL APPLICABLE RULES, REGULATIONS, CODES, ORDINANCES, LAWS AND STATUTES.
4. MSE OR GRAVITY BLOCK WALLS MUST BE CONSTRUCTED SUCH THAT UPON COMPLETION OF CONSTRUCTION THERE IS NO UNFINISHED SURFACE OR LIFTING RINGS VISIBLE (E.G. USE OF FINISHED TOP BLOCK OR CAP STONES)
5. STORMWATER RUNOFF WITHIN PROPERTY MUST BE COLLECTED ON-SITE WITH NO OVERLAND RUNOFF ONTO THE RIGHT-OF-WAY OR ADJACENT PROPERTIES TO THE MAXIMUM EXTENT POSSIBLE OR IN THE MANNER SHOWN ON THE CONSTRUCTION DRAWINGS. STORMWATER RUNOFF ONTO ADJACENT PROPERTIES MUST BE CONTROLLED AS TO NOT ADVERSELY IMPACT SAID PROPERTIES.
6. BEFORE COMMENCING GRADING WORK, CONTRACTOR MUST SUBMIT SAMPLES OF ALL NATIVE AND IMPORTED MATERIALS WITH THEIR INTENDED FOR STRUCTURAL USES TO THE GEOTECHNICAL ENGINEER OF RECORD.
7. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL ADA GUIDELINES AND REQUIREMENTS.
8. FOR ALL RETAINING WALLS FOUR (4) FEET OR GREATER IN HEIGHT (HEIGHT AS DEFINED IN INTERNATIONAL BUILDING CODE AND STATE BUILDING CODE):
   A. THE OWNER OR THE OWNER'S CONTRACTOR IS TO PROVIDE A SITE-SPECIFIC RETAINING WALL DESIGN PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED (E.G. STRUCTURAL ENGINEER) IN THE STATE WHERE THE CONSTRUCTION OCCURS. SOIL TYPES, WATER TABLE ELEVATION, EXISTING & PROPOSED SURROUNDING IMPROVEMENTS/CONDITIONS (INCLUDING BUT NOT LIMITED TO SLOPES, DRIVE AISLES, ROADS, FENCING, GUIDERAILS, UTILITIES, DRAINAGE FACILITIES, STRUCTURES, FOUNDATIONS), LIVE LOADS AND OTHER SITE AMENITIES THAT COULD HAVE AN INFLUENCE OR IMPACT ON THE RETAINING WALL(S) CONSTRUCTABILITY AND/OR LONGEVITY MUST BE CONSIDERED AND INCORPORATED INTO THE RETAINING WALL DESIGN AS WELL AS THE GLOBAL STABILITY ANALYSIS.
   B. PEER REVIEW AND GLOBAL STABILITY ANALYSIS OF THE RETAINING WALL DESIGN MUST BE COMPLETED BY THE OWNER'S GEOTECHNICAL ENGINEER TO CERTIFY THE DESIGN MEETS INDUSTRY STANDARDS FOR FACTOR OF SAFETY. SOIL TYPES, WATER TABLE ELEVATION AND DESIGN PROPERTIES AS NOTED ABOVE MUST BE FIELD CONFIRMED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO WALL CONSTRUCTION.
9. CONTRACTOR MUST INSTALL CURB ALONG FACE OF BUILDING / WALL AS SHOWN TO PROVIDE CONSISTENT WIDTH ALONG LENGTH OF PROPOSED ACCESSIBLE RAMP AND RAMP LANDING TO MEET ADA/AAB REQUIREMENTS.
10. CONTRACTOR MUST REVIEW RETAINING WALL LOCATIONS VERSUS APPLICABLE STATE AND LOCAL CODES AND PROVIDE FALL PROTECTION (E.G. FENCING OR RAILING) IN ACCORDANCE WITH SAID CODE.
11. CONTRACTOR MUST COORDINATE WITH OWNER/OPERATOR TO REVIEW EXISTING DEPRESSIONS WITHIN EXISTING PAVEMENT AREAS TO REMAIN AND MUST CONFIRM THAT THE SCOPE OF WORK MUST PROVIDE POSITIVE DRAINAGE BY FIXING ANY EXISTING AREAS OF PONDING.

MASSACHUSETTS ACCESSIBILITY DESIGN GUIDELINES

(Rev. 10/2025)

1. IN ADDITION TO THE ACCESSIBILITY DESIGN GUIDELINES ON SHEET C-102, THE CONTRACTOR MUST ALSO ENSURE THAT ALL ACCESSIBLE COMPONENTS AND ACCESSIBLE ROUTES ARE CONSTRUCTED IN STRICT ACCORDANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) REGULATIONS 521 CMR. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY DISCREPANCIES BETWEEN THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE, AAB, AND STATE BUILDING CODE AS IT RELATES TO ANY ACCESSIBLE IMPROVEMENTS BEING CONSTRUCTED PRIOR TO COMMENCING THE WORK.

MASSACHUSETTS DRAINAGE NOTES

(Rev. 10/2025)

1. WHEN THESE PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO STORM, SANITARY, UTILITIES, AND IRRIGATION LINES, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. THE CONTRACTOR MUST CAP ENDS OF INSTALLED UTILITIES AS APPROPRIATE, MARK UTILITY ENDS WITH MAGNETIC TRACER TAPE, MARK TERMINUS LOCATIONS WITH A 2 IN X4 FT STAKE, AND MUST NOTE THE LOCATION OF ALL UTILITY STUBS ON A CLEAN COPY OF THE PLAN. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
2. STORM AND SANITARY PIPE LENGTHS INDICATED ARE NOMINAL AND ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE UNLESS INDICATED ON THE PLANS OTHERWISE.
3. UNLESS CLEARLY INDICATED OTHERWISE, ALL STORM PIPE MUST BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH SILT/SOIL TIGHT JOINTS. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS CALLED FOR ON THE PLANS, IT MUST CONFORM TO AASHTO M252 FOR PIPES 4" TO 10" AND TO AASHTO M294 FOR PIPES 12" TO 60" AND TYPE S (SMOOTH INTERIOR WITH ANGULAR CORRUGATIONS) WITH GASKET FOR SILT/SOIL TIGHT JOINT. PIPE FOR ROOF DRAIN CONNECTION MUST BE SDR 26 PVC OR SCHEDULE 40 UNLESS INDICATED OTHERWISE. HDPE PIPE JOINT GASKETS MUST BE PROVIDED AND CONFORM TO ASTM F477. DRAIN PIPE INSTALLED WITH OVER TEN (10) FEET OVER COVER AND/OR IN HIGH GROUNDWATER CONDITIONS SHALL BE SANITITE HP POLYPROPYLENE PIPE (PP), OR APPROVED EQUIVALENT.

MASSACHUSETTS UTILITY NOTES

(Rev. 10/2025)

1. THE CONTRACTOR'S PRICE FOR WATER AND SEWER SERVICE INSTALLATIONS MUST INCLUDE ALL FEES, COSTS, AND APPURTENANCES REQUIRED BY THE UTILITY PROVIDER (AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK) TO PROVIDE FULL AND COMPLETE WORKING SERVICE, INCLUDING (BUT NOT LIMITED TO) NECESSARY FEES, TESTING, DISINFECTING, INSPECTIONS, ROAD OPENING & BACKFILL REQUIREMENTS, TRAFFIC CONTROL AND SURETY BONDS AS DEFINED BY THE PROVIDER (AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK).
2. ALL WORK ASSOCIATED WITH UTILITY POLES, OVERHEAD WIRES AND ANY/ALL APPURTENANCES MUST BE COORDINATED BY THE CONTRACTOR WITH THE LOCAL UTILITY COMPANIES PRIOR TO THE ORDERING OF ANY MATERIALS. THIS MAY INCLUDE BUT IS NOT LIMITED TO THE REMOVAL, INSTALLATION, RELOCATION OR PROTECTION OF ANY BRACING, GUY WIRES, OVERHEAD WIRES, ETC. AS MAY BE REQUIRED TO ACCOMMODATE THE PROJECT.
3. SEWERS CONVEYING SANITARY FLOW, OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST TEN (10) FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST, AT A MINIMUM, BE IN SEPARATE TRENCHES WITH THE AT LEAST 18 INCHES OF VERTICAL SEPARATION FROM THE BOTTOM OF THE WATER MAIN TO THE TOP OF THE SEWER LINE. WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST TEN (10) FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SANITARY SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SANITARY SEWER MUST BE PROVIDED. ALL CROSSINGS MUST BE IN ACCORDANCE WITH JURISDICTIONAL PERMITTING/UTILITY AUTHORITIES REGULATIONS.
4. WHEN THESE PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO STORM, SANITARY, UTILITIES, AND IRRIGATION LINES, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. THE CONTRACTOR MUST CAP ENDS OF INSTALLED UTILITIES AS APPROPRIATE, MARK UTILITY ENDS WITH MAGNETIC TRACER TAPE, MARK TERMINUS LOCATIONS WITH A 2 IN X 4 FT STAKE, AND MUST NOTE THE LOCATION OF ALL UTILITY STUBS ON A CLEAN COPY OF THE PLAN. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
5. UNLESS INDICATED OTHERWISE, ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC., MUST BE INSTALLED UNDERGROUND. ALL NEW UTILITY SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
6. SANITARY PIPE MUST BE POLYVINYL CHLORIDE (PVC) SDR 35 EXCEPT WHERE CLEARLY INDICATED OTHERWISE. SANITARY LATERAL(S) MUST BE PVC SDR 26 UNLESS CLEARLY INDICATED OTHERWISE.
7. UNLESS CLEARLY INDICATED OTHERWISE ALL SANITARY PIPE MUST BE:
   A. FOR PIPES LESS THAN TWELVE (12) FEET DEEP: POLYVINYL CHLORIDE (PVC) SDR 35 PER ASTM D3034.
   B. FOR PIPES GREATER THAN TWELVE (12) FEET DEEP: POLYVINYL CHLORIDE (PVC) SDR 26 PER ASTM D3034.
   C. UNLESS LOCAL OR STATE BUILDING / PLUMBING CODE CLEARLY SPECIFIES DIFFERENTLY, SANITARY LATERALS MUST BE PVC SDR 26.
   D. FOR ALL UTILITY PIPING (INCLUDING DRAIN) WITHIN TEN (10) FEET OF A BUILDING, PIPE MATERIAL MUST COMPLY WITH APPLICABLE LOCAL OR STATE BUILDING AND PLUMBING CODES. CONTRACTOR MUST REFER TO PLUMBING ENGINEERING PLANS AND VERIFY PIPE MATERIAL WITH LOCAL OFFICIAL PRIOR TO ORDERING OF MATERIALS.
   E. CONTRACTOR MUST VERIFY THE CONNECTION OF EXTERIOR PIPING TO ANY FIXTURES (SUCH AS AN EXTERIOR GREASE INTERCEPTOR) OR OTHER DRAINAGE SYSTEMS WITH LOCAL OFFICIALS FOR COMPLIANCE WITH APPLICABLE LOCAL OR STATE BUILDING AND PLUMBING CODES PRIOR TO ORDERING OF MATERIALS.
8. WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER COMPANY. IN THE ABSENCE OF SUCH REQUIREMENTS, WATER MAIN PIPING MUST BE CEMENT-LINED DUCTILE IRON (DIP) MINIMUM CLASS 52 THICKNESS. ALL PIPE AND APPURTENANCES MUST COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.
9. GAS METERS MUST BE PROTECTED AS REQUIRED BY THE JURISDICTIONAL GAS PROVIDER.
10. TRANSFORMERS AND SWITCH GEARS: GC MUST PROVIDE ALL APPURTENANCES IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS AND CARRY SAME IN BASE BID. APPURTENANCES MUST INCLUDE, BUT NOT BE LIMITED TO, THE CONCRETE PAD, SECONDARY SPILL CONTAINMENT AREAS (IF REQUIRED), BOLLARD / VEHICULAR PROTECTION, AND OTHER ITEMS AS MAY BE REQUIRED BY THE UTILITY PROVIDER FOR INSTALLATION OF THE TRANSFORMER AND SWITCH GEAR (IF REQUIRED). GC MUST COORDINATE ALL ASPECTS OF INSTALLATION WITH UTILITY PROVIDER PRIOR TO ORDERING OF MATERIALS AND NOTIFY DESIGN ENGINEER OF ANY CONFLICTS IN WRITING.

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PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

PROFESSIONAL ENGINEER
CIVIL No. 41530
MAINE LICENSE No. 12553

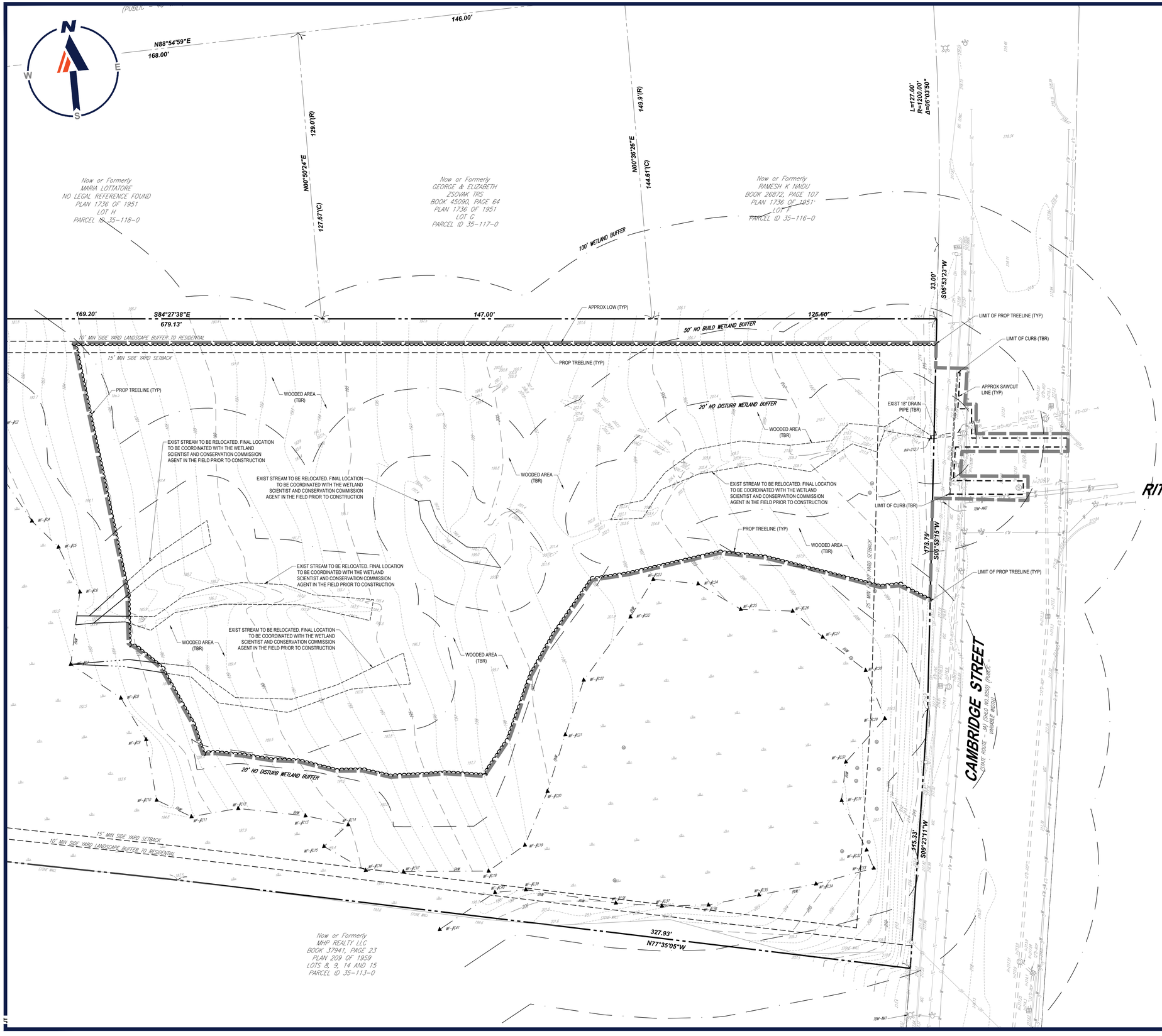
SHEET TITLE:

JURISDICTIONAL NOTES

SHEET NUMBER:

C-103

ORG. DATE - 12/16/2025



THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

20 10 5 0 20

SCALE: 1" = 20'

Dec 16, 2025
\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-PROP-MAA250027.00-0E-----LAYOUT: C-201 EXOM

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DRAWN BY:	JWT/SJR
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DATE:	12/16/2025
CAD I.D.:	P-CIVL-PROP

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

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JOHN A. KUCICH
COMMONWEALTH OF MASSACHUSETTS
JOHN A. KUCICH
CIVIL
No. 41530
REGISTERED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER
MASSACHUSETTS No. 41530
NEW HAMPSHIRE No. 19476
CONNECTICUT No. 26177
RHODE ISLAND No. 9616
MAINE LICENSE No. 12853

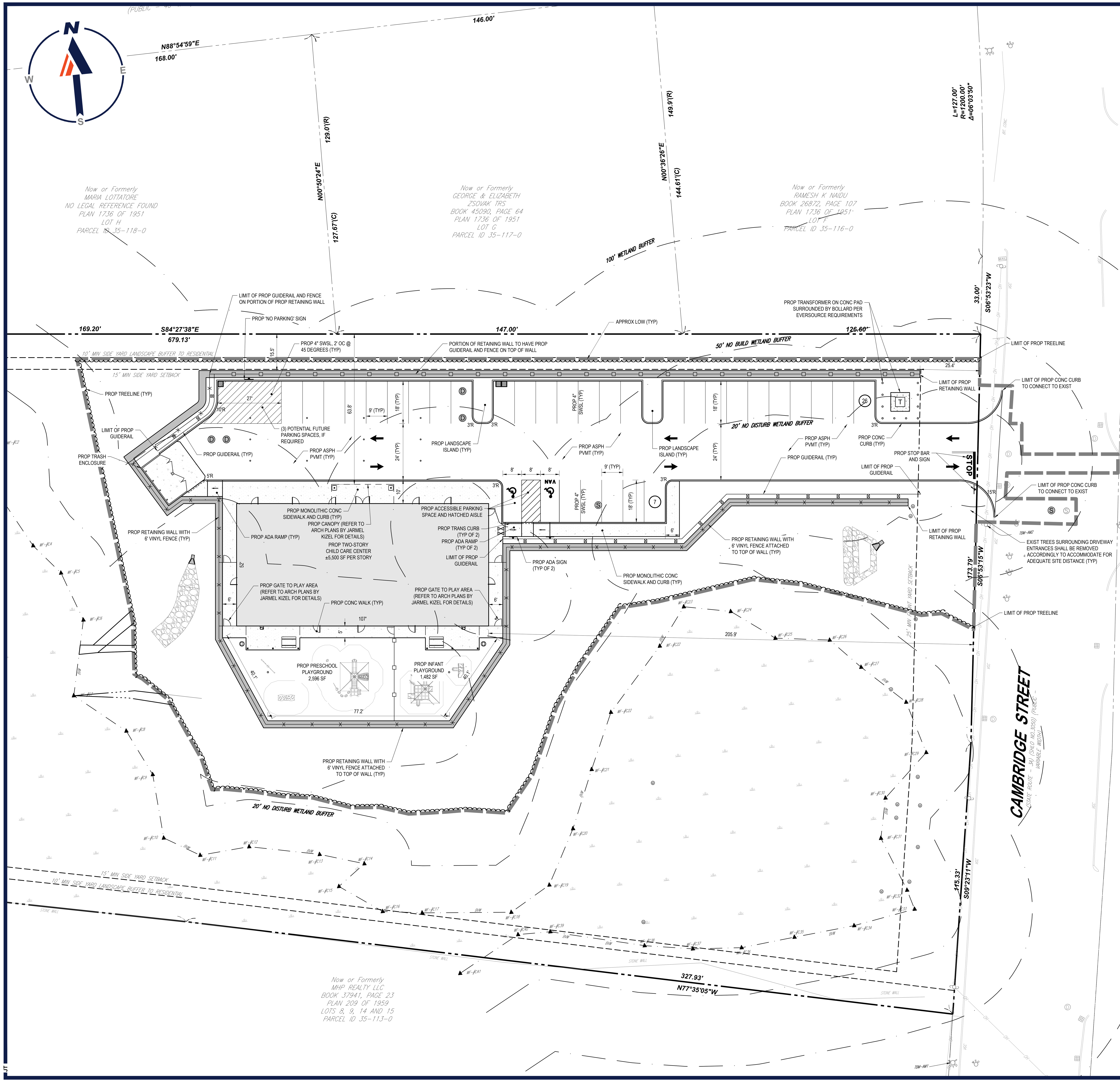
SHEET TITLE:

EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:

C-201

ORG. DATE - 12/16/2025



ZONING TABLE

ZONE: RO - ONE-FAMILY DWELLING
USE: CHILD CARE CENTER
OVERLAY DISTRICT: WATER RESOURCE DISTRICT
PARCEL ID: 35-115-0

APPLICANT/ OWNER INFORMATION

APPLICANT:	FOXBORO LEARNING, LLC 21671 BRONTE PLACE ASHBURN, VA 20147
PROPERTY OWNER:	CHAPIN MICHAEL & J MADDEN TRS 441 MAIN STREET #203 MELROSE, MA 02176

BULK REQUIREMENTS

ITEM	CODE	REQUIRED	EXISTING	PROPOSED
MIN LOT AREA	ARTICLE V 5.2.0 & ARTICLE V 5.1.2.5	20,000 SF (1)	±3.82 AC (166,584 SF)	NO CHANGE
MIN LOT FRONTAGE	ARTICLE V 5.2.0	100 FT	289.1 FT	NO CHANGE
MIN LOT WIDTH	ARTICLE V 5.2.0	20 FT	215.2 FT	NO CHANGE
MIN YARD SETBACKS				
FRONT YARD	ARTICLE V 5.2.0	25 FT	N/A	25.4 FT (TO WALL) 205.9 FT (TO BUILDING)
SIDE YARD	ARTICLE V 5.2.0	15 FT	N/A	15.5 FT (TO WALL) 63.8 FT (TO BUILDING)
REAR YARD	ARTICLE V 5.2.0	15 FT	N/A	341.9 FT (TO WALL) 350.3 FT (TO BUILDING)
MIN SIDE YARD LANDSCAPE BUFFER TO RESIDENTIAL	ARTICLE V 5.1.4	10'	N/A	15.5 FT
MAX PERMITTED HEIGHT	ARTICLE V 5.2.0	30 FT	N/A	<30'
MAX BUILDING COVERAGE	ARTICLE V 5.1.4	25%	0%	3.3%
MAX IMPERVIOUS COVERAGE	ARTICLE VIII 8.3.8.4	60%	0%	16.4%
MIN ACCESS DRIVEWAY WIDTH	ARTICLE VII 7.2.11	24 FT	N/A	24 FT

PARKING REQUIREMENTS

ITEM	CODE	PERMITTED	EXISTING	PROPOSED
MIN STALL SIZE	ARTICLE VII 7.2.4	9' X 18'	N/A	9' X 18'
MIN ADA STALL SIZE	ARTICLE VII 7.2.4	13' X 18'	N/A	8' X 18'
MIN AISLE WIDTH	ARTICLE VII 7.2.4	24 FT	N/A	24 FT
MIN NUMBER OF SPACES	ARTICLE VII 7.2.5	33 SPACES	N/A	33 SPACES
MAX NUMBER OF SPACES	ARTICLE VII 7.2.5	33 SPACES	N/A	33 SPACES
MIN NUMBER OF ADA SPACES	521 CMR 23.2.1	2 SPACES	N/A	2 SPACES
CHILD CARE CENTER: REQUIRED= (3) SPACES PER 1,000 SQUARE FEET CALCULATION= (3) SPACES X 11,000 SF/1,000 = 33 SPACES				

(1) WHERE GROUND SLOPE IS 10% OR LESS IN RO DISTRICTS, THE MINIMUM LOT AREA SHALL BE 20,000 SF. WHERE THE GROUND SLOPE IS MORE THAN 10%, THE MINIMUM LOT SIZE SHALL BE INCREASED BY 1,000 ADDITIONAL SQUARE FEET FOR EACH ADDITIONAL ONE PERCENTAGE OF SLOPE, TO A MAXIMUM OF 45,000 SF.
(1)1) THE CALCULATED GROUND SLOPE PURSUANT TO SECTION 5.1.2.5 (A) IS 8.5%

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

20 10 5 0 20
SCALE: 1" = 20'

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DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-PROP

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

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MAINE LICENSE No. 12853

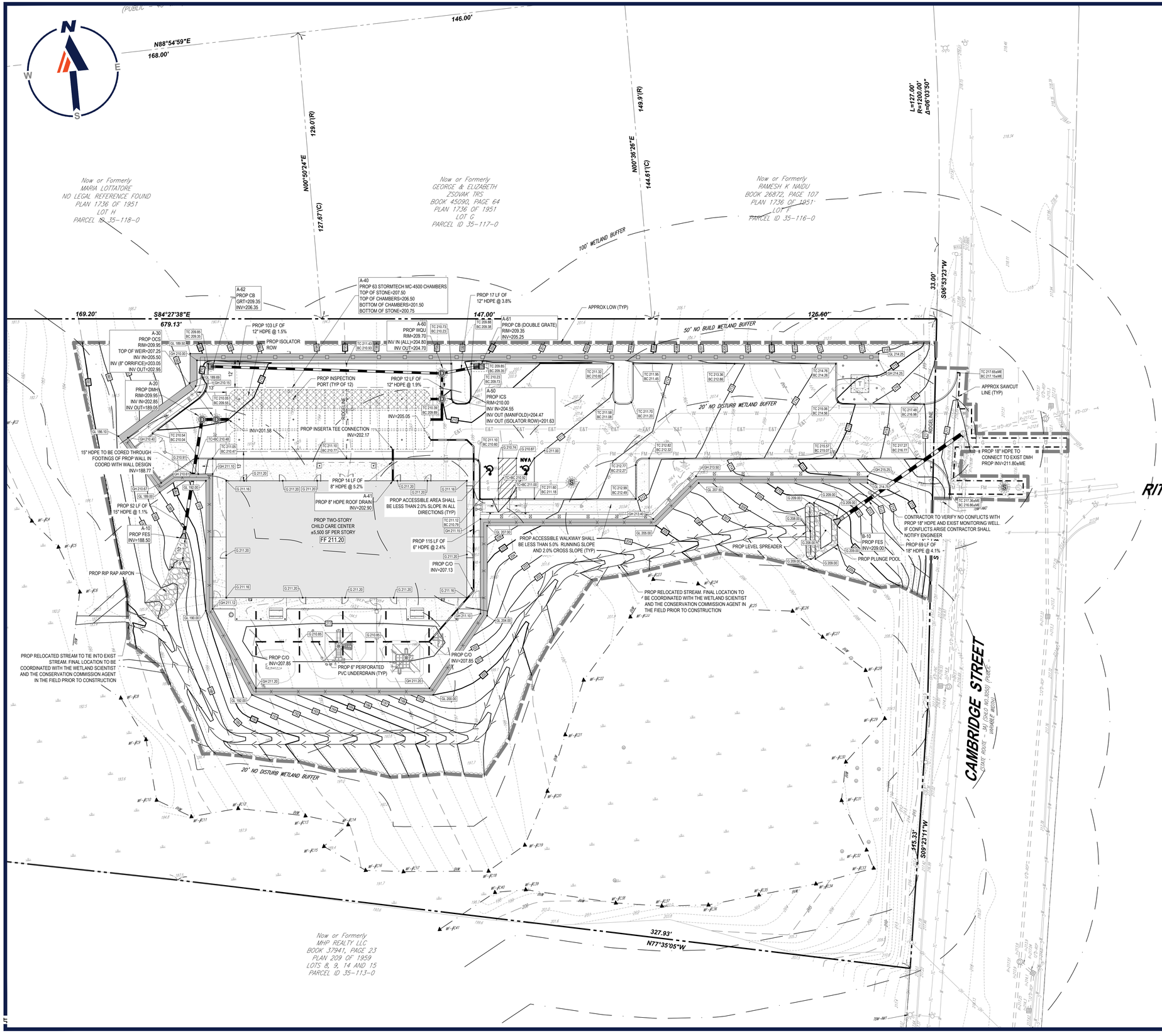
SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-301

ORG. DATE - 12/16/2025



Dec 16, 2025
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JT

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PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED
CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

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CIVIL
No. 41530
REGISTERED PROFESSIONAL ENGINEER
J. KUCZARSKI
PROFESSIONAL ENGINEER
MASSACHUSETTS No. 41530
NEW HAMPSHIRE No. 19476
CONNECTICUT No. 26177
RHODE ISLAND No. 9616
MAINE LICENSE No. 12853

SHEET TITLE:

GRADING AND DRAINAGE PLAN

SHEET NUMBER:

C-401

ORG. DATE - 12/16/2025

N

W E

S

(PUBLIC – 40' R.O.W.)

N88°54'59"E
168.00'

146.00'

129.0'(R)
N00°50'24"E
127.67'(C)

149.9'(R)
N00°36'26"E
144.61'(C)

L=127.09'
R=1200.00'
Δ=06°03'50"

33.00'
S06°53'23"W

Now or Formerly
MARIA LOTTATORE
NO LEGAL REFERENCE FOUND
PLAN 1736 OF 1951
LOT H
PARCEL ID 35-118-0

Now or Formerly
GEORGE & ELIZABETH
ZSOVAK TRS
BOOK 45090, PAGE 64
PLAN 1736 OF 1951
LOT G
PARCEL ID 35-117-0

Now or Formerly
RAMESH K NAIDU
BOOK 26872, PAGE 107
PLAN 1736 OF 1951
LOT F
PARCEL ID 35-116-0

100' WETLAND BUFFER

169.20'
S84°27'38"E
679.13'

147.00'

125.60'

APPROX LOW (TYP)

50' NO BUILD WETLAND BUFFER

PROP TRANSFORMER ON CONC PAD SURROUNDED BY BOLLARD PER EVERSOURCE REQUIREMENTS

PROP 6" CLDI FIRE WATER SERVICE LINE (TYP)

20' NO DISTURB WETLAND BUFFER

PROP ELECTRIC AND TELECOM SERVICE LINE (TYP)

PROP GAS SERVICE LINE (TYP)

APPROX SAWCUT LINE (TYP)

PROP 6" CLDI FIRE WATER SERVICE LINE TO TIE INTO EXIST WATER MAIN. GC TO VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICTS

PROP 40 LF OF 4" SDR 35 PVC @ 2.0%

PROP ELECTRIC SERVICE FOR PUMP STATION

PROP 201 LF FORCEMAIN SANITARY LINE

PROP 7 LF OF 4" SDR 35 PVC @ 2.1%

RITA AVE

PROP ELEC AND TELECOM SERVICE CONNECTION

PROP GAS SERVICE CONNECTION

PROP 4" SANITARY SERVICE CONNECTION INV.=207.00

PROP 6" CLDI FIRE WATER SERVICE

PROP 2" TYPE K COPPER DOMESTIC WATER SERVICE

PROP TWO-STORY CHILD CARE CENTER ±5,500 SF PER STORY

PROP PUMP STATION RIM=211.15 INV IN=206.05 INV OUT=205.95

PROP SMH-10 RIM=217.70 INV IN=210.15 INV OUT=210.05

PROP ELECTRIC AND TELECOM SERVICE CONNECTION TO CONNECT TO EXIST UTILITY POLE. GC TO COORD WITH UTILITY COMPANY

PROP 4" SANTIARY LINE TO EXIST SMH. GC TO VERIFY LOCATION AND ELEVATION PRIOR TO CONSTRUCTION PROP INV=209.9

175.33'
S09°23'11"W

CAMBRIDGE STREET
STATE ROUTE – 3A (OLD NO. 3000) PUBLIC – VARIABLE WIDTH

327.93'
N77°35'05"W

Now or Formerly
MHP REALTY LLC
BOOK 37941, PAGE 23
PLAN 209 OF 1959
LOTS 8, 9, 14 AND 15
PARCEL ID 35-113-0

ALL WET UTILITIES WITHIN 10-FT OF THE BUILDING, INCLUDING OIL/WATER SEPARATOR (IF APPLICABLE), ARE GOVERNED BY THE MASSACHUSETTS UNIFORM STATE PLUMBING CODE (248 CMR 10.00). SEE PLUMBING PLANS FOR PIPE MATERIAL WITHIN 10-FT OF THE BUILDING. WET UTILITIES ARE DRAWN TO THE BUILDING FACE FOR COORDINATION PURPOSES ONLY.

THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY

20 10 5 0 20
SCALE: 1" = 20'

Dec 16, 2025
\\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-PROP-MAA250027.00-SE-----LAYOUT, C-501 UTIL
JT

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DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVIL-PROP

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

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MASSACHUSETTS No. 41530
NEW HAMPSHIRE No. 19476
CONNECTICUT No. 26177
RHODE ISLAND No. 9616
MAINE LICENSE No. 12853

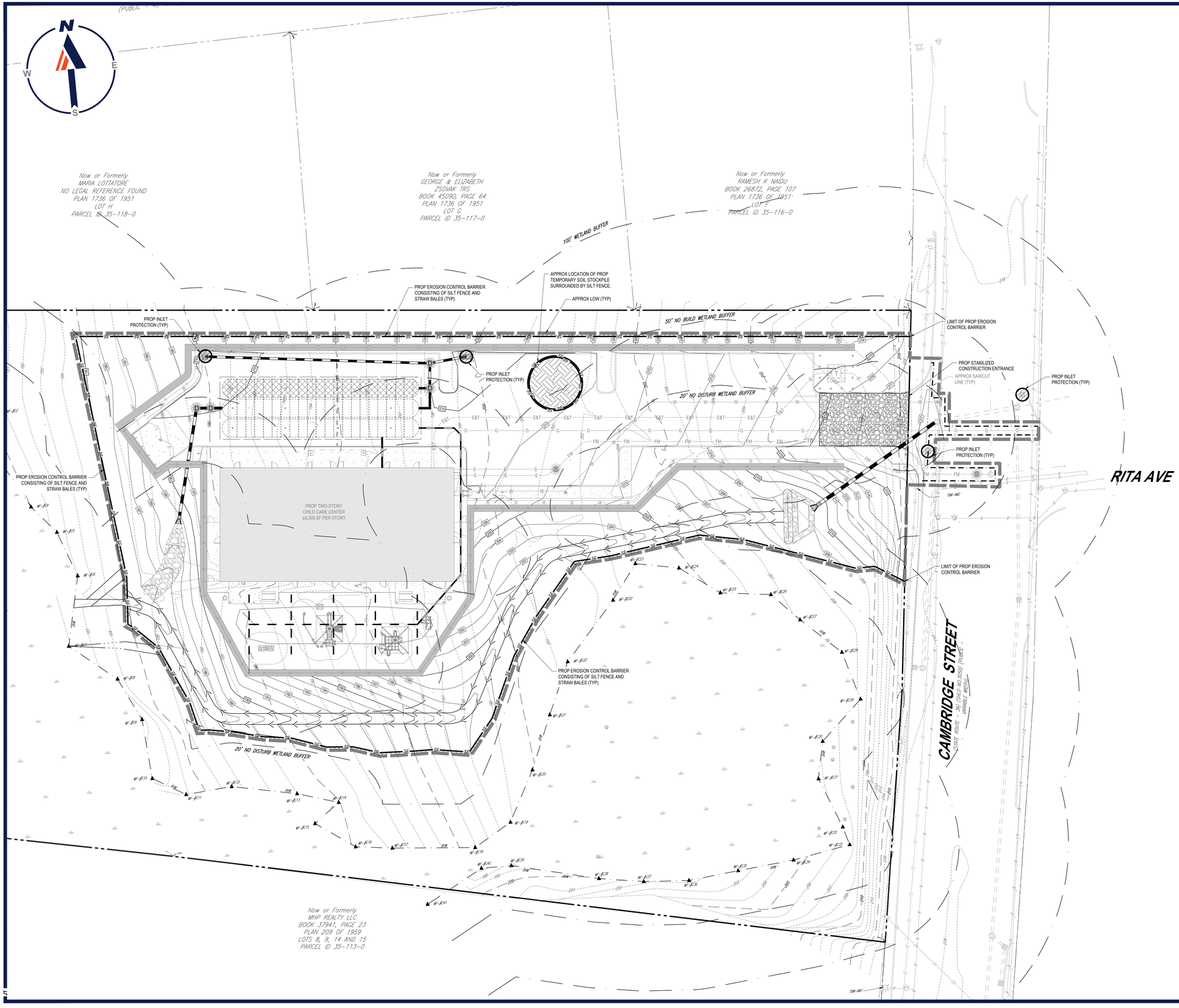
SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C-501

ORG. DATE - 12/16/2025



Dec 16, 2025
\\BOHLERENG\NETSHARES\MA-PROJECTS\2025\MAA250027.00\CADD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-PROP-MAA250027.00-0E-----LAYOUT, C-801 EROS
JT

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MASSACHUSETTS No. 41530
NEW HAMPSHIRE No. 19476
CONNECTICUT No. 26177
RHODE ISLAND No. 9616
MAINE LICENSE No. 12853

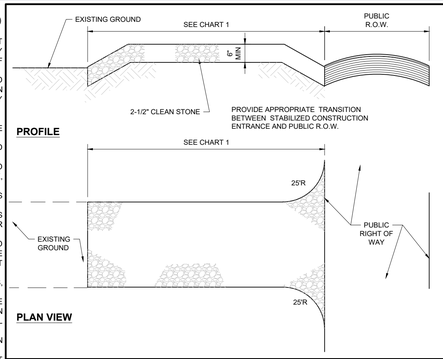
SHEET TITLE:

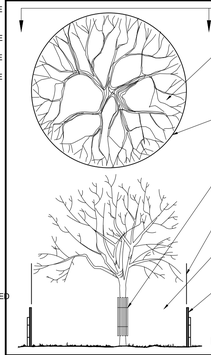
SOIL EROSION AND SEDIMENT CONTROL PLAN

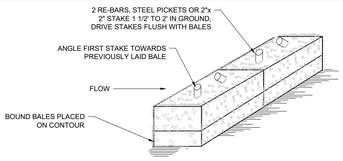
SHEET NUMBER:

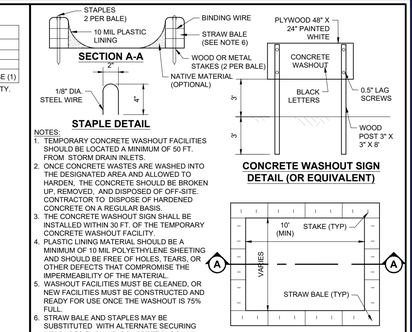
C-801

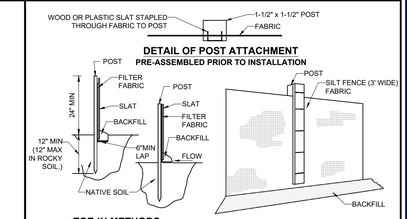
ORG. DATE - 12/16/2025

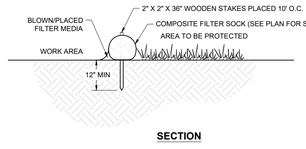


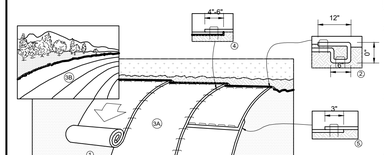












MASSACHUSETTS EROSION AND SEDIMENT CONTROL NOTES

(Rev. 10/2025)

1. ALL SEDIMENT AND EROSION CONTROL MEASURES MUST BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS MUST BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, AREAS MUST BE PERMANENTLY STABILIZED ACCORDING TO THE CURRENT EDITION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), OR IN THE ABSENCE OF A SWPPP, THEY MUST BE PERMANENTLY STABILIZED WITHIN FOURTEEN (14) DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM, POND OR WETLANDS, THE AREA MUST BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO ANY STORM EVENT.
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING MUST BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY SEVEN (7) DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES MUST REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES MUST REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, MUST BE STEEPER THAN TWO TO ONE (2:1) UNLESS OTHERWISE INDICATED ON THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 2:1 MUST BE DESIGNED BY A GEOTECHNICAL ENGINEER.
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED MUST BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT MUST BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED IN ACCORDANCE WITH THE LANDSCAPE PLAN.
11. ALL TEMPORARY EROSION CONTROL MEASURES MAY BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES MUST REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
12. WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, FILTER SOCKS, SILT FENCE OR A COMBINATION THEREOF.
13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM MUST HAVE AN EXPOSURE WINDOW OF NOT MORE THAN SEVEN (7) DAYS.
14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM MUST FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED:

LOCATION	STABILIZATION	APPLICATION
PROTECTED AREA	STRAW	100 POUNDS / 1,000 SF
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS	185-275 POUNDS / 1,000 SF
	STRAW (ANCHORED)*	100 POUNDS / 1,000 SF
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED AND IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS
GREATER THAN 2:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

* A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER MUST BE USED TO ADDITIONAL WIND CONTROL.

* MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

15. SEDIMENT TRAPS MUST BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
    a. TEMPORARY SEDIMENT TRAPS MUST BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND PROVIDE A MINIMUM OF 1,800 CF PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES, MAINTAIN A 2:1 LENGTH TO WIDTH RATIO, AND NOT EXCEED 5 FT IN HEIGHT. UPON SITE STABILIZATION, ACCUMULATED SEDIMENT MUST BE REMOVED AND THE TEMPORARY SEDIMENT TRAP EXCAVATED TO 1 FOOT BELOW THE TRAP. THE AREA MUST THEN BE SCARIFIED TO PREVENT COMPACTION AND PROMOTE INFILTRATION, AND GRADED AND STABILIZED IN ACCORDANCE WITH THE GRADING AND LANDSCAPE PLANS.
16. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
17. EXISTING CATCH BASIN STRUCTURES MUST BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
18. THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.
19. THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.

EROSION CONTROL NOTES DURING WINTER CONSTRUCTION

(Rev. 10/2025)

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK MUST BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (AS APPLICABLE) SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.
3. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS MUST NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
4. AN AREA MUST BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
5. FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING FOURTEEN (14) DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES MUST BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE. SLOPES MUST NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WORK HAS CEASED FOR MORE THAN FOURTEEN (14) DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION MUST BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
6. MULCHING REQUIREMENTS:
   a. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH MUST BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
   b. MULCH NETTING MUST BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
   c. MULCH NETTING MUST BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.

27. ALL DISTURBED AREAS MUST BE STABILIZED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AS APPLICABLE.
28. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW MUST BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

(Rev. 10/2025)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. EROSION CONTROL MEASURES MUST CONFORM TO THE STATE, LOCAL, AND FEDERAL GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR UNLESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
3. THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY 1.24 ACRES.
4. STABILIZED CONSTRUCTION ENTRANCE/ EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
5. EROSION CONTROL BARRIER - INSTALL SILT FENCE(S), STRAW BALES, AND/OR FILTER SOCK (OR APPROVED EQUIVALENT) AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
6. INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.
7. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
8. THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN SIX (6) INCHES OR HALF THE EROSION CONTROL BARRIER'S HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
9. THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN SEVEN (7) DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
10. THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
11. THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF/LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
12. THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
13. THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR INSTALLING DIFFERENT SPECIFIED METHODS OF STABILIZATION.
14. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES, MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
15. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
16. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
17. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
18. SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
19. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (AS SHOWN)
- INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)
- CLEARING AND GRUBBING
- INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
- EARTHWORK AND EXCAVATION/FILLING AS NECESSARY
- CONSTRUCTION OF UTILITIES
- STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING
- INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)
- CONSTRUCTION OF BUILDINGS
- CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
- SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
- FINAL GRADING OF ALL SLOPED AREAS
- PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED AS REQUIRED.
- REMOVAL OF THE TEMPORARY SEDIMENT BASINS
- PAVE PARKING LOT
- LANDSCAPING PER LANDSCAPING PLAN
- REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200FT
>5%	ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE (1)	

(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

CHART 1

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE (NE-O020101 - 09/2023)

CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

NOTES:
1. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAIN INLETS.
2. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF OFF-SITE. CONTRACTOR TO DISPOSE OF HARDENED CONCRETE ON A REGULAR BASIS.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
4. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
5. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
6. STRAW BALE AND STAPLES MAY BE SUBSTITUTED WITH ALTERNATE SECURING MEASURES SUCH AS CONCRETE BLOCK.

PLAN

CONCRETE WASTE MANAGEMENT AREA

NOT TO SCALE (NE-O020201 - 09/2023)

TREE PROTECTION DURING SITE CONSTRUCTION

NOT TO SCALE (NE-O030201 - 09/2023)

NOTES:
1. BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE PROMPTLY AS NEEDED.
5. DRAINAGE AREA NO MORE THAN $\frac{1}{4}$ AC. PER 100 FEEL OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%.
6. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE BARRIER

NOT TO SCALE (NE-O030302 - 09/2023)

DETAIL OF POST ATTACHMENT

PRE-ASSEMBLED PRIOR TO INSTALLATION

TOE-IN METHODS

PERSPECTIVE OF FENCE

NOTES:
1. EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE.
2. UNROLL SILTATION FENCE AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH (NET SIDE AWAY FROM FLOW DIRECTION).
3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL ALSO BE ACCOMPLISHED BY LAYING FABRIC FLAP ON UNDISTURBED GROUND AND PILING & TAMPING FILL AT THE BASE.

SILT FENCE

NOT TO SCALE (NE-O040101 - 09/2023)

NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS
2. COMPOST FILTER SOCK FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE AT COMPLETION OF CONSTRUCTION OR AS DIRECTED BY OWNER AFTER STABILIZATION IS ACHIEVED.

OR APPROVED EQUIVALENT

COMPOST FILTER SOCK

NOT TO SCALE (NE-O040201 - 09/2023)

NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH AS SHOWN IN DETAIL 2. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURES RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MINIMUM 6" OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.
7. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET STEEP SLOPE PROTECTION

NOT TO SCALE (NE-O049901 - 09/2023)

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC $^{-1}$

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC $^{-1}$

NOTES:
1. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

SECTION VIEW

PROFILE VIEW OF INSTALLED FILTER SACK

ISOMETRIC VIEW

OR APPROVED EQUIVALENT

INLET PROTECTION WITH MANUFACTURED INSERT

NOT TO SCALE (NE-O050101 - 09/2023)

TEMPORARY STOCK PILE WITH SILT FENCE AND FILTER SOCK

NOT TO SCALE (NE-O060102 - 09/2023)

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REV	DATE	COMMENT	DRAWN BY CHECKED BY

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PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PROP. SITE PLAN DOCUMENTS
— FOR —
FOXBORO LEARNING, LLC

PROPOSED
CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
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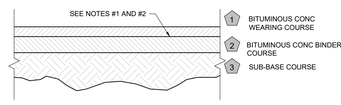
JOHN A. KUCICH CIVIL No. 41530
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE No. 41530
NEW HAMPSHIRE LICENSE No. 15476
CONNECTICUT LICENSE No. 26177
RHODE ISLAND LICENSE No. 9616
MAINE LICENSE No. 12553

SHEET TITLE:
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:
C-803

ORG. DATE - 12/16/2025

Dec 16, 2025 \\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-MAA250027.00-0E----->LAYOUT: C-803 EROD

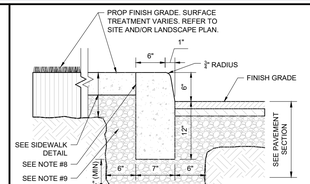


1. BITUMINOUS CONC TOP COURSE (LIGHT DUTY=1") (HEAVY DUTY=1.5") (MA DOT M3.11.4-1)
2. BITUMINOUS CONC BINDER COURSE (LIGHT DUTY=2") (HEAVY DUTY=2.5") (MA DOT M3.11.4-1)
3. GRAVEL BORROW SUB-BASE COURSE (LIGHT DUTY=12") (HEAVY DUTY=12") (MA DOT M2.01.7)

NOTES:
1. IF THE WEARING COURSE IS BEING PLACED MORE THAN 48 HOURS AFTER THE BINDER COURSE, A TACK COAT CONFORMING TO THE STATE DEPARTMENT OF TRANSPORTATION SHALL BE USED TO ENSURE PROPER ADHESION.
2. SWEEP BINDER COURSE CLEAN OF ALL DEBRIS PIRIOR TO PLACING TACK COAT AND ASPHALT.
3. REFER TO GEOTECHNICAL REPORT FOR PAVEMENT SPECIFICATIONS AND ALL INSTALLATION REQUIREMENTS INCLUDING (BUT NOT LIMITED TO) COMPACTION AND NEED FOR GEOTECHNICAL FABRIC (IF REQUIRED)). IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND THE GEOTECH REPORT, THE GEOTECH REPORT SHALL GOVERN.
4. IN THE ABSENCE OF A GEOTECHNICAL REPORT THE PAVEMENT COURSES SHALL CONFORM TO STATE DOT SPECIFICATIONS.

PAVEMENT SECTION

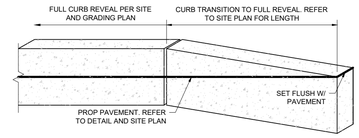
NOT TO SCALE (MA-S010101 - 05/2025)



NOTES:
1. CURB SHALL CONSIST OF 4,000 PSI AIR ENTRAINED CONCRETE, EXPOSED EDGES TO HAVE RUBBED FINISH, AND SURFACE SHALL BE TREATED WITH A CONCRETE PENETRANT/SEALER.
2. THE ENDS OF CURB SECTIONS SHALL BE CHAMFERED 1/4 INCH.
3. THE CORNERS OF CURB SECTIONS SHALL MATCH THE ADJACENT CURB IN SIZE, COLOR AND FINISH.
4. CURBS, CURB CORNERS OR EDGING SHALL BE FITTED TOGETHER AS CLOSELY AS POSSIBLE.
5. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM OF TWENTY FEET (20') ON CENTER USING PREFORMED EXPANSION JOINT FILLER HAVING A THICKNESS OF ½ INCH.
6. PAVEMENT SECTION DEPTHS, MATERIAL, AND SPECIFICATIONS PER PAVEMENT SECTION DETAIL.
7. STRAIGHT CURB SECTIONS CAN BE USED FOR RADII 25' OR GREATER. OTHERWISE, CURVED CURB LENGTHS SHALL BE INSTALLED AT THE SPECIFIED RADIUS PER THE SITE PLAN.
8. PROVIDE ½ INCH EXPANSION JOINT USING PREFORMED EXPANSION JOINT FILLER WHERE ABUTTING CONCRETE SIDEWALK.
9. STONE MATERIAL SHALL BE CONSISTENT WITH THE CRUSHED STONE BASE COURSE REQUIRED FOR THE PAVEMENT SECTION, OR APPROVED EQUIVALENT.

PRECAST CONCRETE CURB

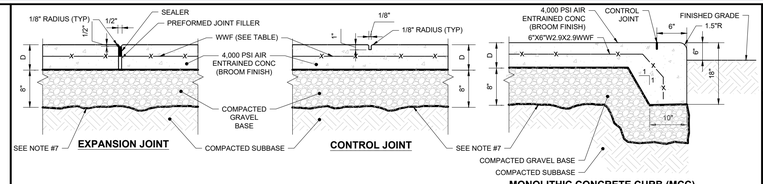
NOT TO SCALE (NE-S020201 - 02/2025)



NOTES:
1. SEE TYPICAL CURB DETAIL AND SITE PLAN FOR CURB TYPE AND TRANSITION CURB LOCATIONS

PRECAST CONCRETE TRANSITION CURB

NOT TO SCALE (NE-S020206 - 09/2023)

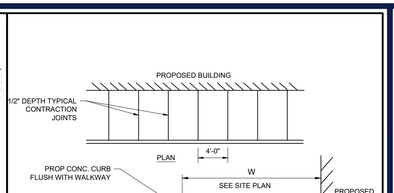


NOTES:
1. TO BE USED FOR BUILDING SURROUNDING AND OTHER CONCRETE WALKS. USE CHAIRS, OR SIMILAR, TO SUPPORT REINFORCING STEEL DURING POUR. VARIES SEE PLAN
2. SEE SITE PLAN FOR WIDTH AND GRADES
3. PROVIDE MINIMUM 1/8"/FT. CROSS-SLOPE
4. PROVIDE CONTROL JOINTS 5'-0" OC MIN
5. PROVIDE EXPANSION JOINTS 20'-0" OC MIN AT EXPANSION JOINTS, PROVIDE #6 DOWELS @ 24" OC
6. 6" CURB REVEAL IS TYPICAL. CONTRACTOR TO REVIEW GRADING PLAN FOR AREAS WHERE REVEAL MAY DIFFER.
7. REFER TO ARCHITECTURAL PLANS FOR DETAILS AT EXTERIOR LANDINGS FOR DOORS INCLUDING FROST PROTECTION AND CONNECTION (E.G. DOWELING) TO FOUNDATION

LOCATION	THICKNESS (D)	WWF
SIDEWALK/WALKWAY	4"	6"X6" W2.9/W2.9
DRIVEWAY	6"	6"X6" W4.0/W4.0

CONCRETE SIDEWALK

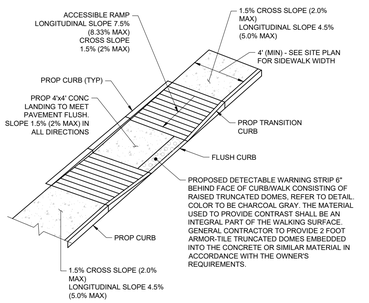
NOT TO SCALE (NE-S030201 - 06/2025)



NOTES:
1. MIN CROSS SLOPE 1/4" PER FOOT PITCHED AWAY FROM BUILDING.
2. PROVIDE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT AT 12' INTERVALS.

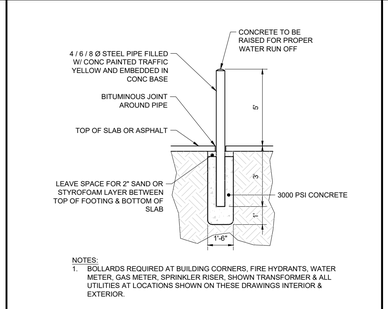
SIDEWALK ALONG BUILDING

NOT TO SCALE (NE-S030209 - 09/2023)



ACCESSIBLE RAMP TYPE B

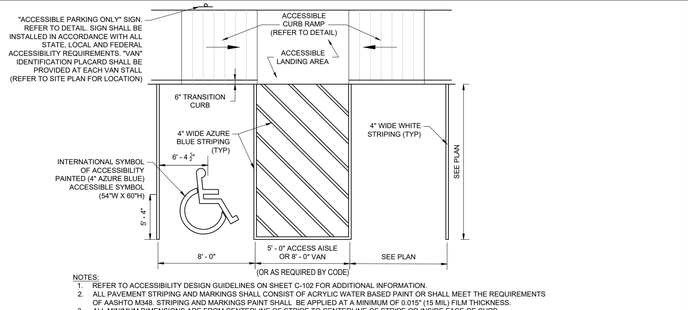
NOT TO SCALE (NE-S030205 - 10/2024)



NOTES:
1. BOLLARDS REQUIRED AT BUILDING CORNERS, FIRE HYDRANTS, WATER METER, GAS METER, SPRINKLER RISER, SHOWN TRANSFORMER & ALL UTILITIES AT LOCATIONS SHOWN ON THESE DRAWINGS INTERIOR & EXTERIOR.

BOLLARD

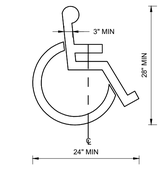
NOT TO SCALE (NE-S070101 - 09/2023)



NOTES:
1. REFER TO ACCESSIBILITY DESIGN GUIDELINES ON SHEET C-102 FOR ADDITIONAL INFORMATION.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF ACRYLIC WATER BASED PAINT OR SHALL MEET THE REQUIREMENTS OF AASHTO M348. STRIPING AND MARKINGS PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS.
3. ALL MINIMUM DIMENSIONS ARE FROM CENTERLINE OF STRIPE TO CENTERLINE OF STRIPE OR INSIDE FACE OF CURB.
4. THE LAYOUT AND NUMBER OF PARKING SPACES VARIES. REFER TO PLAN FOR LOCATION AND CONFIGURATION.
5. ACCESS AISLES CANNOT OVERLAP VEHICULAR WAYS.
6. AN ACCESS AISLE AT LEAST 5' WIDE (8' WIDE FOR VAN) AND AT LEAST AS LONG AS THE PARKING STALL IS REQUIRED AND MUST BE MARKED TO DISCOURAGE PARKING IN IT. TWO SPACES CAN SHARE ONE AISLE.

ACCESSIBLE PARKING STALL

NOT TO SCALE (MA-S050101 - 06/2025)

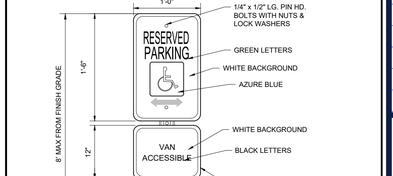


LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

NOTES:
1. LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING.
2. DIMENSIONS PER FIGURE 3B-22 PER LATEST EDITION OF MUTCD.
3. ACCESSIBLE PARKING SYMBOL TO CONFORM TO THE STRIPING PAINT SPECIFIED AND SHALL BE CENTERED IN THE STALL.

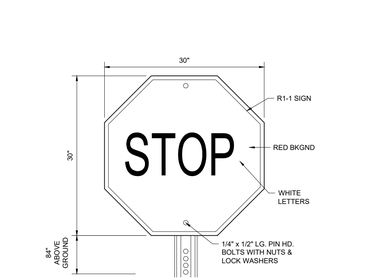
ACCESSIBLE PARKING SYMBOL

NOT TO SCALE (NE-S050102 - 10/2024)



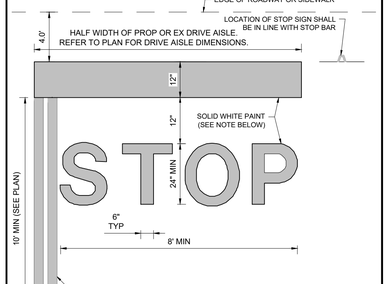
ACCESSIBLE PARKING SIGNS

NOT TO SCALE (NE-S060101 - 10/2024)



STOP SIGN

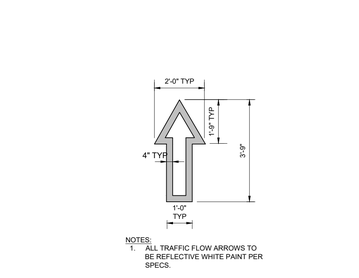
NOT TO SCALE (NE-S060202 - 09/2023)



NOTES:
1. ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF ACRYLIC WATER BASED PAINT OR SHALL MEET THE REQUIREMENTS OF AASHTO M348. . PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS.

STOP BAR

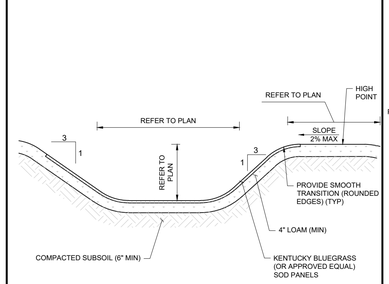
NOT TO SCALE (NE-S050301 - 06/2025)



NOTES:
1. ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE WHITE PAINT PER SPECS.

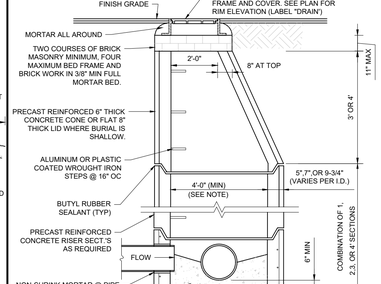
TRAFFIC FLOW ARROW

NOT TO SCALE (NE-S050302 - 10/2024)



SOD SWALE SECTION

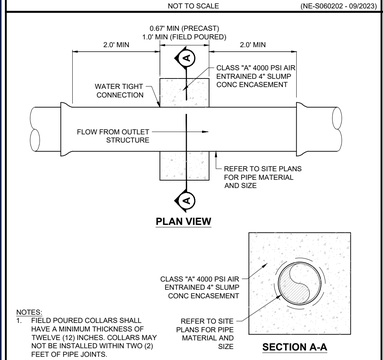
NOT TO SCALE (NE-G020201 - 11/2024)



NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. CONTRACTOR SHALL SIZE MANHOLE AS NECESSARY TO ACCOMMODATE THE PIPE SIZING AND ORIENTATION USING THE GEOMETRY SHOWN ON THE GRADING AND DRAINAGE PLANS.
3. CONCRETE SHALL BE 4,000 PSI AFTER 28 DAYS.
4. REINFORCED STEEL CONFORMS TO ASTM A185 SPEC. 0.12 SQ IN/LINEAL FT AND 0.12 SQ IN (BOTH WAYS) BASE BOTTOM.
5. MANHOLE DESIGN SPECS CONFORM TO ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS"

PRECAST CONCRETE STORM DRAIN MANHOLE

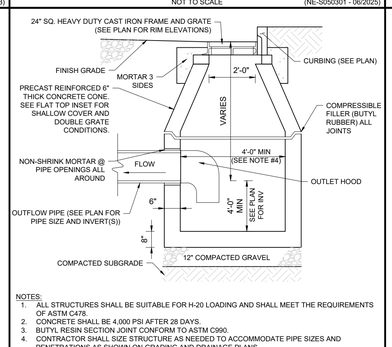
NOT TO SCALE (NE-U010101 - 11/2024)



NOTES:
1. FIELD POURED COLLARS SHALL HAVE A MINIMUM THICKNESS OF TWELVE (12) INCHES. COLLARS MAY NOT BE INSTALLED WITHIN TWO (2) FEET OF PIPE JOINTS.

ANTI-SEEP COLLAR

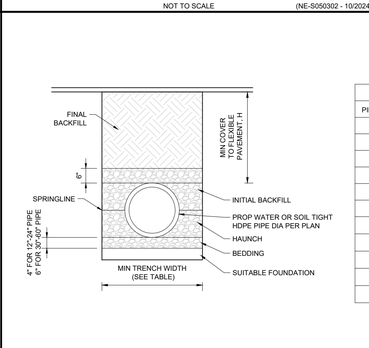
NOT TO SCALE (NE-U019813 - 09/2023)



NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. CONCRETE SHALL BE 4,000 PSI AFTER 28 DAYS.
3. BUTYL RESIN SECTION JOINT CONFORM TO ASTM C990.
4. CONTRACTOR SHALL SIZE STRUCTURE AS NEEDED TO ACCOMMODATE PIPE SIZES AND PENETRATIONS AS SHOWN ON GRADING AND DRAINAGE PLANS.

PRECAST CONCRETE DEEP SUMP CATCH BASIN

NOT TO SCALE (NE-U010201 - 02/2025)

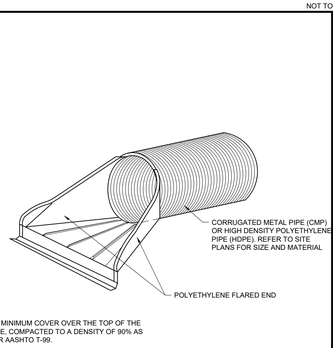


RECOMMENDED MINIMUM TRENCH WIDTH	
PIPE DIA	MIN TRENCH WIDTH
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
48"	80"
60"	96"

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

HDPE STORM PIPE TRENCH

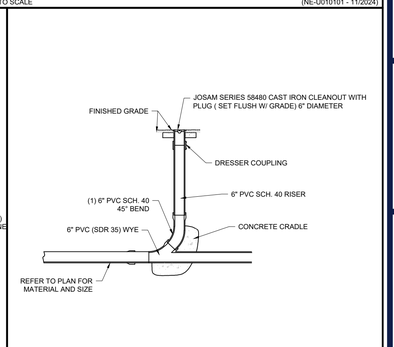
NOT TO SCALE (NE-U019812 - 11/2024)



NOTES:
1. 12" MINIMUM COVER OVER THE TOP OF THE PIPE. COMPACTED TO A DENSITY OF 90% AS PER AASHTO T-99.

POLYETHYLENE FLARED END SECTION

NOT TO SCALE (NE-U010401 - 09/2023)



CLEANOUT (IN-LINE)

NOT TO SCALE (NE-U010302 - 11/2024)

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REVISIONS

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PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVIL-CNDS

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
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JOHN A. KUCHARSKI — CIVIL — No. 41530 — REGISTERED PROFESSIONAL ENGINEER — COMMONWEALTH OF MASSACHUSETTS

SHEET TITLE:

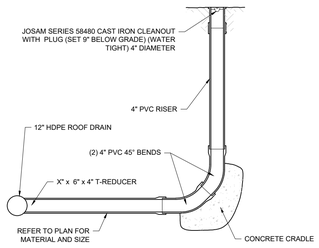
CONSTRUCTION DETAILS

SHEET NUMBER:

C-901

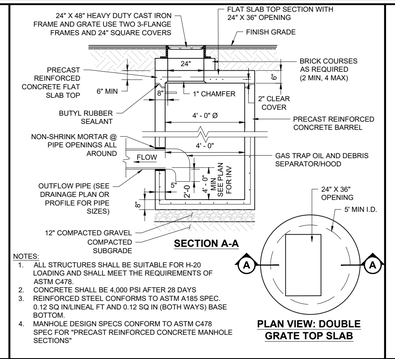
ORG. DATE - 12/16/2025

Dec 16, 2025
\\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-CNDS-MAA250027.00-0E-----LAYOUT: C-901 DETL



CLEANOUT (TERMINAL)

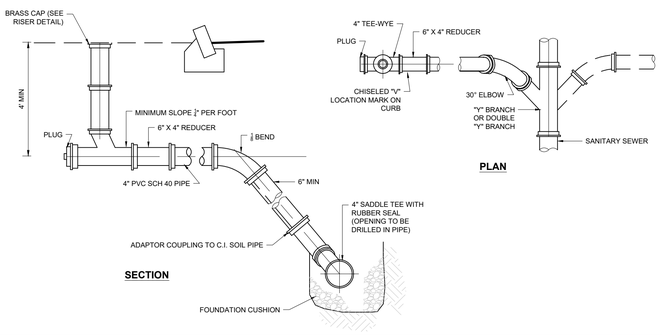
NOT TO SCALE (NE-U010301 - 02/2025)



NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. CONCRETE SHALL BE 4,000 PSI AFTER 28 DAYS
3. REINFORCED STEEL CONFORMS TO ASTM A185 SPEC. 0.12 SQ IN/LINEAL FT AND 0.12 SQ IN (BOTH WAYS) BASE BOTTOM.
4. MANHOLE DESIGN SPECS CONFORM TO ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS"

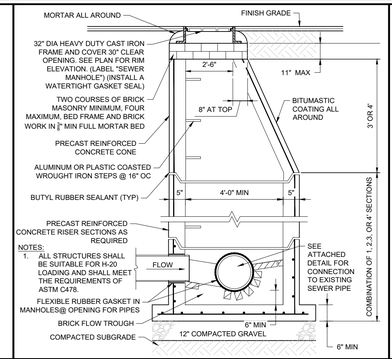
PRECAST CONCRETE CATCH BASIN WITH DOUBLE GRATE

NOT TO SCALE (NE-U010202 - 11/2024)



SANITARY MAIN CONNECTION WITH RISER

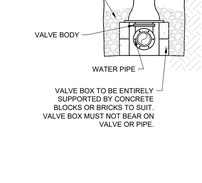
NOT TO SCALE (NE-U020402 - 09/2023)



NOTES:
1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.

PRECAST CONCRETE SANITARY MANHOLE

NOT TO SCALE (NE-U020101 - 11/2024)



GATE VALVE

NOT TO SCALE (NE-U030201 - 09/2023)

NOTES:
1. DETAIL FOR GENERAL PURPOSES. GC TO COORDINATE CONNECTION WITH UTILITY COMPANY.

TAPPING SLEEVE AND GATE VALVE

NOT TO SCALE (NE-U030401 - 11/2024)

LEVEL SPREADER

NOT TO SCALE (NE-U010408 - 09/2023)

HORIZONTAL THRUST BLOCKING					
(BLOCKING HEIGHT GREATER THAN PIPE OD) (BLOCKING WIDTH BETWEEN 1 & 2 TIMES HEIGHT)					
REQUIRED SF OF UNDISTURBED EARTH WALL FOR REACTION BACKING					
TYPE OF FITTINGS					
PIPE SIZE	TEE & PLUG	BENDS			
		90°	45°	22 ½°	11 ¼°
3"	1.0	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0	1.0
6"	1.5	2.0	1.0	1.0	1.0
8"	2.5	3.5	1.8	1.0	1.0
10"	4.0	5.5	2.8	1.5	1.0
12"	6.0	8.0	4.0	2.0	1.5

NOTES:
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 100 PSI AND SOIL BEARING PRESSURE OF 2,000 LBS/SF ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 PSI
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

HORIZONTAL THRUST BLOCKING

NOT TO SCALE (NE-U030501 - 11/2024)

UPWARD THRUST BLOCKING

UPWARD THRUST BLOCKING (REQUIRED REINFORCING BARS & CUBIC YARDS OF P.C. CONCRETE												
	90° BEND			45° BEND			22 ½° BEND			11 ¼° BEND		
PIPE SIZE	CONC CY	REINF QTY	REINF SIZE	CONC CY	REINF QTY	REINF SIZE	CONC CY	REINF QTY	REINF SIZE	CONC CY	REINF QTY	REINF SIZE
6"	1.5	3	5	1.5	3	5	1.25	2	5	1.25	2	5
8"	2	3	5	2	3	5	1.5	2	5	1.5	2	5
10"	2.5	3	5	2.5	3	5	2	3	5	2	3	5
12"	3	3	5	3	3	5	2.5	3	5	2.5	3	5

DOWNWARD THRUST BLOCKING
(SEE HORIZONTAL BLOCKING DETAIL)
(ALL BENDS SIMILAR)

NOTES:
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. REACTION BACKING TABLE IS BASED ON 100 PSI AND SOIL BEARING PRESSURE OF 2,000 LBS/SF ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
7. ALL CONCRETE SHALL BE 2500 PSI
8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

VERTICAL THRUST BLOCKING

NOT TO SCALE (NE-U030502 - 11/2024)

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DATE: 12/16/2025
CAD I.D.: P-CIVL-CNDS

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

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SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER:

C-902

ORG. DATE - 12/16/2025

Dec 16, 2025
\\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-MAA250027.00-0E-----LAYOUT: C-902 DETL

Advanced Drainage Systems, Inc.

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MC-4500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-4500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

1. STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
9. STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
10. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
11. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
12. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

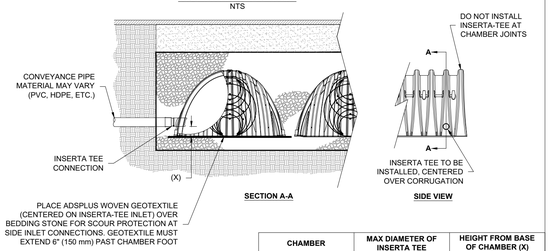
NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
2. THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH INSTALLATION GUIDE MC-3500 & MC-4500 CHAMBER".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

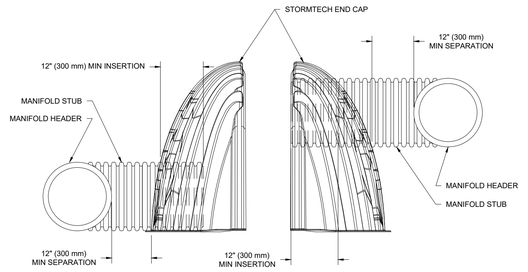
INSERTA TEE DETAIL
NTS



CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-800	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

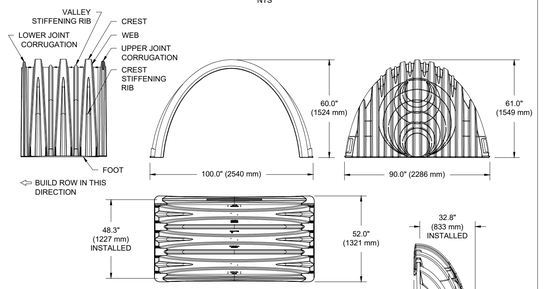
NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
- CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

MC-SERIES END CAP INSERTION DETAIL
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-4500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m³)
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m³)
WEIGHT (NOMINAL)	125.0 lbs.	(56.7 kg)

NOMINAL END CAP SPECIFICATIONS

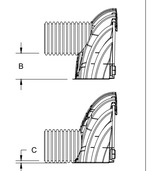
SIZE (W X H X INSTALLED LENGTH)	90.0" X 61.0" X 32.8"	(2286 mm X 1549 mm X 833 mm)
END CAP STORAGE	39.5 CUBIC FEET	(1.12 m³)
MINIMUM INSTALLED STORAGE*	115.3 CUBIC FEET	(3.26 m³)
WEIGHT (NOMINAL)	90 lbs.	(40.8 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500IEPP06T	6" (150 mm)	42.54" (1081 mm)	---
MC4500IEPP06B		---	0.86" (22 mm)
MC4500IEPP08T	8" (200 mm)	40.50" (1029 mm)	---
MC4500IEPP08B		---	1.01" (26 mm)
MC4500IEPP10T	10" (250 mm)	38.37" (975 mm)	---
MC4500IEPP10B		---	1.33" (34 mm)
MC4500IEPP12T	12" (300 mm)	35.69" (907 mm)	---
MC4500IEPP12B		---	1.55" (39 mm)
MC4500IEPP15T	15" (375 mm)	32.72" (831 mm)	---
MC4500IEPP15B		---	1.70" (43 mm)
MC4500IEPP18T	18" (450 mm)	29.36" (746 mm)	---
MC4500IEPP18TW			
MC4500IEPP18B		---	1.97" (50 mm)
MC4500IEPP18BW			
MC4500IEPP24T	24" (600 mm)	23.05" (585 mm)	---
MC4500IEPP24TW			
MC4500IEPP24B		---	2.26" (57 mm)
MC4500IEPP24BW			
MC4500IEPP30BW	30" (750 mm)	---	2.95" (75 mm)
MC4500IEPP36BW	36" (900 mm)	---	3.25" (83 mm)
MC4500IEPP42BW	42" (1050 mm)	---	3.55" (90 mm)

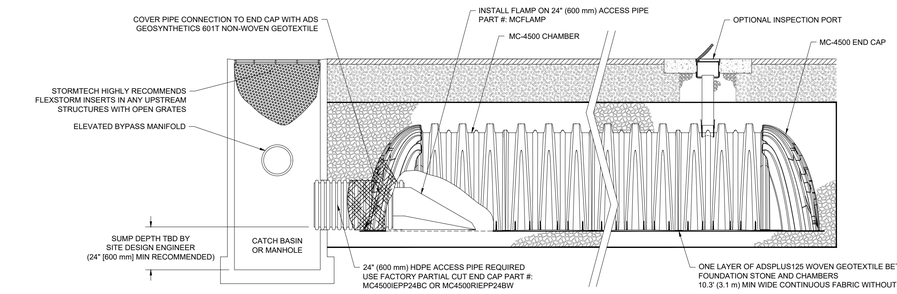
NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PREFABRICATED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

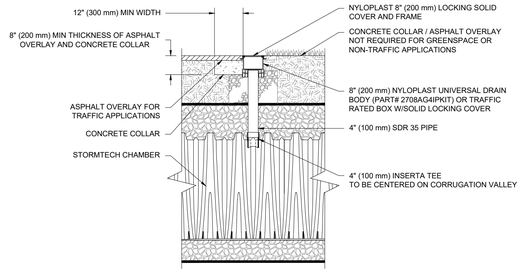
6 MC-SERIES END CAP INSERTION DETAIL

2 MC-4500 TECHNICAL SPECIFICATIONS



MC-4500 ISOLATOR ROW PLUS DETAIL
NTS

3 MC-4500 ISOLATOR ROW PLUS DETAIL



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

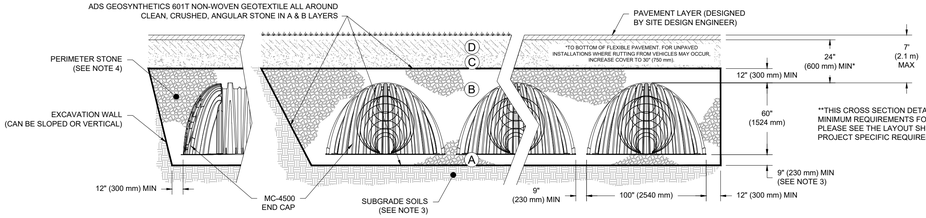
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3" (75 mm).
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 MC-4500 CROSS SECTION DETAIL

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PROJECT No.: MAA250027.00-0E
DRAWN BY: JWT/SJR
CHECKED BY: NPD/NEM
DATE: 12/16/2025
CAD I.D.: P-CIVL-CNDS

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
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PROFESSIONAL ENGINEER
MASSACHUSETTS No. 41530
NEW HAMPSHIRE No. 19476
CONNECTICUT No. 26177
RHODE ISLAND No. 9616
MAINE LICENSE No. 12853

SHEET TITLE:

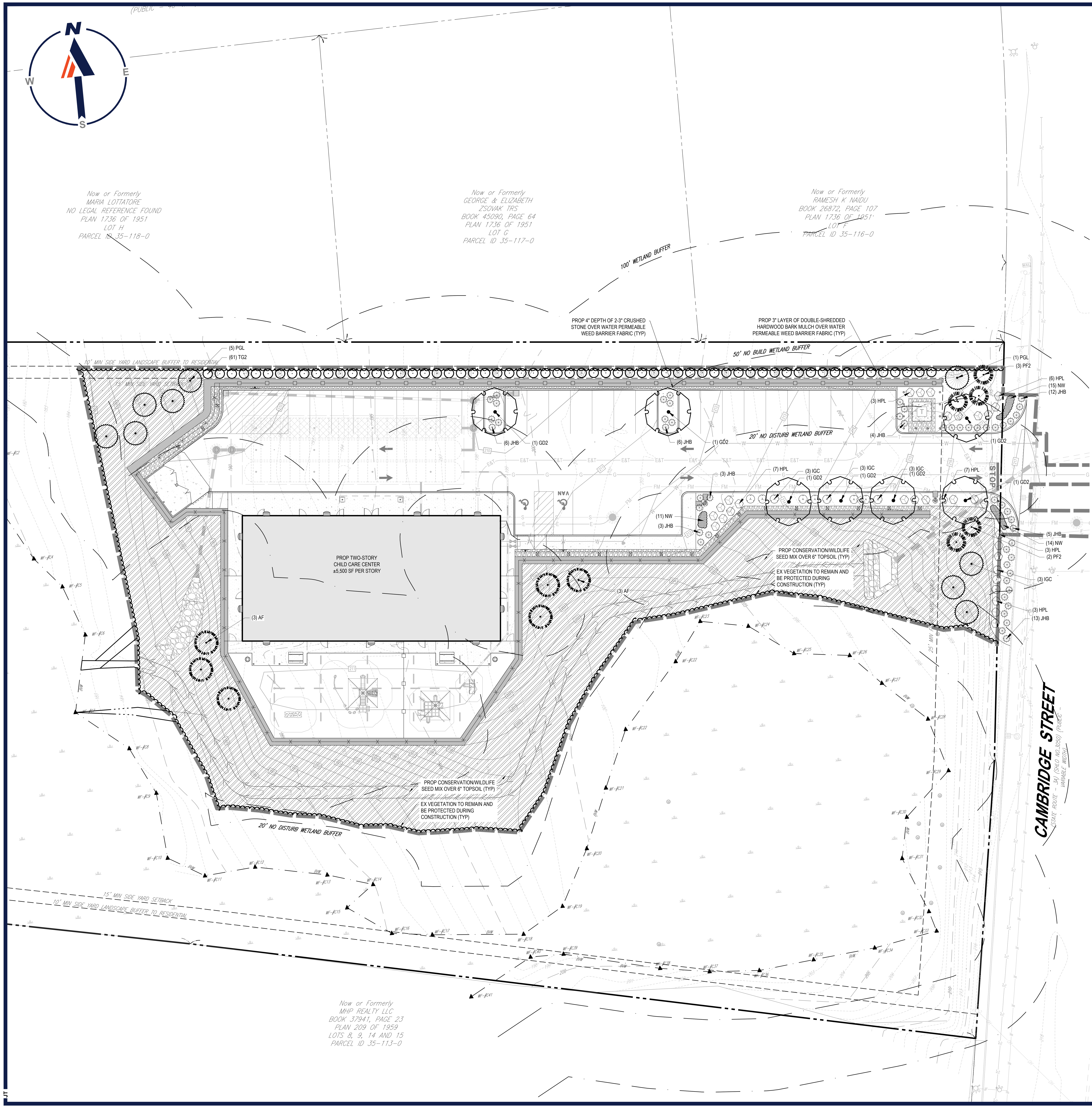
CONSTRUCTION DETAILS

SHEET NUMBER:

C-903

ORG. DATE - 12/16/2025

Dec 16, 2025
\\BOHLERENG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-MAA250027.00-0E-----LAYOUT, C-903 DETL



TOWN OF BURLINGTON, MASSACHUSETTS LANDSCAPE REQUIREMENTS

SECTION	REQUIREMENT	PROPOSED	CALCULATION
ARTICLE VII - GENERAL REGULATIONS	**§7.4.0 GENERAL LANDSCAPING REQUIREMENTS** **§7.4.4 LANDSCAPING REQUIREMENTS** **1. SCREENING.** IN ACCORDANCE WITH AN APPROVED SITE PLAN, SCREENING SHALL BE PROVIDED, ERECTED AND MAINTAINED TO SHIELD RO AND RG DISTRICTS AND MUNICIPAL PROPERTIES FROM ADJOINING BUSINESS. SCREENING SHALL BE ERECTED OR PLANTED BEFORE THE PREMISES ARE FIRST OCCUPIED. ALTERNATIVELY, THE PLANNING BOARD MAY ACCEPT A FINANCIAL GUARANTEE IN THE AMOUNT OF THE COST OF INSTALLING THE SCREENING AND A WRITTEN AGREEMENT TO COMPLETE THE SCREENING WITHIN A SPECIFIED TIME AND PERMIT OCCUPANCY BEFORE THE SCREENING IS INSTALLED.	N/A - SITE IS LOCATED WITHIN RO DISTRICT. HOWEVER, SCREENING IS PROVIDED	
	3. RESIDENTIAL BUFFERS. PROPERTY LINE(S) WHICH ALSO BOUND RESIDENTIAL DISTRICTS SHALL BE SCREENED FROM NONRESIDENTIAL USES BY MEANS OF PLANTINGS OR MAINTENANCE OF TREES OF A SPECIES COMMON TO THE AREA AND APPROPRIATE FOR SCREENING, SPACED TO MINIMIZE VISUAL INTRUSION, AND PROVIDING AN OPAQUE YEAR-ROUND VISUAL BUFFER BETWEEN USES.	PROVIDED	
	4. ACCESSORY RECEPTACLES. DUMPSTERS AND SIMILAR ACCESSORY RECEPTACLES OVER ONE CUBIC YARD CAPACITY SHALL BE ENCLOSED AND SCREENED FROM ALL ADJACENT PREMISES AND STREETS FROM WHICH SUCH FEATURES WOULD OTHERWISE BE VISIBLE IN ACCORDANCE WITH THIS SECTION.	PROVIDED	
	5. UTILITIES. ANY LOADING AREA OR HVAC EQUIPMENT OR OTHER ELECTRICAL EQUIPMENT PLACED ON THE GROUND LEVEL SHALL BE SCREENED FROM ALL ADJACENT PREMISES AND STREETS FROM WHICH IT WOULD OTHERWISE BE VISIBLE IN ACCORDANCE WITH THIS SECTION.	PROVIDED	
	6. PLANT MATERIALS. PLANTED AREAS SHALL CONTAIN AN APPROPRIATE MIX OF NATIVE PLANT SPECIES AS IDENTIFIED BY THE NATIVE PLANT TRUST THAT ARE APPROPRIATE TO THE PROPOSED USE, SITE LAYOUT, SOILS, AND OTHER ENVIRONMENTAL CONDITIONS. VEGETATION IS PREFERABLE TO MULCH WHERE PRACTICAL.	PROVIDED	
	7. EXISTING TREES. EXISTING TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) OF TWELVE INCHES (12") OR MORE SHALL NOT BE REMOVED EXCEPT BY PRIOR APPROVAL OF THE PLANNING BOARD, AND IF REMOVED, SHALL BE REPLACED WITH A MINIMUM 3" CALIPER TREE, UNLESS WAIVED BY THE PLANNING BOARD.	EXISTING TREES TO REMAIN WHERE FEASIBLE	
	§7.4.7 PARKING LOT LANDSCAPING 2. PERIMETER SCREENING. ALL SURFACE PARKING LOTS WITH FRONTAGE ON ANY PORTION OF A STREET RIGHT-OF-WAYSHALL BE SCREENED WITH THE FOLLOWING: A) A MINIMUM 10-FOOT WIDE, LANDSCAPED AREA WITH A CONTINUOUS ROW OF SHRUBS, GRASSES, AND/OR SHADE TREES MUST BE PROVIDED BETWEEN THE STREET AND PARKING LOT.	BUFFER PROVIDED	
	B) SHRUBS AND GRASSES MUST BE A MINIMUM OF 18 INCHES IN HEIGHT WHEN PLANTED AND MUST REACH A MINIMUM SIZE OF 36 INCHES IN HEIGHT WITHIN 3 YEARS OF PLANTING.	PROVIDED WHERE SIGHT LINES ARE NOT AFFECTED	
	D) PLANTS SHALL BE SALT TOLERANT.	PROVIDED	
	3. INTERIOR ISLANDS. A) A LANDSCAPED INTERIOR ISLAND SHALL BE PROVIDED FOR EVERY 10 PARKING SPACES. INTERIOR ISLANDS SHALL BE DISTRIBUTED EVENLY THROUGHOUT THE PARKING AREA. INTERIOR ISLANDS MAY BE CONSOLIDATED, OR INTERVALS MAY BE EXPANDED IN ORDER TO PRESERVE EXISTING TREES.	PROVIDED	
	C) AN INTERIOR ISLAND ABUTTING A SINGLE ROW OF PARKING SPACES SHALL BE A MINIMUM OF 8.5 FEET IN WIDTH AND 150 SQUARE FEET IN AREA.	PROVIDED	
	5. TREE COVERAGE. B) IN NO CASE CAN THERE BE LESS THAN ONE SHADE TREE FOR EVERY 2,000 SQUARE FEET OF PARKING AREA INCLUDING DRIVING AISLES.	REQUIRED: 7 TREES PROVIDED: 7 TREES	13,953 SF / 2,000 = 6.98 TREES

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CANOPY TREES					
GD2	7	GLEDITSIA TRIACANTHOS INERMIS 'DRAVES'	STREET KEEPER® HONEY LOCUST	2.5"-3" CAL.	B&B
EVERGREEN TREES					
AF	6	ABIES FRASERI	FRASER FIR	6-8`	B&B
PF2	5	PINUS FLEXILIS 'VANDERWOLF'S PYRAMID'	VANDERWOLF'S PYRAMID LIMBER PINE	5-6` HT.	B&B
PGL	9	PICEA GLAUCA	WHITE SPRUCE	6-8`	B&B
TG2	61	THUJA STANDISHII X PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	6-8`	B&B
SHRUBS					
HPL	29	HYDRANGEA PANICULATA 'SMHPLQF'	LITTLE QUICK FIRE PANICLE HYDRANGEA	24-30"	CONTAINER
IGC	12	ILEX GLABRA `COMPACTA`	COMPACT INKBERRY	24-30"	CONTAINER
GROUNDCOVER					
JHB	52	JUNIPERUS HORIZONTALIS `BAR HARBOR`	BAR HARBOR CREEPING JUNIPER	15-18" SPRD	CONTAINER
PERENNIALS					
NW	40	NEPETA X `WALKER`S LOW`	WALKER`S LOW CATMINT	1 GAL.	CONTAINER

SEED MIX KEY

HATCH	DESCRIPTION
(hatch)	CONSERVATION / WILDLIFE SEED MIX

GENERAL LANDSCAPE NOTES:

1. THESE LANDSCAPE PLANS ARE TO BE READ IN CONJUNCTION WITH THE LANDSCAPE SPECIFICATIONS, AND ASSOCIATED DETAILS FOUND ON THE LANDSCAPE DETAILS SHEET. THE GENERAL NOTES, FOUND ON THE NOTES PAGE OF THIS PLAN SET, ARE CONSIDERED PART OF LANDSCAPE PLANS. THE CONTRACTOR MUST REFER TO, AND FULLY COMPLY WITH, ALL NOTES, SPECIFICATIONS AND DETAILS DESCRIBED HEREIN, ON THE LANDSCAPE PLANS AND IN THE LANDSCAPE DETAILS SHEET.
2. ALL DISTURBED UNPAVED AREAS, EXCLUDING PLANTING BEDS, ARE TO BE INSTALLED AS LAWN IN ACCORDANCE WITH "MATERIALS" SECTION OF THE LANDSCAPE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY STATED ON THIS PLAN.
3. SHRUBS PLANTED ALONG HEAD-IN PARKING STALLS SHALL BE INSTALLED TO ALLOW A CLEARANCE OF TWO FEET FROM FACE OF CURB TO ALLOW FOR BUMPER OVERHANG.
4. PLANT MATERIAL SUBSTITUTIONS MUST BE FORMALLY SUBMITTED TO BOHLER AND THE MUNICIPALITY'S ENGINEERING AND LANDSCAPE CONSULTANTS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
5. WITHOUT EXCEPTION, WEED BARRIER FABRIC SHALL NOT BE INSTALLED WITHIN ANY STORMWATER FACILITY, INCLUDING RAINGARDENS, INFILTRATION TRENCHES, VEGETATIVE SWALES AND STORMWATER BASINS.
6. IF IRRIGATION IS REQUIRED BY THE OWNER OR APPROVING MUNICIPALITY, THE CONTRACTOR SHALL PROVIDE AN IRRIGATION SYSTEM MEETING THE SPECIFICATIONS OF THE CHOSEN PRODUCT'S MANUFACTURER. THE IRRIGATION DESIGN SHALL ACCOMMODATE LAWN AND BED AREAS EACH UNDER SEPARATE ZONES TO MAXIMIZE WATER EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ANY PERMITS REQUIRED FOR THE INSTALLATION OF AN IRRIGATION SYSTEM.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING UNTIL PROJECT MAINTENANCE IS TURNED OVER TO THE PROPERTY OWNER OR OTHER RESPONSIBLE PARTY. SUCH RESPONSIBILITIES INCLUDE, BUT ARE NOT LIMITED TO, THE CARE, WATERING, AND MAINTENANCE OF ALL PLANT MATERIAL; LAWN MOWING; AND SEASONAL MAINTENANCE.

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

SCALE: 1" = 20'

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PROJECT:

PROP. SITE PLAN DOCUMENTS

— FOR —

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
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REGISTERED LANDSCAPE ARCHITECT

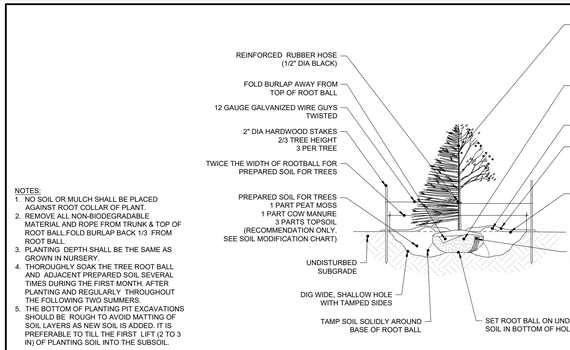
SHEET TITLE:

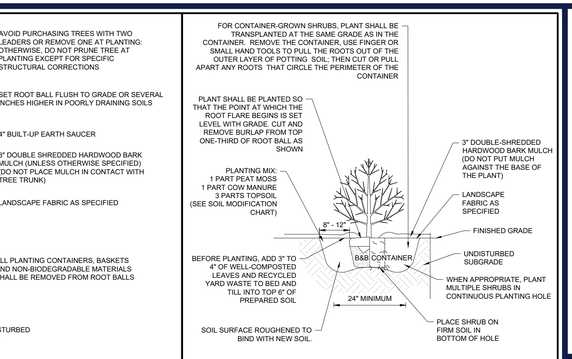
LANDSCAPE PLAN

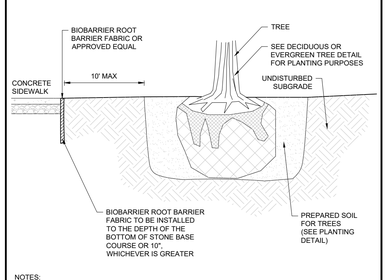
SHEET NUMBER:

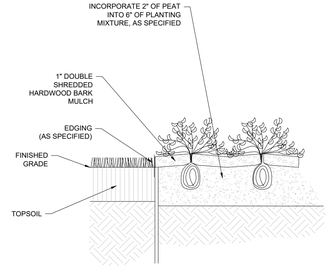
L-101

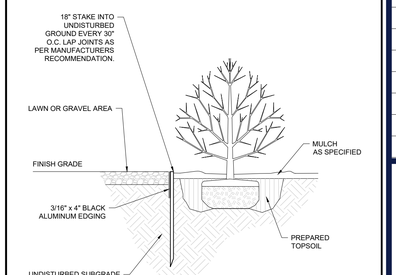
ORG. DATE - 12/16/2025

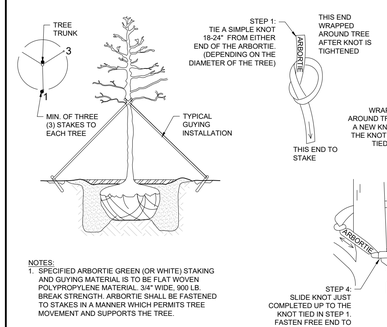


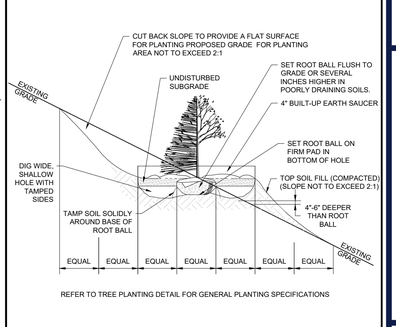












MASSACHUSETTS LANDSCAPE SPECIFICATION

1. SCOPE OF WORK:
   - THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
2. MATERIALS
   - GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
   - TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
   - LAWN:
     - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN.
     - LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
     - SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
     - MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES / DETAILS.
   - FERTILIZER:
     - FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
     - FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY. CONTRACTOR TO ADHERE TO STATE REGULATIONS REGARDING APPLICATION OF FERTILIZERS.
   - PLANT MATERIAL:
     - ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
     - IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
     - PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
     - TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
     - ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
     - CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
     - SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
     - TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
3. GENERAL WORK PROCEDURES
   - CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
   - WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
4. SITE PREPARATIONS
   - BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
   - ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
   - CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
5. TREE PROTECTION
   - CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
   - A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
   - WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
   - AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
6. SOIL MODIFICATIONS
   - CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
   - LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
   - THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
   - TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
     - TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
     - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
7. FINISHED GRADING
   - UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
   - LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).
   - ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.
   - ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.
8. TOPSOILING
   - CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
   - ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
   - CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
   - ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
     - 20 POUNDS 'GRO-POWER' OR APPROVED SOIL CONDITIONER/FERTILIZER
     - 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
   - THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.
9. PLANTING
   - INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
   - PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
   - ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
   - ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.
   - POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
   - PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
     - PLANTS: MARCH 15 TO DECEMBER 15
     - LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
     - PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
   - FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

   - PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
     - 1 PART PEAT MOSS
     - 1 PART COMPOSTED COW MANURE BY VOLUME
     - 3 PARTS TOPSOIL BY VOLUME
     - 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
       - 2 TABLETS PER 1 GALLON PLANT
       - 3 TABLETS PER 5 GALLON PLANT
       - 4 TABLETS PER 15 GALLON PLANT
       - LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK
   - FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
   - ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
   - ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
   - GROUND COVER AREAS SHALL RECEIVE A ¼" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
   - NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
   - ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
   - ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.
10. TRANSPLANTING (WHEN REQUIRED)
    - ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
    - IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
    - PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
    - UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
    - TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.
    - F TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
11. WATERING
    - NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
    - SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
    - IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.
12. GUARANTEE
    - THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF 1 YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
    - ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.
    - TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.
    - LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
13. CLEANUP
    - UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.
    - THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
14. MAINTENANCE (ALTERNATIVE BID):
    - A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD ENSURES TO THE OWNER/OPERATOR THAT THE NEWLY INSTALLED LANDSCAPING HAS BEEN MAINTAINED AS SPECIFIED ON THE APPROVED LANDSCAPE PLAN. ONCE THE INITIAL 90 DAY MAINTENANCE PERIOD HAS EXPIRED, THE OWNER/OPERATOR MAY REQUEST THAT BIDDERS SUBMIT AN ALTERNATE MAINTENANCE BID FOR A MONTHLY MAINTENANCE CONTRACT. THE ALTERNATE MAINTENANCE CONTRACT WILL ENCOMPASS ANY WORK THAT IS CONSIDERED APPROPRIATE TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNER/OPERATOR.

NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL.FOLD BURLAP BACK 1/3 FROM ROOT BALL.
3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH. AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE ROUGH TO AVOID MATTING OF SOIL LAYERS AS NEW SOIL IS ADDED. IT IS PREFERABLE TO TILL THE FIRST LIFT (2 TO 3 IN) OF PLANTING SOIL INTO THE SUBSOIL.

TREE PLANTING

NOT TO SCALE (NE-L040101 - 07/2025)

SHRUB PLANTING

NOT TO SCALE (NE-L040103 - 07/2025)

NOTES:
1. ANY TREE INSTALLED WITHIN 10 FT OF NEW CONCRETE SIDEWALKS SHOULD BE INSTALLED WITH BIOBARRIER ROOT BARRIER FABRIC AS SHOWN.
2. TREES SHALL BE INSTALLED ACCORDING TO THE APPROPRIATE PLANTING DETAIL.

BIOBARRIER ROOT BARRIER

NOT TO SCALE (NE-L049901 - 07/2025)

GROUNDCOVER PLANTING

NOT TO SCALE (NE-L040104 - 07/2025)

BLACK ALUMINUM EDGING

NOT TO SCALE (NE-L030301 - 07/2025)

NOTES:
1. SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL. 3/4" WIDE, 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.

ARBORTIE STAKING

NOT TO SCALE (NE-L049902 - 07/2025)

REFER TO TREE PLANTING DETAIL FOR GENERAL PLANTING SPECIFICATIONS

TREE PLANTING ON SLOPE

NOT TO SCALE (NE-L040102 - 07/2025)

NEW ENGLAND CONSERVATION / WILDLIFE SEED MIX SPECIFICATION

"NEW ENGLAND CONSERVATION/ WILDLIFE SEED MIX" AS PREPARED BY:

NEW ENGLAND WETLAND PLANTS, INC
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000
EMAIL: INFO@NEWP.COM
WEBSITE: WWW.NEWP.COM

APPLICATION RATE: 1750 SF/LB OR 25LBS/ACRE

1. MINIMUM ORDER: 2 LBS
2. SPECIES:
   a) VIRGINIA WILD RYE (ELYMUS VIRGINICUS)
   b) LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)
   c) BIG BLUESTEM (ANDROPOGON GERARDII)
   d) RED FESCUE (FESTUCA RUBRA)
   e) SWITCH GRASS (PANICUM VIRGATUM)
   f) PARTRIDGE PEA (CHAMAECRISTA FASCICULATA)
   g) PANICLEDLEAF TICK TREFOIL (DESMODIUM PANICULATUM)
   h) INDIAN GRASS (SORGHASTRUM NUTANS)
   i) BLUE VERVAIN (VERBENA HASTATA)
   j) BUTTERFLY MILKWEED (ASCLEPIAS TUBEROSA)
   k) BLACK EYED SUSAN (RUDBECKIA HIRTA)
   l) COMMON SNEEZEWEED (HELENIUM AUTUNALE)
   m) HEATH ASTER (ASTERPILOSUS/SYMPHYOTRICHUM PILOSUM)
   n) EARLY GOLDENROD (SOLIDAGO JUNCEA)
   o) UPLAND BENTGRASS (AGROSTIS PERENNANS).

SPECIFICATIONS
NAME; 2"-3" RIVER BED STONE
COLOR; COLORS WILL BE BROWNS, GREYS, AND TANS WITH LITTLE LILACS OR BURGUNDY TONES.
SHAPE; PRIMARILY ROUND OR OVAL SCREENED STONE WITH NO SHARP ANGULAR SIDES OR FACES.
SIZE; STONE SIZES WILL RANGE FROM 2"-3" IN AT LEAST ONE DIMENSION. STONE SIZING SHOULD BE UNIFORM WITH LITTLE VARIATION FROM THIS RANGE.
SILT CONTENT; STONE NEEDS TO BE CLEAN OF DEBRIS AND SILT AT TIME OF DELIVERY.

DECORATIVE STONE MULCH

NOT TO SCALE (NE-L039901 - 06/2025)

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY CHECKED BY

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FOR CONCEPT PURPOSES ONLY

THIS DRAWING IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-LSCP

PROJECT:

PROP.
SITE PLAN
DOCUMENTS
FOR
FOXBORO
LEARNING,
LLC

PROPOSED
CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

MATTHEW J. MRVA
REGISTERED LANDSCAPE ARCHITECT
OHIO No. 250433

SHEET TITLE:
LANDSCAPE NOTES AND DETAILS

SHEET NUMBER:
L-102

ORG. DATE - 12/16/2025

NG.NET\SHARES\MA-PROJECTS\2025\MAA250027.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LSCP-MAA250027.00-0E----->LAYOUT: L-102 LNOTE

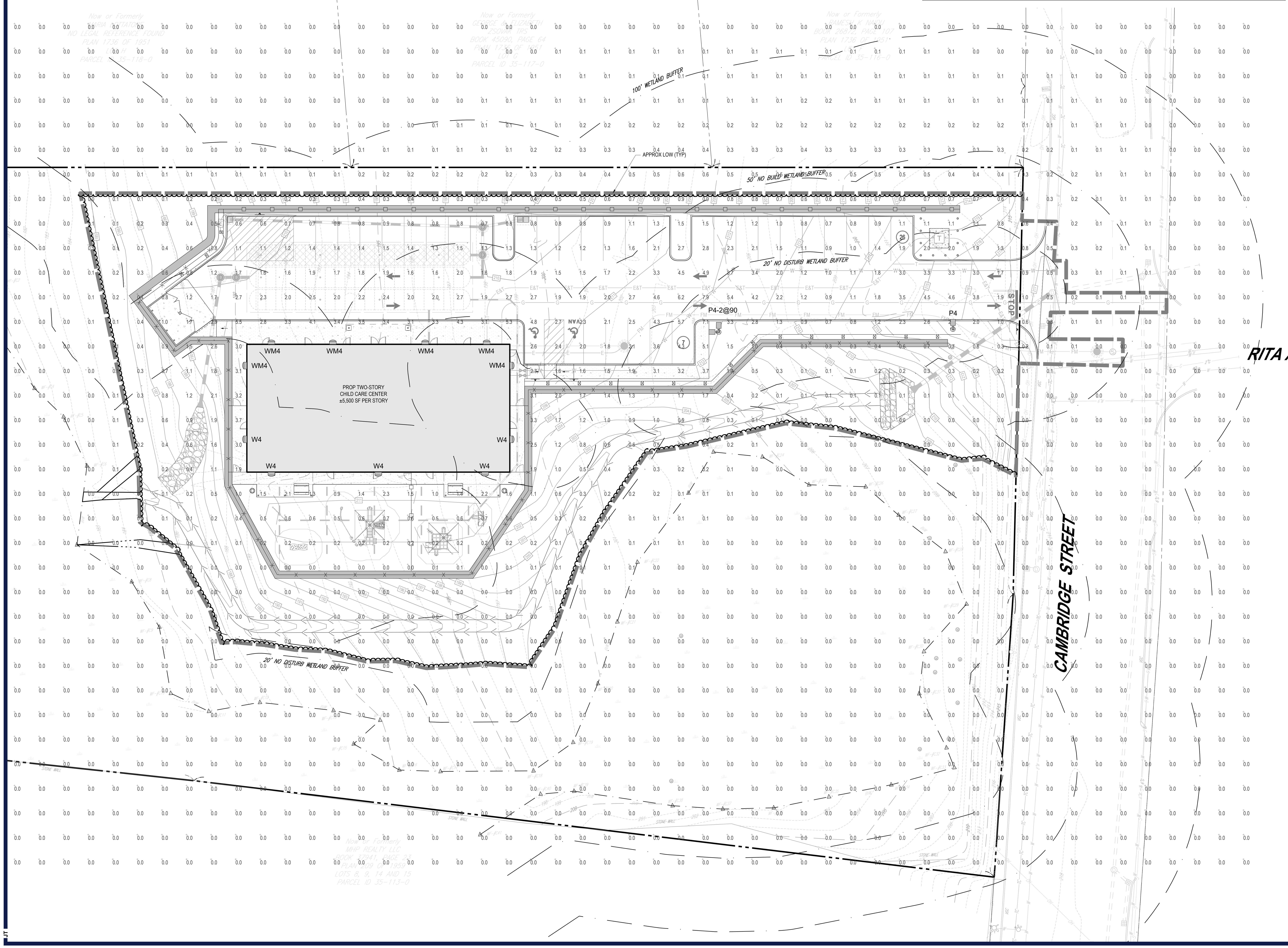
LUMINAIRE SCHEDULE

SYMBOL	TOTAL	MOUNTING HEIGHT	ARRANGEMENT	LUMENS	LLF	DESCRIPTION
P4	1	24.5'	SINGLE	12217	0.9000	LSI INDUSTRIES GREENBRIAR OUTDOOR AREA LIGHT, TYPE FT, ZERO UP-LIGHT (XGBM-FT-LED-LW-NW-UE)
P2-2@90	1	24.5'	2 @ 90 DEGREES	12217	0.9000	LSI INDUSTRIES GREENBRIAR OUTDOOR AREA LIGHT, TYPE FT, ZERO UP-LIGHT (XGBM-FT-LED-LW-NW-UE)
W4	5	10'	SINGLE	3103	0.9000	WILLIAMS LED VOLTAIRE ARCHITECTURAL WALL PACK VERTICAL, ZERO UP-LIGHT (VWPV-L30-740-TFT-XXX-CGL-DIM-UNV)
WM4	6	22'	SINGLE	5454	0.9000	LSI INDUSTRIES GREENBRIAR OUTDOOR WALL SCONCE, TYPE FT, ZERO UP-LIGHT (XGBWM3-FT-LED-48-450-NW-UE)

NOTE: FINAL LOCATION AND SPECIFICATION OF BUILDING MOUNTED LIGHTING PER ARCHITECTURAL PLANS. LIGHTS ARE SHOWN AND MODELED FOR ILLUSTRATIVE PURPOSES ONLY.

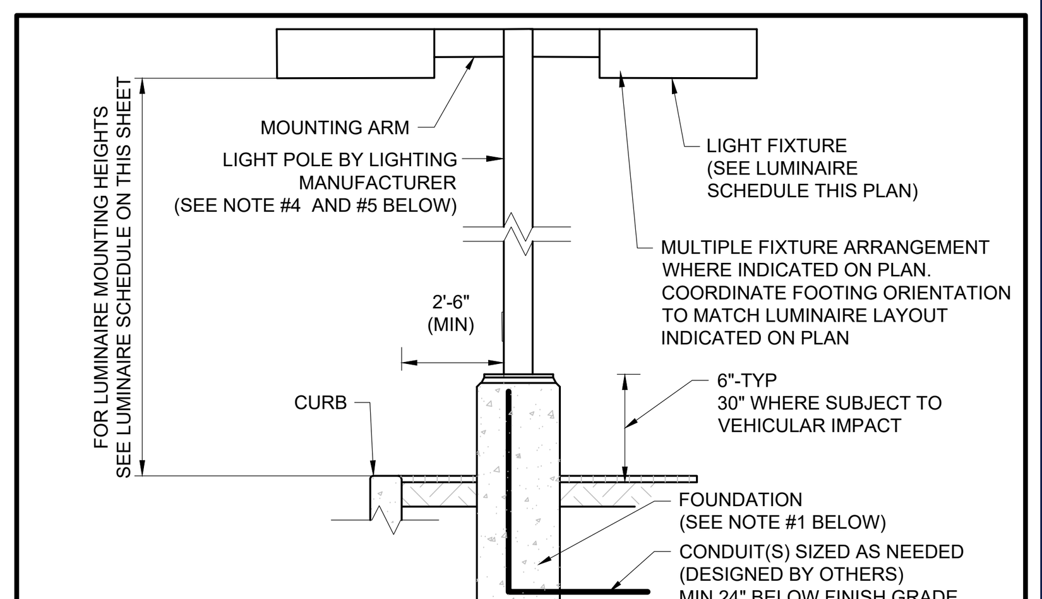
NUMERIC LIGHTING SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG / MIN	MAX / MIN
PARKING COURT	ILLUMINANCE	FC	2.16	7.90	0.60	3.60	13.17



GENERAL LIGHTING NOTES:

1. THE GENERAL NOTES, FOUND ON THE NOTES PAGE OF THIS PLAN SET, MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR MUST BECOME FAMILIAR WITH, REFER TO AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY.
2. THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THIS LIGHTING PLAN, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL APPLICABLE AGENCY AND GOVERNMENTAL REGULATIONS. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY DIFFER FROM THE VALUES DEPICTED ON THIS PLAN DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, MAINTENANCE, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES, EXISTING AMBIENT LIGHT SOURCE ON AND OFF SITE, AND OTHER RELATED VARIABLE FIELD CONDITIONS.
3. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOTCANDLES (FC).
4. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING, CONTROLS, AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECT'S, ELECTRICAL ENGINEER'S AND/OR ELECTRICAL CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) AND ALL APPLICABLE BUILDING AND LOCAL ELECTRICAL CODES.
5. THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE PROFESSIONAL OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL LIGHTING IS INSTALLED PER THIS LIGHTING PLAN, INCLUDING THE LOCATION, ORIENTATION, SHIELDING, AND/OR ROTATED OPTICS IN ORDER TO ACHIEVE THE LIGHTING LEVELS DEPICTED ON THIS PLAN. EXISTING POLES AND FOUNDATIONS ARE NOT TO BE REUSED.
7. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND OTHER MAINTENANCE SPECIFIED BY THE MANUFACTURER. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN.
8. THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-21 TESTING (OR MOST RECENT EDITION). THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
9. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO BOHLER FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
10. LIGHT POLE FOUNDATIONS ARE SHOWN ON THE PLAN IN THE INTENDED LOCATION BASED ON THE LIGHTING CALCULATIONS, UNLESS OTHERWISE NOTED. LIGHT SYMBOLS ARE SHOWN LARGER THAN ACTUAL SIZE, HOWEVER FOUNDATION SIZE IS SHOWN AT ACTUAL SIZE.



NOTES:
1. THIS DETAIL IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A FOUNDATION DESIGN PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS AND SITE SPECIFIC SOIL PARAMETERS.
2. SOME SITE CONDITIONS AND/OR LOCATIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
3. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING TO THE POLE, ASIDE FROM THE LIGHT FIXTURES, INCLUDING BUT NOT LIMITED TO CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC. AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.
4. CONTRACTOR TO ADJUST LENGTH OF POLE DEPENDENT ON FOUNDATION HEIGHT IN DIFFERENT LOCATIONS, AS NECESSARY TO SET LUMINARIES AT MOUNTING HEIGHT INDICATED IN LIGHTING SCHEDULE. MOUNTING HEIGHT IS TO BE MEASURED FROM GROUND SURFACE ELEVATION ADJACENT TO POLE FOUNDATION TO LUMINAIRE.
5. IF FOUNDATIONS ARE REQUIRED TO BE BURIED BY MUNICIPALITY, ANY PORTION OF THE POLE AT THE MULCH LEVEL OR LOWER SHALL BE COATED WITH ANTI-CORROSIVE COATING

AREA LIGHT

NOT TO SCALE (NE-L020101 - 11/2025)

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

SCALE: 1" = 20'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

811 Know what's below. Call before you dig.
ALWAYS CALL 811
It's fast. It's free. It's the law.

FOR CONCEPT PURPOSES ONLY

THIS DRAWING IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-LGHT

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

M. J. MRVA
REGISTERED LANDSCAPE ARCHITECT
MASSACHUSETTS MATTHEW J. MRVA No. 1217

SHEET TITLE:

LIGHTING PLAN

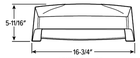
SHEET NUMBER:

L-201

ORG. DATE - 12/16/2025

VWP LED Voltaire Architectural Wall Pack

Williams



VWPH Front View
Weight: 15 lbs

CATALOG #:

TYPE:

PROJECT:

FEATURES

- Designed to illuminate sidewalks, entryways, perimeters or facades
- Intended for use in both uplight and downlight applications
- Savings of up to 80% energy compared to HID systems
- Blends seamlessly with a variety of architectural styles
- Made Right Here® in the USA

SPECIFICATIONS

- HOUSING – Die-cast aluminum enclosure.
- THERMAL MANAGEMENT – Integral die-cast aluminum heatsink and LED assembly provide passive thermal management. Rated -30°C to 40°C ambient operating temperature (-20°C to 40°C with EM/10WC; 0°C to 35°C with EM/4W).
- OPTICAL SYSTEM – Precision, injection-molded, refractive acrylic lensing produces standard IES distributions.
- LED ASSEMBLY – ANSI 3000K, 4000K, or 5000K CCT, minimum 70 CRI LEDs.
- LED DRIVER – 0-10V dimming.
- ELECTRICAL – 120-277, 347, and 480 VAC input range; 50-60Hz; power factor >.90; THD <20% at full load. FCC Class A compliant. 10kA/10kV surge protection standard. Quick-disconnect wiring provided. L70 >50,000 hours per IES TM-21.
- FINISH – Super durable polyester powder coat bonded to phosphate-free, multi-stage pretreated metal, meets and exceeds AAMA 2604 specifications for outdoor durability.
- MOUNTING – Surface mounts directly over a 4" maximum outlet box. Must be anchored to adequate structure that can safely support fixture weight (VWPH = 15 lbs, VWPV = 23 lbs).
- LISTINGS –
  - cCSAus certified as luminaire suitable for wet locations.
  - IDA Dark-Sky approved (downlight applications only).
  - RoHS compliant.
  - IP65 rated.
  - Title 24 compliant with OCCWS FSP-311-_ option.
- WARRANTY – 5-year limited warranty, see hew.com/warranty.

ORDERING EXAMPLE: VWP H - L30/740 - T3 - DBZ - SDGL - OPTIONS - DIM - UNV

ORDERING INFO

SERIES	TYPE	LUMENS [1]	CRI	CCT	DISTRIBUTION [2]
VWP	H Horizontal	L30 3,000lm	70	30 3000K	T3 Type III
	V Vertical	L60 6,000lm		40 4000K	TFT Type forward throw
				50 5000K	

FINISH OPTIONS [3]
- **BLK** Black (RAL #9004)
- **DBZ** Dark bronze
- **DBR** Medium bronze
- **GRAY** Standard gray
- **SLV** Satin aluminum (RAL #9006)
- **WHT** White (RAL #9003)

SHIELDING
- **SDGL** Micro-prismatic tempered glass lens
- **CGL** Clear tempered glass lens

OPTIONS
- **EM/4W** 4-watt integral emergency LED driver [4]
- **SF** Single fuse [5]
- **DF** Double fuse [6]
- **PC** Factory-installed button-style photocell [7]
- **HSGX** Empty housing extension used to match units with EM, OCC, or conduit entry options.
- **TP** Tamper-resistant Torx head screws [8]

CONTROL
- **DIM** Dimming driver prewired for 0-10V controls

VOLTAGE
- **120** 120V
- **208** 208V
- **240** 240V
- **277** 277V
- **UNV** 120-277V
- **347** 347V [15]
- **480** 480V [15]

CONDUIT ENTRY [9]
- **CR** Right side conduit entry [10]
- **CL** Left side conduit entry [11]
- **CD** Dual conduit entry

VWPH ONLY
- **EM/10WC** 10-watt emergency LED driver [12]
- **OCCWS FSP-311-_** Factory-installed occupancy sensor [13]

ACCESSORIES

TPTX-25 TOOL Tamper-resistant tool for Torx head screws. [14]

NOTES

1. Lumen output based on 3500 CCT. Actual lumens may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA. Additional lumen package available, see options
2. See page 2 for DISTRIBUTION DETAILS.
3. See page 3 for FINISH OPTIONS.
4. 120-277V only; VWPV includes housing extension, increases fixture depth. See page 2 for FIXTURE DETAILS.
5. 120V, 277V, or 347V only; must specify voltage
6. 208V, 240V, or 480V only; must specify voltage.
7. 120V, 208V, or 277V only; must specify voltage. Not available when specified with OCCWS option. See page 3 for OPTIONS DETAILS. Right side when viewed from behind fixture.
8. Silver finish only. Safety screws providing added support to the lens are not tamper-resistant (lens is sealed to the fixture via adhesion). Requires a tamper-resistant tool, see Accessories.
9. Fixtures require housing extension when specified with conduit entry. Increases fixture depth. Conduit entry provided with 1/2" NPT tapered pipe thread and plug. Increases fixture height. Conduit fitting to be supplied by others. Left and right when viewed from behind fixture.
10. Left and right when viewed from behind fixture.
11. Left and right when viewed from behind fixture.
12. Low temperature, includes housing extension increases fixture depth; 120-277V only; not available with CR and CD options. See page 2 for FIXTURE DETAILS.
13. Includes housing extension (increases fixture depth), must specify lens. See page 3 for OCCUPANCY SENSOR DETAILS.
14. Includes stepdown transformer.
15. Includes stepdown transformer.
16. Tamper-resistant tool must be ordered separately. Please specify quantity required per project.

WALL MOUNTED PEDESTRIAN LIGHT

NOT TO SCALE

Catalog # : _____ Project : _____

Prepared By : _____ Date : _____

Greenbriar (XGBM)

Outdoor Area Light

IP67

OVERVIEW	
Lumen Output Range	12,000 - 30,000
Wattage Range	136 - 301
Efficacy Range (LPW)	71 - 123
Weight lbs (kg)	49.5 (22.5)

QUICK LINKS

Ordering Guide | Performance | Dimensions | Controls

FEATURES & SPECIFICATIONS

Construction

- Square, die-formed aluminum housing.
- Fully enclosed weather-tight housing contains factory prewired drivers and field connections.
- Gasketed, tethered top-access cover provides ease of installation and allows for easy driver access.
- Four captive stainless-steel fasteners secure the topaccess cover to the housing.
- Luminaire is proudly made in the U.S.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- LSI offers optional color coordinated decals in 9 standard colors to accent the fixture. Decals are guaranteed for five years against peeling, cracking, or fading. (See ordering guide for color options)
- Shipping weight: 50 lbs in carton.

Optical System

- Select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.
- Types 3, 5, FT and FTA available - field rotatable reflectors.
- Clear tempered optical grade flat glass lens sealed to aluminum housing creates an IP67 rated, sealed optical unit (includes pressure stabilizing breather).
- Optical unit can be easily field rotated in 90° increments. Directional arrow on optics allows alignment without the unit being energized.
- Zero uplight.

Electrical

- LSI drivers feature integral sensor which reduces drive current when ambient temperatures exceed rated temperature.
- Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (UE - 50/60Hz input), and 347-480VAC.
- Available in Low Watt (LW), Super Saver (SS) and High Output (HO) drive currents (Drive currents are factory programmed).
- Components are fully encased in potting material for moisture resistance.
- Driver complies with FCC 47 CFR part 15 RFI/EMI standard.
- Operating temperature: -40°C to +50°C (-40°F to +122°F).
- 0-10V dimming (10% - 100%) Optional.

Controls

- Optional integral passive infrared motion sensor.
- Bi-level switching responds to external line voltage signal from separate 120-277V controller or sensor (by others), with low light level decreased to 30% maximum drive current.

Installation

- 2-1/2" x 5-3/8" x 12" extruded aluminum arm mounting bracket shipped standard. Use with LSI BS traditional drilling pattern.
- Round Pole Plate (RPP2) required for mounting to 3"– 5" round poles. (See Accessory Ordering Information chart.)

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsiindustries.com/resources/terms-and-warranty.aspx for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations
- IP67 rated optical chamber.
- 3G rated for ANSI C136.31 high vibration applications.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- US patent D574994 & 7,828,456 and MX patent 29631

Specifications and dimensions subject to change without notice.

AREA LIGHT

NOT TO SCALE

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Greenbriar (XGBWM)

Outdoor Wall Sconce

IP66

OVERVIEW	
Lumen Package (lm)	3,000 - 6,000
Wattage Range (W)	34 - 72
Efficacy Range (LPW)	76 - 90
Weight lbs (kg)	31 (14)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- The aerodynamic aluminum housing is a rectangular shape.
- All mounting hardware is stainless steel or electro-zinc plated steel.
- Housing and optical unit are sealed with extruded silicone gasket; supply conductors with molded EPDM bushing.
- Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP66 rated unit.
- Pressure stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process.

Optical System

- Available with 28 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.
- Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).

Electrical

- LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.
- Available in 350mA and 450mA drive currents (Drive currents are factory programmed). Components are fully encased in potting material for moisture resistance.
- Driver complies with IEC and FCC standards. Driver can be easily accessed and removed.
- Operating temperature is -40°C to +50°C (-40°F to +122°F)
- Integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

Installation

- WALL MOUNTING - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.
- POLE MOUNTING - XPMA (for square) or XPMAR (for round) allows mounting to poles in single and D180 configurations. Use with 3" reduced drilling pattern.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- RoHS Compliant.
- Suitable For Wet Locations.
- IP66 rated luminaire per IEC 60598.

WALL MOUNTED AREA LIGHT

NOT TO SCALE

BOHLER™
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ELECTRICAL ENGINEERING
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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ALWAYS CALL 811
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FOR CONCEPT PURPOSES ONLY

THIS DRAWING IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	MAA250027.00-0E
DRAWN BY:	JWT/SJR
CHECKED BY:	NPD/NEM
DATE:	12/16/2025
CAD I.D.:	P-CIVL-LGHT

PROJECT:

PROP. SITE PLAN DOCUMENTS

FOR

FOXBORO LEARNING, LLC

PROPOSED CHILD CARE CENTER

CAMBRIDGE STREET
TOWN OF BURLINGTON
MIDDLESEX COUNTY
MASSACHUSETTS
PARCEL ID: 35-115-0

BOHLER™
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900
www.BohlerEngineering.com

MASSACHUSETTS NEW HAMPSHIRE RHODE ISLAND REGISTERED LANDSCAPE ARCHITECT NO. 1211 CONNECTICUT VERMONT MAINE

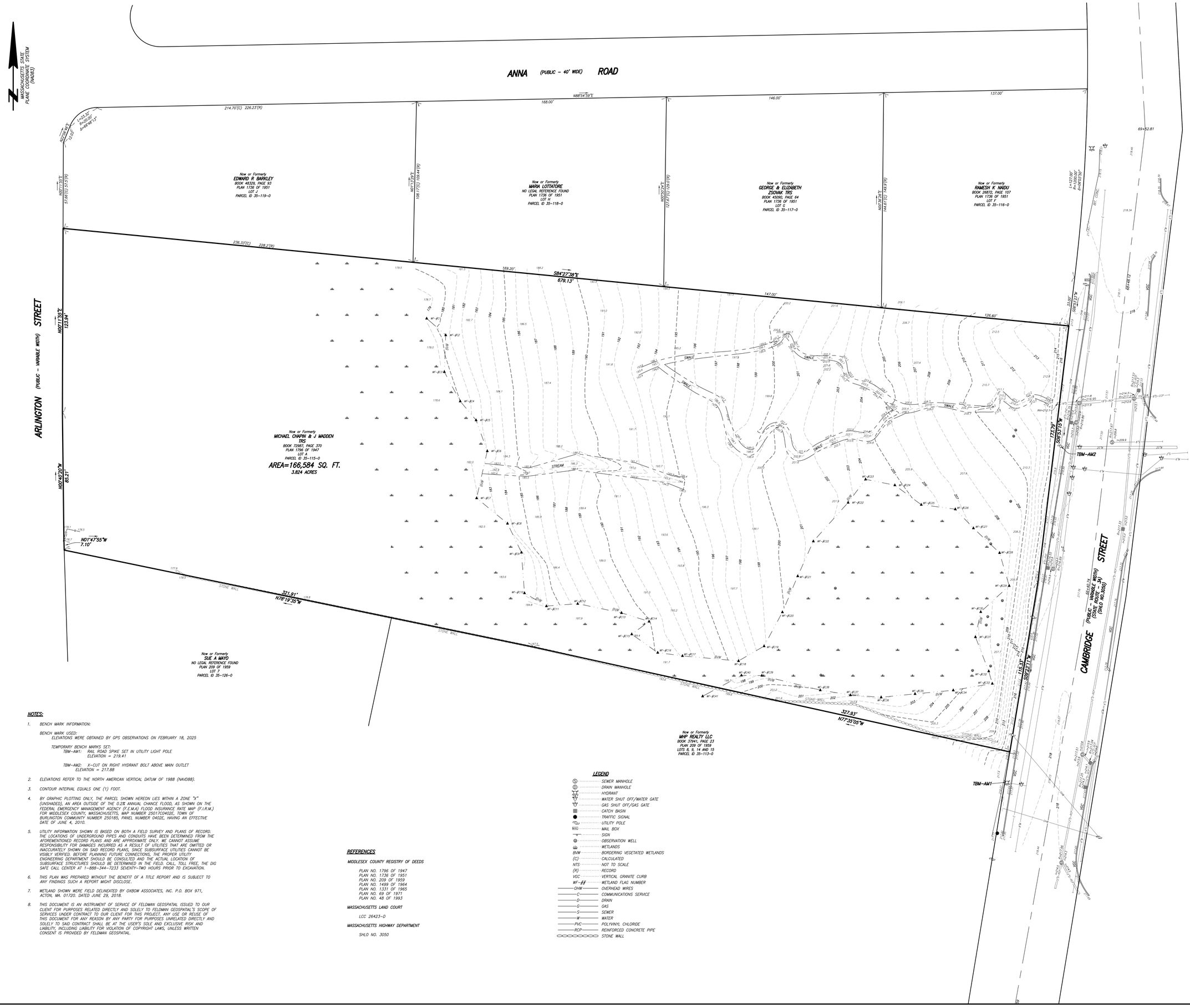
SHEET TITLE:

LIGHTING NOTES AND DETAILS

SHEET NUMBER:

L-202

ORG. DATE - 12/16/2025



NOTES:

1. BENCH MARK INFORMATION:

   BENCH MARK USED:
   ELEVATIONS WERE OBTAINED BY GPS OBSERVATIONS ON FEBRUARY 18, 2025

   TEMPORARY BENCH MARKS SET:
   TBM-AM1: RAIL ROAD SPIKE SET IN UTILITY LIGHT POLE
   ELEVATION = 219.41

   TBM-AM2: X-CUT ON RIGHT HYDRANT BOLT ABOVE MAIN OUTLET
   ELEVATION = 217.88

2. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

3. CONTOUR INTERVAL EQUALS ONE (1) FOOT.

4. BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR MIDDLESEX COUNTY, MASSACHUSETTS, MAP NUMBER 25017C0402E, TOWN OF BURLINGTON COMMUNITY NUMBER 250185, PANEL NUMBER 0402E, HAVING AN EFFECTIVE DATE OF JUNE 4, 2010.

5. UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLANS, SINCE SUBSURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.

6. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY FINDINGS SUCH A REPORT MIGHT DISCLOSE.

7. WETLAND SHOWN WERE FIELD DELINEATED BY OXBOW ASSOCIATES, INC. P.O. BOX 971, ACTON, MA. 01720. DATED JUNE 29, 2018.

8. THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN GEOSPATIAL ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN GEOSPATIAL'S SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN GEOSPATIAL.

REFERENCES:

MIDDLESEX COUNTY REGISTRY OF DEEDS

PLAN NO. 1796 OF 1947
PLAN NO. 1736 OF 1951
PLAN NO. 209 OF 1959
PLAN NO. 1499 OF 1964
PLAN NO. 1331 OF 1965
PLAN NO. 69 OF 1971
PLAN NO. 48 OF 1993

MASSACHUSETTS LAND COURT

LCC 26423-0

MASSACHUSETTS HIGHWAY DEPARTMENT

SHLO NO. 3050

LEGEND

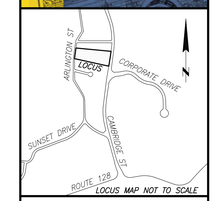
- (S) ..... SEWER MANHOLE
- (D) ..... DRAIN MANHOLE
- HYDRANT
- WATER SHUT OFF/WATER GATE
- GAS SHUT OFF/GAS GATE
- CATCH BASIN
- TRAFFIC SIGNAL
- UTILITY POLE
- MAIL BOX
- SIGN
- OBSERVATION WELL
- WETLANDS
- BVW ..... BORDERING VEGETATED WETLANDS
- (C) ..... CALCULATED
- NTS ..... NOT TO SCALE
- (R) ..... RECORD
- VGC ..... VERTICAL GRANITE CURB
- WF-## ..... WETLAND FLAG NUMBER
- OHW ..... OVERHEAD WIRES
- C ..... COMMUNICATIONS SERVICE
- D ..... DRAIN
- G ..... GAS
- S ..... SEWER
- W ..... WATER
- PVC ..... POLYVINYL CHLORIDE
- RCP ..... REINFORCED CONCRETE PIPE
- STONE WALL

FELDMAN GEOSPATIAL

BOSTON HEADQUARTERS
152 HAMPDEN STREET
BOSTON, MA 02119

WORCESTER OFFICE
27 MECHANIC STREET
WORCESTER, MA 01608

(617)357-9740
www.feldmangeo.com



I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.

TIMOTHY R. AGURKIS, PLS (MA# 52782)
TAGURKIS@FELDMANGEO.COM

4-1-25
DATE

COMMONWEALTH OF MASSACHUSETTS TIMOTHY R AGURKIS No.52782 REGISTERED PROFESSIONAL LAND SURVEYOR

DRAWING NAME:

EXISTING CONDITIONS PLAN OF LAND

0 CAMBRIDGE STREET
BURLINGTON, MASS.

DATE:	MARCH 7, 2025
REVISIONS:	
FILENAME:	2500110-EC.dwg
RESEARCH: TRA/TI	FIELD CHIEF: GH/AM
PROJ. MGR: TRA	APPROVED:
CALC: TI	CADD: TI
FIELD CHK:	CRD FILE: 2500110

20 0 10 20 40
SCALE: 1"=20'

SHEET NO. 1 OF 1

FILENAME: S:\PROJECTS\2025\2500110\DWG\2500110-EC.dwg

ATTACHMENT C – Wildlife Habitat Evaluation

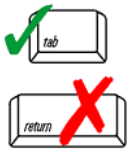
Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wetlands program

Wildlife Habitat Protection Guidance

Appendix A: Simplified Wildlife Habitat Evaluation

Project Information

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



"0" Cambridge Street, Burlington, Massachusetts
Project Location (from NOI)

Ryan Clapp, TRC Environmental Corporation — **1/20/2026**
Name of Person Completing Form — Date

Important Habitat Features

Direct alterations to the following important habitat features in resource areas may be permitted only if they will have no adverse effect (refer to Section V).

- ☐ Habitat for state-listed animal species (receipt of a positive opinion or permit from MNHESP shall be presumed to be correct. Do not refer to Section V).
- ☐ Sphagnum hummocks and pools suitable to serve as nesting habitat for four-toed salamanders
- ☐ Trees with large cavities (≥18" tree diameter at cavity entrance)
- ☐ Existing beaver, mink or otter dens
- ☐ Areas within 100 feet of existing beaver, mink or otter dens (if significant disturbance)
- ☐ Existing nest trees for birds that traditionally reuse nests (bald eagle, osprey, great blue heron)
- ☐ Land containing freshwater mussel beds
- ☐ Wetlands and waterbodies known to contain open water in winter with the capacity to serve as waterfowl winter habitat
- ☐ Turtle nesting areas
- ☐ Vertical sandy banks (bank swallows, rough-winged swallows or kingfishers)

The following habitat characteristics when not commonly encountered in the surrounding area:

- ☐ Stream bed riffle zones (e.g. in eastern MA)
- ☐ Springs
- ☐ Gravel stream bottoms (trout and salmon nesting substrate)
- ☐ Plunge pools (deep holes) in rivers or streams
- ☐ Medium to large, flat rock substrates in streams

None of the above Important Habitat Features are present at the Project Site.

Wildlife Habitat Protection Guidance

Appendix A: Simplified Wildlife Habitat Evaluation

Activities

When any one of the following activities is proposed within resource areas, applicants should complete a Detailed Wildlife Habitat Evaluation (refer to Appendix B).

- ☐ Activities located in mapped "Habitat of Potential Regional or Statewide Importance"
- ☐ Activities affecting certified or documented vernal pool habitat, including habitat within 100' of a certified or documented vernal pool when within a resource area
- ☐ Activities in bank, land under water, bordering land subject to flooding (presumed significant) where alterations are more than twice the size of thresholds
- ☐ Activities affecting vegetated wetlands >5000 sq. ft. occurring in resource areas other than Bordering Vegetated Wetland
- ☐ Activities affecting the sole connector between habitats >50 acres in size
- ☐ Installation of structures that prevent animal movement
- ☐ Activities for the purpose of bank stabilization using hard structure solutions that significantly affect ability of stream channel to shift and meander, or disrupt continuity in cover that would inhibit animal passage
- ☐ Dredging (greater than 5,000 sf)

ATTACHMENT D – Stormwater Report

DRAINAGE REPORT

For

FOXBOROUGH LEARNING, LLC

PROPOSED

"CHILD CARE CENTER"

Cambridge Street
Burlington, Massachusetts
Middlesex County

Prepared by:

BOHLER ENGINEERING
50 Washington Street
Westborough, MA 01581
(508) 480-9900 TEL.

John A. Kucich
Massachusetts P.E. Lic. #41530

BOHLER

December 16, 2025
#MAA250027

BOHLER

TABLE OF CONTENTS

LIST OF TABLES

APPENDICES

I. EXECUTIVE SUMMARY

This report examines the changes in drainage that can be expected as the result of the development of a proposed child care center located on the westerly side of Cambridge Street in the Town of Burlington, Massachusetts. The site, which contains approximately 3.82 acres of land, is currently undeveloped and contains existing wooded area.

The proposed project includes the construction of a new 2-story, 11,000 sf freestanding child care center along with new paved parking areas, landscaping, storm water management components and associated utilities. This report addresses a comparative analysis of the pre- and post-development site runoff conditions. Additionally, this report provides calculations documenting the design of the proposed stormwater conveyance/management system as illustrated within the accompanying Site Development Plans prepared by Bohler. The project will also provide erosion and sedimentation controls during the demolition and construction periods, as well as long term stabilization of the site.

For the purposes of this analysis the pre- and post-development drainage conditions were analyzed at one (1) "design point" where stormwater runoff currently drains to under existing conditions. These design points are described in further detail in **Section II** below. A summary of the existing and proposed conditions peak runoff rates for the 2-, 10-, 25-, and 100-year storms can be found in **Table 1.1** below. In addition, the project has been designed to meet or exceed the Stormwater Management Standards as detailed herein.

Table 1.1: Design Point Peak Runoff Rate Summary

Point of Analysis	2-Year Storm			10-Year Storm			25-Year Storm			100-Year Storm		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
DP1	2.07	1.59	**-0.48**	5.13	5.05	**-0.08**	7.78	7.48	**-0.30**	12.38	11.19	**-1.19**

**Flows are represented in cubic feet per second (cfs)*

II. EXISTING SITE CONDITIONS

Existing Site Description

The site consists of approximately 3.82 acres of land located along the westerly side of Cambridge Street in the Town of Burlington, Massachusetts. The entirety of the site consists of undeveloped wooded area with wetlands large portion of the wooded area.

On-Site Soil Information

The majority of the soils at the site are mapped as Montauk fine sandy loam which is classified by the Natural Resource Conservation Service (NRCS) as Hydrologic Soil Group (HSG) "C". There is a small portion of the westerly and easterly side of the site that is mapped as Udorthents – urban land complex with an undetermined HSG. Based upon on-site geotechnical testing performed in March 2025, the site has been analyzed as HSG "C" for the purposes of this analysis. Refer to **Appendix C** for additional information.

Existing Collection and Conveyance

The entirety of the site drains from the eastern portion along Cambridge street to west an discharges into the existing wetlands on site. Slopes on site range from 1%-50% with on-site elevations ranging from 217 along Cambridge Street to 182 near westerly the discharge to the wetlands.

Existing Watersheds and Design Point Information

The site was subdivided into one (1) sub catchment for the existing conditions as described below to analyze existing and proposed flow rates at each design point. The minimum time of concentration for all proposed areas is calculated as 6 minutes (0.1 hr).

Subcatchment EX-1 in total is 1.74 acres with existing woods to remain. This area flows overland from east to west across the site where it then discharges to an existing wetland. The stormwater runoff from this Subcatchment is not treated or attenuated.

The pre- and post-development drainage conditions for the site were then analyzed at one (1) "design points" where stormwater runoff currently drains to under existing conditions.

Design Point #1 (DP1) is the existing wetlands on site. Under existing conditions, this design point receives stormwater flows from approximately 1.74 acres of land, designated as watershed "EX-1". This watershed includes areas of woodland. This area has a calculated curve number of 70 and a calculated time of concentration of 16.9 minutes.

Refer to **Table 1.1, 1.2, 5.1, and 5.2** for the calculated existing conditions peak rates of runoff and volumes. For additional hydrologic information, refer to **Appendix D** and the Drainage Area Maps in the appendices of this report for a graphical representation of the existing drainage areas.

III. PROPOSED SITE CONDITIONS

Proposed Development Description

The proposed project consists of construction of a new 2-story, 11,000 sf freestanding child care center including paved parking areas, landscaping, associated utilities, and a new stormwater management system. The site, including the proposed parking areas, has been designed to drain to deep-sump, hooded catch basins. The catch basins will capture and convey stormwater runoff, via an underground pipe system, to a proposed underground infiltration system. Pretreatment of stormwater runoff will be provided by a combination of the deep-sump, hooded catch basins and a water quality unit prior to discharge into the proposed infiltration system. Rooftop runoff and runoff from the proposed play area has been designed to flow to the underground system as well.

Proposed Development Collection and Conveyance

Deep sump hooded catch basins are proposed to collect and route runoff from the paved parking areas to the proposed underground infiltration system. Pipes have been designed for the 25-year storm using Rational Method. Pipe, inlet, and outlet protection sizing calculations are included in **Appendix F**.

The best management practices (BMPs) incorporated into the proposed stormwater management system have been designed to meet the total suspended solid (TSS) removal requirements as set forth in the Massachusetts Department of Environmental Protection Stormwater Handbook standards. Refer to **Appendix F** for calculations. In addition, a Stormwater Operation and

Maintenance (O&M) Plan, attached in **Appendix G**, has been developed which includes scheduled maintenance and periodic inspections of stormwater management structures [i.e catch basins and infiltration basins].

Proposed Watersheds and Design Point Information

The project has been designed to maintain existing drainage watersheds to the greatest extent possible, with the same design points described in **Section II** above. The site was subdivided into three (3) separate sub catchments for the proposed conditions as described below. The minimum time of concentration for all proposed areas is calculated as 6 minutes (0.1 hr).

Subcatchment PR-1 consists of 0.13 acres of entirely area consisting of rooftop. This area drains to a series of proposed roof drains that discharge into a proposed underground infiltration system. The model used the minimum time of concentration of 6 minutes.

Subcatchment PR-2 consists of 0.55 acres of entirely area consisting of grass and paved parking. This area drains to a series of proposed catch basins that is then piped through a water quality unit for pretreatment prior to discharge into a proposed underground infiltration system. The model used the minimum time of concentration of 6 minutes.

Subcatchment PR-3 consists of 1.06 acres of entirely area consisting of grass and woodland. This area drains overland from east to west where it then discharges into the existing wetlands. The model calculated a time of concentration of 16.3 minutes.

Refer to **Table 1.1 and 6.1** for the calculated proposed conditions peak rates of runoff. For additional hydrologic information, refer to **Appendix D** and the Drainage Area Maps in the appendices of this report for a graphical representation of the proposed drainage areas.

IV. METHODOLOGY

Peak Flow Calculations

Methodology utilized to design the proposed stormwater management system includes compliance with the guidelines set forth in the latest edition of the Massachusetts DEP Stormwater Handbook. The pre- and post-development runoff rates being discharged from the site were computed using the HydroCAD computer program. The drainage area and outlet information were entered into

the program, which routes storm flows based on NRCS TR-20 and TR-55 methods. The other components of the model were determined following standard NRCS procedures for Curve Numbers (CNs) and times of concentrations documented in the appendices of this report. The rainfall data utilized and listed below in table 4.1 below for stormwater calculations is based on NOAA. Refer to **Appendix F** for more information.

Table 4.1: NOAA Rainfall Intensities

Frequency	2 year	10 year	25 year	100 year
Rainfall* (inches)	4.00	6.37	8.25	11.4

*Values derived from NOAA ATLAS on 10/27/2025

The proposed stormwater management as designed will provide a decrease in peak rates of runoff from the proposed facility for the 2-, 10-, 25- and 100-year design storm events. Additionally, the proposed project meets, or exceeds, the MADEP Stormwater Management standards. Compliance with these standards is described further below.

V. STORMWATER MANAGEMENT STANDARDS

Standard #1: No New Untreated Discharges

The project has been designed so that proposed impervious areas (including the building roof and paved parking/driveway areas) shall be collected and passed through the proposed drainage system for treatment prior to discharge.

Standard #2: Peak Rate Attenuation

As outlined in **Table 1.1** and **Table 5.1**, the development of the site and the proposed stormwater management system, have been designed so that post-development peak rates of runoff are below pre-development conditions for the 2-, 10-, 25- and 100-year storm events at all design points.

Standard #3: Recharge

The stormwater runoff from the project will be collected and diverted to a proposed underground infiltration system. The project as proposed will involve the creation of 27,311 square feet of new impervious area and is required to infiltrate 569 cubic feet of stormwater as defined in Stormwater Standard 3. The proposed infiltration basin will provide 4,177 cubic feet of volume below the lowest outlet for groundwater recharge. Refer to **Appendix F** of this report for calculations documenting required and provided recharge volumes.

The DEP Stormwater Standards require that the infiltration BMP drains completely within 72 hours of the end of the storm event. Calculations showing that the proposed infiltration basin will drain within 70.8 hours are included in **Appendix F** of this report.

A four (4) foot separation to estimated seasonal high groundwater is provided and a groundwater mounding analysis is not required.

Standard #4: Water Quality

Water quality treatment is provided via deep sump catch basins, a water quality unit, and an infiltration basin. TSS removal calculations are included in **Appendix F** of this report. Phosphorus removal calculations have also been included as Burlington requires 60% of the average annual load of Total Phosphorus removal. The project as proposed will involve the creation of 27,311 square feet of new impervious area and is required to treat 2,276 cubic feet of water quality volume

as defined in Stormwater Standard 4. The proposed infiltration basin provides 4,177 cubic feet of water quality volume below the lowest outlet for water quality treatment. Refer to **Appendix F** of this report for calculations documenting required and provided water quality volumes.

Standard #5: Land Use with Higher Potential Pollutant Loads

Not Applicable for this project.

Standard #6: Critical Areas

Not Applicable for this project..

Standard #7: Redevelopment

Not Applicable for this project.

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

The proposed project will provide construction period erosion and sedimentation controls as indicated within the site plan set provided for this project. This includes a proposed construction exit, protection for stormwater inlets, protection around temporary material stock piles and various other techniques as outlined on the erosion and sediment control sheets. Additionally, the project is required to file a Notice of Intent with the US EPA and implement a Stormwater Pollution Prevention Plan (SWPPP) during the construction period. The SWPPP will be prepared prior to the start of construction and will be implemented by the site contractor under the guidance and responsibility of the project's proponent.

Standard #9: Operation and Maintenance Plan (O&M Plan)

An Operation and Maintenance (O&M) Plan for this site has been prepared and is included in **Appendix G** of this report. The O&M Plan outlines procedures and time tables for the long term operation and maintenance of the proposed site stormwater management system, including initial inspections upon completion of construction, and periodic monitoring of the system components, in accordance with established practices and the manufacturer's recommendations. The O&M Plan includes a list of responsible parties and an estimated budget for inspections and maintenance.

Standard #10: Prohibition of Illicit Discharges

The proposed stormwater system will only convey allowable non-stormwater discharges (firefighting waters, irrigation, air conditioning condensates, etc.) and will not contain any illicit discharges from prohibited sources. An Illicit Discharge Statement is included in **Appendix G** of this report.

VI. SUMMARY

In summary, the proposed stormwater management system illustrated on the drawings prepared by Bohler Engineering results in a reduction in peak rates of runoff from the subject site when compared to pre-development conditions for the 2-, 10-, 25- and 100-year storm frequencies. In addition, the proposed best management practices will result in an effective removal of total suspended solids from the post-development runoff. The pre-development versus post-development stormwater discharge comparisons are contained in **Table 6.1** below:

Table 6.1: Design Point Peak Runoff Rate Summary

Point of Analysis	2-Year Storm			10-Year Storm			25-Year Storm			100-Year Storm		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
DP1	2.07	1.59	**-0.48**	5.13	5.05	**-0.08**	7.78	7.48	**-0.30**	12.38	11.19	**-1.19**

**Flows are represented in cubic feet per second (cfs)*

As outlined in the table above, the proposed stormwater management system as designed will provide a decrease in peak rates of runoff from the proposed facility for the 2-, 10-, 25- and 100-year storm events. Additionally, the project meets, or exceeds the MADEP Stormwater Management Standards as described further herein.

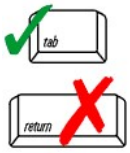
APPENDIX A: MASSACHUSETTS STORMWATER MANAGEMENT CHECKLIST

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

Checklist for Stormwater Report

A. Introduction

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



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

The Stormwater Report must include:

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

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

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

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

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

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

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

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

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

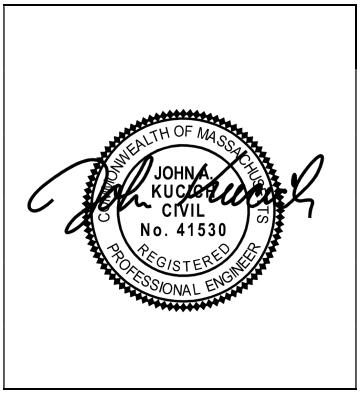
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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

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

Registered Professional Engineer's Certification

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

Registered Professional Engineer Block and Signature



12/16/2025

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): Underground Infiltration System

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.

APPENDIX B: PROJECT LOCATION MAPS

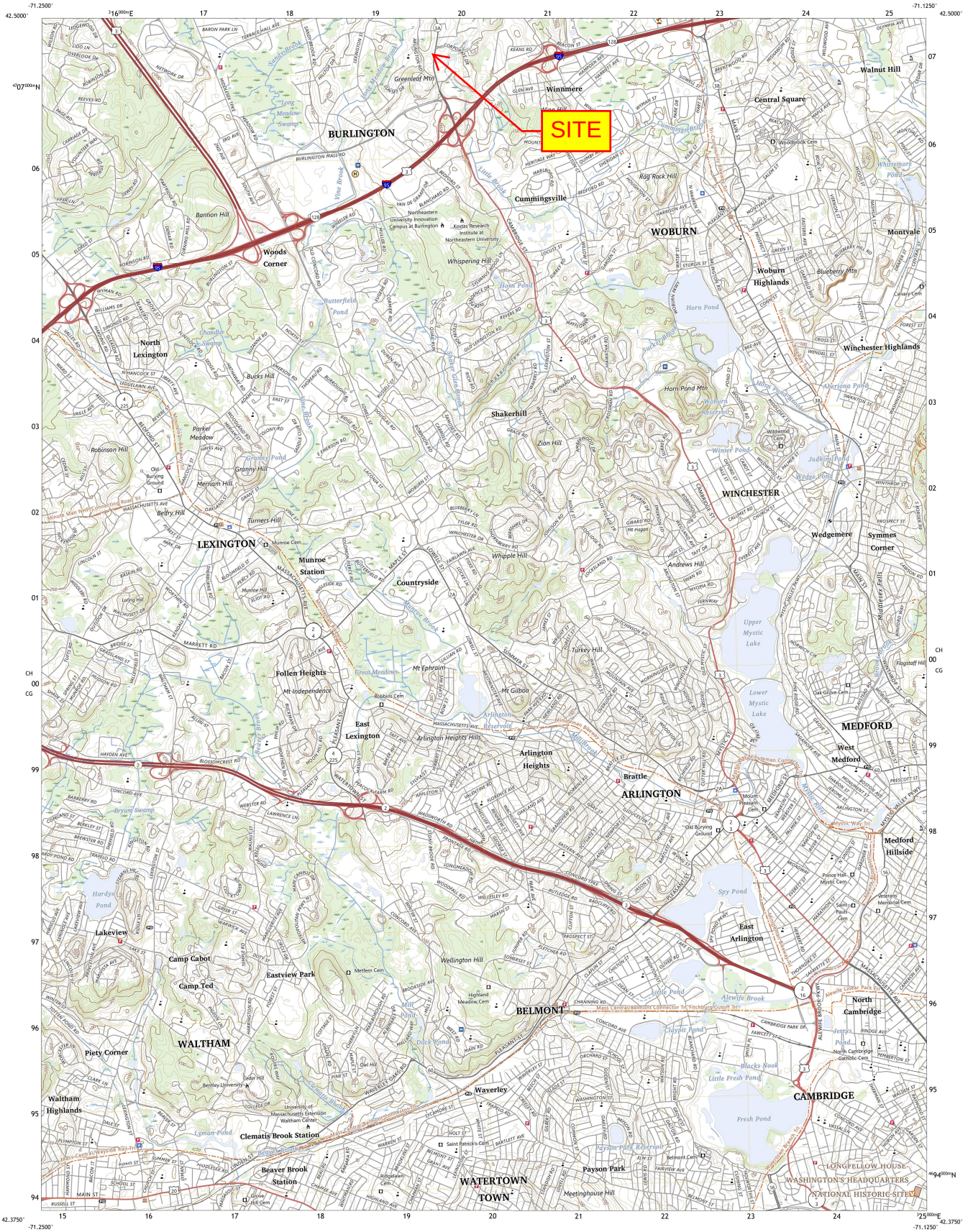
- *USGS MAP*
- *FEMA FIRMETTE*

USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

LEXINGTON QUADRANGLE
MASSACHUSETTS - MIDDLESEX COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 19T
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, October 2018 - October 2018
Roads.....U.S. Census Bureau, 2018
Names.....GNIS, 1974 - 2024
Hydrography.....National Hydrography Dataset, 2004 - 2022
Contours.....National Elevation Dataset, 2023
Boundaries.....Multiple sources; see metadata file 2020 - 2022

Wetlands.....FWS National Wetlands Inventory 1991 - 2013

UTM GRID AND 2023 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
CH
CG
Grid Zone Designation
19T

SCALE 1:24 000

KILOMETERS 0 0.5 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 Billerica
2 Wilmington
3 Reading
4 Concord
5 Boston North
6 Natick
7 Newton
8 Boston South

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

LEXINGTON, MA
2024

National Flood Hazard Layer FIRMette

71°12'1"W 42°30'8"N

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

1:6,000

71°11'24"W 42°29'42"N

Basemap Imagery Source: USGS National Map 2023

Legend

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

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

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

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

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

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

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

N

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

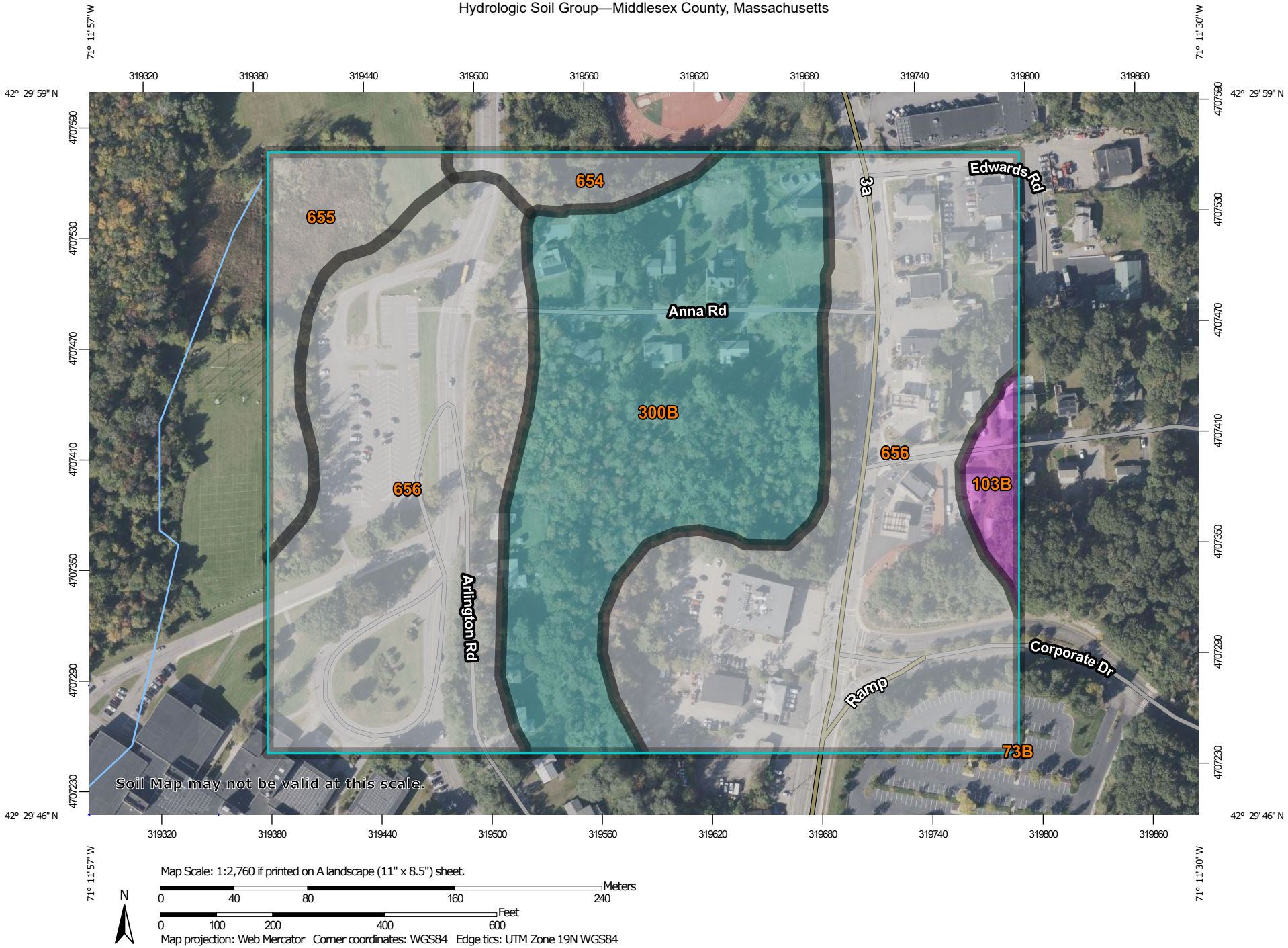
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/16/2025 at 3:53 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

APPENDIX C: SOIL AND WETLAND INFORMATION

- *NCRS CUSTOM SOIL RESOURCE REPORT*
- *REPORT OF GEOTECHNICAL INVESTIGATION*



Map Scale: 1:2,760 if printed on A landscape (11" x 8.5") sheet.

N

0 40 80 160 240 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 25, Sep 5, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
73B	Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony	D	0.0	0.0%
103B	Charlton-Hollis-Rock outcrop complex, 3 to 8 percent slopes	A	0.6	1.9%
300B	Montauk fine sandy loam, 3 to 8 percent slopes	C	9.6	29.1%
654	Udorthents, loamy		0.8	2.5%
655	Udorthents, wet substratum		2.0	6.0%
656	Udorthents-Urban land complex		20.0	60.5%
Totals for Area of Interest			**33.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

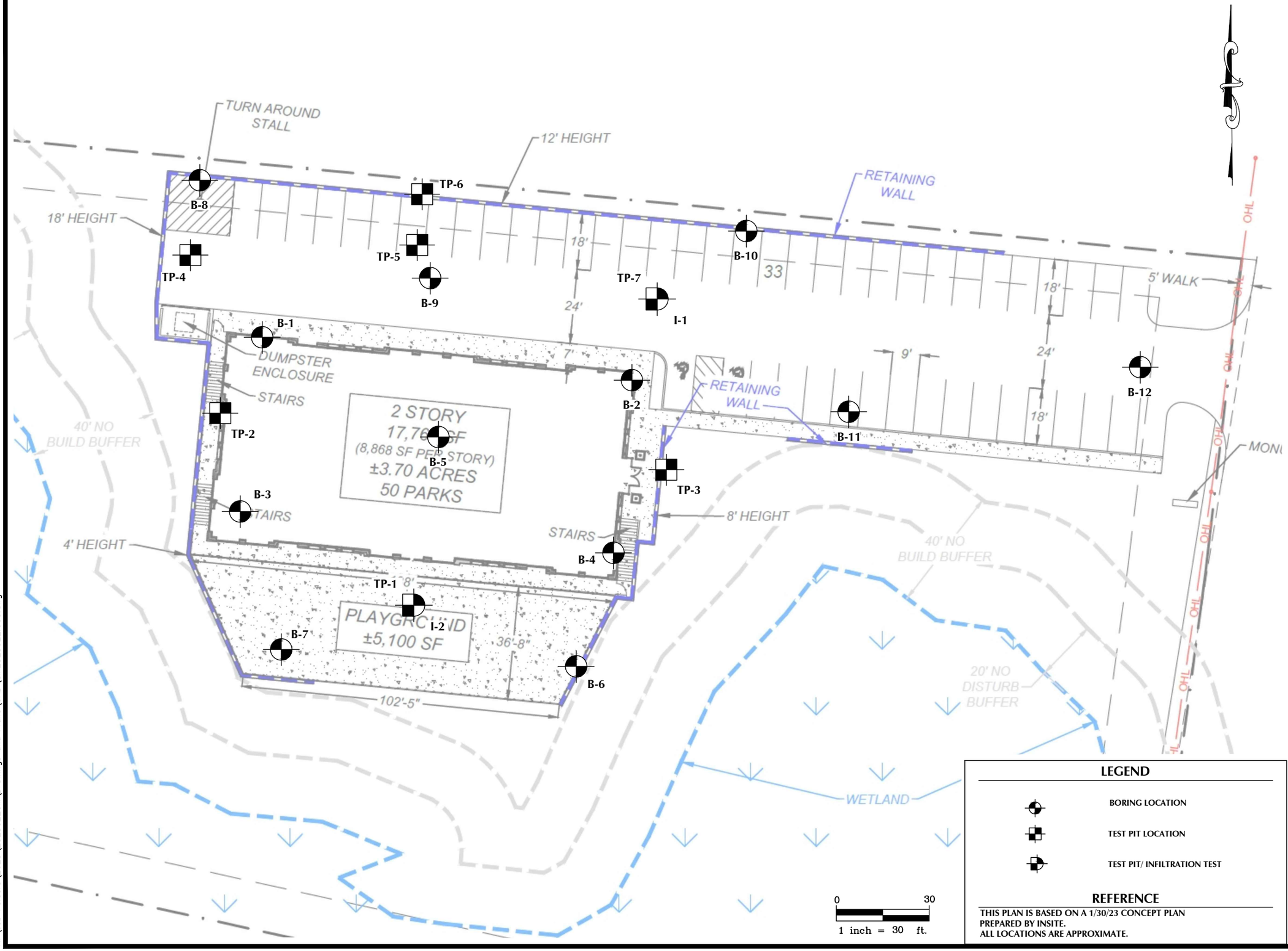
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



LEGEND

- BORING LOCATION
- TEST PIT LOCATION
- TEST PIT/ INFILTRATION TEST

REFERENCE

THIS PLAN IS BASED ON A 1/30/23 CONCEPT PLAN
PREPARED BY INSITE.
ALL LOCATIONS ARE APPROXIMATE.

WHITESTONE
An Employee-Owned Company
352 TURNPIKE ROAD, SUITE 105, SOUTHBOROUGH, MA 01772
508.485.0755 WHITESTONEASSOC.COM

DRAWING TITLE: **TEST LOCATION PLAN**

CLIENT: BOHLER, LLC

PROJECT: PROPOSED DAYCARE CENTER
BETWEEN 101 AND 109 CAMBRIDGE STREET
BURLINGTON, MIDDLESEX COUNTY, MASSACHUSETTS

PROJECT #: GM2523022.000	
DESIGNED BY: MR	PROJ. MGR.: RR
DATE: 3/18/25	FIGURE: 1
SCALE: 1" = 30'	

N: \Job Folders \2025 \2523022GM \Drawings and Plans \CAD \GM2523022.000.dwg

WHITESTONE

APPENDIX A
Records of Subsurface Exploration (Borings B-1 through B-12; Test Pits TP-1 through TP-7)

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-1

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth | Elevation	Cave-In Depth | Elevation
				(feet bgs) | (ft NAVD88)	(feet bgs) | (ft NAVD88)
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/6/2025		
Termination Depth:	18.0 feet bgs	**Date Completed:**	3/6/2025		
Proposed Location:	Building	**Logged By:**	TG	**During:** 0.0 | --	
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE	**At Completion:** -- | --	**At Completion:** -- | --
		Equipment:	Diedrich D-70	**24 Hours:** -- | --	**24 Hours:** -- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
0 - 2	S-1		1 - 3 - 3 - 10	20	6		TS		5" Topsoil	
						1.5	SUBSOIL		13" Subsoil, Roots	
2 - 4	S-2		15 - 18 - 21 - 25	18	39				Brown, Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		11 - 10 - 7 - 5	19	17				As Above, Medium Dense (SM)	
7 - 9	S-4		4 - 8 - 13 - 20	13	21				As Above (SM)	
							GLACIAL TILL			
						10.0				
10 - 12	S-5		9 - 13 - 18 - 21	21	31				As Above, Dense (SM)	
						15.0				
15 - 17	S-6		25 - 26 - 19 - 23	22	45				As Above (SM)	
17 - 18	S-7		25 - 50	12	100				As Above, Very Dense (SM)	Cobbles & Boulders
						20.0			Boring Log B-1 Terminated at Depth of 18 feet below ground surface.	
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-2

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/5/2025
Termination Depth:	20.4 feet bgs	**Date Completed:**	3/5/2025
Proposed Location:	Building	**Logged By:**	JB
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth | Elevation	(feet bgs) | (ft NAVD88)	Cave-In Depth | Elevation	(feet bgs) | (ft NAVD88)
During:	5.0 | --		
At Completion:	-- | --	At Completion:	-- | --
24 Hours:	-- | --	24 Hours:	-- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
							TS		7" Topsoil	
0 - 2	S-1		1 - 1 - 1 - 3	14	2		SUBSOIL		23" Subsoil, Roots	
2 - 4	S-2		7 - 24 - 40 - 30	20	64	2.5			Gray-Brown, Very Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		20 - 26 - 28 - 54	18	54				As Above (SM)	
7 - 9	S-4		36 - 32 - 30 - 46	20	62				As Above (SM)	
						10.0				
10 - 12	S-5		16 - 15 - 14 - 14	14	29		GLACIAL TILL		As Above, Medium Dense (SM)	
						15.0				
15 - 17	S-6		23 - 29 - 36 - 43	20	65				As Above, Very Dense (SM)	
						20.0				
20 - 20.4	S-7		50/5"	4	-				As Above (SM)	Cobbles & Boulders
									Boring Log B-2 Terminated at Depth of 20.4 feet below ground surface.	
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-3

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/5/2025
Termination Depth:	22.0 feet bgs	**Date Completed:**	3/5/2025
Proposed Location:	Building	**Logged By:**	JB
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth | Elevation	(feet bgs) | (ft NAVD88)	Cave-In Depth | Elevation	(feet bgs) | (ft NAVD88)
During:	2.0 | --		
At Completion:	-- | --	At Completion:	-- | --
24 Hours:	-- | --	24 Hours:	-- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
0 - 2	S-1		1 - 2 - 2 - 8	20	4		TS		8" Topsoil	
							SUBSOIL		16" Subsoil, Roots	
						2.0 ▽				
2 - 4	S-2		17 - 23 - 30 - 30	10	53				Brown, Very Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		6 - 5 - 4 - 12	10	9				Gray, Loose, Sandy Silt with Gravel (ML)	
									As Above, Medium Dense (ML)	
7 - 9	S-4		5 - 12 - 10 - 10	18	22				Brown, Medium Dense, Silty Sand with Gravel (SM)	
						10.0				
10 - 12	S-5		8 - 16 - 19 - 26	20	35		GLACIAL TILL		As Above, Dense (SM)	
						15.0				
15 - 17	S-6		19 - 24 - 25 - 29	18	49				As Above (SM)	
						20.0				
20 - 22	S-7		31 - 39 - 37 - 43	24	76				As Above, Very Dense (SM)	
						25.0			Boring Log B-3 Terminated at Depth of 22 feet below ground surface.	

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-4

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/5/2025
Termination Depth:	22.0 feet bgs	**Date Completed:**	3/5/2025
Proposed Location:	Building	**Logged By:**	JB
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth | Elevation	(feet bgs) | (ft NAVD88)	Cave-In Depth | Elevation	(feet bgs) | (ft NAVD88)
During:	5.0 | --		
At Completion:	-- | --	At Completion:	-- | --
24 Hours:	-- | --	24 Hours:	-- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
							TS		7" Topsoil	
0 - 2	S-1	X	1 - 2 - 7 - 13	16	9		SUBSOIL		17" Subsoil, Roots	
						2.0				
2 - 4	S-2	X	25 - 22 - 25 - 21	24	47				Gray-Brown, Dense, Silty Sand with Gravel (SM)	
						5.0 ▽				
5 - 7	S-3	X	20 - 17 - 14 - 10	18	31				As Above (SM)	
7 - 9	S-4	X	8 - 6 - 8 - 11	24	14				As Above, Medium Dense (SM)	
						10.0				
10 - 11.8	S-5	X	15 - 13 - 18 - 50/4"	16	31		GLACIAL TILL		As Above, Dense (SM)	Cobbles & Boulders
						15.0				
15 - 17	S-6	X	9 - 14 - 13 - 11	18	27				As Above, Medium Dense (SM)	
						20.0				
20 - 22	S-7	X	19 - 27 - 28 - 23	22	55				As Above, Very Dense (SM)	
						25.0			Boring Log B-4 Terminated at Depth of 22 feet below ground surface.	

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-5

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/5/2025
Termination Depth:	22.0 feet bgs	**Date Completed:**	3/5/2025
Proposed Location:	Building	**Logged By:**	JB
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
During: 7.0	--		
At Completion: --	--	At Completion: --	--
24 Hours: --	--	24 Hours: --	--

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
							TS		6" Topsoil	
0 - 2	S-1		1 - 1 - 2 - 3	12	3		SUBSOIL		18" Subsoil, Roots	
						2.0				
2 - 4	S-2		21 - 20 - 31 - 21	22	51				Gray-Brown, Very Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		15 - 12 - 14 - 24	12	26				As Above, Medium Dense (SM)	
7 - 9	S-4		18 - 12 - 13 - 10	12	25				As Above (SM)	
						10.0				
10 - 12	S-5		9 - 10 - 11 - 11	20	21		GLACIAL TILL		As Above (SM)	
						15.0				
15 - 17	S-6		29 - 38 - 32 - 26	14	70				As Above, Very Dense (SM)	
						20.0				
20 - 22	S-7		32 - 31 - 34 - 30	20	65				As Above (SM)	
						25.0			Boring Log B-5 Terminated at Depth of 22 feet below ground surface.	

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-6

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth | Elevation	Cave-In Depth | Elevation
				(feet bgs) | (ft NAVD88)	(feet bgs) | (ft NAVD88)
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/5/2025		
Termination Depth:	17.0 feet bgs	**Date Completed:**	3/5/2025		
Proposed Location:	Retaining Wall	**Logged By:**	JB	**During:** 5.0 | --	
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE	**At Completion:** -- | --	**At Completion:** -- | --
		Equipment:	Diedrich D-70	**24 Hours:** -- | --	**24 Hours:** -- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
							TS		6" Topsoil	
0 - 2	S-1		1 - 2 - 3 - 10	18	5		SUBSOIL		18" Subsoil, Roots	
						2.0				
2 - 4	S-2		22 - 41 - 28 - 23	18	69				Gray-Brown, Very Dense, Silty Sand with Gravel (SM)	
						5.0 ▽				
5 - 6.8	S-3		18 - 30 - 18 - 50/3"	8	48				As Above, Dense (SM)	Cobbles & Boulders
							GLACIAL TILL			
						10.0				
10 - 12	S-4		20 - 23 - 22 - 18	20	45				As Above (SM)	
						15.0				
15 - 17	S-5		22 - 24 - 25 - 27	20	49				As Above (SM)	
									Boring Log B-6 Terminated at Depth of 17 feet below ground surface.	
						20.0				
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-7

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/5/2025
Termination Depth:	17.0 feet bgs	**Date Completed:**	3/5/2025
Proposed Location:	Retaining Wall	**Logged By:**	JB
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
During: 2.0	--		
At Completion: --	--	At Completion: --	--
24 Hours: --	--	24 Hours: --	--

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
							TS		6" Topsoil	
0 - 2	S-1		2 - 1 - 2 - 9	18	3		SUBSOIL		18" Subsoil, Roots	
						2.0				
2 - 4	S-2		29 - 36 - 25 - 16	10	61				Brown-Gray, Very Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		5 - 4 - 6 - 6	18	10				Brown, Loose to Medium Dense, Sandy Silt with Gravel (ML)	
7 - 8.8	S-4		9 - 26 - 15 - 50/3"	20	41	8.0			As Above, Dense (ML)	
									Brown, Dense, Silty Sand with Gravel (SM)	Cobbles & Boulders
						10.0				
10 - 12	S-5		9 - 10 - 13 - 19	16	23		GLACIAL TILL		As Above, Medium Dense (SM)	
						15.0				
15 - 17	S-6		20 - 27 - 30 - 31	24	57				As Above, Brown to Gray, Very Dense (SM)	
						20.0			Boring Log B-7 Terminated at Depth of 17 feet below ground surface.	
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-8

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth | Elevation	Cave-In Depth | Elevation
				(feet bgs) | (ft NAVD88)	(feet bgs) | (ft NAVD88)
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/6/2025		
Termination Depth:	14.0 feet bgs	**Date Completed:**	3/6/2025		
Proposed Location:	Retaining Wall	**Logged By:**	TG	**During:** 0.0 | --	
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE	**At Completion:** -- | --	**At Completion:** -- | --
		Equipment:	Diedrich D-70	**24 Hours:** -- | --	**24 Hours:** -- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
							TS		4" Topsoil	
0 - 2	S-1		1 - 2 - 7 - 7	18	9	1.1	SUBSOIL		9" Subsoil, Roots	
									Brown, Medium Dense, Silty Sand with Gravel (SM)	
2 - 4	S-2		9 - 22 - 36 - 53	16	58				As Above, Very Dense (SM)	Cobbles & Boulders
						5.0				
5 - 7	S-3		26 - 17 - 9 - 7	13	26				As Above, Medium Dense (SM)	
7 - 9	S-4		13 - 10 - 15 - 22	11	25		GLACIAL TILL		As Above (SM)	
						10.0				
10 - 12	S-5		12 - 12 - 23 - 30	17	35				As Above, Dense (SM)	
12 - 14	S-6		34 - 42 - 41 - 53	12	83				As Above, Very Dense (SM)	
						15.0			Boring Log B-8 Terminated at Depth of 14 feet below ground surface.	
						20.0				
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-9

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/6/2025
Termination Depth:	9.0 feet bgs	**Date Completed:**	3/6/2025
Proposed Location:	Parking	**Logged By:**	TG
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth | Elevation	(feet bgs) | (ft NAVD88)	Cave-In Depth | Elevation	(feet bgs) | (ft NAVD88)
During:	0.0 | --		
At Completion:	-- | --	At Completion:	-- | --
24 Hours:	-- | --	24 Hours:	-- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
0 - 2	S-1		1 - 1 - 2 - 8	14	3		TS		7" Topsoil	
						2.0	SUBSOIL		17" Subsoil, Roots	
2 - 4	S-2		21 - 16 - 17 - 27	17	33		GLACIAL TILL		Brown, Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		23 - 25 - 12 - 9	11	37				As Above (SM)	
7 - 9	S-4		10 - 15 - 16 - 11	9	31				As Above (SM)	
						10.0			Boring Log B-9 Terminated at Depth of 9 feet below ground surface.	
						15.0				
						20.0				
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-10

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/6/2025
Termination Depth:	9.0 feet bgs	**Date Completed:**	3/6/2025
Proposed Location:	Retaining Wall	**Logged By:**	TG
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
During: 0.5	--		
At Completion: --	--	**At Completion:** --	--
24 Hours: --	--	**24 Hours:** --	--

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
0 - 2	S-1		1 - 2 - 8 - 16	14	10		TS		5" Topsoil	
							SUBSOIL		19" Subsoil, Roots	
						2.0				
2 - 4	S-2		17 - 16 - 37 - 36	17	53				Brown, Very Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 7	S-3		32 - 22 - 20 - 18	17	42		GLACIAL TILL		As Above, Dense (SM)	
7 - 9	S-4		26 - 24 - 24 - 26	12	48				As Above (SM)	
									Boring Log B-10 Terminated at Depth of 9 feet below ground surface.	
						10.0				
						15.0				
						20.0				
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-11

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/6/2025		**Water Depth (feet bgs)**	**Elevation (ft NAVD88)**	**Cave-In Depth (feet bgs)** / **Elevation (ft NAVD88)**
Termination Depth:	13.8 feet bgs	**Date Completed:**	3/6/2025				
Proposed Location:	Retaing Wall	**Logged By:**	TG	**During:**	0.5	--	
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE	**At Completion:**	--	--	**At Completion:** -- / --
		Equipment:	Diedrich D-70	**24 Hours:**	--	--	**24 Hours:** -- / --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
0 - 2	S-1		2 - 3 - 11 - 25	16	14		TS		4" Topsoil	
						0.8	SUBSOIL		6" Subsoil, Roots	
									Brown, Medium Dense, Silty Sand with Gravel (SM)	
2 - 3.4	S-2		28 - 30 - 50/5"	8	60				As Above, Very Dense (SM)	Cobbles & Boulders
						5.0				
5 - 7	S-3		11 - 13 - 15 - 12	15	28				As Above, Medium Dense (SM)	
7 - 9	S-4		14 - 15 - 23 - 15	13	38		GLACIAL TILL		As Above, Gray, Dense (SM)	
						10.0				
10 - 12	S-5		10 - 17 - 19 - 24	14	36				As Above (SM)	
12 - 13.8	S-6		22 - 33 - 54 - 54/3"	20	87				As Above, Very Dense (SM)	Cobbles & Boulders
						15.0			Boring Log B-11 Terminated at Depth of 13.8 feet below ground surface.	
						20.0				
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-12

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 and 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC
Surface Elevation:	± NS feet Above NAVD88	**Date Started:**	3/6/2025
Termination Depth:	6.3 feet bgs	**Date Completed:**	3/6/2025
Proposed Location:	Access / Parking	**Logged By:**	TG
Drill / Test Method:	HSA / SPT (Autohammer)	**Contractor:**	SE
		Equipment:	Diedrich D-70

Water Depth | Elevation	(feet bgs) | (ft NAVD88)	Cave-In Depth | Elevation	(feet bgs) | (ft NAVD88)
During:	1.5 | --		
At Completion:	-- | --	**At Completion:**	-- | --
24 Hours:	-- | --	**24 Hours:**	-- | --

SAMPLE INFORMATION						DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	No	Type	Blows Per 6"	Rec. (in.)	N	(feet)				
						0.0				
0 - 2	S-1		2 - 2 - 4 - 7	9	6		TS		3" Topsoil	
							SUBSOIL		21" Subsoil, Roots	
						2.0				
2 - 4	S-2		26 - 39 - 33 - 50	13	72		GLACIAL TILL		Brown, Very Dense, Silty Sand with Gravel (SM)	
						5.0				
5 - 6.3	S-3		14 - 29 - 50/3"	12	58				As Above (SM)	
									Boring Log B-12 Terminated Upon Auger Refusal at Depth of 6.3 fbgs.	
						10.0				
						15.0				
						20.0				
						25.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Test Pit No.: TP-1

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

Surface Elevation: ±	NS feet NAVD88	**Date Started:**	3/4/2025		**Water Depth (feet bgs) | Elevation (ft NAVD88)**	**Cave-In Depth (feet bgs) | Elevation (ft NAVD88)**
Termination Depth:	9.5 feet bgs	**Date Completed:**	3/4/2025			
Proposed Location:	SWM Area	**Logged By:**	JB	**During:**	3.5 | --	
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:** -- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --	

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		4" Topsoil	
				SUBSOIL		20" Subsoil, Roots	
			2.0				
						Gray, Sandy Silt (ML)	ESHGW @ 2.5 fbgs
			3.0				
							Infiltration test @ 3.5 fbgs
5	1	Grab	5.0	GLACIAL TILL		Gray-Brown, Silty Sand with Gravel, Cobbles, Boulders (SM)	
			10.0			Test Pit TP-1 Terminated at Depth of 9.5 feet below ground surface.	
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Test Pit No.: TP-2

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
Surface Elevation: ±	NS feet NAVD88	**Date Started:**	3/4/2025				
Termination Depth:	8.0 feet bgs	**Date Completed:**	3/4/2025				
Proposed Location:	Retaining Wall	**Logged By:**	JB	**During:**	-- | --		
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:**	-- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --		

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		6" Topsoil	
				SUBSOIL		18" Subsoil, Roots	
			2.0				
3	1	Grab	3.5			Gray, Sandy Silt (ML)	
			5.0	GLACIAL TILL		Gray-Brown, Silty Sand with Gravel, Cobbles, Boulders (SM)	
			10.0			Test Pit TP-2 Terminated at Depth of 8 feet below ground surface.	
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Test Pit No.: TP-3

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
Surface Elevation: ±	NS feet NAVD88	**Date Started:**	3/4/2025				
Termination Depth:	8.0 feet bgs	**Date Completed:**	3/4/2025				
Proposed Location:	Retaining Wall	**Logged By:**	JB	**During:**	2.0 | --		
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:**	-- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --		

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		8" Topsoil	
				SUBSOIL		28" Subsoil, Roots	
			3.0				
			5.0	GLACIAL TILL		Gray, Silty Sand with Gravel, Cobbles, Boulders (SM)	
			10.0			Test Pit TP-3 Terminated at Depth of 8.0 feet below ground surface.	
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

RECORD OF SUBSURFACE EXPLORATION

WHITESTONE

Test Pit No.: TP-4

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
Surface Elevation: ±	NS feet NAVD88	**Date Started:**	3/4/2025				
Termination Depth:	7.5 feet bgs	**Date Completed:**	3/4/2025				
Proposed Location:	SWM Area	**Logged By:**	JB	**During:**	3.0 | --		
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:**	-- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --		

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		6" Topsoil	
				SUBSOIL		24" Subsoil	
			2.5				ESHGW @ 2.5 fbgs
				GLACIAL TILL		Gray, Silty Sand with Gravel, Cobbles, Boulders (SM)	
			5.0				
						Test Pit TP-4 Terminated at Depth of 7.5 feet below ground surface. Refusal on boulder	
			10.0				
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Test Pit No.: TP-5

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
Surface Elevation: ±	NS feet NAVD88	**Date Started:**	3/4/2025				
Termination Depth:	6.5 feet bgs	**Date Completed:**	3/4/2025				
Proposed Location:	SWM Area	**Logged By:**	JB	**During:**	2.0 | --		
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:**	-- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --		

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		8" Topsoil	
				SUBSOIL		28" Subsoil, Roots	ESHGW @ 1.5 fbgs
			3.0				
				GLACIAL TILL		Gray, Silty Sand with Gravel, Cobbles, Boulders (SM)	
5	1	Grab	5.0				
			10.0			Test Pit TP-5 Terminated at Depth of 6.5 feet below ground surface.	
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Test Pit No.: TP-6

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

				Water Depth (feet bgs)	Elevation (ft NAVD88)	Cave-In Depth (feet bgs)	Elevation (ft NAVD88)
Surface Elevation:	± NS feet NAVD88	**Date Started:**	3/4/2025				
Termination Depth:	6.5 feet bgs	**Date Completed:**	3/4/2025				
Proposed Location:	Retaining Wall	**Logged By:**	JB	**During:**	2.0 | --		
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:**	-- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --		

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		8" Topsoil	
				SUBSOIL		28" Subsoil, Roots	
			3.0				
				GLACIAL TILL		Gray, Silty Sand with Gravel, Cobbles, Boulders (SM)	
			5.0				
						Test Pit TP-6 Terminated at Depth of 6.5 feet below ground surface.	
			10.0				
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

WHITESTONE

RECORD OF SUBSURFACE EXPLORATION

Test Pit No.: TP-7

Page 1 of 1

Project:	Proposed Daycare Center	**WAI Project No.:**	GM2523022.000
Location:	Between 101 & 109 Cambridge Street, Burlington, Middlesex County, Massachusetts	**Client:**	Bohler, LLC

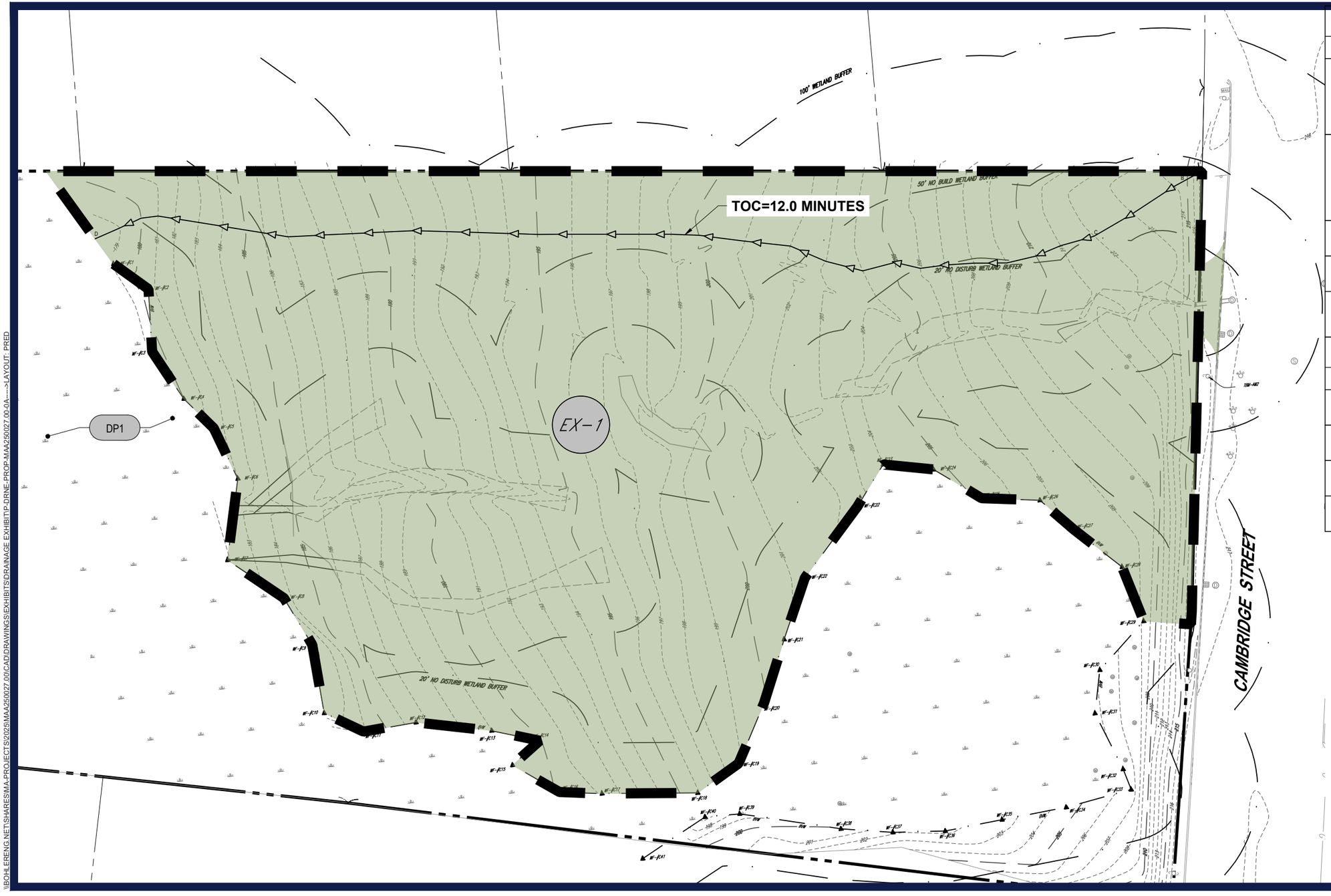
Surface Elevation: ±	NS feet NAVD88	**Date Started:**	3/4/2025		**Water Depth (feet bgs)** | **Elevation (ft NAVD88)**	**Cave-In Depth (feet bgs)** | **Elevation (ft NAVD88)**
Termination Depth:	9.5 feet bgs	**Date Completed:**	3/4/2025			
Proposed Location:	SWM Area	**Logged By:**	JB	**During:**	2.5 | --	
Excavating Method:	Mini Excavator	**Contractor:**	SE	**At Completion:**	-- | --	**At Completion:** -- | --
Test Method:	Visual Observation	**Rig Type:**	Caterpillar 308	**24 Hours:**	-- | --	

SAMPLE INFORMATION			DEPTH	STRATA		DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (ft.)	Number	Type	(feet)				
			0.0				
				TOPSOIL		8" Topsoil	
				SUBSOIL		28" Subsoil, Roots	ESHGW @ 2.5 fbgs
			3.0				Infiltration test @ 3.5 fbgs
5	1	Grab	5.0	GLACIAL TILL		Gray, Silty Sand with Gravel, Cobbles, Boulders (SM)	
			10.0			Test Pit TP-7 Terminated at Depth of 9.5 feet below ground surface.	
			13.0				
			15.0				

NOTES: bgs = below ground surface, msl = mean sea level, NA = Not Applicable, NE = Not Encountered, NS = Not Surveyed, P = Perched

APPENDIX D: EXISTING CONDITIONS HYDROLOGIC ANALYSIS

- *EXISTING CONDITIONS DRAINAGE MAP*
- *EXISTING CONDITIONS HYDROCAD COMPUTATIONS*



LEGEND

EXISTING WATERSHED

DESIGN POINT	DP1 / DP1
SUBCATCHMENT ID	ED1.1 / ED1.1
SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION PATH	
STORMWATER CONTROL MEASURE OR MODELED DRAINAGE STRUCTURE	P1.1 / P1.1

LEGEND

EXISTING COVER TYPES

BUILDING	
PAVEMENT	
GRASS / SOD / LAWN	
WOODED AREA	

BOHLER™

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

EXISTING CONDITIONS WATERSHED MAP

FOXBOROUGH LEARNING, LLC

BURLINGTON, MA 01803

12/16/2025 | JT | MAA250027.00 | REV 0a

40 20 10 0 40

SCALE: 1" = 40'

Subcat Reach Pond Link

Routing Diagram for MAA250027 Model
Prepared by Bohler Engineering, PC, Printed 12/12/2025

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 yr	Type III 24-hr		Default	24.00	1	4.00	2
2	10 yr	Type III 24-hr		Default	24.00	1	6.37	2
3	25 yr	Type III 24-hr		Default	24.00	1	8.25	2
4	100 yr	Type III 24-hr		Default	24.00	1	11.40	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.736	70	Woods, Good, HSG C (EX-1)
1.736	**70**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.736	HSG C	EX-1
0.000	HSG D	
0.000	Other	
1.736		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	1.736	0.000	0.000	1.736	Woods, Good	EX-1
0.000	**0.000**	**1.736**	**0.000**	**0.000**	**1.736**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: to Wetlands Runoff Area=75,601 sf 0.00% Impervious Runoff Depth>1.33"
Flow Length=451' Tc=12.0 min CN=70 Runoff=2.07 cfs 0.192 af

Reach DPE-1: Wetlands Inflow=2.07 cfs 0.192 af
Outflow=2.07 cfs 0.192 af

Total Runoff Area = 1.736 ac Runoff Volume = 0.192 af Average Runoff Depth = 1.33"
100.00% Pervious = 1.736 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX-1: to Wetlands

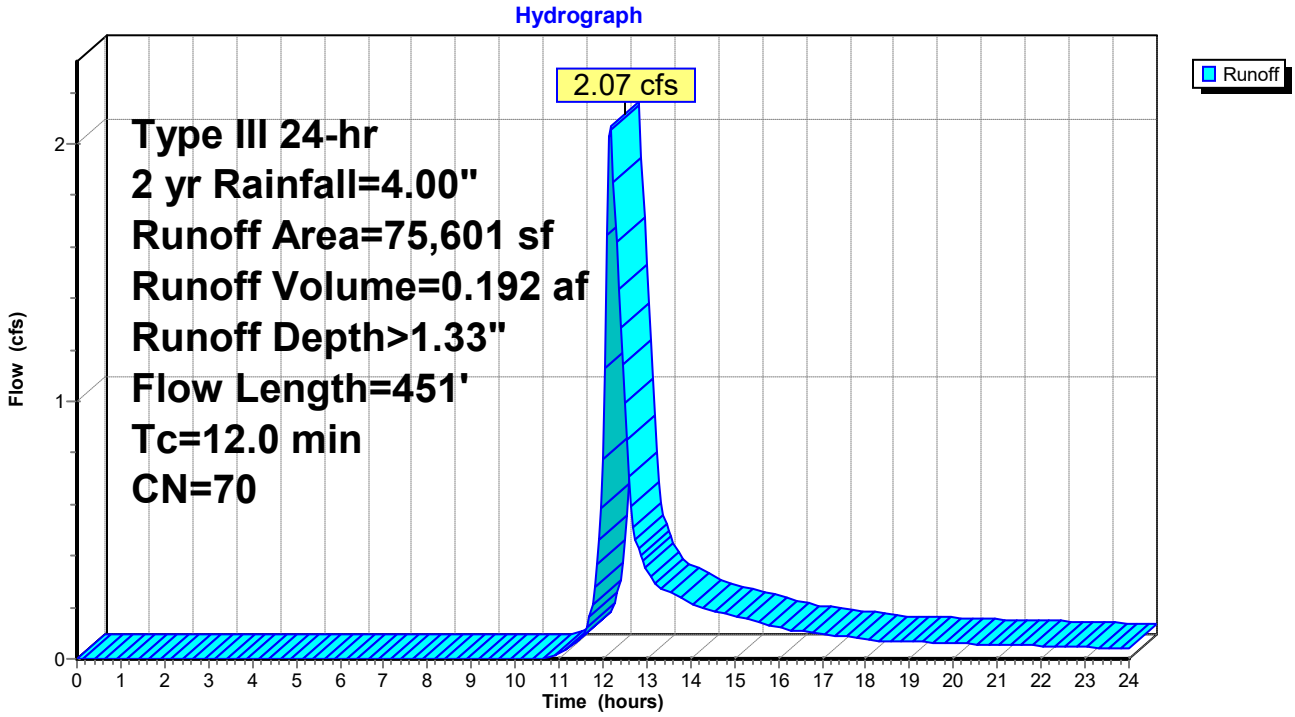
Runoff = 2.07 cfs @ 12.18 hrs, Volume= 0.192 af, Depth> 1.33"
Routed to Reach DPE-1 : Wetlands

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 yr Rainfall=4.00"

Area (sf)	CN	Description
75,601	70	Woods, Good, HSG C
75,601		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	7	0.2860	0.13		**Sheet Flow, A to B** Woods: Light underbrush n= 0.400 P2= 3.28"
6.5	43	0.0700	0.11		**Sheet Flow, B to C** Woods: Light underbrush n= 0.400 P2= 3.28"
4.6	401	0.0840	1.45		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
12.0	451	Total			

Subcatchment EX-1: to Wetlands



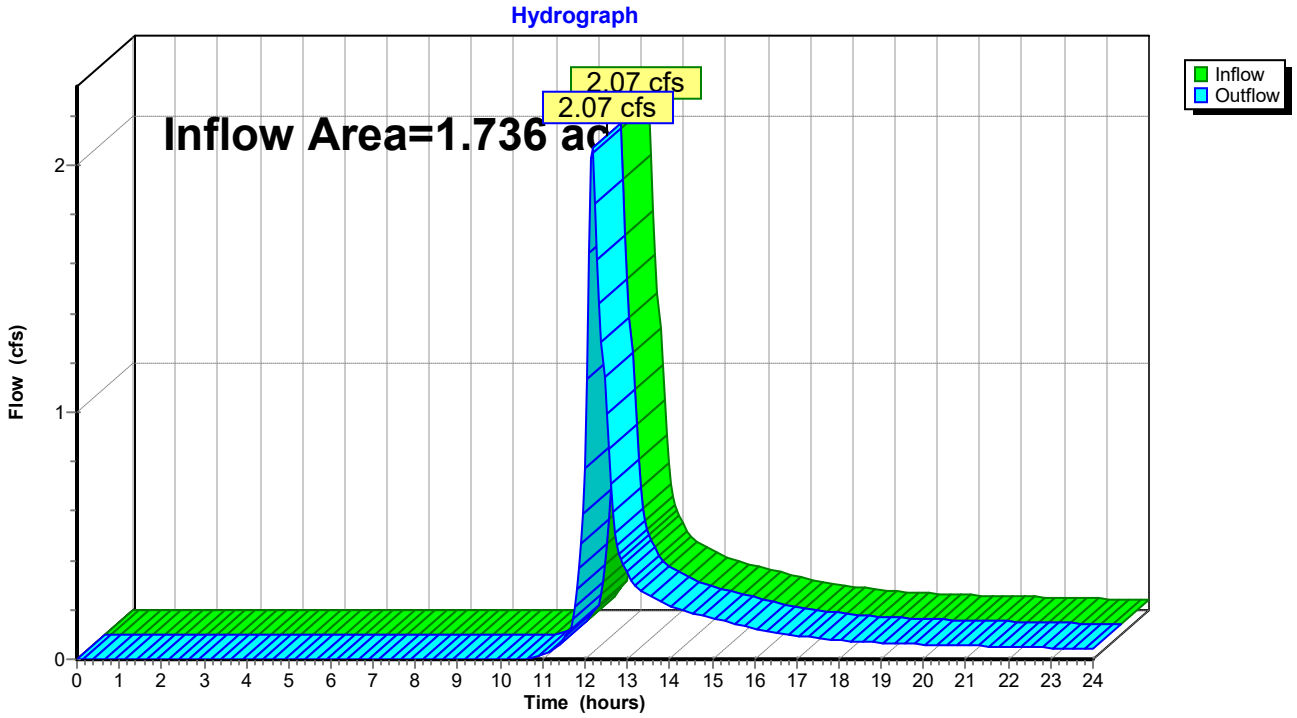
Summary for Reach DPE-1: Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 0.00% Impervious, Inflow Depth > 1.33" for 2 yr event
Inflow = 2.07 cfs @ 12.18 hrs, Volume= 0.192 af
Outflow = 2.07 cfs @ 12.18 hrs, Volume= 0.192 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPE-1: Wetlands



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: to Wetlands Runoff Area=75,601 sf 0.00% Impervious Runoff Depth>3.09"
Flow Length=451' Tc=12.0 min CN=70 Runoff=5.13 cfs 0.448 af

Reach DPE-1: Wetlands Inflow=5.13 cfs 0.448 af
Outflow=5.13 cfs 0.448 af

Total Runoff Area = 1.736 ac Runoff Volume = 0.448 af Average Runoff Depth = 3.09"
100.00% Pervious = 1.736 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX-1: to Wetlands

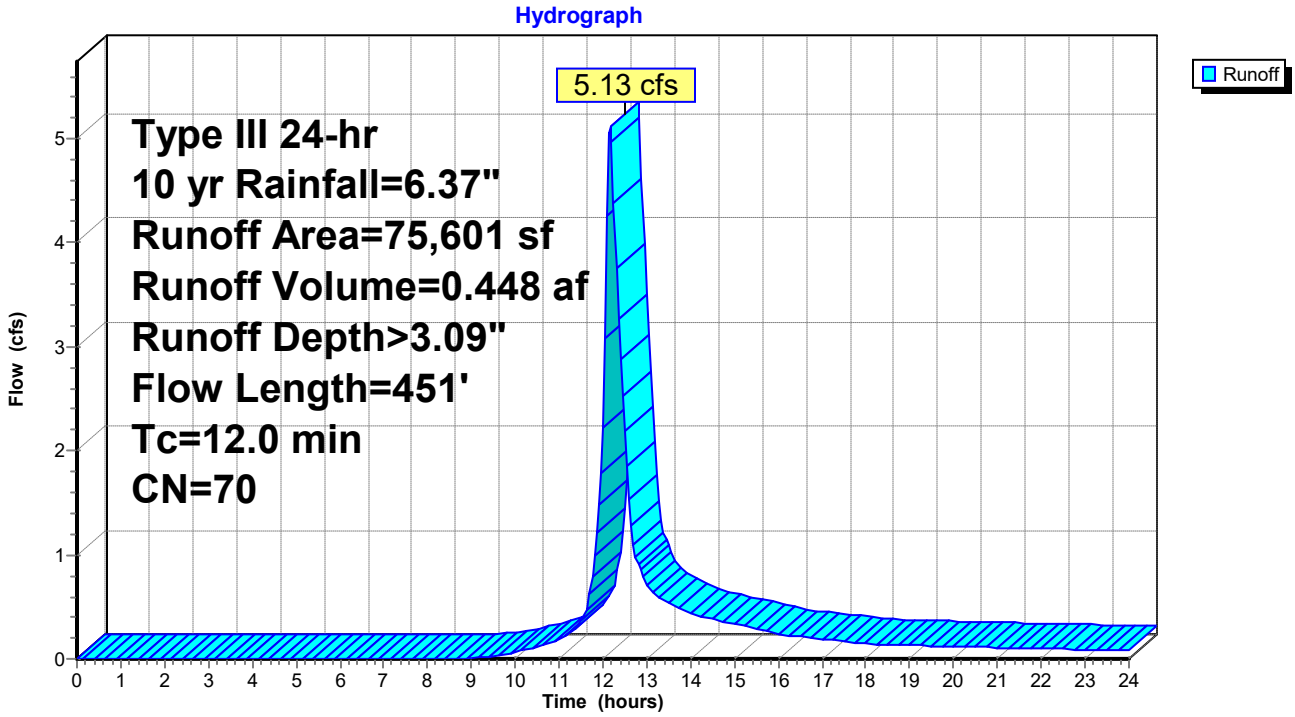
Runoff = 5.13 cfs @ 12.17 hrs, Volume= 0.448 af, Depth> 3.09"
Routed to Reach DPE-1 : Wetlands

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 yr Rainfall=6.37"

Area (sf)	CN	Description
75,601	70	Woods, Good, HSG C
75,601		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	7	0.2860	0.13		**Sheet Flow, A to B** Woods: Light underbrush n= 0.400 P2= 3.28"
6.5	43	0.0700	0.11		**Sheet Flow, B to C** Woods: Light underbrush n= 0.400 P2= 3.28"
4.6	401	0.0840	1.45		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
12.0	451	Total			

Subcatchment EX-1: to Wetlands



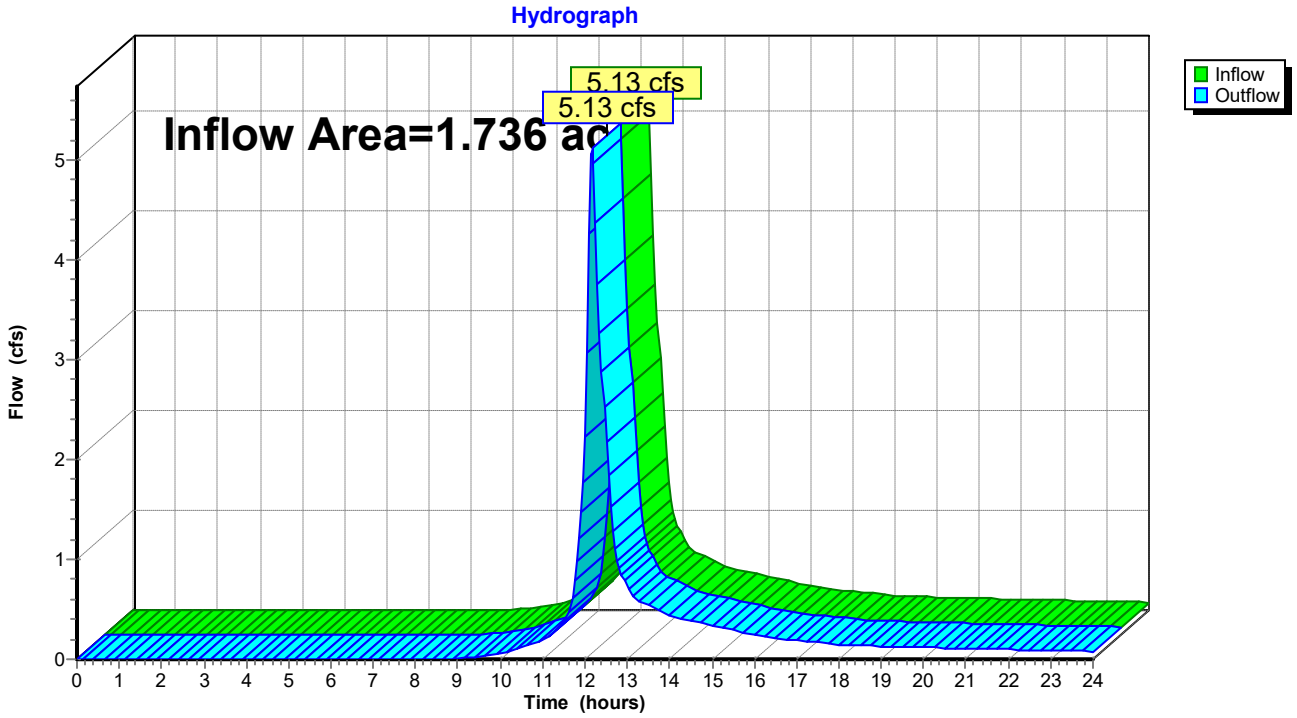
Summary for Reach DPE-1: Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 0.00% Impervious, Inflow Depth > 3.09" for 10 yr event
Inflow = 5.13 cfs @ 12.17 hrs, Volume= 0.448 af
Outflow = 5.13 cfs @ 12.17 hrs, Volume= 0.448 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPE-1: Wetlands



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: to Wetlands Runoff Area=75,601 sf 0.00% Impervious Runoff Depth>4.67"
Flow Length=451' Tc=12.0 min CN=70 Runoff=7.78 cfs 0.675 af

Reach DPE-1: Wetlands Inflow=7.78 cfs 0.675 af
Outflow=7.78 cfs 0.675 af

Total Runoff Area = 1.736 ac Runoff Volume = 0.675 af Average Runoff Depth = 4.67"
100.00% Pervious = 1.736 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX-1: to Wetlands

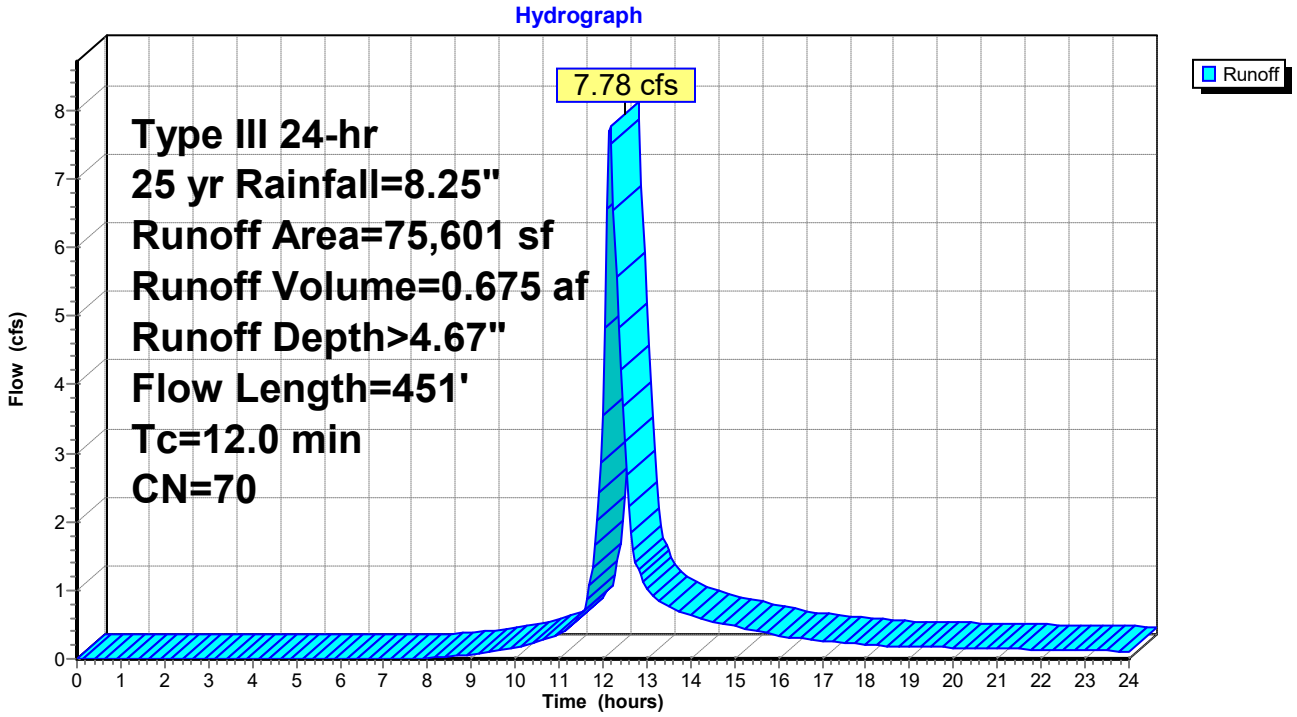
Runoff = 7.78 cfs @ 12.17 hrs, Volume= 0.675 af, Depth> 4.67"
Routed to Reach DPE-1 : Wetlands

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 yr Rainfall=8.25"

Area (sf)	CN	Description
75,601	70	Woods, Good, HSG C
75,601		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	7	0.2860	0.13		**Sheet Flow, A to B** Woods: Light underbrush n= 0.400 P2= 3.28"
6.5	43	0.0700	0.11		**Sheet Flow, B to C** Woods: Light underbrush n= 0.400 P2= 3.28"
4.6	401	0.0840	1.45		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
12.0	451	Total			

Subcatchment EX-1: to Wetlands



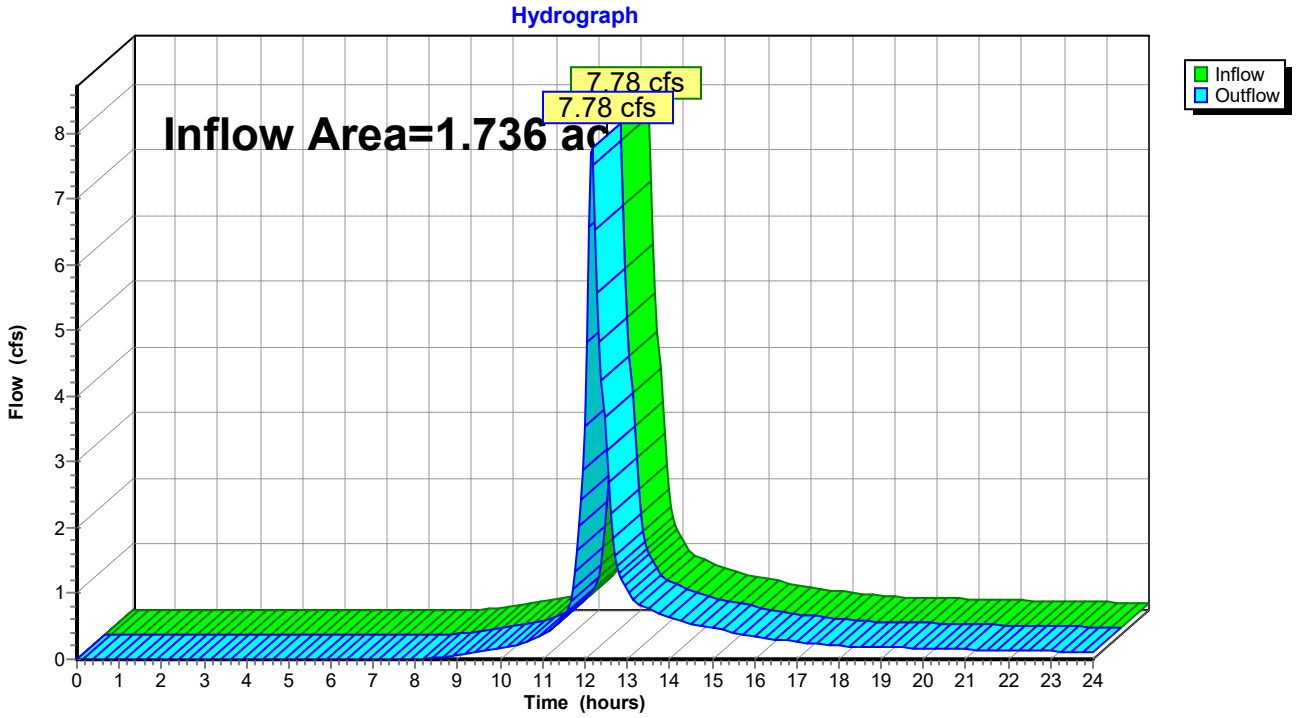
Summary for Reach DPE-1: Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 0.00% Impervious, Inflow Depth > 4.67" for 25 yr event
Inflow = 7.78 cfs @ 12.17 hrs, Volume= 0.675 af
Outflow = 7.78 cfs @ 12.17 hrs, Volume= 0.675 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPE-1: Wetlands



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: to Wetlands Runoff Area=75,601 sf 0.00% Impervious Runoff Depth>7.48"
Flow Length=451' Tc=12.0 min CN=70 Runoff=12.38 cfs 1.082 af

Reach DPE-1: Wetlands Inflow=12.38 cfs 1.082 af
Outflow=12.38 cfs 1.082 af

Total Runoff Area = 1.736 ac Runoff Volume = 1.082 af Average Runoff Depth = 7.48"
100.00% Pervious = 1.736 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment EX-1: to Wetlands

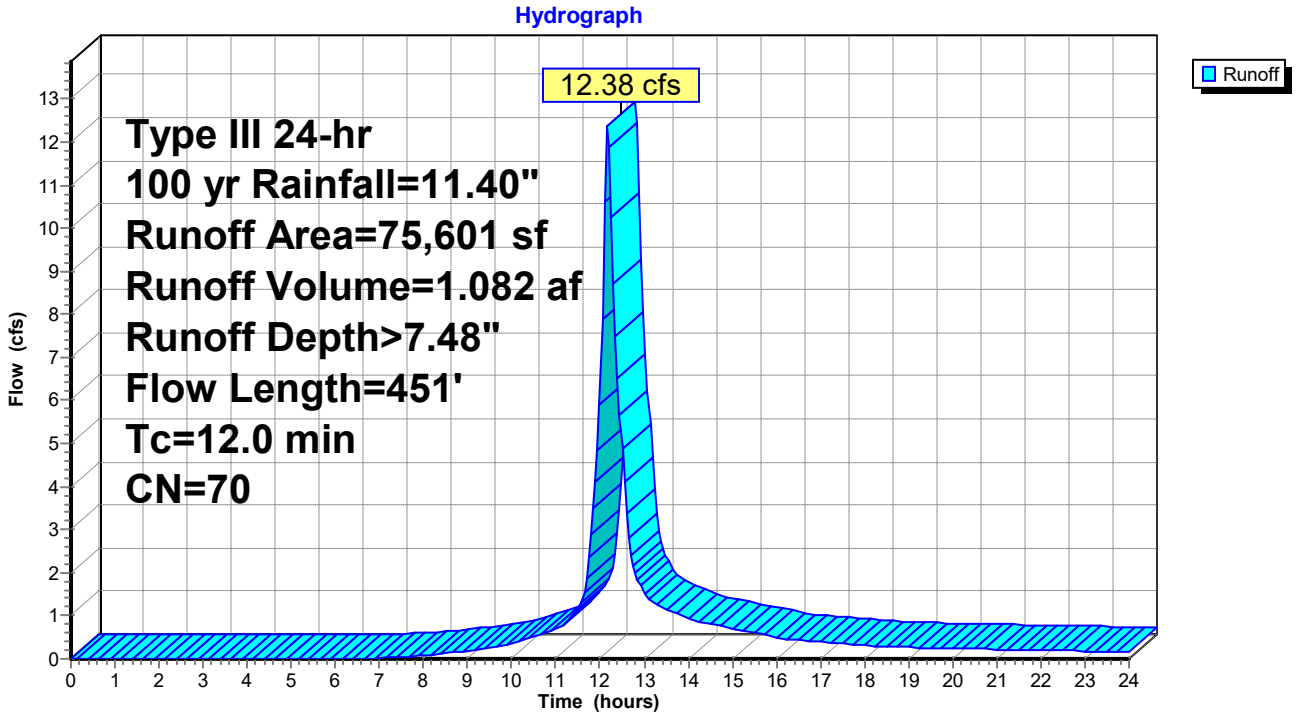
Runoff = 12.38 cfs @ 12.17 hrs, Volume= 1.082 af, Depth> 7.48"
Routed to Reach DPE-1 : Wetlands

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 yr Rainfall=11.40"

Area (sf)	CN	Description
75,601	70	Woods, Good, HSG C
75,601		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	7	0.2860	0.13		**Sheet Flow, A to B** Woods: Light underbrush n= 0.400 P2= 3.28"
6.5	43	0.0700	0.11		**Sheet Flow, B to C** Woods: Light underbrush n= 0.400 P2= 3.28"
4.6	401	0.0840	1.45		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
12.0	451	Total			

Subcatchment EX-1: to Wetlands



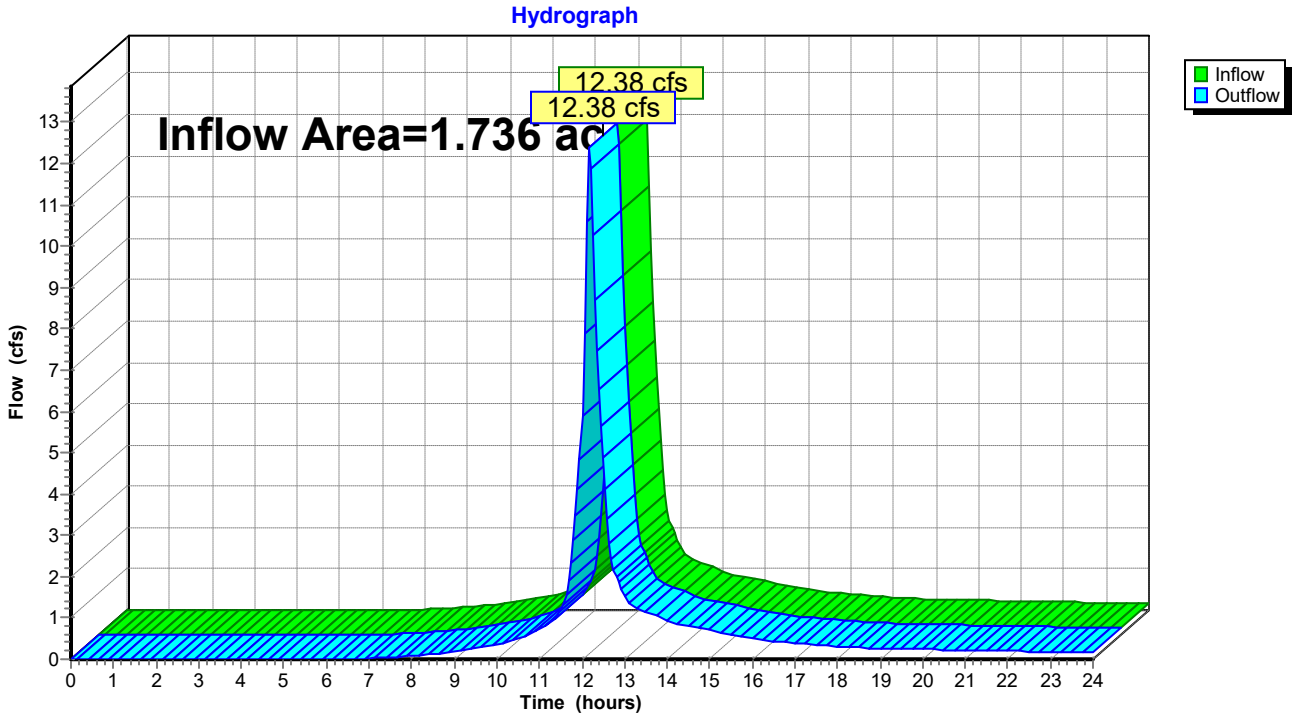
Summary for Reach DPE-1: Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 0.00% Impervious, Inflow Depth > 7.48" for 100 yr event
Inflow = 12.38 cfs @ 12.17 hrs, Volume= 1.082 af
Outflow = 12.38 cfs @ 12.17 hrs, Volume= 1.082 af, Atten= 0%, Lag= 0.0 min

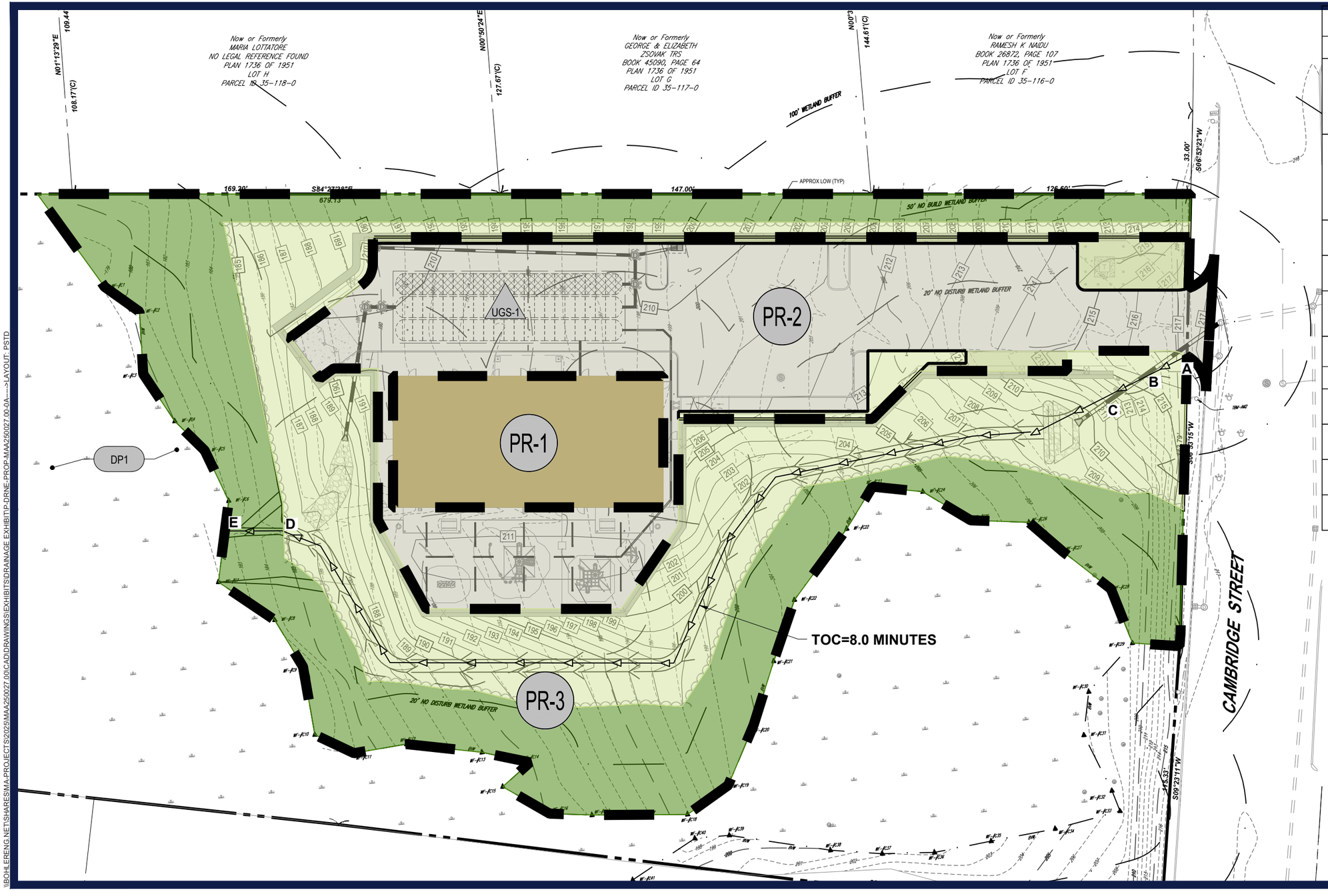
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPE-1: Wetlands



APPENDIX E: PROPOSED CONDITIONS HYDROLOGIC ANALYSIS

- *PROPOSED CONDITIONS DRAINAGE MAP*
- *PROPOSED CONDITIONS HYDROCAD CALCULATIONS*



LEGEND

PROPOSED WATERSHED

DESIGN POINT	DP1 / DP1
SUBCATCHMENT ID	PD1.1 PD1.1
SUBCATCHMENT BOUNDARY	
TIME OF CONCENTRATION PATH	
STORMWATER CONTROL MEASURE OR MODELED DRAINAGE STRUCTURE	P1.1 P1.1

LEGEND

PROPOSED COVER TYPES

BUILDING	
PAVEMENT	
GRASS / SD / LAWN	
WOODED AREA	

BOHLER

50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

PROPOSED CONDITIONS WATERSHED MAP

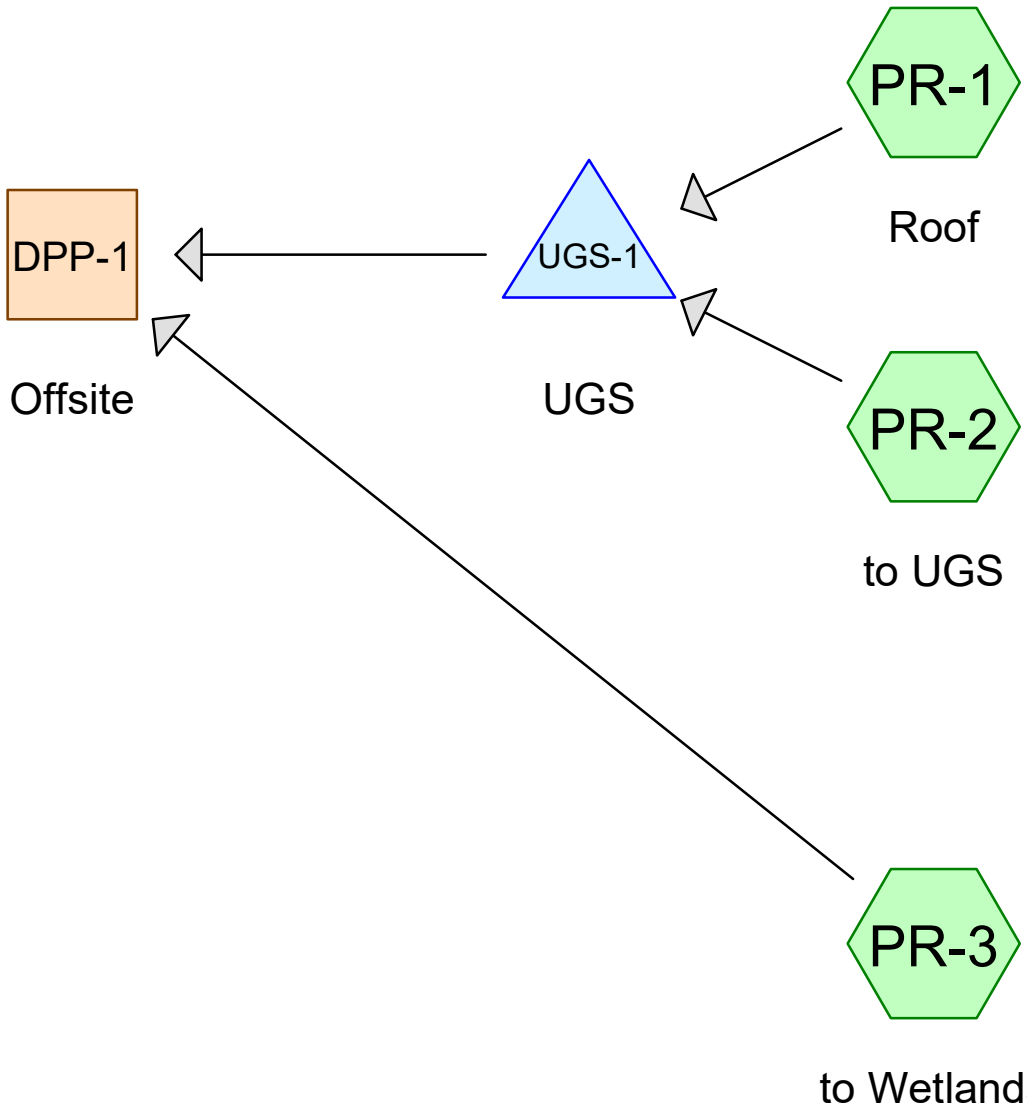
FOXBOROUGH LEARNING, LLC

BURLINGTON, MA 01803

12/16/2025 | JT | MAA250027.00 | REV 0a

40 20 10 0 40

SCALE: 1" = 40'



Subcat Reach Pond Link

Routing Diagram for MAA250027 Model
Prepared by Bohler Engineering, PC, Printed 12/12/2025

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 yr	Type III 24-hr		Default	24.00	1	4.00	2
2	10 yr	Type III 24-hr		Default	24.00	1	6.37	2
3	25 yr	Type III 24-hr		Default	24.00	1	8.25	2
4	100 yr	Type III 24-hr		Default	24.00	1	11.40	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.569	74	>75% Grass cover, Good, HSG C (PR-2, PR-3)
0.508	98	Paved parking, HSG A (PR-2)
0.126	98	Unconnected roofs, HSG A (PR-1)
0.533	70	Woods, Good, HSG C (PR-3)
1.736	**82**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.634	HSG A	PR-1, PR-2
0.000	HSG B	
1.102	HSG C	PR-2, PR-3
0.000	HSG D	
0.000	Other	
1.736		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.569	0.000	0.000	0.569	>75% Grass cover, Good	PR-2, PR-3
0.508	0.000	0.000	0.000	0.000	0.508	Paved parking	PR-2
0.126	0.000	0.000	0.000	0.000	0.126	Unconnected roofs	PR-1
0.000	0.000	0.533	0.000	0.000	0.533	Woods, Good	PR-3
0.634	**0.000**	**1.102**	**0.000**	**0.000**	**1.736**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: Roof Runoff Area=5,500 sf 100.00% Impervious Runoff Depth>3.76"
Tc=6.0 min CN=98 Runoff=0.48 cfs 0.040 af

Subcatchment PR-2: to UGS Runoff Area=24,437 sf 90.49% Impervious Runoff Depth>3.54"
Tc=6.0 min CN=96 Runoff=2.09 cfs 0.165 af

Subcatchment PR-3: to Wetlands Runoff Area=45,664 sf 0.00% Impervious Runoff Depth>1.46"
Flow Length=461' Tc=8.0 min CN=72 Runoff=1.59 cfs 0.127 af

Reach DPP-1: Offsite Inflow=1.59 cfs 0.205 af
Outflow=1.59 cfs 0.205 af

Pond UGS-1: UGS Peak Elev=203.44' Storage=5,001 cf Inflow=2.57 cfs 0.205 af
Discarded=0.02 cfs 0.028 af Primary=0.46 cfs 0.078 af Outflow=0.47 cfs 0.106 af

Total Runoff Area = 1.736 ac Runoff Volume = 0.332 af Average Runoff Depth = 2.30"
63.47% Pervious = 1.102 ac 36.53% Impervious = 0.634 ac

Summary for Subcatchment PR-1: Roof

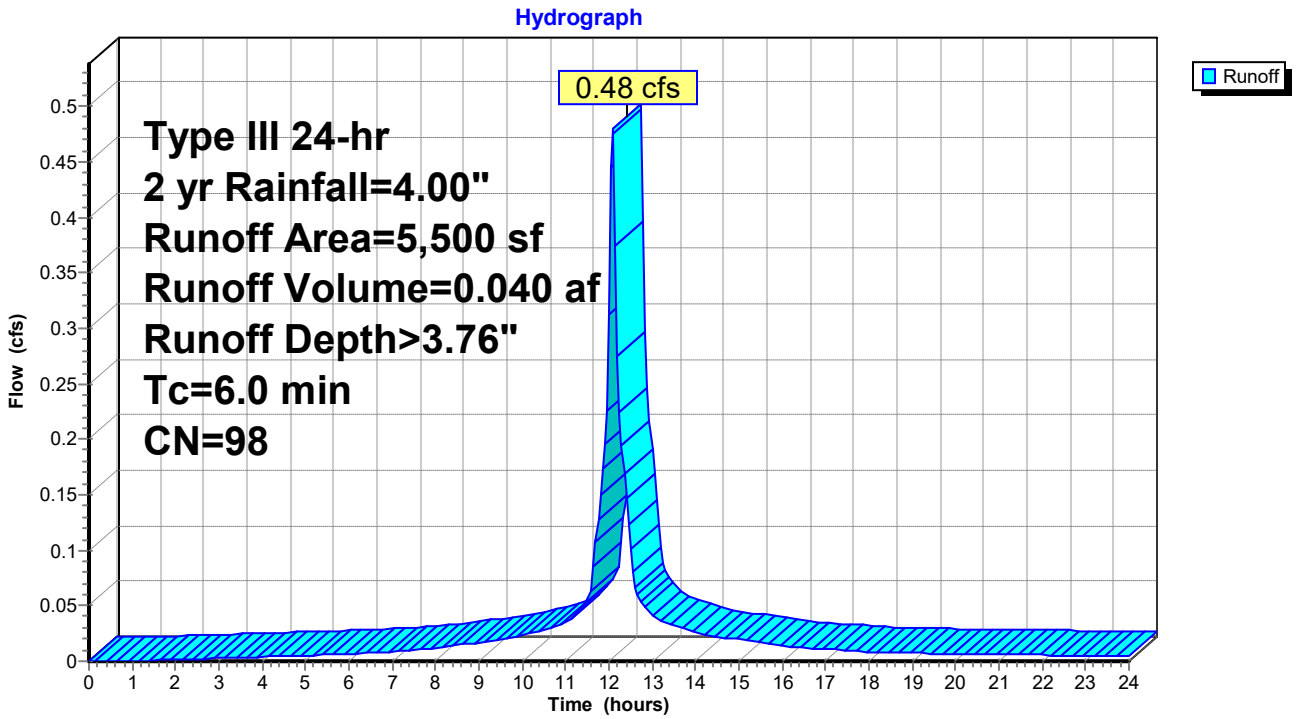
Runoff = 0.48 cfs @ 12.09 hrs, Volume= 0.040 af, Depth> 3.76"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 yr Rainfall=4.00"

Area (sf)	CN	Description
5,500	98	Unconnected roofs, HSG A
5,500		100.00% Impervious Area
5,500		100.00% Unconnected

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

Subcatchment PR-1: Roof



Summary for Subcatchment PR-2: to UGS

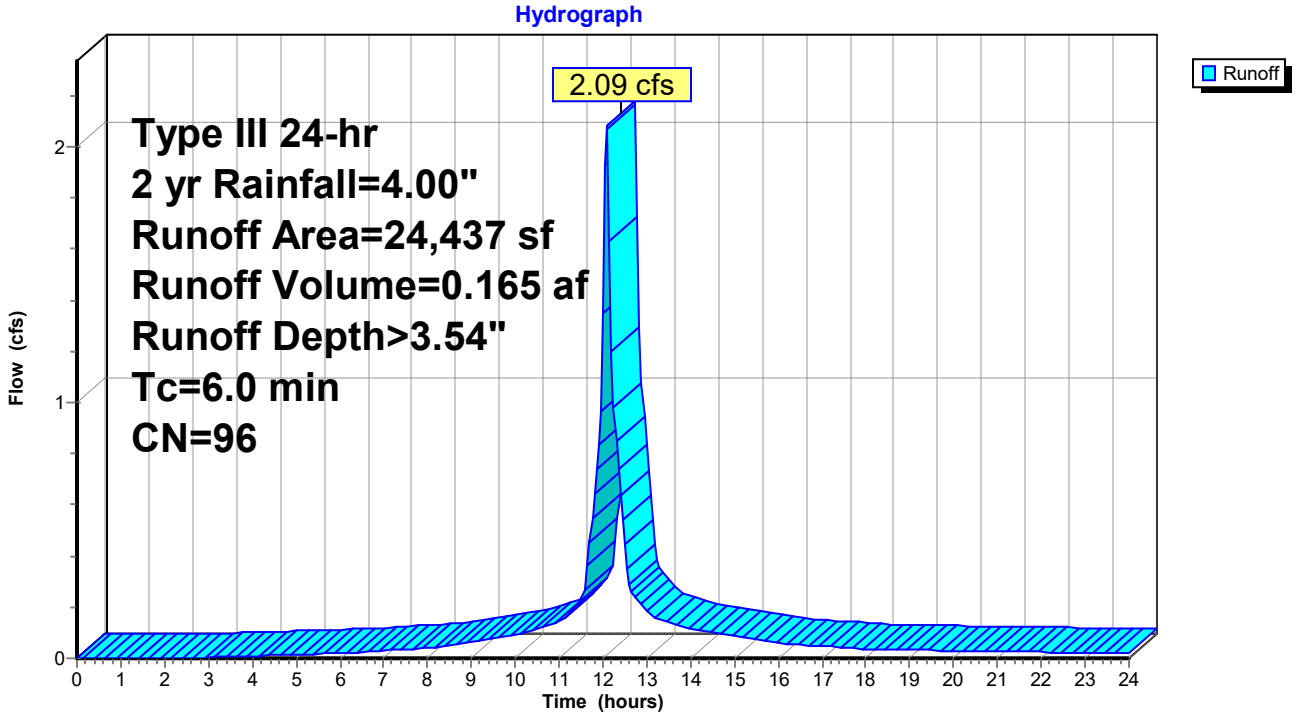
Runoff = 2.09 cfs @ 12.09 hrs, Volume= 0.165 af, Depth> 3.54"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 yr Rainfall=4.00"

Area (sf)	CN	Description
2,323	74	>75% Grass cover, Good, HSG C
22,114	98	Paved parking, HSG A
24,437	96	Weighted Average
2,323		9.51% Pervious Area
22,114		90.49% Impervious Area

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

Subcatchment PR-2: to UGS



Summary for Subcatchment PR-3: to Wetlands

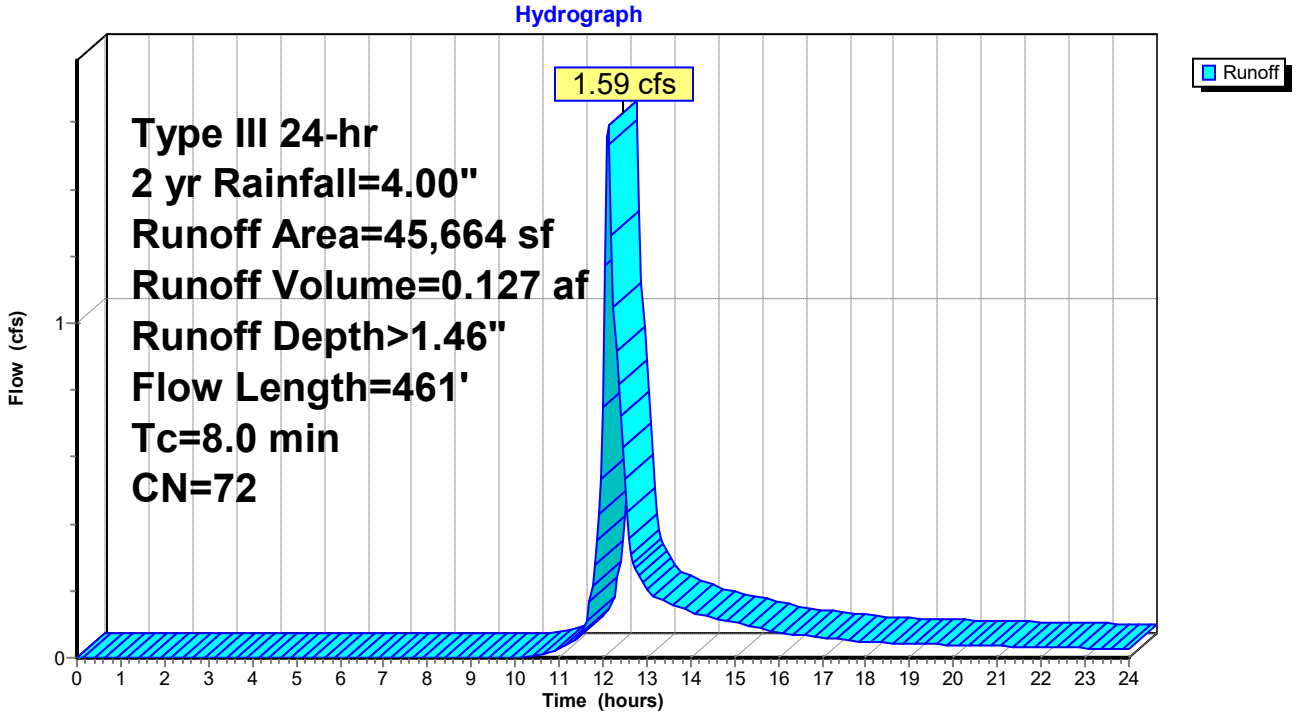
Runoff = 1.59 cfs @ 12.12 hrs, Volume= 0.127 af, Depth> 1.46"
Routed to Reach DPP-1 : Offsite

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 yr Rainfall=4.00"

Area (sf)	CN	Description
22,467	74	>75% Grass cover, Good, HSG C
23,197	70	Woods, Good, HSG C
45,664	72	Weighted Average
45,664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.2700	0.22		**Sheet Flow, A to B** Grass: Dense n= 0.240 P2= 3.28"
3.5	38	0.0920	0.18		**Sheet Flow, B to C** Grass: Dense n= 0.240 P2= 3.28"
3.4	388	0.0720	1.88		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	23	0.1000	1.58		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
8.0	461	Total			

Subcatchment PR-3: to Wetlands



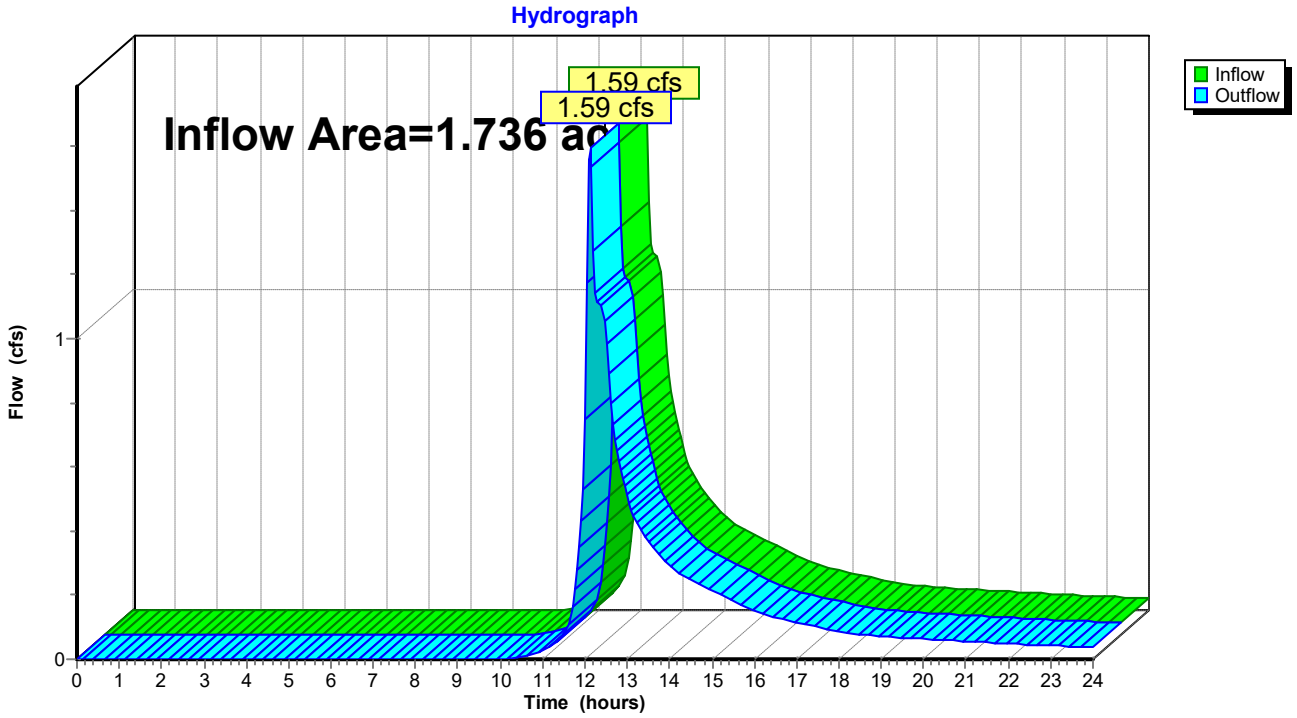
Summary for Reach DPP-1: Offsite

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 36.53% Impervious, Inflow Depth > 1.42" for 2 yr event
Inflow = 1.59 cfs @ 12.12 hrs, Volume= 0.205 af
Outflow = 1.59 cfs @ 12.12 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPP-1: Offsite



Summary for Pond UGS-1: UGS

Inflow Area = 0.687 ac, 92.24% Impervious, Inflow Depth > 3.58" for 2 yr event
Inflow = 2.57 cfs @ 12.09 hrs, Volume= 0.205 af
Outflow = 0.47 cfs @ 12.54 hrs, Volume= 0.106 af, Atten= 82%, Lag= 27.0 min
Discarded = 0.02 cfs @ 6.90 hrs, Volume= 0.028 af
Primary = 0.46 cfs @ 12.54 hrs, Volume= 0.078 af
Routed to Reach DPP-1 : Offsite

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 203.44' @ 12.54 hrs Surf.Area= 2,622 sf Storage= 5,001 cf

Plug-Flow detention time= 227.0 min calculated for 0.106 af (52% of inflow)
Center-of-Mass det. time= 109.4 min (873.8 - 764.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	200.75'	4,300 cf	**28.50'W x 91.99'L x 6.75'H Field A** 17,697 cf Overall - 6,946 cf Embedded = 10,751 cf x 40.0% Voids
#2A	201.50'	6,946 cf	**ADS_StormTech MC-4500 b +Cap** x 63 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 63 Chambers in 3 Rows Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf
		11,246 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.75'	**0.270 in/hr Exfiltration over Surface area**
#2	Primary	203.05'	**8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	207.25'	**5.0' long x 1.0' 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.02 cfs @ 6.90 hrs HW=200.82' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.45 cfs @ 12.54 hrs HW=203.44' TW=0.00' (Dynamic Tailwater)
├**2=Orifice/Grate** (Orifice Controls 0.45 cfs @ 2.13 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond UGS-1: UGS - Chamber Wizard Field A

Chamber Model = ADS_StormTech MC-4500 b +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

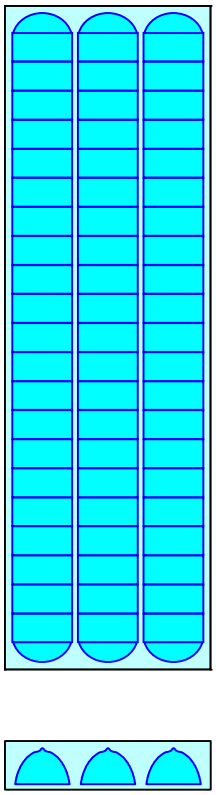
21 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 89.99' Row Length +12.0" End Stone x 2 = 91.99' Base Length
3 Rows x 100.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 28.50' Base Width
9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

63 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 3 Rows = 6,945.9 cf Chamber Storage

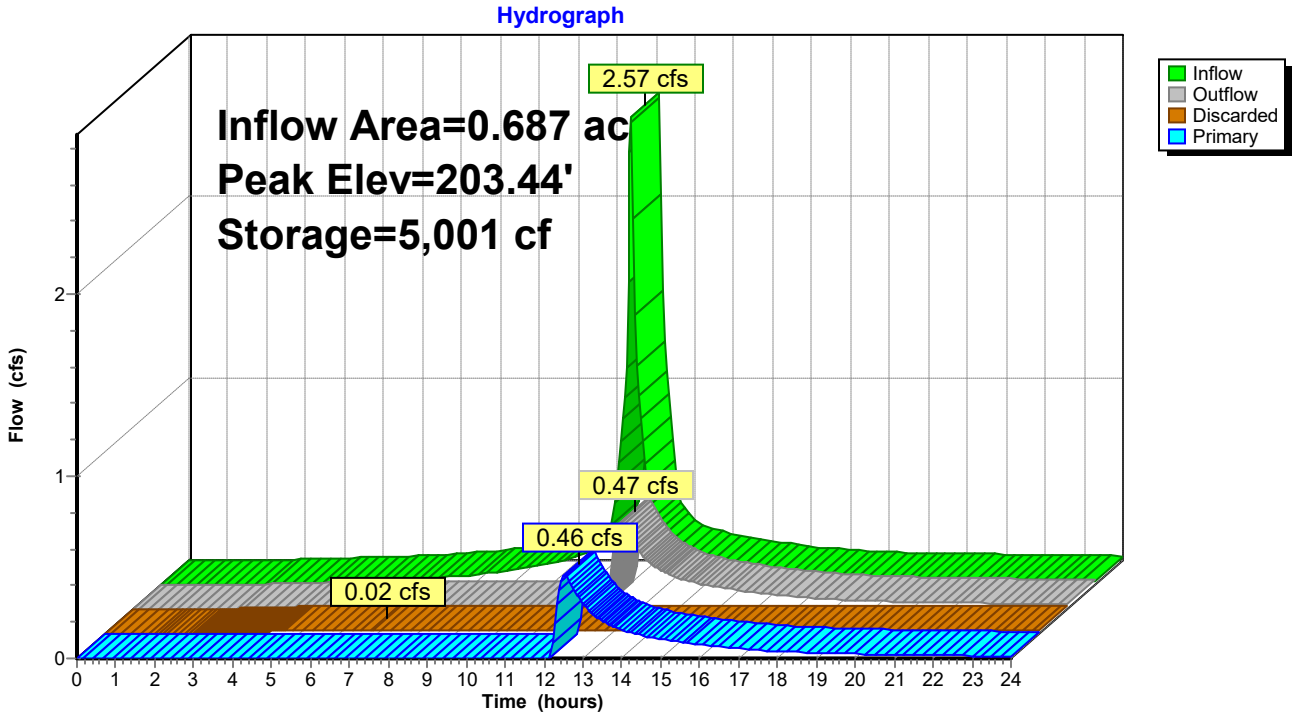
17,696.9 cf Field - 6,945.9 cf Chambers = 10,751.0 cf Stone x 40.0% Voids = 4,300.4 cf Stone Storage

Chamber Storage + Stone Storage = 11,246.3 cf = 0.258 af
Overall Storage Efficiency = 63.5%
Overall System Size = 91.99' x 28.50' x 6.75'

63 Chambers
655.4 cy Field
398.2 cy Stone



Pond UGS-1: UGS



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: Roof Runoff Area=5,500 sf 100.00% Impervious Runoff Depth>6.13"
Tc=6.0 min CN=98 Runoff=0.77 cfs 0.064 af

Subcatchment PR-2: to UGS Runoff Area=24,437 sf 90.49% Impervious Runoff Depth>5.89"
Tc=6.0 min CN=96 Runoff=3.39 cfs 0.275 af

Subcatchment PR-3: to Wetlands Runoff Area=45,664 sf 0.00% Impervious Runoff Depth>3.29"
Flow Length=461' Tc=8.0 min CN=72 Runoff=3.73 cfs 0.288 af

Reach DPP-1: Offsite Inflow=5.05 cfs 0.498 af
Outflow=5.05 cfs 0.498 af

Pond UGS-1: UGS Peak Elev=204.34' Storage=6,797 cf Inflow=4.16 cfs 0.340 af
Discarded=0.02 cfs 0.030 af Primary=1.64 cfs 0.210 af Outflow=1.66 cfs 0.240 af

Total Runoff Area = 1.736 ac Runoff Volume = 0.628 af Average Runoff Depth = 4.34"
63.47% Pervious = 1.102 ac 36.53% Impervious = 0.634 ac

Summary for Subcatchment PR-1: Roof

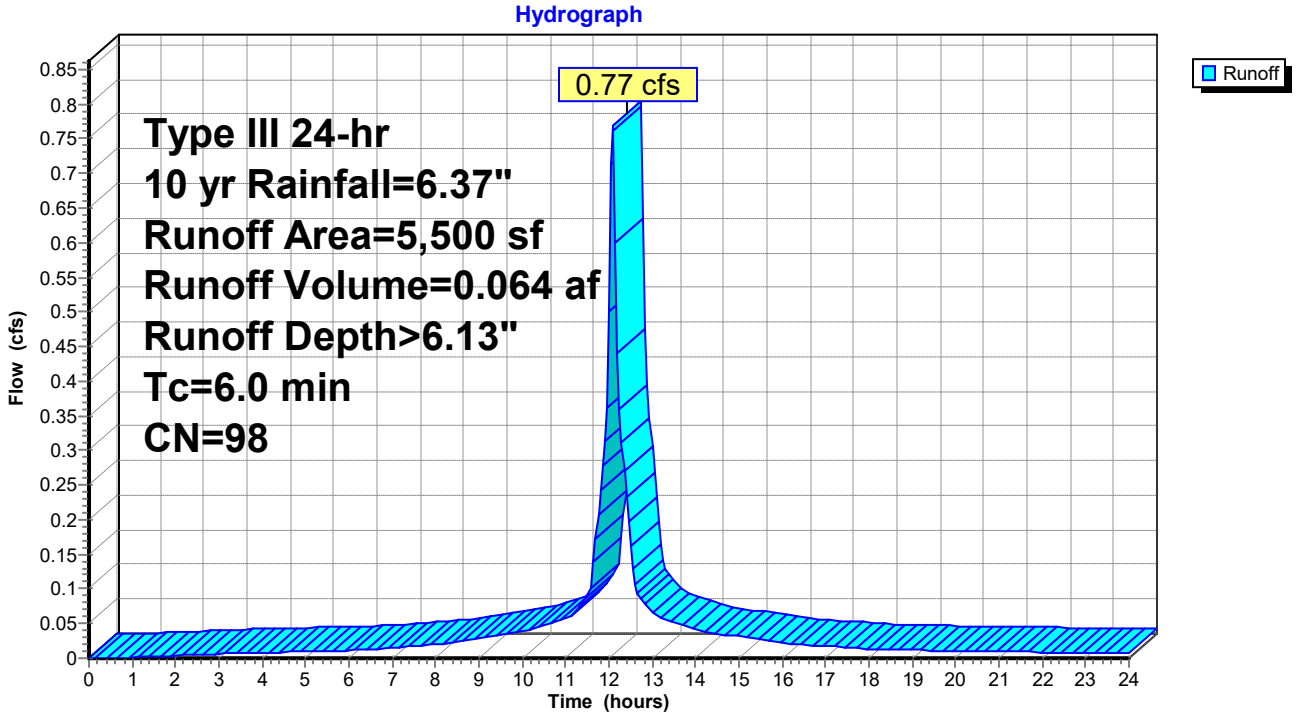
Runoff = 0.77 cfs @ 12.09 hrs, Volume= 0.064 af, Depth> 6.13"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 yr Rainfall=6.37"

Area (sf)	CN	Description
5,500	98	Unconnected roofs, HSG A
5,500		100.00% Impervious Area
5,500		100.00% Unconnected

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

Subcatchment PR-1: Roof



Summary for Subcatchment PR-2: to UGS

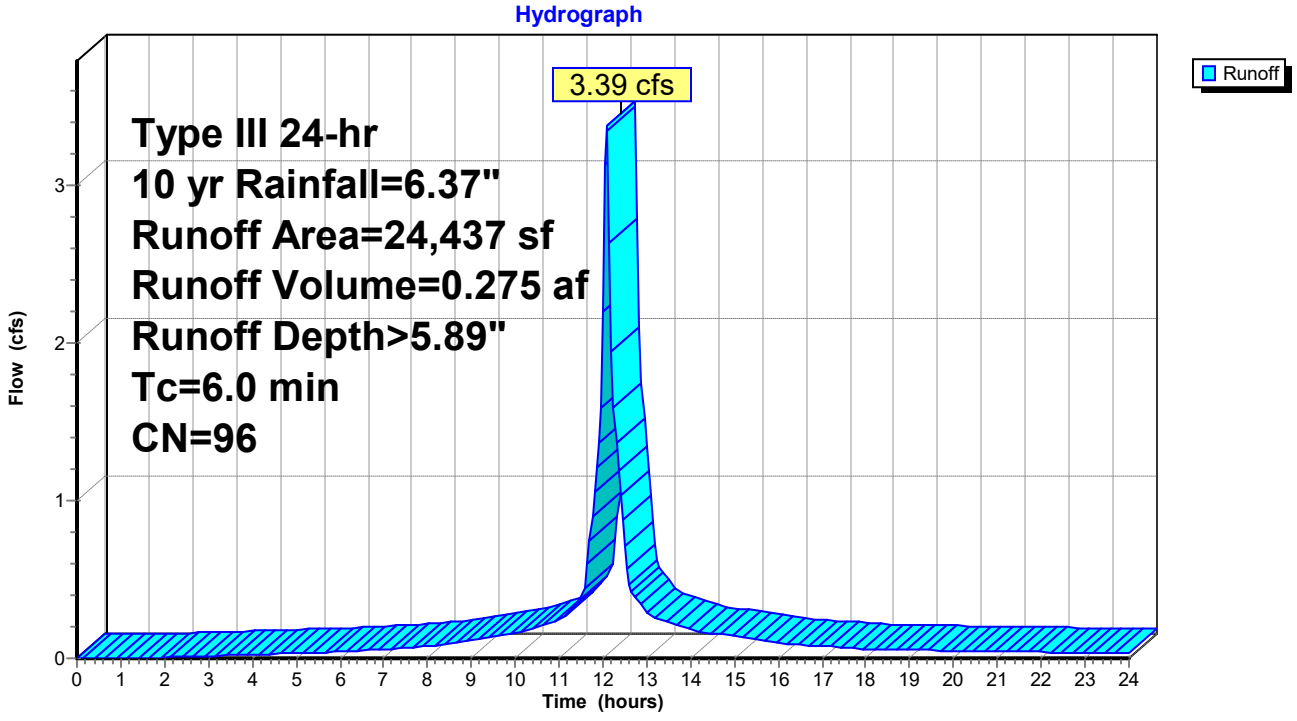
Runoff = 3.39 cfs @ 12.09 hrs, Volume= 0.275 af, Depth> 5.89"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 yr Rainfall=6.37"

Area (sf)	CN	Description
2,323	74	>75% Grass cover, Good, HSG C
22,114	98	Paved parking, HSG A
24,437	96	Weighted Average
2,323		9.51% Pervious Area
22,114		90.49% Impervious Area

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

Subcatchment PR-2: to UGS



Summary for Subcatchment PR-3: to Wetlands

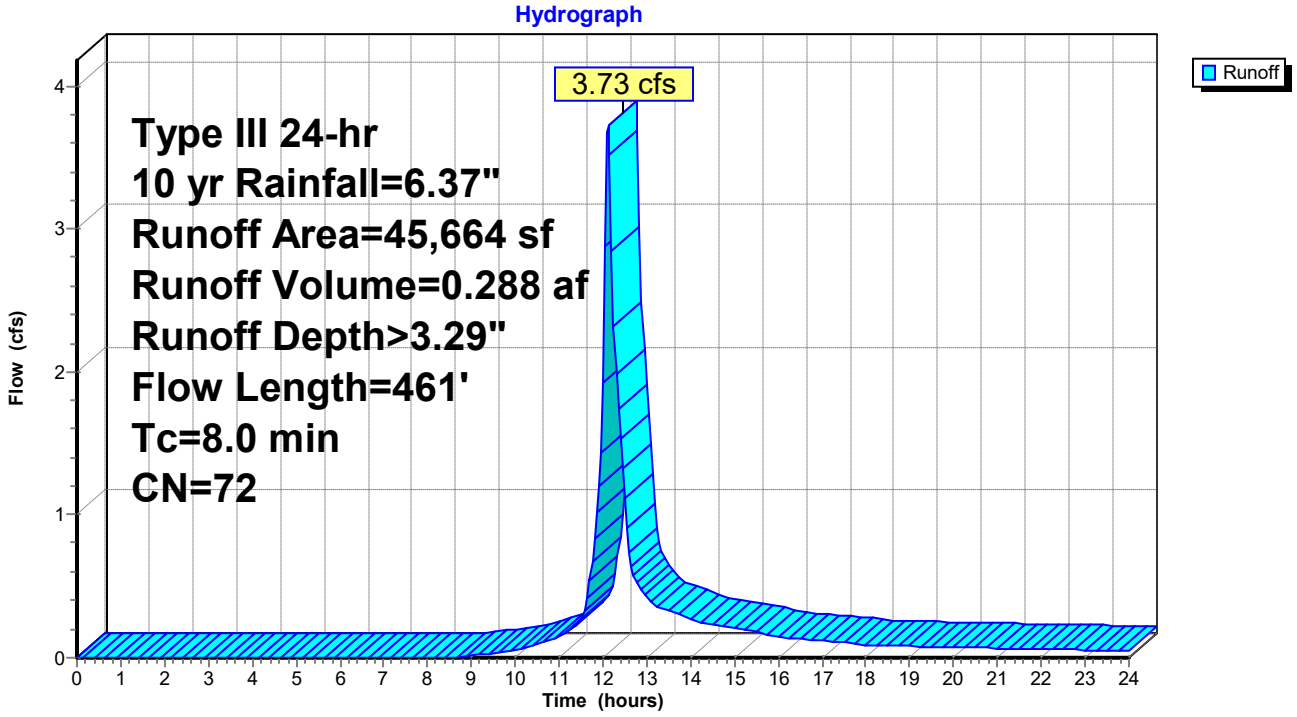
Runoff = 3.73 cfs @ 12.12 hrs, Volume= 0.288 af, Depth> 3.29"
Routed to Reach DPP-1 : Offsite

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 yr Rainfall=6.37"

Area (sf)	CN	Description
22,467	74	>75% Grass cover, Good, HSG C
23,197	70	Woods, Good, HSG C
45,664	72	Weighted Average
45,664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.2700	0.22		**Sheet Flow, A to B** Grass: Dense n= 0.240 P2= 3.28"
3.5	38	0.0920	0.18		**Sheet Flow, B to C** Grass: Dense n= 0.240 P2= 3.28"
3.4	388	0.0720	1.88		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	23	0.1000	1.58		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
8.0	461	Total			

Subcatchment PR-3: to Wetlands



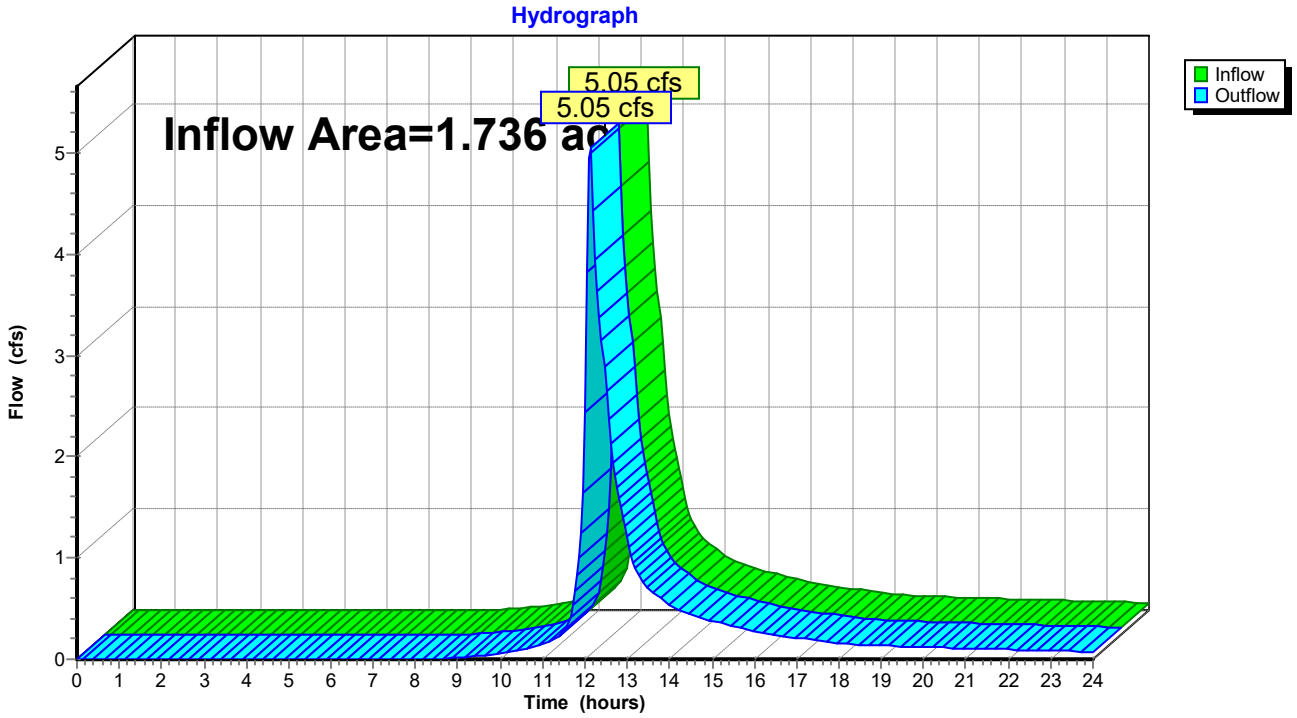
Summary for Reach DPP-1: Offsite

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 36.53% Impervious, Inflow Depth > 3.44" for 10 yr event
Inflow = 5.05 cfs @ 12.13 hrs, Volume= 0.498 af
Outflow = 5.05 cfs @ 12.13 hrs, Volume= 0.498 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPP-1: Offsite



Summary for Pond UGS-1: UGS

Inflow Area = 0.687 ac, 92.24% Impervious, Inflow Depth > 5.94" for 10 yr event
Inflow = 4.16 cfs @ 12.09 hrs, Volume= 0.340 af
Outflow = 1.66 cfs @ 12.31 hrs, Volume= 0.240 af, Atten= 60%, Lag= 13.3 min
Discarded = 0.02 cfs @ 4.50 hrs, Volume= 0.030 af
Primary = 1.64 cfs @ 12.31 hrs, Volume= 0.210 af
Routed to Reach DPP-1 : Offsite

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 204.34' @ 12.31 hrs Surf.Area= 2,622 sf Storage= 6,797 cf

Plug-Flow detention time= 176.1 min calculated for 0.240 af (71% of inflow)
Center-of-Mass det. time= 83.1 min (837.2 - 754.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	200.75'	4,300 cf	**28.50'W x 91.99'L x 6.75'H Field A** 17,697 cf Overall - 6,946 cf Embedded = 10,751 cf x 40.0% Voids
#2A	201.50'	6,946 cf	**ADS_StormTech MC-4500 b +Cap** x 63 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 63 Chambers in 3 Rows Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf
		11,246 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.75'	**0.270 in/hr Exfiltration over Surface area**
#2	Primary	203.05'	**8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	207.25'	**5.0' long x 1.0' 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.02 cfs @ 4.50 hrs HW=200.82' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=1.64 cfs @ 12.31 hrs HW=204.33' TW=0.00' (Dynamic Tailwater)
├**2=Orifice/Grate** (Orifice Controls 1.64 cfs @ 4.70 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond UGS-1: UGS - Chamber Wizard Field A

Chamber Model = ADS_StormTech MC-4500 b +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

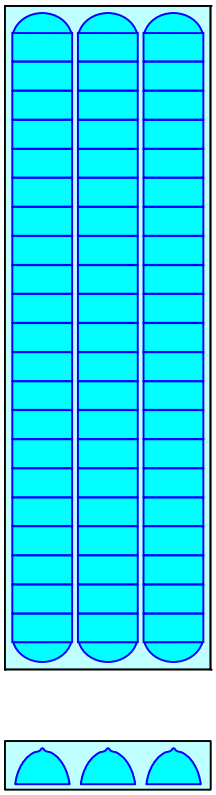
21 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 89.99' Row Length +12.0" End Stone x 2 = 91.99' Base Length
3 Rows x 100.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 28.50' Base Width
9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

63 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 3 Rows = 6,945.9 cf Chamber Storage

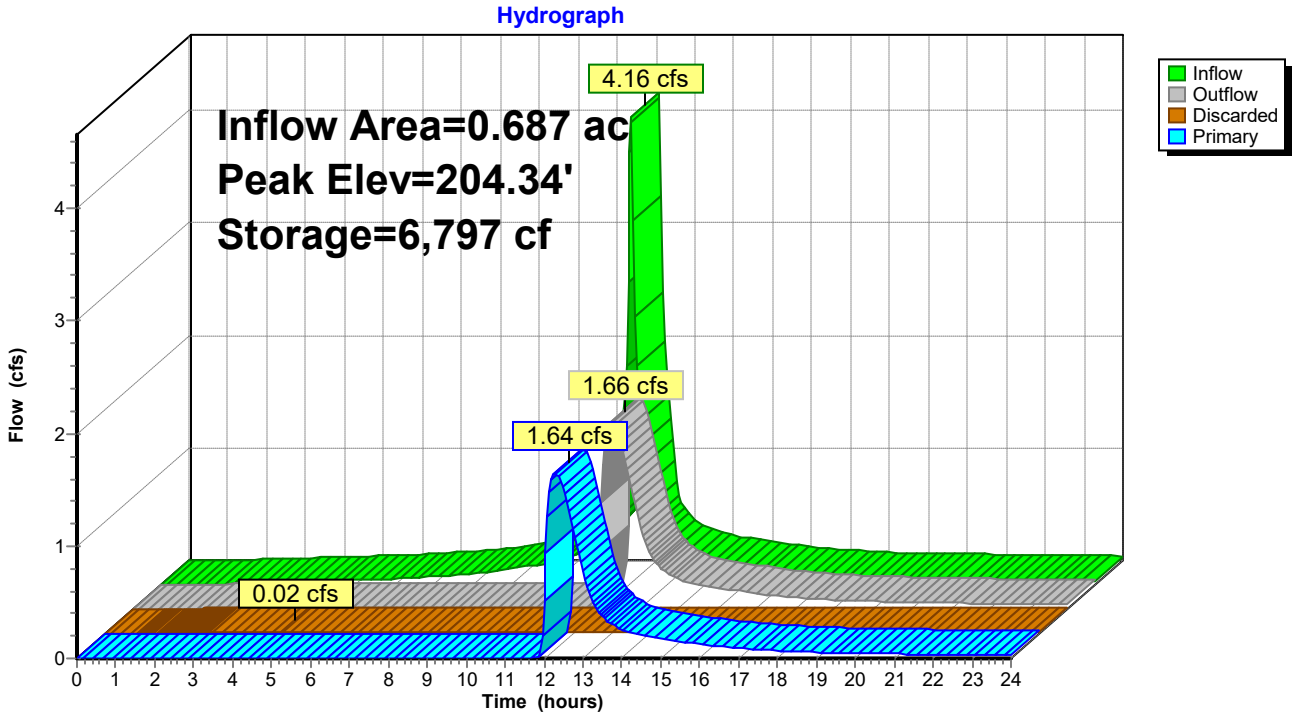
17,696.9 cf Field - 6,945.9 cf Chambers = 10,751.0 cf Stone x 40.0% Voids = 4,300.4 cf Stone Storage

Chamber Storage + Stone Storage = 11,246.3 cf = 0.258 af
Overall Storage Efficiency = 63.5%
Overall System Size = 91.99' x 28.50' x 6.75'

63 Chambers
655.4 cy Field
398.2 cy Stone



Pond UGS-1: UGS



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: Roof Runoff Area=5,500 sf 100.00% Impervious Runoff Depth>8.01"
Tc=6.0 min CN=98 Runoff=1.00 cfs 0.084 af

Subcatchment PR-2: to UGS Runoff Area=24,437 sf 90.49% Impervious Runoff Depth>7.77"
Tc=6.0 min CN=96 Runoff=4.41 cfs 0.363 af

Subcatchment PR-3: to Wetlands Runoff Area=45,664 sf 0.00% Impervious Runoff Depth>4.91"
Flow Length=461' Tc=8.0 min CN=72 Runoff=5.56 cfs 0.429 af

Reach DPP-1: Offsite Inflow=7.48 cfs 0.744 af
Outflow=7.48 cfs 0.744 af

Pond UGS-1: UGS Peak Elev=205.09' Storage=8,188 cf Inflow=5.41 cfs 0.447 af
Discarded=0.02 cfs 0.031 af Primary=2.20 cfs 0.316 af Outflow=2.21 cfs 0.346 af

Total Runoff Area = 1.736 ac Runoff Volume = 0.876 af Average Runoff Depth = 6.06"
63.47% Pervious = 1.102 ac 36.53% Impervious = 0.634 ac

Summary for Subcatchment PR-1: Roof

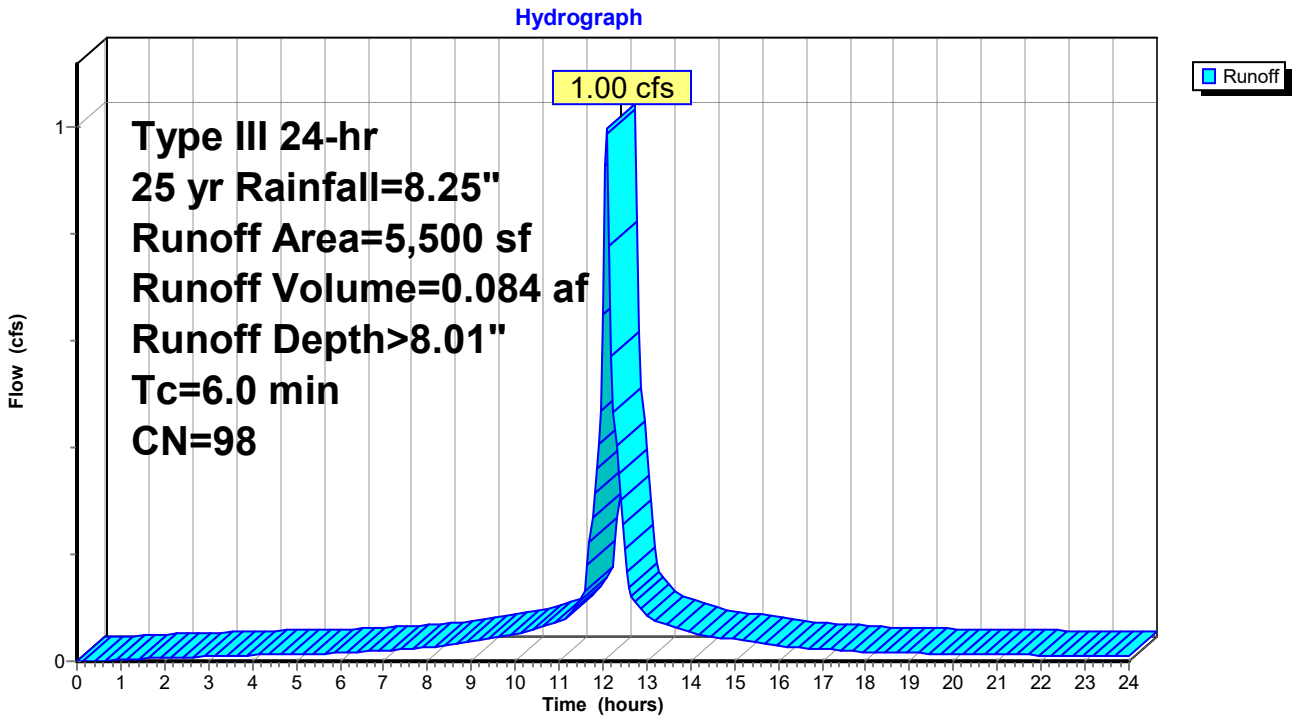
Runoff = 1.00 cfs @ 12.09 hrs, Volume= 0.084 af, Depth> 8.01"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 yr Rainfall=8.25"

Area (sf)	CN	Description
5,500	98	Unconnected roofs, HSG A
5,500		100.00% Impervious Area
5,500		100.00% Unconnected

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

Subcatchment PR-1: Roof



Summary for Subcatchment PR-2: to UGS

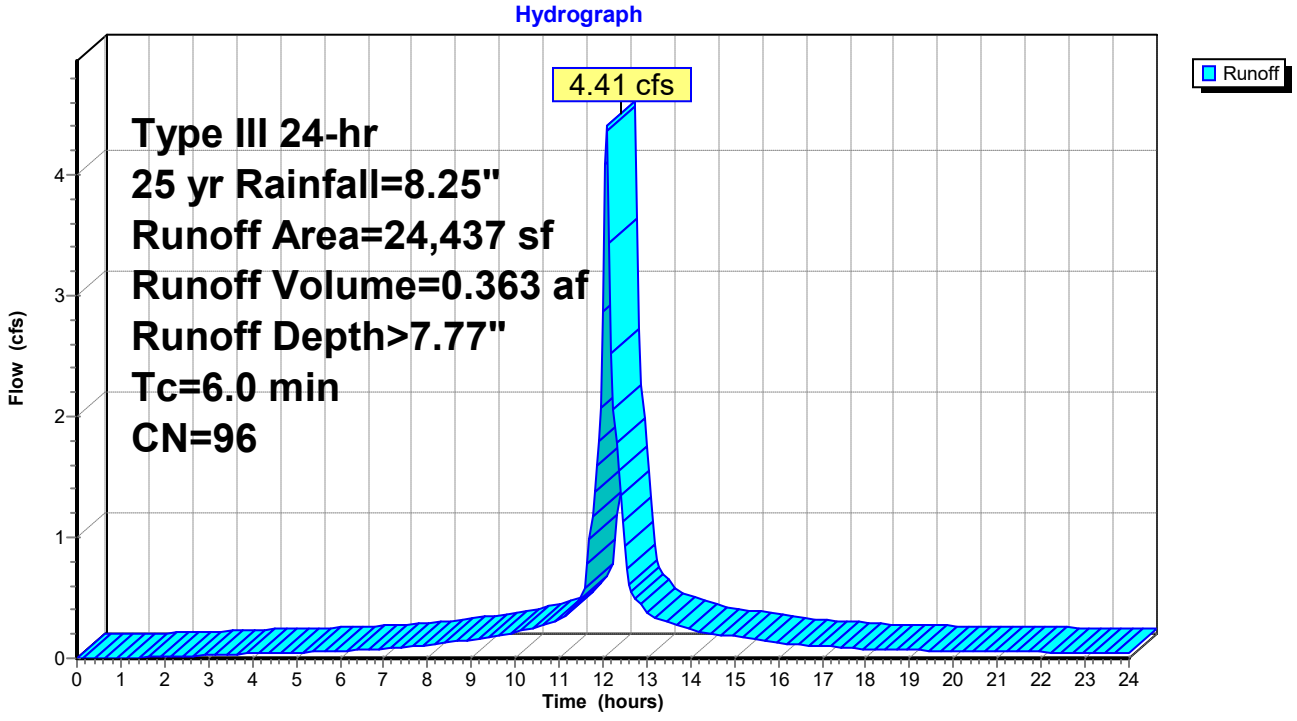
Runoff = 4.41 cfs @ 12.09 hrs, Volume= 0.363 af, Depth> 7.77"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 yr Rainfall=8.25"

Area (sf)	CN	Description
2,323	74	>75% Grass cover, Good, HSG C
22,114	98	Paved parking, HSG A
24,437	96	Weighted Average
2,323		9.51% Pervious Area
22,114		90.49% Impervious Area

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

Subcatchment PR-2: to UGS



Summary for Subcatchment PR-3: to Wetlands

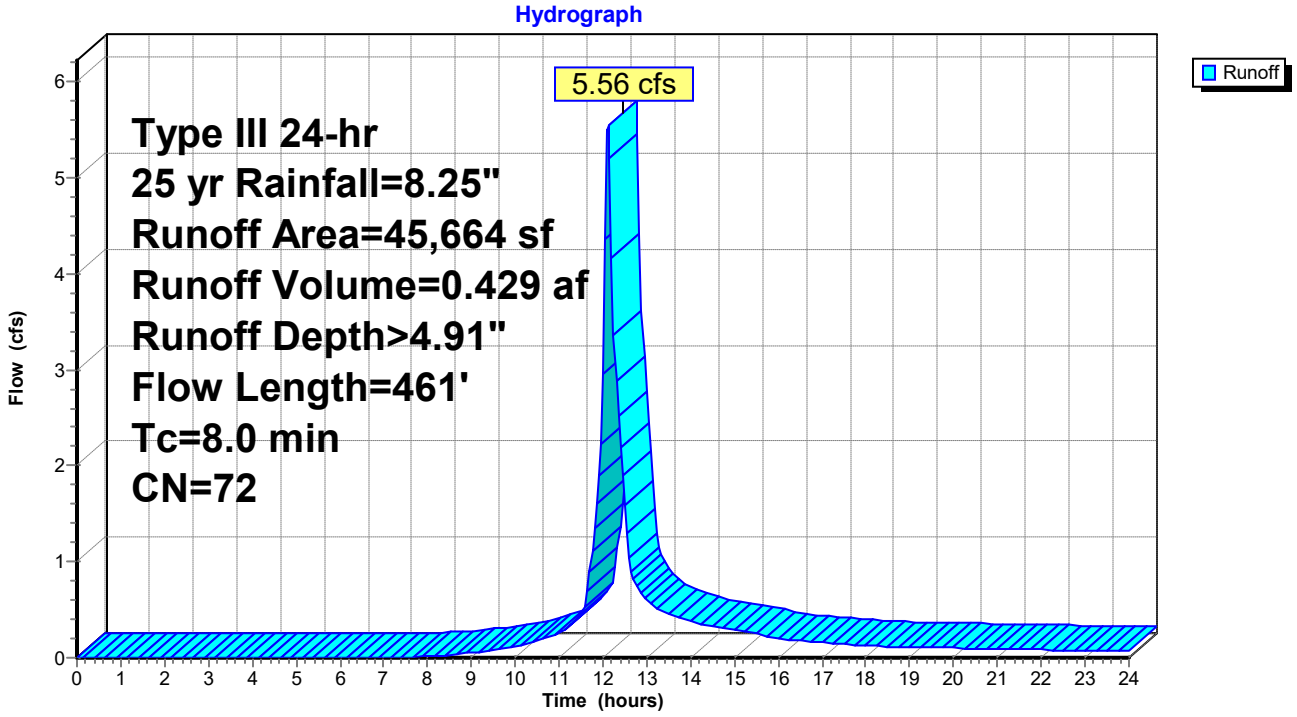
Runoff = 5.56 cfs @ 12.11 hrs, Volume= 0.429 af, Depth> 4.91"
Routed to Reach DPP-1 : Offsite

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 yr Rainfall=8.25"

Area (sf)	CN	Description
22,467	74	>75% Grass cover, Good, HSG C
23,197	70	Woods, Good, HSG C
45,664	72	Weighted Average
45,664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.2700	0.22		**Sheet Flow, A to B** Grass: Dense n= 0.240 P2= 3.28"
3.5	38	0.0920	0.18		**Sheet Flow, B to C** Grass: Dense n= 0.240 P2= 3.28"
3.4	388	0.0720	1.88		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	23	0.1000	1.58		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
8.0	461	Total			

Subcatchment PR-3: to Wetlands



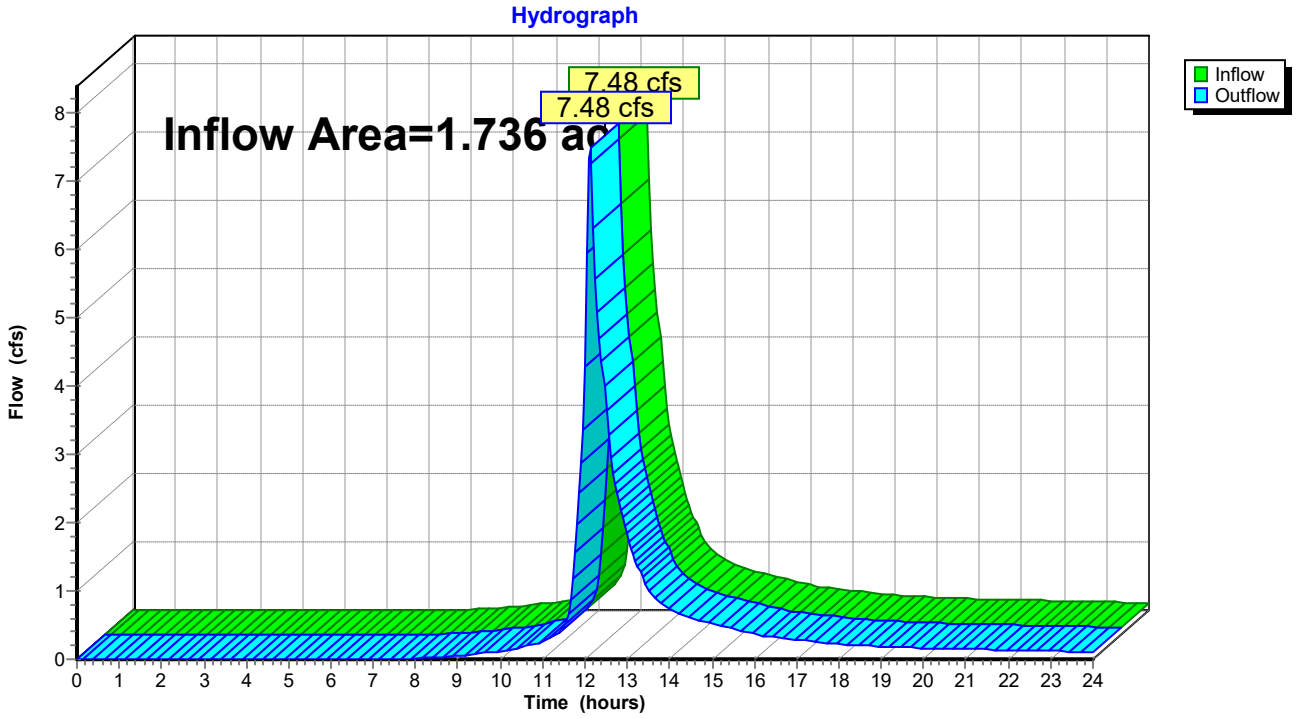
Summary for Reach DPP-1: Offsite

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 36.53% Impervious, Inflow Depth > 5.15" for 25 yr event
Inflow = 7.48 cfs @ 12.12 hrs, Volume= 0.744 af
Outflow = 7.48 cfs @ 12.12 hrs, Volume= 0.744 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPP-1: Offsite



Summary for Pond UGS-1: UGS

Inflow Area = 0.687 ac, 92.24% Impervious, Inflow Depth > 7.81" for 25 yr event
Inflow = 5.41 cfs @ 12.09 hrs, Volume= 0.447 af
Outflow = 2.21 cfs @ 12.30 hrs, Volume= 0.346 af, Atten= 59%, Lag= 12.7 min
Discarded = 0.02 cfs @ 3.45 hrs, Volume= 0.031 af
Primary = 2.20 cfs @ 12.30 hrs, Volume= 0.316 af
Routed to Reach DPP-1 : Offsite

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 205.09' @ 12.30 hrs Surf.Area= 2,622 sf Storage= 8,188 cf

Plug-Flow detention time= 161.3 min calculated for 0.346 af (77% of inflow)
Center-of-Mass det. time= 79.4 min (828.7 - 749.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	200.75'	4,300 cf	**28.50'W x 91.99'L x 6.75'H Field A** 17,697 cf Overall - 6,946 cf Embedded = 10,751 cf x 40.0% Voids
#2A	201.50'	6,946 cf	**ADS_StormTech MC-4500 b +Cap** x 63 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 63 Chambers in 3 Rows Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf
		11,246 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.75'	**0.270 in/hr Exfiltration over Surface area**
#2	Primary	203.05'	**8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	207.25'	**5.0' long x 1.0' 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.02 cfs @ 3.45 hrs HW=200.82' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=2.20 cfs @ 12.30 hrs HW=205.09' TW=0.00' (Dynamic Tailwater)
├**2=Orifice/Grate** (Orifice Controls 2.20 cfs @ 6.29 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond UGS-1: UGS - Chamber Wizard Field A

Chamber Model = ADS_StormTech MC-4500 b +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

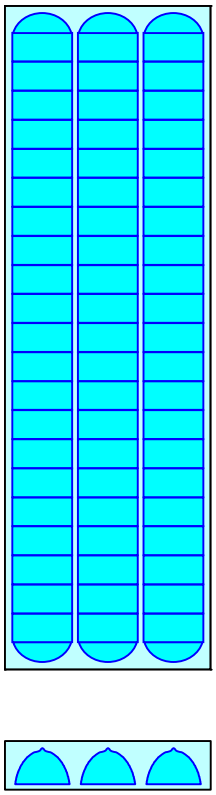
21 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 89.99' Row Length +12.0" End Stone x 2 = 91.99' Base Length
3 Rows x 100.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 28.50' Base Width
9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

63 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 3 Rows = 6,945.9 cf Chamber Storage

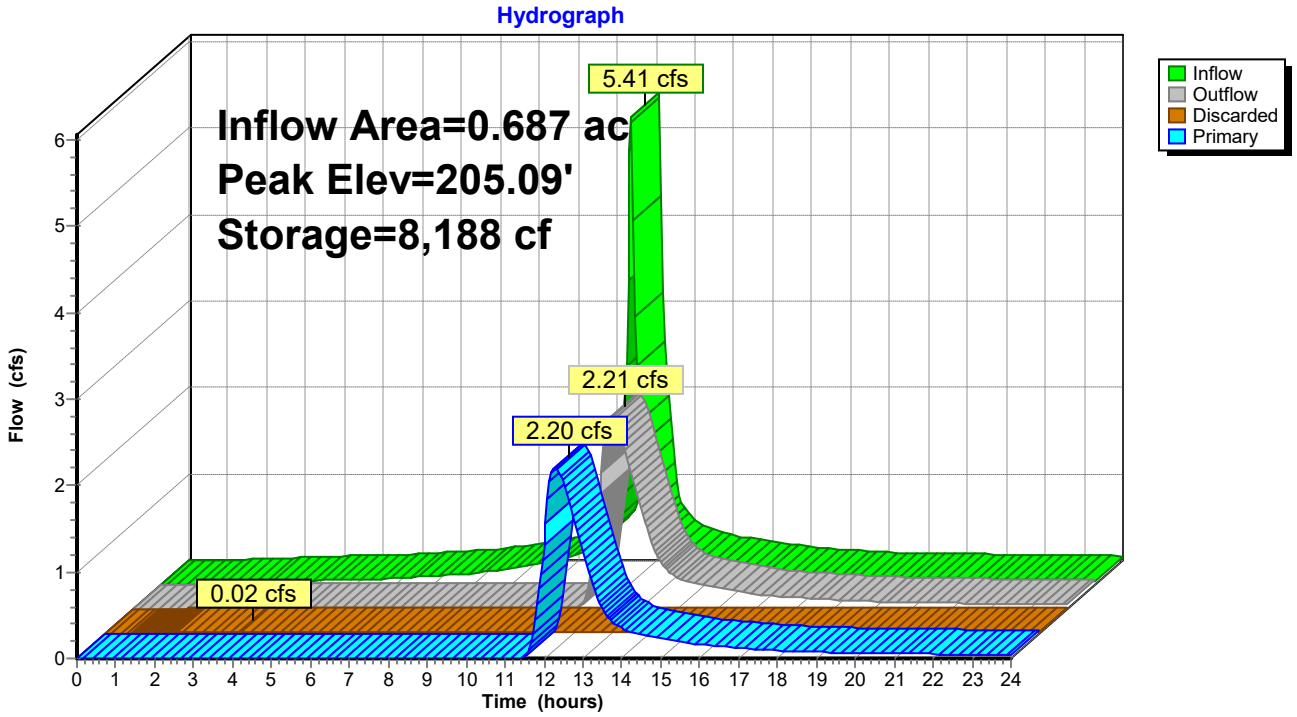
17,696.9 cf Field - 6,945.9 cf Chambers = 10,751.0 cf Stone x 40.0% Voids = 4,300.4 cf Stone Storage

Chamber Storage + Stone Storage = 11,246.3 cf = 0.258 af
Overall Storage Efficiency = 63.5%
Overall System Size = 91.99' x 28.50' x 6.75'

63 Chambers
655.4 cy Field
398.2 cy Stone



Pond UGS-1: UGS



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: Roof Runoff Area=5,500 sf 100.00% Impervious Runoff Depth>11.15"
Tc=6.0 min CN=98 Runoff=1.38 cfs 0.117 af

Subcatchment PR-2: to UGS Runoff Area=24,437 sf 90.49% Impervious Runoff Depth>10.91"
Tc=6.0 min CN=96 Runoff=6.12 cfs 0.510 af

Subcatchment PR-3: to Wetlands Runoff Area=45,664 sf 0.00% Impervious Runoff Depth>7.77"
Flow Length=461' Tc=8.0 min CN=72 Runoff=8.71 cfs 0.678 af

Reach DPP-1: Offsite Inflow=11.19 cfs 1.172 af
Outflow=11.19 cfs 1.172 af

Pond UGS-1: UGS Peak Elev=206.42' Storage=10,115 cf Inflow=7.50 cfs 0.627 af
Discarded=0.02 cfs 0.031 af Primary=2.93 cfs 0.494 af Outflow=2.95 cfs 0.525 af

Total Runoff Area = 1.736 ac Runoff Volume = 1.306 af Average Runoff Depth = 9.03"
63.47% Pervious = 1.102 ac 36.53% Impervious = 0.634 ac

Summary for Subcatchment PR-1: Roof

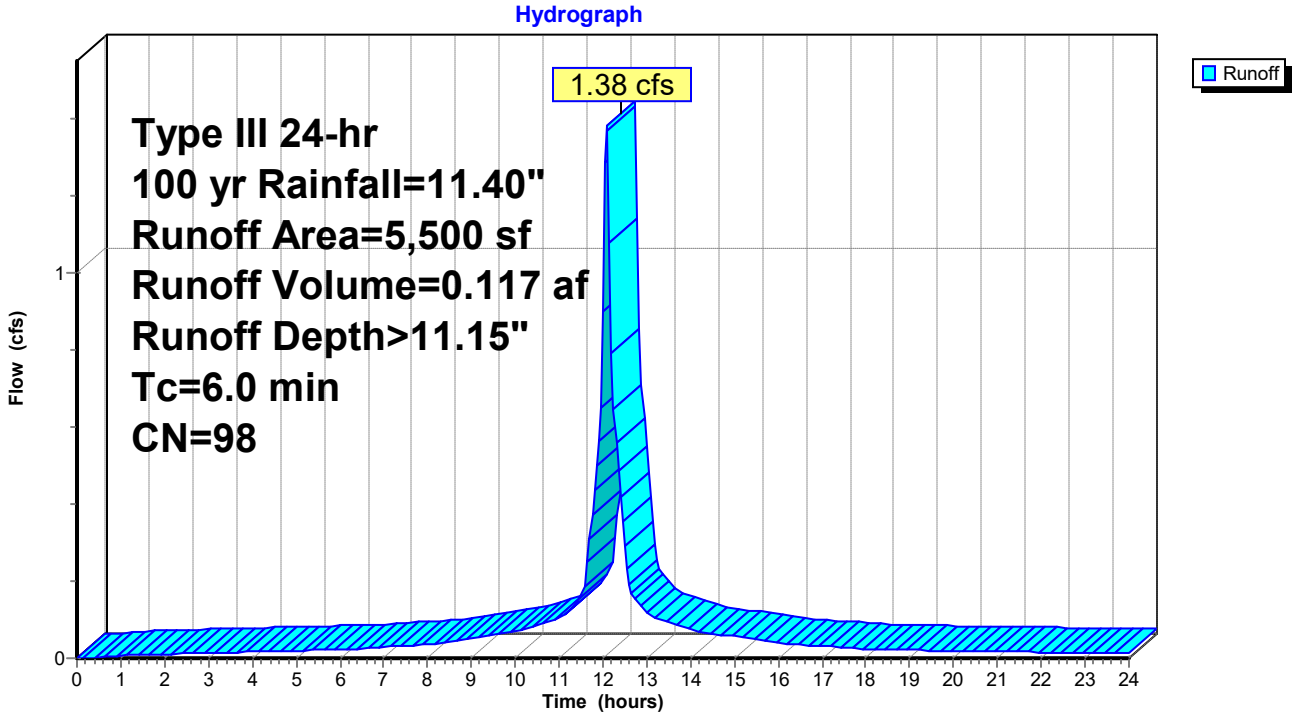
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.117 af, Depth>11.15"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 yr Rainfall=11.40"

Area (sf)	CN	Description
5,500	98	Unconnected roofs, HSG A
5,500		100.00% Impervious Area
5,500		100.00% Unconnected

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

Subcatchment PR-1: Roof



Summary for Subcatchment PR-2: to UGS

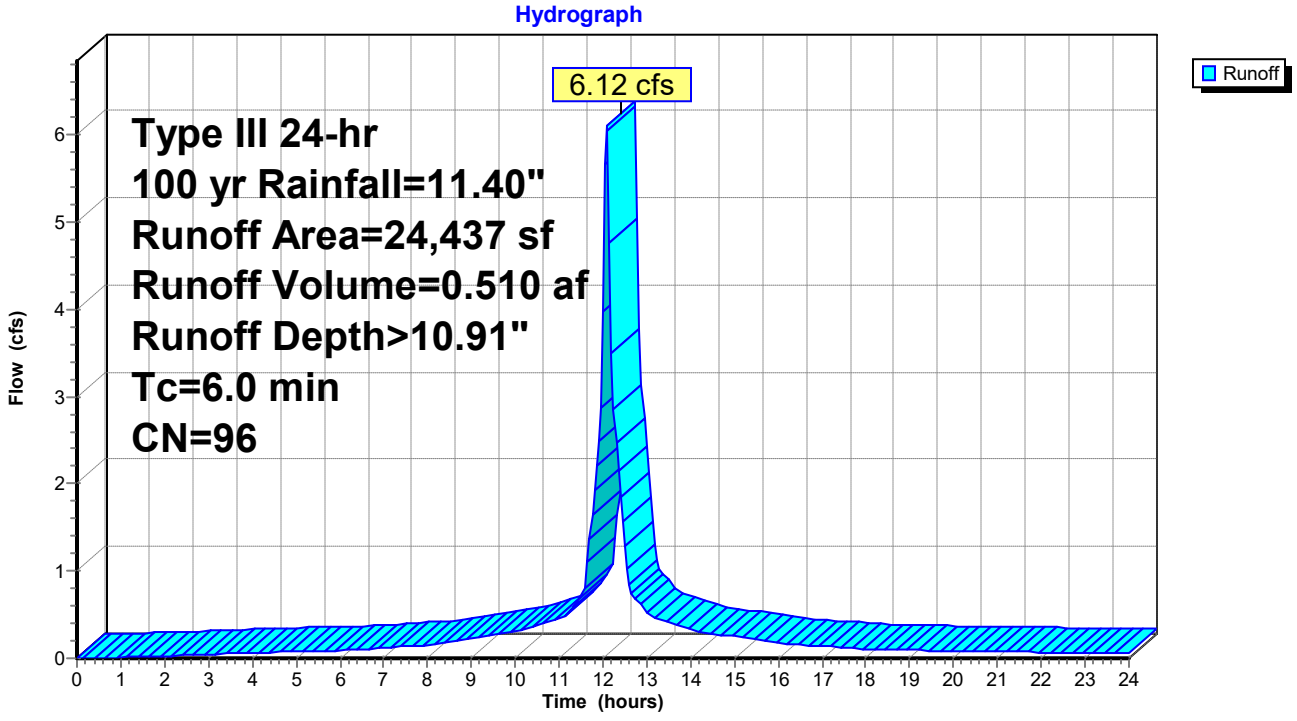
Runoff = 6.12 cfs @ 12.09 hrs, Volume= 0.510 af, Depth>10.91"
Routed to Pond UGS-1 : UGS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 yr Rainfall=11.40"

Area (sf)	CN	Description
2,323	74	>75% Grass cover, Good, HSG C
22,114	98	Paved parking, HSG A
24,437	96	Weighted Average
2,323		9.51% Pervious Area
22,114		90.49% Impervious Area

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

Subcatchment PR-2: to UGS



Summary for Subcatchment PR-3: to Wetlands

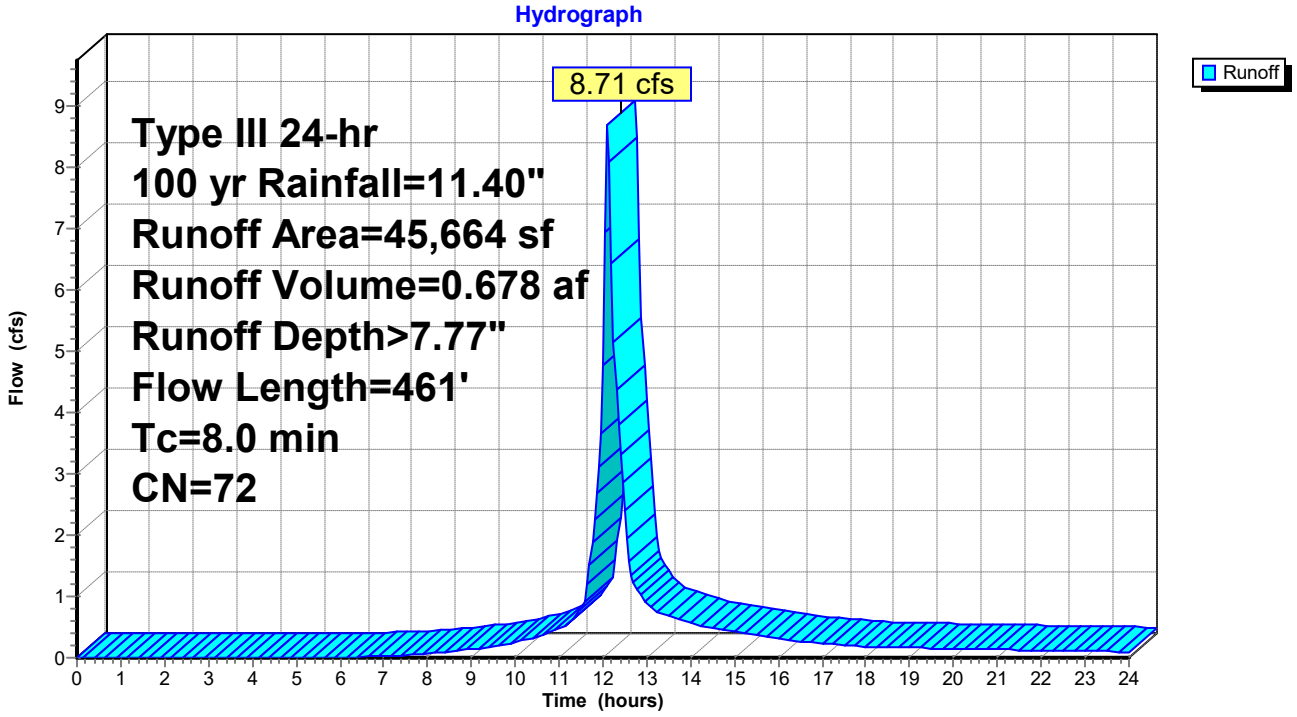
Runoff = 8.71 cfs @ 12.11 hrs, Volume= 0.678 af, Depth> 7.77"
Routed to Reach DPP-1 : Offsite

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 yr Rainfall=11.40"

Area (sf)	CN	Description
22,467	74	>75% Grass cover, Good, HSG C
23,197	70	Woods, Good, HSG C
45,664	72	Weighted Average
45,664		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.2700	0.22		**Sheet Flow, A to B** Grass: Dense n= 0.240 P2= 3.28"
3.5	38	0.0920	0.18		**Sheet Flow, B to C** Grass: Dense n= 0.240 P2= 3.28"
3.4	388	0.0720	1.88		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	23	0.1000	1.58		**Shallow Concentrated Flow, C to D** Woodland Kv= 5.0 fps
8.0	461	Total			

Subcatchment PR-3: to Wetlands



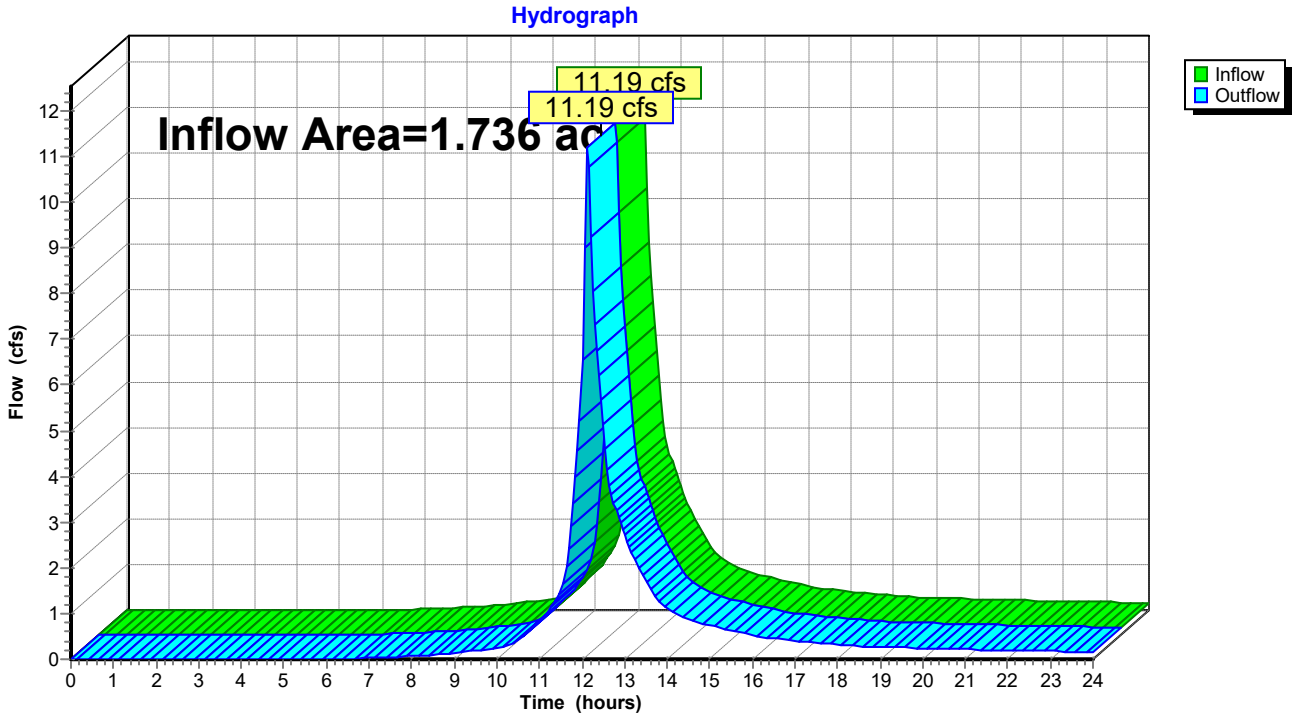
Summary for Reach DPP-1: Offsite

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.736 ac, 36.53% Impervious, Inflow Depth > 8.11" for 100 yr event
Inflow = 11.19 cfs @ 12.12 hrs, Volume= 1.172 af
Outflow = 11.19 cfs @ 12.12 hrs, Volume= 1.172 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DPP-1: Offsite



Summary for Pond UGS-1: UGS

Inflow Area = 0.687 ac, 92.24% Impervious, Inflow Depth > 10.95" for 100 yr event
Inflow = 7.50 cfs @ 12.09 hrs, Volume= 0.627 af
Outflow = 2.95 cfs @ 12.31 hrs, Volume= 0.525 af, Atten= 61%, Lag= 13.5 min
Discarded = 0.02 cfs @ 2.40 hrs, Volume= 0.031 af
Primary = 2.93 cfs @ 12.31 hrs, Volume= 0.494 af
Routed to Reach DPP-1 : Offsite

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 206.42' @ 12.31 hrs Surf.Area= 2,622 sf Storage= 10,115 cf

Plug-Flow detention time= 142.8 min calculated for 0.524 af (84% of inflow)
Center-of-Mass det. time= 75.1 min (819.3 - 744.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	200.75'	4,300 cf	**28.50'W x 91.99'L x 6.75'H Field A** 17,697 cf Overall - 6,946 cf Embedded = 10,751 cf x 40.0% Voids
#2A	201.50'	6,946 cf	**ADS_StormTech MC-4500 b +Cap** x 63 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 63 Chambers in 3 Rows Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf
		11,246 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	200.75'	**0.270 in/hr Exfiltration over Surface area**
#2	Primary	203.05'	**8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	207.25'	**5.0' long x 1.0' 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 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.02 cfs @ 2.40 hrs HW=200.82' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=2.93 cfs @ 12.31 hrs HW=206.42' TW=0.00' (Dynamic Tailwater)
├**2=Orifice/Grate** (Orifice Controls 2.93 cfs @ 8.38 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond UGS-1: UGS - Chamber Wizard Field A

Chamber Model = ADS_StormTech MC-4500 b +Cap (ADS StormTech® MC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= 39.5 cf x 2 x 3 rows = 237.0 cf

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

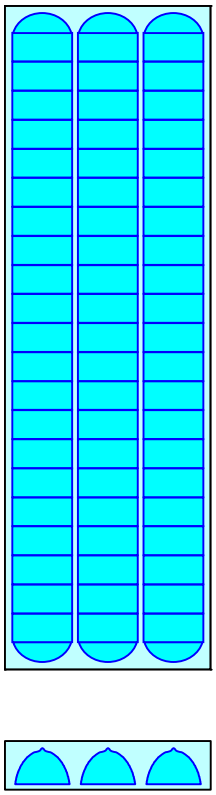
21 Chambers/Row x 4.02' Long +2.73' Cap Length x 2 = 89.99' Row Length +12.0" End Stone x 2 = 91.99' Base Length
3 Rows x 100.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 28.50' Base Width
9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

63 Chambers x 106.5 cf + 39.5 cf Cap Volume x 2 x 3 Rows = 6,945.9 cf Chamber Storage

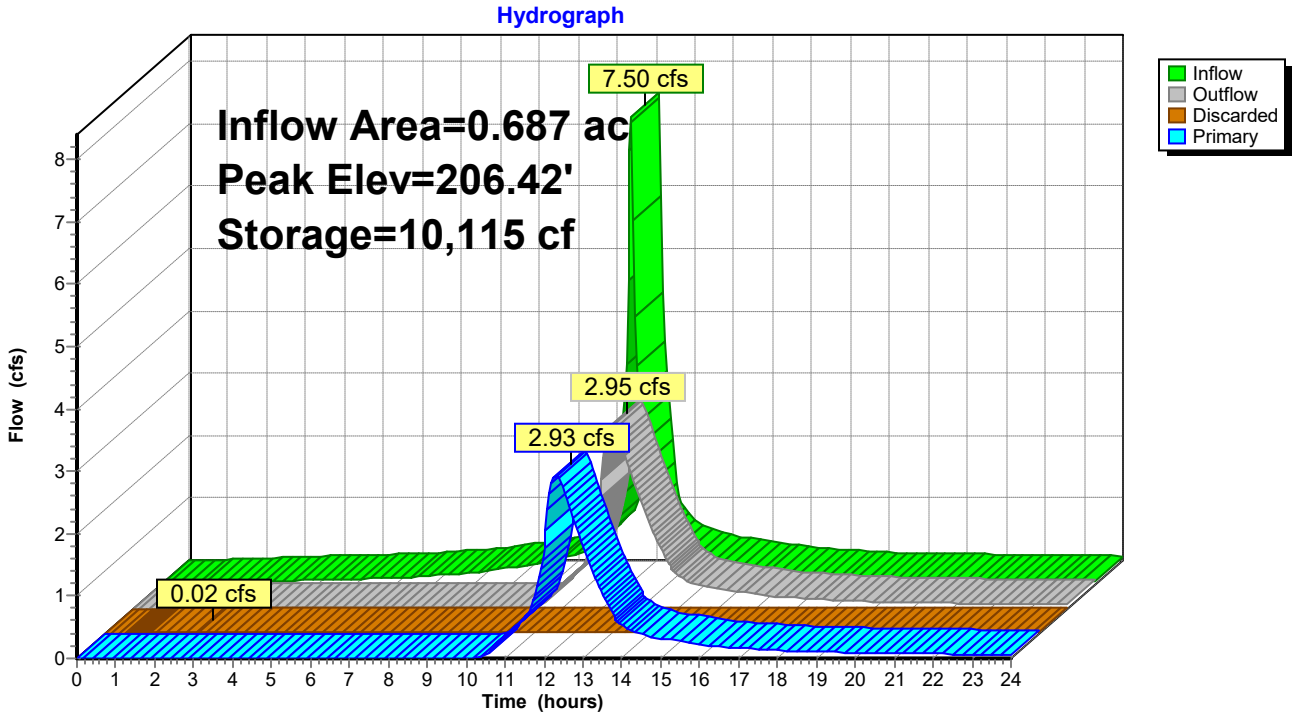
17,696.9 cf Field - 6,945.9 cf Chambers = 10,751.0 cf Stone x 40.0% Voids = 4,300.4 cf Stone Storage

Chamber Storage + Stone Storage = 11,246.3 cf = 0.258 af
Overall Storage Efficiency = 63.5%
Overall System Size = 91.99' x 28.50' x 6.75'

63 Chambers
655.4 cy Field
398.2 cy Stone



Pond UGS-1: UGS



APPENDIX F: STORMWATER CALCULATIONS

- *MA STANDARD #3 – RECHARGE AND DRAWDOWN TIME*
- *MA STANDARD #4 – WATER QUALITY AND TSS REMOVAL*
- *NOAA RAINFALL DATA*
- *PIPE AND INLET SIZING*
- *PHOSPHORUS REMOVAL CALCULATIONS*

TLE - Burlington
Cambridge Street
Burlington, MA
Bohler Job Number: MAA250027
December 12, 2025

MA DEP Standard 3: Recharge Volume Calculations

Required Recharge Volume - A Soils (0.60 in.)	
Existing Site Impervious Area (ac)	0.000
Proposed Site Impervious Area (ac)	0.000
Proposed Increase in Site Impervious Area (ac)	0.000
Recharge Volume Required (cf)	**0**
Required Recharge Volume - B Soils (0.35 in.)	
Existing Site Impervious Area (ac)	0.000
Proposed Site Impervious Area (ac)	0.000
Proposed Increase in Site Impervious Area (ac)	0.000
Recharge Volume Required (cf)	**0**
Required Recharge Volume - C Soils (0.25 in.)	
Existing Site Impervious Area (ac)	0.000
Proposed Site Impervious Area (ac)	0.627
Proposed Increase in Site Impervious Area (ac)	0.627
Recharge Volume Required (cf)	**569**
Required Recharge Volume - D Soils (0.10 in.)	
Existing Site Impervious Area (ac)	0.000
Proposed Site Impervious Area (ac)	0.000
Proposed Increase in Site Impervious Area (ac)	0.000
Recharge Volume Required (cf)	**0**
Total Recharge Volume Required (cf)	**569**
Recharge Volume Adjustment Factor	
Impervious Area Directed to Infiltration BMP (ac)	**0.000**
%Impervious Directed to Infiltration BMP	
Adjustment Factor	
Adjusted Total Recharge Volume Required (cf)	
Provided Recharge Volume*	
BMP #1 Name from HydroCAD	4,177
Total Recharge Volume Provided (cf)	**4,177**
	Input Required

*Volume provided below lowest outlet in cubic feet (cf)

Prepared By:
Bohler Engineering
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900

TLE - Burlington
Cambridge Street
Burlington, MA
Bohler Job Number: MAA250027
December 12, 2025

MA DEP Standard 3: Drawdown Time Calculations

Drawdown Time - BMP #1 Name from HydroCAD	
Volume below outlet pipe (Rv) (cf)	4,177
Soil Type	Silt Loam - C
Infiltration rate (K)*	0.27
Bottom Area (sf)	2,622
Drawdown time (Hours)*	70.8

*Infiltration Rates taken from Rawls Table
**Drawdown time = Rv / (K) x (bottom area)

Prepared By:
Bohler Engineering
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900

TLE - Burlington
Cambridge Street
Burlington, MA
Bohler Job Number: MAA250027
December 12, 2025

MA DEP Standard 4: Water Quality Volume Calculations

Water Quality Volume Required	
Water Quality Volume runoff (in.)*	1.0
Total Post Development Impervious Area (sf)	27,311
Required Water Quality Volume (cf)	2,276

*Water Quality volume runoff is equal to 0.5 or 1.0 inches of runoff times the total impervious area of the post development project site.

Water Quality Volume Provided*	
BMP #1 Name from HydroCAD	4,177
0	0
0	0
0	0
0	0
Total Provided Water Quality Volume (cf)	4,177

*Volume provided below lowest outlet pipe in cubic feet (cf)

Provided greater than or Equal to Required

Prepared By:
Bohler Engineering
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900

TSS Removal Calculation Worksheet

Location: PR-2 to UGS

A BMP[1]	B TSS Removal Rate[1]	C Starting TSS Load*	D Amount Removed (B*C)	E Remaining Load (C-D)
Water Quality Unit	**0.80**	**1.00**	**0.80**	**0.20**
Isolator Row	**0.80**	**0.20**	**0.16**	**0.04**

Total TSS Removal = **96%**

Project: **TLE - Burlington**
Prepared By: **Bohler Engineering**
Date: **12/12/2025**

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

Prepared By:
Bohler Engineering
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900

Stage-Area-Storage for Pond UGS-1: UGS

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
200.75	**2,622**	0
200.85	2,622	105
200.95	2,622	210
201.05	2,622	315
201.15	2,622	419
201.25	2,622	524
201.35	2,622	629
201.45	2,622	734
201.55	2,622	898
201.65	2,622	1,121
201.75	2,622	1,344
201.85	2,622	1,566
201.95	2,622	1,788
202.05	2,622	2,009
202.15	2,622	2,229
202.25	2,622	2,449
202.35	2,622	2,668
202.45	2,622	2,886
202.55	2,622	3,104
202.65	2,622	3,320
202.75	2,622	3,536
202.85	2,622	3,751
202.95	2,622	3,965
203.05	2,622	4,177
203.15	2,622	4,389
203.25	2,622	4,600
203.35	2,622	4,809
203.45	2,622	5,017
203.55	2,622	5,224
203.65	2,622	5,429
203.75	2,622	5,633
203.85	2,622	5,836
203.95	2,622	6,037
204.05	2,622	6,236
204.15	2,622	6,434
204.25	2,622	6,629
204.35	2,622	6,823
204.45	2,622	7,015
204.55	2,622	7,205
204.65	2,622	7,393
204.75	2,622	7,578
204.85	2,622	7,761
204.95	2,622	7,941
205.05	2,622	8,119
205.15	2,622	8,294
205.25	2,622	8,465
205.35	2,622	8,634
205.45	2,622	8,799
205.55	2,622	8,960
205.65	2,622	9,117
205.75	2,622	9,269
205.85	2,622	9,416
205.95	2,622	9,556
206.05	2,622	9,687
206.15	2,622	9,808
206.25	2,622	9,923
206.35	2,622	10,035
206.45	2,622	10,145
206.55	2,622	10,250
206.65	2,622	10,355
206.75	2,622	10,460
206.85	2,622	10,565
206.95	2,622	10,670
207.05	2,622	10,774
207.15	2,622	10,879
207.25	2,622	10,984
207.35	2,622	11,089
207.45	2,622	**11,194**

VOLUME BELOW LOWEST OUTLET = 4,177 CF (8" ORIFICE, INV=203.05"

NOAA Atlas 14, Volume 10, Version 3
Location name: Burlington, Massachusetts, USA*
Latitude: 42.4979°, Longitude: -71.1947°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.310** (0.241-0.391)	**0.376** (0.291-0.474)	**0.483** (0.373-0.611)	**0.572** (0.439-0.727)	**0.694** (0.517-0.924)	**0.785** (0.574-1.07)	**0.882** (0.629-1.25)	**0.996** (0.669-1.43)	**1.16** (0.754-1.74)	**1.31** (0.827-1.98)
10-min	**0.440** (0.341-0.554)	**0.532** (0.412-0.671)	**0.683** (0.528-0.864)	**0.809** (0.622-1.03)	**0.983** (0.733-1.31)	**1.11** (0.814-1.52)	**1.25** (0.891-1.77)	**1.41** (0.949-2.03)	**1.65** (1.07-2.46)	**1.85** (1.17-2.81)
15-min	**0.517** (0.401-0.651)	**0.626** (0.485-0.790)	**0.804** (0.620-1.02)	**0.952** (0.731-1.21)	**1.16** (0.862-1.54)	**1.31** (0.957-1.78)	**1.47** (1.05-2.08)	**1.66** (1.12-2.39)	**1.94** (1.26-2.89)	**2.18** (1.38-3.31)
30-min	**0.709** (0.550-0.893)	**0.859** (0.666-1.08)	**1.10** (0.853-1.40)	**1.31** (1.01-1.67)	**1.59** (1.19-2.12)	**1.80** (1.32-2.45)	**2.02** (1.44-2.87)	**2.29** (1.54-3.29)	**2.68** (1.74-4.00)	**3.01** (1.91-4.58)
60-min	**0.900** (0.698-1.13)	**1.09** (0.846-1.38)	**1.41** (1.09-1.78)	**1.67** (1.28-2.12)	**2.02** (1.51-2.70)	**2.29** (1.68-3.12)	**2.58** (1.84-3.66)	**2.92** (1.96-4.20)	**3.42** (2.21-5.10)	**3.85** (2.44-5.84)
2-hr	**1.16** (0.910-1.46)	**1.42** (1.11-1.78)	**1.84** (1.43-2.31)	**2.19** (1.69-2.76)	**2.67** (2.00-3.54)	**3.02** (2.23-4.10)	**3.40** (2.46-4.83)	**3.88** (2.61-5.54)	**4.60** (2.99-6.81)	**5.24** (3.32-7.89)
3-hr	**1.35** (1.06-1.68)	**1.65** (1.30-2.06)	**2.14** (1.68-2.68)	**2.55** (1.98-3.21)	**3.12** (2.35-4.12)	**3.53** (2.62-4.78)	**3.98** (2.89-5.64)	**4.54** (3.07-6.47)	**5.42** (3.53-7.99)	**6.19** (3.94-9.29)
6-hr	**1.74** (1.38-2.15)	**2.13** (1.68-2.64)	**2.77** (2.18-3.44)	**3.30** (2.58-4.12)	**4.02** (3.06-5.29)	**4.56** (3.40-6.14)	**5.14** (3.75-7.24)	**5.88** (3.99-8.31)	**7.02** (4.58-10.3)	**8.02** (5.12-12.0)
12-hr	**2.21** (1.76-2.71)	**2.70** (2.15-3.33)	**3.52** (2.79-4.34)	**4.19** (3.30-5.20)	**5.12** (3.91-6.67)	**5.80** (4.35-7.74)	**6.54** (4.79-9.12)	**7.47** (5.09-10.5)	**8.91** (5.84-12.9)	**10.2** (6.50-15.0)
24-hr	**2.64** (2.12-3.22)	**3.28** (2.63-4.00)	**4.32** (3.45-5.29)	**5.18** (4.11-6.37)	**6.36** (4.90-8.25)	**7.23** (5.47-9.61)	**8.19** (6.04-11.4)	**9.39** (6.43-13.1)	**11.3** (7.42-16.3)	**12.9** (8.31-19.0)
2-day	**3.00** (2.42-3.63)	**3.79** (3.06-4.59)	**5.09** (4.09-6.18)	**6.16** (4.93-7.53)	**7.64** (5.94-9.87)	**8.72** (6.65-11.6)	**9.92** (7.40-13.8)	**11.5** (7.89-15.9)	**14.0** (9.25-20.1)	**16.3** (10.5-23.7)
3-day	**3.28** (2.67-3.96)	**4.14** (3.36-4.99)	**5.53** (4.47-6.70)	**6.68** (5.37-8.14)	**8.28** (6.46-10.7)	**9.43** (7.23-12.5)	**10.7** (8.04-14.9)	**12.4** (8.56-17.1)	**15.2** (10.0-21.7)	**17.7** (11.4-25.7)
4-day	**3.56** (2.90-4.27)	**4.44** (3.61-5.34)	**5.87** (4.76-7.09)	**7.06** (5.69-8.58)	**8.71** (6.81-11.2)	**9.90** (7.61-13.0)	**11.2** (8.44-15.5)	**13.0** (8.97-17.9)	**15.9** (10.5-22.6)	**18.4** (11.9-26.7)
7-day	**4.32** (3.54-5.16)	**5.23** (4.28-6.26)	**6.72** (5.48-8.07)	**7.96** (6.45-9.60)	**9.66** (7.60-12.3)	**10.9** (8.41-14.2)	**12.3** (9.25-16.8)	**14.1** (9.77-19.2)	**17.0** (11.3-24.0)	**19.7** (12.7-28.2)
10-day	**5.02** (4.13-5.97)	**5.95** (4.89-7.09)	**7.48** (6.13-8.94)	**8.75** (7.12-10.5)	**10.5** (8.28-13.3)	**11.8** (9.10-15.3)	**13.2** (9.92-17.9)	**15.0** (10.4-20.4)	**17.9** (11.9-25.1)	**20.4** (13.3-29.3)
20-day	**6.99** (5.80-8.26)	**8.02** (6.65-9.49)	**9.70** (8.01-11.5)	**11.1** (9.09-13.2)	**13.0** (10.3-16.2)	**14.4** (11.1-18.3)	**16.0** (11.9-21.0)	**17.7** (12.4-23.8)	**20.3** (13.6-28.2)	**22.4** (14.6-31.9)
30-day	**8.64** (7.20-10.2)	**9.74** (8.11-11.5)	**11.5** (9.56-13.6)	**13.0** (10.7-15.5)	**15.1** (11.9-18.6)	**16.6** (12.8-20.9)	**18.2** (13.5-23.7)	**19.9** (14.0-26.7)	**22.3** (15.0-30.8)	**24.1** (15.7-34.1)
45-day	**10.7** (8.99-12.6)	**11.9** (9.96-14.0)	**13.8** (11.5-16.3)	**15.4** (12.8-18.2)	**17.6** (14.0-21.6)	**19.3** (14.9-24.1)	**21.0** (15.5-26.9)	**22.7** (16.0-30.1)	**24.8** (16.7-34.1)	**26.4** (17.2-37.1)
60-day	**12.5** (10.5-14.6)	**13.7** (11.5-16.1)	**15.8** (13.2-18.5)	**17.4** (14.5-20.6)	**19.7** (15.7-24.0)	**21.5** (16.7-26.7)	**23.3** (17.2-29.7)	**24.9** (17.6-33.0)	**27.0** (18.2-37.0)	**28.4** (18.6-39.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

TLE - Burlington
Cambridge Street
Burlington, MA
Bohler Job Number: MAA250027
December 12, 2025

Rational Pipe and Grate Sizing Calculations

Design Period Storm:		**25**	**Year**	**Design Period Intensity***			**8.25**	**in/hr**									
LOCATION		IMPERVIOUS			OTHER			SUM CA	Tc (min)	I (in/hr)	Q (cfs)	D (in)	S (ft/ft)	Matieral	n	Q Full (cfs)	V Full (fps)
FROM	TO	A	C	CA	A	C	CA										
A-61	A-60	0.30	0.95	0.29	0.05	0.30	0.02	0.30	6	8.25	2.48	12	0.038	HDPE	0.012	7.52	9.58
A-62	A-60	0.09	0.95	0.09	0.00	0.30	0.00	0.09	6	8.25	0.72	12	0.015	HDPE	0.012	4.73	6.02
A-60	A-50	0.39	0.95	0.37	0.05	0.30	0.02	0.39	6	8.25	3.19	12	0.019	HDPE	0.012	5.32	6.77
A-50	A-40	0.39	0.95	0.37	0.05	0.30	0.02	0.39	6	8.25	3.19	18	0.008	RCP	0.013	9.40	5.32
A-41	A-40	0.13	0.95	0.12	0.00	0.30	0.00	0.12	6	8.25	1.02	8	0.052	HDPE	0.012	2.99	8.55
A-40	A-30								6		2.20	15	0.011	HDPE	0.012	7.34	5.98
A-30	A-20								6		2.20	15	0.011	HDPE	0.012	7.34	5.98
A-20	A-10								6		2.20	15	0.011	HDPE	0.012	7.34	5.98

*Rainfall intesity provided by NOAA Atlas 14, Volume 10, Version 2 on 10/27/2025

Inlet	Flow To CB (cfs)**	Grate Type	Grate Inlet Area (36) 2"x2"	Head (ft)***	Head (in)***	Single Grate Capacity (cfs)	Double Grate Capacity (cfs)	Grate Size
A-61	2.48	Standard	1.00	0.5	6	2.38	4.77	Double
A-62	0.72	Standard	1.00	0.5	6	2.38	4.77	Single

Orifice Equation used to calculate Grate Inlet Capacity

$$Q = C \times A \times (2gh)^{(1/2)} \times f$$

where:
- Q = Grate Capacity in cfs
- C = Orifice Coefficient = 0.6
- A = Free open area of grate in sf
- h = Head over grate in ft
- g = Gravity = 32.2 ft/s2
- f = Clogging Factor = 0.7 (30% clogged)

**Flow to inlet structure from Rational pipe sizing calculations
***Available head is the largest depth that an inlet can be submerged before runoff overtops and flows to another inlet or catchment area

Prepared By:
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Southborough, MA 01772
(508) 480-9900

50 Washington Street, Suite 2000
Westborough, MA 01581
508.480.9900

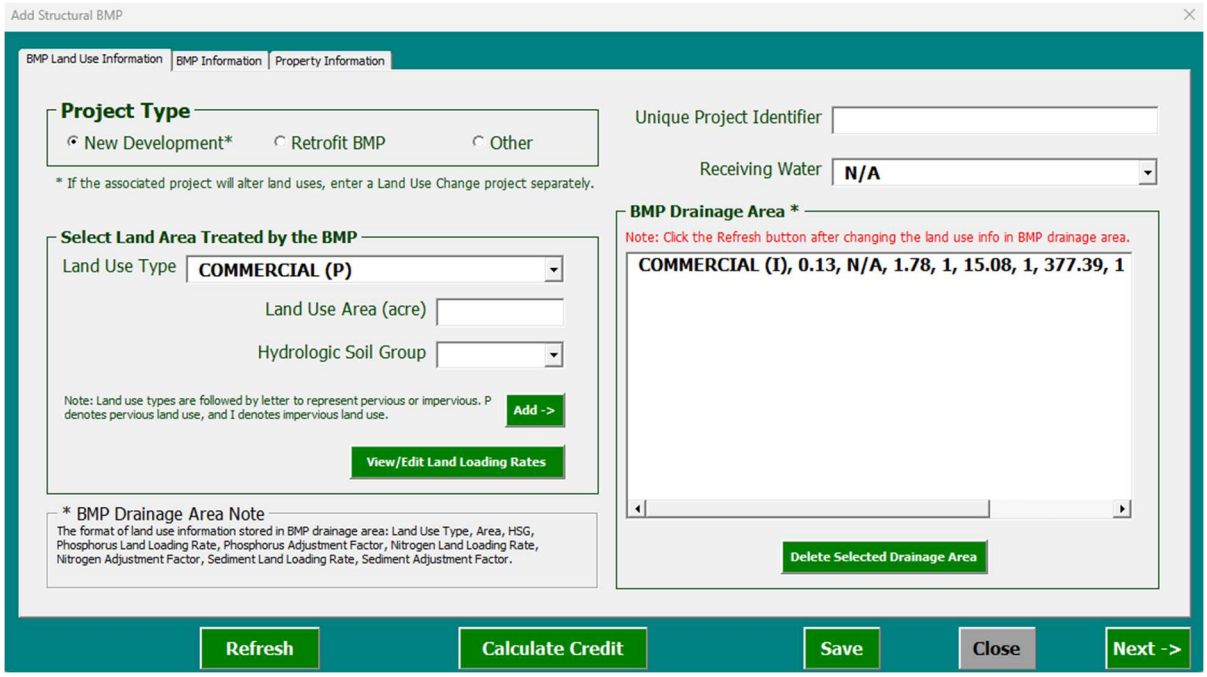
Proposed Child Care Facility
Cambridge Street, Burlington, MA
December 15, 2025

Post-Construction Phosphorus Reduction Calculation

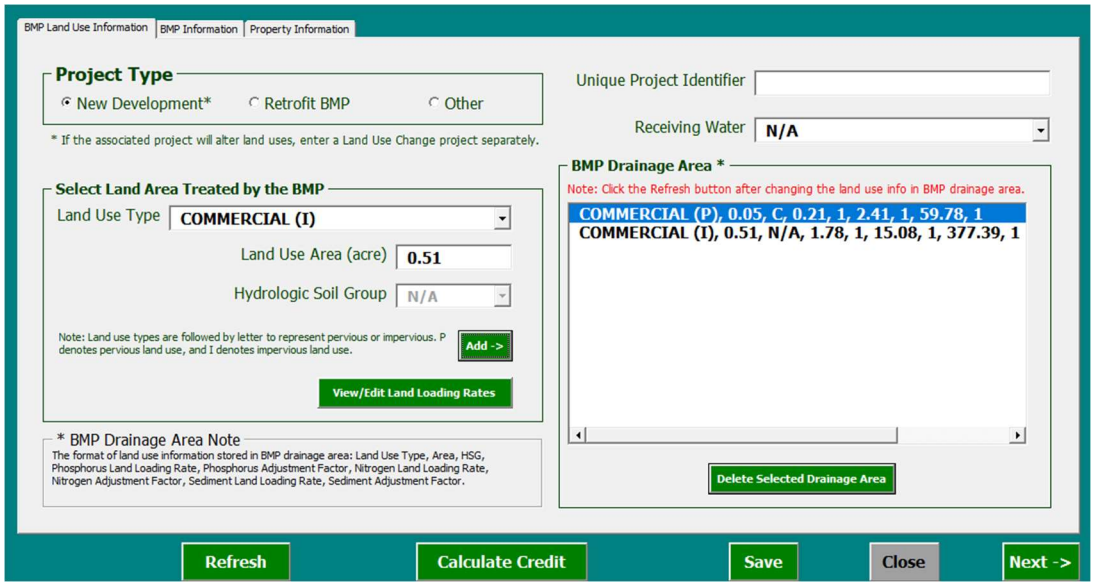
Objective: Determine the reduction in total phosphorus (TP) loading for a given construction land use following the installation of the stormwater Best Management Practices (BMPs). Percent reduction shall be greater than or equal to 60% for new development, as required by the City of Burlington.

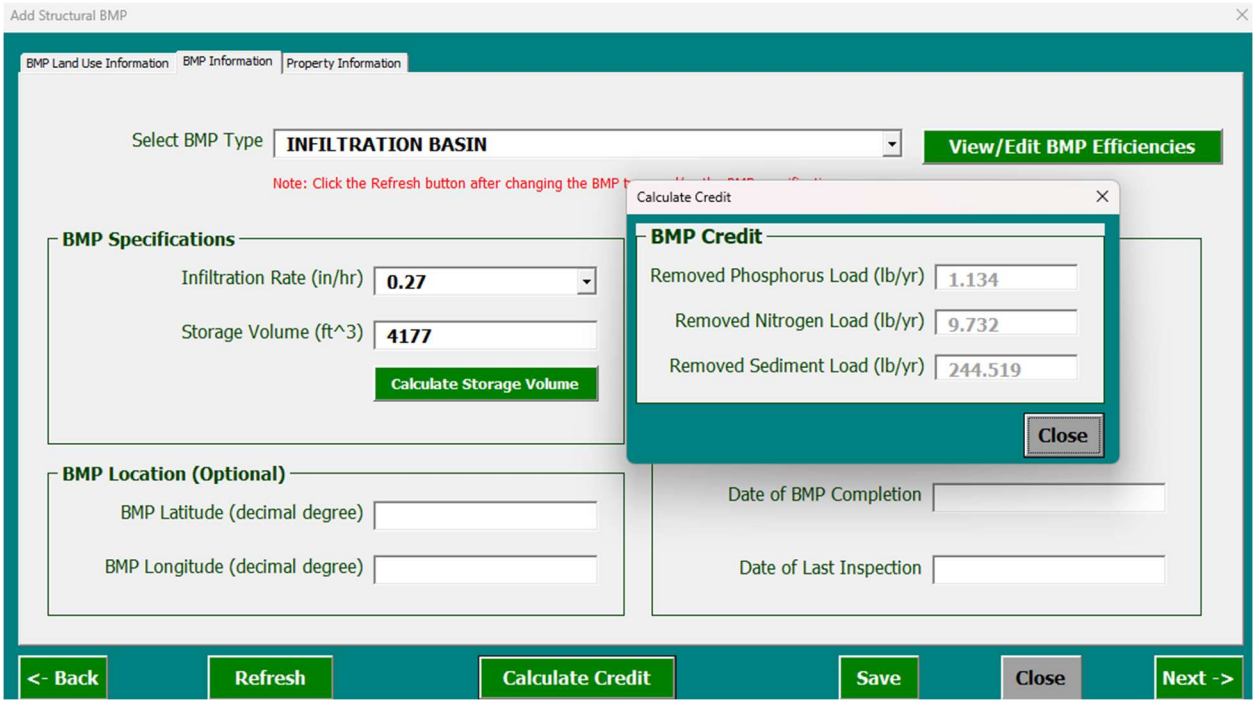
Methodology: Output from the U.S. EPA "BMP Accounting and Tracking Tool (BATT) version 2.2"

Treatment Train #1: Subcatchments PR-#1 & PR-#2 to Underground Infiltration System



Subcatchment PR-1: Phosphorus Loading
Commercial (Impervious Area) = 0.13 acres x 1.78 lb/year/acre = 0.231 lb/year


BMP Land Use Information
BMP Information
Property Information
Project Type
New Development*
Retrofit BMP
Other
* If the associated project will alter land uses, enter a Land Use Change project separately.
Unique Project Identifier
Receiving Water
N/A
Select Land Area Treated by the BMP
Land Use Type
COMMERCIAL (I)
Land Use Area (acre)
0.51
Hydrologic Soil Group
N/A
Note: Land use types are followed by letter to represent pervious or impervious. P denotes pervious land use, and I denotes impervious land use.
Add ->
View/Edit Land Loading Rates
BMP Drainage Area *
Note: Click the Refresh button after changing the land use info in BMP drainage area.
COMMERCIAL (P), 0.05, C, 0.21, 1, 2.41, 1, 59.78, 1
COMMERCIAL (I), 0.51, N/A, 1.78, 1, 15.08, 1, 377.39, 1
Delete Selected Drainage Area
* BMP Drainage Area Note
The format of land use information stored in BMP drainage area: Land Use Type, Area, HSG, Phosphorus Land Loading Rate, Phosphorus Adjustment Factor, Nitrogen Land Loading Rate, Nitrogen Adjustment Factor, Sediment Land Loading Rate, Sediment Adjustment Factor.
Refresh
Calculate Credit
Save
Close
Next ->
Add Structural BMP
BMP Land Use Information
BMP Information
Property Information
Project Type
New Development*
Retrofit BMP
Other
* If the associated project will alter land uses, enter a Land Use Change project separately.
Unique Project Identifier
Receiving Water
N/A
Select Land Area Treated by the BMP
Land Use Type
COMMERCIAL (P)
Land Use Area (acre)
1.05
Hydrologic Soil Group
C
Note: Land use types are followed by letter to represent pervious or impervious. P denotes pervious land use, and I denotes impervious land use.
Add ->
View/Edit Land Loading Rates
BMP Drainage Area *
Note: Click the Refresh button after changing the land use info in BMP drainage area.
COMMERCIAL (P), 1.05, C, 0.21, 1, 2.41, 1, 59.78, 1
Delete Selected Drainage Area
* BMP Drainage Area Note
The format of land use information stored in BMP drainage area: Land Use Type, Area, HSG, Phosphorus Land Loading Rate, Phosphorus Adjustment Factor, Nitrogen Land Loading Rate, Nitrogen Adjustment Factor, Sediment Land Loading Rate, Sediment Adjustment Factor.
Refresh
Calculate Credit
Save
Close
Next ->
Subcatchment PR-2: Phosphorus Loading
Commercial (Impervious Area) = 0.51 acres x 1.78 lb/year/acre = 0.908 lb/year
Commercial (Pervious Area) = 0.05 acres x 0.21 lb/year/acre = 0.011 lb/year
Subcatchment PR-3: Phosphorus Loading
Commercial (Pervious Area) = 1.05 acres x 0.21 lb/year/acre = 0.221 lb/year
Total (PR-1 + PR-2 + PR-3 + PR-4) = 1.371 lb/year



Infiltration System: Storage Volume
Basin Volume below outlet elevation (per HydroCAD) = 4,177 CF
Total = 4,177 CF

Removal Credit = 1.134 lb/year (see above)

Total Phosphorus Weighted Removal

Phosphorus Loading = 1.371 lb/year
Removed Phosphorus Load = 1.134 lb/year (Infiltration System)

Post-Construction TP Reduction = 1.134 / 1.371 = 82.7%

APPENDIX G: OPERATION AND MAINTENANCE

- *STORMWATER OPERATION AND MAINTENANCE PLAN*
- *INSPECTION REPORT*
- *INSPECTION AND MAINTENANCE LOG FORM*
- *LONG-TERM POLLUTION PREVENTION PLAN*
- *ILLICIT DISCHARGE STATEMENT*
- *SPILL PREVENTION*
- *PROPOSED BMP MAP*
- *ISOLATOR ROW O&M*

STORMWATER OPERATION AND MAINTENANCE PLAN

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

RESPONSIBLE PARTY DURING CONSTRUCTION:

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

RESPONSIBLE PARTY POST CONSTRUCTION:

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

Construction Phase

During the construction phase, all erosion control devices and measures shall be maintained in accordance with the final record plans, local/state approvals and conditions, the EPA Construction General Permit and the Stormwater Pollution Prevention Plan (SWPPP) if applicable. Additionally, the maintenance of all erosion / siltation control measures during construction shall be the responsibility of the general contractor. Contact information of the OWNER and CONTRACTOR shall be listed in the SWPPP for this site. The SWPPP also includes information regarding construction period allowable and illicit discharges, housekeeping and emergency response procedures. Upon proper notice to the property owner, the Town/City or its authorized designee shall be allowed to enter the property at a reasonable time and in a reasonable manner for the purposes of inspection.

Post Development Controls

Once construction is completed, the post development stormwater controls are to be operated and maintained in compliance with the following permanent procedures (note that the continued implementation of these procedures shall be the responsibility of the Owner or its assignee):

1. Parking lots and on-site driveways: Sweep at least four (4) times per year and on a more frequent basis depending on sanding operations. All resulting sweepings shall be collected and properly disposed of off site in accordance with MADEP and other applicable requirements.

   Approximate Maintenance Budget: $1,000/year

2. Catch basins, yard drains, trench drains, manholes and piping: Inspect four (4) times per year and at the end of foliage and snow-removal seasons. These features shall be cleaned four (4) times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the catch basin or underground system. Accumulated sediment and hydrocarbons present must be removed

and properly disposed of off site in accordance with MADEP and other applicable requirements.

Approximate Maintenance Budget: $500/year per structure.

3. Water Quality Unit (Proprietary Separator): Follow manufacturer's recommendations (attached).

   Approximate Maintenance Budget: $1,000/year per unit.

4. Underground Infiltration Basins: Preventative maintenance after every major storm event during the first three (3) months of operation and at least twice per year thereafter. Inspect structure and pretreatment BMP to ensure proper operation after every major storm event (generally equal or greater to 3.0 inches in 24 hours) for the first three months. The outlet of the basin, if any, shall be inspected for erosion and sedimentation, and rip-rap shall be promptly repaired in the case of erosion. Sediment collecting in the bottom of the basin shall be inspected twice annually, and removal shall commence any time the sediment reaches a depth of six inches anywhere in the basin. Any sediment removed shall be disposed of in accordance with MADEP and other applicable requirements.

   Approximate Maintenance Budget: Cleaning - $1,000/year, Inspection - $200/year

All components of the stormwater system will be accessible by the owner or their assignee.

STORMWATER MANAGEMENT SYSTEM

POST-CONSTRUCTION INSPECTION REPORT

LOCATION:

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

RESPONSIBLE PARTY:

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

NAME OF INSPECTOR:	INSPECTION DATE:
Note Condition of the Following (sediment depth, debris, standing water, damage, etc.):	
Catch Basins:	
Discharge Points/ Flared End Sections / Rip Rap:	
Infiltration Basin:	
Water Quality Units:	
Other:	

Note Recommended Actions to be taken on the Following (sediment and/or debris removal, repairs, etc.):
Catch Basins:
Discharge Points / Flared End Sections / Rip Rap:
Infiltration Basin:
Water Quality Units:
Other:
Other:
Comments:

STORMWATER INSPECTION AND MAINTENANCE LOG FORM

Foxborough Learning, LLC
Foxborough Learning, LLC – Burlington, MA

Stormwater Management Practice	Responsible Party	Date	Maintenance Activity Performed

LONG-TERM POLLUTION PREVENTION PLAN

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

RESPONSIBLE PARTY DURING CONSTRUCTION:

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

RESPONSIBLE PARTY POST CONSTRUCTION:

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

For this site, the Long-Term Pollution Prevention Plan will consist of the following:

- The property owner shall be responsible for "good housekeeping" including proper periodic maintenance of building and pavement areas, curbing, landscaping, etc.
- Proper storage and removal of solid waste (dumpsters).
- Sweeping of driveways a minimum of twice per year with a commercial cleaning unit. Any sediment removed shall be disposed of in accordance with applicable local and state requirements.
- Regular inspections and maintenance of Stormwater Management System as noted in the "O&M Plan".
- Snow removal shall be the responsibility of the property owner. Snow shall not be plowed, dumped and/or placed in forebays, infiltration basins or similar stormwater controls. Salting and/or sanding of pavement / walkway areas during winter conditions shall only be done in accordance with all state/local requirements and approvals.

OPERATON AND MAINTENANCE TRAINING PROGRAM

The Owner will coordinate an annual in-house training session to discuss the Operations and Maintenance Plan, the Long-Term Pollution Prevention Plan, and the Spill Prevention Plan and response procedures. Annual training will include the following:

Discuss the Operations and Maintenance Plan

- Explain the general operations of the stormwater management system and its BMPs
- Identify potential sources of stormwater pollution and measures / methods of reducing or eliminating that pollution
- Emphasize good housekeeping measures

Discuss the Spill Prevention and Response Procedures

- Explain the process in the event of a spill
- Identify potential sources of spills and procedures for cleanup and /or reporting and notification
- Complete a yearly inventory or Materials Safety Data sheets of all tenants and confirm that no potentially harmful chemicals are in use.

ILLICIT DISCHARGE STATEMENT

Certain types of non-stormwater discharges are allowed under the U.S. Environmental Protection Agency Construction General Permit. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this LTPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. Any existing illicit discharges, if discovered during the course of the work, will be reported to MassDEP and the local DPW, as applicable, to be addressed in accordance with their respective policies. No illicit discharges will be allowed in conjunction with the proposed improvements.

Duly Acknowledged:

_____

Name & Title

SPILL PREVENTION AND RESPONSE PROCEDURES (POST CONSTRUCTION)

In order to prevent or minimize the potential for a spill of Hazardous Substances or Oil or come into contact with stormwater, the following steps will be implemented:

1. All Hazardous Substances or Oil (such as pesticides, petroleum products, fertilizers, detergents, acids, paints, paint solvents, cleaning solvents, etc.) will be stored in a secure location, with their lids on, preferably under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on site.

3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided on site.

4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

5. It is the OWNER's responsibility to ensure that all Hazardous Waste on site is disposed of properly by a licensed hazardous material disposal company. The OWNER is responsible for not exceeding Hazardous Waste storage requirements mandated by the EPA or state and local authorities.

In the event of a spill of Hazardous Substances or Oil, the following procedures should be followed:

1. All measures should be taken to contain and abate the spill and to prevent the discharge of the Hazardous Substance or Oil to stormwater or off-site. (The spill area should be kept well ventilated and personnel should wear appropriate protective clothing to prevent injury from contact with the Hazardous Substances.)

2. For spills of less than five (5) gallons of material, proceed with source control and containment, clean-up with absorbent materials or other applicable means unless an imminent hazard or other circumstances dictate that the spill should be treated by a professional emergency response contractor.

3. For spills greater than five (5) gallons of material immediately contact the MADEP at the toll-free 24-hour statewide emergency number: **1-888-304-1133**, the local fire department (**9-1-1**) and an approved emergency response contractor. Provide information on the type of material spilled, the location of the spill, the quantity spilled, and the time of the spill to the emergency response contractor or coordinator, and proceed with prevention, containment and/or clean-up if so desired. (Use the form provided, or similar).

4. If there is a Reportable Quantity (RQ) release, then the National Response Center should be notified immediately at (800) 424-8802; within 14 days a report should be submitted to the EPA regional office describing the release, the date and circumstances of the release and the steps taken to prevent another release. This Pollution Prevention Plan should be updated to reflect any such steps or actions taken and measures to prevent the same from reoccurring.

SPILL PREVENTION CONTROL AND COUNTERMEASURE FORM

Foxborough Learning, LLC
Cambridge Street
Burlington, MA

Where a release containing a hazardous substance occurs, the following steps shall be taken by the facility manager and/or supervisor:

1. Immediately notify The Burlington Fire Department (at **9-1-1**)

2. All measures must be taken to contain and abate the spill and to prevent the discharge of the pollutant(s) to off-site locations, receiving waters, wetlands and/or resource areas.

3. Notify the Burlington Health Department at (781) 270-1955 and the Burlington Conservation Commission at (781) 270-1655.

4. Provide documentation from licensed contractor showing disposal and cleanup procedures were completed as well as details on chemicals that were spilled to the Town of Burlington Health Department and Conservation Commission.

Date of spill:_____ Time:_____ Reported By:_____

Weather Conditions:_____

Material Spilled	**Location of Spill**	**Approximate Quantity of Spill (in gallons)**	**Agency(s) Notified**	**Date of Notification**

Cause of Spill:_____
_____

Measures Taken to Clean up Spill:_____
_____

Type of equipment: _____ Make: _____ Size:_____

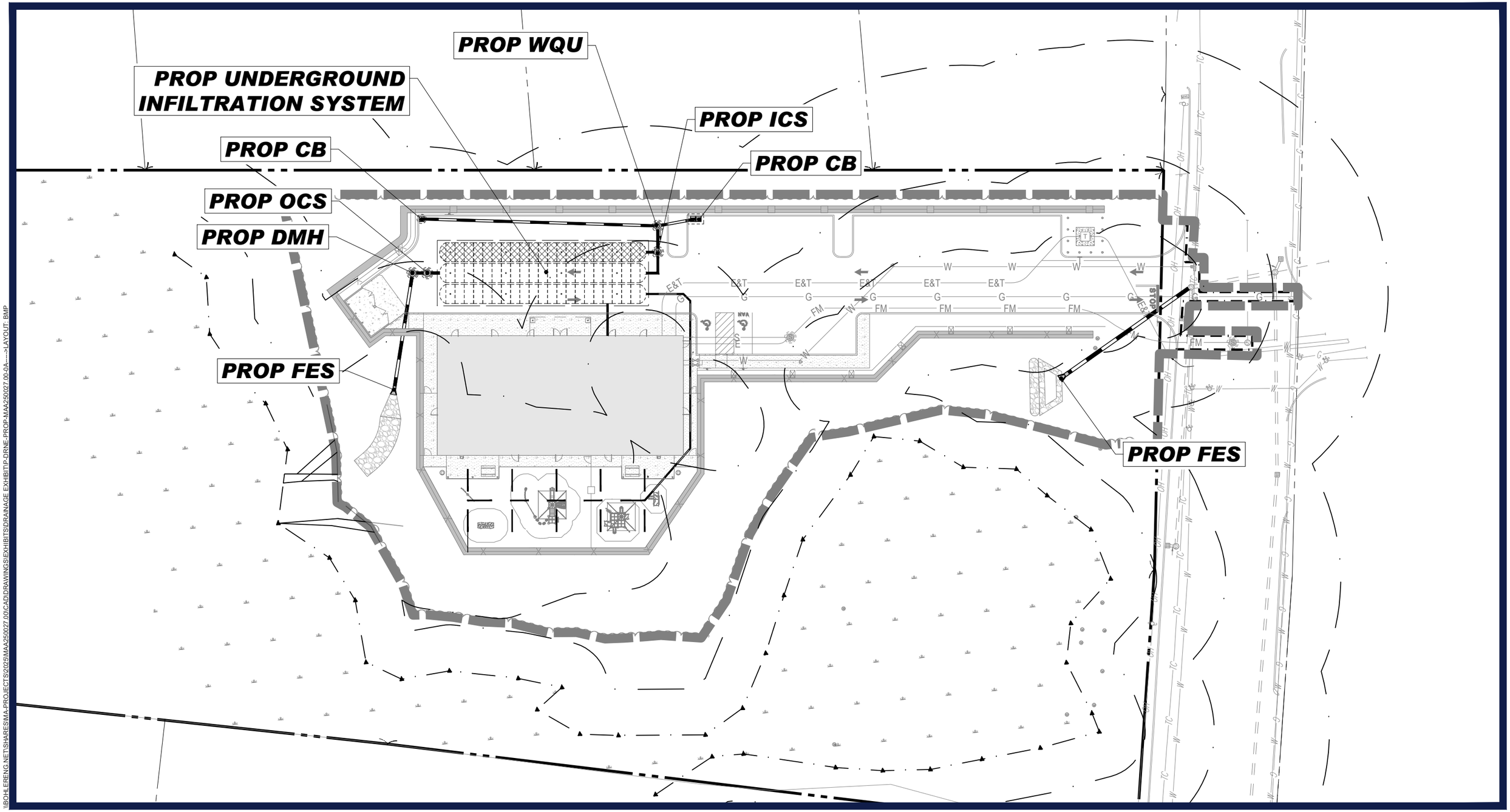
License or S/N: _____

Location and Method of Disposal_____
_____

Procedures, method, and precautions instituted to prevent a similar occurrence from recurring:_____
_____

Additional Contact Numbers:

- DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) EMERGENCY PHONE: 1-888-304-1133
- NATIONAL RESPONSE CENTER PHONE: (800) 424-8802
- U.S. ENVIRONMENTAL PROTECTION AGENCYPHONE: (888) 372-7341



BOHLER
50 WASHINGTON ST., SUITE 2000
WESTBOROUGH, MA 01581
Phone: (508) 480-9900

www.BohlerEngineering.com

PROPOSED BMP MAP

FOXBOROUGH LEARNING, LLC

BURLINGTON, MA 01803

12/16/2025 | JT | MAA250027.00 | REV 0a

40 20 10 0 40

SCALE: 1" = 40'

StormTech®

Detention • Retention • Water Quality

A division of ADS

Save Valuable Land and Protect Water Resources

Isolator® Row O&M Manual

StormTech® Chamber System for Stormwater Management

1.0 The Isolator® Row

1.1 INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.

Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.

1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

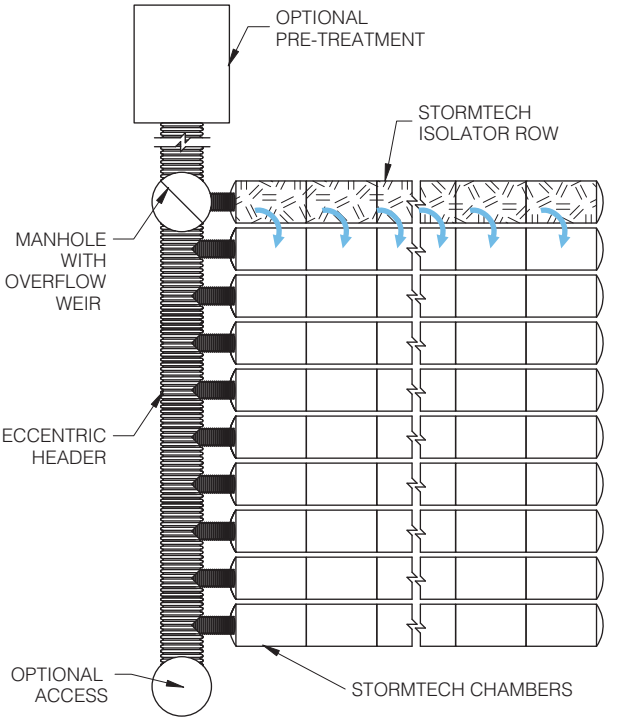
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.

StormTech Isolator Row with Overflow Spillway
(not to scale)



2.0 Isolator Row Inspection/Maintenance

2.1 INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

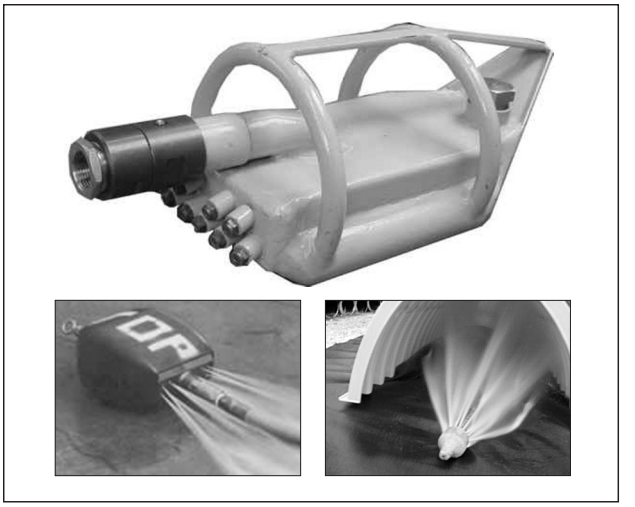
At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

2.2 MAINTENANCE

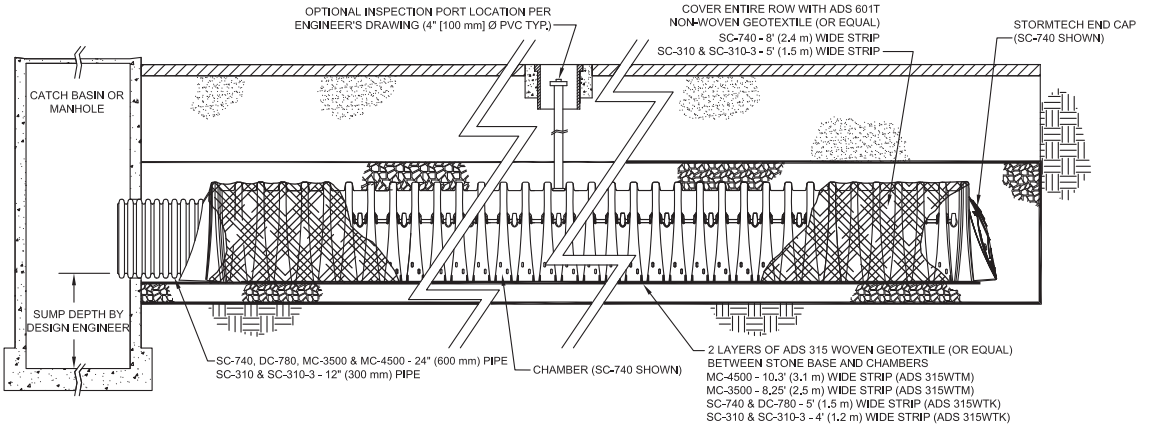
The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.



Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

StormTech Isolator Row (not to scale)



NOTE: NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

3.0 Isolator Row Step By Step Maintenance Procedures

Step 1) Inspect Isolator Row for sediment

A) Inspection ports (if present)

i. Remove lid from floor box frame

ii. Remove cap from inspection riser

iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.

iv. If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3.

B) All Isolator Rows

i. Remove cover from manhole at upstream end of Isolator Row

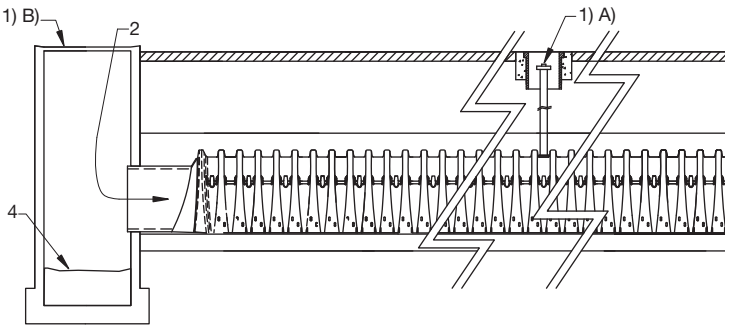
ii. Using a flashlight, inspect down Isolator Row through outlet pipe

1. Mirrors on poles or cameras may be used to avoid a confined space entry

2. Follow OSHA regulations for confined space entry if entering manhole

iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. If not proceed to Step 3.

StormTech Isolator Row (not to scale)



Step 2) Clean out Isolator Row using the JetVac process

A) A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable

B) Apply multiple passes of JetVac until backflush water is clean

C) Vacuum manhole sump as required

Step 3) Replace all caps, lids and covers, record observations and actions

Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1) - (2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/01	6.3 ft.	none		New installation. Fixed point is CI frame at grade	djm
9/24/01		6.2	0.1 ft.	Some grit felt	sm
6/20/03		5.8	0.5 ft.	Mucky feel, debris visible in manhole and in Isolator row, maintenance due	rv
7/7/03	6.3 ft.		0	System jetted and vacuumed	djm

StormTech®

Detention • Retention • Water Quality

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