



144 Addison Street

East Boston, Massachusetts

Notice of Intent

September 19, 2018

submitted to **Boston Conservation Commission**

submitted by **Addison Street Partners, LLC**

prepared by **Fort Point Associates, Inc.**

in association with:

Arrowstreet

Copley Wolff Design Group

Goulston & Storrs

Howard Stein Hudson

Nitsch Engineering

Sanborn Head & Associates, Inc.



Fort Point Associates, Inc.

Urban Planning Environmental Consulting Project Permitting



Fort Point Associates, Inc.

Urban Planning Environmental Consulting Project Permitting

A TETRA TECH COMPANY

September 19, 2018

Amelia Croteau
Boston Conservation Commission
1 City Hall Square, Room 709
Boston, MA 02201

Re: Notice of Intent
144 Addison Street, East Boston, Massachusetts

Dear Ms. Croteau and Conservation Commission Members:

On behalf of Addison Street Partners, LLC (the "Applicant"), we are pleased to submit this Notice of Intent (NOI) for the proposed multi-family residential development (the "Project") located at 144 Addison Street in East Boston, Massachusetts.

This NOI is submitted by the Applicant to the City of Boston Conservation Commission (the "Commission") in order to obtain approval under the Wetlands Protection Act (WPA) and the Massachusetts Department of Environmental Protection Wetlands Protection Regulations (310 CMR 10.00) (the "Regulations") for activities that are located within WPA jurisdiction. Due to the proximity of the Boston Harbor and its associated coastal wetland resources, activities will occur within Land Subject to Coastal Storm Flowage. This resource area, specific work elements, and their associated wetland resource impacts and regulatory compliance, are described in this NOI and supporting materials.

The proposed work is anticipated to commence following the issuance of an Order of Conditions by the Commission as well as local, state, and federal permits required for the Project. If you need additional information, please contact me at (617) 357-7044 x207.

Sincerely,

Cara Pattullo
Fort Point Associates, Inc.

Encl: Notice of Intent with Attachments; DEP Wetlands Fee Transmittal Form; Filing Fee

CC: Department of Environmental Protection, Northeast Regional Office
Damian Szary, Addison Street Partners, LLC
Andrew Dulac, Bulgroup Colorado, LLC

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TRANSMITTAL FORM



Enter your transmittal number

X281596
Transmittal Number

Your unique Transmittal Number can be accessed online:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: MassDEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

* **Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

BRP WPA Form 3

Notice of Intent

1. Permit Code: 4 to 7 character code from permit instructions

2. Name of Permit Category

Residential Construction

3. Type of Project or Activity

B. Applicant Information – Firm or Individual

Addison Street Partners, LLC c/o Gate Residential

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. Last Name of Individual

3. First Name of Individual

4. MI

235 Franklin Street, 6th Floor

5. Street Address

Boston

MA

02110

(617) 904-7111

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Damian Szary

das@gateresidential.com

11. Contact Person

12. e-mail address

C. Facility, Site or Individual Requiring Approval

144 Addison Street

1. Name of Facility, Site Or Individual

144 Addison Street

2. Street Address

East Boston

MA

02128

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Fort Point Associates, Inc.

1. Name of Firm Or Individual

31 State Street

2. Address

Boston

MA

02109

(617) 357-7044

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Cara Pattullo

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? yes no
If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. Fee Exempt (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. Homeowner (according to 310 CMR 4.02).

2200

\$1,037.50

9/18/18

Check Number

Dollar Amount

Date

REDGATE REAL ESTATE ADVISORS, LLC
265 FRANKLIN STREET
6TH FLOOR
BOSTON, MA 02110

FIRST REPUBLIC BANK
BOSTON, MA 02110
FOR WIRES & ACH TRANSFERS
USE ROUTING 321081669

2200

54-7500/2114

CHECK ARMOR
66

9/18/2018

PAY TO THE ORDER OF Commonwealth of Massachusetts

\$ **1,037.50

One Thousand Thirty-Seven and 50/100*****

DOLLARS

Commonwealth of Massachusetts

MEMO

144 Addison Notice of Intent Draft



AUTHORIZED SIGNATURE

⑈00 2 200⑈ ⑆ 2 1 1 4 7 5 0 0 0 ⑆ 8 0 0 0 1 7 6 7 2 0 2 ⑈

REDGATE REAL ESTATE ADVISORS, LLC

Commonwealth of Massachusetts

144 Addison Notice of Intent Draft

9/18/2018

2200
1,037.50

First Republic Checkin 144 Addison Notice of Intent Draft

1,037.50

REDGATE REAL ESTATE ADVISORS, LLC

Commonwealth of Massachusetts

144 Addison Notice of Intent Draft

9/18/2018

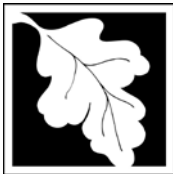
2200
1,037.50

First Republic Checkin 144 Addison Notice of Intent Draft

1,037.50

Details on Back. Security Features Included

APPLICATION FORM



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boston

City/Town

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



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

A. General Information

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

<u>144 Addison Street</u>	<u>Boston</u>	<u>02128</u>
a. Street Address	b. City/Town	c. Zip Code
<u>Latitude and Longitude:</u>	<u>42.385686</u>	<u>-71.014410</u>
	d. Latitude	e. Longitude
<u>Assessors Map/Plat Number</u>	<u>0100548100</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Damian</u>	<u>Szary</u>	
a. First Name	b. Last Name	
<u>Addison Street Partners, LLC c/o Gate Residential</u>		
c. Organization		
<u>235 Franklin Street, 6th Floor</u>		
d. Street Address		
<u>Boston</u>	<u>MA</u>	<u>02110</u>
e. City/Town	f. State	g. Zip Code
<u>(617) 904-7111</u>	<u>das@gateresidential.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

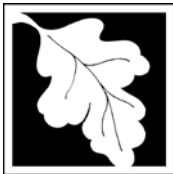
<u>Bulgroup Colorado, LLC</u>	<u></u>	
a. First Name	b. Last Name	
c. Organization		
<u>224 12th Avenue</u>		
d. Street Address		
<u>New York</u>	<u>NY</u>	<u>10001</u>
e. City/Town	f. State	g. Zip Code
<u>(646) 879-3572</u>	<u>adulac@wfboston.com</u>	
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Cara</u>	<u>Pattullo</u>	
a. First Name	b. Last Name	
<u>Fort Point Associates, Inc.</u>		
c. Company		
<u>31 State Street, 3rd Floor</u>		
d. Street Address		
<u>Boston</u>	<u>MA</u>	<u>02109</u>
e. City/Town	f. State	g. Zip Code
<u>(617) 357-7044</u>	<u>cpattullo@fpa-inc.com</u>	
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$2,537.50</u>	<u>\$1,037.50</u>	<u>\$1,500 (Boston Fee)</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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A. General Information (continued)

6. General Project Description:

The Applicant proposes to redevelop a 3.3 acre paved surface parking lot into a multi-family residential building with approximately 270 new housing units and approximately 179 parking spaces.

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.

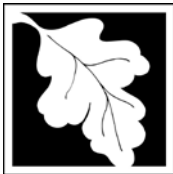
8. Property recorded at the Registry of Deeds for:

Suffolk	_____	_____
a. County		b. Certificate # (if registered land)
34265	_____	298
c. Book		d. Page Number

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

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

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



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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> 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.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	

	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> 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. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	133,700	
	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 2017

b. Date of map

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

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:
- (a) within wetland Resource Area _____ percentage/acreage
- (b) outside Resource Area _____ percentage/acreage
2. Assessor's Map or right-of-way plan of site
2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
- (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
- (b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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

(c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_fee_schedule.htm).
Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

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

(d) Vegetation cover type map of site

(e) Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

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

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

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

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

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

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

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

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

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Boston

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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
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

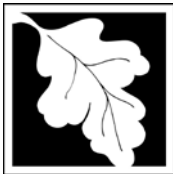
- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

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.

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



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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 Section A.8 NOI Plan List in Attachment A, Supplemental Information

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:

2199

2. Municipal Check Number

September 18, 2018

3. Check date

2200

4. State Check Number

September 18, 2018

5. Check date

Redgate Real Estate Advisors, LLC

6. Payor name on check: First Name

7. Payor name on check: Last Name



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F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant _____

3. Signature of Property Owner (if different) _____

5. Signature of Representative (if any) _____

2. Date 9/18/18

4. Date 9/18/18

6. Date 18 September 2018

For Conservation Commission:

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

For MassDEP:

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

Other:

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

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



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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



A. Applicant Information

1. Location of Project:

144 Addison Street	Boston
a. Street Address	b. City/Town
2199 (City of Boston); 2200 (Cmlth of Mass)	\$2,537.50 (total)
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Damian	Szary	
a. First Name	b. Last Name	
Addison Street Partners, LLC c/o Gate Residential		
c. Organization		
265 Franklin Street, 6th Floor		
d. Mailing Address		
Boston	MA	02110
e. City/Town	f. State	g. Zip Code
(617) 904-7111	das@gateresidential.com	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name	
Bulgroup Colorado, LLC		
c. Organization		
224 12th Avenue		
d. Mailing Address		
New York	NY	10001
e. City/Town	f. State	g. Zip Code
(646) 879-3572	adulac@wfboston.com	
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

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.

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 3b: Building	2	\$1,050.00	\$2,100.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			<u>\$2,100.00</u>
Step 6/Fee Payments:			
Total Project Fee:			<u>\$2,100.00</u> a. Total Fee from Step 5
State share of filing Fee:			<u>\$1,037.50</u> b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:			<u>\$1,500.00 (Boston Fee)</u> 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.)

Attachment A

SUPPLEMENTAL
INFORMATION

ATTACHMENT A: SUPPLEMENTAL INFORMATION

A.1 OVERVIEW OF PROPOSED PROJECT

Addison Street Partners, LLC (the “Applicant”) is proposing to redevelop an approximately 143,743 square foot (sf) parcel into a multifamily, transit-oriented development (the “Project”) at 144 Addison Street in East Boston, Massachusetts (the “Project Site”). See Figure 1, Locus Map. The vacant Project Site is currently paved with asphalt and used for surface parking for up to 980 vehicles.

A.2 EXISTING CONDITIONS

The Project Site is an approximately 143,743 square foot (sf) parcel that is entirely paved with asphalt and is currently used as a surface rental car parking lot for up to 980 vehicles. The Project Site is fenced off, and small guard house and gate currently control access to the Project Site at the northwest corner. Existing elevations at the Project Site range from a low point of 7.8 feet Boston City Base (BCB) at the center of the parcel up to 20.3 feet BCB at the southern corner on Addison Street. The Project Site is bounded by the Brandywyne Village Apartments on the north, the former Maverick Mills building on the west, Addison Street on the south, and the rear yards of several homes on the east. See Figure 2, Aerial View of the Project Site and Surrounding Area; Figures 3 and 4, Existing Conditions Photographs; and Figure 5, Existing Conditions Plan.

The adjacent neighborhood is characterized by a mix of land uses, which includes commercial and industrial space and two and three-story multifamily housing on small urban lots. The Massachusetts Bay Transportation Authority (MBTA) Orient Heights and Wood Island Blue Line stations are located within an approximately 10-minute walk northeast and southeast of the Project Site, respectively. The Project creates a destination in an otherwise uninhabited parking lot.

A.3 PROPOSED PROJECT

The Applicant proposes to redevelop the Project Site into a vibrant residential development, creating approximately 270 new studio, one-bedroom, and two-bedroom housing units. The Project will be comprised of two buildings that have been designed to be certifiable as LEED Silver at a minimum. The building fronting Addison Street (the “South Building”) will provide three to five stories of residential units over at-grade parking. The building on the Project Site’s north side (the “North Building”) will provide five stories of residential units over at-grade parking. The two buildings will be connected by residential amenity space in the

center. The Project will also create publicly accessible greenspace and landscape improvements, such as new sidewalks and pedestrian scale lighting. Minor off-site improvements will include landscaping and sidewalk repair and replacement. See Figure 6, Project Site Plan and Attachment E – Landscape Plans.

Table 1: Project Program

Project Component	Dimensions/Count
Project Site	143,743 sf (3.3 acres)
Gross Floor Area	± 226,400 sf
Floor Area Ratio	1.6
Residential Uses	270 new housing units <ul style="list-style-type: none"> • 54 studio units • 144 one-bedroom units • 72 two-bedroom units ± 11,505 sf lobby/amenity space
Vehicle Parking	179 parking spaces including 7 accessible spaces
Bicycle Parking	270 covered spaces for residents 15 spaces for visitors (at Urban Court)
Open Space	± 80,194 sf

A.4 EXISTING WETLAND RESOURCE AREAS

The coastal wetland resource areas at 144 Addison Street were delineated in accordance with criteria developed by state regulatory agencies and were determined by using elevations near and within the Project Site.

Although the Project Site is not situated on the waterfront, most of the Project Site is located within the FEMA 100-year flood zone due to its elevation. The Project is therefore within the Land Subject to Coastal Storm Flowage resource area and subject to the Massachusetts Wetlands Protection Act (WPA) under state jurisdiction.

1.4.1 LAND SUBJECT TO COASTAL STORM FLOWAGE

Land subject to Coastal Storm Flowage (LSCSF) is defined in the Wetlands Protection Act (310 CMR 10.04) as “land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.” The 100-year flood elevation is identified on the Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency (FEMA).

According to the most recent flood map (FIRM Map No. 25025C0081J, March 16, 2016), the majority of the Project Site is within Zone AE (10 feet NAVD88 or 16.5 feet BCB). See Figure 7, FEMA Flood Insurance Rate Map. Approximately 133,700 sf of the Project Site is located within FEMA Zone AE, which was measured based on actual site elevation. Under existing conditions, the LSCSF resource area is comprised entirely of a paved asphalt parking lot.

A.5 PROPOSED WORK AND IMPACTS IN WETLAND RESOURCE AREAS

The only resource area in which Project work will occur is Land Subject to Coastal Storm Flowage. LSCSF is defined as the area within the FEMA 100 Year Floodplain (10 feet NAVD88 or 16.5 feet BCB). Work within this area will consist of:

- Demolition of existing pavement;
- Construction of two residential buildings;
- Construction of a landscaped courtyard between the two buildings near the center of the Project Site;
- Construction of a new access driveway on the southeastern edge of the Project Site to serve the new parking garage and existing abutting properties on Saratoga Street;
- Construction of new water, sewer, and storm drainage utilities;
- Construction of new electrical, telecom, and gas utilities;
- Construction of new sidewalks and walkways that provide for pedestrian connections through the Project Site; and
- Construction of a new stormwater management system, including a closed drainage system and four subsurface infiltration systems.

There are no performance standards associated with Land Subject to Coastal Storm Flowage.

A.6 CONSTRUCTION PLAN

Construction of the Project will occur in a single phase that is estimated to last approximately 24 months beginning in 2019. Construction methodologies that ensure public safety and protect nearby residences and businesses will be employed, and techniques such as barricades, walkways, and signage will be used as necessary.

A.7 STORMWATER MANAGEMENT SYSTEMS

The Project will include the installation of a stormwater management system that is being designed to meet the MassDEP Stormwater Management Standards and the BWSC Rules and Regulations. As a redevelopment, the Project is required to improve existing conditions at the Project Site. The Project's stormwater management system will reduce or maintain peak runoff rates and volumes, increase groundwater recharge of stormwater runoff, and improve the water quality of stormwater being discharged from the Project Site.

The proposed stormwater management system for the Project Site will include deep sump and hooded catch basins and four underground infiltration systems. Deep sump and hooded catch basins are proposed to provide pretreatment in the impervious areas of the parking lot and access driveway. Stormwater from the impervious areas onsite will be directed to four infiltration systems located at various locations around the Project Site. These systems are sized to capture the first 1.25-inches of stormwater runoff over the impervious areas onsite to meet BWSC requirements. These systems will overflow to the shared storm drain in the shared driveway. The existing drainage system onsite will be removed and disposed of. Existing inlets will be protected in place with inlet protection measures until they are taken offline and removed. See Attachment C – Stormwater Report for full details.

A.8 MITIGATION MEASURES

The following section describes measures that the Project will implement to avoid and mitigate short and long-term impacts to the LSCSF resource area. These measures will be employed throughout all phases of the Project.

1.8.1 CONSTRUCTION PERIOD MITIGATION

The following are proposed mitigation measures that will be implemented during the approximately 24-month construction period. Other measures and conditions imposed by the Conservation Commission will be adhered to during the construction of the Project.

Erosion and Sedimentation Controls

During demolition and construction, erosion and sedimentation control measures will be implemented to minimize the transport of Project Site soils to off-site areas and BWSC storm drain systems. The existing catch basins will be protected with filter fabric or silt sacks to remove sediment from runoff. Where necessary, temporary sedimentation basins will be constructed to prevent the transport of sediment off-site.

Hay Bale and Silt Fence Barrier

Silt fence and hay bales will be installed at the base of stockpiled soils and at erosion-prone areas throughout the construction phase of the Project. The silt fence will be placed behind the hay bales, allowing the hay bales to filter larger particles and the silt fence to remove fine particles. Both hay bales and silt fence will be held in place with wooden stakes.

Dust Control

Fugitive dust will be controlled through wetting with water, street sweeping, and other suppression techniques. Trucks hauling materials and excavate from the Project Site will be required to be covered. During appropriate phases of work, wheel-wash stations will be established to control tracking of mud, dust, and other debris onto city streets.

Pavement Sweeping

If necessary, the roads in the vicinity of the Project Site will be swept. Sweeping will occur as necessary on paved areas within the Project Site.

Dewatering Protocol

Construction dewatering and runoff will either be managed under a National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) or will be recharged onsite in accordance with the Massachusetts Contingency Plan (310 CMR 40.0045).

Site Maintenance

The Project Site will be maintained in a clean and orderly manner. Chain-link fencing will be erected during construction around the perimeter of the edge of the Project Site to control access and minimize transport of windblown debris off-site.

1.8.2 LONG-TERM MITIGATION

While there are no required performance standards for the LSCSF resource area, the Applicant prioritized environmental sustainability and considered the long-term impacts related to climate change and sea level rise since the onset of the Project design. The Project has been designed to be certifiable as LEED Silver, at minimum, and the Applicant has committed to installing photovoltaic panels on the roof through a power purchasing agreement.

The Project will reduce the amount of impervious surface at the Project Site by more than 1.3 acres by replacing asphalt pavement with vegetated and permeable open space. All landscaping at the Project Site will use native species per the USDA/NRCS Plant Database. See Attachment E – Landscape Plans.

Sea Level Rise and Climate Change Resiliency

In 2016, the Boston Planning & Development Agency completed and released a comprehensive study report that suggests that East Boston will be one of the most vulnerable neighborhoods to near-term flooding related to climate change. The report projects approximately nine inches of sea level rise to occur between current day and the 2030s-2050s and approximately 21 inches by the end of the century. As a result, the East Boston waterfront will experience increased coastal flooding. The BPDA has encouraged project proponents to reference the Sea Level Rise – Base Flood Elevations (SLR-BFE) derived from the MassDOT-FHWA Boston Harbor Flood Risk Model to evaluate future vulnerability. The highest SLR-BFE for the Project Site is 19.3 feet BCB, according to the BPDA Zoning Viewer.

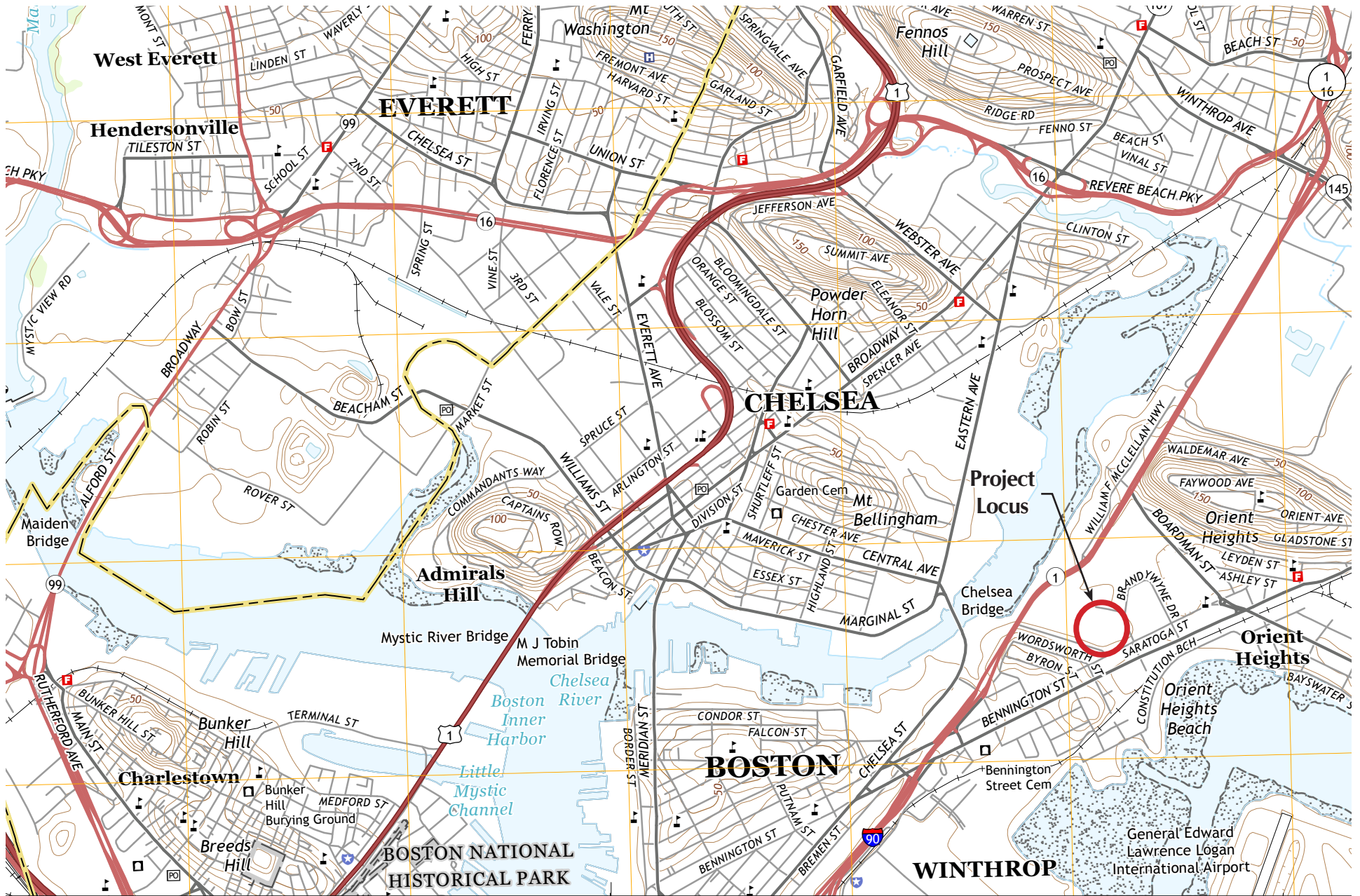
The Applicant explored the opportunity to regrade the entire Project Site to elevate it entirely above the 100 Year Floodplain, but this proved infeasible due to accessibility and financial constraints. To account for current and future flood elevations and the potential for sea level rise, the Project has been designed so that the finished first floor (FFE) elevation is at approximately 21.5 feet BCB, which is five feet above the existing base flood elevation (BFE) and 2.2 feet above the SLR-BFE. All critical building infrastructure including transformers will also be located above the 100 Year Floodplain to prevent a loss of service during a flood event.

The Project is designed to withstand the damaging effects of saltwater on building facades and will be constructed of nonporous, weather-resistant exterior paneling to withstand periodic flooding. The lowest lying areas on the Project Site will be covered with native vegetation and salt tolerant grasses that can withstand occasional storm surges. All structures at elevation 10.0 feet BCB will be constructed of material durable enough to withstand and divert potential flooding at any critical facilities (i.e. fire stair and elevator core). The Project will also provide water tight utility conduits, as well as stormwater and wastewater back flow prevention. Potable water for drinking, food preparation, sinks, and sanitary systems will be maintained in a flood event. As a result, occupants will be able to remain in their residences during a flood and will be able to resume normal activities post-weather event.

A.9 NOI PLAN LIST

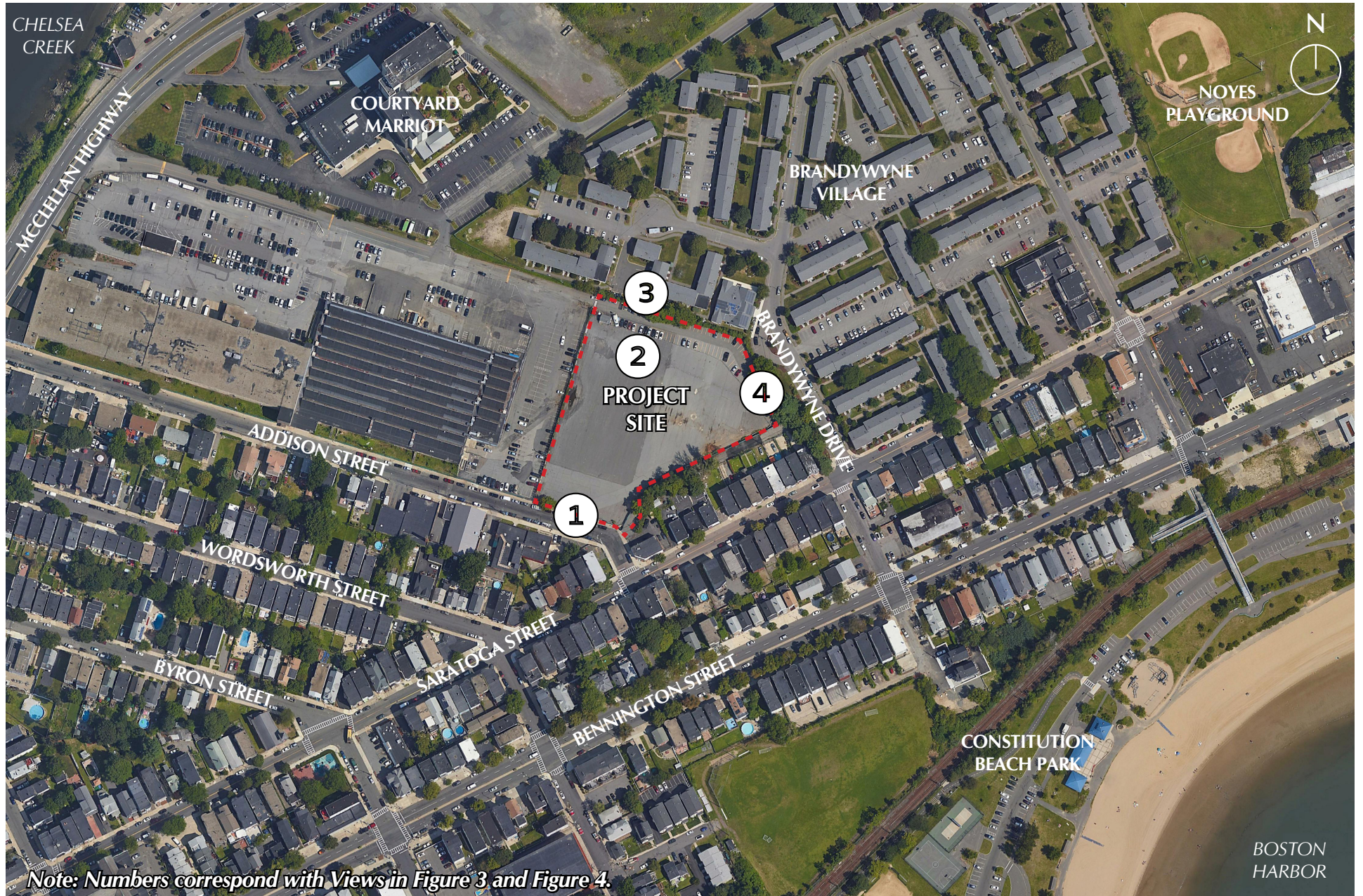
Sheet	Title	Scale	Date	Signed and Stamped
C-000	Notes & Abbreviations	N/A	9/17/18	Christopher Dean Hodney
C-100	Erosion Control Plan	1" = 20'	9/17/18	Christopher Dean Hodney
C-200	Site Grading Plan	1" = 20'	9/17/18	Christopher Dean Hodney
C-300	Site Utility Plan	1" = 20'	9/17/18	Christopher Dean Hodney
C-400	Erosion Control Details	N/A	9/17/18	Christopher Dean Hodney
C-401	Details	N/A	9/17/18	Christopher Dean Hodney

FIGURES



East Boston, Massachusetts

Figure 1
Locus Map
Source: USGS; Fort Point Associates, Inc., 2018





View 1: Southern Edge of the Project Site looking North



View 2: Project Site looking East



View 3: Northern edge of Project Site looking Southeast



View 4: Eastern edge of Project Site and adjacent rear yards of Saratoga Street homes

- NOTES:**
- BENCH MARK INFORMATION:**
ELEVATIONS ESTABLISHED BY GPS
TEMPORARY BENCH MARKS SET:
TBM-1: SPIKE SET IN A UTILITY POLE LOCATED BY THE WESTERLY PROPERTY LINE 261± NORTH OF ADDISON STREET, 1.7' ABOVE GRADE, AS SHOWN HEREON.
ELEVATION = 11.16
TBM-2: SPIKE SET IN A UTILITY POLE LOCATED BY THE WESTERLY PROPERTY LINE 89± NORTH OF ADDISON STREET, 1.8' ABOVE GRADE, AS SHOWN HEREON.
ELEVATION = 14.51
TBM-3: SPIKE SET IN A UTILITY POLE LOCATED ON THE SOUTHERLY SIDELINE OF ADDISON STREET 70± FROM THE WESTERLY SIDELINE OF SARATOGA STREET, 1.8' ABOVE GRADE, AS SHOWN HEREON.
ELEVATION = 21.80
TBM-4: SPIKE SET IN A UTILITY POLE LOCATED ON AND ADJACENT TO #852 SARATOGA STREET, 1.7' ABOVE GRADE, AS SHOWN HEREON.
ELEVATION = 12.54
 - ELEVATIONS REFER TO BOSTON CITY BASE.
 - CONTOUR INTERVAL EQUALS ONE (1) FOOT.
 - THE PARCEL SHOWN HEREON LIES PARTIALLY WITHIN A ZONE "X" (UNSHADED), AN AREA OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD, AND PARTIALLY WITHIN A ZONE "Z" (SHADED), SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD DETERMINED TO HAVE A BASE FLOOD ELEVATION OF 10' (NAVD88), AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C0019A, CITY OF BOSTON COMMUNITY NUMBER 250286, PANEL NUMBER 0019A HAVING AN EFFECTIVE DATE OF MARCH 16, 2016.
 - THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN LAND SURVEYORS ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN LAND SURVEYORS' 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 LAND SURVEYORS.
 - BUILDING HEIGHTS SHOWN HEREON ARE CALCULATED FROM THE NEAREST ADJACENT GRADE.
 - 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 AFORESAID 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.

REFERENCES

MASSACHUSETTS LAND COURT
LCC 22215A
LCC 41939A

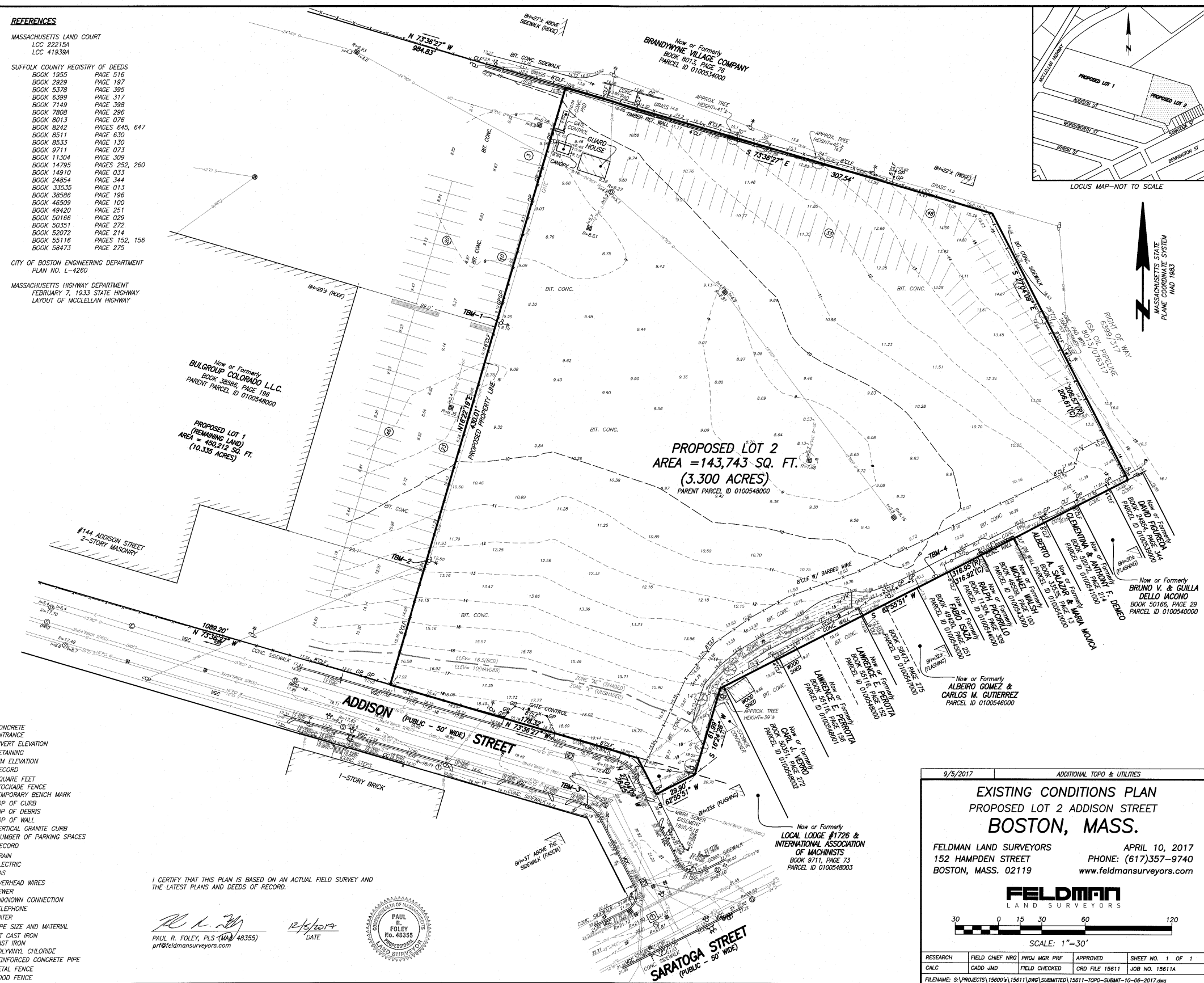
SUFFOLK COUNTY REGISTRY OF DEEDS
BOOK 1955 PAGE 516
BOOK 2929 PAGE 197
BOOK 5378 PAGE 395
BOOK 6399 PAGE 317
BOOK 7149 PAGE 398
BOOK 7808 PAGE 296
BOOK 8013 PAGE 076
BOOK 8242 PAGES 645, 647
BOOK 8511 PAGE 630
BOOK 8533 PAGE 130
BOOK 9711 PAGE 073
BOOK 11304 PAGE 309
BOOK 14795 PAGES 252, 260
BOOK 14910 PAGE 033
BOOK 24854 PAGE 344
BOOK 33535 PAGE 013
BOOK 38586 PAGE 196
BOOK 46509 PAGE 100
BOOK 49420 PAGE 251
BOOK 50166 PAGE 029
BOOK 50351 PAGE 272
BOOK 52072 PAGE 214
BOOK 55116 PAGES 152, 156
BOOK 58473 PAGE 275

CITY OF BOSTON ENGINEERING DEPARTMENT
PLAN NO. L-4260

MASSACHUSETTS HIGHWAY DEPARTMENT
FEBRUARY 7, 1933 STATE HIGHWAY
LAYOUT OF MCCLELLAN HIGHWAY

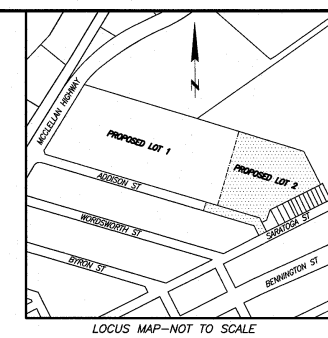
LEGEND

⊙	SEWER MANHOLE	CONC	CONCRETE
⊖	DRAIN MANHOLE	ENT	ENTRANCE
⊕	ELECTRIC MANHOLE	IN	INVERT ELEVATION
⊗	TELEPHONE MANHOLE	RET	RETAINING
⊙	OBSERVATION WELL	RM	ROOM ELEVATION
⊕	HYDRANT	(R)	RECORD
⊕	WATER SHUT OFF/WATER GATE	SQ. FT.	SQUARE FEET
⊕	GAS SHUT OFF/GAS GATE	STF	STOCKADE FENCE
⊕	BOSTON WATER VALVE	TBM	TEMPORARY BENCH MARK
⊕	CATCH BASIN	TC	TOP OF CURB
⊕	GUY WIRE	TOD	TOP OF DEBRIS
⊕	UTILITY POLE	TW	TOP OF WALL
⊕	BOLLARD	VGC	VERTICAL GRANITE CURB
⊕	SIGN	(N)	NUMBER OF PARKING SPACES
⊕	GATE POST	(REC)	RECORD
⊕	HANDICAP RAMP	D	DRAIN
⊕	CURB RETURN	E	ELECTRIC
⊕	UTILITY POLE W/ LIGHT	G	GAS
BC	BOTTOM OF CURB	OHW	OVERHEAD WIRES
BH	BUILDING HEIGHT	S	SEWER
BIT	BITUMINOUS	UC	UNKNOWN CONNECTION
BS	BOTTOM OF STEPS	T	TELEPHONE
BW	BOTTOM OF WALL	W	WATER
CC	CALCULATED	12"(D)	PIPE SIZE AND MATERIAL
CO	CONCRETE CURB	PCI	PIT CAST IRON
CLF	CHAIN LINK FENCE	CI	CAST IRON
		PVC	POLYVINYL CHLORIDE
		RCP	REINFORCED CONCRETE PIPE
		X	METAL FENCE
		□	WOOD FENCE



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

Paul R. Foley
PAUL R. FOLEY, PLS (MA) 48355
prf@feldmansurveyors.com
DATE: 12/5/2017



9/9/2017 ADDITIONAL TOPO & UTILITIES

EXISTING CONDITIONS PLAN
PROPOSED LOT 2 ADDISON STREET
BOSTON, MASS.

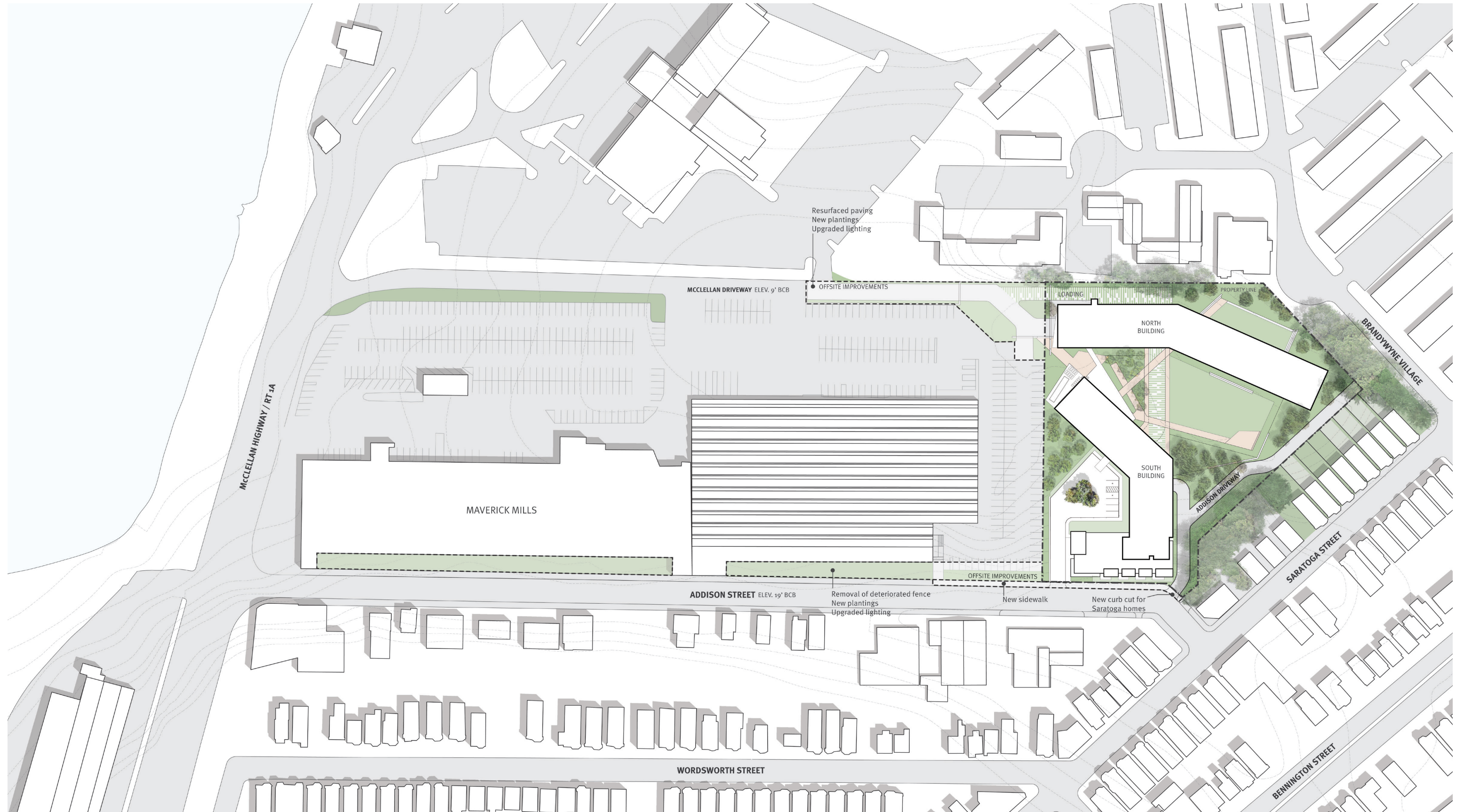
FELDMAN LAND SURVEYORS APRIL 10, 2017
152 HAMPDEN STREET PHONE: (617)357-9740
BOSTON, MASS. 02119 www.feldmansurveyors.com

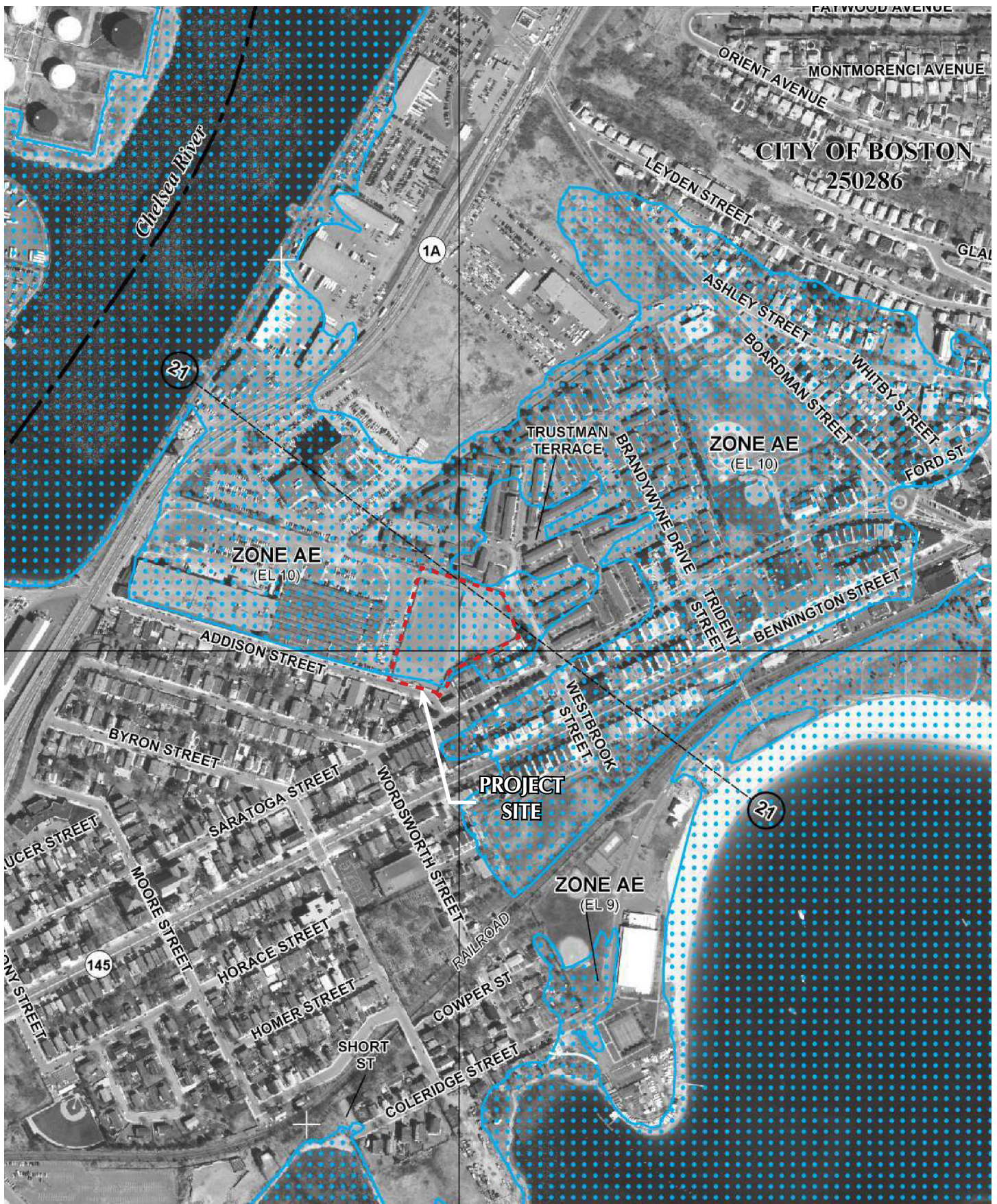
FELDMAN
LAND SURVEYORS

SCALE: 1"=30'

RESEARCH	FIELD CHIEF NRG	PROJ. MGR PRF	APPROVED	SHEET NO. 1 OF 1
CALC	CADD JMD	FIELD CHECKED	CRD FILE 15611	JOB NO. 15611A

FILENAME: S:\PROJECTS\156000\15611\DWG\SUBMITTED\15611-TOPO-SUBMIT-10-06-2017.dwg





Attachment B

NOTIFICATION INFORMATION

ATTACHMENT E: ABUTTER NOTIFICATION

The following table outlines abutters of the Project within 100 feet of the property line as gathered from the City of Boston Assessing Department.

Property	Owner	Owner Address	Parcel ID
WORDSWORTH STREET BOSTON, MA 02128	ERIC R DANILCHUK	73 ADDISON STREET EAST BOSTON, MA 02128	0100592000
73 ADDISON STREET BOSTON, MA 02128	ERIC R DANILCHUK	73 ADDISON STREET EAST BOSTON, MA 02128	0100594000
ADDISON STREET BOSTON, MA 02128	ROBERT J DISTEFANO	73 ADDISON STREET EAST BOSTON, MA 02128	0100595000
81 ADDISON STREET BOSTON, MA 02128	ERIC R DANILCHUK	73 ADDISON STREET EAST BOSTON, MA 02128	0100596000
85 ADDISON STREET BOSTON, MA 02128	ERIC R DANILCHUK	73 ADDISON STREET EAST BOSTON, MA 02128	0100597000
87 ADDISON STREET #1 BOSTON, MA 02128	CLAIRE CAPOZZI	87 ADDISON STREET #1 EAST BOSTON, MA 02128	0100598002
87 ADDISON STREET #2 BOSTON, MA 02128	ILDA C DEFREITAS	87 ADDISON STREET #2 EAST BOSTON, MA 02128	0100598004
87 ADDISON STREET BOSTON, MA 02128	EIGHTY 7 ADDISON STREET	87 ADDISON STREET EAST BOSTON, MA 02128	0100598000
95-97 ADDISON STREET BOSTON, MA 02128	JOHN FITZGERALD	95 ADDISON STREET EAST BOSTON, MA 02128	0100599000
99-105 ADDISON STREET BOSTON, MA 02129	HUAN LI	22 LAKESHORE COURT #4 BRIGHTON, MA 02135	0100600000
113 ADDISON STREET BOSTON, MA 02128	ONE 13-115 ADDISON ST CONDO	113 ADDISON STREET EAST BOSTON, MA 02128	0100601000
113-115 ADDISON STREET #1 BOSTON, MA 02128	REGINALDO A MACEDO	115 ADDISON STREET #1 EAST BOSTON, MA 02128	0100601002

Property	Owner	Owner Address	Parcel ID
113-115 ADDISON STREET #2 BOSTON, MA 02128	GEOFFREY C PONITZ	113 ADDISON STREET #2 EAST BOSTON, MA 02128	0100601004
117 ADDISON STREET BOSTON, MA 02128	FRANCIS JAQUELINE P GOMES	117 ADDISON STREET EAST BOSTON, MA 02128	0100602000
119 ADDISON STREET BOSTON, MA 02128	D&D REAL ESTATE LLC	1036 MAIN STREET MELROSE, MA 02176	0100603010
121 ADDISON STREET BOSTON, MA 02128	D&D REAL ESTATE LLC	1036 MAIN STREET MELROSE, MA 02176	0100603000
125 ADDISON STREET BOSTON, MA 02128	FREDERICK C EDGETT	125 ADDISON STREET EAST BOSTON, MA 02128	0100604000
131 ADDISON STREET BOSTON, MA 02128	EDWARD L FITZGERALD	131 ADDISON STREET EAST BOSTON, MA 02128	0100605000
135 ADDISON STREET BOSTON, MA 02128	MARYANN SCARAMOZZA	135 ADDISON STREET EAST BOSTON, MA 02128	0100606000
ADDISON STREET BOSTON, MA 02128	JOSEPH T BARRY	141 ADDISON STREET EAST BOSTON, MA 02128	0100607000
141 ADDISON STREET BOSTON, MA 02128	JOSEPH T BERRY	143 ADDISON STREET EAST BOSTON, MA 02128	0100608000
ADDISON STREET BOSTON, MA 02128	3B REAL ESTATE LLC	9 CRESCENT STREET WINTHROP, MA 02152	0100608001
143-145 ADDISON STREET BOSTON, MA 02128	3B REAL ESTATE LLC	9 CRESCENT STREET WINTHROP, MA 02152	0100610000
155 ADDISON STREET BOSTON, MA 02128	EAST BOSTON NEIGHBORHOOD	155 ADDISON STREET EAST BOSTON, MA 02128	0100611000
818 SARATOGA STREET BOSTON, MA 02128	ERNEST E MANFRA	4 JEFFERSON DRIVE REVERE, MA 02151	0100553000
820 SARATOGA STREET BOSTON, MA 02128	EVELYN M JIMENEZ	820 SARATOGA STREET EAST BOSTON, MA 02128	0100552000
822 SARATOGA STREET BOSTON, MA 02128	PEDRO MESA	822 SARATOGA STREET EAST BOSTON, MA 02128	0100551000

Property	Owner	Owner Address	Parcel ID
SARATOGA STREET BOSTON, MA 02128	PEDRO MESA	822 SARATOGA STREET EAST BOSTON, MA 02128	0100550000
830 SARATOGA STREET BOSTON, MA 02129	INTNATL ASSOC MECHINISTS	830 SARATOGA STREET EAST BOSTON, MA 02128	0100548003
834 SARATOGA STREET BOSTON, MA 02128	CARL J VERRO	834 SARATOGA STREET EAST BOSTON, MA 02128	0100548002
838 SARATOGA STREET BOSTON, MA 02128	LAWRENCE E PERROTTA	842 SARATOGA STREET EAST BOSTON, MA 02128	0100548001
SARATOGA STREET BOSTON, MA 02128	ALBEIRO GOMEZ	850 SARATOGA STREET EAST BOSTON, MA 02128	0100547000
850 SARATOGA STREET BOSTON, MA 02128	ALBEIRO GOMEZ	850 SARATOGA STREET EAST BOSTON, MA 02128	0100546000
852 SARATOGA STREET BOSTON, MA 02128	FABIO ISAZA	701 BENNINGTON STREET #2 EAST BOSTON, MA 02128	0100545000
854 SARATOGA STREET BOSTON, MA 02128	RALPH ETAL PICCIRILLO	7 VIDEHA STREET PEABODY, MA 01960	0100544000
856 SARATOGA STREET BOSTON, MA 02128	MICHAEL E WALSH	856 SARATOGA STREET EAST BOSTON, MA 02128	0100543000
858 SARATOGA STREET BOSTON, MA 02128	SALAZAR ALBERTO ALARCON	858 SARATOGA STREET EAST BOSTON, MA 02128	0100542000
860 SARATOGA STREET BOSTON, MA 02128	CLEMENTINA DEMEO	860 SARATOGA STREET EAST BOSTON, MA 02128	0100541000
862 SARATOGA STREET BOSTON, MA 02128	DELLO IACONO BRUNO V TS	862 SARATOGA STREET EAST BOSTON, MA 02128	0100540000
864 SARATOGA STREET BOSTON, MA 02128	DAVID FUGUREOA	864 SARATOGA STREET EAST BOSTON, MA 02128	0100539000
870-908A SARATOGA STREET BOSTON, MA 02128	BRANDYWYNE VILLAGE CO	151 TREMONT STREET BOSTON, MA 02111	0100534000
225 WM F MCCLELLAN HIGHWAY BOSTON, MA 02128	SLUMBER TIME LLC	1000 MARKET STREET BUILDING #1 PORTSMOUTH, NH 03801	0100549001

Notification to Abutters Under the Massachusetts Wetlands Protection Act

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

- A. The name of the applicant is **Addison Street Partners, LLC**. The applicant has filed a Notice of Intent with the Conservation Commission for the municipality of **Boston** seeking permission to remove, till, dredge, or alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, section 40).
- B. The address of the lot where the activity is proposed is **144 Addison Street, East Boston, Massachusetts 02128**.
- C. Copies of the notice of Intent may be examined at **Boston City Hall** between the hours of **9 AM and 5 PM** on the following days of the weeks: **Monday through Friday**. For more information, call Boston City Hall at **(617) 635-3850**.
- D. Copies of the Notice of Intent may be obtained from the applicant's representative by calling this telephone number **(617) 357-7044 x 207** between the hours of **9 AM and 5 PM** on the following days of the week: **Monday through Friday**.
- E. Information regarding the date, time, and place of the public hearing may be obtained from **Boston Conservation Commission** by calling this telephone number: **(617) 635-3850** between the hours of and on the following days of the week: **9 AM to 5 PM, Monday through Friday**.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the **Boston Herald**.

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

NOTE: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: the Northeast Region: (978) 694-3200.

Attachment C

STORMWATER REPORT



Nitsch Engineering

September 19, 2018

**STORMWATER
REPORT**

For

144 ADDISON STREET
East Boston, Massachusetts

Prepared for:

Addison Street Partners, LLC
224 12th Avenue
New York, NY 10001

Prepared by:

NITSCH ENGINEERING, INC.
2 Center Plaza, Suite 430
Boston, MA 02108

Nitsch Project #12433

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Appendix A Stormwater Management Standards Documentation

- MassDEP Checklist for Stormwater Report
- Standard 3: Required Recharge Volume Worksheet
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- Standard 4: Pathogen Removal Worksheet
- Standard 10: Illicit Discharge Compliance Statement

Appendix B Closed Drainage System Design

Appendix C Long-Term Pollution Prevention and Stormwater Operation and Maintenance Plan

Appendix D DRAFT Stormwater Pollution Prevention Plan (SWPPP)

Appendix E Soil Investigations

- NRCS Soil Maps and Descriptions
- Geotechnical Report

1.0 INTRODUCTION

Nitsch Engineering has prepared this Stormwater Report to support the Notice of Intent application for the new 144 Addison Street project in East Boston, Massachusetts. The Project Site is an existing parking lot bounded by Brandywyne Village to the north, Brandywyne Drive to the east, existing homes on Saratoga Street to the southeast, Addison Street to the southwest, and a commercial property to the west at 175 McClellan Highway. The Project consists of the construction of two residential buildings with 270 units, new parking at site grade beneath the buildings, and new landscape and hardscape. The Project includes a stormwater management system that has been designed to comply with the requirements of the Boston Water and Sewer Commission (BWSC) and the Massachusetts Department of Environmental Protection (DEP) Stormwater Management Standards.

2.0 EXISTING CONDITIONS

The site is located at 144 Addison Street in East Boston, Massachusetts (Figure 1). The Project Site is approximately 3.3 acres and consists of an asphalt parking lot and a small guard shack. The site has high points at its edges. The edge along Addison Street ranges from elevation 18 to 19 Boston City Base (BCB) and 14-16 BCB along the edge along Brandywyne Drive. The site slopes down to low points near the center of the site at approximately elevation 8 BCB. The west side of the site is at level grade with the parking lot at the adjacent 175 McClellan Highway parcel.

There are no wetlands on or near the site.

Approximately 3.1 acres of the site are Land Subject to Coastal Storm Flowage (LSCSF) as shown on the FEMA Flood Rate Maps for the project site (Figure 2). The limit of this area is elevation 10 NAVD88 or 16.49 BCB.

2.1 Existing Drainage Infrastructure

Stormwater that falls on the Project Site is collected by four catch basins located at the four low points of approximately elevation 8 BCB. These catch basins connect to a closed drainage system that flows west through the 175 McClellan Highway parcel to a 48-inch storm drain in the shared driveway. Stormwater then flows through a tide gate and then down the shared drive, across McClellan Highway and through an outfall into the Chelsea Creek.

The existing stormwater management system was constructed prior to the 2008 MassDEP Stormwater Management Standards, and the Site provides no peak flow attenuation, water quality treatment, or groundwater recharge.

Record plans show that some untreated stormwater flows onto the Site by sheet flow from Brandywyne Drive and Brandywyne Village.

There is an existing 10-inch BWSC-owned storm drain in Addison Street. The Project Site does not currently connect to this storm drain.

2.2 NRCS Soil Designations

The Soil Classification Summary (Table 1) outlines the Natural Resources Conservation Services (NRCS) designation of the soil series at the Site.

The soils within the Project site are classified as Urban land, wet substratum, 0 to 3 percent slopes. These soils have not been assigned to a hydrologic group by the survey and onsite investigation is needed to determine the suitability of these soils for any use.

Table 1. NRCS Soil Classification Summary

Soil Unit	Soil Series	Hydrologic Soil Group
603	Urban land, wet substratum, 0 to 3 percent slopes	---

2.3 On-Site Soil Investigations

Sanborn, Head, and Associates conducted an onsite exploration program and provided the geotechnical engineering for this Project. In general, the following subsurface units, in order of occurrence below the ground surface are anticipated:

Table 2. Typical Subsurface Profile

Stratum/Subsurface Unit	Range in Thickness (ft.)
Fill	4 to 6
Organic Silt	2 to 9
Silty Sand/Sandy Silt	3 to 11
Boston Blue Clay	40 to 100
Glacial Till	---

Groundwater was encountered at approximately 5 feet below grade.

Based on the results of the subsurface investigation, the soils beneath the site appear to be Hydrologic Group D with a corresponding saturated hydraulic conductivity of 0.02 in/hr.

Refer to Appendix E for a copy of the Geotechnical Report.

3.0 PROPOSED CONDITIONS

3.1 Project Description

As stated above, the Project includes the construction of two new residential buildings with parking beneath. The site improvements include the following:

1. Construction of a landscaped courtyard between the two buildings near the center of the site;
2. Construction of a new access driveway on the southeastern edge of the site to serve the new parking garage and the abutting properties on Saratoga Street;
3. Construction of new water, sewer, and storm drainage utilities;
4. Construction of new electrical, telecom, and gas utilities;
5. Construction of new sidewalks and walkways that provide for pedestrian connections through the site;
6. Construction of a new stormwater management system, including a closed drainage system and four subsurface infiltration systems.

The Site is located in Land Subject to Coastal Storm Flowage. To mitigate this issue, parking is proposed at ground level. Habitable spaces will begin above the parking level at an elevation approximately four feet above the flood plain elevation.

The Project is a redevelopment since it is located within previously disturbed areas (i.e. paved parking and buildings) and will substantially decrease the overall impervious area by approximately 1.3 acres. The increase in overall site perviousness will result in a reduction in future peak rates and volumes of stormwater from the Project Site to the shared closed drainage system in the shared driveway. Refer to Table 3 for a comparison of the existing and proposed surface covers for the Site.

Table 3. Proposed Land Use (in acres)

Land Use	Existing Site (acres)	Proposed Site (acres)	Change
Buildings and Paved Parking	3.23	1.92	-1.31
Landscaped Lawns and Planting Areas	0.06	1.37	+1.31
Total	3.30	3.30	---

3.2 Stormwater Management System

The Site will include the installation of a stormwater management system that is being designed to meet the MassDEP Stormwater Management Standards and the BWSC Rules and Regulations. As a redevelopment, the Project is required to improve existing conditions on the site.

The proposed stormwater management system for the project site will include four underground infiltration systems. Runoff from roof drains and area drains with sumps will be directed to these infiltration systems. These systems are sized to capture the first 1.25-inches of stormwater runoff over the impervious areas onsite to meet BWSC requirements. These systems will overflow to the shared storm drain in the shared driveway.

The existing drainage system onsite will be removed and disposed of. Existing inlets will be protected in place with inlet protection measures until they are taken offline and removed.

Deep Sump and Hooded Catch Basins

Deep sump and hooded catch basins are proposed to provide pretreatment in the impervious areas of the parking lot and access driveway.

Subsurface Infiltration Systems

Stormwater from the impervious areas onsite will be directed to four infiltration systems located at various locations around the Site.

Infiltration System #1 is located on the south side of the site under the new access driveway. This system consists of 360 linear feet of 24-inch corrugated polyethylene pipe (CPP) in a crushed stone base that extends six inches above and below the pipe and one foot around the edge. The capacity of the system is sized to infiltrate the first 1.25 inches of runoff over the impervious area that is directed to it. The system overflows to a storm drain main that runs through the center of the site and eventually to the 48-inch storm drain described above.

Infiltration System #2 is located between the two buildings. This system consists of 300 linear feet of 24-inch corrugated polyethylene pipe (CPP) in a crushed stone base that extends six inches above and below the pipe and one foot around the edge. The capacity of the system is sized to infiltrate the first 1.25 inches of runoff over the impervious area that is directed to it. The system also overflows to a storm drain main that runs through the center of the site and eventually to the 48-inch storm drain described above.

Infiltration System #3 is located on the south side of the site under the new access driveway. This system consists of 468 linear feet of 24-inch corrugated polyethylene pipe (CPP) in a crushed stone base that extends six inches above and below the pipe and one foot around the edge. The capacity of the system is sized to infiltrate the first 1.25 inches of runoff over the impervious area that is directed to it. The system overflows to a 24-inch storm drain that connects to the 48-inch storm drain described above.

Infiltration System #4 is located on the west side of the site under a landscaped area. This system consists of 160 linear feet of 24-inch corrugated polyethylene pipe (CPP) in a crushed stone base that extends six inches above and below the pipe and one foot around the edge. The capacity of the system is sized to infiltrate the first 1.25 inches of runoff over the impervious area that is directed to it. The system overflows to a storm drain main that runs through the center of the site and eventually to the 48-inch storm drain described above.

3.3 Stormwater Management During Construction

The Site Contractor will be responsible for stormwater management of the active construction site and is required to adhere to the conditions of the 2017 Construction General Permit (CGP) issued by the Environmental Protection Agency (EPA). The construction contract documents will require the contractor to obtain coverage under the EPA's National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to comply with the Clean Water Act and its amendments. Operators of large and small construction activities must apply for coverage under the terms of the NPDES General Permit. The EPA has issued the CGP to authorize the discharge of stormwater associated with construction activities under the NPDES. The CGP authorizes the stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than 1 acre, where those discharges enter surface waters of the United States or a municipal storm system leading to surface waters of the United States. The discharges are subject to the conditions set forth in the CGP.

The goal of the CGP is to reduce or eliminate stormwater pollution from construction activities by requiring the planning and implementation of a SWPPP to protect the water quality of receiving surface water bodies. The SWPPP identifies potential sources of pollution from the construction site that may affect the quality of stormwater discharges, describes practices to be used to reduce such pollutants, and assures compliance with the terms and conditions of the CGP. The SWPPP is a comprehensive guide, which, when followed will result in the placement of erosion and pollution prevention measures, maintenance and monitoring of the in-place measures, and means to modify the plan.

In order to obtain coverage under the CGP for authorized stormwater discharges, the operator must prepare and submit a *Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity under a NPDES General Permit*. A SWPPP must be prepared before the submission of a NOI and prior to the start of construction activities. A copy of the SWPPP must be kept at the project site from project initiation to the date of final stabilization. Upon final stabilization of the site, a Notice of Termination must be submitted to the EPA. A notice of the permit and SWPPP must be posted conspicuously near the entrance to the site.

In Massachusetts, the EPA is the NPDES permitting authority. Minimum erosion and sediment controls have been incorporated into the project design to protect the resource areas during construction and are indicated on the Construction Plans within the accompanying Project Plan Set.

Prior to commencing any construction activities, the Contractor shall prepare a detailed SWPPP appropriate to the specific means and methods of construction of this project. The project's plans and specifications require the Contractor to implement erosion control measures prior to the start of any work. Control measures shall prevent erosion, siltation, and sedimentation of wetlands, construction areas, and adjacent areas. Erosion and sediment controls will be utilized adjacent to earthwork stockpiles, onsite storage and staging areas, cut and fill slopes, stripped and graded areas, constructed swales and ditches, and the abutting properties.

The erosion and sediment controls will include siltation fences, compost filter tube barriers, and temporary covers for drainage structures. Additionally, temporary soil protective coverings are required in all disturbed or graded areas subject to erosion or as directed by the Engineer. The temporary ground cover will be maintained until the area is stabilized.

In addition, the Contractor is required to submit a Dewatering Plan for activities needed to control groundwater when installing structures. No direct discharges to the BWSC storm drain system will be allowed without the use of measures (i.e., sedimentation basin, dewatering boxes, etc.) to reduce sediments, sludge, and contaminants from the discharge.

This Stormwater Report includes an Operation and Maintenance Plan for stormwater management systems during and post construction operations including scheduled observation and maintenance activities as well as log forms for reporting maintenance actions.

4.0 STORMWATER MANAGEMENT ANALYSIS

4.1 Methodology

Nitsch Engineering completed a hydrologic analysis of the existing project site utilizing Soil Conservation Service (SCS) Runoff Curve Number (CN) methodology. The SCS method calculates the rate at which the runoff reaches the design point considering several factors: the slope and flow lengths of the subcatchment area, the soil type of the subcatchment area, and the type of surface cover in the subcatchment area. HydroCAD Version 10.00 computer modeling software was used in conjunction with the SCS method to determine the peak runoff rates and runoff volumes for the 2-, 10-, 25-, and 100-year, 24-hour storm events. The proposed project site is being analyzed with the same methodology.

The Site was divided into multiple drainage areas, or subcatchments, which drain to the design points along the property boundary and within the site. For each subcatchment area, SCS Runoff Curve Numbers (CNs) were selected by using the cover type and hydrologic soil group of each area. The peak runoff rates and runoff volumes for the 2-, 10-, 25- and 100-year 24-hour storm events were then determined by inputting the drainage areas, CNs, and time of concentration (T_c) paths into the HydroCAD model.

The existing and proposed subcatchments and the design point are indicated on Figure 3, Existing Watershed Areas and Figure 4, Proposed Watershed Areas.

4.2 HydroCAD Version 10.00

The HydroCAD computer program uses SCS and TR-20 methods to model drainage systems. TR-20 (Technical Release 20) was developed by the Soil Conservation Service to estimate runoff and peak

discharges in small watersheds. TR-20 is generally accepted by engineers and reviewing authorities as the standard method for estimating runoff and peak discharges.

HydroCAD Version 10.00 uses up to four types of components to analyze the hydrology of a given site: subcatchments, reaches, basins, and links. Subcatchments are areas of land that produce surface runoff. The area, weighted CN, and T_c characterize each individual subcatchment area. Reaches are generally uniform streams, channels, or pipes that convey water from one point to another. A basin is any impoundment that fills with water from one or more sources and empties via an outlet structure. Links are used to introduce hydrographs into a project from another source or to provide a junction for more than one hydrograph within a project. The time span for the model was set for 0-48 hours in order to prevent truncation of the hydrograph.

4.3 Precipitation Data

Nitsch Engineering, Inc. used National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Volume 10 Precipitation Data to estimate the rainfall for the 2-year, 10-year, 25-year and 100-year 24-hour storms. The rainfall values for Boston that will be used are as follows:

Table 4. Precipitation Data

Storm Event	24-Hour Rainfall
2-year	3.16 in
10-year	5.00 in
25-year	6.15 in
100-year	7.92 in

4.4 Existing Hydrologic Conditions

As summarized in Table 4, Nitsch Engineering delineated the project site into one on-site subcatchment (watershed) area discharging to one design point utilizing an existing conditions survey and on-site observations (See Figure 3). Table 5 summarizes the design point, location and area of the watershed. The single design point is defined as the 48-inch storm drain in the shared drive (DP-A).

Table 5. Existing Drainage Area Summary

Design Point	Watershed	Area (acres)	Description
A	A	3.3	Parking Lot and Guard Shack
Total Area		3.3	

4.5 Proposed Hydrologic Conditions

The proposed project has been designed to mitigate the change in stormwater runoff at the design point as required by the DEP Stormwater Management Standards. The existing watershed area was modified to reflect the proposed topography, storm drainage structures and BMPs, and roof areas. (See Figure 4 and Table 6). The proposed BMPs included as ponds or reaches in the HydroCAD model are Subsurface Infiltration Systems.

BWSC requires that the site capture and infiltrate the first inch and a quarter of runoff over site impervious areas. The Subsurface Infiltration Systems are sized to meet this volume.

Table 6. Proposed Drainage Area Summary

Design Point	Watershed	Area (acres)	Description	Proposed Treatment BMP(s)
A	A1	0.73	Roof and Landscaped Area	Infiltration System #1
	A2	0.57	Roof and Landscaped Area	Infiltration System #2
	A3	0.80	Roof and Landscaped Area	Infiltration System #3
	A4	0.30	Front Parking Lot	Infiltration System #4
	A5	0.90	Landscaped Areas	
Total Area		3.30		

4.6 Peak Flow Rates

The proposed stormwater management system is expected to reduce the proposed peak runoff rates to below the existing rates for the Design Point. Tables 7 through 8 below summarize the existing and proposed hydrologic analyses for the site at each design point.

Table 7 – Peak Rates of Runoff for Design Point DP-A (in cfs)

Storm Event	2-year	10-year	25-year	100-year
Existing	9.83	15.73	19.38	25.00
Proposed	8.03	14.62	18.55	24.61

Table 8 –Volumes of Runoff for Total Site (in cubic feet)

Storm Event	2-year	10-year	25-year	100-year
Existing	34,967	56,891	70,609	91,733
Proposed	18,202	39,839	53,434	74,889

5.0 MassDEP Stormwater Management Standards

The Project is considered a *redevelopment* under the MassDEP Stormwater Management Standards and has been designed to meet the Standards as summarized below:

Standard 1: No New Untreated Discharges

The Project will not discharge any untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth. Stormwater from the Site will be collected and treated in accordance

with the MassDEP Stormwater Management Standards and stormwater outfalls will be stabilized to prevent erosion.

Standard 2: Peak Rate Attenuation

The proposed stormwater management system has been designed so that the post-development peak discharge rates do not exceed pre-development peak discharge rates. To prevent storm damage and downstream flooding, the proposed stormwater management practices will mitigate peak runoff rates for the 2-, 10-, and 100-year, 24-hour storm events as noted in Section 4.6.

Standard 3: Groundwater Recharge

As noted above, an infiltration system has been included in the design of the stormwater management system to provide groundwater recharge, water quality treatment and peak rate attenuation of stormwater discharges to the BWSC storm drainage system adjacent to the project site. The infiltration system design recharge volume exceeds the required Recharge Volume under the Massachusetts Stormwater Management Standards since the system is designed to capture and infiltrate 1.25-inches over the project site's impervious area as required by BWSC.

This results in a significant improvement over existing conditions since the required recharge volume is captured and infiltrated into the ground for the Project Site.

Recharge Volume Sizing calculations are provided in Appendix A. The soil information is included in Appendix E.

Table 11 – Proposed Recharge Volumes for Stormwater BMPs

Infiltration BMP	Recharge Volume (cf)
Infiltration System #1	2,704
Infiltration System #2	2,327
Infiltration System #3	2,809
Infiltration System #4	1,102
Total	8,942

Standard 4: Water Quality Treatment

The proposed stormwater management system has been designed to improve the water quality treatment of the post-construction discharges from the project site resulting in a reduction in annual stormwater pollutant loads from the site. This project includes water quality treatment BMPs in the stormwater management system to provide increased TSS and pathogen removal over existing conditions. The stormwater pretreatment and treatment BMPs include deep sump and hooded catch basins, and underground infiltration structures.

The infiltration system is a highly effective stormwater treatment Best Management Practice (BMP) that removes many contaminants including TSS, nutrients, and pathogens. However, infiltration systems are not intended to remove coarse particulate pollutants so pretreatment BMPs including deep sump and hooded catch basins and proprietary water quality inlets and structures have been incorporated into the stormwater management system design to remove coarse particulates from vehicular and pedestrian surface areas before entering the infiltration structure.

The new infiltration systems will provide for the water quality treatment of the stormwater discharges from the project site, since the system will be sized to capture a water quality treatment depth of 1.25-inches over the project site's impervious area. This exceeds the required water quality treatment volume as required by the Massachusetts Stormwater Management Standards. This water quality treatment of the post-construction discharges from the project site results in a reduction in annual stormwater pollutant loads from the site including removing a minimum of 80% of Total Suspended Solids (TSS) and also the removal of pathogens. There is a draft Total Maximum Daily Load (TMDL) for pathogens for the Boston Harbor Watershed, and the proposed infiltration system will meet the requirements of the TMDL by reducing the pathogen loading in the stormwater runoff discharging to the storm drain mains from the project site.

TSS removal calculation spreadsheets and BMP sizing calculations are provided in Appendix A.

A post-construction Stormwater Management System Operation and Maintenance Plan (O&M) has been prepared which documents the long-term BMP operational requirements to maintain the functionality of the stormwater management system as designed. The O&M Plan is incorporated into the overall long-term pollution prevention plan that will be developed to document the post-construction source control and pollution prevention practices to be implemented by the Proponent. The long-term pollution prevention plan includes the proper procedures for the following as applicable:

1. Good housekeeping;
2. Storing materials and waste products inside or under cover;
3. Vehicle washing;
4. Routine inspection and maintenance of stormwater BMPs;
5. Spill prevention and response;
6. Maintenance of lawns, gardens, and other landscape areas;
7. Storage and use of fertilizers, herbicides, and pesticides;
8. Pet waste management; and
9. Proper management of deicing chemicals and snow.

The Operation and Maintenance Plan and Long-Term Pollution Prevention Plan are included in Appendix C.

Standard 5: Land Uses with Higher Potential Pollutant Loads

The project does not contain Land Uses with Higher Potential Pollutant Loads (LUHPPLs) as defined by MassDEP. Therefore, this standard is not applicable.

Standard 6: Critical Areas

The Project is not located within any critical areas. Therefore, this standard is not applicable.

Standard 7: Redevelopments

The project is a redevelopment as defined in the MassDEP Stormwater Management Handbook since these areas are located within previously disturbed areas (i.e. paved parking, roadways, walkways, and plazas), and the Project reduces impervious area. Therefore, the project has been designed to meet Standard 2, Standard 3, and the pretreatment and structural stormwater BMPs requirements of Standards 4, 5, and 6 of the Stormwater Management Standards to the maximum extent practicable. The project complies with all other requirements of the Stormwater Management Standards and will improve existing conditions.

Standard 8: Construction Period Pollution Prevention and Sedimentation Control

Sedimentation and erosion controls are included as part of the requirements of this project and will be employed during site construction by the Contractor. Land disturbance will be kept to a minimum and the phasing of the work will be planned so that only the areas actively being developed are exposed. All other areas should have natural vegetation preserved, have good temporary cover, or permanent vegetation established. Permanent structures, temporary or permanent vegetation, and mulch/erosion netting will be required to be employed, as quickly as possible after land is disturbed. Disturbed areas will be protected from stormwater runoff by installing erosion control or stormwater management measures to prevent water from entering and running over disturbed areas, and to prevent erosion damage to downstream facilities. Perimeter control practices will be installed to isolate the construction site from surrounding areas. Siltation fence, temporary covers for drainage structures, and temporary settlement basins will be utilized where applicable.

Since the project will disturb more than 1 acre of land, the Contractor will be required to submit a NOI to the EPA for coverage under the General Permit of the NPDES. As part of this application the Contractor will be required to prepare a SWPPP and implement the measures in the SWPPP. The SWPPP, which is to be kept onsite, includes erosion and sediment controls (stabilization practices and structural practices), temporary and permanent stormwater management measures, Contractor inspection schedules and reporting of all SWPPP features, materials management, waste disposal, off-site vehicle tracking, spill prevention and response, sanitation, and non-stormwater discharges.

The Contractor will be required to implement the SWPPP for the duration of the project. The Contractor will be required to inspect all controls regularly to ensure that the controls are working properly and shall clean and reinstall any control that needs to be cleaned or replaced. Additionally, the Contractor will be required to clean/flush the entire stormwater management system prior to final acceptance by the Owner.

The Contractor will obtain the appropriate permits for dewatering operations during construction and the Contractor will be required to adhere to the requirements and special conditions of these permits.

Standard 9: Operation and Maintenance Plan

A post-construction Operation and Maintenance Plan has been prepared and will be implemented to ensure that stormwater management systems function as designed. Source control and stormwater BMP operation requirements for the project site are summarized in the Long-Term Pollution Prevention Plan.

The Operation and Maintenance Plan and Long-Term Pollution Prevention Plan are included in Appendix C.

Standard 10: Prohibition of Illicit Discharges

There will be no illicit discharges to the stormwater management system associated with the Project. An Illicit Discharge Compliance Statement is provided in Appendix A.

6.0 CLOSED DRAINAGE SYSTEM DESIGN

The proposed closed drainage system consists of deep sump and hooded catch basins, plastic area drains with sumps, drainage manholes, and proprietary water quality treatment units connected with corrugated polyethylene pipe. The closed drainage system was designed to convey the 25-year storm event using the Rational method, as required by the BWSC. Refer to Appendix B for more information.

6.1 The Rational Method for Closed Drainage System Design

The Rational Method is a widely accepted rainfall-runoff model used for estimating peak design flows when modeling closed drainage system hydraulics. It is typically used when analyzing runoff rates from drainage areas to individual catch basins due to its simplicity and advantages on smaller scales over other models. Nitsch Engineering used the Rational Method to estimate the runoff into the closed drainage system.

The general formula for the rational method is:

$$Q = C i A$$

where

Q = volumetric rate of runoff, in cubic feet per second

C = dimensionless runoff coefficient

i = rate of rainfall, in inches per hour

A = contributing drainage area (subcatchment), in acres

The volumetric flow rate, Q , at which the runoff reaches a catch basin or other drainage inlet is determined by a number of factors: the slope and flow lengths of the subcatchment area, the soil type, the surface cover and size of the subcatchment area, and the chosen rainfall return period and associated intensity.

The primary difference between the Rational Method and the SCS method is the calculation of the runoff coefficient, C . The dimensionless runoff coefficient is determined from a number of factors which are generally related to the surface cover of each individual subcatchment. A site covered with impermeable pavement typically has a runoff coefficient of 0.90. This value implies that almost all of the rain that falls on pavement or other impermeable covers will be converted to runoff. A site covered by grass or other landscaping will allow some of the water to be absorbed into the ground and can have coefficients which vary from 0.20 to 0.40, reflecting the associated reduction of runoff due to absorption. These different cover types within a drainage area are assigned a runoff coefficient and then weighted to determine an overall drainage area runoff coefficient, C , for each subcatchment.

6.2 Autodesk® Storm and Sanitary Analysis Software v. 12.0

Nitsch Engineering used AutoDesk® Storm and Sanitary Analysis Software (SSA) to estimate storm system inflows by the Rational Method and to size the proposed closed drainage system. SSA models hydraulic system capacities using Manning's Formula to properly size closed drainage system elements for the calculated runoff rates. Please refer to Appendix B of this report for the results of this analysis.

7.0 CONCLUSION

In conclusion, the Project's stormwater management system will reduce or maintain peak runoff rates and volumes, increase groundwater recharge of stormwater runoff, and improve the water quality of stormwater being discharged from the Site. The Project is being designed to meet the applicable requirements of the MassDEP Stormwater Management Standards, and BWSC storm drainage improvement construction standards.

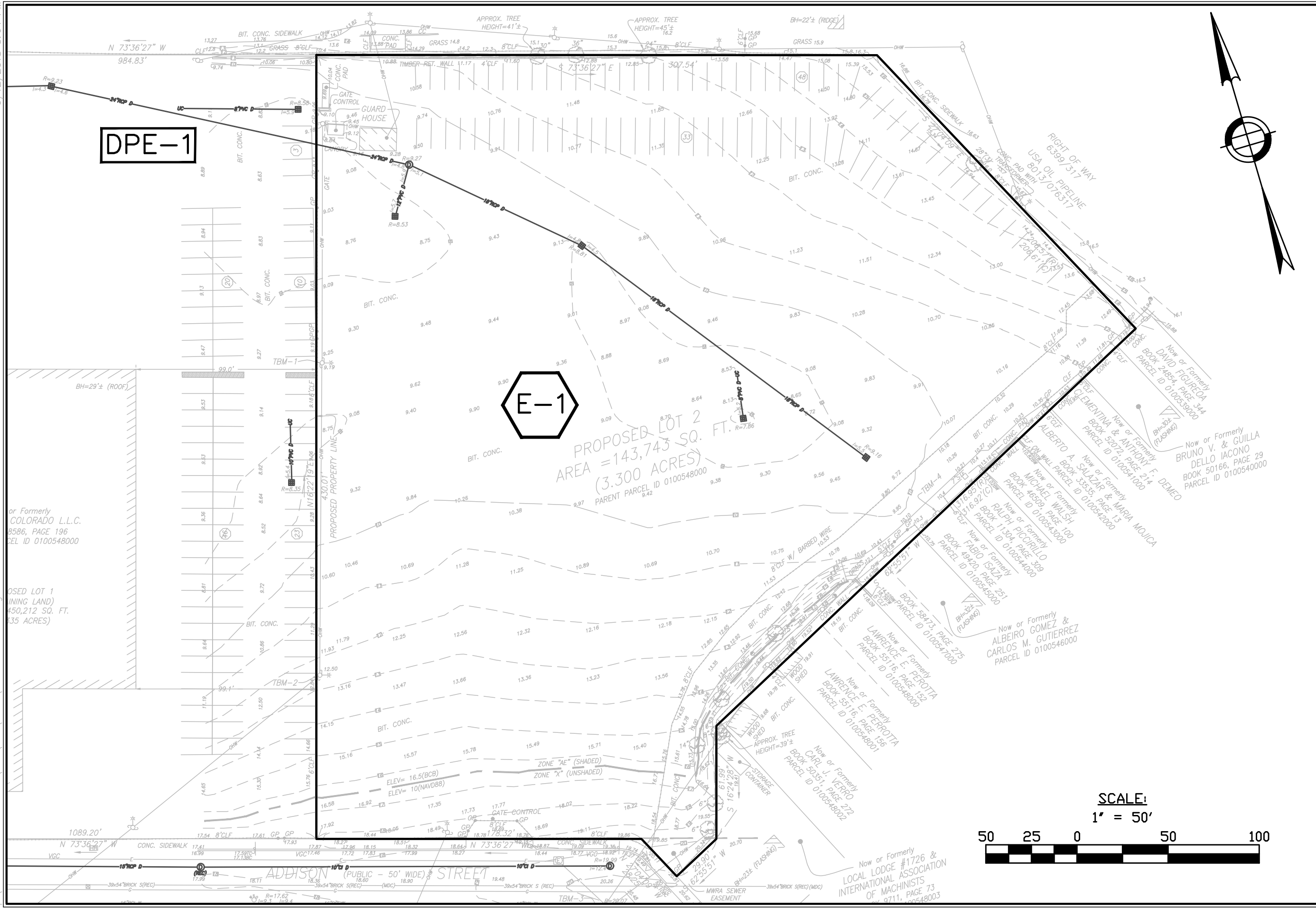
FIGURES

DR-1 Existing Watershed Areas

DR-2 Proposed Watershed Areas

9/12/2018 5:04 PM

q:\12433\144 addison st\civil\cad\drain\12433-existida.dwg



DPE-1

E-1

PROPOSED LOT 2
AREA = 143,743 SQ. FT.
(3.300 ACRES)
PARENT PARCEL ID 0100548000



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EXISTING WATERSHED MAP

144 ADDISON STREET
EAST BOSTON, MA

PREPARED FOR
REDGATE
265 FRANKLIN STREET, BOSTON, MA 02110

PROJECT #	12433
FILE:	12344DAEX.DWG
SCALE:	1"=50'
DATE:	09/19/2018
PROJECT MGR:	GP
SURVEYOR:	
DRAFTED BY:	PES
CHECKED BY:	CH

SHEET: 1

FIGURE-1

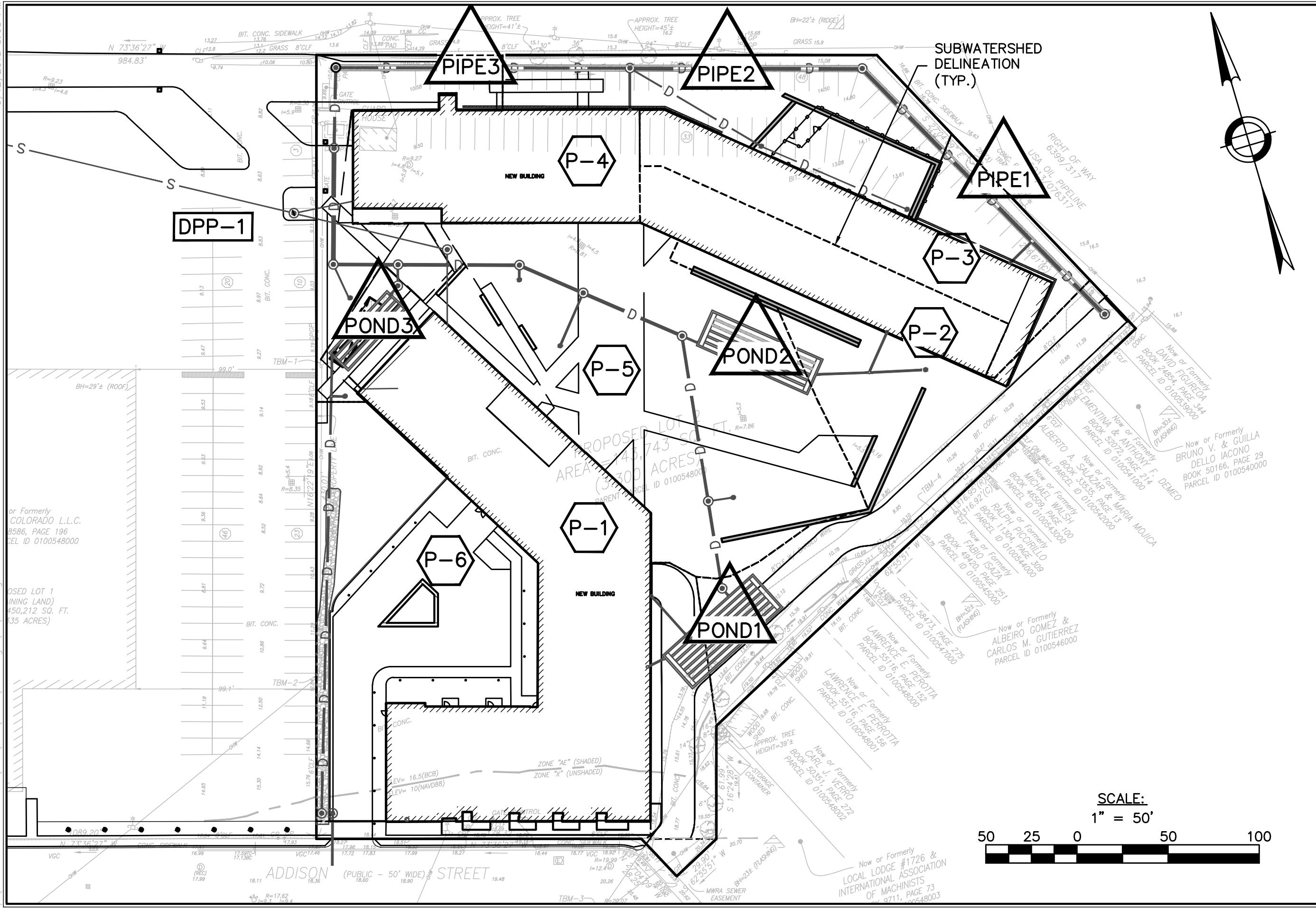
OF 2

SCALE:
1" = 50'



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PROPOSED WATERSHED MAP

144 ADDISON STREET
 EAST BOSTON, MA

PREPARED FOR:
REDGATE
 265 FRANKLIN STREET, BOSTON, MA 02110

PROJECT #	12433
FILE:	12344DAEX.DWG
SCALE:	1"=50'
DATE:	09/19/2018
PROJECT MGR:	GP
SURVEYOR:	
DRAFTED BY:	PES
CHECKED BY:	CH

SHEET: 1

FIGURE-2

APPENDIX A

Stormwater Management Standards Documentation

MassDEP Checklist for Stormwater Report

Standard 3: Required Recharge Volume Worksheet

Standard 4: TSS Removal Calculations

Standard 4: Pathogen Removal Worksheet

Standard 10: Illicit Discharge Compliance Statement



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 8²
- Operation and Maintenance Plan required by Standard 9

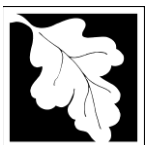
In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans 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.



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.

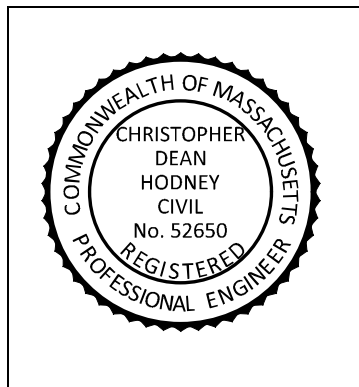
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



Chris Hodney 9/17/18
Signature and Date

Checklist

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

- New development
- Redevelopment
- Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

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

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

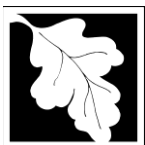
Standard 2: Peak Rate Attenuation

- 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 Field¹
- 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)

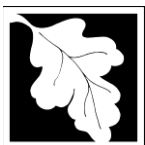
Standard 3: Recharge (continued)

- 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)

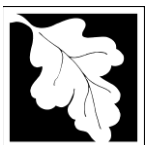
- The BMP is sized (and calculations provided) based on:
 - The ½" or 1" Water Quality Volume or
 - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary 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.

**Form S3-B: Standard #3 – Recharge
 Required Recharge Volume**

Project Name: 144 Addison Street	Nitsch Project #: 12433
Location: East Boston, MA	Checked by:
Prepared by: CDH	Sheet No. 1 of 1
Date: 9/11/18	

INSTRUCTIONS:

1. Determine the increase in impervious area (in square feet) proposed above each Hydrologic Soil Group and input those areas in the appropriate blue cells.
2. The Required Recharge Volume (in cubic feet) will be calculated and displayed in the yellow cell.

Impervious area located above:	
Hydrologic Soil Group "A" Soil =	0 sf
Hydrologic Soil Group "B" Soil =	0 sf
Hydrologic Soil Group "C" Soil =	0 sf
Hydrologic Soil Group "D" Soil =	84507 sf
Required Recharge Volume =	704.23 cf

**Water Quality
 Pathogen Removal Worksheet**

Project Name: 144 Addison Street	Nitsch Project #: 12433
Location: East Boston, MA	Checked by:
Prepared by: CDH	Sheet No.1 of 1
Date: 9/11/18	

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

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

Location:

	B BMP ¹	C TP Removal Rate ¹	D Starting TP Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Pathogen Removal Calculation Worksheet	Subsurface Infiltration Structure	0.80	1.00	0.80	0.20
		0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00
		0.00	0.00	0.00	0.00

Total TP Removal

Project:
 Prepared By:

*Equals remaining load from previous BMP (E)

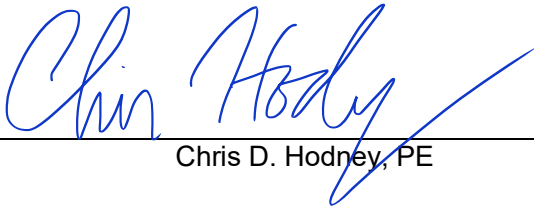
STANDARD 10: Illicit Discharge Compliance Statement

Project Name: 144 Addison Street	Nitsch Project #: 12433
Location: East Boston, MA	Checked by:
Prepared by: CDH	Sheet No. 1 of 1
Date: 9/19/18	

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

This is to verify:

1. Based on the information available there are no known or suspected illicit discharges to the stormwater management system at the 144 Addison Street site as defined in the MassDEP Stormwater Handbook.
2. The design of the stormwater system includes no proposed illicit discharges.



Chris D. Hodney, PE



Date

APPENDIX B

Closed Drainage System Design

Rainfall Details

Return Period..... 25 year(s)

Subbasin Summary

Subbasin Name	Area (ac)	Weighted Runoff Coefficient	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
DA-AD1	0.28	0.38	0.69	0 00:06:00
DA-AD2	0.35	0.53	1.18	0 00:06:00
DA-AD3	0.11	0.46	0.34	0 00:06:00
DA-AD4	0.22	0.64	0.90	0 00:06:00
DA-AD5	0.15	0.31	0.30	0 00:06:00
DA-AD6	0.12	0.52	0.40	0 00:06:00
DA-AD7	0.07	0.64	0.27	0 00:06:00
DA-AD8	0.07	0.64	0.27	0 00:06:00
DA-CB-1	0.28	0.78	1.42	0 00:06:00
DA-RD1	0.56	0.90	3.22	0 00:06:00
DA-RD2	0.18	0.90	1.05	0 00:06:00
DA-RD3	0.18	0.90	1.05	0 00:06:00
DA-RD4	0.18	0.90	1.05	0 00:06:00
DA-TD1	0.10	0.78	0.48	0 00:06:00
DA-TD2	0.09	0.30	0.17	0 00:06:00
DA-TD3	0.15	0.40	0.38	0 00:06:00

Link Summary

Pipe Name	From (Inlet) Node	Inlet To Invert (Outlet) Elevation Node	Outlet Invert Elevation	Pipe Length	Pipe Slope	Pipe Diameter	Manning's Roughness	Peak Flow Q	Peak Flow Velocity	Pipe Design Capacity	Q/Qf Ratio
		(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(ft/sec)	(cfs)	
Link-01	OCS3	5.95 AccBasin5	5.75	8	2.61			0.73	4.11	6.23	0.12
Pipe - (100)	AccBasin3	5.15 Out-1Pipe - (100)	4.80	62	0.57			9.10	5.07	18.45	0.49
Pipe - (101)	DMH1	8.00 WYE3	7.73	54	0.50			0.09	0.42	17.27	0.01
Pipe - (101) (2)	WYE3	7.73 OCS4	7.08	131	0.50			1.41	2.76	17.27	0.08
Pipe - (102)	OCS4	6.98 OCS6	6.35	125	0.50			1.14	2.13	17.37	0.07
Pipe - (103)	OCS6	6.25 OCS5	5.48	159	0.48			2.76	3.59	17.03	0.16
Pipe - (104)	OCS5	5.48 Out-1Pipe - (104)	4.90	44	1.31			2.71	5.14	8.02	0.34
Pipe - (105)	AD1	7.60 AccBasin1	7.40	14	1.44			0.69	1.97	1.57	0.44
Pipe - (106)	Infil2Exit	7.50 OCS2	7.25	9	2.67			2.15	3.82	6.31	0.34
Pipe - (107)	AD4	7.00 AccBasin2	6.50	31	1.61			0.89	1.20	4.90	0.18
Pipe - (108)	AD3	6.70 AccBasin4	6.50	8	2.61			0.32	0.98	6.23	0.05
Pipe - (109)	AD5	6.70 WYE2	6.60	8	1.33			0.30	2.55	4.45	0.07
Pipe - (111)	AD6	6.00 AccBasin3	5.45	20	2.72			0.39	1.29	2.16	0.18
Pipe - (112)	AD2	7.25 WYE1	7.10	29	0.52			1.16	2.10	2.78	0.42
Pipe - (113)	WYE1	7.10 Out-1Pipe - (113)	6.50	29	2.08			2.15	3.73	5.57	0.39
Pipe - (114)	RD2	7.45 WYE1	7.10	24	1.44			1.02	1.98	4.63	0.22
Pipe - (115)	RD3	7.85 WYE3	7.73	17	0.70			1.21	3.46	3.24	0.37
Pipe - (116)	RD4	7.00 OCS6	6.35	23	2.84			1.41	3.25	6.50	0.22
Pipe - (117)	AD8	7.50 AD7	6.95	86	0.64			0.25	2.43	0.49	0.52
Pipe - (118)	AD7	6.87 OCS6	6.25	83	0.74			0.50	1.94	1.13	0.45
Pipe - (123)	AccBasin2	6.20 AccBasin4	6.00	34	0.59			7.02	4.07	8.71	0.81
Pipe - (124)	DMH2	12.19 WYE2	6.60	227	2.46			0.00	0.00	6.06	0.00
Pipe - (125)	WYE2	6.60 Out-1Pipe - (125)	6.30	22	1.36			0.29	2.37	4.51	0.06
Pipe - (126)	Infil4Exit	6.30 OCS3	6.20	4	2.59			1.45	3.40	6.21	0.23
Pipe - (127)	OCS3	5.95 AccBasin5	5.75	8	2.61			0.73	4.11	6.23	0.12
Pipe - (92)	RD1	7.75 Out-1Pipe - (92)	7.50	10	2.45			3.18	4.98	6.04	0.53
Pipe - (93)	Trench Drain	7.75 Out-1Pipe - (93)	7.50	28	0.89			0.48	2.56	3.64	0.13
Pipe - (94)	Infil1Exit	8.10 OCS1	7.90	3	6.00			3.66	7.19	6.68	0.55
Pipe - (95)	OCS1	8.00 AccBasin1	7.40	44	1.35			3.67	5.48	8.13	0.45
Pipe - (96)	AccBasin1	7.30 OCS2	6.70	88	0.68			4.10	3.83	5.79	0.71
Pipe - (97)	OCS2	6.60 AccBasin2	6.30	59	0.51			6.27	4.17	8.10	0.77
Pipe - (99)	AccBasin4	5.90 AccBasin5	5.55	67	0.53			7.31	4.31	8.25	0.89
Pipe - (99) (1)	AccBasin5	5.45 AccBasin3	5.25	35	0.56			8.76	4.30	18.42	0.48

Junction Input

Junction Name	Invert Elevation	Rim Elevation
	(ft)	(ft)
AccBasin1	7.30	9.61
AccBasin2	6.20	10.64
AccBasin3	5.15	9.70
AccBasin4	5.90	9.31
AccBasin5	5.45	9.79
AD1	7.60	9.25
AD2	7.25	8.92
AD3	6.37	9.30
AD4	6.50	9.26
AD5	6.70	9.35
AD6	5.63	9.25
AD7	6.87	10.01
AD8	7.50	10.01
CB1	15.00	18.84
DMH1	8.00	12.72
DMH2	12.19	16.99
Infil1Exit	8.10	9.26
Infil2Exit	7.50	8.07
Infil4Exit	6.30	6.82
OCS1	8.00	11.95
OCS2	6.60	10.85
OCS3	5.95	9.83
OCS4	6.98	15.38
OCS5	5.48	10.32
OCS6	6.25	8.69
RD1	7.75	0.66
RD2	7.45	7.12
RD3	7.85	0.66
RD4	7.00	7.06
Trench Drain	7.75	0.66
WYE1	7.10	6.01
WYE2	6.60	0.67
WYE3	7.73	10.00

APPENDIX C

Long-Term Pollution Prevention and Stormwater Operation and Maintenance Plan

LONG-TERM POLLUTION PREVENTION PLAN AND STORMWATER OPERATION AND MAINTENANCE PLAN

144 Addison Street, East Boston, MA

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1.0 INTRODUCTION

The purpose of this document is to specify the pollution prevention measures and stormwater management system operation and maintenance for the 144 Addison Street site. The Responsible Party indicated below shall implement the management practices outlined in this document and proactively conduct operations at the project site in an environmentally responsible manner. Compliance with this Manual does not in any way dismiss the responsible party, owner, property manager, or occupants from compliance with other applicable federal, state or local laws.

Responsible Party: Name
 Contact, Title
 Address
 Phone

This Document has been prepared in compliance with Standards 4 and 9 of the 2008 Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards, which state:

Standard 4:

The Long Term Pollution Prevention Plan shall include the proper procedures for the following:

- Good housekeeping
- Storing materials and waste products inside or under cover
- Vehicle washing
- Routine inspections of stormwater best management practices
- Spill prevention and response
- Maintenance of lawns, gardens, and other landscaped areas
- Pet waste management
- Operation and management of septic systems
- Proper management of deicing chemicals and snow

Standard 9:

The Long-Term Operation and Maintenance Plan shall at a minimum include:

- Stormwater management system(s) owner(s)
- The party or parties responsible for operation and maintenance, including how future property owners shall be notified of the presence of the stormwater management system and the requirement for operation and maintenance
- The routine and non-routine maintenance tasks to be undertaken after construction is complete and a schedule for implementing those tasks
- A plan that is drawn to scale and shows the location of all stormwater BMPs in each treatment train along with the discharge point
- A description of public safety features
- An estimated operations and maintenance budget

2.0 LONG-TERM POLLUTION PREVENTION PLAN

The Responsible Party shall implement the following good housekeeping procedures at the project site to reduce the possibility of accidental releases and to reduce safety hazards.

2.1 Storage of Hazardous Materials

To prevent leaks and spills, keep hazardous materials and waste products under cover or inside. Use drip pans or spill containment systems to prevent chemicals from entering the drainage system. Inspect storage areas for materials and waste products at least once per year to determine amount and type of the material on site, and if the material requires disposal.

Securely store liquid petroleum products and other liquid chemicals in federally- and state-approved containers. Restrict access to maintenance personnel and administrators.

2.2 Storage of Waste Products

Collect and store all waste materials in securely lidded dumpster(s) or other secure containers as applicable to the material. Keep dumpster lids closed and the areas around them clean. Do not fill the dumpsters with liquid waste or hose them out. Sweep areas around the dumpster regularly and put the debris in the garbage, instead of sweeping or hosing it into the parking lot. Legally dispose of collected waste on a regular basis.

Segregate liquid wastes, including motor oil, antifreeze, solvents, and lubricants, from solid waste and recycle through hazardous waste disposal companies, whenever possible. Separate oil filters, batteries, tires, and metal filings from grinding and polishing metal parts from common trash items and recycle. These items are not trash and are illegal to dump. Contact a hazardous waste hauler for proper disposal to a hazardous waste collection center.

2.3 Spill Prevention and Response

Implement spill response procedures for releases of significant materials such as fuels, oils, or chemical materials onto the ground or other area that could reasonably be expected to discharge to surface or groundwater.

- For minor spills, keep fifty (50) gallon spill control kits and Speedy Dry at all shop and work areas.
- Immediately contact applicable Federal, State, and local agencies for reportable quantities as required by law.
- Immediately perform applicable containment and cleanup procedures following a spill release.
- Promptly remove and dispose of all material collected during the response in accordance with Federal, State and local requirements. A licensed emergency response contractor may be required to assist in cleanup of releases depending on the amount of the release, and the ability of the Contractor to perform the required response.
- Reportable quantities of chemicals, fuels, or oils are established under the Clean Water Act and enforced through Massachusetts Department of Environmental Protection (DEP).

2.4 Minimize Soil Erosion

Soil erosion facilitates mechanical transport of nutrients, pathogens, and organic matter to surface water bodies. Repair all areas where erosion is occurring throughout the project site. Stabilize bare soil with riprap, seed, mulch, or vegetation.

2.5 Vehicle Washing

Vehicle washing will occur within the covered service area. The car wash will be a state-of-the art system that will reclaim and reuse water for the car wash operation. Eventual discharge of the wash water will be directed to the sanitary sewer.

2.6 Maintenance of Lawns, Gardens, and other Landscaped Areas

Pesticides and fertilizers shall not be used in the landscaped areas associated with the project site and shall not be stored on-site. Dumping of lawn wastes, brush or leaves or other materials or debris is not permitted in any Resource Area. Grass clippings, pruned branches and any other landscaped waste should be disposed of or composted in an appropriate location.

2.7 Management of Deicing Chemicals and Snow

The qualified contractor selected for snow plowing and deicing shall be made fully aware of the requirements of this section.

No road salt (sodium chloride) shall be stored on-site. The use of magnesium chloride de-icing product with a 0.5 to 1.0 percent sodium chloride mix for snow and ice treatment is permitted. The product shall be stored in a locked room inside the building and shall be used at exterior stairs and walkways. The snow plow contractor shall adhere to these magnesium chloride use and storage requirements.

During typical snow plowing operations, snow shall be pushed to the designated snow removal areas. Snow shall not be stockpiled in wetland resource areas or the 100-foot Buffer Zone, catch basins, or bioretention basins. In severe conditions where snow cannot be stockpiled on site, the snow shall be removed from the site and properly disposed of in accordance with DEP Guideline BRP601-01.

Before winter begins, the property owner and the contractor shall review snow plowing, deicing, and stockpiling procedures. Areas designated for stockpiling should be cleaned of any debris. Street and parking lot sweeping should be followed in accordance with the Operation and Maintenance Plan.

2.8 Coordination with other Permits and Requirements

Certain conditions of other approvals affecting the long term management of the property shall be considered part of this Long Term Pollution Prevention Plan. The Owner shall become familiar with those documents and comply with the guidelines set forth in those documents.

3.0 STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE PLAN

3.1 Introduction

This Operation and Maintenance Plan (O&M Plan) for 144 Addison Street site is required under Standard 9 of the 2008 MassDEP Stormwater Handbook to provide best management practices for implementing maintenance activities for the stormwater management system in a manner that minimizes impacts to wetland resource areas.

The Owner shall implement this O&M Plan and proactively conduct operations at the site in an environmentally responsible manner. Compliance with this O&M Plan does not in any way dismiss the Owner from compliance with other applicable Federal, State or local laws.

Routine maintenance during construction and post-development phases of the project, as defined in the Operation and Maintenance Plan, shall be permitted without amendment to the Order of Conditions. A continuing condition in the Certificate of Compliance shall ensure that maintenance can be performed without triggering further filings under the Wetlands Protection Act.

All stormwater best management practices (BMPs) shall be operated and maintained in accordance with the design plans and the Operation and Maintenance Plan approved by the issuing authority. The Owner shall:

- a. Maintain an operation and maintenance log for the last three years, including inspections, repairs, replacement and disposal (for disposal the log shall indicate the type of material and the disposal location). This is a rolling log in which the responsible party records all operation and maintenance activities for the past three years.
- b. Make this log available to MassDEP and the Conservation Commissions upon request; and
- c. Allow members and agents of the MassDEP and the Conservation Commissions to enter and inspect the premises to evaluate and ensure that the Owner complies with the Operation and Maintenance requirements for each BMP.

3.2 Stormwater Operation and Maintenance Requirements

Inspect and maintain the stormwater management system as directed below. Repairs to any component of the system shall be made as soon as possible to prevent any potential pollutants (including silt) from entering the resource areas.

Deep Sump and Hooded Catch Basins

Inspect catch basins four times per year, including after the foliage season. Other inspection and maintenance requirements include:

- Remove organic material, sediment and hydrocarbons four 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 basin.
- Always clean out catch basins after street sweeping. If any evidence of hydrocarbons is found during inspection, the material immediately remove using absorbent pads or other suitable measures and dispose of legally. Remove other accumulated debris as necessary.
- Transport and disposal of accumulated sediment off-site shall be in accordance with applicable local, state and federal guidelines and regulations.

Area Drains

Inspect area drains at least once per month and remove debris from the grate. Clean out accumulated sediments at least once per year and more frequently as necessary.

Water Quality Units (Proprietary Separators)

Maintain water quality units according to the recommendations set forth by the manufacturer. General inspection and maintenance procedures for proprietary devices are provided below:

- Inspect units following completion of construction, prior to being put into service.
- Inspect units at least twice per year following installation and no less than once per year thereafter.
- Inspect units immediately after any oil, fuel or chemical spill.
- All inspections shall include checking the oil level and sediment depth in the unit. Removal of sediments/oils shall occur per manufacturer recommendations.
- A licensed waste management company shall remove captured petroleum waste products from any oil, chemical or fuel spills and dispose.
- OSHA confined space entry protocols shall be followed if entry into the unit is required.

Tree Box Filters

Tree box filters shall be inspected twice per year during the first year after construction. In subsequent years, the swales shall be inspected annually and after rain events greater than 3 inches in 24 hours. Inspection and maintenance procedures for tree box filters are provided below:

- During and after storm events, the length of time standing water remains in the tree box filters shall be recorded:
 - If the time is greater than 72 hours, thoroughly inspect the basin for signs of clogging.
 - A corrective action plan shall be developed by a qualified professional to restore infiltrative function. Immediate action shall be taken to implement these corrective measures.
- Inspect and remove trash from surface of filter.
- Inspect surface of filter for erosion and repair as necessary. Remulch void areas.
- Remove and replace all dead and diseased trees that cannot be treated.

Vegetated Swales

Vegetated swales shall be inspected twice per year during the first year after construction. In subsequent years, the swales shall be inspected annually and after rain events greater than 3 inches in 24 hours. Inspection and maintenance procedures for drainage channels are provided below:

- Inspect the riprap on the channel bottom and side slopes for signs of erosion and formation of rills and gullies. Replace riprap as necessary.
- Remove accumulated trash and debris.
- Remove sediment as needed. Use hand methods (i.e. a person with a shovel) when cleaning to minimize disturbance to vegetation and underlying soils.
- Check Dams: Inspect check dams after every significant rainfall event. Repair damage as needed. Remove sediment as needed.

Infiltration Basins

The infiltration basins shall be inspected and maintained after major storm events (rainfall totals greater than 2.5 inches in 24 hours) during the first three months of operation and twice a year and when there are discharges through the outlet control structure thereafter. Additionally, all pretreatment BMPs shall be inspected in accordance with the minimal requirements specified for those practices and after all major storm events. Inspections shall include the following measures:

- During and after major storm events, the length of time standing water remains in the basin shall be recorded.
 - If the time is greater than 72 hours, thoroughly inspect the basin for signs of clogging.
 - A corrective action plan shall be developed by a qualified professional to restore infiltrative function. The Site Owner shall take immediate action to implement these corrective measures.
- Examine the outlet structure for evidence of clogging or outflow release velocities that are greater than the design velocity.
- Identify areas of sediment accumulation, differential settlement, cracking, and erosion within the basin.
- Inspect embankments for leakage and tree growth.
- Examine the health of the vegetation within the basin and on the embankments.

Corrective measures shall be taken immediately as warranted by the inspections. If any evidence of hydrocarbons is found during inspection, the material shall be immediately removed using absorbent pads or other suitable measures and legally disposed.

Preventative maintenance shall include the following activities:

- Mow the buffer area and basin bottom and side slopes, if vegetated.
- Remove trash, debris, and accumulated sediment that may clog the system.

Detention Basin

Inspect the detention basin at least once per year to ensure that the basin is operating as intended. Inspect the detention basin during and after major storms to determine if the basin is meeting the expected detention times.

- Examine the outlet structure for evidence of clogging or outflow release velocities that are greater than design flow.
 - Potential problems that should be checked include: subsidence, erosion, cracking or tree growth on the embankment; damage to the emergency spillway; sediment accumulation around the outlet; inadequacy of the inlet/outlet channel erosion control measures; changes in the condition of the pilot channel; and erosion within the basin and banks. Make any necessary repairs immediately.
- During inspections, note any changes to the extended dry detention basin or the contributing watershed, because these could affect basin performance.
- Mow the upper-stage, side slopes, embankment, and emergency spillway at least twice per year. Also remove trash and debris at this time.
- Remove sediment from the extended dry detention basin as necessary, but at least once every 5 years. Providing an on-site sediment disposal area will reduce the overall sediment removal costs.

3.3 Street Sweeping

Perform street sweeping at least twice per year, whenever there is significant debris present on roads and parking lots. Street sweeping shall occur in the spring and fall. Sweepings must be handled and disposed of properly according to the Boston Conservation Commission.

3.4 Repair of the Stormwater Management System

The stormwater management system shall be maintained. The repair of any component of the system shall be made as soon as possible to prevent any potential pollutants including silt from entering the resource areas or the existing closed drainage system.

3.5 Reporting

The Owner shall maintain a record of drainage system inspections and maintenance (per this Plan) and submit a yearly report to the Boston Conservation Commission.

STORMWATER MANAGEMENT SYSTEM INSPECTION FORM

144 Addison Street East Boston, MA		Inspected by: _____ Date: _____
Component	Status/Inspection	Action Taken
Deep Sump Catch Basins, Area Drains and Drain Manholes		
Bioretention Basin		
Subsurface Infiltration System		
Water Quality Units		
Oil/Water Separator		
Porous Asphalt		
Stormwater Outfalls & Level Spreaders		
General site conditions – evidence of erosion, etc.		

**SUBMIT COPIES OF STORMWATER MANAGEMENT SYSTEM INSPECTION FORM TO THE
BOSTON CONSERVATION COMMISSIONS WITH THE YEARLY REPORT.**

APPENDIX D

DRAFT Stormwater Pollution Prevention Plan (SWPPP)

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

144 ADDISON STREET
East Boston, Massachusetts 02128
Site Telephone Number: xxx-xxx-xxxx

SWPPP Prepared For:

REDGATE
Lizbeth Bello
265 Franklin Street, 6th Floor
Boston, MA 02110
T: 617-609-7108
Lizbeth.bello@redgate-re.com

SWPPP Prepared By:

Nitsch Engineering
Chris Hodney, PE
Ryan Gordon, PE
2 Center Plaza
Boston, MA 02108
T: 617-338-0063
F: 617-338-6472

SWPPP Preparation Date:

09/12/2018 (DRAFT)

Estimated Project Dates:

Project Start Date: XX/XX/XXXX
Project Completion Date: XX/XX/XXXX



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SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Operator(s) / Subcontractor(s)

Operator(s):

Construction Manager Responsibilities:

The Construction Manager shall maintain the Stormwater Pollution Prevention Plan (SWPPP) documentation and will conduct and document self-inspections required under the 2017 Construction General Permit (CGP) once every 7 days and within 24 hours of a storm event 0.25" or greater. The Construction Manager will provide copies of inspections reports to the Owner's Representative within 24 hours following each inspection. Incidents of non-compliance will be immediately brought to the attention of the Owner's Representative. The Construction Manager shall be responsible for maintaining compliance with the SWPPP, including all requirements in the CGP and will maintain erosion and sediment control Best Management Practices (BMPs) in all areas of the site under its day-to-day control.

The Construction Manager shall file a Notice of Intent (NOI) to be covered by the CGP and obtain coverage by the Environmental Protection Agency (EPA) before beginning construction at the project. Permit coverage will be maintained throughout the project. The Construction Manager shall not file a Notice of Termination (NOT) until all disturbed areas of the site under its day-to-day control have been fully stabilized with permanent erosion controls that satisfy the final stabilization requirements in the CGP or have met another criteria of the NOT. The Construction Manager will maintain a clean site and construction trash and debris will be picked up and disposed of properly by the end of each day.

Each Operator is responsible for advising employees and subcontractors working on this project of the requirements in the CGP and SWPPP. Particular emphasis should be placed on ensuring that employees and subcontractors do not damage BMPs and maintain compliance with the CGP.

Construction Manager Contact Information:

Construction Manager Company

Construction Manager Contact Person, Position

Street Address

Town, State, Zip Code

T: xxx-xxx-xxxx

Email address:

Owner's Representative Responsibilities:

Owner's Representative shall provide general oversight of the project including review of the SWPPP and any amendments, inspection reports, and corrective actions. **Owner's Representative** shall file a NOI to be covered by the CGP and obtain coverage by the EPA before beginning construction at the project. Permit coverage will be maintained throughout the project. **Owner's Representative** shall not file a notice of Termination until all disturbed areas of the site have been fully stabilized with permanent erosion controls that satisfy the final stabilization requirements in the CGP. **Owner's Representative** will coordinate with the **Construction Manager** to maintain a clean site so that trash and debris will be picked up and disposed of properly by the end of the day.

Each Operator is responsible for advising employees and subcontractors working on this project of the requirements in the CGP and SWPPP. Particular emphasis should be placed on ensuring that employees and subcontractors do not damage BMPs and maintain compliance with the CGP.

Owner's Representative Company Name

Owner's Representative Contact person, Position

Street Address

Town, State, Zip Code

T: xxx-xxx-xxxx

Email Address:

Site Contractor:

Company Name

Contact person, Position

Street Address

Town, State, Zip Code

T: xxx-xxx-xxxx

Email Address:

Emergency 24-Hour Contact:

Company

Emergency Contact person, Position

T: xxx-xxx-xxxx

1.2 Stormwater Team

Construction Manager: Company

Stormwater Role/Responsibility: Responsible for overseeing the development of the SWPPP, modifications and updates to the SWPPP, and for compliance with the requirements in the CGP (e.g., installing and maintaining stormwater controls, conducting site inspections, picking up trash, taking corrective actions where required, etc.).

Contact:

Construction Manager Contact Person, Position

T: xxx-xxx-xxxx

Email address

I, **Construction Manager Contact Person**, have read the CGP and Understand the Applicable Requirements

Yes

Date: _____

Site Contractor: Company

Stormwater Role/Responsibility: Responsible for compliance with the requirements in this permit (e.g., installing and maintaining stormwater controls, conducting site inspections, taking corrective actions where required, etc.).

Contact:

Contact Person, Position

T: xxx-xxx-xxxx

Email Address

Refer to the Subcontractor Certifications/Agreements in Attachment G.

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1 Project/Site Information

Project Name and Address

Project/Site Name: 144 Addison Street
Project Street/Location: 144 Addison Street
City/Town: Boston
State: Massachusetts
ZIP Code: 02128
County or Similar Subdivision: Suffolk County

Project Latitude/Longitude

Latitude: 1. 42.385638° Longitude: 1. -71.014185°

Method for determining latitude/longitude:

USGS topographic map GPS
 Other (please specify): Google Maps

Horizontal Reference Datum:

NAD 27 NAD 83 WGS 84

If you used a U.S.G.S topographic map, what was the scale? _____

Additional Project Information

Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? Yes No

Are you applying for permit coverage as a "federal operator" as defined in Appendix A of the CGP?
 Yes No

Will there be demolition of any structure built or renovated before January 1, 1980?

Yes No

If yes, do any of the structures being demolished have at least 10,000 square feet of floor space?

Yes No

Was pre-development land use used for agriculture (see Appendix A of the CGP for definition of "agricultural land")?

Yes No

Type of Construction Site (check all that apply): Single-Family Residential

Multi-Family Residential Commercial Industrial Institutional Highway or Road
 Utility Other _____

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?

Yes No

Are there any surface waters that are located within 50 feet of your construction disturbances?

Yes No

Table 1 – Names of Receiving Waters

Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4 (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)
001. Chelsea River
002.
003.

Table 2 – Impaired Waters / TMDLs (Answer the following for each surface water listed in Table 1 above)

	Is this surface water listed as "impaired" on the CWA303(d) list?	If you answered yes, then answer the following:			
		What pollutant(s) are causing the impairment?	Has a TMDL been completed?	Title of the TMDL document	Pollutant(s) for which there is a TMDL
001.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Ammonia, Debris/Floatables/Trash, Dissolved Oxygen, Fecal Coliform, PCB in Fish Tissue, Petroleum Hydrocarbons, Sediment Screening Value, Taste and Odor, Turbidity	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	2014 Waterbody Report for Chelsea River	Debris/Floatables/Trash
002.	<input type="checkbox"/> YES <input type="checkbox"/> NO				
003.	<input type="checkbox"/> YES <input type="checkbox"/> NO				

Table 3 – Tier 2, 2.5, or 3 Waters (Answer the following for each surface water listed in Table 1 above)

	Is this surface water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If you answered yes, specify which Tier (2, 2.5, or 3) the surface water is designated as?
001.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
002.	<input type="checkbox"/> YES <input type="checkbox"/> NO	
003.	<input type="checkbox"/> YES <input type="checkbox"/> NO	

2.3 Nature of the Construction Activity

General Description of Project

Provide a general description of the construction project:

The site is located at 144 Addison Street in East Boston, Massachusetts and consists of an existing asphalt parking lot and a small guard shack. The Project includes the construction of two new residential buildings with parking beneath, and the following site improvements:

1. Construction of a new access driveway on the southeastern edge of the site to serve the new parking garage and the abutting properties on Saratoga Street;
2. Construction of new water, sewer, and storm drainage utilities;
3. Construction of new electrical, telecom, and gas utilities;
4. Construction of new sidewalks and walkways that provide for pedestrian connections through the site;
5. Construction of a new stormwater management system, including a closed drainage system and three subsurface infiltration systems.

Size of Construction Project

Size of Property: 3.3 acres

Total Area of Construction Disturbances: 4.2 acres

Maximum Area to be Disturbed at Any One Time: 4.2 acres

Construction Support Activities

Include a description of the construction support activities or reference Site Maps in Attachment A that include this information.

Contact Information for Construction Support Activity:

Name: XXX

Telephone: XXX-XXX-XXXX

Email: XXXX

Address and/or Latitude and Longitude:

Business Hours

Day-Day Xa.m-Xp.m.

2.4 Sequence and Estimated Dates of Construction Activities

Phase I: Name of Phase

- Description of Phase
- Schedule: Month, Day Year – Month, Day Year
- Area Disturbed During Phase: xx acres
- Description of stormwater controls that will be installed/maintained during phase

(See example below- CONTRACTOR TO DELETE ONCE COMPLETED)

Phase I: Demolition

This phase consists of the demolition of site features and utilities as shown on the Site Preparation Plan provided in Attachment A.

- Schedule: April 3, 2017-April 30, 2017
- Area Disturbed During Phase: 1.5 acres
- This phase will include the installation of all stormwater control measures as shown on the Site Preparation Plan provided in Attachment A. Stormwater controls will be removed at the end of Phase III upon stabilization of the site.

Phase II: Exterior Utilities

This phase consists of the installation of all exterior utilities on the site.

- Schedule: April 3, 2017-July 1, 2017
- Area Disturbed During Phase: 1.5 acres
- All stormwater controls will be installed prior to earth disturbance as described in Phase I. Stormwater controls will be removed at the end of Phase III upon stabilization of the site.

Phase III: Landscaping and Paving

This phase consists of the landscaping and paving of the site.

- Schedule: July 1, 2017-September 30, 2017
- Area Disturbed During Phase: 1.5 acres
- Stormwater controls will be installed as described in Phase I. Stormwater controls will remain in place until site work is complete and the site is stabilized.

2.5 Allowable Non-Stormwater Discharges

List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Fire hydrant flushings	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Landscape irrigation	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Waters used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Water used to control dust	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Potable water including uncontaminated water line flushings	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A of the CGP) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs))	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Uncontaminated air conditioning or compressor condensate	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> YES <input type="checkbox"/> NO
Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated groundwater	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Construction dewatering water discharged in accordance with Part 2.4 of the CGP	<input type="checkbox"/> YES <input type="checkbox"/> NO

Note: You are prohibited from directing pavement wash waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control.

2.6 Site Maps

Site Maps must include the following:

- a) Boundaries of the property. The map(s) in the SWPPP must show the overall boundary of the property.
- b) Locations where construction activities will occur. The map(s) in the SWPPP must show the locations where construction activities will occur, including
 - i. Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;
 - ii. Approximate slopes before and after major grading activities (note any steep slopes);
 - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
 - iv. Any water of the U.S. crossings;
 - v. Designated points where vehicles will exit onto paved roads;
 - vi. Locations of structures and other impervious surfaces upon completion of construction; and
 - vii. Locations of onsite and off-site construction support activity areas covered by the permit (see Part 1.2.1.c).
- c) Locations of all waters of the U.S. within and one mile downstream of the site's discharge point. Also identify if any are listed as impaired, or are identified as a Tier 2, Tier 2.5, or Tier 3 water.
- d) Areas of federally listed critical habitats within the site and/or at discharge locations.
- e) Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures).
- f) Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities.
- g) Stormwater and authorized non-stormwater discharge locations. The permit requires the site map to show information pertaining to discharge locations including:
 - i. Locations where stormwater and/or authorized non-stormwater will be discharges to storm drain inlets; and
 - ii. Locations where stormwater and/or authorized non-stormwater will be discharged directly to waters of the U.S.
- h) Locations of all potential pollutant-generating activities identified in Part 7.2.3.g. The permit requires identification in the site map of all potential pollutant-generating activities identified in Part 7.2.3.g.
- i) Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit. The permit requires identification on the site map of the location of stormwater control measures.
- j) Locations where polymers, flocculants, or other treatment chemicals will be used and stored. The permit requires identification on the site map of the locations where polymers, flocculants, or other treatment chemicals will be used and stored.

Refer to Attachment A for site maps.

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 *Endangered Species Protection*

Eligibility Criterion

Under which criterion listed in Appendix D of the CGP are you eligible for coverage under this permit?

A B C D E

For reference purposes, the eligibility criteria listed in Appendix D of the CGP are as follows:

Criterion A. No federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's "action area" as defined in Appendix A of the CGP.

Criterion B. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under eligibility Criterion A, C, D, E, or F and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify your eligibility under this Criterion, there must be no lapse of NPDES permit coverage in the other operator's certification. By certifying eligibility under this Criterion, you agree to comply with any effluent limitations or conditions upon which the other operator's certification was based. You must include in your NOI the tracking number from the other operator's notification of authorization under this permit. If your certification is based on another operator's certification under Criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C in your NOI form.

Criterion C. Federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your site's "action area," and your site's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. This determination may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect listed species and critical habitat. To make this certification, you must include the following in your NOI: 1) any federally listed species and/or designated habitat located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles). You must also include a copy of your site map with your NOI.

Criterion D. Coordination between you and the Services has been concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in a written concurrence from the relevant Service(s) that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion E. Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat. The result of this consultation must be either:

- i. a biological opinion that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or
- ii. written concurrence from the applicable Service(s) with a finding that the site's discharges and discharge-related activities are not likely to adversely affect federally-listed species or federally-designated habitat.

You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion F. Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and this authorization addresses the effects of the site's discharges and discharge-related activities on federally-listed species and federally-designated critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

For criterion A, indicate the basis for your determination that no federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's action area (as defined in Appendix A of the CGP). Check the applicable source of information you relied upon:

- Specific communication with staff of the U.S. Fish & Wildlife Service or National Marine Fisheries Service.
- Publicly available species list.
- Other source: NHESP data layer (August 2017 or as amended) from MassGIS, U.S. Fish and Wildlife online system Information for Planning and Conservation (IPaC) – Refer to Attachment K.

For criterion B, provide the Tracking Number from the other operator's notification of permit authorization: **INSERT AUTHORIZATION TRACKING NUMBER FROM OTHER OPERATOR'S NOTIFICATION LETTER/EMAIL**

Provide a brief summary of the basis used by the other operator for selecting criterion A, B, C, D, E, or F: **INSERT TEXT HERE**

For criterion C, provide the following information:

- **INSERT LIST OF FEDERALLY-LISTED SPECIES OR FEDERALLY-DESIGNATED CRITICAL HABITAT LOCATED IN YOUR ACTION AREA**
- **INSERT DISTANCE BETWEEN YOUR SITE AND THE LISTED SPECIES OR CRITICAL HABITAT (in miles)**

Also, provide a brief summary of the basis used for determining that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat: **INSERT TEXT HERE**

For criterion D, E, or F, attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding consultation or coordination activities. **INSERT COPIES OF LETTERS OR OTHER COMMUNICATIONS HERE**

3.2 *Historic Preservation*

Appendix E (of the CGP), Step 1

Do you plan on installing any of the following stormwater controls at your site? Check all that apply below, and proceed to Appendix E, Step 2.

- Dike
- Berm
- Catch Basin
- Pond
- Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- Culvert
- Other type of ground-disturbing stormwater control: Area Drains, Trench Drains, Water Quality Structures, Outlet Control Structures, Subsurface Infiltration Systems, Drain Manholes

If you will not be installing any ground-disturbing stormwater controls, no further documentation is required for Section 3.2.

Appendix E, Step 2

If you answered yes in Step 1, have prior cultural resource surveys or other evaluations determined that historic properties do not exist, or that prior disturbances at the site have precluded the existence of historic properties? YES NO

If yes, provide documentation of the basis for your determination. If no, proceed to Appendix E, Step 3.

Appendix E, Step 3

If you are installing any stormwater controls that require subsurface earth disturbance, you must determine if these activities will have an effect on historic properties. This assessment may be based on historical sources, knowledge of the area, an assessment of the types of earth-disturbing activities you are engaging in, considerations of any controls and/or management practices you will adopt to ensure that your stormwater control related earth-disturbing activities will not have an effect on historic properties, and any other relevant factors.

Does your determination demonstrate that earth disturbances related to the installation of your stormwater controls will have no effect on historic properties? YES NO

If yes, provide documentation of the basis for your determination. If no, proceed to Appendix E, Step 4.

Appendix E, Step 4

If you are installing any stormwater controls that require subsurface earth disturbance and you have not satisfied the conditions in Steps 1-3, you must contact and consult with the appropriate historic preservation authorities including the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), or other tribal representative (whichever applies). Your request should include the information outlined in Appendix E of the CGP.

Did SHPO, THPO, or another tribal representative respond to you within 15 calendar days after their receipt to indicate whether the subsurface earth disturbances caused by the installation of stormwater controls affect historic properties? YES NO

If no, no further documentation is required for Section 3.2 of the Template.

If yes, describe the nature of their response:

- Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions. INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE
- No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls. INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE
- Other: INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE

If within 15 days of receipt of your request the applicable SHPO, THPO, or other tribal representative responds with a request for additional information or for further consultation, you must comply with this request and proceed to Step 5.

Appendix E, Step 5

If, following your discussions with the appropriate historic preservation authorities in Step 4, the applicable SHPO, THPO, or tribal representative requests additional information or further consultation, you must respond with such information or consult to determine impacts to historic properties that may be caused by the installation of stormwater controls on your site and appropriate measures for treatment or mitigation of such impacts. If as a result of your discussions with the applicable SHPO, THPO, or tribal representative, you enter into, and comply with, a written agreement regarding treatment and/or mitigation of impacts on your site, then you may indicate this on your NOI, and no further screening steps are necessary.

If, however, agreement on an appropriate treatment or mitigation plan cannot be reached between you and the SHPO, THPO, or other tribal representative within 30 days of your response to the SHPO, THPO, or other tribal representative's request for additional information or further consultation, you may submit your NOI, but you must indicate that you have not negotiated measures to avoid or mitigate such effects. You must also include in your SWPPP the following documentation:

1. Copies of any written correspondence between you and the SHPO, THPO, or other tribal representative; and
2. A description of any significant remaining disagreements as to mitigation measures between you and the SHPO, THPO, or other tribal representative.

After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, ACHP, or other tribal representative may request that EPA place a hold on authorization based upon concerns regarding potential adverse effects to historic properties. EPA, in coordination with the ACHP, will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

3.3 Safe Drinking Water Act Underground Injection Control Requirements

Do you plan to install any of the following controls? Check all that apply below.

- Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
- Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and

- Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

If one or more of the above apply, then, **INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE STATE AGENCY OR EPA REGIONAL OFFICE**

SECTION 4: EROSION AND SEDIMENT CONTROLS REQUIREMENTS

Section 4 of this document describes the stormwater controls that will be implemented throughout construction. The operator must install and maintain all stormwater controls in compliance with Parts 2.2 and 2.3 of the CGP. The operator must install stormwater controls by the time construction activity in any given portion of the site begins.

The stormwater controls shall be designed and installed in accordance with good engineering practices and applicable design specifications. Specifications titled "312500- Erosion and Sedimentation Controls," dated ***** and prepared by Nitsch Engineering and details titled "Erosion and Sedimentation Control Details," dated ***** and prepared by Nitsch Engineering have been provided to the contractor under separate cover. Updated once plans and specifications have been submitted.

4.1 Natural Buffers or Equivalent Sediment Controls

Buffer Compliance Alternatives

Are there any surface waters within 50 feet of your project's earth disturbances? YES NO

(Note: If no, no further documentation is required for Part 4.1 in the SWPPP Template. Continue to Part 4.2.)

4.2 Perimeter Controls

General

The site will be enclosed by a temporary construction fence as shown on the Erosion and Sedimentation Control Plan in Attachment A. Construction gates will be located at the entrance to the site as shown on the Erosion and Sedimentation Control Plan and all entrances will have stabilized construction entrances. All gates and entrances to the site will be secured during non-working hours. The areas of the site that will receive pollutant discharges will be surrounded by a Specific Perimeter Control listed below as shown on the Erosion and Sedimentation Control Plan in Attachment A. Sediment tracked offsite must be removed by the end of the same workday.

Specific Perimeter Controls

Perimeter Control # 1

- BMP Description: Silt Fence.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 2

- BMP Description: Silt Fence with Wattles.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 3

- BMP Description: Super Silt Fence.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 4

- BMP Description: Wattles.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 5

- BMP Description: Silt Fence with Straw Bales.
- Installation Schedule: Prior to the Start of Construction and/or immediately after stockpile is established.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.3 Sediment Track-Out

General

Gates will be located as shown on the Erosion and Sedimentation Control Plan in Attachment A to allow for construction vehicle access. Construction access points will have a stabilized construction entrance station or wheel wash station to minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles exiting the construction site. Where sediment has been tracked out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S.

Specific Track-Out Controls

Track-Out Control # 1

- BMP Description: Street Sweeping.

- Installation Schedule: Start of construction.
- Inspection Schedule: The areas adjacent to the site should be inspected daily to determine if street sweeping is required.
- Responsible Staff: Construction Manager and Site Contractor(s).

Track-Out Control # 2

- BMP Description: Stabilized Construction Entrance.
- Installation Schedule: Start of construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Track-Out Control # 3

- BMP Description: Wheel Wash Station.
- Installation Schedule: Start of construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP(s).
The operator must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of wash waters. The operator must ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water. For storage of soaps, detergents, or solvents, the operator shall provide either a cover to minimize the exposure of these detergents to precipitation and to stormwater, or a similarly effective means designed to minimize discharge of pollutants from these areas.
- Responsible Staff: Construction Manager and Site Contractor.

4.4 **Stockpiled Sediment or Soil**

General

All soil stockpiles will be located outside of any natural buffers and away from existing and proposed catch basins and area drains and outside of proposed infiltration system footprints. A sediment barrier shall be installed along all downgradient perimeter areas. Examples of sediment barriers include silt fence, super silt fence, or wattles.

You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or water of the U.S.

For stockpiles that will be unused for 14 or more days, a cover such as a tarp or blown straw shall be provided or temporary stabilization should be provided (consistent with Part 2.2.14 of the CGP).

Specific Stockpile Controls

Stockpile Control # 1

- BMP Description: Silt Fence.
- Installation Schedule: Immediately after stockpile is established.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective

- Responsible Staff: condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
Construction Manager and Site Contractor(s).

Stockpile Control # 2

- BMP Description: Wattles.
- Installation Schedule: Immediately after stockpile is established.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 3

- BMP Description: Tarp.
- Installation Schedule: When stockpile will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 4

- BMP Description: Straw Bales.
- Installation Schedule: Immediately after stockpile is established.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 5

- BMP Description: Blown Straw.
- Installation Schedule: When stockpile will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 6

- BMP Description: Hydroseeding.

- Installation Schedule: When stockpile will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.5 **Minimize Dust**

General

Disturbed land will be temporarily stabilized as required by the CGP. Dust will be minimized using measures including sprinkling/irrigation, vegetative cover, mulch, and/or stone. Stockpiles will be handled in accordance with section 4.4 of the SWPPP.

Earth-disturbing activities are considered temporarily ceased when work will not resume for a period of 14 or more calendar days. Stabilization shall be initiated when earth-disturbing activities are temporarily or permanently ceased. Stabilization activities shall be complete within 7 calendar days after the initiation of soil stabilization measures.

Specific Dust Controls

Dust Control # 1

- BMP Description: Sprinkling/Irrigation.
- Installation Schedule: As needed throughout earthwork activities as determined by the site contractor and construction manager.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dust Control # 2

- BMP Description: Straw or Mulch.
- Installation Schedule: As needed throughout earthwork activities as determined by the site contractor and construction manager. When disturbed land will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.6 **Minimize the Disturbance of Steep Slopes**

General

Steep slopes are defined as slopes of 15% or greater in grade. No steep slopes are proposed as part of this project. The EPA notes that the requirement to minimize disturbances to steep slopes does not apply to the creation of stockpiles.

4.7 Preserve Native Topsoil

Onsite native topsoil shall be preserved, unless infeasible. Preserving native topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

Stockpiling topsoil at off-site locations or transferring topsoil to other locations is an example of a way to preserve naïve topsoil.

The contractor shall perform construction sequencing such that earth materials are exposed for a minimum of time before they are covered, seeded, or otherwise stabilized.

4.8 Minimize Soil Compaction

General

In areas where infiltration practices will be installed or areas of the site where final vegetative stabilization will occur, soil compaction shall be minimized. This includes restricting vehicle access and equipment use.

Areas used for post-construction infiltration shall be constructed after all ground surfaces are fully stabilized when feasible. If proposed infiltration areas are constructed prior to the site being fully stabilized, additional erosion controls shall be installed. All stockpiled and material storage areas shall be located outside of the areas proposed for post-construction infiltration.

Areas of post-construction landscaping shall be constructed after all ground surface are fully stabilized. If proposed landscaped areas are constructed prior to the site being fully stabilized, additional erosion controls shall be installed. All soil stockpiles and material storage areas shall be located outside of the areas proposed for post-construction landscaping where feasible. Where this is not feasible, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth prior to planting.

4.9 Storm Drain Inlets

General

All existing and proposed storm drain inlets affected by construction activities should be protected using an Inlet Sediment Filter as shown on the Erosion and Sedimentation Control Plan provided in Attachment A.

Clean or remove and replace the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

Specific Storm Drain Inlet Controls

Storm Drain Inlet Control # 1

- | | |
|--------------------------|--|
| • BMP Description: | Inlet Sediment Filter. |
| • Installation Schedule: | Prior to the Start of Construction. |
| • Inspection Schedule: | Once every 7 days and within 24 hours of a storm event 0.25" or greater. |
| • Maintenance: | Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. |
| • Responsible Staff: | Construction Manager and Site Contractor(s). |

Storm Drain Inlet Control # 2

- BMP Description: Inlet Protection with Gravel.
- Installation Schedule: Prior to the Start of Construction .
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25” or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Storm Drain Inlet Control # 3

- BMP Description: Inlet Protection with Block and Gravel.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25” or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.10 Minimize Erosion of Stormwater Conveyances

There are no proposed stormwater conveyance channels associated with this project.

4.11 Sediment Basins

There are no proposed sediment basins associated with this project.

4.12 Chemical Treatment

There are no proposed chemical treatments associated with this project.

4.13 Dewatering Practices

If dewatering is expected to occur on site, dewatering will occur in a way that minimizes the discharge of pollutants in ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation. Dewatering water shall be treated in compliance with Section 2.4 of the CGP and water with visible floating solids or foam may not be discharged.

Any applicable permits shall be obtained from local permitting authorities.

Dewatering Control # 1

- BMP Description: Sediment basin or Sediment Trap.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25” or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dewatering Control # 2

- BMP Description: Sediment socks.

- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dewatering Control # 3

- BMP Description: Dewatering Tanks.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater and as required by the manufacturer.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dewatering Control # 4

- BMP Description: Filtration Systems.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater and as required by the manufacturer.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.14 Other Stormwater Controls

Any changes in construction activity that include means of stormwater control not included in this document will be identified, the SWPPP will be amended, and the appropriate erosion and sedimentation controls will be implemented.

4.15 Site Stabilization

Initiate the installation of stabilization measures immediately in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days. Complete the installation of stabilization measures as soon as practicable, but no later than 7 calendar days after stabilization has been initiated.

Site Stabilization Practice #1

- Vegetative Non-Vegetative
 Temporary Permanent

- BMP Description: Soil Stabilization Mat.
- Installation Schedule: As/if required.
- Maintenance and Inspection: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor(s).

Site Stabilization Practice #2

- Vegetative* *Non-Vegetative*
 Temporary *Permanent*

- **BMP Description:** Temporary Seeding.
- **Installation Schedule:** As/if required.
- **Maintenance and Inspection:** Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- **Responsible Staff:** Construction Manager and Site Contractor(s).

SECTION 5: POLLUTION PREVENTION STANDARDS

5.1 *Potential Sources of Pollution*

Potential sources of sediment to stormwater runoff:

- Stockpiles and construction staging
- Clearing and grubbing operations
- Grading and site excavation
- Topsoil stripping
- Landscape operations
- Soil tracking offsite from construction vehicles
- Runoff from unstabilized areas
- Construction debris

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Area – fueling activities, equipment maintenance, sanitary facilities, and hazardous waste storage
- Materials Storage Area – building materials, solvents, adhesives, paving materials, paints, aggregates, trash, etc.
- Construction Activity-paving, curb installation, concrete pouring, and building construction

Staging areas are shown on the Erosion and Sedimentation Control Plan provided in Attachment A.

Construction Site Pollutants

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Chlorinated hydrocarbons, organophosphates, carbonates, arsenic	Herbicides used for noxious weed control
Fertilizers	Nitrogen, phosphorous	Newly seeded areas
Plaster	Calcium sulphate, calcium carbonate, sulfuric acid	Building construction
Cleaning Solvents	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Oil, petroleum distillates	Streets and parking lots
Concrete	Limestone, sand pH, chromium	Curb and gutter, sidewalk, building construction
Glue, Adhesives	Polymers, epoxies	Building construction
Paints	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic	Building construction
Curing compounds	Naphtha	Curb and gutter, building construction
Wood preservatives	Stoddard solvent, petroleum distillates, arsenic, copper, chromium	Timber pads, bracing, building construction
Hydraulic Oils/fluids	Mineral oil	Leaks/broken hoses from equipment
Gasoline	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Diesel Fuel	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment/staging area
Kerosene	Coal oil, petroleum distillates	Secondary containment/staging area
Antifreeze/coolant	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Bacteria, parasites, and viruses	Staging area

5.2 Spill Prevention and Response

BMP Description: Spill kit, vehicle washing, silt sack catch basin protection, silt fence

Installation Schedule: Start of construction activity

Maintenance and Inspection: Minimum weekly & as necessary

Responsible Staff: Construction Manager and Site Contractor

- Major vehicle maintenance onsite is prohibited
- Re-fueling of vehicles within 25 feet of a drainage structure is prohibited
- Spill kit shall be kept onsite consisting of:
 - Gloves
 - Absorbent mats
 - Drip pan

Spill Prevention and Control Plan

- Refer to contractor's Spill Plan.
- Manufacturers' recommended spill control methods will be posted onsite and site personnel will be made aware of the requirements.
- Cleanup supplies will be kept onsite in a materials storage area. This equipment will include: goggles, brooms, dustpans, mops, rags, gloves, oil absorbent, sawdust, plastic and metal trash cans, and other materials and supplies specifically designated for cleanup.
- All spills will be immediately cleaned up after discovery.
- The spill area will be well ventilated.
- Cleanup personnel will wear suitable protective clothing.
- Spills of toxic and/or hazardous material will be reported to state, local, and Federal authorities, as required by law. Spills shall also be reported immediately to the owner.
- A spill incident report will be filed detailing the amount and extent of the spill, material(s) involved, and effectiveness of the cleanup. This report will be on file at the Construction Manager/Site Contractor office, as well as kept onsite in the field office. A copy shall also be filed with the Hazard Communication Coordinator (HCC). Contractor should indicate if they have a Hazard Communication Coordinator or who spills should be reported to.

The Construction Manager/Site Contractor will designate someone onsite that will serve as the Spill Cleanup Coordinator. At least two other personnel will be designated as alternate spill coordinators. All spill control personnel will be trained in spill prevention, control, and cleanup. The names of the responsible personnel will be posted at the jobsite office of the Construction Manager/ Site Contractor.

5.3 Fueling and Maintenance of Equipment or Vehicles

General

Minor vehicle and equipment emergency maintenance can be performed onsite away from drainage structures. Major vehicle and equipment maintenance must be performed offsite. Equipment/vehicle storage areas and any onsite fuel tanks will be inspected weekly and after storm events. Equipment and vehicles will be inspected for leaks, equipment damage, and other service problems on each day of use. Any leaks will be repaired immediately or the equipment/vehicle will be removed from the site.

Minor vehicle and equipment emergency maintenance shall occur when a vehicle cannot be safely removed from the site. The vehicle should be repaired so it can be taken off-site so that the rest of the maintenance can occur.

Major vehicle maintenance onsite is prohibited. Re-fueling or maintenance of vehicles within 25 feet of a drainage structure shall be prohibited. Drip pans, drip cloths, or absorbent pads should be used when replacing spent fluids. The fluids should be collect and stored prior to being disposed of offsite.

Specific Pollution Prevention Practice #1

- BMP Description: Spill Kit.
- Installation Schedule: Onsite throughout construction.
- Responsible Staff: Construction Manager and Site Contractor.

Specific Pollution Prevention Practice #1

- BMP Description: Drip Pans, Drip Cloths, Absorbent Pads.
- Installation Schedule: Onsite throughout construction.
- Responsible Staff: Construction Manager and Site Contractor.

5.4 Washing of Equipment and Vehicles

General

Vehicle and equipment washout areas shall be constructed by the contractor so that no untreated water enters the storm drain system. Soaps, detergents, or solvents must be stored in a way to prevent these detergents from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas.

Specific Pollution Prevention Practices

Pollution Prevention Practice # 1

- BMP Description: Designated vehicle/equipment washing areas
- Installation Schedule: Start of construction.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor

Pollution Prevention Practice # 2

- BMP Description: Spill kit, vehicle washing, straw bale catch basin protection, silt fence
- Installation Schedule: Start of construction activity
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor

5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes

5.5.1 Building Products

General

The contractor will recycle all construction materials possible. For materials that cannot be recycled, solid waste will be disposed of in accordance with DEP Regulations for Solid Waste Facilities, 310 CMR 10.00.

Any building materials required to be stored onsite will be stored at a combined staging and materials storage area as shown on the CMP. Larger items will be elevated by appropriate methods to minimize contact with runoff. The storage area will be inspected weekly and after storm events. It will be kept clean, organized, and equipped with appropriate cleaning supplies.

Building product usage shall follow the following good housekeeping BMPs:

- The Responsible Staff: Construction Manager or Site Contractor representative will inspect daily for inspection of the work area to ensure proper management of waste materials.
- Store only enough material onsite required for that job as to satisfy current construction needs.
- Store required materials in tightly lidded containers under cover.
- Store materials in original containers with clearly legible labels.
- Separate and store materials apart from each other.
- Do not mix materials unless specifically in accordance with manufacturers' recommendations.
- Use all products from a container before disposing of the container.
- Follow manufacturers' instructions for handling, storage, and disposing of all materials.
- All materials shall be stored in an area to prevent the discharge of pollutants from building products.

Specific Pollution Prevention Practices

Pollution Prevention Practice # 1

- BMP Description: Perimeter Protection control around Stockpiles.
- Installation Schedule: Start of construction/ Immediately after stockpile is established.
- Inspection Schedule: Once every 7 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials

- In storage areas, provide either (1) cover to minimize the exposure of these chemicals to precipitation and to stormwater or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.
- Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.

5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals

General

- Only skilled personnel in a designated area will perform fueling of vehicles onsite.
- Vehicles used onsite will be monitored for fuel and oil leaks.
- Vehicles used onsite will be maintained in good working order.
- Asphalt substances will be applied in accordance with manufacturers' recommendations.
- The use of petroleum products as a release agent for asphalt transport trucks is prohibited.
- Vehicle fueling will only be done in vehicle fueling areas located by the contractor. See section 5.3 of the SWPPP.
- The contractor shall be responsible for locating the fuel storage and re-fueling area onsite to minimize disturbance to construction activities and site area.
- Construction equipment not in active use for 5 minutes or more will be turned off.

5.5.4 Hazardous or Toxic Waste

(Note: Examples include paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids.)

General

- Keep products in their original containers.
- Original container labels should be clearly visible.
- Material safety data sheets will be kept onsite and be available.
- Follow all state, local, and Federal regulations regarding the handling, use, storage, and disposal of hazardous material.

Paints:

- All paint containers will be tightly sealed when not in use.
- Remove excess paint in original labeled containers from the jobsite.
- Paint will not be disposed of onsite. Remove excess paint material from the site and legally dispose of.
- Paint shall not be disposed of in the storm drain system.

5.5.5 Construction and Domestic Waste

General

The contractor will manage domestic waste onsite. The contractor will provide waste containers of sufficient size and number to contain construction and domestic wastes. The waste container lids will be kept closed when not in use and lids will be closed at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either a cover or a similarly effective means designed to minimize discharge of pollutants. Clean up immediately if containers overflow.

Pollution Prevention Practice # 1

- BMP Description: Dumpster.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: Weekly and covered daily.
- Responsible Staff: Construction Manager and Site Contractor(s).

Pollution Prevention Practice # 2

- BMP Description: Litter/debris pick-up.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: Daily.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.5.6 Sanitary Waste

All sanitary waste portable toilets shall be positioned so that they are secure and will not be tipped or knocked over, and located away from any stormwater inlets or conveyances.

Pollution Prevention Practice # 1

- BMP Description: Porta John.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: As manufacturer requires.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.6 Washing of Applicators and Containers used for Paint, Concrete, or Other Materials

General

Washing of applicators and containers used for paint, concrete, or other materials shall follow the following good housekeeping BMPs:

- An effective means of eliminating the discharge of water from the washout and cleanout of stucco, paint, concrete, form release oils, curing compounds, and other construction materials.
- All washwater must be directed into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.
- Washout and cleanout wastes should be handled as follows:
 - Do not dump liquid wastes into storm sewers.
 - Dispose of liquid wastes in accordance with applicable requirements.
 - Remove and dispose of hardened concrete waste consistent with the handling of other construction wastes.
- Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.

Pollution Prevention Practice # 1

- BMP Description: Designated applicator and container washing areas.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: Daily.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.7 Fertilizers

General

If fertilizer is required onsite, installation will follow the following guidelines:

- Fertilizers will be used at the application rates called for in the specifications for the project.
- Once applied, fertilizer will be worked into the soil to minimize wash off from irrigation and stormwater.
- Fertilizer will be stored under cover.
- The contents of partially used fertilizer bags will be transferred to re-sealable, watertight containers clearly labeled with their contents.
- Avoid applying before heavy rains.
- Never apply to frozen ground.
- Never apply to stormwater conveyance channels with flowing water.

5.8 Other Pollution Prevention Practices

Any changes in construction activity that produce other allowable non-stormwater discharges will be identified, the SWPPP will be amended and the appropriate erosion and sedimentation controls will be implemented.

Control # X

- BMP Description: Description of control to be installed.
- Installation Schedule: Approximate date of installation.
- Inspection Schedule: Pick Inspection schedule from above.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

SECTION 6: INSPECTION AND CORRECTIVE ACTION

6.1 *Inspection Personnel and Procedures*

Personnel Responsible for Inspections

Construction Manager
Contact Person

Site Contractor
Contact person

(Note: All personnel conducting inspections must be considered a “qualified person.” CGP Part 4.1.1 clarifies that a “qualified person” is a person knowledgeable in the principles and practices of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.)

Inspection Schedule

Specific Inspection Frequency

The contractor shall inspect and maintain erosion control measures, and remove sediment therefrom, once every 7 days and within 24 hours of a storm event 0.25” or greater.

Rain Gauge Location:

NOAA Rain Gauge Location or Onsite Rain Gauge Location

Reductions in Inspection Frequency (if applicable):

Inspection frequency may be reduced to twice per month (no more than 14 days apart) for the first month in areas of the site where the stabilization steps outlined in Parts 2.2.14 of the CGP have been completed. After the first month, inspection frequency may be reduced to once per month. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.2 and 4.3 as applicable. You must document the beginning and ending dates of this period in the SWPPP.

Inspection frequency may be reduced to once per month and within 24 hours of the occurrence of a storm event of 0.25 inches or greater if the project is located in an arid, semi-arid, or drought-stricken area and construction is occurring during the seasonally dry period or a period in which drought is predicted to occur. If this inspection frequency is followed, you must document the beginning and ending dates of this period in the SWPPP.

Inspections can be temporarily suspended under the following conditions:

- Earth-disturbing activity is suspended due to frozen condition;
- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three months based on historic seasonal averaged. **If unexpected weather conditions make discharges likely, the operators must immediately resume the regular inspection schedule;**
- Land disturbances have been suspended; and
- All disturbed areas of the site have been stabilized in accordance with Part 2.2.14a of the CGP.

Inspection frequency may be reduced to once per month under the following conditions:

- The operator is still conducting earth disturbing activities under frozen conditions;
- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three months based on historic seasonal averages. **If unexpected weather conditions make discharges likely, the operator must immediately resume the regular inspection schedule;** and
- Except for areas in which the operator is conducting earth-disturbing activities, disturbed areas of the site have been stabilized in accordance with Part 2.2.14a of the CGP.

Inspection Report Forms

Copies of inspection reports are in Attachment D.

6.2 Corrective Action

Personnel Responsible for Corrective Actions

Contact Person, Construction Manager Company

Contact Person, Site Contractor

Corrective Action Forms

A copy of the Corrective Action Form is in Attachment E.

6.3 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Construction Manager Company

Contact Person

Contact Person Title

Street Address

Town/City, State Zip Code

xxx-xxx-xxxx

Email address

SECTION 7: TRAINING LOG

Refer to Attachment I for a Training Log to be completed for each SWPPP training session.

Table 7-1: Documentation for Completion of Training

Name	Date Training Completed

SECTION 8: CERTIFICATION AND NOTIFICATION

Operator – Owner’s Representative

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

Operator – Construction Manager

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

SWPPP ATTACHMENTS

Attachment A – Site Maps

Attachment B – 2017 Construction General Permit

Attachment C – NOI and EPA Authorization Email

Attachment D – Inspection Form

Attachment E – Corrective Action Form

Attachment F – SWPPP Amendment Log

Attachment G – Subcontractor Certifications/Agreements

Attachment H – Grading and Stabilization Activities Log

Attachment I – SWPPP Training Log

Attachment J – Delegation of Authority Form

Attachment K – Endangered Species Documentation

Attachment L – Historic Preservation Documentation

Attachment M – Rainfall Gauge

Attachment N – Order of Conditions

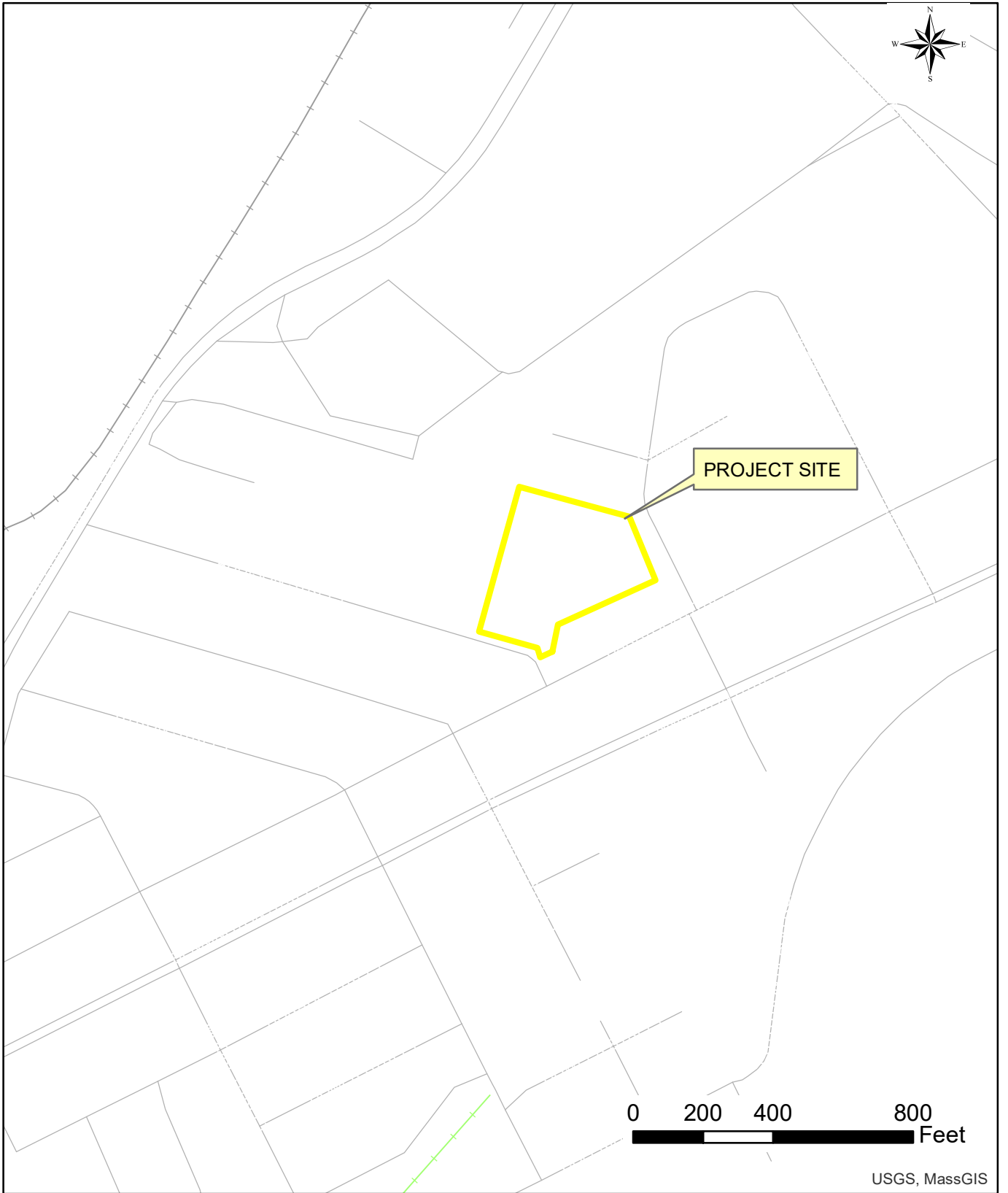
Attachment A – Site Maps

Site Locus Map

USGS Locus Map

Erosion and Sedimentation Control Plans

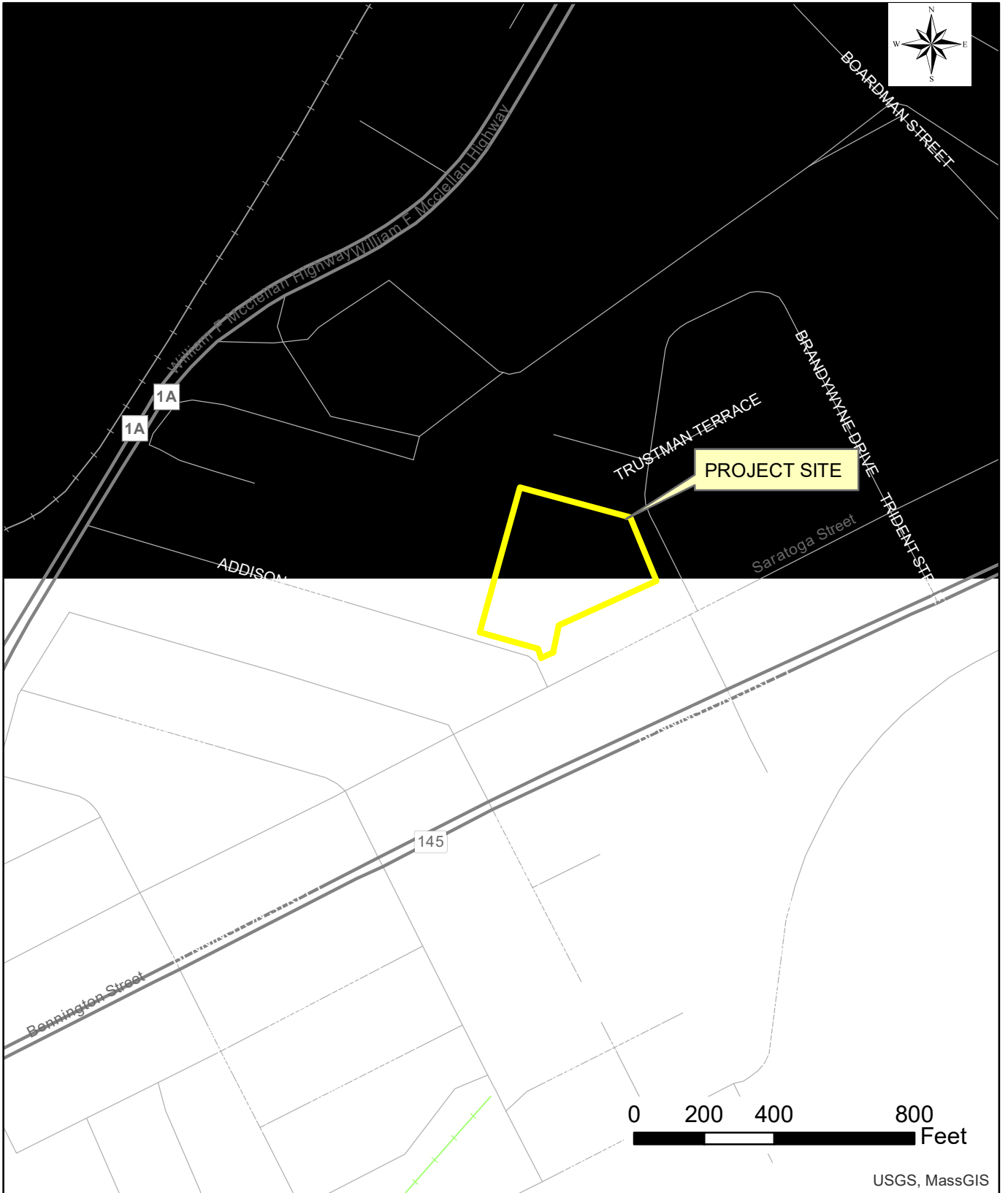
Phasing Plans/Mobilization Plans/Construction Management Plans from the contractor



SITE LOCUS MAP
ADDISON STREET
BOSTON, MASSACHUSETTS

Data Source: MassGIS
Nitsch Project #12433





USGS LOCUS MAP
ADDISON STREET
BOSTON, MASSACHUSETTS

Data Source: MassGIS
Nitsch Project #12433



Attachment B – 2017 Construction General Permit

**National Pollutant Discharge Elimination System
General Permit for Discharges from
Construction Activities**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et. seq., (hereafter CWA), as amended by the Water Quality Act of 1987, P.L. 100-4, "operators" of construction activities (defined in Appendix A) that meet the requirements of Part 1.1 of this National Pollutant Discharge Elimination System (NPDES) general permit, are authorized to discharge pollutants in accordance with the effluent limitations and conditions set forth herein. Permit coverage is required from the "commencement of construction activities" (see Appendix A) until one of the conditions for terminating CGP coverage has been met (see Part 8.2).

This permit becomes effective on **February 16, 2017**.

This permit and the authorization to discharge expire at 11:59pm, **February 16, 2022**.

Signed and issued this 11th day of January 2017

Deborah Szaro,
Acting Regional Administrator, EPA Region 1

Signed and issued this 11th day of January 2017

William K. Honker, P.E.,
Director, Water Division, EPA Region 6

Signed and issued this 11th day of January 2017

Javier Laureano, Ph.D.,
Director, Clean Water Division, EPA Region 2

Signed and issued this 11th day of January 2017

Karen Flournoy,
Director, Water, Wetlands, and Pesticides Division,
EPA Region 7

Signed and issued this 11th day of January 2017

Jose C. Font,
Acting Director, Caribbean Environmental
Protection Division, EPA Region 2.

Signed and issued this 11th day of January 2017

Darcy O'Connor,
Assistant Regional Administrator, Office of Water
Protection, EPA Region 8

Signed and issued this 11th day of January 2017

Dominique Lueckenhoff,
Acting Director, Water Protection Division, EPA
Region 3

Signed and issued this 11th day of January 2017

Kristin Gullatt
Deputy Director, Water Division, EPA Region 9

Signed and issued this 11th day of January 2017

César A. Zapata,
Deputy Director, Water Protection Division, EPA
Region 4

Signed and issued this 11th day of January 2017

Daniel D. Opalski,
Director, Office of Water and Watersheds, EPA
Region 10

Signed and issued this 11th day of January 2017

Christopher Korleski,
Director, Water Division, EPA Region 5

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1 HOW TO OBTAIN COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT (CGP)

To be covered under this permit, you must meet the eligibility conditions and follow the requirements for obtaining permit coverage in this Part.

1.1 ELIGIBILITY CONDITIONS

1.1.1 You are an “operator” of a construction site for which discharges will be covered under this permit. For the purposes of this permit and in the context of stormwater discharges associated with construction activity, an “operator” is any party associated with a construction project that meets either of the following two criteria:

- a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (*e.g., in most cases this is the owner of the site*); or
- b. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (*e.g., they are authorized to direct workers at a site to carry out activities required by the permit; in most cases this is the general contractor (as defined in Appendix A) of the project*).

Where there are multiple operators associated with the same project, all operators must obtain permit coverage.¹ Subcontractors generally are not considered operators for the purposes of this permit.

1.1.2 Your site's construction activities:

- a. Will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land; or
- b. Have been designated by EPA as needing permit coverage under 40 CFR 122.26(a)(1)(v) or 40 CFR 122.26(b)(15)(ii);

1.1.3 Your site is located in an area where EPA is the permitting authority (see Appendix B);

1.1.4 Discharges from your site are not:

- a. Already covered by a different NPDES permit for the same discharge; or
- b. In the process of having coverage under a different NPDES permit for the same discharge denied, terminated, or revoked.^{2, 3}

1.1.5 You are able to demonstrate that you meet one of the criteria listed in Appendix D with respect to the protection of species that are federally listed as endangered or threatened under the Endangered Species Act (ESA) and federally designated critical habitat;

¹ If the operator of a “construction support activity” (see Part 1.2.1c) is different than the operator of the main site, that operator must also obtain permit coverage. See Part 7.1 for clarification on the sharing of liability between and among operators on the same site and for conditions that apply to developing a SWPPP for multiple operators associated with the same site.

² Parts 1.1.4a and 1.1.4b do not include sites currently covered under the 2012 CGP that are in the process of obtaining coverage under this permit, nor sites covered under this permit that are transferring coverage to a different operator.

³ Notwithstanding a site being made ineligible for coverage under this permit because it falls under the description of Parts 1.1.4a or 1.1.4b, above, EPA may waive the applicable eligibility requirement after specific review if it determines that coverage under this permit is appropriate.

- 1.1.6** You have completed the screening process in Appendix E relating to the protection of historic properties; and
- 1.1.7** You have complied with all requirements in Part 9 imposed by the applicable state, Indian tribe, or territory in which your construction activities and/or discharge will occur.
- 1.1.8** For “new sources” (as defined in Appendix A) only:
- a. EPA has not, prior to authorization under this permit, determined that discharges from your site will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures designed to bring your discharge into compliance with this permit, specifically the requirement to meet water quality standards. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3, will result in discharges that will not cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.
 - b. Discharges from your site to a Tier 2, Tier 2.5, or Tier 3 water⁴ will not lower the water quality of the applicable water. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3.2, will result in discharges that will not lower the water quality of such waters.
- 1.1.9** If you plan to add “cationic treatment chemicals” (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, you may not submit your Notice of Intent (NOI) unless and until you notify your applicable EPA Regional Office (see Appendix L) in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to discharges that cause an exceedance of water quality standards.

1.2 TYPES OF DISCHARGES AUTHORIZED⁵

- 1.2.1** The following stormwater discharges are authorized under this permit provided that appropriate stormwater controls are designed, installed, and maintained (see Parts 2 and 3):
- a. Stormwater discharges, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity under 40 CFR 122.26(b)(14) or 122.26(b)(15)(i);

⁴ Note: Your site will be considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water to which you discharge is identified by a state, tribe, or EPA as a Tier 2, Tier 2.5, or Tier 3 water. For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

⁵ See “Discharge” as defined in Appendix A. Note: Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the SWPPP, or during an inspection.

- b. Stormwater discharges designated by EPA as needing a permit under 40 CFR 122.26(a)(1)(v) or 122.26(b)(15)(ii);
- c. Stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that:
 - i. The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
 - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated construction sites;
 - iii. The support activity does not continue to operate beyond the completion of the construction activity at the site it supports; and
 - iv. Stormwater controls are implemented in accordance with Part 2 and Part 3 for discharges from the support activity areas.
- d. Stormwater discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining.

1.2.2 The following non-stormwater discharges associated with your construction activity are authorized under this permit provided that, with the exception of water used to control dust and to irrigate vegetation in stabilized areas, these discharges are not routed to areas of exposed soil on your site and you comply with any applicable requirements for these discharges in Parts 2 and 3:

- a. Discharges from emergency fire-fighting activities;
- b. Fire hydrant flushings;
- c. Landscape irrigation;
- d. Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;
- e. Water used to control dust;
- f. Potable water including uncontaminated water line flushings;
- g. External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs));
- h. Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. You are prohibited from directing pavement wash waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
- i. Uncontaminated air conditioning or compressor condensate;
- j. Uncontaminated, non-turbid discharges of ground water or spring water;
- k. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water; and
- l. Construction dewatering water discharged in accordance with Part 2.4.

- 1.2.3** Also authorized under this permit are discharges of stormwater listed above in Part 1.2.1, or authorized non-stormwater discharges listed above in Part 1.2.2, commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

1.3 PROHIBITED DISCHARGES⁶

- 1.3.1** Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 2.3.4;
- 1.3.2** Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
- 1.3.3** Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- 1.3.4** Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and
- 1.3.5** Toxic or hazardous substances from a spill or other release.

To prevent the above-listed prohibited non-stormwater discharges, operators must comply with the applicable pollution prevention requirements in Part 2.3.

1.4 SUBMITTING YOUR NOTICE OF INTENT (NOI)

All "operators" (as defined in Appendix A) associated with your construction site, who meet the Part 1.1 eligibility requirements, and who seek coverage under this permit, must submit to EPA a complete and accurate NOI in accordance with the deadlines in **Table 1** prior to commencing construction activities.

Exception: If you are conducting construction activities in response to a public emergency (e.g., *mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services*), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, you may discharge on the condition that a complete and accurate NOI is submitted within 30 calendar days after commencing construction activities (see Table 1) establishing that you are eligible for coverage under this permit. You must also provide documentation in your Stormwater Pollution Prevention Plan (SWPPP) to substantiate the occurrence of the public emergency.

1.4.1 Prerequisite for Submitting Your NOI

You must develop a SWPPP consistent with Part 7 before submitting your NOI for coverage under this permit.

1.4.2 How to Submit Your NOI

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOI for coverage under the 2017 CGP, unless you received a waiver from your EPA Regional Office.

To access NeT, go to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>.

⁶ EPA includes these prohibited non-stormwater discharges here as a reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.2.2. Any unauthorized non-stormwater discharges must be covered under an individual permit or alternative general permit.

Waivers from electronic reporting may be granted based on one of the following conditions:

- a. If your operational headquarters is physically located in a geographic area (*i.e.*, ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or
- b. If you have limitations regarding available computer access or computer capability.

If the EPA Regional Office grants you approval to use a paper NOI, and you elect to use it, you must complete the form in Appendix J.

1.4.3 Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage

Table 1 provides the deadlines for submitting your NOI and the official start date of your permit coverage, which differ depending on when you commence construction activities.

Table 1 NOI Submittal Deadlines and Official Start Date for Permit Coverage.

Type of Operator	NOI Submittal Deadline ⁷	Permit Authorization Date ⁸
Operator of a new site (<i>i.e.</i> , a site where construction activities commence on or after February 16, 2017)	At least 14 calendar days before commencing construction activities.	14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.
Operator of an existing site (<i>i.e.</i> , a site with 2012 CGP coverage where construction activities commenced prior to February 16, 2017)	No later than May 17, 2017 .	
New operator of a permitted site (<i>i.e.</i> , an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction site that is either a "new site" or an "existing site")	At least 14 calendar days before the date the transfer to the new operator will take place.	
Operator of an "emergency-related project" (<i>i.e.</i> , a project initiated in response to a public emergency (<i>e.g.</i> , mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services)	No later than 30 calendar days after commencing construction activities.	You are considered provisionally covered under the terms and conditions of this permit immediately, and fully covered 14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.

⁷ If you miss the deadline to submit your NOI, any and all discharges from your construction activities will continue to be unauthorized under the CWA until they are covered by this or a different NPDES permit. EPA may take enforcement action for any unpermitted discharges that occur between the commencement of construction activities and discharge authorization.

⁸ Discharges are not authorized if your NOI is incomplete or inaccurate or if you are not eligible for permit coverage.

1.4.4 Modifying your NOI

If after submitting your NOI you need to correct or update any fields, you may do so by submitting a "Change NOI" form using NeT. Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office has granted you approval to submit a paper NOI modification, you may indicate any NOI changes on the same NOI form in Appendix J.

When there is a change to the site's operator, the new operator must submit a new NOI, and the previous operator must submit a Notice of Termination (NOT) form as specified in Part 8.3.

1.4.5 Your Official End Date of Permit Coverage

Once covered under this permit, your coverage will last until the date that:

- a. You terminate permit coverage consistent with Part 8; or
- b. You receive permit coverage under a different NPDES permit or a reissued or replacement version of this permit after expiring on February 16, 2022; or
- c. You fail to submit an NOI for coverage under a revised or replacement version of this permit before the deadline for existing construction sites where construction activities continue after this permit has expired.

1.5 REQUIREMENT TO POST A NOTICE OF YOUR PERMIT COVERAGE

You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site, and it must use a font large enough to be readily viewed from a public right-of-way.⁹ At a minimum, the notice must include:

- a. The NPDES ID (*i.e.*, *permit tracking number assigned to your NOI*);
- b. A contact name and phone number for obtaining additional construction site information;
- c. The Uniform Resource Locator (URL) for the SWPPP (if available), or the following statement: "If you would like to obtain a copy of the Stormwater Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at [*include the appropriate CGP Regional Office contact information found at <https://www.epa.gov/npdes/contact-us-stormwater#regional>*];" and
- d. The following statement "If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, contact the EPA through the following website: <https://www.epa.gov/enforcement/report-environmental-violations>."

2 TECHNOLOGY-BASED EFFLUENT LIMITATIONS

You must comply with the following technology-based effluent limitations in this Part for all authorized discharges.¹⁰

⁹ If the active part of the construction site is not visible from a public road, then place the notice of permit coverage in a position that is visible from the nearest public road and as close as possible to the construction site.

¹⁰ For each of the effluent limits in Part 2, as applicable to your site, you must include in your SWPPP (1) a

2.1 GENERAL STORMWATER CONTROL DESIGN, INSTALLATION, AND MAINTENANCE REQUIREMENTS

You must design, install, and maintain stormwater controls required in Parts 2.2 and 2.3 to minimize the discharge of pollutants in stormwater from construction activities. To meet this requirement, you must:

2.1.1 Account for the following factors in designing your stormwater controls:

- a. The expected amount, frequency, intensity, and duration of precipitation;
- b. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. You must design stormwater controls to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater and to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points; and
- c. The soil type and range of soil particle sizes expected to be present on the site.

2.1.2 Design and install all stormwater controls in accordance with good engineering practices, including applicable design specifications.¹¹

2.1.3 Complete installation of stormwater controls by the time each phase of construction activities has begun.

- a. By the time construction activity in any given portion of the site begins, install and make operational any downgradient sediment controls (*e.g., buffers, perimeter controls, exit point controls, storm drain inlet protection*) that control discharges from the initial site clearing, grading, excavating, and other earth-disturbing activities.¹²
- b. Following the installation of these initial controls, install and make operational all stormwater controls needed to control discharges prior to subsequent earth-disturbing activities.

2.1.4 Ensure that all stormwater controls are maintained and remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.

- a. Comply with any specific maintenance requirements for the stormwater controls listed in this permit, as well as any recommended by the manufacturer.¹³

description of the specific control(s) to be implemented to meet the effluent limit; (2) any applicable design specifications; (3) routine maintenance specifications; and (4) the projected schedule for its (their) installation/implementation. See Part 7.2.6.

¹¹ Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practices and must be explained in your SWPPP. You must also comply with any additional design and installation requirements specified for the effluent limits in Parts 2.2 and 2.3.

¹² Note that the requirement to install stormwater controls prior to each phase of construction activities for the site does not apply to the earth disturbance associated with the actual installation of these controls. Operators should take all reasonable actions to minimize the discharges of pollutants during the installation of stormwater controls.

¹³ Any departures from such maintenance recommendations made by the manufacturer must reflect good engineering practices and must be explained in your SWPPP.

- b. If at any time you find that a stormwater control needs routine maintenance, you must immediately initiate the needed maintenance work, and complete such work by the close of the next business day.
- c. If at any time you find that a stormwater control needs repair or replacement, you must comply with the corrective action requirements in Part 5.

2.2 EROSION AND SEDIMENT CONTROL REQUIREMENTS

You must implement erosion and sediment controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater from construction activities.

2.2.1 Provide and maintain natural buffers and/or equivalent erosion and sediment controls when a water of the U.S. is located within 50 feet of the site's earth disturbances.

- a. **Compliance Alternatives.** For any discharges to waters of the U.S. located within 50 feet of your site's earth disturbances, you must comply with one of the following alternatives:
 - i. Provide and maintain a 50-foot undisturbed natural buffer; or
 - ii. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve, in combination, the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
 - iii. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

See Appendix G, Part G.2 for additional conditions applicable to each compliance alternative.

- b. **Exceptions.** See Appendix G, Part G.2 for exceptions to the compliance alternatives.

2.2.2 Direct stormwater to vegetated areas and maximize stormwater infiltration and filtering to reduce pollutant discharges, unless infeasible.

2.2.3 Install sediment controls along any perimeter areas of the site that will receive pollutant discharges.¹⁴

- a. Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- b. **Exception.** For areas at "linear construction sites" (as defined in Appendix A) where perimeter controls are infeasible (*e.g., due to a limited or restricted right-of-way*), implement other practices as necessary to minimize pollutant discharges to perimeter areas of the site.

2.2.4 Minimize sediment track-out.

- a. Restrict vehicle use to properly designated exit points;
- b. Use appropriate stabilization techniques¹⁵ at all points that exit onto paved roads.

¹⁴ Examples of perimeter controls include filter berms, silt fences, vegetative strips, and temporary diversion dikes.

¹⁵ Examples of appropriate stabilization techniques include the use of aggregate stone with an underlying geotextile or non-woven filter fabric, and turf mats.

- i. **Exception:** Stabilization is not required for exit points at linear utility construction sites that are used only episodically and for very short durations over the life of the project, provided other exit point controls¹⁶ are implemented to minimize sediment track-out;
- c. Implement additional track-out controls¹⁷ as necessary to ensure that sediment removal occurs prior to vehicle exit; and
- d. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S.¹⁸

2.2.5 Manage stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil:

- a. Locate the piles outside of any natural buffers established under Part 2.2.1 and away from any stormwater conveyances, drain inlets, and areas where stormwater flow is concentrated;
- b. Install a sediment barrier along all downgradient perimeter areas;¹⁹
- c. For piles that will be unused for 14 or more days, provide cover²⁰ or appropriate temporary stabilization (consistent with Part 2.2.14);
- d. You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or water of the U.S.

2.2.6 Minimize dust. On areas of exposed soil, minimize the generation of dust through the appropriate application of water or other dust suppression techniques.

2.2.7 Minimize steep slope disturbances. Minimize the disturbance of "steep slopes" (as defined in Appendix A).

¹⁶ Examples of other exit point controls include preventing the use of exit points during wet periods; minimizing exit point use by keeping vehicles on site to the extent possible; limiting exit point size to the width needed for vehicle and equipment usage; using scarifying and compaction techniques on the soil; and avoiding establishing exit points in environmentally sensitive areas (e.g., karst areas; steep slopes).

¹⁷ Examples of additional track-out controls include the use of wheel washing, rumble strips, and rattle plates.

¹⁸ Fine grains that remain visible (*i.e.*, staining) on the surfaces of off-site streets, other paved areas, and sidewalks after you have implemented sediment removal practices are not a violation of Part 2.2.4.

¹⁹ Examples of sediment barriers include berms, dikes, fiber rolls, silt fences, sandbags, gravel bags, or straw bale.

²⁰ Examples of cover include tarps, blown straw and hydroseeding.

2.2.8 Preserve native topsoil, unless infeasible.²¹

2.2.9 Minimize soil compaction.²² In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed:

- a. Restrict vehicle and equipment use in these locations to avoid soil compaction; and
- b. Before seeding or planting areas of exposed soil that have been compacted, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth.

2.2.10 Protect storm drain inlets.

- a. Install inlet protection measures that remove sediment from discharges prior to entry into any storm drain inlet that carries stormwater flow from your site to a water of the U.S., provided you have authority to access the storm drain inlet;²³ and
- b. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

2.2.11 Minimize erosion of stormwater conveyance channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters. Use erosion controls and velocity dissipation devices²⁴ within and along the length of any stormwater conveyance channel and at any outlet to slow down runoff to minimize erosion.

2.2.12 If you install a sediment basin or similar impoundment:

- a. Situate the basin or impoundment outside of any water of the U.S. and any natural buffers established under Part 2.2.1;
- b. Design the basin or impoundment to avoid collecting water from wetlands;
- c. Design the basin or impoundment to provide storage for either:
 - i. The calculated volume of runoff from a 2-year, 24-hour storm (see Appendix H); or
 - ii. 3,600 cubic feet per acre drained.

²¹ Stockpiling topsoil at off-site locations, or transferring topsoil to other locations, is an example of a practice that is consistent with the requirements in Part 2.2.8. Preserving native topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. For example, some sites may be designed to be highly impervious after construction, and therefore little or no vegetation is intended to remain, or may not have space to stockpile native topsoil on site for later use, in which case, it may not be feasible to preserve topsoil.

²² Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.

²³ Inlet protection measures can be removed in the event of flood conditions or to prevent erosion.

²⁴ Examples of velocity dissipation devices include check dams, sediment traps, riprap, and grouted riprap at outlets.

- d. Utilize outlet structures that withdraw water from the surface of the sediment basin or similar impoundment, unless infeasible;²⁵
- e. Use erosion controls and velocity dissipation devices to prevent erosion at inlets and outlets; and
- f. Remove accumulated sediment to maintain at least one-half of the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.

2.2.13 If using treatment chemicals (e.g., polymers, flocculants, coagulants):

- a. **Use conventional erosion and sediment controls before and after the application of treatment chemicals.** Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g., sediment basin, perimeter control) before discharge.
- b. **Select appropriate treatment chemicals.** Chemicals must be appropriately suited to the types of soils likely to be exposed during construction and present in the discharges being treated (i.e., the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or area).
- c. **Minimize discharge risk from stored chemicals.** Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in a covered area, having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill).
- d. **Comply with state/local requirements.** Comply with applicable state and local requirements regarding the use of treatment chemicals.
- e. **Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier.** Use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals, or document in your SWPPP specific departures from these specifications and how they reflect good engineering practice.
- f. **Ensure proper training.** Ensure that all persons who handle and use treatment chemicals at the construction site are provided with appropriate, product-specific training. Among other things, the training must cover proper dosing requirements.
- g. **Perform additional measures specified by the EPA Regional Office for the authorized use of cationic chemicals.** If you have been authorized to use cationic chemicals at your site pursuant to Part 1.1.9, you must perform all additional measures as conditioned by your authorization to ensure that the use of such chemicals will not cause an exceedance of water quality standards.

²⁵ The circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include areas with extended cold weather, where using surface outlets may not be feasible during certain time periods (although they must be used during other periods). If you determine that it is infeasible to meet this requirement, you must provide documentation in your SWPPP to support your determination, including the specific conditions or time periods when this exception will apply.

2.2.14 Stabilize exposed portions of the site. Implement and maintain stabilization measures (e.g., seeding protected by erosion controls until vegetation is established, sodding, mulching, erosion control blankets, hydromulch, gravel) that minimize erosion from exposed portions of the site in accordance with Parts 2.2.14a and 2.2.14b.

a. Stabilization Deadlines:²⁶

Total Amount of Land Disturbance Occurring At Any One Time ²⁷	Deadline
<p>i. Five acres or less (≤5.0)</p> <p>Note: this includes sites disturbing more than five acres (>5.0) total over the course of a project, but that limit disturbance at any one time (i.e., phase the disturbance) to five acres or less (≤5.0)</p>	<ul style="list-style-type: none"> • Initiate the installation of stabilization measures immediately²⁸ in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;²⁹ and • Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.³⁰

²⁶ EPA may determine, based on an inspection carried out under Part 4.8 and corrective actions required under Part 5.3, that the level of sediment discharge on the site makes it necessary to require a faster schedule for completing stabilization. For instance, if sediment discharges from an area of exposed soil that is required to be stabilized are compromising the performance of existing stormwater controls, EPA may require stabilization to correct this problem.

²⁷ Limiting disturbances to five (5) acres or less at any one time means that at no time during the project do the cumulative earth disturbances exceed five (5) acres. The following examples would qualify as limiting disturbances at any one time to five (5) acres or less:

1. The total area of disturbance for a project is five (5) acres or less.
2. The total area of disturbance for a project will exceed five (5) acres, but the operator ensures that no more than five (5) acres will be disturbed at any one time through implementation of stabilization measures. In this way, site stabilization can be used to “free up” land that can be disturbed without exceeding the five (5)-acre cap to qualify for the 14-day stabilization deadline. For instance, if an operator completes stabilization of two (2) acres of land on a five (5)-acre disturbance, then two (2) additional acres could be disturbed while still qualifying for the longer 14-day stabilization deadline.

²⁸ The following are examples of activities that would constitute the immediate initiation of stabilization:

1. Prepping the soil for vegetative or non-vegetative stabilization as long as seeding, planting, and/or installation of non-vegetative stabilization products takes place as soon as practicable, but no later than one (1) calendar day of completing soil preparation;
2. Applying mulch or other non-vegetative product to the exposed area;
3. Seeding or planting the exposed area;
4. Starting any of the activities in # 1 – 3 on a portion of the entire area that will be stabilized; and
5. Finalizing arrangements to have stabilization product fully installed in compliance with the deadlines for completing stabilization.

²⁹ The requirement to initiate stabilization immediately is triggered as soon as you know that construction work on a portion of the site is temporarily ceased and will not resume for 14 or more days, or as soon as you know that construction work is permanently ceased. In the context of this provision, “immediately” means as soon as practicable, but no later than the end of the next business day, following the day when the construction activities have temporarily or permanently ceased.

³⁰ If vegetative stabilization measures are being implemented, stabilization is considered “installed” when all activities necessary to seed or plant the area are completed. If non-vegetative stabilization measures are being implemented, stabilization is considered “installed” when all such measures are implemented or applied.

<p>ii. More than five acres (>5.0)</p>	<ul style="list-style-type: none"> • Initiate the installation of stabilization measures immediately³¹ in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;³² and • Complete the installation of stabilization measures as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.³³
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iii. **Exceptions:**

(a) Arid, semi-arid, and drought-stricken areas (as defined in Appendix A). If it is the seasonally dry period or a period in which drought is occurring, and vegetative stabilization measures are being used:

- (i) Immediately initiate and, within 14 calendar days of a temporary or permanent cessation of work in any portion of your site, complete the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion;
- (ii) As soon as practicable, given conditions or circumstances on the site, complete all activities necessary to seed or plant the area to be stabilized; and
- (iii) If construction is occurring during the seasonally dry period, indicate in your SWPPP the beginning and ending dates of the seasonally dry period and your site conditions. Also include the schedule you will follow for initiating and completing vegetative stabilization.

(b) Operators that are affected by unforeseen circumstances³⁴ that delay the initiation and/or completion of vegetative stabilization:

- (i) Immediately initiate and, within 14 calendar days, complete the installation of temporary non-vegetative stabilization measures to prevent erosion;
- (ii) Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on your site; and
- (iii) Document in the SWPPP the circumstances that prevent you from meeting the deadlines in Part 2.2.14a and the schedule you will follow for initiating and completing stabilization.

(c) Discharges to a sediment- or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes. Complete stabilization as soon as

³¹ See footnote 27

³² See footnote 28

³³ See footnote 29

³⁴ Examples include problems with the supply of seed stock or with the availability of specialized equipment and unsuitability of soil conditions due to excessive precipitation and/or flooding.

practicable, but no later than seven (7) calendar days after stabilization has been initiated.

- b. **Final Stabilization Criteria** (for any areas not covered by permanent structures):
- i. Establish uniform, perennial vegetation (*i.e.*, *evenly distributed, without large bare areas*) that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas; and/or
 - ii. Implement permanent non-vegetative stabilization measures³⁵ to provide effective cover.
 - iii. **Exceptions:**
 - (a) **Arid, semi-arid, and drought-stricken areas** (as defined in Appendix A). Final stabilization is met if the area has been seeded or planted to establish vegetation that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas within three (3) years and, to the extent necessary to prevent erosion on the seeded or planted area, non-vegetative erosion controls have been applied that provide cover for at least three years without active maintenance.
 - (b) **Disturbed areas on agricultural land that are restored to their preconstruction agricultural use.** The Part 2.2.14b final stabilization criteria does not apply.
 - (c) **Areas that need to remain disturbed.** In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed, and only the minimum area needed remains disturbed (*e.g.*, *dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, materials*).

2.3 POLLUTION PREVENTION REQUIREMENTS³⁶

You must implement pollution prevention controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater and to prevent the discharge of pollutants from spilled or leaked materials from construction activities.

2.3.1 For equipment and vehicle fueling and maintenance:

- a. Provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuels and oils, from these activities;³⁷

³⁵ Examples of permanent non-vegetative stabilization measures include riprap, gravel, gabions, and geotextiles.

³⁶ Under this permit, you are not required to minimize exposure for any products or materials where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

³⁷ Examples of effective means include:

- Locating activities away from waters of the U.S. and stormwater inlets or conveyances so that stormwater coming into contact with these activities cannot reach waters of the U.S.;
- Providing secondary containment (*e.g.*, *spill berms, decks, spill containment pallets*) and cover where appropriate; and
- Having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill.

- b. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the CWA;
- c. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;
- d. Use drip pans and absorbents under or around leaky vehicles;
- e. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements; and
- f. Clean up spills or contaminated surfaces immediately, using dry clean up measures (do not clean contaminated surfaces by hosing the area down), and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

2.3.2 For equipment and vehicle washing:

- a. Provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of wash waters;³⁸
- b. Ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water; and
- c. For storage of soaps, detergents, or solvents, provide either (1) cover (*e.g., plastic sheeting, temporary roofs*) to minimize the exposure of these detergents to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.

2.3.3 For storage, handling, and disposal of building products, materials, and wastes:

- a. *For building materials and building products*³⁹, provide either (1) cover (*e.g., plastic sheeting, temporary roofs*) to minimize the exposure of these products to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.
- b. *For pesticides, herbicides, insecticides, fertilizers, and landscape materials:*
 - i. In storage areas, provide either (1) cover (*e.g., plastic sheeting, temporary roofs*) to minimize the exposure of these chemicals to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas; and
 - ii. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label (see also Part 2.3.5).
- c. *For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:*
 - i. Store chemicals in water-tight containers, and provide either (1) cover (*e.g., plastic sheeting, temporary roofs*) to minimize the exposure of these containers to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas (*e.g., having a spill kit available on site and ensuring personnel are available to respond expeditiously in*

³⁸ Examples of effective means include locating activities away from waters of the U.S. and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

³⁹ Examples of building materials and building products typically present at construction sites include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and mulch stockpiles.

- the event of a leak or spill*), or provide secondary containment (*e.g., spill berms, decks, spill containment pallets*); and
- ii. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- d. *For hazardous or toxic wastes:*⁴⁰
- i. Separate hazardous or toxic waste from construction and domestic waste;
 - ii. Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements;
 - iii. Store all outside containers within appropriately-sized secondary containment (*e.g., spill berms, decks, spill containment pallets*) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (*e.g., storing chemicals in a covered area, having a spill kit available on site*);
 - iv. Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements;
 - v. Clean up spills immediately, using dry clean-up methods, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge; and
 - vi. Follow all other federal, state, tribal, and local requirements regarding hazardous or toxic waste.
- e. *For construction and domestic wastes:*⁴¹
- i. Provide waste containers (*e.g., dumpster, trash receptacle*) of sufficient size and number to contain construction and domestic wastes;
 - ii. Keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either (1) cover (*e.g., a tarp, plastic sheeting, temporary roof*) to minimize exposure of wastes to precipitation, or (2) a similarly effective means designed to minimize the discharge of pollutants (*e.g., secondary containment*);
 - iii. On business days, clean up and dispose of waste in designated waste containers; and
 - iv. Clean up immediately if containers overflow.

⁴⁰ Examples of hazardous or toxic waste that may be present at construction sites include paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.

⁴¹ Examples of construction and domestic waste include packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, demolition debris; and other trash or building materials.

- f. *For sanitary waste, position portable toilets so that they are secure and will not be tipped or knocked over, and located away from waters of the U.S. and stormwater inlets or conveyances.*

2.3.4 For washing applicators and containers used for stucco, paint, concrete, form release oils, curing compounds, or other materials:

- a. Direct wash water into a leak-proof container or leak-proof and lined pit designed so that no overflows can occur due to inadequate sizing or precipitation;
- b. Handle washout or cleanout wastes as follows:
 - i. Do not dump liquid wastes in storm sewers or waters of the U.S.;
 - ii. Dispose of liquid wastes in accordance with applicable requirements in Part 2.3.3; and
 - iii. Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 2.3.3; and
- c. Locate any washout or cleanout activities as far away as possible from waters of the U.S. and stormwater inlets or conveyances, and, to the extent feasible, designate areas to be used for these activities and conduct such activities only in these areas.

2.3.5 For the application of fertilizers:

- a. Apply at a rate and in amounts consistent with manufacturer's specifications, or document in the SWPPP departures from the manufacturer specifications where appropriate in accordance with Part 7.2.6.b.ix;
- b. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
- c. Avoid applying before heavy rains that could cause excess nutrients to be discharged;
- d. Never apply to frozen ground;
- e. Never apply to stormwater conveyance channels; and
- f. Follow all other federal, state, tribal, and local requirements regarding fertilizer application.

2.3.6 Emergency Spill Notification Requirements

Discharges of toxic or hazardous substances from a spill or other release are prohibited, consistent with Part 1.3.5. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. State, tribal, or local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

2.4 CONSTRUCTION DEWATERING REQUIREMENTS

Comply with the following requirements to minimize the discharge of pollutants in ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, in accordance with Part 1.2.2.⁴²

- 2.4.1** Treat dewatering discharges with controls to minimize discharges of pollutants;⁴³
- 2.4.2** Do not discharge visible floating solids or foam;
- 2.4.3** Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering water is found to contain these materials;
- 2.4.4** To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water before discharge. You are prohibited from using waters of the U.S. as part of the treatment area;
- 2.4.5** At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11;
- 2.4.6** With backwash water, either haul it away for disposal or return it to the beginning of the treatment process; and
- 2.4.7** Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

3 WATER QUALITY-BASED EFFLUENT LIMITATIONS

3.1 GENERAL EFFLUENT LIMITATION TO MEET APPLICABLE WATER QUALITY STANDARDS

Discharges must be controlled as necessary to meet applicable water quality standards. Discharges must also comply with any additional state or tribal requirements that are in Part 9.

In the absence of information demonstrating otherwise, EPA expects that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that discharges are not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Parts 5.1 and 5.2, and document the corrective actions as required in Part 5.4.

EPA may insist that you install additional controls (to meet the narrative water quality-based effluent limit above) on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards. This includes situations where additional controls are necessary to comply with a wasteload allocation in an EPA-established or approved TMDL.

⁴² Uncontaminated, clear (non-turbid) dewatering water can be discharged without being routed to a control.

⁴³ Appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, filtration systems (e.g., *bag or sand filters*), and passive treatment systems that are designed to remove sediment. Appropriate controls to use downstream of dewatering controls to minimize erosion include vegetated buffers, check dams, riprap, and grouted riprap at outlets.

If during your coverage under a previous permit, you were required to install and maintain stormwater controls specifically to meet the assumptions and requirements of an EPA-approved or established TMDL (for any parameter) or to otherwise control your discharge to meet water quality standards, you must continue to implement such controls as part of your coverage under this permit.

3.2 DISCHARGE LIMITATIONS FOR SITES DISCHARGING TO SENSITIVE WATERS⁴⁴

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes, you must comply with the inspection frequency specified in 4.3 and you must comply with the stabilization deadline specified in Part 2.2.14.a.iii.(c).⁴⁵

If you discharge to a water that is impaired for a parameter other than a sediment-related parameter or nutrients, EPA will inform you if any additional controls are necessary for your discharge to be controlled as necessary to meet water quality standards, including for it to be consistent with the assumptions of any available wasteload allocation in any applicable TMDL, or if coverage under an individual permit is necessary.

In addition, on a case-by-case basis, EPA may notify operators of new sites or operators of existing sites with increased discharges that additional analyses, stormwater controls, or other measures are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary.

If you discharge to a water that is impaired for polychlorinated biphenyls (PCBs) and are engaging in demolition of any structure with at least 10,000 square feet of floor space built or renovated before January 1, 1980, you must:

⁴⁴ Sensitive waters include waters that are impaired and Tier 2, Tier 2.5, and Tier 3 waters.

"Impaired waters" are those waters identified by the state, tribe, or EPA as not meeting an applicable water quality standard and (1) requires development of a TMDL (pursuant to section 303(d) of the CWA; or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1). Your construction site will be considered to discharge to an impaired water if the first water of the U.S. to which you discharge is an impaired water for the pollutants contained in the discharge from your site. For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. For assistance in determining whether your site discharges to impaired waters, EPA has developed a tool that is available both within the electronic NOI form in NeT, and at <https://water.epa.gov/polwaste/npdes/stormwater/discharge.cfm>.

Tiers 2, 2.5 and 3 refer to waters either identified by the state as high quality waters or Outstanding National Resource Waters under 40 CFR 131.12(a)(2) and (3). For the purposes of this permit, you are considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3. For discharges that enter a storm sewer system prior to discharge, the water of the U.S. to which you discharge is the first water of the U.S. that receives the stormwater discharge from the storm sewer system. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

EPA may determine on a case-by-case basis that a site discharges to a sensitive water.

⁴⁵ If you qualify for any of the reduced inspection frequencies in Part 4.4, you may conduct inspections in accordance with Part 4.4 for any portion of your site that discharges to a sensitive water.

- a. Implement controls⁴⁶ to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures, to precipitation and to stormwater; and
- b. Ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

4 SITE INSPECTION REQUIREMENTS

4.1 PERSON(S) RESPONSIBLE FOR INSPECTING SITE

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person."⁴⁷

4.2 FREQUENCY OF INSPECTIONS.⁴⁸

At a minimum, you must conduct a site inspection in accordance with one of the two schedules listed below, unless you are subject to the Part 4.3 site inspection frequency for discharges to sensitive waters or qualify for a Part 4.4 reduction in the inspection frequency:

4.2.1 At least once every seven (7) calendar days; or

4.2.2 Once every 14 calendar days *and* within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.⁴⁹ To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

4.3 INCREASE IN INSPECTION FREQUENCY FOR SITES DISCHARGING TO SENSITIVE WATERS.

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes (see Part 3.2), instead of the inspection frequency specified in

⁴⁶ Examples of controls to minimize exposure of PCBs to precipitation and stormwater include separating work areas from non-work areas and selecting appropriate personal protective equipment and tools, constructing a containment area so that all dust or debris generated by the work remains within the protected area, using tools that minimize dust and heat (<212°F). For additional information, refer to Part 2.3.3 of the CGP Fact Sheet.

⁴⁷ A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

⁴⁸ Inspections are only required during the site's normal working hours.

⁴⁹ "Within 24 hours of the occurrence of a storm event" means that you must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24-hour period, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly in accordance with Part 4.2.2 and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

Part 4.2, you must conduct inspections in accordance with the following inspection frequencies:

Once every seven (7) calendar days *and* within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

4.4 REDUCTIONS IN INSPECTION FREQUENCY

4.4.1 Stabilized areas.

- a. You may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, then once per month in any area of your site where the stabilization steps in 2.2.14a have been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.2 and 4.3, as applicable. You must document the beginning and ending dates of this period in your SWPPP.
- b. **Exception.** For “linear construction sites” (as defined in Appendix A) where disturbed portions have undergone final stabilization at the same time active construction continues on others, you may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, in any area of your site where the stabilization steps in 2.2.14a have been completed. After the first month, inspect once more within 24 hours of the occurrence of a storm event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, you may suspend further inspections. If “wash-out” of stabilization materials and/or sediment is observed, following re-stabilization, inspections must resume at the inspection frequency required in Part 4.4.1a. Inspections must continue until final stabilization is visually confirmed following a storm event of 0.25 inches or greater.

4.4.2 Arid, semi-arid, or drought-stricken areas (as defined in Appendix A). If it is the seasonally dry period or a period in which drought is occurring, you may reduce the frequency of inspections to once per month and within 24 hours of the occurrence of a storm event of 0.25 inches or greater. You must document that you are using this reduced schedule and the beginning and ending dates of the seasonally dry period in your SWPPP. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

4.4.3 Frozen conditions:

- a. If you are suspending construction activities due to frozen conditions, you may temporarily suspend inspections on your site until thawing conditions (as defined in Appendix A) begin to occur if:
 - i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain

- events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable;
 - ii. Land disturbances have been suspended; and
 - iii. All disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.
- b. If you are still conducting construction activities during frozen conditions, you may reduce your inspection frequency to once per month if:
- i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable; and
 - ii. Except for areas in which you are actively conducting construction activities, disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.

You must document the beginning and ending dates of this period in your SWPPP.

4.5 AREAS THAT MUST BE INSPECTED

During your site inspection, you must at a minimum inspect the following areas of your site:

- 4.5.1** All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 2.2.14a;
- 4.5.2** All stormwater controls (including pollution prevention controls) installed at the site to comply with this permit;⁵⁰
- 4.5.3** Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;
- 4.5.4** All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or treat stormwater;
- 4.5.5** All points of discharge from the site; and
- 4.5.6** All locations where stabilization measures have been implemented.

You are not required to inspect areas that, at the time of the inspection, are considered unsafe to your inspection personnel.

4.6 REQUIREMENTS FOR INSPECTIONS

During your site inspection, you must at a minimum:

- 4.6.1** Check whether all stormwater controls (*i.e.*, *erosion and sediment controls and pollution prevention controls*) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges;
- 4.6.2** Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;

⁵⁰ This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas consistent with Part 2.2.4.

- 4.6.3 Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 2 and/or 3;
- 4.6.4 Check for signs of visible erosion and sedimentation (*i.e., sediment deposits*) that have occurred and are attributable to your discharge at points of discharge and, if applicable, the banks of any waters of the U.S. flowing within or immediately adjacent to the site;
- 4.6.5 Identify any incidents of noncompliance observed;
- 4.6.6 If a discharge is occurring during your inspection:
 - a. Identify all discharge points at the site; and
 - b. Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.
- 4.6.7 Based on the results of your inspection, complete any necessary maintenance under Part 2.1.4 and corrective action under Part 5.

4.7 INSPECTION REPORT

- 4.7.1 You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report must include the following:
 - a. The inspection date;
 - b. Names and titles of personnel making the inspection;
 - c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.6, including any necessary maintenance or corrective actions;
 - d. If you are inspecting your site at the frequency specified in Part 4.2.2, Part 4.3, or Part 4.4.1b, and you conducted an inspection because of rainfall measuring 0.25 inches or greater, you must include the applicable rain gauge or weather station readings that triggered the inspection; and
 - e. If you determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations to which this condition applies.
- 4.7.2 Each inspection report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 4.7.3 You must keep a copy of all inspection reports at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by EPA.
- 4.7.4 You must retain all inspection reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

4.8 INSPECTIONS BY EPA

You must allow EPA, or an authorized representative of EPA, to conduct the following activities at reasonable times. To the extent that you are utilizing shared controls that are

not on site to comply with this permit, you must make arrangements for EPA to have access at all reasonable times to those areas where the shared controls are located.

- 4.8.1** Enter onto all areas of the site, including any construction support activity areas covered by this permit, any off-site areas where shared controls are utilized to comply with this permit, discharge locations, adjoining waterbodies, and locations where records are kept under the conditions of this permit;
- 4.8.2** Access and copy any records that must be kept under the conditions of this permit;
- 4.8.3** Inspect your construction site, including any construction support activity areas covered by this permit (see Part 1.2.1c), any stormwater controls installed and maintained at the site, and any off-site shared controls utilized to comply with this permit; and
- 4.8.4** Sample or monitor for the purpose of ensuring compliance.

5 CORRECTIVE ACTIONS

5.1 CONDITIONS TRIGGERING CORRECTIVE ACTION.

You must take corrective action to address any of the following conditions identified at your site:

- 5.1.1** A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); or
- 5.1.2** A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- 5.1.3** Your discharges are causing an exceedance of applicable water quality standards; or
- 5.1.4** A prohibited discharge has occurred (see Part 1.3).

5.2 CORRECTIVE ACTION DEADLINES

For any corrective action triggering conditions in Part 5.1, you must:

- 5.2.1** Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events;
- 5.2.2** When the problem does not require a new or replacement control or significant repair, the corrective action must be completed by the close of the next business day;
- 5.2.3** When the problem requires a new or replacement control or significant repair, install the new or modified control and make it operational, or complete the repair, by no later than seven (7) calendar days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7-day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7-day timeframe. Where these actions result in changes to any of the stormwater controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within seven (7) calendar days of completing this work.

5.3 CORRECTIVE ACTION REQUIRED BY EPA

You must comply with any corrective actions required by EPA as a result of permit violations found during an inspection carried out under Part 4.8.

5.4 CORRECTIVE ACTION REPORT

For each corrective action taken in accordance with this Part, you must complete a report in accordance with the following:

- 5.4.1** Within 24 hours of identifying the corrective action condition, document the specific condition and the date and time it was identified.
- 5.4.2** Within 24 hours of completing the corrective action (in accordance with the deadlines in Part 5.2), document the actions taken to address the condition, including whether any SWPPP modifications are required.
- 5.4.3** Each corrective action report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 5.4.4** You must keep a copy of all corrective action reports at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by EPA.
- 5.4.5** You must retain all corrective action reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

6 STAFF TRAINING REQUIREMENTS

Each operator, or group of multiple operators, must assemble a “stormwater team” to carry out compliance activities associated with the requirements in this permit.

- 6.1** Prior to the commencement of construction activities, you must ensure that the following personnel⁵¹ on the stormwater team understand the requirements of this permit and their specific responsibilities with respect to those requirements:
 - a. Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention controls);
 - b. Personnel responsible for the application and storage of treatment chemicals (if applicable);
 - c. Personnel who are responsible for conducting inspections as required in Part 4.1; and
 - d. Personnel who are responsible for taking corrective actions as required in Part 5.
- 6.2** You are responsible for ensuring that all activities on the site comply with the requirements of this permit. You are not required to provide or document formal training for subcontractors or other outside service providers, but you must ensure that such personnel understand any requirements of this permit that may be affected by the work they are subcontracted to perform.

⁵¹ If the person requiring training is a new employee who starts after you commence construction activities, you must ensure that this person has the proper understanding as required above prior to assuming particular responsibilities related to compliance with this permit.

For emergency-related projects, the requirement to train personnel prior to commencement of construction activities does not apply, however, such personnel must have the required training prior to NOI submission.

- 6.3** At a minimum, members of the stormwater team must be trained to understand the following if related to the scope of their job duties (*e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections*):
- a. The permit deadlines associated with installation, maintenance, and removal of stormwater controls and with stabilization;
 - b. The location of all stormwater controls on the site required by this permit and how they are to be maintained;
 - c. The proper procedures to follow with respect to the permit's pollution prevention requirements; and
 - d. When and how to conduct inspections, record applicable findings, and take corrective actions.

6.4 Each member of the stormwater team must have easy access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

7 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

7.1 GENERAL REQUIREMENTS

All operators associated with a construction site under this permit must develop a SWPPP consistent with the requirements in Part 7 prior to their submittal of the NOI.^{52, 53} The SWPPP must be kept up-to-date throughout coverage under this permit.

If a SWPPP was prepared under a previous version of this permit, the operator must review and update the SWPPP to ensure that this permit's requirements are addressed prior to submitting an NOI for coverage under this permit.

7.2 SWPPP CONTENTS

At a minimum, the SWPPP must include the information specified in this Part and as

⁵² The SWPPP does not establish the effluent limits that apply to your site's discharges; these limits are established in this permit in Parts 2 and 3.

⁵³ You have the option of developing a group SWPPP where you are one of several operators at your site. For instance, if both the owner and the general contractor of the construction site are operators and thus are both required to obtain a permit, the owner may be the party undertaking SWPPP development, and the general contractor (or any other operator at the site) can choose to use this same SWPPP, as long as the SWPPP addresses the general contractor's (or other operator's) scope of construction work and functions to be performed under the SWPPP. Regardless of whether there is a group SWPPP or several individual SWPPPs, all operators would be jointly and severally liable for compliance with the permit.

Where there are multiple operators associated with the same site through a common plan of development or sale, operators may assign to themselves various permit-related functions under the SWPPP provided that each SWPPP, or a group SWPPP, documents which operator will perform each function under the SWPPP. However, dividing the functions to be performed under each SWPPP, or a single group SWPPP, does not relieve an individual operator from liability for complying with the permit should another operator fail to implement any measures that are necessary for that individual operator to comply with the permit, e.g., the installation and maintenance of any shared controls. In addition, all operators must ensure, either directly or through coordination with other operators, that their activities do not cause a violation and/or render any other operators' controls and/or any shared controls ineffective. All operators who rely on a shared control to comply with the permit are jointly and severally liable for violations of the permit resulting from the failure to properly install, operate and/or maintain the shared control.

specified in other parts of this permit.

- 7.2.1 All Site Operators.** Include a list of all other operators who will be engaged in construction activities at the site, and the areas of the site over which each operator has control.
- 7.2.2 Stormwater Team.** Identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities, including which members are responsible for conducting inspections.
- 7.2.3 Nature of Construction Activities.**⁵⁴ Include the following:
- a. A description of the nature of your construction activities, including the age or dates of past renovations for structures that are undergoing demolition;
 - b. The size of the property (in acres or length in miles if a linear construction site);
 - c. The total area expected to be disturbed by the construction activities (to the nearest quarter acre or nearest quarter mile if a linear construction site);
 - d. A description of any on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c);
 - e. The maximum area expected to be disturbed at any one time, including on-site and off-site construction support activity areas;
 - f. A description and projected schedule for the following:
 - i. Commencement of construction activities in each portion of the site, including clearing and grubbing, mass grading, demolition activities, site preparation (*i.e.*, *excavating, cutting and filling*), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
 - ii. Temporary or permanent cessation of construction activities in each portion of the site;
 - iii. Temporary or final stabilization of exposed areas for each portion of the site; and
 - iv. Removal of temporary stormwater controls and construction equipment or vehicles, and the cessation of construction-related pollutant-generating activities.
 - g. A list and description of all pollutant-generating activities⁵⁵ on the site. For each pollutant-generating activity, include an inventory of pollutants or pollutant constituents (*e.g.*, *sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels*) associated with that activity, which could be discharged in stormwater from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed or removed during construction;
 - h. Business days and hours for the project;
 - i. If you are conducting construction activities in response to a public emergency (see Part 1.4), a description of the cause of the public emergency (*e.g.*, *mud slides*,

⁵⁴ If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to "lock in" the operator to meeting these dates. When departures from initial projections are necessary, this should be documented in the SWPPP itself, or in associated records, as appropriate.

⁵⁵ Examples of pollutant-generating activities include paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations.

earthquake, extreme flooding conditions, widespread disruption in essential public services), information substantiating its occurrence (e.g., state disaster declaration or similar state or local declaration), and a description of the construction necessary to reestablish affected public services.

- 7.2.4 Site Map.** Include a legible map, or series of maps, showing the following features of the site:
- a. Boundaries of the property;
 - b. Locations where construction activities will occur, including:
 - i. Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;
 - ii. Approximate slopes before and after major grading activities (note any steep slopes (as defined in Appendix A));
 - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
 - iv. Any water of the U.S. crossings;
 - v. Designated points where vehicles will exit onto paved roads;
 - vi. Locations of structures and other impervious surfaces upon completion of construction; and
 - vii. Locations of on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c).
 - c. Locations of all waters of the U.S. within and one mile downstream of the site's discharge point. Also identify if any are listed as impaired, or are identified as a Tier 2, Tier 2.5, or Tier 3 water;
 - d. Areas of federally listed critical habitat within the site and/or at discharge locations;
 - e. Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures);
 - f. Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities;
 - g. Stormwater and authorized non-stormwater discharge locations, including:
 - i. Locations where stormwater and/or authorized non-stormwater will be discharged to storm drain inlets;⁵⁶ and
 - ii. Locations where stormwater or authorized non-stormwater will be discharged directly to waters of the U.S.
 - h. Locations of all potential pollutant-generating activities identified in Part 7.2.3g;
 - i. Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit; and
 - j. Locations where polymers, flocculants, or other treatment chemicals will be used and stored.

⁵⁶ The requirement to show storm drain inlets in the immediate vicinity of the site on your site map only applies to those inlets that are easily identifiable from your site or from a publicly accessible area immediately adjacent to your site.

7.2.5 Non-Stormwater Discharges. Identify all authorized non-stormwater discharges in Part 1.2.2 that will or may occur.

7.2.6 Description of Stormwater Controls.

- a. For each of the Part 2.2 erosion and sediment control effluent limits, Part 2.3 pollution prevention effluent limits, and Part 2.4 construction dewatering effluent limits, as applicable to your site, you must include the following:
 - i. A description of the specific control(s) to be implemented to meet the effluent limit;
 - ii. Any applicable stormwater control design specifications (including references to any manufacturer specifications and/or erosion and sediment control manuals/ordinances relied upon);⁵⁷
 - iii. Routine stormwater control maintenance specifications; and
 - iv. The projected schedule for stormwater control installation/implementation.
- b. You must also include any of the following additional information as applicable.
 - i. **Natural buffers and/or equivalent sediment controls** (see Part 2.2.1 and Appendix G). You must include the following:
 - (a) The compliance alternative to be implemented;
 - (b) If complying with alternative 2, the width of natural buffer retained;
 - (c) If complying with alternative 2 or 3, the erosion and sediment control(s) you will use to achieve an equivalent sediment reduction, and any information you relied upon to demonstrate the equivalency;
 - (d) If complying with alternative 3, a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size;
 - (e) For "linear construction sites" where it is infeasible to implement compliance alternative 1, 2, or 3, a rationale for this determination, and a description of any buffer width retained and/or supplemental erosion and sediment controls installed; and
 - (f) A description of any disturbances that are exempt under Part 2.2.1 that occur within 50 feet of a water of the U.S.
 - ii. **Perimeter controls for a "linear construction site"** (see Part 2.2.3). For areas where perimeter controls are not feasible, include documentation to support this determination and a description of the other practices that will be implemented to minimize discharges of pollutants in stormwater associated with construction activities.

Note: Routine maintenance specifications for perimeter controls documented in the SWPPP must include the Part 2.2.3a requirement that sediment be removed before it has accumulated to one-half of the above-ground height of any perimeter control.
 - iii. **Sediment track-out controls** (see Parts 2.2.4b and 2.2.4c). Document the specific stabilization techniques and/or controls that will be implemented to remove sediment prior to vehicle exit.
 - iv. **Sediment basins** (see Part 2.2.12). In circumstances where it is infeasible to utilize outlet structures that withdraw water from the surface, include documentation to

⁵⁷ Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practice and must be explained in the SWPPP.

support this determination, including the specific conditions or time periods when this exception will apply.

- v. **Treatment chemicals** (see Part 2.2.13), you must include the following:
- (a) A listing of the soil types that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems. Also include a listing of soil types expected to be found in fill material to be used in these same areas, to the extent you have this information prior to construction;
 - (b) A listing of all treatment chemicals to be used at the site and why the selection of these chemicals is suited to the soil characteristics of your site;
 - (c) If the applicable EPA Regional Office authorized you to use cationic treatment chemicals for sediment control, include the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to an exceedance of water quality standards;
 - (d) The dosage of all treatment chemicals to be used at the site or the methodology to be used to determine dosage;
 - (e) Information from any applicable Safety Data Sheet (SDS);
 - (f) Schematic drawings of any chemically enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals;
 - (g) A description of how chemicals will be stored consistent with Part 2.2.13c;
 - (h) References to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems; and
 - (i) A description of the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to use of the treatment chemicals at your site.
- vi. **Stabilization measures** (see Part 2.2.14). You must include the following:
- (a) The specific vegetative and/or non-vegetative practices that will be used;
 - (b) The stabilization deadline that will be met in accordance with Part 2.2.14.a.i-ii;
 - (c) If complying with the deadlines for sites in arid, semi-arid, or drought-stricken areas, the beginning and ending dates of the seasonally dry period and the schedule you will follow for initiating and completing vegetative stabilization; and
 - (d) If complying with deadlines for sites affected by unforeseen circumstances that delay the initiation and/or completion of vegetative stabilization, document the circumstances and the schedule for initiating and completing stabilization.
- vii. **Spill prevention and response procedures** (see Part 1.3.5 and Part 2.3). You must include the following:
- (a) Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s)

responsible for detection and response of spills or leaks; and

- (b) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.6 and established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available to all employees.

You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an NPDES permit for the construction activity, provided that you keep a copy of that other plan on site.⁵⁸

- viii. **Waste management procedures** (see Part 2.3.3). Describe the procedures you will follow for handling, storing and disposing of all wastes generated at your site consistent with all applicable federal, state, tribal, and local requirements, including clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.
- ix. **Application of fertilizers** (see Part 2.3.5). Document any departures from the manufacturer specifications where appropriate.

7.2.7 Procedures for Inspection, Maintenance, and Corrective Action. Describe the procedures you will follow for maintaining your stormwater controls, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part 2.1.4, Part 4, and Part 5 of this permit. Also include:

- a. The inspection schedule you will follow, which is based on whether your site is subject to Part 4.2 or Part 4.3, or whether your site qualifies for any of the reduced inspection frequencies in Part 4.4;
- b. If you will be conducting inspections in accordance with the inspection schedule in Part 4.2.2, Part 4.3, or Part 4.4.1b, the location of the rain gauge or the address of the weather station you will be using to obtain rainfall data;
- c. If you will be reducing your inspection frequency in accordance with Part 4.4.1b, the beginning and ending dates of the seasonally defined arid period for your area or the valid period of drought;
- d. If you will be reducing your inspection frequency in accordance with Part 4.4.3, the beginning and ending dates of frozen conditions on your site; and
- e. Any maintenance or inspection checklists or other forms that will be used.

7.2.8 Staff Training. Include documentation that the required personnel were, or will be, trained in accordance with Part 6.

7.2.9 Compliance with Other Requirements.

- a. **Threatened and Endangered Species Protection.** Include documentation required in Appendix D supporting your eligibility with regard to the protection of threatened and endangered species and designated critical habitat.

⁵⁸ Even if you already have an SPCC or other spill prevention plan in existence, your plans will only be considered adequate if they meet all of the requirements of this Part, either as part of your existing plan or supplemented as part of the SWPPP.

- b. **Historic Properties.** Include documentation required in Appendix E supporting your eligibility with regard to the protection of historic properties.
- c. **Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls.** If you are using any of the following stormwater controls at your site, document any contact you have had with the applicable state agency⁵⁹ or EPA Regional Office responsible for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing regulations at 40 CFR 144 -147. Such controls would generally be considered Class V UIC wells:
 - i. Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
 - ii. Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and
 - iii. Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).

7.2.10 SWPPP Certification. You must sign and date your SWPPP in accordance with Appendix I, Part I.11.

7.2.11 Post-Authorization Additions to the SWPPP. Once you are authorized for coverage under this permit, you must include the following documents as part of your SWPPP:

- a. A copy of your NOI submitted to EPA along with any correspondence exchanged between you and EPA related to coverage under this permit;
- b. A copy of the acknowledgment letter you receive from NeT assigning your NPDES ID (*i.e.*, *permit tracking number*);
- c. A copy of this permit (an electronic copy easily available to the stormwater team is also acceptable).

7.3 ON-SITE AVAILABILITY OF YOUR SWPPP

You must keep a current copy of your SWPPP at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by EPA; a state, tribal, or local agency approving stormwater management plans; the operator of a storm sewer system receiving discharges from the site; or representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).

EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) will be withheld from the public, but may not be withheld from EPA, USFWS, or NMFS.⁶⁰

⁵⁹ For state UIC program contacts, refer to the following EPA website: <https://www.epa.gov/uic>.

⁶⁰ Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR Part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the CWA. The authorized representatives, including employees of other executive branch agencies, may review CBI during the course of reviewing draft regulations.

If an on-site location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of your construction site.

7.4 SWPPP MODIFICATIONS

- 7.4.1** You must modify your SWPPP, including the site map(s), within seven (7) days of any of the following conditions:
- a. Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, stormwater controls, or other activities at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered under Part 5. You do not need to modify your SWPPP if the estimated dates in Part 7.2.3f change during the course of construction;
 - b. To reflect areas on your site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;
 - c. If inspections or investigations by EPA or its authorized representatives determine that SWPPP modifications are necessary for compliance with this permit;
 - d. Where EPA determines it is necessary to install and/or implement additional controls at your site in order to meet the requirements of this permit, the following must be included in your SWPPP:
 - i. A copy of any correspondence describing such measures and requirements; and
 - ii. A description of the controls that will be used to meet such requirements.
 - e. To reflect any revisions to applicable federal, state, tribal, or local requirements that affect the stormwater controls implemented at the site; and
 - f. If applicable, if a change in chemical treatment systems or chemically enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate, or different area of application.
- 7.4.2** You must maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part 7.2.10 above) and a brief summary of all changes.
- 7.4.3** All modifications made to the SWPPP consistent with Part 7.4 must be authorized by a person identified in Appendix I, Part I.11.b.
- 7.4.4** Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify any operators who may be impacted by the change to the SWPPP.

8 HOW TO TERMINATE COVERAGE

Until you terminate coverage under this permit, you must comply with all conditions and effluent limitations in the permit. To terminate permit coverage, you must submit to EPA a complete and accurate Notice of Termination (NOT), which certifies that you have met the requirements for terminating in Part 8.

8.1 MINIMUM INFORMATION REQUIRED IN NOT

- 8.1.1** NPDES ID (*i.e.*, *permit tracking number*) provided by EPA when you received coverage under this permit;

- 8.1.2 Basis for submission of the NOT (see Part 8.2);
- 8.1.3 Operator contact information;
- 8.1.4 Name of site and address (or a description of location if no street address is available); and
- 8.1.5 NOT certification.

8.2 CONDITIONS FOR TERMINATING CGP COVERAGE

You must terminate CGP coverage only if one or more of the following conditions has occurred:

- 8.2.1 You have completed all construction activities at your site and, if applicable, construction support activities covered by this permit (see Part 1.2.1c), and you have met the following requirements:
 - a. For any areas that (1) were disturbed during construction, (2) are not covered over by permanent structures, and (3) over which you had control during the construction activities, you have met the requirements for final vegetative or non-vegetative stabilization in Part 2.2.14b;
 - b. You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage;
 - c. You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable; and
 - d. You have removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following your termination of permit coverage; or
- 8.2.2 You have transferred control of all areas of the site for which you are responsible under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or
- 8.2.3 Coverage under an individual or alternative general NPDES permit has been obtained.

8.3 HOW TO SUBMIT YOUR NOT

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOT for the 2017 CGP.

To access NeT, go to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>.

Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office grants you approval to use a paper NOT, and you elect to use it, you must complete the form in Appendix K.

8.4 DEADLINE FOR SUBMITTING THE NOT

You must submit your NOT within 30 calendar days after any one of the conditions in Part 8.2 occurs.

8.5 EFFECTIVE DATE OF TERMINATION OF COVERAGE

Your authorization to discharge under this permit terminates at midnight of the calendar day that a complete NOT is submitted to EPA.

9 PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY LANDS, OR TERRITORIES

The provisions in this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and areas in certain states subject to construction projects by Federal Operators. States, Indian country, and areas subject to construction by Federal Operators not included in this Part do not have any modifications or additions to the applicable conditions of this permit.

9.1 EPA Region 1**9.1.1 NHR100000 State of New Hampshire**

- a. If you disturb 100,000 square feet or more of contiguous area, you must also apply for an Alteration of Terrain (AoT) permit from DES pursuant to RSA 485- A:17 and Env-Wq 1500. This requirement also applies to a lower disturbance threshold of 50,000 square feet or more when construction occurs within the protected shoreline under the Shoreland Water Quality Protection Act (see RSA 483-B and Env-Wq 1400). A permit application must also be filed if your project disturbs an area of greater than 2,500 square feet, is within 50 feet of any surface water, and has a flow path of 50 feet or longer disturbing a grade of 25 percent or greater. Project sites with disturbances smaller than those discussed above, that have the potential to adversely affect state surface waters, are subject to the conditions of an AoT General Permit by Rule.
- b. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-stormwater discharge under this permit (see Part 1.2.2). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the groundwater dewatering location. Information on groundwater contamination can be generated over the Internet via the NHDES web site <http://des.nh.gov/> by using the One Stop Data Mapper at <http://des.nh.gov/onestop/gis.htm>. If it is determined that the groundwater to be dewatered is near a remediation or other waste site you must apply for the Remediation General Permit (see <https://www3.epa.gov/region1/npdes/rqp.html>.)
- c. You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at least once per week during weeks when discharges occur. Samples must be analyzed for total suspended solids (TSS) or turbidity and must meet monthly average and daily maximum limits of 50 milligrams per liter (mg/L) and 100 mg/L, respectively for TSS or 33 mg/l and 67 mg/l, respectively for turbidity. TSS (a.k.a. Residue, Nonfilterable) or turbidity sampling and analysis must be performed in accordance with Tables IB and II in 40 CFR 136.3 (http://www.ecfr.gov/cgi-bin/text-idx?SID=0243e3c4283cbd7d8257eb6afc7ce9a2&mc=true&node=se40.25.136_13&r

[gn=div8](#)). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.

- d. Construction site owners and operators must consider opportunities for post-construction groundwater recharge using infiltration best management practices (BMPs) during site design and preparation of the SWPPP. If your construction site is in a town that is required to obtain coverage under the NPDES General Permit for discharges from Municipal Separate Storm Sewer Systems (MS4) you may be required to use such practices. The SWPPP must include a description of any on-site infiltration that will be installed as a post-construction stormwater management measure or reasons for not employing such measures such as 1) The facility is located in a wellhead protection area as defined in RSA 485- C:2; or 2) The facility is located in an area where groundwater has been reclassified to GAA, GAI or GA2 pursuant to RSA 485-C and Env-DW 901; or 3) Any areas that would be exempt from the groundwater recharge requirements contained in Env-Wq 1507.04(e), including all land uses or activities considered to be a "High-load Area" (see Env-Wq 1502.26). For design considerations for infiltration measures see Volume II of the NH Stormwater Manual.
- e. Appendix F contains a list of Tier 2, or high quality waters. Although there is no official list of tier 2 waters, it can be assumed that all NH surface waters are tier 2 for turbidity unless 1) the surface water that you are proposing to discharge into is listed as impaired for turbidity in the states listing of impaired waters (see Surface Water Quality - Watershed Report Cards at http://des.nh.gov/organization/divisions/water/wmb/swqa/report_cards.htm) or 2) sampling upstream of the proposed discharge location shows turbidity values greater than 10 NTU. A single grab sample collected during dry weather (no precipitation within 48 hours) is acceptable.
- f. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 1700 and Env-Wq 302, the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.4 (g).
 - i. A site map required in Part 7.2.4, showing the type and location of all post-construction infiltration BMPs utilized at the facility or the reason(s) why none were installed;
 - ii. A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (see Part 1.2.2).
 - iii. Records of sampling and analysis of TSS required for construction dewatering discharges (see Part 9.1.4 (c)).
- g. All required or requested documents must be sent to:

NH Department of Environmental Services, Wastewater Engineering Bureau,
Permits & Compliance Section
P.O. Box 95
Concord, NH 03302-0095

9.2 EPA Region 3

9.2.1 DCR100000 District of Columbia

- a. The permittee must comply with the District of Columbia Water Pollution Control Act of 1984, as amended, (D.C. Official Code §8-103.01 *et seq.*) and its

implementing regulations in Title 21, Chapters 11 and 19 of the District of Columbia Municipal Regulations. Nothing in this permit will be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to District of Columbia laws and regulations.

- b. The permittee must comply with the District of Columbia Stormwater Management, and Soil Erosion and Sediment Control in Chapter 5 of Title 21 of the District of Columbia Municipal Regulations.
- c. The permittee must comply with the District of Columbia Flood Management control in Chapter 31 of Title 20 of the District of Columbia Municipal Regulations.
- d. The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department with 14 days of such request. The Department may conduct an inspection of any facility covered by this permit to ensure compliance with District's law requirements including water quality.

9.2.2 DER10F000 Areas in the State of Delaware subject to construction by a Federal Operator

- a. Federal agencies engaging in construction activities must submit, to DNREC, a sediment and stormwater management (S&S) plan and obtain approval from DNREC in accordance with 7 Del. C. §4010, 7 DE Admin. Code 5101, and 7 DE Admin. Code 7201.
- b. Federal agencies engaging in construction activities must provide for construction review by a certified construction reviewer in accordance with 7 Del. C. §§4010 & 4013 and 7 DE Admin. Code 5101, subsection 6.1.6.
- c. Federal agencies engaging in construction activities must certify that all responsible personnel involved in the construction project will have attended the blue card training prior to initiation of any land disturbing activity – see 7 Del. C. §§ 4002 & 4014 and 7 DE Admin. Code 5101.

9.3 EPA Region 5

9.3.1 MNR10I000 Indian country within the State of Minnesota

9.3.1.1 Fond du Lac Band of Lake Superior Chippewa. The following conditions apply only to discharges on the Fond du Lac Band of Lake Superior Chippewa Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the Office of Water Protection at least fifteen (15) days in advance of sending the Notice of Intent (NOI) to EPA. The SWPPP can be submitted electronically to richardgitar@FDLREZ.com or by hardcopy sent to:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, MN 55720

CGP applicants are encouraged to work with the FDL Office of Water Protection in the identification of all proposed receiving.

- b. Copies of the Notice of Intent (NOI) and the Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.
- c. The turbidity limit shall NOT exceed 10% of natural background within the receiving water(s) as determined by Office of Water Protection staff.
- d. Turbidity sampling must take place within 24 hours of a ½-inch or greater rainfall event. The results of the sampling must be reported to the Office of Water Protection within 7 days of the sample collection. All sample reporting must include the date and time, location (GPS: UTM/Zone 15), and NTU. CGP applicants are encouraged to work with the Office of Water Protection in determining the most appropriate location(s) for sampling.
- e. Receiving waters with open water must be sampled for turbidity prior to any authorized discharge as determined by Office of Water Protection staff. This requirement only applies to receiving waters in which no ambient turbidity data exists.
- f. This Certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in §105 b.3. of the Fond du Lac Water Quality Standards (Ordinance #12/98, as amended). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit from EPA for stormwater discharges from large and small construction activities.
- g. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98, as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm water fisheries, cold water fisheries, subsistence fishing (netting), primary contact recreation, secondary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation, and commercial.
- h. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Fond du Lac Reservation. All spills must be reported to the appropriate emergency management agency (National Response Center AND the State Duty Officer), and measures shall be taken immediately to prevent the pollution of waters of the Fond du Lac Reservation, including groundwater. The Fond du Lac Office of Water Protection must also be notified immediately of any spill regardless of size.
- i. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

9.3.1.2 Grand Portage Band of Lake Superior Chippewa. The following conditions apply only to discharges on the Grand Portage Band of Lake Superior Chippewa Reservation:

- a. The CGP authorization is for construction activities that may occur within the exterior boundaries of the Grand Portage Reservation in accordance to the Grand Portage Land Use Ordinance. The CGP regulates stormwater discharges associated with construction sites of one acre or more in size. Only those activities specifically authorized by the CGP are authorized by this certification (the

“Certification”). This Certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for listing as such.

- b. All construction stormwater discharges authorized by the CGP must comply with the Water Quality Standards and Water Resources Ordinance, as well as Applicable Federal Standards (as defined in the Water Resources Ordinance). As such, appropriate steps must be taken to ensure that petroleum products or other chemical pollutants are prevented from entering the Waters of the Reservation (as defined in the Water Resources Ordinance). All spills must be reported to the appropriate emergency-management agency, and measures must be taken to prevent the pollution of the Waters of the Reservation, including groundwater.
- c. The 2017 CGP requires inspections and monitoring reports of the construction site stormwater discharges by a qualified person. Monitoring and inspection reports must comply with the minimum requirements contained in the 2017 CGP. The monitoring plan must be prepared and incorporated into the Stormwater Pollution Prevention Plan (the “SWPPP”). A copy of the SWPPP must be submitted to the Board at least 30 days in advance of sending the requisite Notice of Intent to EPA. The SWPPP should be sent to:

Grand Portage Environmental Resources Board
P.O. Box 428
Grand Portage, MN 55605

Copies of the Notice of Intent and Notice of Termination required under the CGP must be submitted to the Board at the address above at the same time they are submitted to the EPA.

- d. If requested by the Grand Portage Environmental Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Water Quality Standards and any Applicable Federal Standards.
- e. Discharges that the Board has determined to be or that may reasonably be expected to be contributing to a violation of Water Quality Standards or Applicable Federal Standards are not authorized by this Certification.
- f. The Board retains full authority provided by the Water Resources Ordinance to ensure compliance with and to enforce the provisions of the Water Resource Ordinance and Water Quality Standards, Applicable Federal Standards, and these Certification conditions.
- g. Appeals related to Board actions taken in accordance with any of the preceding conditions may be heard by the Grand Portage Tribal Court.

9.3.2 WIR10I000 Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community

9.3.2.1 Bad River Band of Lake Superior Tribe of Chippewa Indians: The following conditions apply only to discharges on the Bad River Band of the Lake Superior Tribe of Chippewa Indians Reservation:

- a. Only those activities specifically authorized by the CGP are authorized by this Certification. This Certification does not authorize impacts to cultural properties, or historical sites, or properties that may be eligible for listing as such.^{61, 62}
- b. Operators are not eligible to obtain authorization under the CGP for all new discharges to an Outstanding Tribal Resource Water (or Tier 3 water).⁶³ Outstanding Tribal Resource Waters, or Tier 3 waters, include the following: Kakagon Slough and the lower wetland reaches of its tributaries that support wild rice, Kakagon River, Bad River Slough, Honest John Lake, Bog Lake, a portion of Bad River, from where it enters the Reservation through the confluence with the White River, and Potato River.⁶⁴
- c. Projects utilizing cationic treatment chemicals⁶⁵ within the Bad River Reservation boundaries are not eligible for coverage under the CGP.⁶⁶
- d. All projects which are eligible for coverage under the CGP and are located within the exterior boundaries of the Bad River Reservation shall be implemented in such a manner that is consistent with the Tribe's Water Quality Standards (WQS).⁶⁷
- e. An operator proposing to discharge to an Outstanding Resource Water (or Tier 2.5 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. Outstanding Resource Waters, or Tier 2.5 waters, include the following: a portion of Bad River, from downstream the confluence with the White River to Lake Superior, White River, Marengo River, Graveyard Creek, Bear Trap Creek, Wood Creek, Brunsweller River, Tyler Forks, Bell Creek, and Vaughn Creek.⁶⁸ The antidegradation demonstration materials described in provision E.4.iii. must be submitted to the following address:

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

⁶¹ Bad River Band of Lake Superior Tribe of Chippewa Indians Water Quality Standards adopted by Resolution No. 7-6-11-441 (hereafter, Tribe's WQS).

⁶² 36 C.F.R. § 800.16(l)(2).

⁶³ Tribe's WQS: See provisions E.3.ii. and E.4.iv.

⁶⁴ Tribe's WQS: See provision E.2.iii.

⁶⁵ See definition of cationic treatment chemicals in Appendix A of the CGP.

⁶⁶ Tribe's WQS: See provisions E.6.ii.a. and E.6.ii.c.

⁶⁷ See footnote 61.

⁶⁸ Tribe's WQS: See provision E.2.ii.

- f. An operator proposing to discharge to an Exceptional Resource Water (or Tier 2 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. Exceptional Resource Waters, or Tier 2 waters, include the following: any surface water within the exterior boundaries of the Reservation that is not specifically classified as an Outstanding Resource Water (Tier 2.5 water) or an Outstanding Tribal Resource Water (Tier 3 water).⁶⁹ The antidegradation demonstration materials described in provision E.4.ii. must be submitted to the following address:

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

- g. A discharge to a surface water within the Bad River Reservation boundaries shall not cause or contribute to an exceedance of the turbidity criterion included in the Tribe's WQS, which states: Turbidity shall not exceed 5 NTU over natural background turbidity when the background turbidity is 50 NTU or less, or turbidity shall not increase more than 10% when the background turbidity is more than 50 NTU.⁷⁰
- h. All projects which are eligible for coverage under the CGP within the exterior boundaries of the Bad River Reservation must comply with the Bad River Reservation Wetland and Watercourse Protection Ordinance, or Chapter 323 of the Bad River Tribal Ordinances, including the erosion and sedimentation control, natural buffer, and stabilization requirements. Questions regarding Chapter 323 and requests for permit applications can be directed to the Wetlands Specialist in the Tribe's Natural Resources Department at (715) 682-7123 or wetlands@badriver-nsn.gov.
- i. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must notify the Tribe prior to the commencing earth-disturbing activities.^{71, 72} The operator must submit a copy of the Notice of Intent (NOI) to the following addresses at the same time it is submitted to the U.S. EPA:

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

Bad River Tribe's Natural Resources Department
Attn: Tribal Historic Preservation Officer (THPO)
P.O. Box 39
Odanah, WI 54861

⁶⁹ Tribe's WQS: See provision E.2.i.

⁷⁰ Tribe's WQS: See provision E.7.iii.

⁷¹ See footnote 61.

⁷² See footnote 62.

The operator must also submit a copy of the Notice of Termination (NOT) to the above addresses at the same time it is submitted to the U.S. EPA.

- j. The THPO must be provided 30 days to comment on the project.⁷³
- k. The operator must obtain THPO concurrence in writing. This written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties. For more information regarding the specifics of the cultural resources process, see 36 CFR Part 800. A best practice for an operator is to consult with the THPO during the planning stages of an undertaking.⁷⁴
- l. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the following address at the same time as submitting the NOI:⁷⁵

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

- m. Any corrective action reports that are required under the CGP must be submitted to the following address within one (1) working day of the report completion:⁷⁶

Bad River Tribe's Natural Resources Department
P.O. Box 39
Odanah, WI 54861

- n. An operator shall be responsible for meeting any additional permit requirements imposed by the U.S. EPA necessary to comply with the Tribe's antidegradation policies if the discharge point is located upstream of waters designated by the Tribe.⁷⁷

9.3.2.2 Lac du Flambeau Band of Lake Superior Tribe of Chippewa Indians: The following conditions apply only to discharges on the Lac du Flambeau Band of the Lake Superior Tribe of Chippewa Indians Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan must be submitted to the following office, for the Traival environmental review process, at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Lac du Flambeau
Tribal Land Management
P.O. Box 279

⁷³ 36 C.F.R. § 800.3(c)(4).

⁷⁴ 36 C.F.R. § 800.3(b).

⁷⁵ See footnote 61.

⁷⁶ See footnote 61.

⁷⁷ See footnote 61.

Lac du Flambeau, WI 54538

CGP applicants are encouraged to work with the LdF Water Resources Program in the identification of all proposed receiving waters.

- b. Copies of the NOI and the Notice of Termination (NOT) must be sent to the LdF Water Resources Program at the same time they are submitted to EPA.
- c. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Lac du Flambeau Reservation. This includes, but is not limited to, the prevention of any discharge that cause a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Lac du Flambeau Reservation for any of the uses designated in the Water Quality Standards of the Lac du Flambeau Reservation.
- d. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Lac du Flambeau Reservation. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the Lac du Flambeau reservation, including groundwater.
- e. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.
- f. Due to the significant ecological and cultural importance of the Lac du Flambeau Reservation, any operator requesting a permit for a point source discharge of pollutants (i.e., discharge) associated with the Stormwater Discharge will need a stormwater pollution prevention plan in place that does not violate Lac du Flambeau Water Quality Standards to protect Reservation Waters.

9.4 EPA Region 6

9.4.1 NMR100000 State of New Mexico, except Indian country

- a. 20.6.4.13 NMAC General Criteria states: ...Surface waters of the state shall be free of any water contaminant in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or unreasonably interfere with public welfare or use with property:
- b. Bottom Deposits and Suspended or Settleable Solids:
 - i. Surface waters of the state shall be free of water contaminants including fine sediment particles (less than two millimeters in diameter), precipitates or organic or inorganic solids from other than natural causes that have settled to form layers on or fill the interstices of the natural or dominant substrate in quantities that damage or impair the normal growth, function or reproduction of aquatic life or significantly alter the physical or chemical properties of the bottom.
 - ii. Suspended or settleable solids from other than natural causes shall not be present in surface waters of the state in quantities that damage or impair the normal growth, function or reproduction of aquatic life or adversely affect other designated uses.

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- c. Floating Solids, Oil and Grease: Surface waters of the state shall be free of oils, scum, grease and other floating materials resulting from other than natural causes that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.
 - d. Color: Color-producing materials resulting from other than natural causes shall not create an aesthetically undesirable condition nor shall color impair the use of the water by desirable aquatic life presently common in surface waters of the state.
 - e. Toxic Pollutants: Except as provided in 20.6.4.16 N MAC, surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, concentrations or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms.
 - f. Turbidity: Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth, function or reproduction of aquatic life is impaired or that will cause substantial visible contrast with the natural appearance of the water. Activities or discharges shall not cause turbidity to increase more than 10 NTU over background turbidity when the background turbidity, measured at a point immediately upstream of the activity, is 50 NTU or less, nor to increase more than 20 percent when the background turbidity is more than 50 NTU. However, limited-duration turbidity increases caused by dredging, construction or other similar activities may be allowed provided all practicable turbidity control techniques have been applied and all appropriate permits, certifications and approvals have been obtained.
 - g. Total Dissolved Solids (TDS): TDS attributable to other than natural causes shall not damage or impair the normal growth, function or reproduction of animal, plant or aquatic life. TDS shall be measured by either the "calculation method" (sum of constituents) or the filterable residue method. Approved test procedures for these determinations are set forth in 20.6.4.14 NMAC.
 - h. Dissolved Gases: Surface waters of the state shall be free of nitrogen and other dissolved gases at levels above 110 percent saturation when this supersaturation is attributable to municipal, industrial or other discharges.
 - i. 20.6.4.52 NMAC: *PECOS RIVER BASIN: In order to protect existing and designated uses, it is a goal of the state of New Mexico to prevent increases in TDS in the Pecos River above the following benchmark values, which are expressed as flow-weighted, annual average concentrations, at three USGS gauging stations: at Santa Rosa 500 mg/L; near Artesia 2,700 mg/L; and near Malaga 3,600 mg/l. The benchmark values serve to guide state action. They are adopted pursuant to the New Mexico Water Quality Act, not the Clean Water Act.*
 - j. 20.6.4.54 NMAC: *COLORADO RIVER BASIN: For the tributaries of the Colorado river system, the state of New Mexico will cooperate with the Colorado river basin states and the federal government to support and implement the salinity policy and program outlined in the most current "review, water quality standards for salinity, Colorado river system" or equivalent report by the Colorado river salinity control forum.*

- k. Segment-specific criteria across the state specify numeric limits for TDS, sulfate and chloride depending on the receiving waterbody, and numeric constituent specific values in 20.6.4.900 NMAC also apply depending on the designated use of the waterbody.
- l. If construction dewatering activities are anticipated at a site, permittees must complete the following steps:
 - i. Investigative information must be documented in the facility SWPPP.
 - ii. Refer to the GWQB Mapper at <https://gis.web.env.nm.gov/GWQB/> AND the PSTB Mapper (Go Mapper) at <https://gis.web.env.nm.gov/GoNM/> and check if the following sources are located within the noted distance from your anticipated construct site groundwater dewatering activity:

Project Location Relative to a Source of Potential Groundwater Contamination	Constituents likely to be required for testing
<i>Within 0.5 mile of an open Leaking Underground Storage Tank (LUST) site</i>	<i>BTEX (Benzene, Toluene, Ethylbenzene, and Xylene) plus additional parameters depending on site conditions.*</i>
<i>Within 0.5 mile of an open Voluntary Remediation site</i>	<i>All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)**</i>
<i>Within 0.5 mile of an open RCRA Corrective Action Site</i>	
<i>Within 0.5 mile of an open Abatement Site</i>	
<i>Within 0.5 mile of an open Brownfield Site</i>	
<i>Within 1.0 mile or more of a Superfund site or National Priorities List (NPL) site with associated groundwater contamination.</i>	

**For further assistance determining whether dewatering may encounter impacted groundwater, the permittee may contact the NMED Ground Water Quality Bureau at: 505-827-2965.*

***EPA approved-sufficiently sensitive methods must be used - approved methods are listed in 40 CFR Part 136.3.*

- ii. Indicate on the NO/ that dewatering activities are anticipated. Provide information on flow and potential to encounter impacted groundwater.
 - iii. Permittee must test the quality of the groundwater according to the chart above. Hardness and pH must also be measured.
 - iv. Permittee must send test result data to EPA Region 6 and the NMED Surface Water Quality Bureau. If the test data exceed standards, it cannot be discharged from the construction site into surface waters under this permit. Discharge to surface waters must be conducted under a separate NPDES individual permit to ensure proper treatment and disposal.
 - v. If disposal will be to the ground surface or in an unlined pond, the permittee must submit an NO/ to the NMED Ground Water Quality Bureau.
- m. State regulations at 20.6.4.8 NMAC state: *No degradation shall be allowed in waters designated by the commission as outstanding national resource waters (ONRWs), except as provided in Subparagraphs (a) through (e) of this paragraph and in Paragraph (4) of this Subsection A.*

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- n. Operators are not eligible to obtain authorization under this permit for all new and existing storm water discharges to outstanding national resource waters (ONRWs) (also referred to as "Tier 3" waters.)
- o. NMED does not believe compliance with the permit necessarily assures that no degradation will occur. Although state WQS provide for temporary and short-term degradation of water quality in an ONRW under very limited circumstances if approved by the Water Quality Control Commission as specified at 20.6.4.8.A NMAC, the approval process required for these activities does not lend itself for use for projects covered under this general permit. This condition is necessary to ensure that no degradation is allowed in ONRWs by requiring proposed storm water discharges to be reviewed under the individual permit process. Tier 3 waters are defined in Appendix F of the proposed permit.
- p. EPA regulations at 40 CFR Part 122.44(k) require, in part: *Best management practices (BMPs) to control or abate the discharge of pollutants when:*
- (3) *Numeric effluent limitations are infeasible, or*
 - (4) *The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.*
- q. State regulations at 20.6.4.8.A(2) state in part: *...Further, the state shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources...*
- r. State regulations at 20.6.4.8.B NMAC also state:
- (3) *assess the probable effect of the effluent on the receiving water relative to its attainable or designated uses and numeric and narrative criteria.*
- s. Operators who intend to obtain authorization under this permit for new and existing storm water discharges from construction sites must satisfy the following condition: The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4.NMAC, including the antidegradation policy, or TMDL waste load allocations (WLAs) are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long term maintenance plan), criteria for inspections, and expected performance and longevity of these BMPs. For sites greater than 5 acres in size, BMP selection must be made based on the use of appropriate soil loss prediction models (i.e. SEDCAD, RUSLE, SEDIMOT, MULTISED, etc.) OR equivalent generally accepted (by professional erosion control specialists) soil loss prediction tools.
- t. For all sites, the operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will assure that the applicable standards or TMDL WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than

the sediment yield levels and flow velocities from preconstruction, pre-development conditions.

- u. All SWPPPs must be prepared in accordance with good engineering practices by qualified (e.g. CPESC certified, engineers with appropriate training) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil loss prediction tools). Qualifications of the preparer (e.g., professional certifications, description of appropriate training) must be documented in the SWPPP. The operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.
- v. State regulations at 20.6.2.1203 NMAC state: *With respect to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, the following notifications and corrective actions are required:*
 - i. As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, any person in charge of the facility shall orally notify the Chief of the Ground Water Quality Bureau of the department, or his counterpart in any constituent agency delegated responsibility for enforcement of these rules as to any facility subject to such delegation.

Permittees can call 505-827-9329 for emergencies at any time and 505-476-6000 for non-emergencies during business hours from 5am-5pm, Monday through Friday.

- w. EPA regulations at 40 CFR Part 122.44(k) require, in part: *Best management practices (BMPs) to control or abate the discharge of pollutants when:*
 - (3) *Numeric effluent limitations are infeasible, or*
 - (4) *The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.*
- x. State regulations at 20.6.4.8.A(2) state in part: *...Further, the state shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources...*

9.4.2 NMR10I000 Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.

9.4.2.1 Pueblo of Isleta. The following conditions apply only to discharges on the Pueblo of Isleta Reservation:

- a. CGP at 1.3 Prohibited discharges: Stormwater discharges associated with construction activity that EPA or the Pueblo of Isleta, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or may reasonably be expected to contribute to a violation or excursion of any applicable water quality standard, including the antidegradation policy, or the impairment of a designated use of receiving waters are not authorized by this permit.
- b. CGP at 1.4.1 How to Submit Your NOI: The operator shall provide a copy of the Notice of Intent ("NOI") to the Pueblo of Isleta at the same time it is submitted to the

U.S. Environmental Protection Agency, for projects occurring within the exterior boundaries of the Pueblo of Isleta. The operator shall also notify the Pueblo of Isleta when it has submitted the Notice of Termination ("NOT"). The NOI and NOT shall be sent to the Pueblo of Isleta at the following address:

Water Quality Control Officer
Pueblo of Isleta
Environment Division
PO Box 1270
Isleta, NM 87022
(505) 869-7565
E-mail: POI36871@isletapueblo.com

Overnight/Express Mail Delivery
Pueblo of Isleta
Environment Division
6 Sagebrush St.
Albuquerque, NM 87105

- c. CGP at 1.5 Requirement to post a notice of your permit coverage: Amend to read: "You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road or tribal road that is nearest to the active part of the construction site..."
- d. CGP at 7.2.6 Description of stormwater controls: The SWPPP will be considered to be incomplete if the operator has not coordinated requirements under this Part with the Pueblo of Isleta Public Services Department.
- e. CGP 1.12.6.1 at pg.1-6 of 8. The Pueblo of Isleta requests notification within 10 hours (rather than 24 hrs.) if health or the environment become endangered.
- f. CGP at 1.12.2 Anticipated noncompliance: Amend to read: "You must give advance notice to EPA and the Pueblo of Isleta at the address indicated in 1.4.1(a) of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements."
- g. CGP at 1.12.6.1: Any noncompliance for projects within the exterior boundaries of the Pueblo of Isleta which may endanger health or the environment shall be reported directly to the EPA Regional Office [(see contacts at <https://www2.epa.gov/national-pollutant-discharge-elimination-system-npdes/contact-us-stormwater#regional>)] and to the Pueblo of Isleta Water Quality Control Officer. Any information must be provided orally within 12 hours of the time you become aware of the circumstances. Other requirements of this Part for a written submission apply. Electronic communication (E-mail) shall be provided as soon as practical. Verbal notice shall be provided to:

Water Quality Control Officer
Pueblo of Isleta
E-mail: POI36871@isletapueblo.com
(505) 869-7565
(505) 263-5425 cellular
(505) 869-3030 Police Dispatch

- h. CGP at 2.2 Erosion and sediment control requirements: Erosion and sediment controls shall be designed to retain sediment on-site.
- i. CGP at 2.2 Under Sediment control requirements, Standard Permit Condition Duty to Mitigate Volumes of sediment at or over (five) 5 cubic yards must be removed and placed for disposal within a tribally approved sediment Disposal Site, located on Pueblo of Isleta lands. CGP 2.2 at pg. 8.
- j. Under Minimize erosion, a permittee must secure permission from the Pueblo or affected Pueblo of Isleta land assignment owner if a dissipation device needs to be placed up- or down- elevation of a given construction site. CGP 2.2.11 at pg. 11.
- k. CGP at 2.3.6 Emergency spill notification requirements: You must notify the Pueblo of Isleta Water Quality Control Officer and National Response Center (NRC) [at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302] as soon as you have knowledge of the release. Verbal and electronic notice shall be provided as specified in I.12.6.1
- l. CGP at C.3 Equivalent analysis waiver: Parties wishing to apply for an Equivalent Analysis Waiver (see Appendix D, Section C) must provide a copy of the waiver analysis to the Pueblo of Isleta Water Quality Control Officer at the address indicated in 1.4.1 (a).

9.4.2.2 Pueblo of Sandia. The following conditions apply only to discharges on the Pueblo of Sandia Reservation:

- a. Only those activities specifically authorized by the CGP are authorized by the Pueblo of Sandia's Water Quality certification. The Pueblo of Sandia's Water Quality Certification does not authorize impact to cultural properties, historical sites or properties that may be eligible as such.
- b. Copies of all Notices of Intent (NOI) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia at the following address. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the Pueblo of Sandia, either by mail or electronically.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department
Attention: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, New Mexico 87004

Electronically:

sbulgrin@sandiapueblo.nsn.us

- c. Any correspondences between the applicant and EPA related to analytical data, written reports, corrective action, enforcement, monitoring, or an adverse incident written reports should likewise be routed to the Pueblo of Sandia at the above address.
- d. The Stormwater Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia Environment Department either electronically or hard copy upon request for review. The SWPPP must be made available at least fourteen (14) days before construction begins. The fourteen (14) day period will give Pueblo staff time to become familiar with the project site, prepare for construction site inspections, and

determine compliance with the Pueblo of Sandia Water Quality Standards. Failure to provide a SWPPP to the Pueblo of Sandia may result in the delay or denial of the construction project.

- e. If requested by the Pueblo of Sandia Environment Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Pueblo of Sandia Water Quality Standards and/or applicable Federal Standards not authorized by this certification.
- f. An "Authorization to Proceed Letter" with site specific mitigation requirements may be sent out to the permittee when a review of the NOI and SWPPP, on a case-by-case basis is completed by the Pueblo of Sandia Environment Department. This approval will allow the application to proceed if all mitigation requirements are met.
- g. The Pueblo of Sandia will not allow Small construction Waivers (Appendix C) or the Rainfall Erosivity Waiver (Appendix C.1) to be granted for any small construction activities.
- h. Before submitting a Notice of Termination (NOT) to the EPA, permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed. A short letter stating the NOT is acceptable and all requirements have been met will be sent to the permittee to add to the permittee's NOT submission to EPA.
- i. Copies of all NOT submitted to the EPA must also be sent concurrently to the Pueblo of Sandia through the mail or electronically.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department
Attention: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, New Mexico 87004

Electronically:

sbulgrin@sandiapueblo.nsn.us

- j. The Pueblo of Sandia may require the permittee to perform water quality monitoring for pH, turbidity, and total suspended solids (TSS) during the permit term if the discharge is to a surface water leading to the Rio Grande for the protection of public health and the environment.

9.4.2.3 Pueblo of Santa Ana. The following conditions apply only to discharges on the Pueblo of Santa Ana Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Pueblo of Santa Ana (the Pueblo), at the same time it is submitted to the U.S. Environmental Protection Agency (EPA), for projects with discharges onto the lands of the Pueblo as defined in the Pueblo of Santa Ana Water Quality Standards.
- b. The operator shall provide a copy of the Stormwater Pollution Prevention Plan (SWPPP), at the same time that an NOI is submitted to the EPA, to the Pueblo for

projects with discharges onto the lands of the Pueblo as defined in the Pueblo of Santa Ana Water Quality Standards.

- c. The operator shall provide a copy of the SWPPP, copies of inspections reports, and copies of corrective action reports to the Pueblo at the address below for review, upon request.
- d. The NOI, SWPPP and Notice of Termination (NOT) shall be sent to the Pueblo at the following address:

Pueblo of Santa Ana Department of Natural Resources,
Attention: Water Quality Program Specialist
2 Dove Road
Santa Ana Pueblo, NM, 87004

- e. Discharges are not authorized by this permit unless an accurate and complete NOI and SWPPP have been submitted to the Pueblo. Failure to provide an accurate and complete NOI and SWPPP may result in a denial of the discharge permit or groundbreaking or construction delay.
- f. The operator will not proceed with site work until authorized by the Pueblo. The Pueblo requires review of the complete and final SWPPP by the Pueblo before authorization to proceed. The Pueblo will provide an "authorization to proceed" notice after review and approval of the SWPPP.
- g. Before submitting a NOT, permittees must certify to the Pueblo's Department of Natural Resources in writing that requirements for site stabilization have been met, and any temporary erosion control structures have been removed. Documentation of the Pueblo's review that such requirements have been reviewed and met will be provided for the permittee to add to the permittee's NOT submission to EPA. Copies of all NOT submitted to the EPA must also be sent to the Pueblo at the address provided above.

9.4.2.4 Pueblo of Santa Clara. The following conditions apply only to discharges on the Pueblo of Santa Clara Reservation:

- a. The operator must provide a copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to the Santa Clara Pueblo Governor's Office at the same time it is provided to the US Environmental Protection Agency.
- b. A copy of the Storm water Pollution Prevention Plan shall be made available to the Pueblo of Santa Clara staff upon request.

9.4.2.5 Pueblo of Tesuque. The following conditions apply only to discharges on the Pueblo of Tesuque Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Pueblo of Tesuque Governor's Office and Environment Department at same time it is submitted to the Environmental Protection Agency, for projects occurring within the exterior boundaries of our tribal lands. The operator shall also notify the Pueblo of Tesuque Governor's Office and Environment Department when it submitted the Notice of Termination. The NOI and NOT shall be sent to the Pueblo of Tesuque Governor's Office and Environment Department at the following address:

Pueblo of Tesuque
Office of the Governor

Route 42 Box 360-T
Santa Fe, NM 87506 or
email: governor@pueblooftesuque.org

- b. The operator shall also provide a copy of the Stormwater Pollution Prevention Plan, copies of inspections reports, and copies of corrective action reports to staff in the Pueblo of Tesuque Environment Department.

9.4.2.6 Taos Pueblo. The following conditions apply only to discharges on the Taos Pueblo Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Taos Pueblo Governor's Office, War Chief's Office and Environmental Office, at the same time it is submitted to the U.S. Environmental Protection Agency, for projects occurring within the exterior boundaries of Taos Pueblo. The operator shall also notify Taos Pueblo when it has submitted the Notice of Termination (NOT). The NOI and NOT shall be sent to the Taos Pueblo at the following addresses:

- i. Taos Pueblo Governor's Office
P.O. Box 1846
Taos NM 87571
- ii. Taos Pueblo War Chief's Office
P.O. Box 2596
Taos NM 87571
- iii. Environmental Office
Attn: Program Manger
P.O. Box 1846
Taos NM 87571

- b. Taos Pueblo requests that in the event Indian artifacts or human remains are inadvertently discovered on projects occurring near or on Taos Pueblo lands that consultation with the tribal Governor's Office occur at the earliest possible time.
- c. The operator shall provide a copy of the Stormwater Pollution Prevention Plan, copies of inspections reports, and copies of corrective action reports to staff in the Taos Pueblo Environmental Office for review and copy, upon request.

9.4.2.7 Ohkay Owingeh. The following conditions apply only to discharges on the Ohkay Owingeh Reservation:

- a. Prior to commencement of any construction activity on Ohkay Owingeh Lands requiring permit coverage under EPA's Construction General Permit, the operator(s) shall submit to Ohkay Owingeh Office of Environmental Affairs, a copy of the electronic "Notice of Intent," submitted to the Environmental Protection Agency, immediately following EPA's electronic notification that the NOI has been received. A copy of the Stormwater Pollution Prevention Plan(s) must be made available to the Ohkay Owingeh Office of Environmental Affairs upon the tribe's request either electronically or hard copy. Operator(s) shall also submit to Ohkay Owingeh Office of Environmental Affairs a copy of the electronic Notice of Termination (NOT) submitted to the Environmental Protection Agency. Documents shall be submitted to Ohkay Owingeh at the following address:

Ohkay Owingeh Office of Environment Affairs
Attention: Environmental Programs Manager

P.O. Box 717
Ohkay Owingeh, New Mexico 87566
Office # 505.852.4212
Fax # 505.852.1432
Electronic mail: naomi.archuleta@ohkay.org

- b. Ohkay Owingeh will not allow the Rainfall Erosivity Waivers (see Appendix C) to be granted for any small construction activities.
- c. All vegetation used to prevent soil loss, seeding or planting of the disturbed area(s) to meet the vegetative stabilization requirements must utilize native seeds/vegetation commonly known to the area. All temporary erosion control structures, such as silt fences must be removed as soon as stabilization requirements are met.

9.4.3 OKR10I000 Indian country within the State of Oklahoma

9.4.3.1 Pawnee Nation. The following conditions apply only to discharges within Pawnee Indian country:

- a. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pawnee Nation at the same time it is submitted to the Environmental Protection Agency to the following address:

Pawnee Nation Department of Environmental Conservation and Safety
P.O. Box 470
Pawnee, OK 74058
Or email to mmatlock@pawneenation.org

- b. The Storm Water Pollution Prevention Plan must be available to Departmental inspectors upon request.
- c. The Department must be notified at 918.762.3655 immediately upon discovery of any noncompliance with any provision of the permit conditions.

9.4.4 OKR10F000 Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).

- a. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Certification is denied for any on-going activities such as sand and gravel mining or any other mineral mining.
- b. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, certification is denied for any discharges originating from support activities, including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.

- c. In order to comply with Oklahoma's Water Quality Standards, these conditions and restrictions also apply to any construction projects located wholly or partially on Indian Country lands within the State of Oklahoma.

9.5 EPA Region 8

9.5.1 MTR10I000 Indian country within the State of Montana

9.5.1.1 The Confederated Salish and Kootenai Tribes of the Flathead Nation. The following conditions apply only to discharges on the Confederated Salish and Kootenai Tribes of the Flathead Nation Reservation:

- a. Permittees must submit the Stormwater Pollution Prevention Plan (SWPPP) to the Confederated Salish and Kootenai Tribes at least 30 days before construction starts.
- b. Before submitting the Notice of Termination (NOT), permittees must clearly demonstrate to an appointed Tribal staff person during an onsite inspection that requirements for site stabilization have been met.
- c. The permittee must send a copy of the Notice of Intent (NOI) and the NOT to CSKT.
- d. Permittees may submit their SWPPPs, NOIs and NOTs electronically to:
clintf@cskt.org.
- e. Written SWPPPs, NOIs and NOTs may be mailed to:

Clint Folden, Water Quality Regulatory Specialist
Confederated Salish and Kootenai Tribes
Natural Resources Department
P.O. Box 278
Pablo, MT 59855

9.6 EPA Region 9

9.6.1 CAR10I000 Indian country within the State of California

9.6.1.1 Twenty-Nine Palms Band of Mission Indians. The following conditions apply only to discharges on the Twenty-Nine Palms Band of Mission Indians Reservation:

- a. At the time the applicant submits its Notice of Intent (NOI) to the EPA, the applicant must concurrently submit written notification of the NOI and a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Twenty-Nine Palms Band of Mission Indians at the address below:

Tribal Environmental Coordinator
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place
Coachella, CA 92236

- b. The applicant must also concurrently submit to the Tribal Environmental Coordinator written notification of any other forms or information submitted to the EPA, including waivers, reporting, and Notice of Termination (NOT).
- c. Permitted entities under the CGP must keep the Tribal EPA informed of authorized discharges under the CGP by submitting written information about the type, quantity, frequency and location, intended purpose, and potential human health

and/or environmental effects of their activities. These requirements are pursuant to Section 4 of the Twenty-Nine Palms Band of Mission Indians Water Pollution Control Ordinance (022405A). This information may be submitted to Tribal EPA in the form of Stormwater Pollution Prevention Plans (SWPPPs), monitoring reports, or other reports as required under the CGP. Spills, leaks, or unpermitted discharges must be reported in writing to Tribal EPA within 24 hours of the incident.

9.6.2 GUR100000 Island of Guam. The following conditions apply only to discharges on the Island of Guam:

- a. Any earth-moving operations which require a permit must be obtained from the Department of Public Works (DPW) with clearance approval from various Government of Guam Agencies including Guam EPA prior to the start of any earth-moving activity.
- b. In the event that the construction sites are within the Guam Sole Source Aquifer, the construction site owner and operator must consider opportunities to facilitate groundwater recharge for construction and post-construction implementing infiltration Best Management Practices. Stormwater disposal systems shall be designed and operated within the boundaries of the project. Stormwater systems shall not be permitted within any Wellhead Protection Zone unless the discharge meets the Guam Water Quality Standards within the zone. Waters discharged within the identified category G-2 recharge zone shall receive treatment to the degree required to protect the drinking water quality prior to it entering the category G-1 resource zone.
- c. All conditions and requirements set forth in the 22 Guam Administrative Rules and Regulations (GARR), Division II, Water Control, Chapter 10, Guam Soil Erosion and Sediment Control Regulations (GSESCR) that are more protective than the CGP regarding construction activities must be complied with.
- d. All standards and requirements set forth in the 22 GARR, Division II, Water Control, Chapter 5, *Guam Water Quality Standards (GWQS) 2001 Revisions*, must be complied with to include reporting GWQS exceedance to Guam EPA.
- e. All operators/owners of any property development or earth moving activities shall comply with the erosion control pre-construction and post-construction BMP design performance standards and criteria set forth in the 2006 CNMI and Guam Stormwater Management Manual.
- f. All conditions and requirements regarding dewatering activities set forth in 22 Guam Administrative Rules and Regulations Chapter 7, Water Resources Development and Operating Regulations must be complied with to include securing permits with Guam EPA prior to the start of any dewatering activities.
- g. If a project to be developed is covered under the Federal Stormwater Regulations (40 CFR Parts 122 & 123), a Notice of Intent (NOI) to discharge stormwater to the surface and marine waters of Guam must be submitted to the U.S. EPA and a copy furnished to Guam EPA, pursuant to Section 10, 104(B)(5)(d) 22GAR, Division II, Chapter 10.
- h. Guam EPA shall apply the Buffer Requirements listed in Appendix G of the CGP NPDES Permit for construction activities as it pertains to Waters of the U.S. in Guam. Guam EPA shall also apply the same buffer requirements for sinkholes in Guam.
- i. When Guam EPA, through its permit review process, identifies that the proposed construction activity is close proximity to marine waters, contractors and owners will

be informed that any activity that may impair water quality are required to stop during peak coral spawning periods as per the Guam Coral Spawning Construction Moratoriums.

- j. The Proposed Construction General Permit must set appropriate measures and conditions to protect Guam's Threatened and Endangered Species and Outstanding Resource Waters of exceptional recreational or ecological significance as determined by the Guam EPA Administrator as per *Guam Water Quality Standards 2001 Revisions*, §5102, Categories of Waters, D. Outstanding Resource Waters.
- k. When Guam EPA through its permit review process identifies that proposed construction activity is in close proximity to any Section 303d impaired waters, which includes marine waters and surface waters, shall ensure that construction activity does not increase the impaired water's ambient parameters.
- l. When Rainfall Erosivity and TMDL Waivers reflected in the CGP, Appendix C, are submitted to the U.S. EPA, Guam EPA will review waivers on a project by project basis.
- m. Prior to submission of the Notice of Termination (NOT) to the U.S. EPA, permittees must clearly demonstrate to Guam EPA that the project site has met all soil stabilization requirements and removal of any temporary erosion control as outlined in the GSESCR.

9.7 EPA Region 10

9.7.1 IDR100000 State of Idaho, except Indian country

- a. Idaho's Antidegradation Policy. The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).
 - 1. Tier I Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier 1 review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.05).
 - 2. Tier II Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
 - 3. Tier III Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

- b. Pollutants of Concern. The primary pollutants of concern associated with stormwater discharges from construction activities are sediment, typically

measured as total suspended solids and turbidity. Other potential pollutants include the following: phosphorus, nitrogen, pesticides, organics, metals, PCBs, petroleum products, construction chemicals, and solid wastes.

- c. Receiving Water Body Level of Protection. The CGP provides coverage to construction activities throughout the entire State of Idaho. Because of the statewide applicability, all of the jurisdictional waters within Idaho could potentially receive discharges either directly or indirectly from activities covered under the CGP. DEQ applies a water body by water body approach to determine the level of antidegradation a water body will receive.

All waters in Idaho that receive discharges from activities authorized under the CGP will receive, at minimum Tier I antidegradation protection because Idaho's antidegradation policy applies to all waters of the state. Water bodies that fully support their aquatic life or recreational uses are considered to be *high quality waters* and will receive Tier II antidegradation protection.

Although Idaho does not currently have any Tier III designated outstanding resource waters (ORWs) designated, it is possible for a water body to be designated as an ORW during the life of the CGP. Because of this potential, the antidegradation review also assesses whether the permit complies with the outstanding resource water requirements of Idaho's antidegradation policy.

To determine the support status of the receiving water body, persons filing a Notice of Intent (NOI) for coverage under this general permit must use the most recent EPA-approved Integrated Report, available on Idaho DEQ's website:

<http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report/>.

High quality waters are identified in Categories 1 and 2 of the Integrated Report. If a water body is in either Category 1 or 2, it is a Tier II water body.

Unassessed waters are identified as Category 3 of DEQ's Integrated Report. These waters require a case-by-case determination to be made by DEQ based on available information at the time of the application for permit coverage. If a water body is unassessed, the applicant is directed to contact DEQ for assistance in filing the NOI.

Impaired waters are identified in Categories 4 and 5 of the Integrated Report. Category 4(a) contains impaired waters for which a TMDL has been approved by EPA. Category 4(b) contains impaired waters for which controls other than a TMDL have been approved by EPA. Category 5 contains waters which have been identified as "impaired," for which a TMDL is needed. These waters are Tier I waters, for the use which is impaired. With the exception, if the aquatic life uses are impaired for any of these three pollutants—dissolved oxygen, pH, or temperature—and the biological or aquatic habitat parameters show a health, balanced biological community, then the water body shall receive Tier II protection, in addition to Tier I protection, for aquatic life uses (IDAPA 58.01.02.052.05.c.i.).

DEQ's webpage also has a link to the state's map-based Integrated Report which presents information from the Integrated Report in a searchable, map-based format: <http://www.deq.idaho.gov/assistance-resources/maps-data/>.

Water bodies can be in multiple categories for different causes. If assistance is

needed in using these tools, or if additional information/clarification regarding the support status of the receiving water body is desired, the operator is directed to make contact with the appropriate DEQ regional office of the State office in the table below:

Regional and State Office	Address	Phone Number	Email
Boise	1445 N. Orchard Rd., Boise 83706	208-373-0550	Kati.carberry@deq.idaho.gov
Coeur d'Alene	2110 Ironwood Parkway, Coeur D'Alene 83814	208-769-1422	June.bergquist@deq.idaho.gov
Idaho Falls	900 N. Skyline, Suite B., Idaho Falls 83402	208-528-2650	Troy.saffle@deq.idaho.gov
Lewiston	1118 "F" St., Lewiston 83501	208-799-4370	Mark.sellet@deq.idaho.gov
Pocatello	444 Hospital way, #300 Pocatello 83201	208-236-6160	Lynn.vanevery@deq.idaho.gov
Twin Falls	650 Addison Ave., W., Suite 110, Twin Falls 83301	208-736-2190	Balthasar.buhidar@deq.idaho.gov
State Office	1410 N. Hilton Rd., Boise 83706	208-373-0502	Nicole.deinarowicz@deq.idaho.gov

- d. *Turbidity Monitoring*. The permittee must conduct turbidity monitoring during construction activities and thereafter on days where there is a direct discharge of pollutants from an unstabilized portion of the site which is causing a visible plume to a water of the U.S.

A properly and regularly calibrated turbidimeter is required for measurements analyzed in the field (preferred method), but grab samples may be collected and taken to a laboratory for analysis. If the permittee can demonstrate that there will be no direct discharge from the construction site, then turbidity monitoring is not required. When monitoring is required, a sample must be taken at an undisturbed area immediately upstream of the project area to establish background turbidity levels for the monitoring event. Background turbidity, location, date and time must be recorded prior to monitoring downstream of the project area. A sample must also be taken immediately downstream from any point of discharge and *within* any visible plume. The turbidity, location, date and time must be recorded. The

downstream sample must be taken immediately following the upstream sample in order to obtain meaningful and representative results.

Results from the compliance point sampling or observation⁷⁸ must be compared to the background levels to determine whether project activities are causing an exceedance of state WQS. If the downstream turbidity is 50 NTUs or more than the upstream turbidity, then the project is causing an exceedance of WQS. *Any exceedance of the turbidity standard must be reporting to the appropriate DEQ regional office within 24 hours. The following six (6) steps should be followed to ensure compliance with the turbidity standard:*

1. If a visible plume is observed, quantify the plume by collecting turbidity measurements from within the plume and compare the results to Idaho's instantaneous numeric turbidity criterion (50 NTU over the background).
2. If turbidity is less than 50 NTU instantaneously over the background turbidity; continue monitoring as long as the plume is visible. If turbidity exceeds background turbidity by more than 50 NTU instantaneously then stop all earth disturbing construction activities and proceed to step 3.
3. Take immediate action to address the cause of the exceedance. That may include inspection the condition of project BMPs. If the BMPs are functioning to their fullest capability, then the permittee must modify project activities and/or BMPs to correct the exceedance.
4. Notify the appropriate DEQ regional office within 24 hours.
5. Possibly increase monitoring frequency until state water quality standards are met.
6. Continue earth disturbing construction activities once turbidity readings return to within 50 NTU instantaneously and 25 NTU for more than ten consecutive days over the background turbidity.

Copies of daily logs for turbidity monitoring must be available to DEQ upon request. The report must describe all exceedances and subsequent actions taken, including the effectiveness of the action.

- e. Reporting of Discharges Containing Hazardous Materials or Petroleum Products. All spills of hazardous material, deleterious material or petroleum products which may impact waters (ground and surface) of the state shall be immediately reported. Call 911 if immediate assistance is required to control, contain or clean up the spill. If no assistance is needed in cleaning up the spill, contact the appropriate DEQ regional office in the table below during normal working hours or Idaho State Communications Center after normal working hours. If the spilled volume is above federal reportable quantities, contact the National Repose Center.

For immediate assistance: Call 911

National Response Center: (800) 424-8802

⁷⁸ A visual observation is only acceptable to determine whether BMPs are functioning properly. If a plume is observed, the project may be causing an exceedance of WQS and the permittee must collect turbidity data and inspect the condition of the projects BMPs. If the BMPs appear to be functioning to their fullest capability and the turbidity is 50 NTUs or more than the upstream turbidity, then the permittee must modify the activity or implement additional BMPs (this may also include modifying existing BMPs).

Idaho State Communications Center: (208) 632-8000

Regional office	Toll Free Phone Number	Phone Number
Boise	888-800-3480	208-373-0321
Coeur d'Alene	877-370-0017	208-769-1422
Idaho Falls	800-232-4635	208-528-2650
Lewiston	977-547-3304	208-799-4370
Pocatello	888-655-6160	208-236-6160
Twin Falls	800-270-1663	208-736-2190

9.7.2 IDR10I000 Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)

9.7.2.1 Shoshone-Bannock Tribes. The following conditions apply only to discharges on the Shoshone-Bannock Reservation:

- f. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Shoshone-Bannock Tribes Water Resources Department at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Shoshone-Bannock Tribes Water Resources Department the acknowledgement of receipt of the NOI from the EPA within 7 calendar days of receipt from the EPA.

9.7.3 WAR10F000 Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator. The following conditions apply only to discharges on federal facilities in the State of Washington:

- a. Discharges shall not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), groundwater quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that are not in compliance with these standards are not authorized.
- b. Prior to the discharge of stormwater and non-storm water to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate SWPPP, with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- c. Permittees who discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, phosphorus, or pH must comply with the following numeric effluent limits:

Parameter Identified in 303(d) Listing	Parameter Sampled	Unit	Analytical Method	Numeric Effluent Limit
<ul style="list-style-type: none"> • Turbidity • Fine Sediment • Phosphorus 	Turbidity	NTU	SM2130 or EPA 180.1	25 NTUs at the point where the stormwater is discharged from the site.
High pH	pH	Su	pH meter	In the range of

				6.5 – 8.5
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- d. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current EPA approved listing of impaired waters that exists on February 16, 2017, or the date when the operator's complete permit application is received by EPA, whichever is later.
- e. Discharges to waterbodies subject to an applicable Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus, shall be consistent with the assumptions and requirements of the TMDL.
 - i. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements establish by the applicable TMDL.
 - ii. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with this permit will be assumed to be consistent with the approved TMDL.
 - iii. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with this permit will be assumed to be consistent with the approved TMDL.
 - iv. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
 - v. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which has been completed and approved by EPA prior to February 16, 2017, or prior to the date the operator's complete NOI is received by EPA, whichever is later.

9.7.4 WAR10I000 Indian country within the State of Washington

9.7.4.1 Confederated Tribes of the Colville Reservation. The following conditions apply only to discharges on the Colville Indian Reservation (CIR) and on other Tribal trust lands or allotments of the Confederated Tribes of the Colville Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan must be submitted to the following office at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Environmental Trust Department
 Confederated Tribes of the Colville Reservation
 PO Box 150
 Nesepelem, WA 99155

- b. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be sent to the ETD at the same time they are submitted to EPA.
- c. Discharges to Omak Creek, the Okanogan River, and Columbia River downstream of Chief Joseph Dam may affect threatened or endangered species, and shall only be permitted in adherence with Appendix D of the CGP.

- d. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Chapter 4-8 Water Quality Standards of the Colville Law and Order Code, as amended.
- e. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the CIR. All spills must be reported to the appropriate emergency management agency and the ETD, and measures shall be taken immediately to prevent the pollution of waters of the CIR, including groundwater.
- f. Stormwater site inspections shall be conducted at least once every 7 calendar days, within 24-hours of the occurrence of a rain event of 0.25 inches or greater in a 24-hour period, and daily during periods of saturated ground surface or snowmelt with accompanying surface runoff.
- g. Results of discharge sampling must be reported to the ETD within 7 days of sample collection. All sample reporting must include the date and time, location, and individual performing the sampling.
- h. Any corrective action reports that are required under the CGP must be submitted to the ETD at the above address within one (1) working day of the report completion.
- i. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

9.7.4.2 Lummi Nation. The following conditions apply only to discharges on the Lummi Reservation:

- a. The Lummi Nation reserves the right to modify this 401 certification if the final version of the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (CGP) on tribal lands in the State of Washington (Permit No. WAR10I000) is substantively different than the draft version of the proposed permit that was made available for public comments during April 2016. The Lummi Nation will determine if the final version of the NPDES CGP is substantively different than the draft version following review of the final version once the EPA makes it available.
- b. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.
- c. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.
- d. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210 together with supplements and amendments thereto).
- e. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Lummi Water Resources Division at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Lummi Water Resources Division the acknowledgement of receipt of the NOI from the EPA and

the associated NPDES tracking number provided by the EPA within 7 calendar days of receipt from the EPA.

- f. Each operator shall submit a signed hard copy of the Notice of Termination (NOT) to the Lummi Water Resources Division at the same time it is submitted electronically to the EPA and shall provide the Lummi Water Resources Division the EPA acknowledgement of receipt of the NOT.
- g. Storm Water Pollution Prevention Plans, Notice of Intent, Notice of Termination and associated correspondence with the EPA shall be submitted to:

Lummi Natural Resources Department
ATTN: Water Resources Manager
2665 Kwina Road
Bellingham, WA 98226-9298

9.7.4.3 Makah Tribe. The following conditions apply only to discharges on the Makah Reservation:

- a. The operator shall be responsible for achieving compliance with the Makah Tribe's Water Quality Standards.
- b. The operator shall submit a Storm Water Pollution Prevention Plan to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division for review and approval at least thirty (30) days prior to beginning any discharge activities.
- c. The operator shall submit a copy of the Notice of Intent to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division at the same time it is submitted to EPA.
- d. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:

Aaron Parker
Makah Fisheries Management Water Quality Specialist
(360) 645-3162
Cell 206-356-0319
Aaron.parker@makah.com
PO Box 115
Neah Bay WA 98357

9.7.4.4 Puyallup Tribe of Indians. The following conditions apply only to discharges on the Puyallup Tribe of Indians Reservation:

- a. Each permittee shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards, including antidegradation provisions. The Puyallup Natural Resources Department will conduct an antidegradation review for permitted activities that have the potential to lower water quality. The antidegradation review will be consistent with the Tribe's Antidegradation Implementation Procedures. The Tribe may also impose additional controls on a site-specific basis, or request EPA to require the operator obtain coverage under an individual permit, if information in the NOI or from other sources indicates that the operator's discharges are not controlled as necessary to meet applicable water quality standards.
- b. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation

policies if the discharge point is located within 1 linear mile upstream of waters designated by the Tribe.

- c. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to Char Naylor (char.naylor@puyalluptribe.com) and Russ Ladley (russ.ladley@puyalluptribe.com) by email or at the address listed below at the same time it is submitted to EPA.

Puyallup Tribe of Indians
3009 E. Portland Avenue
Tacoma, WA 98404
ATTN: Russ Ladley and Char Naylor

- d. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to the Tribe's Resource Protection Manager (russ.ladley@puyalluptribe.com) and Char Naylor (char.naylor@puyalluptribe.com) for review.
- e. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to Russ Ladley and Char Naylor at the address listed above.
- f. The permittee shall submit all stormwater pollution prevention plans to Char Naylor for review and approval prior to beginning any activities resulting in a discharge to tribal waters.
- g. The permittee shall conduct benchmark monitoring for turbidity (or transparency) and, in the event of significant concrete work or engineered soils, pH monitoring as well. Monitoring, benchmarks, and reporting requirements contained in Condition S.4. (pp.13-20) of the Washington State Construction Stormwater General Permit, effective January 1, 2016, shall apply, as applicable.
- h. The permittee shall notify Char Naylor (253-680-5520) and Russ Ladley (253-680-5560) prior to conducting inspections at construction sites generating storm water discharged to tribal waters.
- i. Treat dewatering discharges with controls necessary to minimize discharges of pollutants in order to minimize the discharge of pollutants to groundwater or surface waters from stormwater that is removed from excavations, trenches, foundations, vaults, or other storage areas. Examples of appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, and filtration systems (e.g., bag or sand filters) that are designed to remove sediment.

To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11 of EPA's 2016 General Construction Stormwater Permit. Examples of velocity dissipation devices include check dams, sediment traps, riprap, and grouted riprap at outlets.

- j. The permittee shall provide and maintain natural buffers to the maximum extent possible (and/or equivalent erosion and sediment controls) when tribal waters are located within 100 feet of the site's earth disturbances. If infeasible to provide and maintain an undisturbed 100 foot natural buffer, erosion and sediment controls to achieve the sediment load reduction equivalent to a 100-foot undisturbed natural buffer shall be required.

9.7.4.5 Spokane Tribe of Indians. The following conditions apply only to discharges on the Spokane Tribe Reservation:

- a. Pursuant to Tribal Law and Order Code (TLOC) Chapter 30 each operator shall be responsible for achieving compliance with the Surface Water Quality Standards of the Spokane Tribe. The operator shall notify the Spokane Tribe, Water Control Board (WCB) of any spills of hazardous material and;
- b. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the WCB at the same time it is submitted to EPA.
- c. The permittee shall allow the Tribal Water Control Board or its designee to inspect and sample at the construction site as needed.
- d. Each operator shall submit a signed copy of the Notice of Termination (NOT) to the WCB at the same time it is submitted to EPA.

The correspondence address for the Spokane Tribe Water Control Board is:

Water Control Board
c/o. Brian Crossley
PO Box 480
Wellpinit WA 99040
(509)626-4409
crossley@spokanetribe.com

9.7.4.6 Swinomish Indian Tribal Community. The following conditions apply only to discharges on the Swinomish Reservation:

- a. Owners and operators seeking coverage under this permit who intend to discharge to Regulated Surface Waters must submit a copy of the Notice of Intent (NOI) to the DEP at the same time the NOI is submitted to EPA.
- b. Owners and operators seeking coverage under this permit must also submit a Stormwater Pollution Prevention Plan to the DEP for review and approval by DEP prior to beginning any discharge activities.
- c. Owners and operators must also submit to the DEP Changes in NOI and/or Notices of Termination at the same time they are submitted to EPA.

9.7.4.7 Tulalip Tribes. The following conditions apply only to discharges on the Tulalip Reservation:

- a. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Tulalip tribal agencies. Pursuant to Tulalip Tribes code of law, the operator must also obtain a land use permit from the Tulalip Tribes Planning Department as provided in Title 7 of the Tulalip Tribal Code (<http://www.codepublishing.com/WA/Tulalip/?Tulalip02/Tulalip0205.html>).
- b. Each CGP operator shall be responsible for achieving compliance with Tulalip Tribes Water Quality Standards.
- c. Each CGP operator shall submit their Stormwater Pollution Prevention Plan (SWPPP) to the:

Tulalip Natural & Cultural Resources Department
Tulalip Tribes
6406 Marine Drive
Tulalip, WA 98271

Appendix A - Definitions and Acronyms

1. Definitions

“Action Area” – all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. See 50 CFR 402. For the purposes of this permit and for application of the threatened and endangered species protection eligibility requirements, the following areas are included in the definition of action area:

- The areas on the construction site where stormwater discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity. (Example: Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity or where grading causes stormwater to flow into a small wetland or other habitat that is on the site that contains listed species.)
- The areas where stormwater discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as listed amphibians) are found in the ditch, swale, or gully.)
- The areas where stormwater from construction activities discharges into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls. (Example: Where a stormwater retention pond would be built.)
- The areas upstream and/or downstream from the stormwater discharge into a stream segment that may be affected by these discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

“Agricultural Land” - cropland, grassland, rangeland, pasture, and other agricultural land, on which agricultural and forest-related products or livestock are produced and resource concerns may be addressed. Agricultural lands include cropped woodland, marshes, incidental areas included in the agricultural operation, and other types of agricultural land used for the production of livestock.

“Antidegradation Policy” or “Antidegradation Requirements” - the water quality standards regulation that requires states and tribes to establish a three-tiered antidegradation program:

1. Tier 1 maintains and protects existing uses and water quality conditions necessary to support such uses. An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur. Where an existing use is established, it must be protected even if it is not listed in the water quality standards as a designated use. Tier 1 requirements are applicable to all surface waters.
2. Tier 2 maintains and protects "high quality" waters -- waterbodies where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable" uses. Water quality can be lowered in such waters. However, state and tribal Tier 2 programs identify procedures that must be followed and questions that must be

answered before a reduction in water quality can be allowed. In no case may water quality be lowered to a level which would interfere with existing or designated uses.

3. Tier 3 maintains and protects water quality in outstanding national resource waters (ONRWs). Except for certain temporary changes, water quality cannot be lowered in such waters. ONRWs generally include the highest quality waters of the United States. However, the ONRW classification also offers special protection for waters of exceptional ecological significance, i.e., those which are important, unique, or sensitive ecologically. Decisions regarding which water bodies qualify to be ONRWs are made by states and authorized Indian tribes.

"Arid Areas" – areas with an average annual rainfall of 0 to 10 inches.

"Bank" (e.g., stream bank or river bank) – the rising ground bordering the channel of a water of the U.S.

"Bluff" – a steep headland, promontory, riverbank, or cliff.

"Borrow Areas" – the areas where materials are dug for use as fill, either onsite or off-site.

"Business day" – for the purposes of this permit, a business day is a calendar day on which construction activities will take place.

"Bypass" – the intentional diversion of waste streams from any portion of a treatment facility. See 40 CFR 122.41(m)(1)(i).

"Cationic Treatment Chemical" – polymers, flocculants, or other chemicals that contain an overall positive charge. Among other things, they are used to reduce turbidity in stormwater discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic PAM.

"Commencement of Construction Activities" – the initial disturbance of soils (or 'breaking ground') associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material; placement of raw materials at the site).

"Common Plan of Development or Sale" – A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one common plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

"Construction Activities" – earth-disturbing activities, such as the clearing, grading, and excavation of land, and other construction-related activities (e.g., stockpiling of fill material; placement of raw materials at the site) that could lead to the generation of pollutants. Some of the types of pollutants that are typically found at construction sites are:

- sediment;
- nutrients;
- heavy metals;
- pesticides and herbicides;
- oil and grease;
- bacteria and viruses;
- trash, debris, and solids;

- treatment polymers; and
- any other toxic chemicals.

“Construction and Development Effluent Limitations and New Source Performance Standards” (C&D Rule) – as published in 40 CFR § 450, the regulation requiring effluent limitations guidelines (ELGs) and new source performance standards (NSPS) for controlling the discharge of pollutants from construction sites.

“Construction Site” or “Site” – the land or water area where construction activities will occur and where stormwater controls will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether.

“Construction Support Activity” – a construction-related activity that specifically supports the construction activity and involves earth disturbance or pollutant-generating activities of its own, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

“Construction Waste” – discarded material (such as packaging materials; scrap construction materials; masonry products; timber, steel, pipe, and electrical cuttings; plastics; and styrofoam).

“Conveyance Channel” – a temporary or permanent waterway designed and installed to safely convey stormwater flow within and out of a construction site.

“Critical Habitat” – as defined in the Endangered Species Act at 16 U.S.C. 1531 for a threatened or endangered species, (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

“CWA” – the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

“Dewatering” – the act of draining rainwater and/or ground water from building foundations, vaults, and trenches.

“Discharge” – when used without qualification, means the “discharge of a pollutant.”

“Discharge of a Pollutant” – any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source,” or any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

“Discharge Point” – for the purposes of this permit, the location where collected and concentrated stormwater flows are discharged from the construction site.

“Discharge-Related Activity” – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged.

“Discharge to an Impaired Water” – for the purposes of this permit, a discharge to an impaired water occurs if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting an applicable water quality standard and (1) requires development of a total maximum daily load (TMDL) (pursuant to section 303(d) of the CWA; or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1). For discharges that enter a storm sewer system prior to discharge, the water of the U.S. to which you discharge is the first water of the U.S. that receives the stormwater discharge from the storm sewer system.

“Domestic Waste” – for the purposes of this permit, typical household trash, garbage or rubbish items generated by construction activities.

“Drainageway” – an open linear depression, whether constructed or natural, that functions for the collection and drainage of surface water.

“Drought-Stricken Area” – for the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration’s U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) “Drought to persist or intensify”, (2) “Drought ongoing, some improvement”, (3) “Drought likely to improve, impacts ease”, or (4) “Drought development likely”. See http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php.

“Earth-Disturbing Activity” – actions taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, cutting, and filling), soil compaction, and movement and stockpiling of top soils.

“Earth-Disturbing Activities Conducted Prior to Active Mining Activities” – Consists of two classes of earth-disturbing (i.e., clearing, grading and excavation) activities:

- a. activities performed for purposes of mine site preparation, including: cutting new rights of way (except when related to access road construction); providing access to a mine site for vehicles and equipment (except when related to access road construction); other earth disturbances associated with site preparation activities on any areas where active mining activities have not yet commenced (e.g., for heap leach pads, waste rock facilities, tailings impoundments, wastewater treatment plants); and
- b. construction of staging areas to prepare for erecting structures such as to house project personnel and equipment, mill buildings, etc., and construction of access roads.

Note: only earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining (see (b) above) are considered to be “construction” and therefore stormwater discharges from these activities are eligible for coverage under this permit. See Part 1.2.1.b. The activities described in (a) above are not considered to be “construction” and therefore stormwater discharges associated with this activity are not eligible for coverage under this permit.

“Effective Operating Condition” – for the purposes of this permit, a stormwater control is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

“Effluent Limitations” – for the purposes of this permit, any of the Part 2 or Part 3 requirements.

“Effluent Limitations Guideline” (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of the CWA to adopt or revise effluent limitations.

“Eligible” – for the purposes of this permit, refers to stormwater and allowable non-stormwater discharges that are authorized for coverage under this general permit.

“Emergency-Related Project” – a project initiated in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.

“Endangered Species” – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

“Excursion” – a measured value that exceeds a specified limit.

“Existing Site” – a site where construction activities commenced prior to February 16, 2017.

“Exit Points” – any points of egress from the construction site to be used by vehicles and equipment during construction activities.

“Exposed Soils” – for the purposes of this permit, soils that as a result of earth-disturbing activities are left open to the elements.

“Federal Operator” – an entity that meets the definition of “Operator” in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

“Final Stabilization” – on areas not covered by permanent structures, either (1) uniform, perennial vegetation (*e.g., evenly distributed, without large bare areas*) has been established, or for arid or semi-arid areas, will be established that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas, and/or (2) permanent non-vegetative stabilization measures (*e.g., riprap, gravel, gabions, and geotextiles*) have been implemented to provide effective cover for exposed portions of the site

“General Contractor” – for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.

“Hazardous Substances” or “Hazardous or Toxic Waste” – for the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

“Historic Property” – as defined in the National Historic Preservation Act regulations, means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

“Impaired Water” – a water identified by the state, tribe, or EPA as not meeting an applicable water quality standard and (1) requires development of a TMDL (pursuant to section 303(d) of the CWA; or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1).

“Impervious Surface” – for the purpose of this permit, any land surface with a low or no capacity for soil infiltration including, but not limited to, pavement, sidewalks, parking areas and driveways, packed gravel or soil, or rooftops.

“Indian Country” or “Indian Country Lands” – defined at 40 CFR §122.2 as:

1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
2. All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-ways running through the same.

“Infeasible” – for the purpose of this permit, infeasible means not technologically possible or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.

“Install” or “Installation” – when used in connection with stormwater controls, to connect or set in position stormwater controls to make them operational.

“Jar test” – a test designed to simulate full-scale coagulation/flocculation/sedimentation water treatment processes by taking into account the possible conditions.

“Landward” – positioned or located away from a waterbody, and towards the land.

“Large Construction Activity” – defined at 40 CFR § 122.26(b)(14)(x) and incorporated here by reference. Large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

“Linear Construction Site” – includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

“Minimize” – to reduce and/or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

“Mining Activity” – for the purposes of this permit, includes mining-related construction activities defined at 40 CFR 122.26(b)(14)(x) and 122.26(b)(15)(i), and active mining activities defined at 40 CFR 122.26(b)(14)(iii). Both of these sub categories of activities include earth-disturbing activities, with the latter also including such activities as: extraction, removal or recovery, and beneficiation of mined material from the earth; removal of overburden and waste rock to expose mineable material; and site reclamation and closure activities.

“Mining Operations” – for the purposes of this permit, mining operations are grouped into two distinct categories, with distinct effluent limits and requirements applicable to each: 1) earth-disturbing activities conducted prior to active mining activities; and 2) active mining activities, which includes reclamation.

“Municipal Separate Storm Sewer System” or “MS4” – defined at 40 CFR §122.26(b)(8) as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special

districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

“National Pollutant Discharge Elimination System” (NPDES) – defined at 40 CFR §122.2 as the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an ‘approved program.’

“Native Topsoil” – the uppermost layer of naturally occurring soil for a particular area, and is often rich in organic matter, biological activity, and nutrients.

“Natural Buffer” – for the purposes of this permit, an area of undisturbed natural cover surrounding waters of the U.S. within which construction activities are restricted. Natural cover includes the vegetation, exposed rock, or barren ground that exists prior to commencement of earth-disturbing activities.

“Natural Vegetation” – vegetation that occurs spontaneously without regular management, maintenance, or species introductions or removals, and that generally has a strong component of native species.

“New Operator of a Permitted Site” – an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction site that is either a “new site” or an “existing site”.

“New Site” – a site where construction activities commenced on or after February 16, 2017.

“New Source” – for the purposes of this permit, a construction project that commenced construction activities after February 1, 2010.

“New Source Performance Standards (NSPS)” – for the purposes of this permit, NSPS are technology-based standards that apply to construction sites that are new sources under 40 CFR 450.24.

“Non-Stormwater Discharges” – discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

“Non-Turbid” – a discharge that does not cause or contribute to an exceedence of turbidity-related water quality standards.

“Notice of Intent” (NOI) – the form (electronic or paper) required for authorization of coverage under the Construction General Permit.

“Notice of Termination” (NOT) – the form (electronic or paper) required for terminating coverage under the Construction General Permit.

“NPDES eReporting Tool” (NeT) – EPA's online system for submitting electronic Construction General Permit forms.

“Operational” – for the purposes of this permit, stormwater controls are made “operational” when they have been installed and implemented, are functioning as designed, and are properly maintained.

“Operator” – for the purposes of this permit and in the context of stormwater discharges associated with construction activity, any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (*e.g. in most cases this is the owner of the site*); or
2. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (*e.g., they are authorized to direct workers at a site to carry out activities required by the permit; in most cases this is the general contractor of the project*).

This definition is provided to inform permittees of EPA's interpretation of how the regulatory definitions of “owner or operator” and “facility or activity” are applied to discharges of stormwater associated with construction activity. Subcontractors generally are not considered operators for the purposes of this permit.

“Ordinary High Water Mark” – the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris.

“Permitting Authority” – for the purposes of this permit, EPA, a Regional Administrator of EPA, or an authorized representative.

“Point(s) of Discharge” – see “Discharge Point.”

“Point Source” – any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

“Pollutant” – defined at 40 CFR § 122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

“Pollution Prevention Controls” – stormwater controls designed to reduce or eliminate the addition of pollutants to construction site discharges through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

“Polymers” – for the purposes of this permit, coagulants and flocculants used to control erosion on soil or to enhance the sediment removal capabilities of sediment traps or basins. Common construction site polymers include polyacrylamide (PAM), chitosan, alum, polyaluminum chloride, and gypsum.

“Prohibited Discharges” – discharges that are not allowed under this permit, including:

1. Wastewater from washout of concrete;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;

4. Soaps or solvents used in vehicle and equipment washing;
5. Toxic or hazardous substances from a spill or other release; and
6. Waste, garbage, floatable debris, construction debris, and sanitary waste.

“Provisionally Covered Under this Permit” – for the purposes of this permit, EPA provides temporary coverage under this permit for emergency-related projects prior to receipt of a complete and accurate NOI. Discharges from earth-disturbing activities associated with the emergency-related projects are subject to the terms and conditions of the permit during the period of temporary coverage.

“Qualified Person” – a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

“Receiving Water” – a “Water of the United States” as defined in 40 CFR § 122.2 into which the regulated stormwater discharges.

“Run-On” – sources of stormwater that drain from land located upslope or upstream from the regulated site in question.

“Semi-Arid Areas” – areas with an average annual rainfall of 10 to 20 inches.

“Shared Control” - for the purposes of this permit, a stormwater control, such as a sediment basin or pond, used by two or more operators that is installed and maintained for the purpose of minimizing and controlling pollutant discharges from a construction site with multiple operators associated with a common plan of development or sale. Any operators that are contributing stormwater from their construction activities to a shared control are considered to rely upon a shared control.

“Small Construction Activity” – defined at 40 CFR § 122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

“Small Residential Lot” – for the purpose of this permit, a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

“Snowmelt” – the conversion of snow into overland stormwater and ground water flow as a result of warmer temperatures.

“Spill” – for the purpose of this permit, the release of a hazardous or toxic substance from its container or containment.

“Stabilization” – the use of vegetative and/or non-vegetative cover to prevent erosion and sediment loss in areas exposed through the construction process.

“Steep Slopes” – where a state, tribe, local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a “steep slope”, this permit’s definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

“Storm Sewer System” – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) designed or used for collecting or conveying stormwater.

“Stormwater” – stormwater runoff, snowmelt runoff, and surface runoff and drainage.

“Stormwater Control” - refers to any best management practice or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

“Stormwater Discharge Associated with Construction Activity” – as used in this permit, a discharge of pollutants in stormwater to waters of the United States from areas where earth-disturbing activities (e.g., clearing, grading, or excavation) occur, or where construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants), are located.

“Stormwater Inlet” – a structure placed below grade to conduct water used to collect stormwater runoff for conveyance purposes.

“Stormwater Team” – the group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individuals on the “Stormwater Team” must be identified in the SWPPP.

“Storm Event” – a precipitation event that results in a measurable amount of precipitation.

“Storm Sewer” – a system of pipes (separate from sanitary sewers) that carries stormwater runoff from buildings and land surfaces.

“Subcontractor” – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.

“SWPPP” (Stormwater Pollution Prevention Plan) – a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.

“Temporary Stabilization” – a condition where exposed soils or disturbed areas are provided temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

“Thawing Conditions” – for the purposes of this permit, thawing conditions are expected based on the historical likelihood of two or more days with daytime temperatures greater than 32°F. This date can be determined by looking at historical weather data. Note: the estimation of thawing conditions is for planning purposes only. During construction the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

“Threatened Species” – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

“Tier 2 Waters” – for antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), those waters that are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

“Tier 2.5 Waters” – for antidegradation purposes, those waters designated by states or tribes as requiring a level of protection equal to and above that given to Tier 2 waters, but less than that given Tier 3 waters. Some states have special requirements for these waters.

“Tier 3 Waters” – for antidegradation purposes, pursuant to 40 CFR 131.12(a)(3), Tier 3 waters are identified by states as having high quality waters constituting an Outstanding National Resource Water (ONRW), such as waters of National Parks and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance.

“Total Maximum Daily Load” or “TMDL” – the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measure.

“Toxic Waste” – see “Hazardous Substances.”

“Treatment Chemicals” – polymers, flocculants, or other chemicals used to reduce turbidity in stormwater.

“Turbidity” – a condition of water quality characterized by the presence of suspended solids and/or organic material.

“Uncontaminated Discharge” – in the context of authorized non-stormwater discharges, a discharge that does not cause or contribute to an exceedance of applicable water quality standards.

“Upland” – the dry land area above and ‘landward’ of the ordinary high water mark.

“Upset” – Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

“Water-Dependent Structures” – structures or facilities that are required to be located directly adjacent to a waterbody or wetland, such as a marina, pier, boat ramp, etc.

“Water Quality Standards” – defined in 40 CFR § 131.3, and are provisions of state or federal law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, and an antidegradation policy to protect high-quality waters. Water quality standards protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

“Waters of the United States” – see definition at 40 CFR 122.2.

“Wetland” – those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. On-site evaluations are typically required to confirm the presence and boundaries of wetlands.

1. Acronyms

ACHP – Advisory Council on Historic Preservation

BMP – Best Management Practice

CBI – Confidential Business Information
CGP – Construction General Permit
CFR – Code of Federal Regulations
CWA – Clean Water Act
CZMA – Coastal Zone Management Act
ECHO – EPA Enforcement and Compliance History Online
ELG – Effluent Limitations Guideline
EPA – United States Environmental Protection Agency
ESA – Endangered Species Act
FR – Federal Register
MS4 – Municipal Separate Storm Sewer System
MSGP – Multi-Sector General Permit
NEPA – National Environmental Policy Act
NeT – NPDES eReporting Tool
NHPA – National Historic Preservation Act
NMFS – United States National Marine Fisheries Service
NPDES – National Pollutant Discharge Elimination System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NRC – National Response Center
NRCS – National Resources Conservation Service
NSPS – New Source Performance Standards
ONRW – Outstanding National Resource Water
PAM – Polyacrylamide
POTW – Publicly Owned Treatment Works
RUSLE – Revised Universal Soil Loss Equation
SDS – Safety Data Sheet
SHPO – State Historic Preservation Office
SPCC – Spill Prevention Control and Countermeasure
SWPPP – Stormwater Pollution Prevention Plan
THPO – Tribal Historic Preservation Office
TMDL – Total Maximum Daily Load
TSS – Total Suspended Solids
UIC – Underground Injection Control

USDA – United States Department of Agriculture

USFWS – United States Fish and Wildlife Service

USGS – United States Geological Survey

WQS – Water Quality Standard

Appendix B - Permit Areas Eligible for Coverage and EPA Regional Addresses

Permit coverage for stormwater discharges from construction activity occurring within the following areas is provided by legally separate and distinctly numbered permits.

B.1 EPA Region 1

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 1:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
CTR10I000	Indian country within the State of Connecticut
MAR100000	Commonwealth of Massachusetts (except Indian country)
MAR10I000	Indian country within the State of Massachusetts
NHR100000	State of New Hampshire
RIR100000	Indian country within the State of Rhode Island
VTR10F000	Areas in the State of Vermont subject to construction by a Federal Operator
01R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 1 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 1 Address:

U.S. EPA Region 1
Office of Ecosystem Protection
Stormwater and Construction Permits Section
5 Post Office Square, Suite 100
(OEP 06-1)
Boston, MA 02109-3912

B.2 EPA Region 2

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 2:

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
NYR10I000	Indian country within the State of New York
PRR100000	Commonwealth of Puerto Rico
02R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 2 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 2 Address:

For Puerto Rico:
U.S. EPA Region 2
Caribbean Environmental Protection Division
NPDES Stormwater Program

City View Plaza II – Suite 7000
 48 Rd. 165 Km 1.2
 Guaynabo, PR 00968-8069

For New York:
 U.S. EPA Region 2
 NPDES Stormwater Program
 290 Broadway, 24th Floor
 New York, NY 10007-1866

B.3 EPA Region 3

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 3:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
DCR100000	District of Columbia
DER10F000	Areas in the State of Delaware subject to construction by a Federal Operator
VAR10I000	Indian country within the State of Virginia
03R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 3 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 3 Address:

U.S. EPA Region 3
 Office of NPDES Permits and Enforcement
 NPDES Permits Branch, Mailcode 3WP41
 1650 Arch Street
 Philadelphia, PA 19103

B.4 EPA Region 4

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 4:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
ALR10I000	Indian country within the State of Alabama
FLR10I000	Indian country within the State of Florida
MSR10I000	Indian country within the State of Mississippi
NCR10I000	Indian country within the State of North Carolina
RE410I000	Indian country within any other Region 4 State (except Catawba lands in South Carolina)
04R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 4 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 4 Address:

U.S. EPA Region 4
 Water Protection Division
 NPDES Stormwater Program
 Atlanta Federal Center
 61 Forsyth Street SW
 Atlanta, GA 30303-3104

B.5 EPA Region 5

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 5:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
MIR10I000	Indian country within the State of Michigan
MNR10I000	Indian country within the State of Minnesota
WIR10I000	Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community
05R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 5 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 5 Address:

U.S. EPA Region 5
 NPDES Program Branch
 77 W. Jackson Blvd.
 Mail Code WN16J
 Chicago, IL 60604-3507

B.6 EPA Region 6

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 6:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
LAR10I000	Indian country within the State of Louisiana
NMR100000	State of New Mexico, except Indian country
NMR10I000	Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.
OKR10I000	Indian country within the State of Oklahoma
OKR10F000	Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
TXR10F000	Discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality (formerly TNRCC), including

activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline.

TXR10I000
06R10I000

Indian country within the State of Texas
All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 6 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 6 Address:

U.S. EPA Region 6
NPDES Stormwater Program (WQ-PP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

B.7 EPA Region 7

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 7:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
IAR10I000	Indian country within the State of Iowa
KSR10I000	Indian country within the State of Kansas
NER10I000	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)
07R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 7 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 7 Address:

U.S. EPA Region 7
NPDES Stormwater Program
11201 Renner Blvd
Lenexa, KS 66219

B.8 EPA Region 8

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 8:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
COR10F000	Areas in the State of Colorado, except those located on Indian country, subject to construction activity by a Federal Operator
COR10I000	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
MTR10I000	Indian country within the State of Montana
NDR10I000	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the

	portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR10000I listed below)
SDR10I000	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation which is covered under North Dakota permit NDR10000I listed above)
UTR10I000	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
WYR10I000	Indian country within the State of Wyoming
08R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 8 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 8 Address:

EPA Region 8 Storm Water Program
 Mailcode: 8P-W-WW
 1595 Wynkoop Street
 Denver, CO 80202-1129

B.9 EPA Region 9

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 9:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
ASR100000	Island of American Samoa
AZR10I000	Indian country within the State of Arizona, as well as Navajo Reservation lands in New Mexico and Utah
CAR10I000	Indian country within the State of California
GUR100000	Island of Guam
JAR100000	Johnston Atoll
MPR100000	Commonwealth of the Northern Mariana Islands
MWR100000	Midway Island and Wake Island
NVR10000I	Indian country within the State of Nevada, as well as the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Goshute Reservation in Utah
09R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 9 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 9 Address:

U.S. EPA Region 9
 Water Division
 NPDES Stormwater Program (WTR-2-3)
 75 Hawthorne Street

San Francisco, CA 94105-3901

B.10 EPA Region 10

The permit offers coverage for stormwater discharges from construction activity from the following areas in EPA Region 10:

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
AKR10I000	Indian country lands as defined in 18 U.S.C. 1151 within the State of Alaska
AKR10F000	Denali National Park and Preserve
IDR100000	State of Idaho, except Indian country
IDR10I000	Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)
ORR10I000	Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9)
WAR10F000	Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator
WAR10I000	Indian country within the State of Washington
010R10I000	All areas of Indian country not identified above that are not already covered by an EPA-approved permitting program

For stormwater discharges in EPA Region 10 outside the areas of coverage identified above, please contact your state NPDES permitting authority to obtain coverage under a state-issued NPDES permit.

EPA Region 10 Address:

U.S. EPA Region 10
 NPDES Stormwater Program
 1200 6th Avenue (OWW-191)
 Seattle, WA 98101-3140

Appendix C - Small Construction Waivers and Instructions

These waivers are only available to stormwater discharges associated with small construction activities (i.e., 1-5 acres). As the operator of a small construction activity, you may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (A) a low rainfall erosivity factor, (B) a TMDL analysis, or (C) an equivalent analysis that determines allocations for small construction sites are not needed. Each operator, otherwise needing permit coverage, must notify EPA of its intention for a waiver. It is the responsibility of those individuals wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification to be waived.

C.1 Rainfall Erosivity Waiver

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than five during the period of construction activity. The operator must certify to EPA that construction activity will occur only when the rainfall erosivity factor is less than five. The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide interim non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the CGP have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The operator must submit a waiver certification to EPA prior to commencing construction activities.

Note: The rainfall erosivity factor "R" is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21–64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service.

EPA has developed an online rainfall erosivity calculator to help small construction sites determine potential eligibility for the rainfall erosivity waiver. You can access the calculator from EPA's website at: <https://www.epa.gov/npdes/rainfall-erosivity-factor-calculator-small-construction-sites>. The R factor can easily be calculated by using the construction site latitude/longitude or address and estimated start and end dates of construction. This calculator may also be useful in determining the time periods during which construction activity could be waived from permit coverage. You may find that moving your construction activity by a few weeks or expediting site stabilization will allow you to qualify for the waiver. Use this online calculator or the Construction Rainfall Erosivity Waiver Fact Sheet (<https://www.epa.gov/sites/production/files/2015-10/documents/fact3-1.pdf>) to assist in determining the R Factor for your small construction site.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you can submit a rainfall erosivity waiver electronically via EPA's NPDES eReporting Tool (NeT) (<https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>), unless you received a waiver from your EPA Regional Office (see Part 1.4.1 of the CGP for information about receiving a waiver from electronic reporting).

Note: If the R factor is five or greater, you do not qualify for the rainfall erosivity waiver, and must obtain coverage under an NPDES permit (e.g., the CGP), unless you qualify for the Water Quality Waiver as described in section B below.

If your small construction project continues beyond the projected completion date given on the waiver certification, you must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five, you must update all applicable information on the waiver certification and retain a copy of the revised waiver as part of your records. The new waiver certification must be submitted prior to the projected completion date listed on the original waiver form to assure your exemption from permitting requirements is uninterrupted. If the new R factor is five or above, you must obtain NPDES permit coverage.

C.2 TMDL Waiver

This waiver is available if EPA has established or approved a TMDL that addresses the pollutant(s) of concern for the impaired water and has determined that controls on stormwater discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any waterbody that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by EPA is available from EPA online at <https://www.epa.gov/tmdl> and from state and tribal water quality agencies.

If you are the operator of the construction activity and eligible for a waiver based on compliance with an EPA-established or approved TMDL, you must provide the following information in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the waterbody(s) that would be receiving stormwater discharges from your construction project;
5. The name and approval date of the TMDL;
6. A statement, signed and dated by an authorized representative as provided in Appendix I, Subsection I.11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the TMDL.

C.3 Equivalent Analysis Waiver

This waiver is available for discharges to non-impaired waters only. The operator can develop an equivalent analysis that determines allocations for his/her small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction operator to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

If you are a construction operator who wants to use this waiver, you must develop your equivalent analysis and provide the following information to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);

2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the waterbody(s) that would be receiving stormwater discharges from your construction project;
5. Your equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided in Appendix I, Subsection I.11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the equivalent analysis.

C.4 Waiver Deadlines and Submissions

1. Waiver certifications must be submitted prior to commencement of construction activities.
2. If you submit a TMDL or equivalent analysis waiver request, you are not waived until EPA approves your request. As such, you may not commence construction activities until receipt of approval from EPA.
3. Late Notifications: Operators are not prohibited from submitting waiver certifications after initiating clearing, grading, excavation activities, or other construction activities. The Agency reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and waiver authorization is granted.

Submittal of a waiver certification is an optional alternative to obtaining permit coverage for discharges of stormwater associated with small construction activity, provided you qualify for the waiver. Any discharge of stormwater associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the Clean Water Act. As mentioned above, EPA reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and either discharge authorization is granted or a complete and accurate waiver certification is submitted. EPA may notify any operator covered by a waiver that they must obtain NPDES permit coverage. EPA may notify any operator who has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition EPA to take action under this provision by submitting written notice along with supporting justification.

Complete and accurate TMDL or equivalent analysis waiver requests must be sent to the applicable EPA Regional Office address specified in Appendix B.

Appendix D - Eligibility Procedures Relating to Threatened and Endangered Species Protection

In accordance with Part 1.1.5 of the CGP, you must follow the procedures in this appendix to determine your eligibility under one of the criteria in Part D.1 of this appendix with respect to the protection of federally listed threatened or endangered species and federally designated "critical habitat" [hereinafter "threatened and endangered species"] under the Endangered Species Act (ESA) from discharges and discharge-related activities authorized under this permit. If you do not meet one of these criteria, you are not eligible for coverage under this permit.

While coordination between you and the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) (together, the "Services") is not necessarily required in all cases, EPA encourages you to coordinate with the Services, to document that coordination, and to do so early in the planning process prior to submitting your NOI.

This appendix is organized as follows:

- **Part D.1:** Threatened and Endangered Species Protection Eligibility Criteria
- **Part D.2:** Procedures for Determining Which Threatened and Endangered Species Protection Criteria Applies

D.1 Threatened and Endangered Species Protection Eligibility Criteria

You must certify in your NOI that you meet one of the eligibility criteria listed below in order to be eligible for coverage under this permit. Once you determine the applicable eligibility criterion, you must:

- Specify the basis for your selection of the applicable eligibility criterion, and if required, provide documentation that is the basis for your determination with the NOI form; and
- Provide documentation in your SWPPP that is sufficient to support your determination that you satisfy the requirements of the applicable criterion.

The definition of "action area," which is contained in Appendix A, is repeated below for convenience.

"Action Area" – all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. For the purposes of this permit and for application of the Endangered Species Act requirements, the following areas are included in the definition of action area:

- The areas on the construction site where stormwater discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity. (Example: Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity or where grading causes stormwater to flow into a small wetland or other habitat that is on the site that contains listed species.)
- The areas where stormwater discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as listed amphibians) are found in the ditch, swale, or gully.)
- The areas where stormwater from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls. (Example: Where a stormwater retention pond would be built.)
- The areas upstream and/or downstream from the stormwater discharge into a stream segment that may be affected by these discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

Criterion A. No ESA-listed species and/or designated critical habitat present in action area. Using the process outlined in Appendix D of this permit, you certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of this permit.

Basis statement content: A basis statement supporting the selection of this criterion should identify the USFWS and NMFS information sources used. Attaching aerial image(s) of the site to this NOI is helpful to EPA, USFWS, and NMFS in confirming eligibility under this criterion. Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers.

Criterion B. Eligibility requirements met by another operator under the 2017 CGP. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your "action area" under eligibility Criterion A, C, D, E, or F of the 2017 CGP and you have confirmed that no additional ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS not considered in the that certification may be present or located in the "action area." To certify your eligibility under this criterion, there must be no lapse of NPDES permit coverage in the other CGP operator's certification. By certifying eligibility under this criterion, you agree to comply with any conditions upon which the other CGP operator's certification was based. You must include in your NOI the NPDES ID from the other 2017CGP operator's notification of authorization under this permit. If your certification is based on another 2017 CGP operator's certification under criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in criterion C in your NOI form.

Basis statement content: A basis statement supporting the selection of this criterion should identify the eligibility criterion of the other CGP NOI, the authorization date, and confirmation that the authorization is effective.

Criterion C. Discharges not likely to adversely affect ESA-listed species and/or designated critical habitat. ESA-listed species and/or designated critical habitat(s) under the jurisdiction of the USFWS and/or NMFS are likely to occur in or near your site's "action area," and you certify to EPA that your site's discharges and discharge-related activities are not likely to adversely affect ESA-listed threatened or endangered species and/or designated critical habitat. This certification may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat. To certify your eligibility under this criterion, indicate 1) the ESA-listed species and/or designated habitat located in your "action area" using the process outlined in Appendix D of this permit; 2) the distance between the site and the listed species and/or designated critical habitat in the action area (in miles); and 3) a rationale describing specifically how adverse effects to ESA-listed species will be avoided from the discharges and discharge-related activities. You must also include a copy of your site map from your SWPPP showing the upland and in-water extent of your "action area" with this NOI.

Basis statement content: A basis statement supporting the selection of this criterion should identify the information resources and expertise (e.g., state or federal biologists) used to arrive at this conclusion. Any supporting documentation should explicitly state that both ESA-listed species and designated critical habitat under the jurisdiction of the USFWS and/or NMFS were considered in the evaluation.

Criterion D. Coordination with USFWS and/or NMFS has successfully concluded. Coordination between you and the USFWS and/or NMFS has concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS, and resulted in a written concurrence from USFWS and/or NMFS that your site's discharges and discharge-related activities are not likely to adversely affect listed species and/or critical habitat. You must include copies of the correspondence with the participating agencies in your SWPPP and this NOI.

Basis statement content: A basis statement supporting the selection of this criterion should identify whether USFWS or NMFS or both agencies participated in coordination, the field office/regional office(s) providing that coordination, and the date that coordination concluded.

Criterion E. ESA Section 7 consultation has successfully concluded. Consultation between a Federal Agency and the USFWS and/or NMFS under section 7 of the ESA has concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS. To certify eligibility under this criterion, Indicate the result of the consultation:

- I. biological opinion from USFWS and/or NMFS that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or
- II. written concurrence from USFWS and/or NMFS with a finding that the site's discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat.

You must include copies of the correspondence between yourself and the USFWS and/or NMFS in your SWPPP and this NOI.

Basis statement content: A basis statement supporting the selection of this criterion should identify the federal action agency(ies) involved, the field office/regional office(s) providing that consultation, any tracking numbers of identifiers associated with that consultation (e.g., IPaC number, PCTS number), and the date the consultation was completed.

Criterion F. Issuance of section 10 permit. Potential take is authorized through the issuance of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of the site's discharges and discharge-related activities on ESA-listed species and designated critical habitat. You must include copies of the correspondence between yourself and the participating agencies in your SWPPP and your NOI.

Basis statement content: A basis statement supporting the selection of this criterion should identify whether USFWS or NMFS or both agencies provided a section 10 permit, the field office/regional office(s) providing permit(s), any tracking numbers of identifiers associated with that consultation (e.g., IPaC number, PCTS number), and the date the permit was granted.

You must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility criteria in this section to remain eligible for coverage under this permit. Documentation of these requirements must be kept as part of your SWPPP (see Part 7.2.9.a).

NMFS will, within 14 days of submission of the NOI, advise EPA whether it believes the planned discharges meet the eligibility criteria of not likely to adversely affect NMFS Listed Resources of Concern, whether the eligibility criterion could be met with additional conditions; or whether the eligibility criterion is not met. With respects to ESA issues, EPA recognizes NMFS expertise and will carefully consider NMFS' determination in identifying eligibility for authorization, either with or without additional conditions. In the event NMFS has placed a hold on your NOI, EPA will notify you as to whether your discharges are authorized or whether an individual permit will be

required. If you do not hear from EPA within 14 days, you may assume that your discharge is authorized without further conditions.

D.2 Procedures for Determining Which Threatened and Endangered Species Protection Criterion Applies

You must follow the procedures in this Part to determine the criterion listed above under which your site is eligible for permit coverage.

D.2.1 Step 1 - Determine if Your Discharges and Discharge-Related Activities Were Already Addressed in Another Operator's Valid Certification that Included Your Action Area.

- **If your discharges and discharge-related activities were already addressed in another operator's valid certification that included your action area** (e.g., a general contractor or developer may have completed and filed an NOI for the entire action area with the necessary ESA certifications (Criterion A, C, D, E, or F)), *you may select eligibility Criterion B on your NOI form.*

By certifying eligibility under Criterion B, you must comply with any terms and conditions imposed under the eligibility requirements of the criterion for which the other operator has established eligibility (either Criterion A, C, D, E, or F) to ensure that your discharges and discharge-related activities are protective of listed species and/or critical habitat.

Note: If you are unable to meet these eligibility requirements, then you may either establish eligibility under one of the other criterion, or you may consider applying to EPA for an individual permit.

Under Criterion B, you must provide documentation in your SWPPP of any of these terms and conditions, as well as the other operator's basis for establishing eligibility. You must also provide a description of the basis for your selection of Criterion B on your NOI form, including the eligibility criterion (A, C, D, E, or F) that was certified to by the other operator, and must provide the NPDES ID from the other operator's notification of authorization under this permit.

If your certification is based on another operator's certification under criterion C, you must provide the documentation required in the NOI for criterion C, namely: 1) what federally listed species and/or designated habitat are located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles).

- **If discharges and discharge-related activities from your site were not addressed in another operator's valid certification that included your action area**, you must follow the applicable procedures in Steps 2 through 5 below.

D.2.2 Step 2 - Determine if Listed Threatened or Endangered Species or their Designated Critical Habitat(s) are Likely to Occur in your Site's Action Area

You must determine, to the best of your knowledge, whether species listed as either threatened or endangered, or their critical habitat(s) (see definitions of these terms in Appendix A), are located in your site's action area. To make this determination, you should first determine if listed species and/or critical habitat are expected to exist in your county or township. The U.S. Fish and Wildlife Service and National Marine Fisheries Service maintain lists of federally listed endangered or threatened species on their internet sites.

- For National Marine Fisheries Service species and critical habitat information, use the following webpages, which provide up-to-date information on listed species (<http://www.nmfs.noaa.gov/pr/species/esa/>) and critical habitat

(<http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm>). To determine the field office that corresponds to your site, go to <http://www.nmfs.noaa.gov/> (under the left tab for "Regions").

For National Marine Fisheries Service species in the Greater Atlantic Region, go to <http://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidance/maps/index.html>.

- For Fish and Wildlife Service species information, use the on-line mapping tool IPaC (the Information, Planning, and Consultation System) located at <http://ecos.fws.gov/ipac/>, and follow these steps:
 - Select Get Started
 - Select Enter Project Location
 - Use an address, city name or other location to zoom into your project area
 - Use the zoom feature to see the entire extent of your action area on the screen
 - Use one of the mapping features (e.g., Polygon or line feature) to draw your action
- When you are done, press *Continue*.
- Select Request an Official Species List
- Complete the fields on the Official Species List Request page, and include "(CGP)" at the end of the project description. – For Classification, select "Water Quality Modification".
- Select the appropriate requesting agency/organization type (for most dischargers, this should be "Other").
- Submit the request to acquire an Official Species List, which should show both listed species as well as any designated critical habitat that are present in the action area in the previous step.
- *Note: If a link to an Official Species List is not available on the page, follow the web link of the office(s) indicated, or contact the office directly by mail or phone if a web link is not shown.*
- **If listed species and/or critical habitat may exist in your action area, you must do one or more of the following:**
 - Conduct visual inspections. This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.
 - Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive stormwater discharges, biological surveys may be an appropriate way to assess whether species are located in the action area and whether there are likely to be adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms.
 - If required, conduct an environmental assessment under the National Environmental Policy Act (NEPA). Some construction activities might require review under NEPA for specific reasons, such as federal funding or other federal involvement in the project. Note: Coverage under the CGP does not

trigger such a review for individual projects/sites. EPA has complied with NEPA in the issuance of the CGP.

and

- Follow the instructions in Steps 3 – 5 below, as applicable. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.
- **If there are no listed species and no critical habitat areas in your action area, you may check eligibility criterion A on your NOI form.** You must also provide a description of the basis for the criterion selected on your NOI form and provide documentation supporting the criterion selected in your SWPPP.

D.2.3 Step 3 - Determine if the Construction Activity's Discharges or Discharge-Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat

If in Step 2 you determine that listed species and/or critical habitat could exist in your action area, you must next assess whether your discharges or discharge-related activities are likely to adversely affect listed threatened or endangered species or designated critical habitat.

Potential adverse effects from discharges and discharge-related activities include:

- *Hydrological.* Stormwater discharges may cause siltation, sedimentation, or induce other changes in receiving waters such as temperature, salinity, or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.
- *Habitat.* Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of stormwater controls, may adversely affect listed species or their habitat. Stormwater may drain or inundate listed species habitat.
- *Toxicity.* In some cases, pollutants in stormwater may have toxic effects on listed species.

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you should contact the appropriate Services office for assistance.

- **If adverse effects to listed threatened or endangered species or their critical habitat are not likely, then you may select eligibility criterion C on the NOI form.** You must provide the following specific information on your NOI form: 1) the federally listed species and/or designated habitat are located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles). You must also provide a copy of your site map with your NOI.
- **If adverse effects to listed threatened or endangered species or their critical habitat are likely, you must follow Step 4 below.**

D.2.4 Step 4 - Determine if Measures Can Be Implemented to Avoid Adverse Effects

If you make a preliminary determination in Step 3 that adverse effects from your construction activity's discharges or discharge-related activities are likely to occur, you can still receive coverage under eligibility criterion C of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CGP coverage.

These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating stormwater controls, or by modifying the "footprint" of the construction activity. If you are unable to ascertain which measures to implement to avoid the likelihood of adverse effects, you must coordinate or enter into consultation with the Fish and Wildlife Service and/or National Marine Fisheries Service, in which case you would not be eligible for coverage under eligibility criterion C, but may instead be eligible for coverage under eligibility criterion D, E, or F (described in more detail in Step 5).

- **If you are able to install and implement appropriate measures to avoid the likelihood of adverse effects, then you may check eligibility criterion C on the NOI form.** The measures you adopt to avoid or eliminate adverse effects must be implemented for the duration of the construction project and your coverage under the CGP. You must also provide a description of the basis for the criterion selected, and the following specific information on your NOI form: 1) the federally listed species and/or designated habitat are located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles).
- **If you cannot ascertain which measures to implement to avoid the likelihood of adverse effects, you must follow the procedures in Step 5.**

D.2.5 Step 5 - Determine if the Eligibility Requirements of Criterion D, E, or F Can Be Met

If in Step 4 you cannot ascertain which measures to implement to avoid the likelihood of adverse effects, you must contact the Fish and Wildlife Service and/or the National Marine Fisheries Service. You may still be eligible for CGP coverage if likely adverse effects can be addressed through meeting criterion D, E, or F.

- **Criterion D:** Coordination between you and the Services has concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and resulted in a written concurrence from the relevant Service(s) that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat.

If you have met the requirements of criterion D, *you may select eligibility criterion D on the NOI form.* You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between you and the applicable Service in your SWPPP.

- **Criterion E:** Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat. The result of this consultation must be either (1) a biological opinion that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or (2) written concurrence from the applicable Service(s) with a

finding that the site's discharges and discharge-related activities are not likely to adversely affect federally-listed species or federally-designated habitat.

For more information on section 7 consultation, see 50 CFR §402. If you receive a "jeopardy opinion," you may continue to work with the Fish and Wildlife Service and/or National Marine Fisheries Service and your permitting authority to modify your project so that it will not jeopardize listed species or designated critical habitat.

Note that most consultations are accomplished through informal consultation. When conducting informal ESA section 7 consultation as a non-federal representative, you must follow the procedures found in 50 CFR Part 402 of the ESA regulations. You must notify the Services of your intention and agreement to conduct consultation as a non-federal representative.

Consultation may also occur in the context of another federal action at the construction site (e.g., where ESA section 7 consultation was performed for issuance of a wetlands dredge and fill permit for the project or where a NEPA review is performed for the project that incorporates a section 7 consultation).

Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the SWPPP. As noted above, operators may, if they wish, initiate consultation with the Services at Step Four.

Whether ESA section 7 consultation must be performed with either the Fish and Wildlife Service, National Marine Fisheries Service, or both Services depends on the listed species that may be affected by the operator's activity. In general, the National Marine Fisheries Service has jurisdiction over marine, estuarine, and anadromous species. Operators should also be aware that while formal section 7 consultation provides protection from incidental takings liability, informal consultation does not.

If you have met the requirements of criterion E, *you may select eligibility criterion E on the NOI form*. You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between yourself and the Services in your SWPPP.

- **Criterion F:** Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and this authorization addresses the effects of the site's discharges and discharge-related activities on federally-listed species and federally-designated critical habitat.

You must follow Fish and Wildlife Service and/or National Marine Fisheries Service procedures when applying for an ESA section 10 permit (see 50 CFR §17.22(b)(1) for Fish and Wildlife Service and §222.22 for National Marine Fisheries Service). Application instructions for section 10 permits can be obtained from <http://www.fws.gov> and <http://www.nmfs.noaa.gov> or by contacting the appropriate Service office.

If you have met the requirements of criterion F, *you may select eligibility criterion F on the NOI form*. You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between yourself and the Services in your SWPPP.

Appendix E – Historic Property Screening Process

Background

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal “undertakings”, such as the issuance of this permit, on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. To address any issues relating to historic properties in connection with the issuance of this permit, EPA developed the screening process in this appendix that enables construction operators to appropriately consider the potential impacts, if any, of their installation of stormwater controls on historic properties and to determine whether actions can be taken, if applicable, to mitigate any such impacts. Although the coverages of individual construction sites under this permit do not constitute separate Federal undertakings, the screening process in this appendix provides an appropriate site-specific means of addressing historic property issues in connection with EPA’s issuance of the permit.

Key Terms

Historic property- prehistoric or historic districts, sites, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and remains that are related to and located within such properties

SHPO – The State Historic Preservation Officer for a particular state

THPO or Tribal representative – The Tribal Historic Preservation Officer for a particular tribe or, if there is no THPO, the representative designated by such tribe for NHPA purposes

Instructions for All Construction Operators

You are required to follow the screening process in this appendix to determine if your installation of stormwater controls on your site has the potential to cause effects to historic properties, and whether or not you need to contact your SHPO, THPO, or other tribal representative for further information. **You may not submit your NOI until you have completed this screening process.** The following four steps describe how applicants can meet the historic property requirements under this permit:

Step 1 *Are you installing any stormwater controls that require subsurface earth disturbance?*¹

The first step of the screening process is to determine if you will install stormwater controls that cause subsurface earth disturbance. The installation of the following types of stormwater controls require subsurface earth disturbance:²

- Dikes
- Berms
- Catch Basins
- Ponds
- Ditches
- Trenches
- Culverts
- Channels

¹ You are only required to consider earth-disturbing activities related to the installation of stormwater controls in the NHPA screening process. You are not required to consider other earth-disturbing activities at the site. If you are installing one of the above stormwater controls or another type of control that requires subsurface earth disturbance, your stormwater controls have the potential to have an effect on historic properties. If this is the case, then you must proceed to Step 2.

² This list is not intended to be exhaustive. Other stormwater controls that are not on this list may involve earth-disturbing activities and must also be examined for the potential to affect historic properties.

- Perimeter Drains
- Swales

If you are not installing one of the above stormwater controls or another type of control that requires subsurface earth disturbance, then you may indicate this on your NOI, and no further screening is necessary. During the 14-day waiting period after submitting your NOI, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any additional controls to address adverse effects to historic properties are necessary.

Step 2 *Have prior professional cultural resource surveys or other evaluations determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?*

If you are installing a stormwater control that requires subsurface earth disturbance, you must next determine if no historic properties exist on your site based on prior professional cultural resource surveys or other evaluations, or if the existence of historic properties has been precluded because of prior earth disturbances.

If prior to your project it has already been determined that no historic properties exist at your site based on available information, including information that may be provided by your applicable SHPO, THPO, or other tribal representative, then you may indicate this on your NOI, and no further screening steps are necessary. Similarly, if prior earth disturbances have eliminated the possibility that historic properties exist on your site, you may indicate this on your NOI, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

If neither of these circumstances exists for your project, you must proceed to Step 3.

Step 3 *If you are installing any stormwater controls that require subsurface earth disturbance, you must determine if these activities will have an effect on historic properties.*

If your answer to the question in Step 2 is "no", then you must assess whether your earth-disturbing activities related to the installation of stormwater controls will have an effect on historic properties. This assessment may be based on historical sources, knowledge of the area, an assessment of the types of earth-disturbing activities you are engaging in, considerations of any controls and/or management practices you will adopt to ensure that your stormwater control-related earth-disturbing activities will not have an effect on historic properties, and any other relevant factors. If you determine based on this assessment that earth disturbances related to the installation of your stormwater controls will have no effect on historic properties, you may indicate this on your NOI, and document the basis for your determination in your SWPPP, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

If none of the circumstances in Steps 1 - 3 exist for your project, you must proceed to Step 4.

Step 4: *If you are installing any stormwater controls that require subsurface earth disturbance and you have not satisfied the conditions in Steps 1 - 3, you must contact and consult with the appropriate historic preservation authorities.*

Where you are installing stormwater controls that require subsurface earth disturbance, and you cannot determine in Step 3 that these activities will have no effect on historic properties, then you must contact the relevant SHPO, THPO, or other tribal representative to request their views as to the likelihood that historic properties are potentially present on your site and may be impacted by the installation of these controls.

Note: Addresses for SHPOs and THPOs may be found on the Advisory Council on Historic Preservation's website (www.achp.gov/programs.html). If a tribe does not have a THPO, you should contact the appropriate tribal government office designated by the tribe for this purpose.

You must submit the following minimum information in order to properly initiate your request for information:

1. Project name (i.e., the name or title most commonly associated with your project);
2. A narrative description of the project;
3. Name, address, phone and fax number, and email address (if available) of the operator;
4. Most recent U.S. Geological Survey (USGS) map section (7.5 minute quadrangle) showing actual project location and boundaries clearly indicated; and
5. Sections of the SWPPP site map (see Part 7.2.4) that show locations where stormwater controls that will cause subsurface earth disturbance will be installed (see Step 1).

Without submitting this minimum information, you will not have been considered to have properly initiated your request. You will need to provide the SHPO, THPO, or other tribal representative **a minimum of 15 calendar days** after they receive these materials to respond to your request for information about your project.

If you do not receive a response within 15 calendar days after receipt by the SHPO, THPO, or other tribal representative of your request, then you may indicate this on your NOI, and no further screening steps are necessary. Or, if the applicable SHPO, THPO, or other tribal representative responds to your request with an indication that no historic properties will be affected by the installation of stormwater controls at your site, then you may indicate this on your NOI, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse effects to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

If within 15 calendar days of receipt of your request the applicable SHPO, THPO, or other tribal representative responds with a request for additional information or for further consultation regarding appropriate measures for treatment or mitigation of effects on historic properties caused by the installation of stormwater controls on your site, you must comply with this request and proceed to Step 5.

Step 5: Consultation with your applicable SHPO, THPO, or other tribal representative.

If, following your discussions with the appropriate historic preservation authorities in Step 4, the applicable SHPO, THPO, or tribal representative requests additional information or further consultation, you must respond with such information or consult to determine impacts to historic properties that may be caused by the installation of stormwater controls on your site and appropriate measures for treatment or mitigation of such impacts. If as a result of your discussions with the applicable SHPO, THPO, or tribal representative, you enter into, and comply with, a written agreement regarding treatment and/or mitigation of impacts on your site, then you may indicate this on your NOI, and no further screening steps are necessary.

If, however, agreement on an appropriate treatment or mitigation plan cannot be reached between you and the SHPO, THPO, or other tribal representative within 30 days of your response to the SHPO, THPO, or other tribal representative's request for additional information or further consultation, you may submit your NOI, but you must indicate that you have not negotiated measures to avoid or mitigate such effects. You must also include in your SWPPP the following documentation:

1. Copies of any written correspondence between you and the SHPO, THPO, or other tribal representative; and
2. A description of any significant remaining disagreements as to mitigation measures between you and the SHPO, THPO, or other tribal representative.

After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, ACHP or other tribal representative may request that EPA place a hold on authorization based upon concerns regarding potential adverse effects to historic properties. EPA, in coordination with the ACHP, will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

Appendix F - List of Tier 3, Tier 2, and Tier 2.5 Waters

EPA's CGP has special requirements for discharges to waters that receive Tier 2, Tier 2.5, or Tier 3 protections for antidegradation purposes. See Parts 1.1.8 and 3.2.

EPA's antidegradation regulation, at 40 CFR 131.12, provides a framework for maintaining and protecting water quality for: (1) existing uses (known as "Tier 1"); (2) high quality waters by establishing a process for authorizing the lowering of water quality where existing water quality exceeds levels needed to support propagation of fish, shellfish, and wildlife and recreation in and on the water (known as "Tier 2"); and (3) for Outstanding National Resource Waters (known as "Tier 3"). While EPA's antidegradation regulation only outlines three levels of antidegradation protection, some states and tribes include an additional level of antidegradation protection between Tier 2 and Tier 3 (sometimes known as "Tier 2.5").

High quality (Tier 2) waters may be identified on a parameter-by-parameter basis or on a water body-by-water body basis consistent with the requirements of 40 CFR 131.12(a)(2). States and tribes using a parameter-by-parameter basis (sometimes called a "pollutant-by-pollutant approach") do not maintain a list of Tier 2 waters, but instead identify a high quality water at the time an entity proposes an activity that would lower water quality. In contrast, states and tribes using a water body-by-water body basis typically identify high quality waters in advance on a list by weighing a variety of factors (e.g., chemical, physical, biological, and other information) to classify a water body's overall quality.

The list below is provided as a resource for operators who must determine whether they discharge to a Tier 2, Tier 2.5, or Tier 3 water. Where available, the table lists waters specifically identified for Tier 2, Tier 2.5, or Tier 3 protection by a water quality standard authority (e.g., a state or tribe). Operators should not assume that a water does not receive Tier 2, Tier 2.5, or Tier 3 protection solely based on the absence of information in this table. Evaluation regarding antidegradation protections for a specific water may need to be done on a case-by-case basis, especially where the state or tribe uses the parameter-by-parameter approach to identify whether water quality is better than necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
MAR100000	<p>Commonwealth of Massachusetts, except Indian Country lands</p> <p>Tier 2, Tier 2.5, and 3 waters are identified and listed in the Massachusetts Water Quality Standards 314 CMR 4.00. Surface water qualifiers that correspond with Tier classifications are defined at 314 CMR 4.06(1)(d)m and listed in tables and figures at the end of 314 CMR 4.06. See MassDEP's web page at: http://www.mass.gov/eea/agencies/massdep/water/regulations/314-cmr-4-00-mass-surface-water-quality-standards.html. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-massachusetts</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
	Tier 2	Listed as "High Quality Waters", and all wetlands that are not designated as an Outstanding Resource Water.
	Tier 2.5	Listed as "Outstanding Resource Water", "Public Water Supply", "Tributary to Public Water Supply", all wetlands bordering Outstanding Resource Waters, and vernal pools.
	Tier 3	Defined as "Special Resource Water". Note: No waters have been identified as a Special Resource Water as of the issuance of this permit.
NHR100000	State of New Hampshire	
	Tier 2 waters are identified on a parameter-by-parameter basis. Tier 2.5 and 3 waters are identified and listed in the New Hampshire Water Quality Standards CHAPTER Env-Wq 1700. Description of the antidegradation tiers are included at CHAPTER Env-Wq 1708 and listed in the tables at. New dischargers and new sources should contact EPA Region 1's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-new-hampshire	
	Tier 3	Env-Ws 1708.05(a) Surface waters of national forests and surface waters designated as "natural" under RSA 483:7-a, I shall be considered outstanding resource waters (ORW). "Natural waters" are listed at http://www.gencourt.state.nh.us/rsa/html/L/483/483-15.htm . Surface waters of national forests are not included in an official list. For further questions, new dischargers and new sources should contact EPA Region 1's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional .
NYR10I000	Saint Regis Mohawk Tribe (NY)	
	Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Saint Regis Mohawk Tribe Water Quality Standards. New dischargers and new sources should contact EPA Region 2's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See: https://www.epa.gov/sites/production/files/2014-12/documents/stregis-tribe.pdf	
	Tier 3	Outstanding Resource Waters. Those waters designated as such by the Tribe. The Waters that may be considered for designation as Outstanding Resource Waters include, but are not limited to, water bodies that are recognized as: (i) Important because of protection through official action, such as Tribal, Federal or State law, Presidential or secretarial action, international treaty, or interstate compact; (ii) Having exceptional recreational significance; (iii) Having exceptional ecological significance; (iv) Having other special environmental, recreational, religious or ecological attributes; or waters whose designation as Outstanding Resource Waters is reasonably necessary for the protection of other waters so designated. New dischargers and new sources should contact EPA Region 2's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional .

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
PRR100000	Commonwealth of Puerto Rico	
	Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Puerto Rico Water Quality Standards. New dischargers and new sources should contact EPA Region 2's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-puerto-rico	
	Tier 3	Tier III waters are those which are classified as either Class SA or Class SE. Class SA waters are defined as "Coastal waters and estuarine waters of high quality and/or exceptional ecological or recreational value whose existing characteristics shall not be altered, except by natural causes, in order to preserve the existing natural phenomena." Class SA waters include bioluminescent lagoons and bays such as La Parguera and Monsio José on the Southern Coast, Bahía de Mosquito in Vieques, and any other coastal or estuarine waters of exceptional quality of high ecological value or recreational which may be designated by Puerto Rico, through Resolution, as requiring this classification for protection of the waters. Class SE waters are defined as "Surface waters and wetlands of exceptional ecological value, whose existing characteristics should not be altered in order to preserve the existing natural phenomena." Class SE waters include Laguna Tortuguero, Laguna Cartagena and any other surface water bodies of exceptional ecological value as may be designated by Puerto Rico through Resolution.
DCR100000	District of Columbia	
	New dischargers and new sources should contact EPA Region 3's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . Tier 2.5 waters are identified and listed in the District of Columbia Water Quality Standards. See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-washington-dc	
	Tier 2.5	Rule 1102.4 SPECIAL WATERS OF THE DISTRICT OF COLUMBIA (SWDC): Any segment or segments of the surface waters of the District that are of water quality better than needed for the current use or have scenic or aesthetic importance shall be designated as Special Waters of the District of Columbia (SWDC). Rock Creek and its tributaries and Battery Kemble Creek and its tributaries are considered Special Waters of the District of Columbia (SWDC) under its antidegradation program.
FLR10I000	Miccosukee Tribe (FL)	
	New dischargers and new sources should contact EPA Region 4's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . The Miccosukee Tribe Water Quality Standards includes an additional tier of protection between Tier 2 and 3 that is referred as Tier 2 ¾ for Outstanding Miccosukee Waters. See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-miccosukee-tribe-indians-florida	

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>Tier 2 ³/₄</p> <p>Outstanding Miccosukee Waters (OMW): The Miccosukee Tribe recognizes that the waters of its Federal Reservation which are contained within Water Conservation Area 3-A and the Miccosukee Reserved Area constitute the Tribe's highest quality waters and must be preserved in as pristine a condition as possible while at the same time allowing for the activities of man. These ecologically important waters are essential to the survival of the Miccosukee Tribe, therefore: The Miccosukee Tribe hereby designates the waters of its Federal Reservation which are contained within Water Conservation Area 3-A (North Grass, South Grass, Gap) and Miccosukee Reserved Area as Class III-A and Outstanding Miccosukee waters (OMW). The North Grass is defined as that area bounded by the northern boundary of the reservation, the eastern edge of the L-28 levee (which is east of the L-28 canal), the southern edge of the C-60 Canal, and the eastern boundary of the reservation. The South Grass is defined as the area bounded by southern edge of the C-60 canal, the eastern boundary of the reservation, the southern boundary of the reservation, the eastern edge of the L-28 canal (which is south of the L-28 Tieback Canal), a line running north from the L-28 Canal (where the L-28 Canal turns northwest to become the L-28 Tieback Canal) until this line intersects the oil pipeline, the center of the oil pipeline until the oil pipeline intercepts the L-28 Interceptor Canal, and the eastern edge of the L-28 levee (which is east of the L-28 Canal). The Gap is defined as that area which is bounded by the southern boundary of the reservation, the western boundary of the reservation, the northeastern edge of the L-28 Interceptor Canal, the oil pipeline which runs generally south from the L-28 Interceptor Canal until the pipeline intercepts a line running north from the L-28 Canal where the L-28 canal turns northwest to become the L-28 Tieback Canal, and the eastern edge of the L-28 canal (which is south of the L-28 Tieback Canal).</p> <p>Tier 3</p> <p>Tier 3: Outstanding Natural Resource Waters (ONRW): Where high quality waters constitute an Outstanding Tribal resource such as waters of parks and wildlife refuges and waters of exceptional ecological and recreational significance, that water quality shall be maintained and protected. These waters shall be designated as Outstanding Natural Resource Waters (ONRW). Currently, no Tribal waters are designated as ONRW.</p>
	<p>Seminole Tribe (FL)</p> <p>New dischargers and new sources should contact EPA Region 4's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/sites/production/files/2014-12/documents/seminole_floridawqs.pdf</p>
MNR10I000	<p>Fond du Lac Band of MN Chippewa</p> <p>Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Fond du Lac Band of MN Chippewa Water Quality Standards. New dischargers and new sources should contact EPA</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
	Region 5's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-fond-du-lac-band-minnesota-chippewa-tribe	
Tier 3	Six Lakes are presently identified as Tier 3/Outstanding Reservation Resource Waters (ORRW): (1) Dead Fish Lake; (2) Jaskari Lake; (3) Miller (Mud) Lake; (4) Perch Lake; (5) Rice Portage Lake; (6) Wild Rice Lake.	
	Grand Portage Band of MN Chippewa	
	Tier 2 waters are identified on a parameter-by-parameter basis. Two subcategories of protection (referred to as outstanding tribal water resource (OTWR)) exist in the Grand Portage Band of MN Chippewa Water Quality Standards as follows: (a) OTWR-Restricted (lowered water quality may be allowed under limited circumstances); (b) OTWR-Prohibited (Discharges and permanent lowering of water quality are prohibited). New dischargers and new sources should contact EPA Region 5's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-grand-portage-band-minnesota-chippewa-tribe	
Tier 2	OTWR-Restricted: All waters, not already classified as Tier 3, are high quality Tier 2 waters (see Grand Portage Reservation Water Quality Standards, Section VI & VII, Pages 14-16).	
Tier 3	OTWR-Prohibited: "The portion of Lake Superior north of latitude 47 degrees, 57 minutes, 13 seconds, east of Hat Point, south of the Minnesota-Ontario boundary, and west of the Minnesota-Michigan boundary" (see Section VII, Page 16).	
WIR10I000	Bad River Band of Lake Superior Chippewa (WI)	
	Tier 2 waters are identified on a water body-by-water body basis. Tier 2, 2.5, and 3 classifications are included in the Bad River Band of Lake Superior Chippewa Water Quality Standards. See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-bad-river-band-lake-superior-chippewa-tribe	
Tier 2	Any surface water not specifically classified as Outstanding Tribal Resource Water or Outstanding Resource Water is classified as Exceptional Resource Water (Anishinaabosibiing).	
Tier 2.5	Outstanding Resource Waters: a portion of Bad River, from downstream the confluence with the White River to Lake Superior, White River, Marengo River, Graveyard Creek, Bear Trap Creek, Wood Creek, Brunsweller River, Tyler Forks, Bell Creek, and Vaughn Creek.	

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
Tier 3	<p>Outstanding Tribal Resource Waters: Kakagon Slough and the lower wetland reaches of its tributaries that support wild rice, Kakagon River, Bad River Slough, Honest John Lake, Bog Lake, a portion of Bad River, from where it enters the Reservation through the confluence with the White River, and Potato River.</p>
<p>Lac du Flambeau Band of the Lake Superior Chippewa</p> <p>Tier 2 waters are identified on a water body-by-water body basis. Tier 2, 2.5, and 3 classifications are included in the Lac du Flambeau Band of the Lake Superior Chippewa Water Quality Standards. See:</p> <p>https://www.epa.gov/wqs-tech/water-quality-standards-regulations-lac-du-flambeau-band-lake-superior-chippewa-tribe</p>	
Tier 2	<p>All named waters, including wetlands, not specified under an Antidegradation classification are classified as Tribal Resource Water (Tier 2). Unclassified Named Waters (Tier 2): Buckskin Lake; Flambeau Lake; Long (Interlaken) Lake); Marland's Lake (Sec. 13, T40NR4E); Moss Lake; Pokegema Lake.</p>
Tier 2.5	<p>Exceptional Tribal Resource Waters: Bills Lake, Birch Lake, Bobidosh Lake, Bog Lake (SE SE Sec. 31, T40NR6E), Bolton Lake, Broken Bow Lake, Chewalah Lake, Clear Lake (Sec. 2, T39NR4E), Corn Great, Great, Corn Lake, Little "Least/Lesser", Crawling Stone Lake, Big, Crawling Stone Lake, Little, Crescent Lake, Crooked Lake, Big, David Lake, Ellerson Lake, Middle, Ellerson Lake, West, Elsie Lake "Boundary Lake", Fat Lake, Fence Lake, Gresham Creek, Green Lake (NW NW Sec. 19, T41R6E), Grey Lake, Gunlock Lake, Haskell Lake, Headflyer Lake (Sec. 19, T41NR5E), Highway Lake (NW NW Sec. 19, T41NR5E), Horsehead Lake (SE SW Sec. 9, T40NR5E), Hutton's Creek, Ike Walton Lake, Lily Lake (SE SW Sec. 35, T40NR5E), Little Ten Lake, Lodge Lake "L. Rice" (NW NW Sec. 8, T41NR6E), Lucy Lake, Mindys Lake (Sec. 8, T40NR5E), Minette Lake, Mitten Lake, Monk's Lake (Sec. 13, T40NR5E), Moving Cloud Lake, Mud Creek, Muskesin Lake, Patterson Lake, Placid Twin Lake (North), Placid Twin Lake (South), Plummer Lake, Poupart Lake, Prairie Lake (NE SW Sec. 13, T40NR4E), Raven Lake, Ross Allen Lake, Sand Lake, Little, Scott Lake (Sec. 22, T40N, R4E), Shishebogama Lake, Signal Lake, Snort Lake (Sec. 5, T41N, R6E), Spring Lake "Jerms", Squirrel Lake, Statenaker Lake "Hollow", Stearns Lake "Hourglass", Sugarbush "Hidden Lake" (NW NW Sec. 17, T41NR5E), Sugarbush Creek, Sugarbush Lake, Little, Sugarbush Lake, Lower, Sugarbush Lake, Middle, Sugarbush Lake, Upper, Sunfish Lake, Tippecanoe Lake, Tomahawk River, To-To Tom Lake, Toulish Lake, Trout River, Warrior Lake, White Sand Lake, Whitefish Lake "Cattail Lake" (Sec. 34, T40N5R), Wishow Lake, Wyandock Lake.</p>
Tier 3	<p>Outstanding Tribal Resource Waters: Bear River (1st bridge to Reservation boundary), Big Springs (Sec. 25, T40NR4E), Black Lake, Cranberry Lake, Doud Lake, Eagle Lake, Gene Lake, Johnson Springs, Little Trout Lake, Lost Lake (Sect. 1, T41NR4E), Mishonagon Creek, Munnomin (Jesse, Duck) Lake, Negani (Hegani) Lake, Reservation Line Lake, Spring Creek, Tank Lake, Thomas Lake, Wild Rice Lake, Zee Lake.</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
NMR100000	State of New Mexico	
	Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the State of New Mexico Water Quality Standards. New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-new-mexico	
	Tier 2	If you need assistance determining if your discharge is to a Tier 2 waterbody, please contact the NMED Surface Water Quality Bureau's Stormwater Program at https://www.env.nm.gov/swqb/StormWater/index.html .
	Tier 3	See https://www.env.nm.gov/swqb/ONRW/ for current list of NMED's Tier 3/Outstanding National Resource Waters. See also New Mexico's Water Quality Standards at 20.6.4.9.D NMAC.
NMR10I000	Ohkay Owingeh (NM) (formerly the Pueblo of San Juan)	
	New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-ohkay-owingeh-pueblo-formerly-pueblo-san-juan	
	Pueblo of Acoma (NM)	
	New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-acoma	
	Pueblo of Isleta (NM)	
	New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-isleta	
	Pueblo of Nambe (NM)	
	New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-nambe	
Pueblo of Picuris (NM)		
New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . Tier 2, 2.5, and 3 classifications are included in the Pueblo of Picuris Water Quality Standards. See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-picuris		

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority		
	<p>Pueblo of Pojoaque (NM)</p> <p>New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-pojoaque</p> <p>Pueblo of Sandia (NM)</p> <p>New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-sandia</p> <p>Pueblo of Santa Ana (NM)</p> <p>New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-santa-ana</p> <p>Pueblo of Santa Clara (NM)</p> <p>New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-santa-clara</p> <p>Pueblo of Taos (NM)</p> <p>New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-taos</p> <table border="1"> <tr> <td>Tier 3</td> <td>Outstanding Tribal Resource Waters: Mountain Lakes; Mountain Streams & Springs;</td> </tr> </table> <p>Pueblo of Tesuque (NM)</p> <p>New dischargers and new sources should contact EPA Region 6's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pueblo-tesuque</p>	Tier 3	Outstanding Tribal Resource Waters: Mountain Lakes; Mountain Streams & Springs;
Tier 3	Outstanding Tribal Resource Waters: Mountain Lakes; Mountain Streams & Springs;		
COR101000	<p>Ute Mountain Ute Tribe</p> <p>Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Ute Mountain Ute Tribe Water Quality Standards. New dischargers and new sources should contact EPA Region 8's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-ute-mountain-ute-tribe</p>		

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>Tier 3 Outstanding Tribal Resource Waters: 1. Ute Spring and unnamed creek from Ute Spring downstream within Section 12, TWP35N R18W (Colorado). 2. Allen Canyon Creek, Sections 17, 20, 29, 30, 31, TWP 35S, R21E (Utah) 3. "Lopez" Spring and unnamed creek tributary to and downstream from the spring, within Section 35, TWP 34N, R18W</p>
MTR10I000	<p>Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation (MT)</p>
	<p>Tier 2 waters are identified on a water body-by-water body basis. There is not a Tier 2.5 classification identified in the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation Water Quality Standards. New dischargers and new sources should contact EPA Region 8's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-assiniboine-and-sioux-tribes-fort-peck-indian</p>
	<p>Tier 2 Most Tribal Waters will qualify as Tier 2 waters. Unless the water body is not attaining the Clean Water Act Section 101(a)(2) goals, the water body has received an OTRW designation, or there is no assimilative capacity for pollutants to protect existing and designated uses, it is likely that the water body will receive Tier 2 protection.</p>
	<p>Confederated Salish and Kootenai Tribes of the Flathead Reservation (MT)</p>
	<p>Tier 2 waters are identified on a water body-by-water body basis. There is not a Tier 2.5 classification identified in the Confederated Salish and Kootenai Tribes of the Flathead Reservation Water Quality Standards. New dischargers and new sources should contact EPA Region 8's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-confederated-salish-and-kootenai-tribes-flathead</p>
	<p>Tier 3 The following are Tier 3 waters: All waters located within Tribally designated primitive or wilderness areas.</p>
	<p>Northern Cheyenne (MT)</p>
	<p>Tier 2 waters are identified on a water body-by-water body basis. There is not a Tier 2.5 classification identified in the Northern Cheyenne Water Quality Standards. New dischargers and new sources should contact EPA Region 8's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-northern-cheyenne-tribe-northern-cheyenne-reservation</p>
ASR100000	<p>Island of American Samoa New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/sites/production/files/2014-12/documents/aswqs.pdf</p>
AZR10I000	<p>Hopi Tribe (AZ)</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Hopi Tribe Water Quality Standards. New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-hopi-tribe</p>
Tier 3	<p>Unique Waters: In the Moencopi Wash watershed, from Blue Canyon Springs to the confluence of Begashibito Wash.</p>
<p>Hualapai Indian Tribe (AZ)</p>	
	<p>Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Hualapai Indian Tribe Water Quality Standards. New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-hualapai-tribe</p>
Tier 3	<p>Segments assigned as Tier 3: Spencer; Meriwhitica; Willow Spring; Upper Milkweed Spring; Bridge Canyon; Travertine Spring; Travertine Falls; Diamond Creek; Diamond Creek Spring; Blue Mountain; Metuck; Peach Springs Spring; Westwater; Clay Tank; Hocky Puck; Pocamote Spring; Mohawk Spring; Granite Spring; Three Spring; Warm Spring; Honga Spring; National Canyon Spring; National Canyon; Moss Spring.</p>
<p>Navajo Nation (AZ, NM, UT)</p>	
	<p>New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-navajo-nation</p>
<p>White Mountain Apache Tribe (AZ)</p>	
	<p>Tier 2 waters are identified on a water body-by-water body basis. Tier classifications are identified in Appendix B of the White Mountain Apache Tribe Water Quality Standards. New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-white-mountain-apache-tribe</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>Tier 2</p> <p>High Quality Waters: East Fork White River, above R52 Road; Paradise Creek, above Wohlenberg; Ord Creek; Smith Cienega; Bull Cienega; Smith Creek; Big Bonito; Tonto Creek, below Y47 Crossing; Crooked Creek; Boggy Creek; Little Bonito Creek, above Y55 Crossing; Flash Creek; Squaw Creek; Hurricane Lake; Hurricane Creek; Hughey Creek; Bonito Cienega; West Fork Black River; Hall Cienega; Purcell Cienega; Thompson Creek; Cibecue Creek in Box Canyon to Salt river; Rock Springs Creek; Willow Creek (Lower Canyon Cr.).</p> <p>Sensitive Waters (treated the same manner as Tier 2): East Fork White River below R52 Road, above Rock Cr; Lofer Cienega Creek; Carrizo Creek above Corduroy; Cedar Creek; Big Canyon (E. Cedar Creek); Middle Cedar Creek; West Cedar Creek; Cibecue Creek, Box Canyon up to Confluence with Salt Creek; Spring Creek; Salt Creek; Cibecue Creek, from confluence w/Salt Cr. To Big Springs; Cibecue Creek, above Big Springs; Salt Draw; Canyon Creek S. of Chediski Farms; Oak Creek; Canyon Creek, N. of Chediski Farms.</p>
	<p>Tier 3</p> <p>Outstanding Waters: East Fork White River, in Wilderness area; Pumpkin Lake.</p>
CAR10I000	<p>Big Pine Band of Owens Valley (CA)</p>
	<p>New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-big-pine-paiute-tribe-owens-valley</p>
	<p>Hoopa Valley Tribe (CA)</p>
	<p>New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-hoopa-valley-tribe</p>
	<p>Paiute-Shoshone Indians of the Bishop Community (CA)</p>
<p>New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-bishop-paiute-tribe</p>	
<p>Twenty-Nine Palms (CA)</p>	
<p>New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-twenty-nine-palms-band-mission-indians</p>	
GUR100000	<p>Island of Guam</p>
	<p>New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
	stormwater#regional . See also: https://www.epa.gov/sites/production/files/2014-12/documents/aswqs.pdf	
JAR100000	Johnston Atoll New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional	
MPR100000	Commonwealth of the Northern Mariana Islands New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/sites/production/files/2014-12/documents/aswqs.pdf	
MWR100000	Midway Island and Wake Island New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional	
NVR100001	Pyramid Lake Paiute (NV) New dischargers and new sources should contact EPA Region 9's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-pyramid-lake-paiute-tribe	
IDR100000	State of Idaho	
	Tier 2 waters are identified on a water body-by-water body basis. There is not a Tier 2.5 classification identified in the State of Idaho Water Quality Standards. New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-idaho	
IDR10I000	Tier 2 and Tier 3	For Tier 2 and Tier 3 waters, please consult the most recent approved version of Idaho's Idaho Integrated Report, available at: http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report/ and the closest regional office of the Idaho Department of Environmental Quality: http://www.deq.idaho.gov/regional-offices-issues/ .
	Coeur D'Alene Tribe (ID)	
IDR10I000	Tier 2 waters are identified on a water body-by-water body basis. There is not a Tier 2.5 classification identified in the Coeur D'Alene Tribe Water Quality Standards. New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-coeur-dalene-tribe-indians	
ORR10I000	Confederated Tribes of the Warm Springs Reservation (OR)	
	New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional . See also:	

Permit Number	<p style="text-align: center;">Areas of Coverage/Where EPA Is Permitting Authority</p> <p>https://www.epa.gov/wqs-tech/water-quality-standards-regulations-confederated-tribes-warm-springs-indian-reservation</p> <p>Confederated Tribes of Umatilla (OR)</p> <p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-confederated-tribes-umatilla-indian-reservation-oregon</p>
WAR10I000	<p>Confederated Tribes of the Chehalis Reservation (WA)</p> <p>Tier 2 waters are identified on a parameter-by-parameter basis. There is not a Tier 2.5 classification identified in the Confederated Tribes of the Chehalis Reservation Water Quality Standards. New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. https://www.epa.gov/wqs-tech/water-quality-standards-regulations-confederated-tribes-chehalis-reservation</p> <p>Confederated Tribes of the Colville Reservation (WA)</p> <p>EPA established federal water quality standards for the Confederated Tribes of the Colville Reservation at 40 CFR 131.35. See: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-confederated-tribes-colville-reservation</p> <p>Kalispel Indian Community (WA)</p> <p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-kalispel-indian-community-kalispel-reservation</p> <p>Lummi Tribe (WA)</p> <p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-lummi-nation</p> <p>Makah Indian Nation (WA)</p> <p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-makah-indian-nation</p> <p>Port Gamble S'Klallam (WA)</p> <p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also:</p>

<p>Permit Number</p>	<p align="center">Areas of Coverage/Where EPA Is Permitting Authority</p> <p>https://www.epa.gov/wqs-tech/water-quality-standards-regulations-port-gamble-sklallam-tribe</p>
	<p>Puyallup Tribe of Indians (WA)</p>
	<p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-puyallup-tribe-indians</p>
	<p>Spokane Tribe of Indians (WA)</p>
<p>New dischargers and new sources should contact EPA Region 10's stormwater coordinator found at https://www.epa.gov/npdes/contact-us-stormwater#regional. See also: https://www.epa.gov/wqs-tech/water-quality-standards-regulations-spokane-tribe-indians</p>	

Appendix G – Buffer Requirements.

The purpose of this appendix is to assist you in complying with the requirements in Part 2.2.1 of the permit regarding the establishment of natural buffers and/or equivalent sediment controls. This appendix is organized as follows:

G.1 SITES THAT ARE REQUIRED TO PROVIDE AND MAINTAIN NATURAL BUFFERS AND/OR EQUIVALENT EROSION AND SEDIMENT CONTROLS2

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G.1 SITES THAT ARE REQUIRED TO PROVIDE AND MAINTAIN NATURAL BUFFERS AND/OR EQUIVALENT EROSION AND SEDIMENT CONTROLS

The requirement in Part 2.2.1 to provide and maintain natural buffers and/or equivalent erosion and sediment controls applies for any discharges to waters of the U.S. located within 50 feet of your site's earth disturbances. If the water of the U.S. is not located within 50 feet of earth-disturbing activities, Part 2.2.1 does not apply. See G – 1.

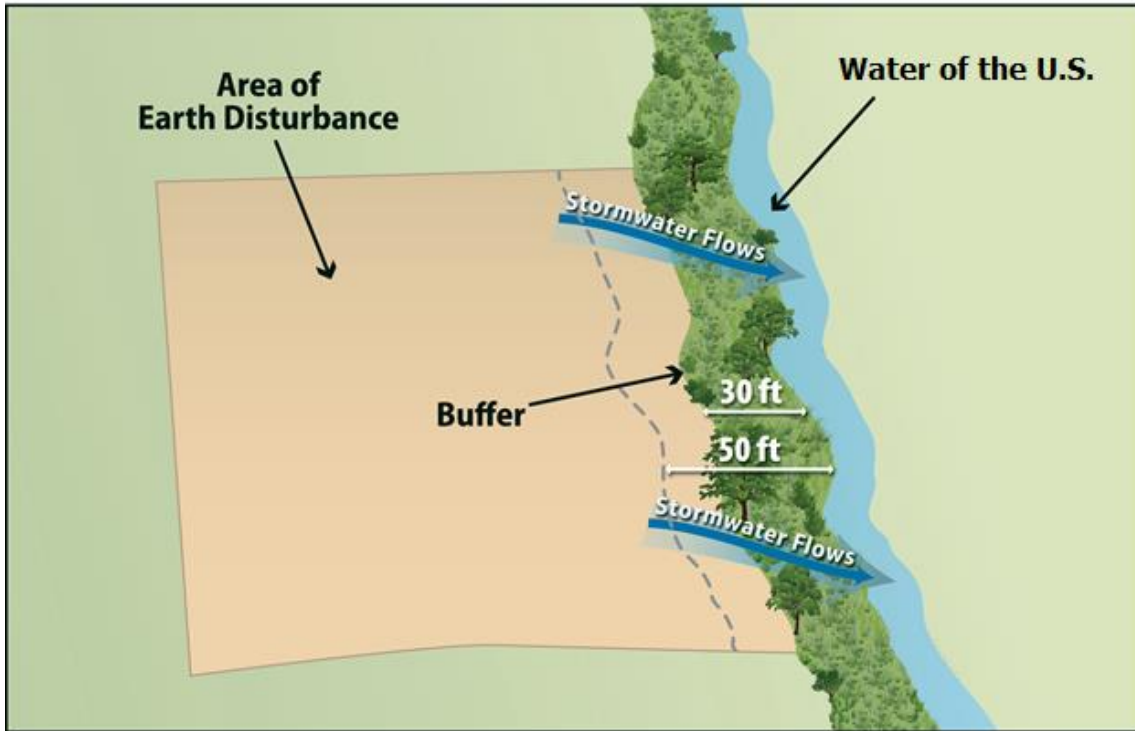


Figure G-1 Example of earth-disturbing activities within 50 feet of a water of the U.S.

G.2 COMPLIANCE ALTERNATIVES AND EXCEPTIONS

G.2.1 Compliance Alternatives

If Part 2.2.1 applies to your site, you have three compliance alternatives from which you can choose, unless you qualify for any of the exceptions (see below and Part 2.2.1.a):

1. Provide and maintain a 50-foot undisturbed natural buffer; or
2. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
3. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer. ¹

The compliance alternative selected must be maintained throughout the duration of permit coverage.

See Part G.2.2 below for exceptions to the compliance alternatives.

See Part G.2.3 for requirements applicable to providing and maintaining natural buffers under compliance alternatives 1 and 2 above.

See Part G.2.4 for requirements applicable to providing erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer under compliance alternatives 2 and 3 above.

G.2.2 Exceptions to the Compliance Alternatives

The following exceptions apply to the requirement to implement one of the Part 2.2.1.a compliance alternatives (see also Part 2.2.1.b):

- The following disturbances within 50 feet of a water of the U.S. are exempt from the requirements Part 2.2.1 and this Appendix:
 - Construction approved under a CWA Section 404 permit; or
 - Construction of a water-dependent structure or water access areas (e.g., pier, boat ramp, trail).
- If there is no discharge of stormwater to waters of the U.S. through the area between the disturbed portions of the site and any waters of the U.S. located within 50 feet of your site, you are not required to comply with the requirements in Part 2.2.1 and this Appendix. This includes situations where you have implemented controls measures, such as a berm or other barrier, that will prevent such discharges.
- Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in Part 2.2.1 and this Appendix.

Where some natural buffer exists but portions of the area within 50 feet of the water of the U.S. are occupied by preexisting development disturbances, you are required to comply with the requirements in Part 2.2.1 and this Appendix. For the purposes of calculating the sediment load reduction for either compliance alternative 2 or 3, you are not expected to compensate for the reduction in buffer function that would have resulted from the area covered by these preexisting disturbances. Clarity about how to implement the compliance alternatives for these situations is provided in G.2.3 and G.2.4 below.

If during your project, you will disturb any portion of these preexisting disturbances, the area removed will be deducted from the area treated as a "natural buffer."

- For "linear construction sites" (see Appendix A), you are not required to comply with this requirement if site constraints (e.g., *limited right-of-way*) make it infeasible to implement one of the Part 2.2.1.a compliance alternatives, provided that, to the extent feasible, you limit disturbances within 50 feet of any waters of the U.S. and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the water of the U.S. You must also document in your SWPPP your rationale for why it is infeasible for you to implement one of the Part 2.2.1.a compliance alternatives, and describe any buffer width retained and supplemental erosion and sediment controls installed.
- For "small residential lot" construction (*i.e., a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre*), you have the option of complying with one of the "small residential lot" compliance alternatives in Part G.3 of this appendix.

Note that you must document in your SWPPP if any disturbances related to any of the above exceptions occurs within the buffer area on your site.

G.2.3 Requirements for Providing and Maintaining Natural Buffers

This part of the appendix applies to you if you choose compliance alternative 1 (50-foot buffer), compliance alternative 2 (a buffer of < 50 feet supplemented by additional erosion and sediment controls that achieve the equivalent sediment load reduction as the 50-foot buffer), or if you are providing a buffer in compliance with one of the "small residential lot" compliance alternatives in Part G.3.

Buffer Width Measurement

Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:

1. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
2. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

Refer to Figures G – 2 and **Error! Reference source not found..** You may find that specifically measuring these points is challenging if the flow path of the water of the U.S. changes frequently, thereby causing the measurement line for the buffer to fluctuate continuously along the path of the waterbody. Where this is the case, EPA suggests that rather than measuring each change or deviation along the water's edge, it may be easier to select regular intervals from which to conduct your measurement. For instance, you may elect to conduct your buffer measurement every 5 to 10 feet along the length of the water.

Additionally, note that if earth-disturbing activities will take place on both sides of a water of the U.S. that flows through your site, to the extent that you are establishing a buffer around this water, it must be established on both sides. For example, if you choose compliance alternative 1, and your project calls for disturbances on both sides of a small stream, you would need to retain the full 50 feet of buffer on both sides of the water. However, if your construction activities will only occur on one side of the stream, you would only need to retain the 50-foot buffer on the side of the stream where the earth-disturbance will occur.

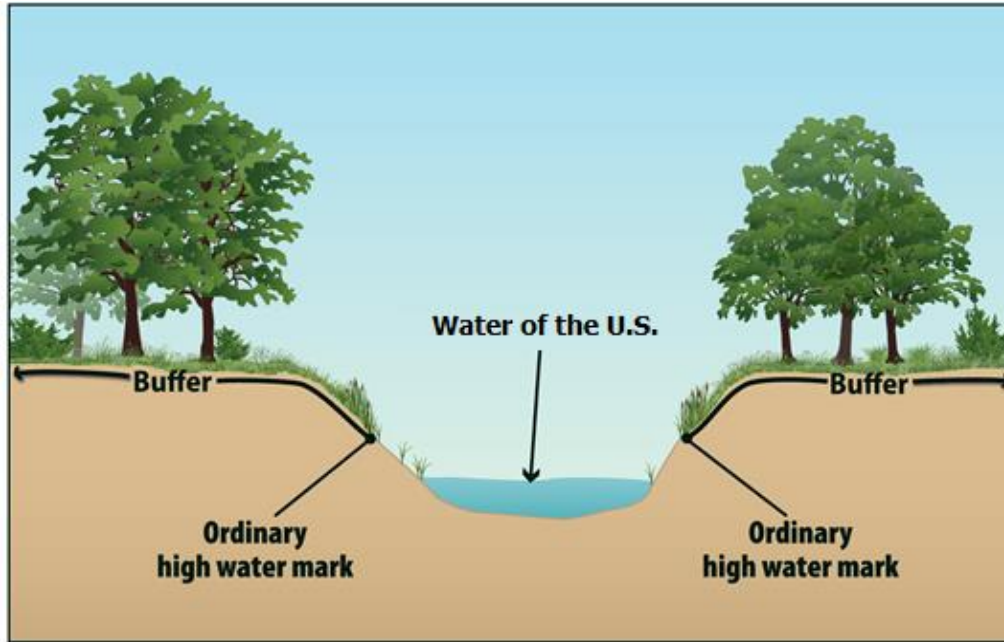


Figure G-2 Buffer measurement from the ordinary high water mark of the water body, as indicated by a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and/or the presence of litter/debris.

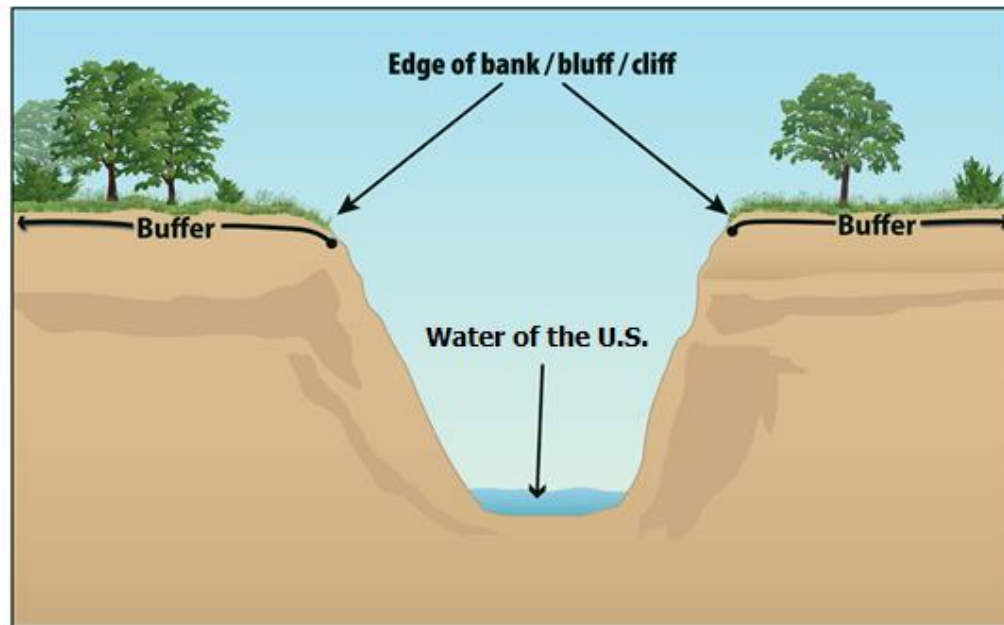


Figure G-3 Buffer measurement from the edge of the bank, bluff, or cliff, whichever is applicable.

Limits to Disturbance Within the Buffer

You are considered to be in compliance with the requirement to provide and maintain a natural buffer if you retain and protect from construction activities the natural buffer that existed prior to the commencement of construction. If the buffer area contains no vegetation prior to the commencement of construction (e.g., sand or rocky surface), you are not required to plant vegetation. As noted above, any preexisting structures or

impervious surfaces may occur in the natural buffer provided you retain and protect from disturbance the buffer areas outside of the preexisting disturbance.

To ensure that the water quality protection benefits of the buffer are retained during construction, you are prohibited from conducting any earth-disturbing activities within the buffer during permit coverage. In furtherance of this requirement, **prior to commencing earth-disturbing activities on your site, you must delineate, and clearly mark off, with flags, tape, or a similar marking device, the buffer area on your site.** The purpose of this requirement is to make the buffer area clearly visible to the people working on your site so that unintended disturbances are avoided.

While you are not required to enhance the quality of the vegetation that already exists within the buffer, you are encouraged to do so where such improvements will enhance the water quality protection benefits of the buffer. (Note that any disturbances within the buffer related to buffer enhancement are permitted and do not constitute construction disturbances.) For instance, you may want to target plantings where limited vegetation exists, or replace existing vegetation where invasive or noxious plant species (see <http://plants.usda.gov/java/noxiousDriver>) have taken over. In the case of invasive or noxious species, you may want to remove and replace them with a diversity of native trees, shrubs, and herbaceous plants that are well-adapted to the climatic, soil, and hydrologic conditions on the site. You are also encouraged to limit the removal of naturally deposited leaf litter, woody debris, and other biomass, as this material contributes to the ability of the buffer to retain water and filter pollutants.

If a portion of the buffer area adjacent to the water of the U.S. is owned by another party and is not under your control, you are only required to retain and protect from construction activities the portion of the buffer area that is under your control. For example, if you comply with compliance alternative 1 (provide and maintain a 50-foot buffer), but 10 feet of land immediately adjacent to the water of the U.S. is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you must only retain and protect from construction activities the 40-foot buffer area that occurs adjacent to the property on which your construction activities are taking place. EPA would consider you to be in compliance with this requirement regardless of the activities that are taking place in the 10-foot area that is owned by a different party than the land on which your construction activities are taking place that you have no control over.

Discharges to the Buffer

You must ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls (for example, you must comply with the Part 2.2.3 requirement to install sediment controls along any perimeter areas of the site that will receive pollutant discharges), **and if necessary to prevent erosion caused by stormwater flows within the buffer, you must use velocity dissipation devices.** The purpose of this requirement is to decrease the rate of stormwater flow and encourage infiltration so that the pollutant filtering functions of the buffer will be achieved. To comply with this requirement, construction operators typically will use devices that physically dissipate stormwater flows so that the discharge entering the buffer is spread out and slowed down.

SWPPP Documentation

You are required to document in your SWPPP the natural buffer width that is retained. For example, if you are complying with alternative 1, you must specify in your SWPPP that you are providing a 50-foot buffer. Or, if you will be complying with alternative 2, you must document the reduced width of the buffer you will be retaining (and you must also

describe the erosion and sediment controls you will use to achieve an equivalent sediment reduction, as required in Part G.2.4 below). Note that you must also show any buffers on your site map in your SWPPP consistent with Part 7.2.4.i. Additionally, if any disturbances related to the exceptions in Part G.2.2 occur within the buffer area, you must document this in the SWPPP.

G.2.4 Guidance for Providing the Equivalent Sediment Reduction as a 50-foot Buffer

This part of the appendix applies to you if you choose compliance alternative 2 (provide and maintain a buffer that is less than 50 feet that is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot buffer) or compliance alternative 3 (implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot buffer).

Determine Whether it is Feasible to Provide a Reduced Buffer

EPA recognizes that there will be a number of situations in which it will be infeasible to provide and maintain a buffer of any width. While some of these situations may exempt you from the buffer requirement entirely (see G.2.2), if you do not qualify for one of these exemptions, there still may be conditions or circumstances at your site that make it infeasible to provide a natural buffer. For example, there may be sites where a significant portion of the property on which the earth-disturbing activities will occur is located within the buffer area, thereby precluding the retention of natural buffer areas.

Therefore, you should choose compliance alternative 2 if it is feasible for you to retain some natural buffer on your site. (Note: For any buffer width retained, you are required to comply with the requirements in Part G.2.3, above, concerning the retention of vegetation and restricting earth disturbances.) Similarly, if you determine that it is infeasible to provide a natural buffer of any size during construction, you should choose alternative 3.

Design Controls That Provide Equivalent Sediment Reduction as 50-foot Buffer

You must next determine what additional controls must be implemented on your site that, alone or in combination with any retained natural buffer, achieve a reduction in sediment equivalent to that achieved by a 50-foot buffer.

Note that if only a portion of the natural buffer is less than 50 feet, you are only required to implement erosion and sediment controls that achieve the sediment load reduction equivalent to the 50-foot buffer for discharges through that area. You would not be required to provide additional treatment of stormwater discharges that flow through 50 feet or more of natural buffer. See **Error! Reference source not found.**

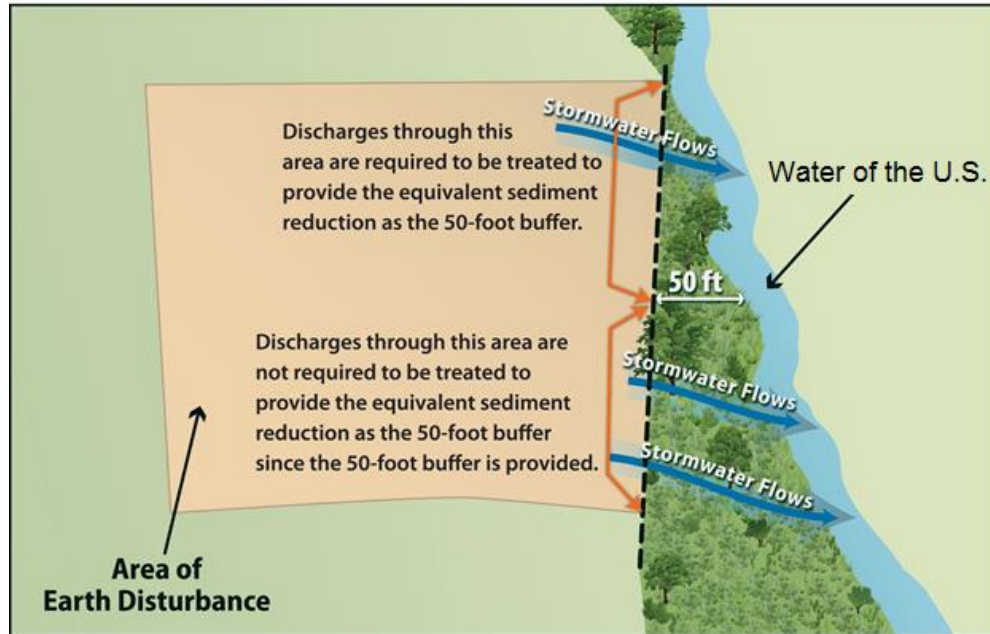


Figure G-4 Example of how to comply with the requirement to provide the equivalent sediment reduction when only a portion of your earth-disturbances discharge to a buffer of less than 50-feet. Area of Earth Disturbance

Steps to help you meet compliance alternative 2 and 3 requirements are provided below.

Step 1 - Estimate the Sediment Reduction from the 50-foot Buffer

In order to design controls that match the sediment removal efficiency of a 50-foot buffer, you first need to know what this efficiency is for your site. The sediment removal efficiencies of natural buffers vary according to a number of site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of erosion and sediment controls used to reduce the discharge of sediment prior to the buffer. EPA has simplified this calculation by developing buffer performance tables covering a range of vegetation and soil types for the areas covered by the CGP. See Attachment 1 of this Appendix, Tables G-8 through G-15. Note: buffer performance values in Tables G-8 through G-15 represent the percent of sediment captured through the use of perimeter controls (e.g., silt fences) and 50-foot buffers at disturbed sites of fixed proportions and slopes.¹

¹ EPA used the following when developing the buffer performance tables:

- The sediment removal efficiencies are based on the U.S. Department of Agriculture's RUSLE2 ("Revised Universal Soil Loss Equation 2") model for slope profiles using a 100-foot long denuded slopes.
- Sediment removal was defined as the annual sediment delivered at the downstream end of the 50-foot natural buffer (tons/yr/acre) divided by the annual yield from denuded area (tons/yr/acre).
- As perimeter controls are also required by the CGP, sediment removal is in part a function of the reduction due to a perimeter control (i.e., silt fence) located between the disturbed portion of the site and the upstream edge of the natural buffer and flow traveling through a 50-foot buffer of undisturbed natural vegetation.
- It was assumed that construction sites have a relatively uniform slope without topographic features that accelerate the concentration for erosive flows.

Using Tables G-8 through G-15 (see Attachment 1 of this Appendix), you can determine the sediment removal efficiency of a 50-foot buffer for your geographic area by matching the vegetative cover type that best describes your buffer area and the type of soils that predominate at your site. For example, if your site is located in Massachusetts (Table G-9), and your buffer vegetation corresponds most closely with that of tall fescue grass, and the soil type at your site is best typified as sand, your site's sediment removal efficiency would be 81 percent.

In this step, you should choose the vegetation type in the tables that most closely matches the vegetation that would exist naturally in the buffer area on your site regardless of the condition of the buffer. However, because you are not required to plant any additional vegetation in the buffer area, in determining what controls are necessary to meet this sediment removal equivalency in Step 2 below, you will be able to take credit for this area as a fully vegetated "natural buffer."

Similarly, if a portion of the buffer area adjacent to the water of the U.S. is owned by another party and is not under your control, you can treat the area of land not under your control as having the equivalent vegetative cover and soil type that predominates on the portion of the property on which your construction activities are occurring.

For example, if your earth-disturbances occur within 50 feet of a water of the U.S., but the 10 feet of land immediately adjacent to the water of the U.S. is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10 foot area adjacent to the stream as having the equivalent soil and vegetation type that predominates in the 40 foot area under your control. You would then make the same assumption in Step 2 for purposes of determining the equivalent sediment removal.

Alternatively, you may do your own calculation of the effectiveness of the 50-foot buffer based upon your site-specific conditions, and may use this number as your sediment removal equivalency standard to meet instead of using Tables G-8 through G-15. This calculation must be documented in your SWPPP.

Step 2 - Design Controls That Match the Sediment Removal Efficiency of the 50-foot Buffer

Once you determine the estimated sediment removal efficiency of a 50-foot buffer for your site in Step 1, you must next select stormwater controls that will provide an equivalent sediment load reduction. These controls can include the installation of a single control, such as a sediment pond or additional perimeter controls, or a combination of stormwater controls. Whichever control(s) you select, you must demonstrate in your SWPPP that the controls will provide at a minimum the same sediment removal capabilities as a 50-foot natural buffer (Step 1). You may take credit for the removal efficiencies of your required perimeter controls in your calculation of equivalency, because these were included in calculating the buffer removal efficiencies in Tables G-8 through G-15. (Note: You are reminded that the controls must be kept in effective operating condition until you complete final stabilization on the disturbed portions of the site discharging to the water of the U.S.)

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- It was assumed that vegetation has been removed from the disturbed portion of the site and a combination of cuts and fills have resulted in a smooth soil surface with limited retention of near-surface root mass.

To represent the influence of soil, EPA analyzed 11 general soil texture classifications in its evaluation of buffer performance. To represent different types of buffer vegetation, EPA evaluated 4 or more common vegetative types for each state/territory covered under the permit. For each vegetation type evaluated, EPA considered only permanent, non-grazed, and non-harvested vegetation, on the assumption that a natural buffer adjacent to the water of the U.S. will typically be undisturbed. EPA also evaluated slope steepness and found that sediment removal efficiencies present in Tables G-8 through G-15 are achievable for slopes that are less than nine percent.

To make the determination that your controls and/or buffer area achieve an equivalent sediment load reduction as a 50-foot buffer, you should use a model or other type of calculation. As mentioned above, there are a variety of models available that can be used to support your calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other models. A couple of examples are provided in Attachment 3 to help illustrate how this determination could be made.

If you retain a buffer of less than 50 feet, you may take credit for the removal that will occur from the reduced buffer and only need to provide additional controls to make up the difference between the removal efficiency of a 50 foot buffer and the removal efficiency of the narrower buffer. For example, if you retain a 30 foot buffer, you can account for the sediment removal provided by the 30 foot buffer retained, and you will only need to design controls to make up for the additional removal provided by the 20 feet of buffer that is not being provided. To do this, you would plug the width of the buffer that is retained into RUSLE or another model, along with other stormwater controls that will together achieve a sediment reduction equivalent to a natural 50-foot buffer.

As described in Step 1 above, you can take credit for the area you retained as a "natural buffer" as being fully vegetated, regardless of the condition of the buffer area.

For example, if your earth-disturbances occur 30 feet from a water of the U.S., but the 10 feet of land immediately adjacent to the water of the U.S. is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10-foot area as a natural buffer, regardless of the activities that are taking place in the area. Therefore, you can assume (for purposes of your equivalency calculation) that your site is providing the sediment removal equivalent of a 30-foot buffer, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided.

Step 3 - Document How Site-Specific Controls Will Achieve the Sediment Removal Efficiency of the 50-foot Buffer

In Steps 1 and 2, you determined both the expected sediment removal efficiency of a 50-foot buffer at your site, and you used this number as a performance standard to design controls to be installed at your site, which alone or in combination with any retained natural buffer, achieves the expected sediment removal efficiency of a 50-foot buffer at your site. The final step is to document in your SWPPP the information you relied on to calculate the equivalent sediment reduction as an undisturbed natural buffer.

EPA will consider your documentation to be sufficient if it generally meets the following:

- For Step 1, refer to the table in Attachment 1 that you used to derive your estimated 50-foot buffer sediment removal efficiency performance. Include information about the buffer vegetation and soil type that predominate at your site, which you used to select the sediment load reduction value in Tables G-8 through G-15. Or, if you conducted a site-specific calculation for sediment removal efficiency, provide the specific removal efficiency, and the information you relied on to make your site-specific calculation.
- For Step 2, (1) Specify the model you used to estimate sediment load reductions from your site; and (2) the results of calculations showing how your controls will meet or exceed the sediment removal efficiency from Step 1.

If you choose compliance alternative 3, you must also include in your SWPPP a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size.

G.3 SMALL RESIDENTIAL LOT COMPLIANCE ALTERNATIVES

EPA has developed two additional compliance alternatives applicable only to "small residential lots" that are unable to provide and maintain a 50 foot buffer.

A **small residential lot** is a lot or grouping of lots being developed for residential purposes that will disturb less than 1 acre of land, but that is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

The following steps describe how a small residential lot operator would achieve compliance with one these 2 alternatives.

G.3.1 Small Residential Lot Compliance Alternative Eligibility

In order to be eligible for the small residential lot compliance alternatives, the following conditions must be met:

- a. The lot or grouping of lots meets the definition of "small residential lot"; and
- b. The operator must follow the guidance for providing and maintaining a natural buffer in Part G.2.3 of this Appendix, including:
 - i. Ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls, and use velocity dissipation devices if necessary to prevent erosion caused by stormwater within the buffer;
 - ii. Document in the SWPPP the natural buffer width retained on the property, and show the buffer boundary on your site plan; and
 - iii. Delineate, and clearly mark off, with flags, tape, or other similar marking device, all natural buffer areas.

G.3.2 Small Residential Lot Compliance Alternatives

You must next choose from one of two small residential lot compliance alternatives and implement the stormwater control practices associated with that alternative.

Note: The compliance alternatives provided below are not mandatory. Operators of small residential lots can alternatively choose to comply with the any of the options that are available to other sites in Part 2.2.1.a and G.2.1 of this Appendix.

Small Residential Lot Compliance Alternative 1

Alternative 1 is a straightforward tiered-technology approach that specifies the controls that a small residential lot must implement based on the buffer width retained. To meet the requirements of small residential lot compliance alternative 1, you must implement the controls specified in Table G-1 based on the buffer width to be retained. See footnote 3, below, for a description of the controls you must implement.

For example, if you are an operator of a small residential lot that will be retaining a 35-foot buffer and you choose Small Residential Lot Compliance Alternative 1, you must implement double perimeter controls between earth disturbances and the water of the U.S.

In addition to implementing the applicable control, you must also document in your SWPPP how you will comply with small residential lot compliance alternative 1.

Table G-1 Alternative 1 Requirements²

Retain 50-foot Buffer	Retain <50 and >30 foot Buffer	Retain ≤ 30 foot Buffer
No Additional Requirements	Double Perimeter Controls	Double Perimeter Controls and 7-Day Site Stabilization

Small Residential Lot Compliance Alternative 2

Alternative 2 specifies the controls that a builder of a small residential lot must implement based on both the buffer width retained and the site’s sediment discharge risk. By incorporating the sediment risk, this approach may result in the implementation of controls that are more appropriate for the site’s specific conditions.

Step 1 – Determine Your Site’s Sediment Risk Level

To meet the requirements of Alternative 2, you must first determine your site’s sediment discharge “risk level” based on the site’s slope, location, and soil type. To help you to determine your site’s sediment risk level, EPA developed five different tables for different slope conditions. You should select the table that most closely corresponds to your site’s average slope.

For example, if your site’s average slope is 7 percent, you should use Table G–4 to determine your site’s sediment risk.

After you determine which table applies to your site, you must then use the table to determine the “risk level” (e.g., “low”, “moderate”, or “high”) that corresponds to your site’s location and predominant soil type.³

For example, based on Table G-3, a site located in New Hampshire with a 4 percent average slope and with predominately sandy clay loam soils would fall into the “moderate” risk level.

Table G-2 Risk Levels for Sites with Average Slopes of ≤ 3 Percent

Soil Type Location	Soil Type				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	Moderate	Moderate	Moderate	Moderate	High
Puerto Rico	Moderate	Moderate	Moderate	Moderate	High

² Description of Additional Controls Applicable to Small Residential Lot Compliance Alternatives 1 and 2:

- **No Additional Requirements:** If you implement a buffer of 50 feet or greater, then you are not subject to any additional requirements. Note that you are required to install perimeter controls between the disturbed portions of your site and the buffer in accordance with Part 2.2.3.
- **Double Perimeter Control:** In addition to the reduced buffer width retained on your site, you must provide a double row of perimeter controls between the disturbed portion of your site and the water of the U.S. spaced a minimum of 5 feet apart.
- **Double Perimeter Control and 7-Day Site Stabilization:** In addition to the reduced buffer width retained on your site and the perimeter control implemented in accordance with Part 2.2.3, you must provide a double row of perimeter controls between the disturbed portion of your site and the water of the U.S. spaced a minimum of 5 feet apart, and you are required to complete the stabilization activities specified in Parts 2.2.14 within 7 calendar days of the temporary or permanent cessation of earth-disturbing activities.

³ One source for determining your site’s predominant soil type is the USDA’s Web Soil Survey located at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

Virgin Islands	Low	Moderate	Low	Moderate	Moderate
American Samoa	Moderate	Moderate	Moderate	Moderate	High
Massachusetts and New Hampshire	Low	Moderate	Low	Low	Moderate
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Low
Washington D.C.	Low	Moderate	Low	Low	Moderate

Table G-3 Risk Levels for Sites with Average Slopes of > 3 Percent and ≤ 6 Percent

Location	Soil Type				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	Moderate	Moderate	Moderate	Moderate	High
Puerto Rico	Moderate	Moderate	Moderate	Moderate	High
Virgin Islands	Moderate	Moderate	Moderate	Moderate	High
American Samoa	High	High	Moderate	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Low	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Moderate
Washington D.C.	Moderate	Moderate	Moderate	Moderate	High

Table G-4 Risk Levels for Sites with Average Slopes of > 6 Percent and ≤ 9 Percent

Soil Type Location					
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	Moderate	High	Moderate	High	High
Puerto Rico	Moderate	High	Moderate	Moderate	High
Virgin Islands	Moderate	Moderate	Moderate	Moderate	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Moderate	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Moderate
Washington D.C.	Moderate	Moderate	Moderate	Moderate	High

Table G-5 Risk Levels for Sites with Average Slopes of > 9 Percent and ≤ 15 Percent

Soil Type Location					
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
CNMI / Guam	High	High	High	High	High
Puerto Rico	High	High	High	High	High
Virgin Islands	Moderate	High	Moderate	High	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Moderate	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Moderate	Low	Moderate	Moderate
Washington D.C.	Moderate	High	Moderate	Moderate	High

Table G-6 Risk Levels for Sites with Average Slopes of > 15 Percent

Soil Type Location	Silty Clay Loam or Clay- Loam		Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
	Clay				
CNMI / Guam	High	High	High	High	High
Puerto Rico	High	High	High	High	High
Virgin Islands	High	High	High	High	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	High	High	Moderate	High	High
Idaho	Low	Low	Low	Low	Moderate
New Mexico	Moderate	Moderate	Moderate	Moderate	High
Washington D.C.	High	High	Moderate	High	High

Step 2 – Determine Which Additional Controls Apply

Once you determine your site's "risk level", you must next determine the additional controls you need to implement on your site, based on the width of buffer you plan to retain. Table G-7 specifies the requirements that apply based on the "risk level" and buffer width retained. See footnote 3, above, for a description of the additional controls that are required.

For example, if you are the operator of a small residential lot that falls into the "moderate" risk level, and you decide to retain a 20-foot buffer, using Table G-7 you would determine that you need to implement double perimeter controls to achieve compliance with small residential lot compliance alternative 2.

You must also document in your SWPPP your compliance with small residential lot compliance alternative 2.

Table G - 7. Alternative 2 Requirements²

Risk Level Based on Estimated Soil Erosion	Retain ≥ 50' Buffer	Retain <50' and >30' Buffer	Retain ≤30' and >10' Buffer	Retain ≤ 10' Buffer
Low Risk	No Additional Requirements	No Additional Requirements	Double Perimeter Control	Double Perimeter Control
Moderate Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization

High Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization	Double Perimeter Control and 7-Day Site Stabilization
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ATTACHMENT 1

Sediment Removal Efficiency Tables⁴

EPA recognizes that very high removal efficiencies, even where theoretically achievable by a 50-foot buffer, may be very difficult to achieve in practice using alternative controls. Therefore in the tables below, EPA has limited the removal efficiencies to a maximum of 90%. Efficiencies that were calculated at greater than 90% are shown as 90%, and this is the minimum percent removal that must be achieved by alternative controls.

Table G-8 Estimated 50-foot Buffer Performance in Idaho*

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Tall Fescue Grass	42	52	44	48	85
Medium-density Weeds	28	30	28	26	60
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	25	26	24	24	55
Northern Mixed Prairie Grass	28	30	28	26	50
Northern Range Cold Desert Shrubs	28	28	24	26	50

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

Table G-9 Estimated 50-foot Buffer Performance in Massachusetts and New Hampshire*

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Warm-season Grass (i.e., Switchgrass, Lemongrass)	79	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	78	90	90	90	90
Tall Fescue Grass	76	90	81	89	90
Medium-density Weeds	66	76	60	72	66

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

⁴ The buffer performances were calculated based on a denuded slope upgradient of a 50-foot buffer and a perimeter controls, as perimeter controls are a standard requirement (see Part 2.2.3).

Table G-10 Estimated 50-foot Buffer Performance in New Mexico*

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Tall Fescue grass	71	85	80	86	90
Medium-density Weeds	56	73	55	66	78
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	53	70	51	62	67
Southern Mixed Prairie Grass	53	71	52	63	50
Southern Range Cold Desert Shrubs	56	73	55	65	53

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

Table G-11 Estimated 50-foot Buffer Performance in Washington, DC*

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Warm-season Grass (i.e., Switchgrass, Lemongrass)	82	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	81	90	90	90	90
Tall Fescue Grass	79	90	83	89	90
Medium-density Weeds	71	79	66	75	74

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

Table G-12 Estimated 50-foot Buffer Performance in American Samoa*

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	82	90	90	90	83
Warm-season Grass (i.e., Switchgrass, Lemongrass)	82	90	90	90	85
Dense Grass	82	90	90	90	83
Tall Fescue Grass	82	89	82	89	79
Medium-density Weeds	70	73	62	75	59

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

Table G-13 Estimated 50-foot Buffer Performance in CNMI and Guam*

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	80	90	90	90	89
Warm-season Grass (i.e., Switchgrass, Lemongrass)	80	90	90	90	90
Dense Grass	79	90	90	90	89
Tall Fescue Grass	76	90	80	88	87
Medium-density Weeds	63	73	53	68	61

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

Table G-14 Estimated 50-foot Buffer Performance in Puerto Rico*

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	83	90	90	90	90
Warm-season Grass (i.e., Switchgrass, Lemongrass)	83	90	90	90	90
Dense Grass	83	90	90	90	90
Tall Fescue Grass	82	90	84	90	89
Medium-density Weeds	72	78	65	76	64

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

Table G-15 Estimated 50-foot Buffer Performance in Virgin Islands*

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	85	90	90	90	90
Warm-season Grass (i.e., Switchgrass, Lemongrass)	86	90	90	90	90
Dense Grass	85	90	90	90	90
Tall Fescue Grass	85	90	88	90	89
Medium-density Weeds	75	77	71	78	63

* Applicable for sites with less than nine percent slope

** Characterization focuses on the under-story vegetation

ATTACHMENT 2Using the Sediment Removal Efficiency Tables – Questions and Answers

- *What if my specific buffer vegetation is not represented in Tables G-8 through G-15?* Tables G - 8 through G - 15 provide a wide range of factors affecting buffer performance; however, there are likely instances where the specific buffer vegetation type on your site is not listed. If you do not see a description of the type of vegetation present at your site, you should choose the vegetation type that most closely matches the vegetation type on your site. You can contact your local Cooperative Extension Service Office (<http://nifa.usda.gov/partners-and-extension-map>) for assistance in determining the vegetation type in Tables G-8 through G-15 that most closely matches your site-specific vegetation.
- *What if there is high variability in local soils?* EPA recognizes that there may be a number of different soil type(s) on any given construction site. General soil information can be obtained from USDA soil survey reports (<http://websoilsurvey.nrcs.usda.gov>) or from individual site assessments performed by a certified soil expert. Tables G-8 through G-15 present eleven generic soil texture classes, grouping individual textures where EPA has determined that performance is similar. If your site contains different soil texture classes, you should use the soil type that best approximates the predominant soil type at your site.
- *What if my site slope is greater than 9 percent after final grade is reached?* As indicated in the buffer performance tables, the estimated sediment removal efficiencies are associated with disturbed slopes of up to 9 percent grade. Where your graded site has an average slope of greater than 9 percent, you should calculate a site-specific buffer performance.
- *How do I calculate my own estimates for sediment reduction at my specific site?* If you determine that it is necessary to calculate your own sediment removal efficiency using site-specific conditions (e.g., slopes at your site are greater than 9 percent), you can use a range of available models that are available to facilitate this calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other equivalent models.
- *What is my estimated buffer performance if my site location is not represented by Tables G-8 through G-15?* If your site is located in an area not represented by Tables G-8 through G-15, you should use the table that most closely approximates conditions at your site. You may instead choose to conduct a site-specific calculation of the buffer performance.
- *What if only a portion of my site drains to the buffer area?* If only a portion of your site drains to a water of the U.S., where that water is within 50 feet of your earth disturbances, you are only required to meet the equivalency requirement for the stormwater flows corresponding to those portions of the site. See Example 2 below for an example of how this is expected to work.

ATTACHMENT 3Examples of How to Use the Sediment Removal Efficiency Tables*Example 1. Comparatively Wet Location (7.5 acre site located in Massachusetts)*

The operator of a 7.5-acre construction site in Massachusetts has determined that it is infeasible to establish a buffer of any size on the site, and is now required to select and install controls that will achieve an equivalent sediment load reduction as that estimated in G-9 for their site conditions. The first step is to identify what percentage of eroded sediment is estimated to be retained from a 50-foot buffer. For this example, it is assumed that the site has a relatively uniform gentle slope (3 percent), so Table G-9 can be used to estimate the 50-foot buffer sediment load reduction. If the site's buffer vegetation is best typified by cool-season dense grass and the underlying soil is of a type best described as loamy sand, the 50-foot buffer is projected to capture 90 percent of eroded sediment from the construction site.

The second step is to determine what sediment controls can be selected and installed in combination with the perimeter controls already required to be implemented at the site (see Part 2.2.3), which will achieve the 90 percent sediment removal efficiency from Table G-9. For this example, using the RUSLE2 profile model, it was determined that installing a pair of shallow-sloped diversion ditches to convey runoff to a well-designed and maintained sediment basin provides 99 percent sediment removal. Because the estimated sediment reduction is greater than the required 90 percent that a 50-foot buffer provides, the operator will have met the buffer requirements. See **Error! Reference source not found..** The operator could also choose a different set of controls, as long as they achieve at least a 90 percent sediment removal efficiency.

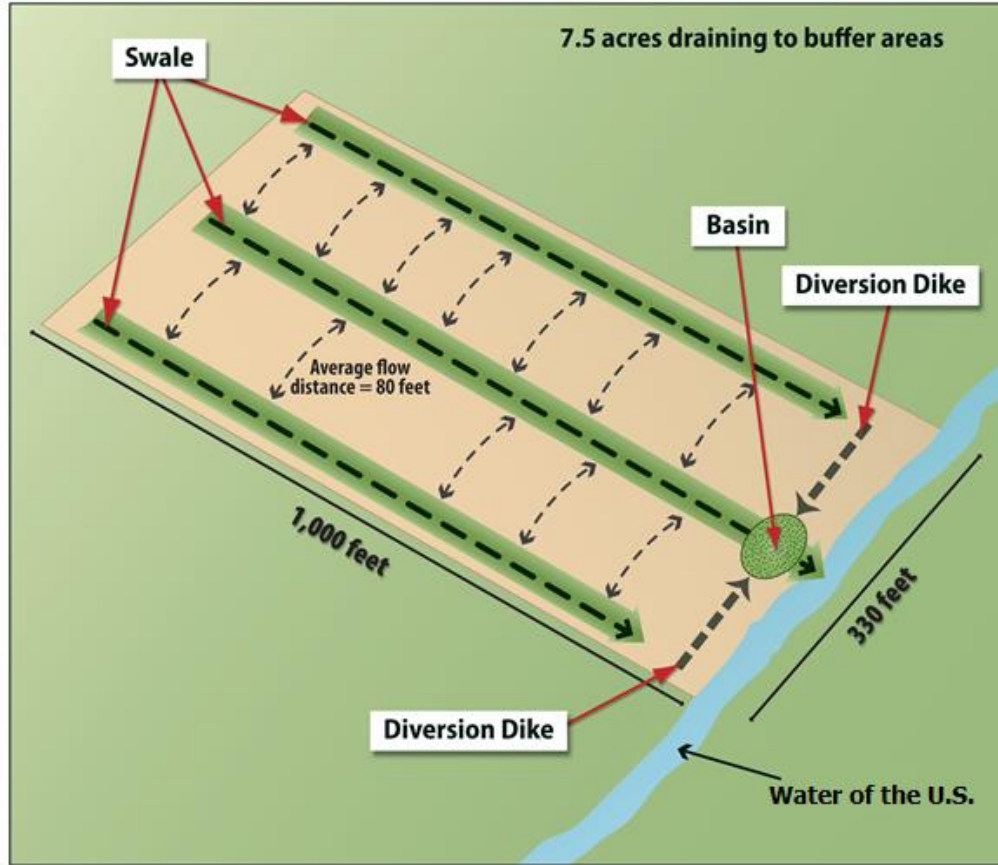


Figure G-5 Example 1 – Equivalent Sediment Load Reductions at a 7.5 ac Site in MA.

Example 2. Arid Location With Pre-existing Disturbances in the Natural Buffer (6.5 acre site located in New Mexico)

An operator of a site in New Mexico determines that it is not feasible to provide a 50-foot buffer, but a 28-foot buffer can be provided. Because the operator will provide a buffer that is less than 50 feet, the operator must determine which controls, in combination with the 28-foot buffer, achieve a sediment load reduction equivalent to the 50-foot buffer. In this example, the project will disturb 6.5 acres of land, but only 1.5 acres of the total disturbed area drains to the buffer area. Within the 28-foot buffer area is a preexisting concrete walkway. Similar to Example 1, the equivalence analysis starts with Step 1 in Part G.2.4 of this Appendix with a review of the New Mexico buffer performance (Table G-10). The operator determines that the predominate vegetation type in the buffer area is prairie grass, the soil type is similar to silt, and the site is of a uniform, shallow slope (e.g., 3 percent grade). Although the operator will take credit for the disturbance caused by the concrete walkway as a natural buffer in Step 2, here the operator can treat the entire buffer area as being naturally vegetated with prairie grass. Based on this information, the operator refers to Table G-10 to estimate that the 50-foot buffer would retain 50 percent of eroded soil.

The second step is to determine, based on the 50 percent sediment removal efficiency found in Table G - 10, what sediment controls, in combination with the 28-foot buffer area, can be implemented to reduce sediment loads by 50 percent or more. The operator does not have to account the reduction in buffer function caused by the preexisting walkway, and can take credit for the entire 28-foot buffer being fully vegetated in the analysis. For this example, using the RUSLE2 profile model, the operator determined that installing a fiber roll barrier between the

silt fence (already required by Part 2.2.3) and the 28-foot buffer will achieve an estimated 84 percent sediment removal efficiency. See **Error! Reference source not found..** Note that this operator is subject to the requirement in Part G.2.3 of this Appendix to ensure that discharges through the silt fence, fiber roll barrier, and 28-foot buffer do not cause erosion within the buffer. The estimated sediment reduction is greater than the required 50 percent; therefore the operator will have met the buffer alternative requirement.

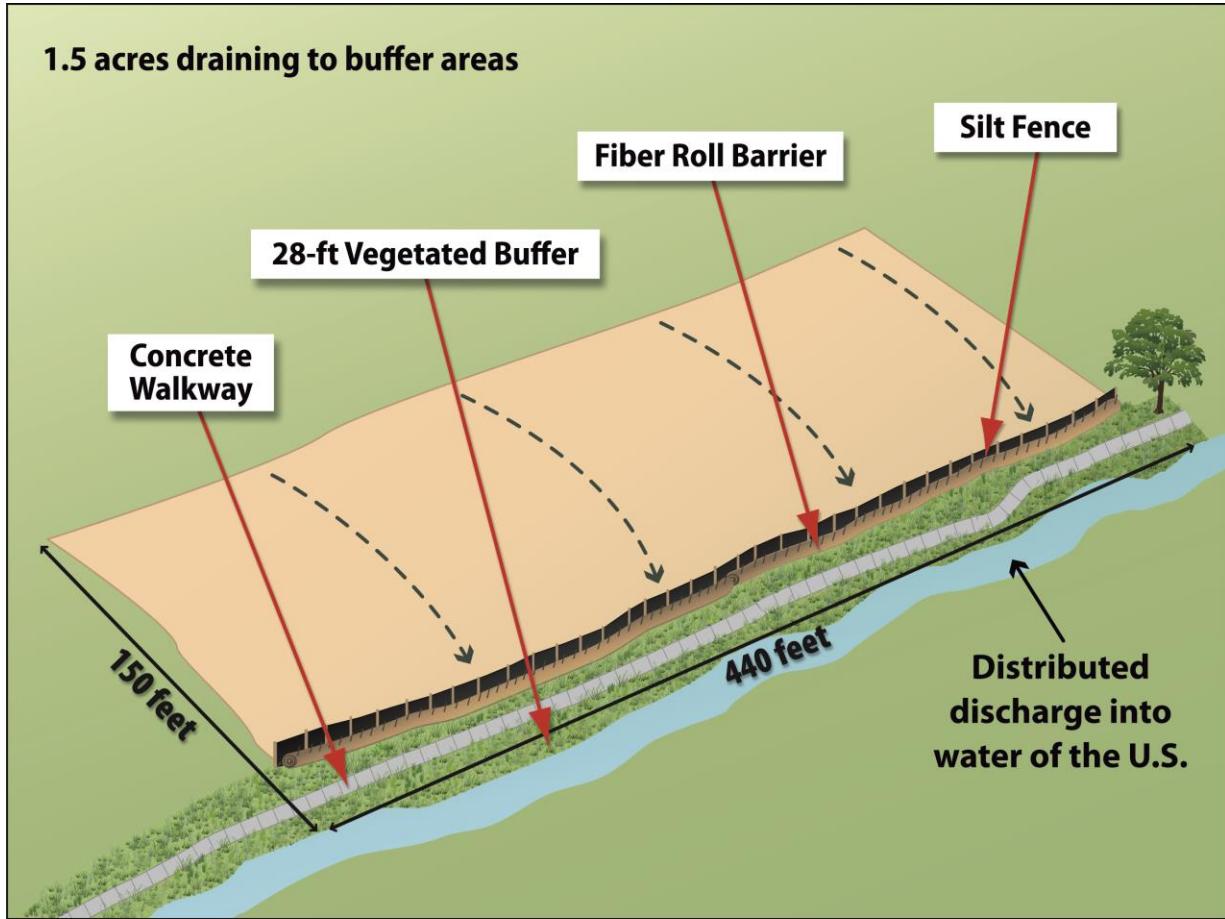


Figure G-6 Example 2 – Equivalent Sediment Load Reductions at a 6.5 ac Site in NM.

Appendix H – 2-Year, 24-Hour Storm Frequencies

Part 2.2.12 of the permit indicates that if you install a sediment basin, one of the design requirements is to provide storage for either (1) the calculated volume of runoff from a 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained. This appendix is intended to provide a guide to permittees to determine the volume of precipitation associated with their local 2-year, 24-hour storm event.

The permittee should start out by determining their local 2-year, 24-hour storm volume. The rainfall frequency atlases, technical papers, and the Precipitation Frequency Data Server (PFDS) developed by the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) serve as national standards for rainfall intensity at specified frequencies and durations in the United States. Table H-1 identifies methods for determining precipitation frequency based on permit area. EPA notes that permittees may also use alternative peer-reviewed data sources not listed in Table H - 1 to determine the 2-year, 24-hour storm for their site.

Table H - 1 – Method to Determine Precipitation Frequency Based on Permit Area

PERMIT AREA	METHOD TO DETERMINE PRECIPITATION FREQUENCY
District of Columbia	PFDS; NOAA Atlas 14, Vol. 2
Idaho	NOAA Atlas 2, Vol. 5; Technical Paper 40
Massachusetts	Technical Paper 40
New Hampshire	Technical Paper 40
New Mexico	PFDS; Technical Paper 40
Selected Pacific Islands	PFDS; Technical Paper 40
Puerto Rico and the U.S Virgin Islands	PFDS; Technical Paper 40
Other	PFDS; Technical Paper 40; NOAA Atlas 2 or 14

How to Determine Your Local 2-year, 24-hour Storm Size

Projects located in the **District of Columbia, Massachusetts, New Hampshire, New Mexico, Puerto Rico, U.S. Virgin Islands, or Pacific Islands** can use the PFDS at <http://hdsc.nws.noaa.gov/hdsc/pfds/index.html> or the appropriate NOAA's Atlas 14 Volume at <http://www.nws.noaa.gov/oh/hdsc/currentpf.htm> to determine their precipitation frequency.

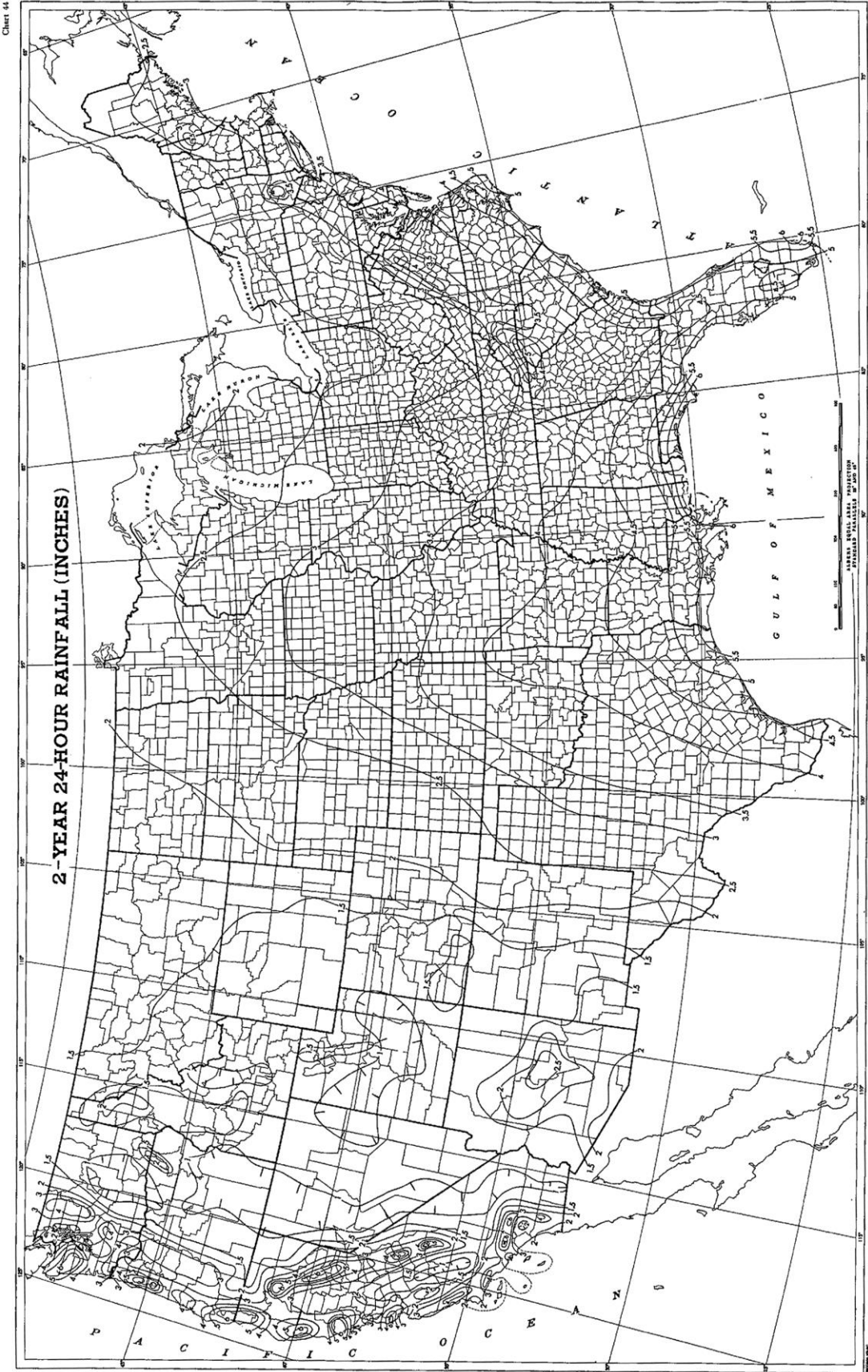
The PFDS is an easy to use, point-and-click interface to official U.S. precipitation frequency estimates and intensities. The opening PFDS screen is a clickable map of the United States. Upon clicking on a state, a state-specific interface appears. From this page the user selects the following:

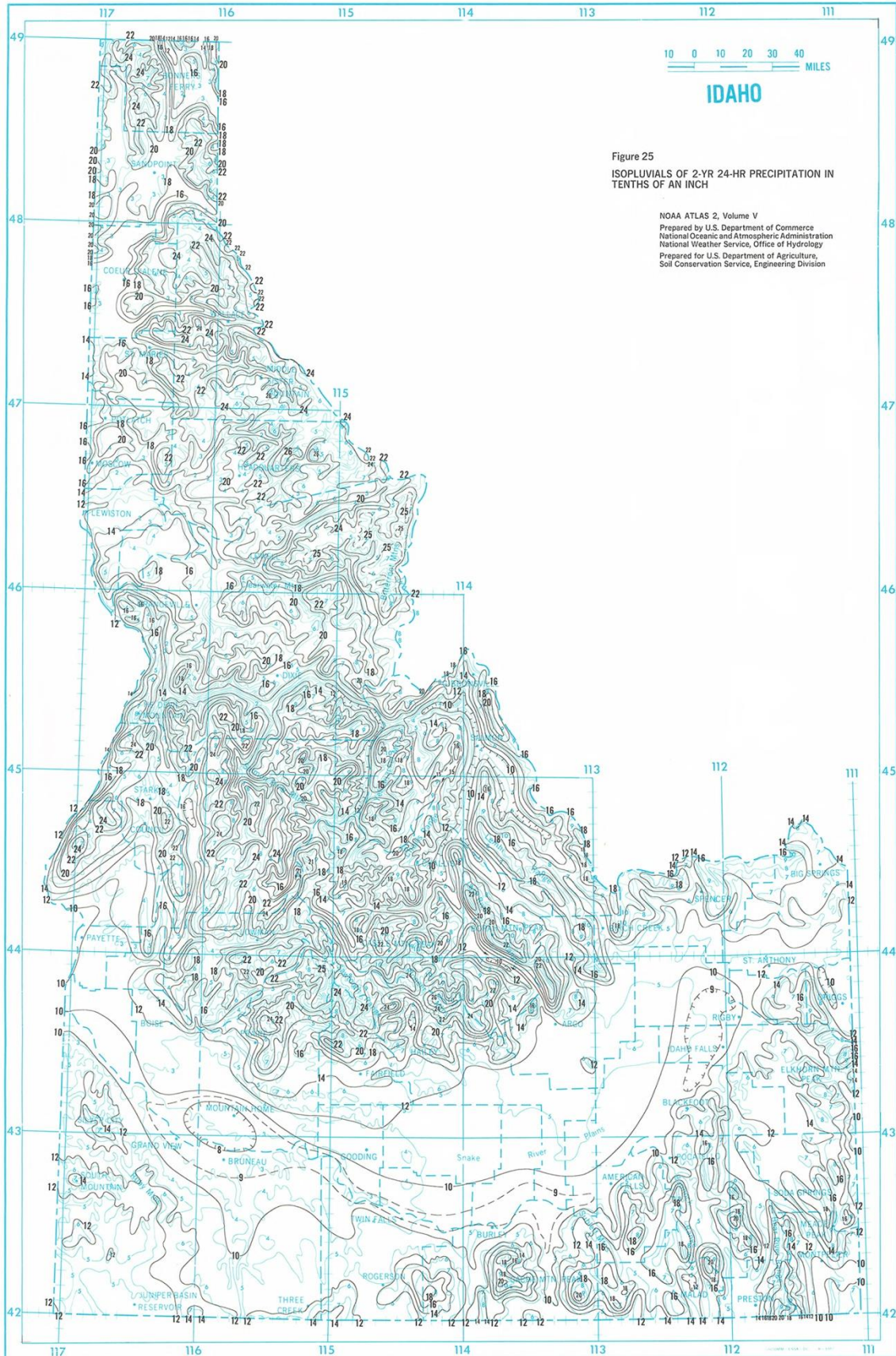
- A location: Either via clicking on the map or manually entering a longitude/latitude coordinate;
- Data type: precipitation depth or precipitation intensity
- Units: english or metric; and
- Time series type: partial duration or annual maximum.

Additionally, PFDS also serves as a tool for providing references and other information for other current precipitation frequency standards that are not yet updated.

Projects located in **Idaho** can use the NOAA Atlas 2, Vol. 5 to determine their precipitation frequency. NOTE: Precipitation Frequencies on the NOAA Atlas 2, Vol. 5 are in tenths of an inch and will have to be converted to inches to determine precipitation frequency. NOAA Atlas 2, Vol. 5 can be accessed at http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas2_Volume5.pdf. (See also attached map of NOAA Atlas 2, Vol. 5)

Projects located in areas not covered by the PFDS or NOAA Atlases will need to use TP-40 to identify the precipitation frequency. TP-40 provides a map of the continental U.S. for the 2-year, 24-hour rainfall. TP40 can be accessed at http://www.nws.noaa.gov/oh/hdsc/PF_documents/TechnicalPaper_No40.pdf. (See also attached map of TP-40)





Appendix I - Standard Permit Conditions

Standard permit conditions in Appendix I are consistent with the general permit provisions required under 40 CFR 122.41.

I.1 Duty To Comply.

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

I.1.1 You must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement.

I.1.2 Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (61 FR 252, December 31, 1996, pp. 69359-69366, as corrected in 62 FR 54, March 20, 1997, pp.13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every 4 years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties following were adjusted for inflation starting in 1996.

I.1.2.1 *Criminal Penalties.*

- a. *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than \$2,500 nor more than \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation or by imprisonment of not more than two years, or both.
- b. *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- c. *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than \$250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision be subject to a fine of not

more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

- d. *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

I.1.2.2 *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amount authorized by Section 309(d) of the Act, as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.

I.1.2.3 *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows

- a. *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note), as amended (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.
- b. *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act, as adjusted pursuant to the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note), as amended, (28 U.S.C. § 2461 note), and codified at 40 CFR § 19.4.

I.2 Duty to Reapply.

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once EPA issues it.

I.3 Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

I.4 Duty to Mitigate.

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

I.5 Proper Operation and Maintenance.

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

I.6 Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

I.7 Property Rights.

This permit does not convey any property rights of any sort, or any exclusive privileges.

I.8 Duty to Provide Information.

You must furnish to EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), within a reasonable time, any information that EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA or an authorized representative upon request, copies of records required to be kept by this permit.

I.9 Inspection and Entry.

You must allow EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), upon presentation of credentials and other documents as may be required by law, to:

- I.9.1** Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- I.9.2** Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- I.9.3** Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- I.9.4** Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

I.10 Monitoring and Records.

- I.10.1** Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.
- I.10.2** You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of EPA at any time.
- I.10.3** Records of monitoring information must include:

I.10.3.1 The date, exact place, and time of sampling or measurements;

I.10.3.2 The individual(s) who performed the sampling or measurements;

I.10.3.3 The date(s) analyses were performed

I.10.3.4 The individual(s) who performed the analyses;

I.10.3.5 The analytical techniques or methods used; and

I.10.3.6 The results of such analyses.

I.10.4 Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

I.10.5 The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

I.11 Signatory Requirements.

I.11.1 All applications, including NOIs, must be signed as follows:

I.11.1.1 For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

I.11.1.2 For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

I.11.1.3 For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

I.11.2 Your SWPPP, including changes to your SWPPP, inspection reports, and any other compliance documentation required under this permit, must be signed by a person described in Appendix I, Subsection I.11.1 above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

I.11.2.1 The authorization is made in writing by a person described in Appendix I, Subsection I.11.1;

I.11.2.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant

manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

I.11.2.3 The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

I.11.3 Changes to Authorization. If an authorization under this permit is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI must be submitted to EPA. See Table 1 in Part 1.4.2 of the permit. However, if the only change that is occurring is a change in contact information or a change in the facility's address, the operator need only make a modification to the existing NOI submitted for authorization.

I.11.4 Any person signing documents in accordance with Appendix I, Subsections I.11.1 or I.11.2 above must include the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I.11.5 For persons signing NOIs electronically, in addition to meeting other applicable requirements in Appendix I, Subsection I.11, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication).

I.11.6 The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

I.12 Reporting Requirements.

I.12.1 Planned changes. You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

I.12.1.1 The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

I.12.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

I.12.2 Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

- I.12.3** Transfers. This permit is not transferable to any person except after notice to EPA. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination pursuant to Part 8. The new owner or operator must submit a Notice of Intent in accordance with Part 1.7 and Table 1. See also requirements in Appendix I, Subsections I.11.1 and I.11.2.
- I.12.4** Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.
- I.12.4.1 Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by EPA for reporting results of monitoring of sludge use or disposal practices.
- I.12.4.2 If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by EPA.
- I.12.5** Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.
- I.12.6** Twenty-four hour reporting. In addition to reports required elsewhere in this permit:
- I.12.6.1 You must report any noncompliance which may endanger health or the environment directly to the EPA Regional Office (see contacts at <https://www2.epa.gov/national-pollutant-discharge-elimination-system-npdes/contact-us-stormwater#regional>). Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- I.12.6.2 The following shall be included as information which must be reported within 24 hours under this paragraph.
- a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(m)(3)(ii))
 - b. Any upset which exceeds any effluent limitation in the permit
 - c. Violation of a maximum daily discharge limit for any numeric effluent limitation. (See 40 CFR 122.44(g).)
- I.12.6.3 EPA may waive the written report on a case-by-case basis for reports under Appendix I, Subsection I.12.6.2 if the oral report has been received within 24 hours.
- I.12.7** Other noncompliance. You must report all instances of noncompliance not reported under Appendix I, Subsections I.12.4, I.12.5, and I.12.6, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix I, Subsection I.12.6.
- I.12.8** Other information. Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permitting Authority, you must promptly submit such facts or information.

I.13 Bypass.

I.13.1 Definitions.

I.13.1.1 Bypass means the intentional diversion of waste streams from any portion of a treatment facility See 40 CFR 122.41 (m)(1)(i).

I.13.1.2 Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41 (m)(1)(ii).

I.13.2 Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix I, Subsections I.13.3 and I.13.4. See 40 CFR 122.41 (m)(2).

I.13.3 Notice.

I.13.3.1 Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR 122.41 (m)(3)(i).

I.13.3.2 Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix I, Subsection I.12.6 (24-hour notice). See 40 CFR 122.41 (m)(3)(ii).

I.13.4 Prohibition of bypass. See 40 CFR 122.41 (m)(4).

I.13.4.1 Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c. You submitted notices as required under Appendix I, Subsection I.13.3.

I.13.4.2 EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix I, Subsection I.13.4.1.

I.14 Upset.

I.14.1 Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41 (n)(1).

I.14.2 Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix I, Subsection I.14.3 are met. No determination made during

administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. See 40 CFR 122.41(n)(2).

I.14.3 Conditions necessary for a demonstration of upset. See 40 CFR 122.41(n)(3). A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.14.3.1 An upset occurred and that you can identify the cause(s) of the upset;

I.14.3.2 The permitted facility was at the time being properly operated; and

I.14.3.3 You submitted notice of the upset as required in Appendix I, Subsection I.12.6.2.b (24 hour notice).

I.14.3.4 You complied with any remedial measures required under Appendix I, Subsection I.4.

I.14.4 Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, have the burden of proof. See 40 CFR 122.41(n)(4).

I.15 Retention of Records.

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

I.16 Reopener Clause.

I.16.1 Procedures for modification or revocation. Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

I.16.2 Water quality protection. If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit, or the permit may be modified to include different limitations and/or requirements.

I.16.3 Timing of permit modification. EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

I.17 Severability.

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. EPA's intent is that the permit is to remain in effect to the extent possible; in the event that any part of this permit is invalidated, EPA will advise the regulated community as to the effect of such invalidation.

Appendix J - Notice of Intent (NOI) Form and Instructions

Part 1.4.1 requires you to use the NPDES eReporting Tool, or "NeT" system, to prepare and submit your NOI electronically. However, if the EPA Regional Office grants you a waiver to use a paper NOI form, and you elect to use it, you must complete and submit the following form.



Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section III of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section II of this form. Submission of this NOI also constitutes notice that the operator identified in Section III of this form meets the eligibility requirements of Part 1.1 CGP for the project identified in Section IV of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

I. Approval to Use Paper NOI Form

Have you been granted a waiver from electronic reporting from the Regional Office *? YES NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

- Waiver granted: The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
- The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver:

Date approval obtained: / /

*** Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOI form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT).**

II. Permit Information

NPDES ID (EPA Use Only):

Master Permit Number: (see Appendix B of the CGP for the list of eligible permit numbers)

III. Operator Information

Operator Information

Operator Name:

Are you requesting coverage under this NOI as a "federal operator" as defined in Appendix A? YES NO

Mailing Address:

Street:

City: State: ZIP Code: -

County or Similar Government Division:

Phone: - - Ext.

E-mail:

Operator Point of Contact Information:

First Name, Middle Initial, Last Name:

Title:

NOI Preparer (Complete if NOI was prepared by someone other than the certifier):

First Name, Middle Initial, Last Name:

Organization:

Receiving Waters Information: (Attach a separate list if necessary)

Point of Discharge ID	For each point of discharge, provide the following receiving water information:		
	Provide the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to:	If the receiving water is impaired (on the CWA 303(d) list), list the pollutants that are causing the impairment:	If a TMDL been completed for this receiving waterbody, providing the following information:
			<p>TMDL Name and ID:</p> <p>Pollutant(s) for which there is a TMDL:</p>
			<p>TMDL Name and ID:</p> <p>Pollutant(s) for which there is a TMDL:</p>
			<p>TMDL Name and ID:</p> <p>Pollutant(s) for which there is a TMDL:</p>
			<p>TMDL Name and ID:</p> <p>Pollutant(s) for which there is a TMDL:</p>

			TMDL Name and ID: Pollutant(s) for which there is a TMDL:
			TMDL Name and ID: Pollutant(s) for which there is a TMDL:

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? (See Appendix F).

YES NO

If yes, name(s) of receiving water(s) and its designation (Tier 2, Tier 2.5 or Tier 3): _____

VI. Chemical Treatment Information

Will you use polymers, flocculants, or other treatment chemicals at your construction site? YES NO

If yes, will you use cationic treatment chemicals at your construction site*? YES NO

If yes, have you been authorized to use cationic treatment chemicals by your applicable EPA Regional Office in advance of filing your NOI*?
 YES NO

If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

Please indicate the treatment chemicals that you will use: _____

* Note: You are ineligible for coverage under this permit unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

VII. Stormwater Pollution Prevention Plan (SWPPP) Information

Has the SWPPP been prepared in advance of filing this NOI, as required? YES NO

SWPPP Contact Information:

First Name, Middle Initial Last Name: _____

Professional Title: _____

Phone: _____ - _____ - _____ Ext. _____

E-mail: _____

VIII. Endangered Species Protection

Using the instructions in Appendix D of the CGP, under which criterion listed below are you eligible for coverage under this permit? Check only 1 box, include the required information and provide a sound basis for supporting the criterion selected. You must consider Endangered Species Act listed threatened or endangered species (ESA-listed) and/or designated critical habitat(s) under the jurisdiction of both the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) and select the most conservative criterion that applies.

A No ESA-listed species and/or designated critical habitat present in action area. Using the process outlined in Appendix D of this permit, you certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of this permit. **[Basis statement content: A basis statement supporting the selection of this criterion should identify the USFWS and NMFS information sources used. Attaching aerial image(s) of the site to this NOI is helpful to EPA, USFWS, and NMFS in confirming eligibility under this criterion. Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers.]**

B Eligibility requirements met by another operator under the 2017 CGP. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your "action area" under eligibility Criterion A, C, D, E, or F of the 2017 CGP and you have confirmed that no additional ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS not considered in the that certification may be present or located in the "action area." To certify your eligibility under this criterion, there must be no lapse of NPDES permit coverage in the other CGP operator's certification. By certifying eligibility under this criterion, you agree to comply with any conditions upon which the other CGP operator's certification was based. You must include in your NOI the NPDES ID from the other 2017CGP operator's notification of authorization under this permit. If your certification is based on another 2017 CGP operator's certification under criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in criterion C in your NOI form. **[Basis statement content: A basis statement supporting the selection of this criterion should identify the eligibility criterion of the other CGP NOI, the authorization date, and confirmation that the authorization is effective.]**

If you select criterion B, provide the NPDES ID from the other operator's notification of authorization under this permit: _____

C Discharges not likely to adversely affect ESA-listed species and/or designated critical habitat. ESA-listed species and/or designated critical habitat(s) under the jurisdiction of the USFWS and/or NMFS are likely to occur in or near your site's "action area," and you certify to EPA that your site's discharges and discharge-related activities are not likely to adversely affect ESA-listed threatened or endangered species and/or designated critical habitat. This certification may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat. To certify your eligibility under this criterion, indicate 1) the ESA-listed species and/or designated habitat located in your "action area" using the process outlined in Appendix D of this permit; 2) the distance between the site and the listed species and/or designated critical habitat in the action area (in miles); and 3) a rationale describing specifically how adverse effects to ESA-listed species will be avoided from the discharges and discharge-related activities. You must also include a copy of your site map from your SWPPP showing the upland and in-water extent of your "action area" with this NOI. **[Basis statement content: A basis statement supporting the selection of this criterion should identify the information resources and expertise (e.g., state or federal biologists) used to arrive at this conclusion. Any supporting documentation should explicitly state that both ESA-listed species and designated critical habitat under the jurisdiction of the USFWS and/or NMFS were considered in the evaluation.]**

What ESA-listed species and/or designated critical habitat are located in your "action area":

Distance between your site and the ESA-listed species and/or designated critical habitat within the action area (in miles, state "on site" if the ESA-listed species and/or designated critical habitat is within the area to be disturbed):

D Coordination with USFWS and/or NMFS has successfully concluded. Coordination between you and the USFWS and/or NMFS has concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS, and resulted in a written concurrence from USFWS and/or NMFS that your site's discharges and discharge-related activities are not likely to adversely affect listed species and/or critical habitat. You must include copies of the correspondence with the participating agencies in your SWPPP and this NOI. **[Basis statement content: A basis statement supporting the selection of this criterion should identify whether USFWS or NMFS or both agencies participated in coordination, the field office/regional office(s) providing that coordination, and the date that coordination concluded.]**

E ESA Section 7 consultation has successfully concluded. Consultation between a Federal Agency and the USFWS and/or NMFS under section 7 of the ESA has concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS. To certify eligibility under this criterion, Indicate the result of the consultation:

biological opinion from USFWS and/or NMFS that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or

written concurrence from USFWS and/or NMFS with a finding that the site's discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat.

You must include copies of the correspondence between yourself and the USFWS and/or NMFS in your SWPPP and this NOI. **[Basis statement content: A basis statement supporting the selection of this criterion should identify the federal action agency(ies) involved, the field office/regional office(s) providing that consultation, any tracking numbers of identifiers associated with that consultation (e.g., IPaC number, PCTS number), and the date the consultation was completed.]**

F Issuance of section 10 permit. Potential take is authorized through the issuance of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of the site's discharges and discharge-related activities on ESA-listed species and designated critical habitat. You must include copies of the correspondence between yourself and the participating agencies in your SWPPP and your NOI. **[Basis**

statement content: A basis statement supporting the selection of this criterion should identify whether USFWS or NMFS or both agencies provided a section 10 permit, the field office/regional office(s) providing permit(s), any tracking numbers of identifiers associated with that consultation (e.g., IPaC number, PCTS number), and the date the permit was granted.

Provide a brief summary of the basis for criterion selection listed above [the necessary content for a supportive basis statement is provided under the criterion you selected].

IX. Historic Preservation

Are you installing any stormwater controls as described in Appendix E that require subsurface earth disturbance? (Appendix E, Step 1) YES NO

If yes, have prior surveys or evaluations conducted on the site have already determined historic properties do not exist, or that prior disturbances have precluded the existence of historic properties? (Appendix E, Step 2) YES NO

If no, have you determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on historic properties? (Appendix E, Step 3) YES NO

If no, did the SHPO, THPO, or other tribal representative (whichever applies) respond to you within the 15 calendar days to indicate whether the subsurface earth disturbances caused by the installation of stormwater controls affect historic properties? (Appendix E, Step 4) YES NO

If yes, describe the nature of their response:

- Written indication that no historic properties will be affected by the installation of stormwater controls.
- Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions.
- No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls.
- Other:

X. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____ Date: / /

Email:

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NPDES Form Date (2/17)

This Form Replaces Form 3510-9 (02/12)

Form Approved OMB No. 2040-0004

Who Must File an NOI Form

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), federal law prohibits stormwater discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) permit. Operators of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must obtain coverage under an NPDES general permit. For coverage under the 2017 CGP, each person, firm, public organization, or any other entity that meets either of the following criteria must file a Notice of Intent form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with the permit conditions. If you have questions about whether you need a NPDES stormwater permit, or if you need information to determine whether EPA or your state agency is the permitting authority, contact your EPA Regional Office.

Completing the Form

Obtain and read a copy of the 2017 CGP, viewable at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#cgp>. To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, telephone EPA's NOI Processing Center at (866) 352-7755. **Please submit the original document with signature in ink - do not send a photocopied signature.**

Section I. Approval to Use Paper NOI Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOI form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided.

See <https://www.epa.gov/npdes/contact-us-stormwater#regional>

for a list of EPA Regional Office contacts.

Section II. Permit Number

Provide the master permit number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible master permit numbers)

Section III. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this NOI. Refer to Appendix A of the permit for the definition of "operator".

Indicate whether you are seeking coverage under this permit as a "federal operator" as defined in Appendix A.

Also provide a point of contact, the operator's mailing address, county, telephone number, and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the full name, organization, phone number, and email address of the NOI preparer.

Section IV. Project/Site Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility in decimal degrees format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and web-based siting tools, among others. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. For linear construction sites, the measurement should be taken midpoint of the site. If known, enter the horizontal reference datum for your latitude and longitude. The horizontal reference datum is shown on the bottom left corner of USGS topographic maps; it is also available for GPS receivers.

Indicate whether the project is in Indian country lands or located on a property of religious or cultural significance to an Indian tribe, and if so, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 10/06/2012). Indicate to the nearest quarter acre the estimated area to be disturbed.

Indicate the type of construction site, if demolition is occurring, and if so, if the structure has at least 10,000 square feet of floor space. Indicate whether the pre-development land use of the site was used for agriculture Appendix A defines "agricultural land" as cropland, grassland, rangeland, pasture, and other agricultural land, on which agricultural and forest-related products or livestock are produced and resource concerns may be addressed. Agricultural lands include cropped woodland, marshes, incidental areas included in the agricultural operation, and other types of agricultural land used for the production of livestock.

Indicate whether earth-disturbing activities have already commenced on your project/site. If earth-disturbing activities have commenced on your site because stormwater discharges from the site have been previously covered under a NPDES permit, you must provide the 2012 CGP NPDES ID or the NPDES permit number if coverage was under an individual permit.

Section V. Discharge Information

You must confirm that you understand that the CGP only authorizes the allowable stormwater discharges listed in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2.

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Any discharges not expressly authorized under the CGP are not covered by the CGP or the permit shield provision of the CWA Section 402(k) and they cannot become authorized or shielded by disclosure to EPA, state, or local authorities via the NOI to be covered by the permit or by any other means (e.g., in the SWPPP or during an inspection). If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must either be eliminated or covered under another NPDES permit.

Indicate whether discharges from the site will enter into a municipal separate storm sewer system (MS4), as defined in Appendix A.

Also, indicate whether any waters of the U.S. exist within 50 feet from your site. Note that if "yes", you are required to comply with the requirement in Part 2.2.1 of the permit to provide natural buffers or equivalent erosion and sediment controls.

For each unique point of discharge you list, you must specify the name of the first water of the U.S. that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to. You must specify whether any waters of the U.S. that you discharge to are listed as "impaired" as defined in Appendix A, and the pollutants for which the water is impaired. You must identify any Total Maximum Daily Loads (TMDL) that have been completed for any of the waters of the U.S. that you discharge to.

Indicate whether discharges from the site will enter into a water of the U.S. that is designated as a Tier 2, Tier 2.5, or Tier 3 water. A list of Tier 2, 2.5, and 3 waters is provided as Appendix F. If the answer is "yes", name all waters designated as Tier 2, Tier 2.5, or Tier 3 to which the site will discharge.

Section VI. Chemical Treatment Information

Indicate whether the site will use polymers, flocculants, or other treatment chemicals. Indicate whether the site will employ cationic treatment chemicals. If the answer is "yes" to either question, indicate which chemical(s) you will use. Note that you are not eligible for coverage under this permit to use cationic treatment chemicals unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. Examples of cationic treatment chemicals include, but are not limited to, cationic polyacrylamide (C-PAM), PolyDADMAC (POLYDIALLYLDIMETHYLAMMONIUM CHLORIDE), and chitosan.

Section VII. Stormwater Pollution Prevention Plan (SWPPP) Information

All sites eligible for coverage under this permit are required to prepare a SWPPP in advance of filing the NOI, in accordance with Part 7. Indicate whether the SWPPP has been prepared in advance of filing the NOI.

Indicate the street, city, state, and ZIP code where the SWPPP can be found. Indicate the contact information (name, organization, phone, and email) for the person who developed the SWPPP for this project.

Section VIII. Endangered Species Information

Using the instructions in Appendix D, indicate under which criterion (i.e., A, B, C, D, E, or F) of the permit the applicant is eligible with regard to protection of ESA-listed endangered and threatened species and designated critical habitat. A description of the basis for the criterion selected must also be provided.

If criterion B is selected, provide the NPDES Number for the other operator who had previously certified their eligibility for the CGP under criterion A, C, D, E, or F. The Tracking Number was assigned when the operator received coverage under this permit, and is included in the notice of authorization.

If criterion C is selected, you must attach copies of your site map. See Part 7.2.4 of the permit for information about what is required to be in your site map. You must also specify the federally-listed species and/or federally-designated critical habitat that are located in the "action area" of the project, and provide the distance between the construction site and any listed endangered species and/or their designated critical habitat.

If criterion D, E, or F is selected, attach copies of any communications between you and the U.S. Fish and Wildlife Service and National Marine Fisheries Service and identify the participating agencies and Field Offices/Regional Offices you worked with in the basis statement of this NOI.

Section IX. Historic Preservation

Use the instructions in Appendix E to complete the questions on the NOI form regarding historic preservation.

Section X. Certification Information

The NOI must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or

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(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage.

Modifying Your NOI

If you have been granted a waiver from your Regional Office from electronic reporting, and if after submitting your NOI you need to correct or update any fields on this NOI form, you may do so by indicating changes on this same form. Paperwork Reduction Act Notice

Public reporting burden for this NOI is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch 2136, U.S. Environmental Protection, Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Include the OMB control number on

any correspondence. Do not send the completed form to this address.

Submitting Your Form

Submit your NOI form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2017 CGP
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2017 CGP
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

<https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>

Appendix K - Notice of Termination (NOT) Form and Instructions

Part 8.3 requires you to use the NPDES eReporting Tool, or "NeT" system, to prepare and submit your NOT electronically. However, if you are given a waiver by the EPA Regional Office to use a paper NOT form, and you elect to use it, you must complete and submit the following form.



Submission of this Notice of Termination constitutes notice that the operator identified in Section III of this form is no longer authorized discharge pursuant to the NPDES Construction General Permit (CGP) from the site identified in Section IV of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

I. Approval to Use Paper NOT Form

Have you been granted a waiver from electronic reporting from the Regional Office *? YES NO

If yes, check which waiver you have been granted, the name of the EPA Regional Office staff person who granted the waiver, and the date of approval:

- Waiver granted:
- The owner/operator's headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission.
 - The owner/operator has issues regarding available computer access or computer capability.

Name of EPA staff person that granted the waiver: [Grid]

Date approval obtained: [Grid]

*** Note: You must have been given approval by the Regional Office prior to using this paper NOT form. If you have not obtained a waiver, you must file this form electronically using the NPDES eReporting Tool (NeT).**

II. Permit Information

NPDES ID: [Grid]

Reason for Termination (Check only one):

- You have completed all construction activities at your site, and you have met all other requirements in Part 8.2.1.
- Another operator has assumed control over all areas of the site and that operator has submitted an NOI and obtained coverage under the CGP.
- You have obtained coverage under an individual permit or another general NPDES permit addressing stormwater discharges from the construction site.

III. Operator Information

Operator Name: [Grid]

Mailing Address:

Street: [Grid]

City: [Grid] State: [Grid] ZIP Code: [Grid] - [Grid]

County or Similar Government Division: [Grid]

Phone: [Grid] - [Grid] - [Grid] Ext. [Grid]

E-mail: [Grid]

IV. Project/Site Information

Project/Site Name: [Grid]

Project/Site Address:

Street/Location: [Grid]

City: [Grid] State: [Grid] ZIP Code: [Grid] - [Grid]

County or Similar Government Division: [Grid]

V. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: _____

Date: / /

Email:

**Notice of Termination for the 2017 NPDES
Construction General Permit**

NPDES Form Date (2/17)

This Form Replaces Form 3510-13 (02/12)

Form Approved OMB No. 2040-0004

Who May File an NOT Form

Permittees who are presently covered under the EPA-issued 2017 Construction General Permit (CGP) for Stormwater Discharges Associated with Construction Activity may submit an NOT form when: (1) earth-disturbing activities at the site are completed and the conditions in Parts 8.2.1.a through 8.2.1.b are met; or (2) the permittee has transferred all areas under its control to another operator, and that operator has submitted and obtained coverage under this permit; or (3) the permittee has obtained coverage under a different NPDES permit for the same discharges.

Completing the Form

Type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, refer to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#cgp> or telephone EPA's NOI Processing Center at (866) 352-7755. **Please submit original document with signature in ink - do not send a photocopied signature.**

Section I. Approval to Use Paper NOT Form

You must indicate whether you have been granted a waiver from electronic reporting from the EPA Regional Office. Note that you are not authorized to use this paper NOT form unless the EPA Regional Office has approved its use. Where you have obtained approval to use this form, indicate the waiver that you have been granted, the name of the EPA staff person who granted the waiver, and the date that approval was provided.

See <https://www.epa.gov/npdes/contact-us-stormwater#regional> for a list of EPA Regional Office contacts.

Section II. Permit Information

Enter the existing NPDES ID assigned to the project. If you do not know the permit tracking number, or contact EPA's NOI Processing Center at (866) 352-7755.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one.

Section III. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this NOT and is covered by the NPDES ID identified in Section II. Enter the complete mailing address, telephone number, and email address of the operator.

Section IV. Project/Site Information

Enter the official or legal name and complete street address, including city, state, ZIP code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit coverage to be valid.

Section V. Certification Information

The NOT, must be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing,

production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice

Public reporting burden for this NOT is estimated to average 0.5 hours per notice, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB number on any correspondence. Do not send the completed form to this address.

Submitting Your Form:

Submit your NOT form by mail to one of the following addresses:

For Regular U.S. Mail Delivery:

Stormwater Notice Processing Center
Mail Code 4203M, ATTN: 2017 CGP
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

Stormwater Notice Processing Center
William Jefferson Clinton East Building - Room 7420
ATTN: 2017 CGP
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Visit this website for instructions on how to submit electronically:

<https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>

Appendix L – Suggested Format for Request for Chemical Treatment

If you plan to add "cationic treatment chemicals" (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, Part 1.1.9 requires you to notify your applicable EPA Regional Office in advance of submitting your NOI. The EPA Regional Office will authorize coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to an exceedance of water quality standards. To notify your EPA Regional Office, you may use following form.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
SUGGESTED FORMAT FOR NOTIFYING EPA ABOUT PROPOSED USE OF CATIONIC TREATMENT CHEMICALS
UNDER THE 2017 NPDES CONSTRUCTION GENERAL PERMIT**

Under Part 1.1.9 of the 2017 CGP, if you plan to add "cationic treatment chemicals" (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, you may not submit your Notice of Intent (NOI) until you notify your applicable EPA Regional Office in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. You may use this suggested form to notify your EPA Regional Office about your proposed use of cationic treatment chemicals.

I. Operator Information

Operator Name:

Mailing Address:

Street:

City: State: ZIP Code: -

Phone: - - Ext.

E-mail:

II. Project/Site Information

Project/Site Name:

Project/Site Address:

Street/Location:

City: State: ZIP Code: -

County or Similar Government Subdivision:

Site contact name (if different from operator):

Site contact phone (if different from operator): - -

Name(s) of receiving waterbodies: _____

II. Map

Attach a map that illustrates the entire site including all of the below items. Include this map in your Stormwater Pollution Prevention Plan (SWPPP):

- All receiving waterbodies
- All proposed location(s) of chemical treatment system(s)
- All proposed point(s) of discharge to receiving waterbodies
- All soil types within areas to be disturbed
- All area of earth disturbance
- Sufficient indication of topography to indicate where stormwater flows

Attach a schematic drawing of the proposed treatment system(s). Include all components of the treatment train, sample points, and pipe configurations. In addition to sufficient holding capacity upstream of treatment, the system must have the capacity to hold water for testing and to re-treat water that does not meet water quality standards.

IV. Responsible Personnel

Treatment System Operator or Company Name (if subcontracted out):

Street/Location:

City: State: Zip Code: -

Responsible personnel. List personnel who will be responsible for operating the chemical treatment systems and application of the chemicals. Cite the training that the personnel have received in operation and maintenance of the treatment system(s) and use of the specific chemical(s) proposed.

V. Proposed Treatment

Check proposed treatment system.

- Chitosan enhanced sand filtration with discharge to infiltration (ground water)
- Chitosan enhanced sand filtration with discharge to temporary holding ponds (batch).
- Chitosan enhanced sand filtration with discharge to surface waters (flow-through).
- Other (describe below and submit documentation that the proposed system and chemical(s) demonstrate the ability to remove turbidity and produce non-toxic effluent/ discharge)

Check proposed cationic chemical(s) to be used:

- FlocClear™ (2% chitosan acetate solution)
- StormKlear™ LiquiFloc™ (1% chitosan acetate solution).
- ChitoVan™ (1% chitosan acetate solution).
- StormKlear™ LiquiFloc™ (3% Chitosan acetate solution)
- Other _____

Estimated Treatment Period Start Date: / / Estimated Treatment Period End Date: / /

Describe sampling and recordkeeping schedule. Attach additional sheets as needed:

Explain why you have selected this proposed treatment system and chemicals. Include an explanation of why the use of cationic treatment chemicals is necessary at the site. Reference how the soil types on your site influenced your choices. Describe or provide an illustration of how the site of the discharge will be stabilized and why the discharge location will not cause erosion of the discharge water's bank or bed (please note that a permit from the Corps and state agencies may be necessary to place rock in the water body for this stabilization). Attach as many additional sheets as needed for a full explanation. If you have a report from a chemical treatment contractor describing their recommended approach you may attach that.

VI. Certification Information

I have documented and hereby certify that the following information is correct and has been documented in the SWPPP for this project:

- The SWPPP includes a complete site-specific description of the chemical treatment system herein proposed for use, including specifications, design, and Material Safety Data Sheets for all chemicals to be used.
- The controls to be used on the site are compatible with the safe and effective use of cationic chemical treatment.
- I verified through jar tests that the site soil is conducive to chemical treatment.
- I verified that the chemical treatment system operators for this project received training.
- I read, understand, and will follow all conditions and design criteria in the applicable use designation(s).
- If the discharge is to tribal waters, I notified the appropriate tribal government of the intent to use chemical treatment on a site located within that jurisdiction.
- I will keep the use level designation, operation and maintenance manual, and training certificate on site prior to and during use of chemical treatment.
- A licensed engineer designed the system for this project including system sizing, pond sizing, and flow requirements.
- I verify that the discharge will not adversely affect downstream conveyance systems or stream channels (e.g. cause erosion).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official First Name, Middle Initial, Last Name:

Title:

Signature: _____

Date: / /

Email:

Instructions for Submitting This Form:

Submit your this form to your applicable EPA Regional Office. Contact information can be found at: <https://www.epa.gov/npdes/contact-us-stormwater#regional>

Attachment C – NOI and EPA Authorization e-mail

Attachment D – Inspection Form

2017 Construction General Permit Inspection Report Template – Field Version

Purpose

This Inspection Report Template (or “template”) is to assist you in preparing inspection reports for EPA’s 2017 Construction General Permit (CGP). If you are covered under the 2017 CGP, you can use this template to create an inspection report form that is customized to the specific circumstances of your site and that complies with the minimum reporting requirements of Part 4.7 of the permit. Note that the use of this form is optional; you may use your own inspection report form provided it includes the minimum information required in Part 4.7 of the CGP.

If you are covered under a state CGP, this template may be helpful in developing a form that can be used for that permit; however, it will need to be modified to meet the specific requirements of that permit. If your permitting authority requires you to use a specific inspection report form, you should not use this form.

Notes:

While EPA has made every effort to ensure the accuracy of all instructions contained in the Inspection Report Template, it is the permit, not the template, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between the Inspection Report Template and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the Inspection Report Template at any time and will consider those comments in any future revision of this document. You may contact EPA for CGP-related inquiries at cgp@epa.gov.

Overview of Inspection Requirements (see CGP Part 4)

Construction operators covered under the 2017 CGP are subject to the following inspection requirements:

Person(s) Responsible for Inspecting the Site (see Part 4.1)

The person(s) inspecting your site must be a “qualified person” who may be either on your staff or a third party you hire to conduct such inspections.

- A “qualified person” is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

Inspection Frequency (see Part 4.2)

You are required to conduct inspections either:

- Once every 7 calendar days; or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater or the occurrence of runoff from snowmelt sufficient to cause a discharge.

Your inspection frequency is increased if the site discharges to a sensitive water. See Part 4.3. Your inspection frequency may be decreased to account for stabilized areas, or for arid, semi-arid, or drought-stricken conditions, or for frozen conditions. See Part 4.4.

Areas That Need to Be Inspected (see Part 4.5)

During each inspection, you must inspect the following areas of your site:

- Cleared, graded, or excavated areas of the site;
- Stormwater controls (e.g., perimeter controls, sediment basins, inlets, exit points etc.) and pollution prevention practices (e.g., pollution prevention practices for vehicle fueling/maintenance and washing, construction product storage, handling, and disposal, etc.) at the site;
- Material, waste, or borrow areas covered by the permit, and equipment storage and maintenance areas;
- Areas where stormwater flows within the site;
- Stormwater discharge points; and
- Areas where stabilization has been implemented.

What to Check For During Your Inspection (see Part 4.6)

During your site inspection, you are required to check:

- Whether stormwater controls or pollution prevention practices are properly installed, require maintenance or corrective action, or whether new or modified controls are required;
- For the presence of conditions that could lead to spills, leaks, or other pollutant accumulations and discharges;
- For locations where new or modified stormwater controls are necessary to meet requirements of the permit;

- Whether there are visible signs of erosion and sediment accumulation at points of discharge and to the channels and streambanks that are in the immediate vicinity of the discharge;
- If a stormwater discharge is occurring at the time of the inspection, whether there are obvious, visual signs of pollutant discharges; and
- If any permit violations have occurred on the site.

Inspection Reports (see Part 4.7)

Within 24 hours of completing each inspection, you are required to complete an inspection report that includes:

- Date of inspection;
- Names and titles of person(s) conducting the inspection;
- Summary of inspection findings;
- Rain gauge or weather station readings if your inspection is triggered by the 0.25-inch storm threshold; and
- If you determine that a portion of your site is unsafe to access for the inspection, documentation of what conditions prevented the inspection and where these conditions occurred on the site

Instructions for Using This Template

This Field Version of the Inspection Report Template is intended to be used in the field and filled out by hand. If you will be filling out the Inspection Report Template electronically (i.e., you will be typing in your findings), please use the Electronic Version of the Inspection Report Template available at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. The Electronic Version includes text fields with instructions for what to enter.

Keep in mind that this document is a template and not an "off-the-shelf" inspection report that is ready to use without some modification. You must first customize this form to include the specifics of your project in order for it to be useable for your inspection reports. Once you have entered all of your site-specific information into these fields, you may print out this form for use in the field to complete inspection reports.

The following tips for using this template will help you ensure that the minimum permit requirements are met:

- **Review the inspection requirements.** Before you start developing your inspection report form, read the CGP's Part 4 inspection requirements. This will ensure that you have a working understanding of the permit's underlying inspection requirements.
- **Complete all required text fields.** Fill out all text fields. Only by filling out all fields will the template be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the template form for your inspection, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Use your site map to document inspection findings.** In several places in the template, you are directed to specify the location of certain features of your site, including where stormwater controls are installed and where you will be stabilizing exposed soil. You are also asked to fill in location information for unsafe conditions and the locations of any discharges occurring during your inspections. Where you are asked for location information, EPA encourages you to reference the point on your SWPPP site map that corresponds to the requested location on the inspection form. Using the site map as a tool in this way will help you conduct efficient inspections, will assist you in evaluating problems found, and will ensure proper documentation.
- **Sign and certify each inspection report.** The operator or a duly authorized representative (see Appendix I, Part I.11.2) must sign and certify each inspection report for it to be considered complete. Where a contractor or subcontractor carries out your inspections, it is recommended that you also have the inspector sign and certify the form, in addition to the signature and certification required of the permitted operator. The template includes a signature block for both parties.
- **Include the inspection form with your SWPPP.** Once your form is complete, make sure to include a copy of the inspection form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all inspection reports with your records.** You must also retain in your records copies of all inspection reports in accordance with the requirements in Part 4.7.3 of the 2017 CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated.

Section-by-Section Instructions

You will find specific instructions corresponding to each section of the report form on the reverse side of each page. These instructions provide you with more details in terms of what EPA expects to be documented in these reports.

General Information
(see reverse for instructions)

Name of Project		NPDES ID No.		Inspection Date	
Weather conditions during inspection		Inspection start time		Inspection end time	

Inspector Name, Title & Contact Information

Present Phase of Construction

Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)

Inspection Frequency (Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply)

Standard Frequency:

Every 7 days

Every 14 days and within 24 hours of a 0.25" rain or the occurrence of runoff from snowmelt sufficient to cause a discharge

Increased Frequency:

Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)

Reduced Frequency:

Twice during first month, no more than 14 calendar days apart; then once per month after first month; (for stabilized areas)

Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of a 0.25" rain (for stabilized areas on "linear construction sites")

Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)

Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? Yes No

If yes, how did you determined whether a 0.25" storm event has occurred?

Rain gauge on site Weather station representative of site. Specify weather station source:

Total rainfall amount that triggered the inspection (in inches):

Was this inspection triggered by the occurrence of runoff from snowmelt sufficient to cause a discharge? Yes No

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.5? Yes No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:

- Location(s) where conditions were found:

Instructions for Filling Out “General Information” Section

Name of Project

Enter the name for the project.

NPDES ID No.

Enter the NPDES ID number that was assigned to your NOI for permit coverage.

Inspection Date

Enter the date you conducted the inspection.

Weather Conditions During Inspection

Enter the weather conditions occurring during the inspection, e.g., sunny, overcast, light rain, heavy rain, snowing, icy, windy.

Inspection start and end times

Enter the time you started and ended the inspection.

Inspector Name, Title & Contact Information

Provide the name of the person(s) (either a member of your company's staff or a contractor or subcontractor) that conducted this inspection. Provide the inspector's name, title, and contact information as directed in the form.

Present Phase of Construction

If this project is being completed in more than one phase, indicate which phase it is currently in.

Inspection Location

If your project has multiple locations where you conduct separate inspections, specify the location where this inspection is being conducted. If only one inspection is conducted for your entire project, enter “Entire Site.” If necessary, complete additional inspection report forms for each separate inspection location.

Inspection Frequency

Check the box that describes the inspection frequency that applies to you. Note that you may be subject to different inspection frequencies in different areas of your site. If your project does not discharge to a “sensitive water” (i.e., a water impaired for sediment or nutrients, or listed as Tier 2, 2.5, or 3 by your state or tribe) and you are not affected by any of the circumstances described in CGP Part 4.4, then you can choose your frequency based on CGP Part 4.2 – either every 7 calendar days, or every 14 calendar days and within 24 hours of a 0.25-inch storm event. For any portion of your site that discharges to a sensitive water, your inspection frequency for that area is fixed under CGP Part 4.3 at every 7calendar days and within 24 hours of a 0.25-inch storm event. If portions of your site are stabilized, are located in arid, semi-arid, or drought-stricken areas, or are subject to frozen conditions, consult CGP Part 4.4 for the applicable inspection frequency. Check all the inspection frequencies that apply to your project.

Was This Inspection Triggered by a 0.25 Inch Storm Event or the occurrence of runoff from snowmelt sufficient to cause a discharge?

If you were required to conduct this inspection because of a 0.25-inch (or greater) rain event, indicate whether you relied on an on-site rain gauge or a nearby weather station (and where the weather station is located). Also, specify the total amount of rainfall for this specific storm event. If you were required to conduct this inspection because of the occurrence of runoff from snowmelt, then check the appropriate box.

Unsafe Conditions for Inspection

Inspections are not required where a portion of the site or the entire site is subject to unsafe conditions. See CGP Part 4.5. These conditions should not regularly occur, and should not be consistently present on a site. Generally, unsafe conditions are those that render the site (or a portion of it) inaccessible or that would pose a significant probability of injury to applicable personnel. Examples could include severe storm or flood conditions, high winds, and downed electrical wires.

If your site, or a portion of it, is affected by unsafe conditions during the time of your inspection, provide a description of the conditions that prevented you from conducting the inspection and what parts of the site were affected. If the entire site was considered unsafe, specify the location as “Entire site”

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.2)

(see reverse for instructions)

Type/Location of E&S Control [Add an additional sheet if necessary]	Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

* **Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. See Part 5 of the permit for more information.

Instructions for Filling Out the “Erosion and Sediment Control” Table

Type and Location of E&S Controls

Provide a list of all erosion and sediment (E&S) controls that your SWPPP indicates will be installed and implemented at your site. This list must include at a minimum all E&S controls required by CGP Part 2.2. Include also any natural buffers established under CGP Part 2.2.1. Buffer requirements apply if your project's earth-disturbing activities will occur within 50 feet of a water of the U.S. You may group your E&S controls on your form if you have several of the same type of controls (e.g., you may group “Inlet Protection Measures”, “Perimeter Controls”, and “Stockpile Controls” together on one line), but if there are any problems with a specific control, you must separately identify the location of the control, whether maintenance or corrective action is necessary, and in the notes section you must describe the specifics about the problem you observed.

Maintenance Needed?

Answer “yes” if the E&S control requires maintenance due to normal wear and tear in order for the control to continue operating effectively. At a minimum, maintenance is required in the following specific instances: (1) for perimeter controls, whenever sediment has accumulated to half or more the above-ground height of the control (CGP Part 2.2.3.a); (2) where sediment has been tracked-out onto the surface of off-site streets or other paved areas (CGP Part 2.2.4); (3) for inlet protection measures, when sediment accumulates, the filter becomes clogged, and/or performance is compromised (CGP Part 2.2.10); and (4) for sediment basins, as necessary to maintain at least half of the design capacity of the basin (CGP Part 2.2.12.f). Note: In many cases, “yes” answers are expected and indicate a project with an active operation and maintenance program. You should also answer “yes” if work to fix the problem is still ongoing from the previous inspection.

Corrective Action Needed?

Answer “yes” if during your inspection you found any of the following conditions to be present (CGP, Part 5.1): (1) a required E&S control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); (2) a required E&S control was never installed or was installed incorrectly; (3) you become aware that the inadequacy of the E&S control has led to an exceedance of an applicable water quality standard; (4) one of the prohibited discharges in Part 1.3 is occurring or has occurred; or (5) EPA requires corrective action for an E&S control as a result of a permit violation found during an inspection carried out under Part 4.8. If you answer “yes”, you must take corrective action and complete a corrective action report, found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. Note: You should answer “yes” if work to fix the problem from a previous inspection is still ongoing.

Date on Which Maintenance or Corrective Action First Identified?

Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Notes

For each E&S control and the area immediately surrounding it, note whether the control is properly installed and whether it appears to be working to minimize sediment discharge. Describe any problem conditions you observed such as the following, and why you think they occurred as well as actions (e.g., maintenance or corrective action) you will take or have taken to fix the problem:

1. Failure to install or to properly install a required E&S control
2. Damage or destruction to an E&S control caused by vehicles, equipment, or personnel, a storm event, or other event
3. Mud or sediment deposits found downslope from E&S controls
4. Sediment tracked out onto paved areas by vehicles leaving construction site
5. Noticeable erosion at discharge outlets or at adjacent streambanks or channels
6. Erosion of the site's sloped areas (e.g., formation of rills or gullies)
7. E&S control is no longer working due to lack of maintenance

For buffer areas, make note of whether they are marked off as required, whether there are signs of construction disturbance within the buffer, which is prohibited under the CGP, and whether there are visible signs of erosion resulting from discharges through the area.

If maintenance or corrective action is required, briefly note the reason. If maintenance or corrective action have been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action report describing the condition and your work to fix the problem.*

Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3)

(see reverse for instructions)

Type/Location of P2 Practices [Add an additional sheet if necessary]	Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

* **Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. See Part 5 of the permit for more information.

Instructions for Filling Out the "Pollution Prevention (P2) Practice" Table

Type and Location of P2 Controls

Provide a list of all pollution prevention (P2) practices that are implemented at your site. This list must include all P2 practices required by Part 2.3, and those that are described in your SWPPP.

Maintenance Needed?

Answer "yes" if the P2 practice requires maintenance due to normal wear and tear in order for the control to continue operating effectively. Note: In many cases, "yes" answers are expected and indicate a project with an active operation and maintenance program.

Corrective Action Needed?

Answer "yes" if during your inspection you found any of the following conditions to be present (CGP, Part 5.1): (1) a required P2 practice needs repair or replacement (beyond routine maintenance required under Part 2.1.4); (2) a required P2 practice was never installed or was installed incorrectly; (3) you become aware that the inadequacy of the P2 practice has led to an exceedance of an applicable water quality standard; (4) one of the "prohibited discharges" listed in CGP Part 1.3 is occurring or has occurred, or (5) EPA requires corrective action for a P2 practice as a result of a permit violation found during an inspection carried out under Part 4.8. If you answer "yes", you must take corrective action and complete a corrective action report (see <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>). Note: You should answer "yes" if work to fix the problem from a previous inspection is still ongoing.

Date on Which Maintenance or Corrective Action First Identified?

Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Notes

For each P2 control and the area immediately surrounding it, note whether the control is properly installed, whether it appears to be working to minimize or eliminate pollutant discharges, and whether maintenance or corrective action is required. Describe problem conditions you observed such as the following, and why you think they occurred, as well as actions you will take or have taken to fix the problem:

1. Failure to install or to properly install a required P2 control
2. Damage or destruction to a P2 control caused by vehicles, equipment, or personnel, or a storm event
3. Evidence of a spill, leak, or other type of pollutant discharge, or failure to have properly cleaned up a previous spill, leak, or other type of pollutant discharge
4. Spill response supplies are absent, insufficient, or not where they are supposed to be located
5. Improper storage, handling, or disposal of chemicals, building materials or products, fuels, or wastes
6. P2 practice is no longer working due to lack of maintenance

If maintenance or corrective action is required, briefly note the reason. If maintenance or corrective action have been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action report describing the condition and your work to fix the problem.*

Stabilization of Exposed Soil (CGP Part 2.2.14)

(see reverse for instructions)

Stabilization Area [Add an additional sheet if necessary]	Stabilization Method	Have You Initiated Stabilization?	Notes
1.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
2.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
3.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
4.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
5.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	

Description of Discharges (CGP Part 4.6.6)

(see reverse for instructions)

Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If "yes", provide the following information for each point of discharge:	
Discharge Location [Add an additional sheet if necessary]	Observations
1.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Instructions for Filling Out the “Stabilization of Exposed Soil” Table

Stabilization Area

List all areas where soil stabilization is required to begin because construction work in that area has permanently stopped or temporarily stopped (i.e., work will stop for 14 or more days), and all areas where stabilization has been implemented.

Stabilization Method

For each area, specify the method of stabilization (e.g., hydroseed, sod, planted vegetation, erosion control blanket, mulch, rock).

Have You Initiated Stabilization

For each area, indicate whether stabilization has been initiated.

Notes

For each area where stabilization has been initiated, describe the progress that has been made, and what additional actions are necessary to complete stabilization. Note the effectiveness of stabilization in preventing erosion. If stabilization has been initiated but not completed, make a note of the date it is to be completed. If stabilization has been completed, make a note of the date it was completed. If stabilization has not yet been initiated, make a note of the date it is to be initiated, and the date it is to be completed.

Instructions for Filling Out the “Description of Discharges” Table

You are only required to complete this section if a discharge is occurring at the time of the inspection.

Was a Stormwater Discharge Occurring From Any Part of Your Site At The Time of the Inspection?

During your inspection, examine all points of discharge from your site, and determine whether a discharge is occurring. If there is a discharge, answer “yes” and complete the questions below regarding the specific discharge. If there is not a discharge, answer “no” and skip to the next page.

Discharge Location (repeat as necessary if there are multiple points of discharge)

Location of discharge. Specify the location on your site where the discharge is occurring. The location may be an outlet from a stormwater control or constructed stormwater channel, a discharge into a storm sewer inlet, or a specific point on the site. Be as specific as possible; it is recommended that you refer to a precise point on your site map.

Describe the discharge. Include a specific description of any noteworthy characteristics of the discharge such as color; odor; floating, settled, or suspended solids; foam; oil sheen; and other obvious pollution indicators.

Are there visible signs of erosion or sediment accumulation? At each point of discharge and the channel and streambank in the immediate vicinity, visually assess whether there are any obvious signs of erosion and/or sediment accumulation that can be attributed to your discharge. If you answer “yes”, include a description in the space provided of the erosion and sediment deposition that you have found, specify where on the site or in the water of the U.S. it is found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue.

Contractor or Subcontractor Signature and Certification

(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ **Date:** _____

Printed Name and Affiliation: _____

Operator Signature and Certification

(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____ **Date:** _____

Printed Name and Affiliation: _____

Instructions for Signature/Certification

Each inspection report must be signed and certified to be considered complete.

Contractor or Subcontractor Signature and Certification

Where you rely on a contractor or subcontractor to carry out the inspection and complete the inspection report, you should require the inspector to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the inspection report as well.

Operator Signature and Certification

At a minimum, the inspection report must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply to scenarios (1) and (2):

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* A responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* A general partner or the proprietor, respectively.
- *For a municipality, state, federal, or other public agency:* Either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

Attachment E – Corrective Action Form

2017 Construction General Permit Corrective Action Report Form – Field Version

Purpose

This Corrective Action Report Form is to assist you in preparing corrective action reports for EPA's 2017 Construction General Permit (CGP). If you are covered under EPA's 2017 CGP, you can use this form to create a corrective action report that complies with the minimum reporting requirements of Part 5.4 of the permit.

You are only required to fill out this form if one of the conditions triggering corrective action in Part 5.1 or 5.3 occurs on your site. Routine maintenance is generally not considered to trigger corrective action. Corrective actions are triggered only for specific conditions that are identified below in the "Overview of Corrective Action Requirements."

If you are covered under a state CGP, this form may be helpful in developing a report that can be used for that permit; however, it will need to be modified to meet the specific requirements of the permit. If your permitting authority requires you to use a specific corrective action report form, you should not use this form.

Notes

While EPA has made every effort to ensure the accuracy of all instructions contained in the Corrective Action Report Form, it is the permit, not the form, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between the Corrective Action Report Form and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the Corrective Action Report Form at any time and will consider those comments in any future revision of this document. You may contact EPA for CGP-related inquiries at cgp@epa.gov.

Overview of Corrective Action Requirements

Construction operators covered under the 2017 CGP are required to conduct corrective actions and report on progress made in correcting the problem condition(s) in accordance with the following requirements:

Conditions Triggering Corrective Action (Parts 5.1 and 5.3)

Corrective action is required whenever any of the following conditions occur at your site:

- A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); or
- A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- Discharges are causing an exceedance of applicable water quality standards; or
- A Part 1.3 prohibited discharge has occurred; or
- EPA requires corrective action as a result of permit violations found during an inspection carried out under Part 4.8.

Deadlines for Completing Corrective Actions (Part 5.2)

For any condition triggering corrective action:

- You must immediately take all reasonable steps to address the condition (e.g. cleaning up contaminated surfaces so the material(s) is not discharged in subsequent storm events);
- If the problem does not require a new or replacement control or significant repair, you must complete the corrective action by the close of the next business day
- If the problem does require a new or replacement control or significant repair, you must complete corrective action (e.g., installing and making operational any new or modified control, completing repairs) by no later than 7 calendar days from the time of discovery of the condition. If infeasible to complete the installation or repair within 7 calendar days, you must document why it is infeasible and document your schedule for completing the corrective action as soon as practicable. If any of these actions result in changes to the stormwater controls documented in your SWPPP, you must modify your SWPPP within 7 calendar days.

Deadlines for Documenting Corrective Actions in a Report (Part 5.4)

You are required to complete a corrective action report for each corrective action you take in accordance with the following deadlines.

- Within 24 hours of *identifying* the corrective action condition, you must document the following:
 - The condition identified at your site; and
 - The date and time you identified the condition
- Within 24 hours of completing the corrective action, you must document the following:
 - The actions you took to address the condition, and
 - Whether any SWPPP modifications are required.

Instructions for Using This Report Form

This Field Version of the Corrective Action Report Form is intended to be used in the field and filled out by hand. If you will be filling out the Corrective Action Report Form electronically (i.e., you will be typing in your findings), please use the Electronic Version of the Corrective Action Report Form available at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. The Electronic Version includes text fields with instructions for what to enter.

The following tips for using this form will help you ensure that the minimum permit requirements are met:

- **Review the corrective action requirements.** Before you fill out this corrective action report form, read the CGP's Part 5 corrective action requirements. This will ensure that you have a working understanding of the permit's underlying corrective action requirements.
- **Complete a separate report for each condition that triggers corrective action.** For each triggering condition on your site, you will need to fill out a separate corrective action report form.
- **Complete all required text fields.** Fill out all text fields. Only by filling out all fields will the form be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the corrective action report form, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Sign and certify each corrective action report.** The operator or a duly authorized representative (see Appendix I, Part I.11.2) must sign and certify each corrective action report form for it to be considered complete. Where a contractor or subcontractor carries out your corrective actions, it is recommended that you also have that individual sign and certify the form, in addition to the signature and certification required of the permitted operator. The form includes a signature block for both parties.
- **Include the corrective action report form with your SWPPP.** Once your form is complete, make sure to include a copy of the corrective action report form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all corrective action reports with your records.** You must retain copies of your corrective action reports in your records in accordance with the requirements in Part 5.4.4 of the 2017 CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated.

Section-by-Section Instructions

You will find specific instructions corresponding to each section of the report form on the reverse side of each page. These instructions were written in order to provide you with more details in terms of what EPA expects to be documented in these reports

Section A – Initial Report (CGP Part 5.4.1)

(Complete this section within 24 hours of identifying the condition that triggered corrective action)

Name of Project		NPDES ID No.		Today's Date	
Date Problem First Discovered		Time Problem First Discovered			
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action (*check the box that applies*):

- A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4)
- A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly
- A discharge is causing an exceedance of applicable water quality standards
- A Part 1.3 prohibited discharge has occurred
- EPA requires corrective action as a result of permit violations found during an EPA inspection carried out under Part 4.8

Provide a description of the problem:

Deadline for completing corrective action (*check the box that applies*):

- Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events
- Complete by close of the next business day when problem does not require a new or replacement control or significant repair
- No later than 7 calendar days from the time of discovery for problems that require a new or replacement control or significant repair
- Infeasible to complete the installation or repair within 7 calendar days. Explain why it is infeasible and document schedule for installing control:

Enter date of corrective action completion: _____

Section B – Corrective Action Completion (CGP Part 5.4.2)

(Complete this section no later than 24 hours after completing the corrective action)

Section B.1 – Why the Problem Occurred

Cause(s) of Problem (Add an additional sheet if necessary)	How You Determined the Cause and the Date You Determined the Cause
1.	1.
2.	2.

Section B.2 – Stormwater Control Modifications Implemented to Correct the Problem

List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Date of Completion	SWPPP Update Necessary?	Notes
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:	
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:	

Instructions for Filling Out the Initial Report (Section A)

You must complete Section A of the report form within 24 hours of discovering the condition that triggered corrective action

Name of Project

Enter the name for the project.

NPDES ID No.

Enter the NPDES ID number that was assigned to your NOI for permit coverage.

Today's Date

Enter the date you completed this form.

Date/Time Problem First Discovered

Specify the date on which the triggering condition was first discovered. Also specify the time of the discovery.

Name/Contact Information

Provide the individual's name, title, and contact information as directed in the form.

Site Condition That Triggered Corrective Action

Under the CGP, corrective action is required when one of 4 triggering conditions occurs at your site or when EPA requires a corrective action as a result of a permit violation found during an EPA inspection. See CGP Parts 5.1 and 5.3. Check the box that corresponds to the condition that triggered this corrective action.

Description of the Site Condition

Provide a summary description of the condition you found that triggered corrective action under CGP Part 5.1 and the specific location where it was found. Be as specific as possible about the location; it is recommended that you refer to a precise point on your site map. If you have already provided this explanation in an inspection report, you can refer to that report.

Deadline for Completing Corrective Action

This deadline is fixed in CGP Part 5.2. For all projects, the deadlines are: (1) immediately take all reasonable steps; (2) by the close of the next business day when the problem does not require significant repair or replacement; (3) no more than 7 calendar days after the date you discovered the problem when the problem does require significant repair or replacement, or (4) if it is infeasible to complete work within the first 7 days, as soon as practicable following the 7th day. If your estimated date of completion falls after the 7-day deadline consistent with (3), above, explain (a) why you believe it is infeasible to complete work within 7 days, and (b) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe.

Instructions for Filling Out the Corrective Action Completion Table (Section B)

You must complete Section B of the report form no later than 24 hours after completing the correction action.

Section B.1 – Why the Problem Occurred

After you have had the opportunity to examine the problem more closely, provide details as to what you believe to be the cause of the problem, and specify the follow-up actions you took (along with the dates of such actions) to diagnose the problem. This is consistent with CGP Part 5.4.2.

Section B.2 – Stormwater Control Modifications Implemented

Provide a list of modifications you made to your stormwater controls to correct the problem and the date you completed such work. Keep in mind that your work must be completed within the timeline specified in Section A for the completion of corrective action work.

Also, if a SWPPP modification is necessary consistent with Part 7.4.1.a in order to reflect changes implemented at your site, indicate the date you modified your SWPPP. Keep in mind that SWPPP changes must be made within 7 days of discovering the problem that triggered this corrective action.

Space is provided for you to include additional notes or observations regarding the change that you implemented at your site to correct the problem.

Section C –Signature and Certification (CGP Part 5.4.3)

Section C.1 – Contractor or Subcontractor Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____

Date:

Printed Name and Affiliation: _____

Section C.2 – Operator Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____

Date:

Printed Name and Affiliation: _____

Instructions for Signature and Certification (Section C)

Each corrective action report must be signed and certified to be considered complete.

Section C.1 – Contractor or Subcontractor Signature and Certification

Where you rely on a contractor or subcontractor to complete this report and the associated corrective action, you should require the individual(s) to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the report as well.

Section C.2 – Operator Signature and Certification

At a minimum, the corrective action report form must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply to scenarios (1) and (2):

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* A responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* A general partner or the proprietor, respectively.
- *For a municipality, state, federal, or other public agency:* Either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

Attachment F – SWPPP Amendment Log

Attachment G –Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform onsite. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____

Date: _____

Attachment H – Grading and Stabilization Activities Log

Attachment I – SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name: **144 Addison Street**

Project Location: **East Boston, Massachusetts**

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- Sediment and Erosion Controls**
- Emergency Procedures**
- Stabilization Controls**
- Inspections/Corrective Actions**
- Pollution Prevention Measures**

Specific Training Objective: _____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Attachment J – Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

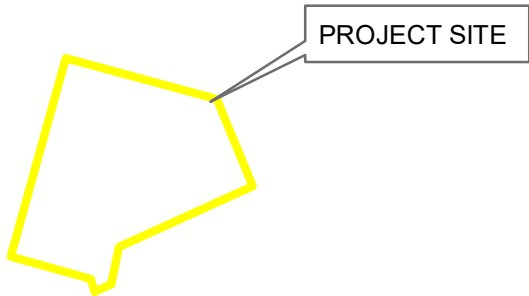
_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix I of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix I.





I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

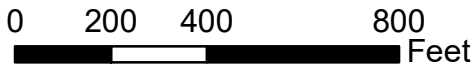
Name: _____
Company: _____
Title: _____
Signature: _____
Date: _____

Attachment K – Endangered Species Documentation



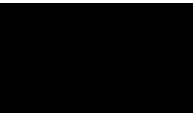
Legend

-  NHESP Certified Vernal Pools
-  NHESP Potential Vernal Pools
-  NHESP Natural Communities
-  NHESP Priority Habitats of Rare Species
-  NHESP Estimated Habitats of Rare Wildlife

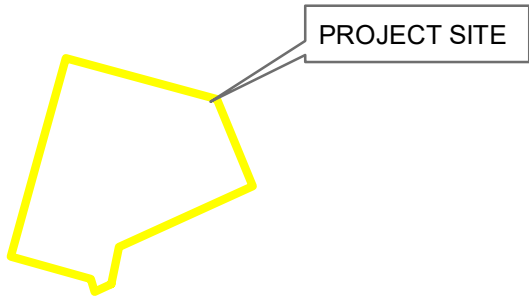


USGS, MassGIS

ENDANGERED SPECIES
ADDISON STREET
BOSTON, MASSACHUSETTS



Attachment L – Historic Preservation Documentation



Legend

- Designated Historic Inventory Point
- Undesignated Historic Inventory Point
- Designated Historic Inventory Area
- Undesignated Historic Inventory Area



USGS, MassGIS

HISTORIC PRESERVATION
ADDISON STREET
BOSTON, MASSACHUSETTS



Attachment M – Rainfall Gauge Recording

Use the table below to record the rainfall gauge readings at the beginning and end of each work day. An example table follows.

Month/Year			Month/Year			Month/Year		
Day	Start time	End time	Day	Start time	End time	Day	Start time	End time
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
11			11			11		
12			12			12		
13			13			13		
14			14			14		
15			15			15		
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22			22			22		
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24			24			24		
25			25			25		
26			26			26		
27			27			27		
28			28			28		
29			29			29		
30			30			30		
31			31			31		

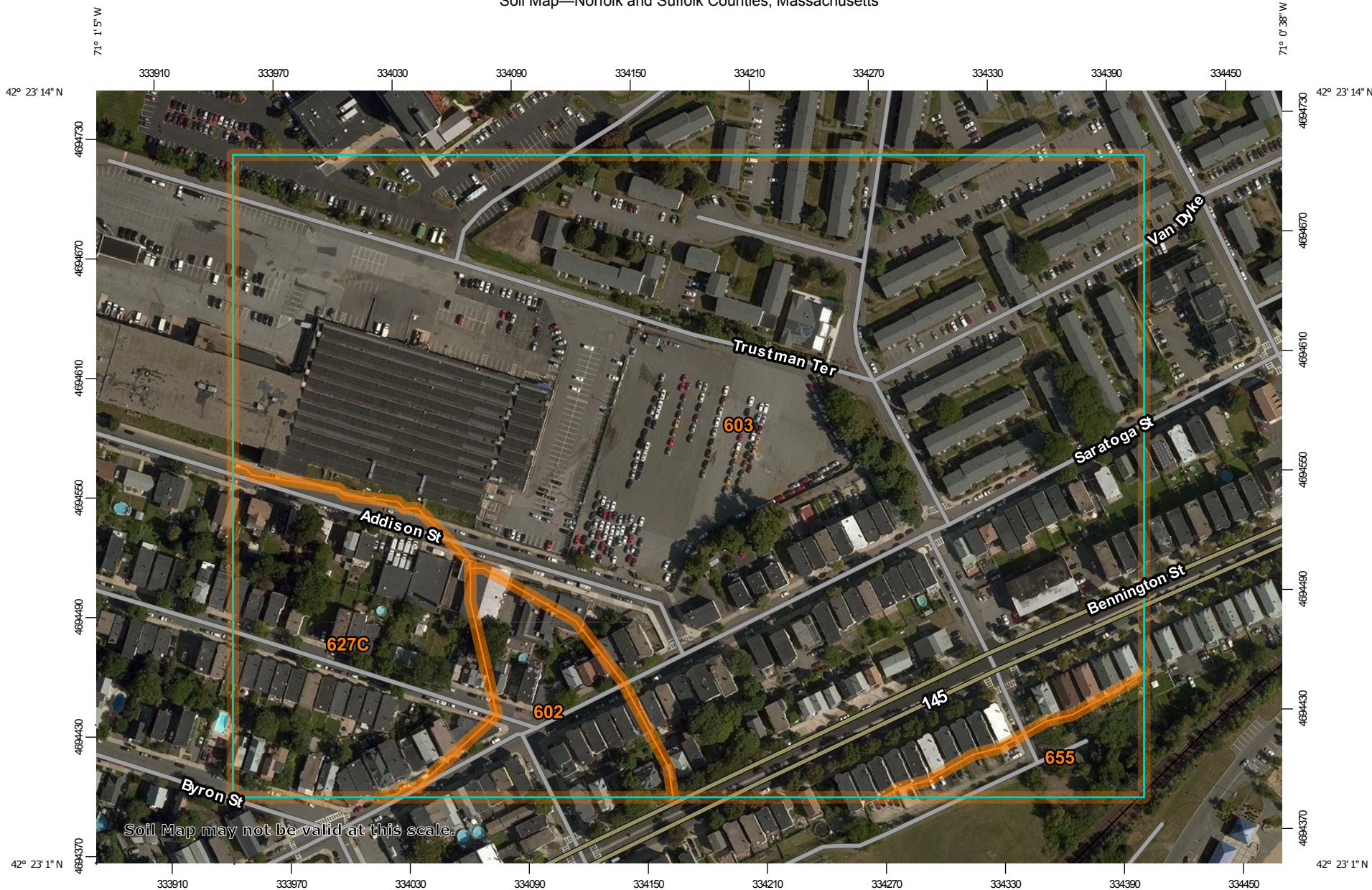
Attachment N – Order of Conditions

APPENDIX E

Soil Investigations

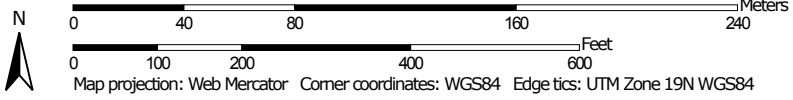
NRCS Soil Maps and Descriptions
Geotechnical Report

Soil Map—Norfolk and Suffolk Counties, Massachusetts




Soil Map may not be valid at this scale.

Map Scale: 1:2,730 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

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 1:25,000.

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: Norfolk and Suffolk Counties, Massachusetts
Survey Area Data: Version 13, Oct 6, 2017

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

Date(s) aerial images were photographed: Aug 10, 2014—Aug 25, 2014

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
602	Urban land, 0 to 15 percent slopes	2.0	5.5%
603	Urban land, wet substratum, 0 to 3 percent slopes	29.3	79.8%
627C	Newport-Urban land complex, 3 to 15 percent slopes	4.4	12.1%
655	Udorthents, wet substratum	1.0	2.6%
Totals for Area of Interest		36.8	100.0%

PRELIMINARY GEOTECHNICAL ENGINEERING REPORT
Addison Street Redevelopment
144 Addison Street
East Boston, Massachusetts

*Prepared for Gate Residential
File No. 4232.00
September 8, 2017*

Mr. Steve Perdue, Vice President
Gate Residential
265 Franklin Street, 6th Floor
Boston, MA 02110

September 8, 2017
File No. 4232.00

Re: Preliminary Geotechnical Engineering Report
Addison Street Redevelopment
144 Addison Street
East Boston, Massachusetts

Dear Steve:

Attached is an electronic (PDF) copy of our Preliminary Geotechnical Engineering Report for the above-referenced project in East Boston, Massachusetts. Foundation alternatives are discussed in the Executive Summary and in Section 7.0 of the report. Our final report will be issued upon receipt of a site grading plan, and pending additional test borings, if requested by you.

We trust this report meets the needs of the project at this time. If you have any questions, please call the undersigned at (857) 327-9731.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.



Americo J. Santamaria
Project Engineer



Stan S. Sadkowski, P.E.
Vice President/Senior Associate

SSS/KPS: ajs

Encl. Preliminary Geotechnical Engineering Report

P:\4200s\4232.00\Source Files\GT Report\20170908 GT Rpt Cover Ltr.docx

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FIGURES

Figure 1 Exploration Location Plan

APPENDICES

- Appendix A Limitations
- Appendix B Boring Logs by Sanborn Head
- Appendix C Geotechnical Laboratory Report

EXECUTIVE SUMMARY

The proposed Addison Street Redevelopment includes the construction of three (3) new buildings (two interconnected) and associated site improvements at the 144 Addison Street property in East Boston, Massachusetts (Site). The proposed buildings are anticipated to consist of 5 stories of timber-framed construction over a concrete podium. No below-grade areas are proposed currently. We understand that site grades may be raised as much as approximately 8 to 12 feet in some areas to construct buildings and pavement areas as high as approximately El. 20.5 feet.

This preliminary report provides foundation alternatives to support the proposed raise-in-grade fill and buildings.

Based on the explorations advanced, the subsurface conditions consist of urban fill overlying compressible organic deposits overlying approximately 40 to 100 feet of compressible clay soils. Estimated settlement of the organic soils from the raise-in-grade fill ranges from approximately 4 to 20 inches (depending on the organic thickness and estimated fill to be placed above), plus approximately 3 to 8 inches of settlement in the clay soils from the raise-in-grade fill.

The existing fill and organics are unsuitable to support the proposed buildings. The estimated settlement of the clay soils from anticipated building loads is generally less than 1 inch, but will need to be re-evaluated pending the availability of actual column loads.

To address potential settlement concerns, we evaluated three options:

Option 1: Pre-load the clay for 6 to 9 months with approximately 8 feet of material above proposed grades to induce settlement prior to construction and installation of shallow ground improvement (through the fill and organics) to support the building. Ground improvement which would likely consist of rigid inclusions, or grouted rammed aggregate piers would allow the building to be constructed with footings and a slab-on-grade. To achieve a feasible duration for the pre-loading wick drains will be required. Ground improvement would only be necessary below foundations, and not slabs or pavement in this scenario.

Option 2: Deep ground improvement to support both the raise in grade fill and buildings across the entire Site. Ground improvement elements would be installed at the existing grade and extend through the fill, organics and clay down to approximately 45 to 85 feet below existing grade to limit settlement to less than 1 inch.

Option 3: The proposed 8 to 12 feet of fill is the major contributor to the amount of settlement. As such, we evaluated reducing the fill thickness to limit settlement of the underlying clays to less than 1 inch of total settlement with shallow ground improvement to support the raise in grade fill and buildings through the fill and organics. Our preliminary analyses indicate that shallow ground improvement (25 to

30 feet long) could support the building and up to approximately 3 feet of raise-in-grade fill.

Given the variability of the clay thickness and the proposed grades, additional explorations will be necessary to evaluate the length and spacing of ground improvement options and wick drains. Alternatively, limiting the raise of the site to 3 feet or less should be considered to lessen the premium costs associated with foundation construction.

1.0 INTRODUCTION

Sanborn, Head & Associates, Inc. (Sanborn Head) has prepared this preliminary geotechnical engineering report on behalf of Gate Residential (Client) to convey geotechnical design parameters and preliminary geotechnical foundation options based on data obtained from our subsurface exploration program for the proposed project located on a portion of 144 Addison Street in East Boston, Massachusetts (the Site). The scope of services to complete this preliminary geotechnical report was outlined in Sanborn Head's Proposal for Services dated August 10, 2017. Our environmental summary letter has been provided under separate cover. This report is subject to the Limitations included in Appendix A.

2.0 SITE DESCRIPTION AND SITE HISTORY

Based on our familiarity with the Site and surrounding area, and our review of the plans provided to us, we understand the Site is an approximately 3-acre portion of the property identified by the City of Boston Assessing Department as 144 Addison Street, formerly referred to as 175 McClellan Highway, in East Boston, Massachusetts. The Site consists of a paved surface parking lot with a small guard house and is currently operated as a car rental parking area for Avis. The Site is bounded by residential properties to the north and east, Addison Street to the south, and the larger approximately 10-acre portion of the 144 Addison Street property to the west. The western portion of the 144 Addison Street property is occupied by an approximately 330,000 square-foot commercial industrial building and a smaller auto storage garage. West of 144 Addison Street is Route 1A (William F McClellan Highway) and the Chelsea River.

Based on a survey by Feldman Land Surveyors of Boston, Massachusetts, the existing ground generally varies between approximately El. 8 to El. 14 feet, with higher elevation around El. 18 feet near Addison Street. Based on our experience working in the area and our review of readily available information, the Site was historically filled as part of land creation in East Boston. Elevations reference the Boston City Base datum.

3.0 PROPOSED CONSTRUCTION

Based on our review of the concept plans prepared by Arrowstreet Inc., we understand that the project consists of the following:

- Three (3) residential buildings (two interconnected) with five levels of timber frame above a concrete podium with no below grade-structures is currently proposed;
- The site may be raised as much as 8 to 12 feet in low-lying areas to address flood plain design requirements (up to El. 20.5 feet);
- First floor parking with approximately 150 total spaces; and,
- Landscaped areas and pedestrian walkways.

4.0 SUBSURFACE EXPLORATION PROGRAM

Sanborn Head conducted a subsurface exploration program which included five (5) geotechnical test borings, three (3) of which were completed as monitoring wells (SH-101W through SH-103W). The test boring explorations were advanced by Crawford Drilling Services, LLC (CDS) of Westminister, Massachusetts. The approximate locations of the subsurface explorations are shown on Figure 1.

The explorations were observed and logged by Sanborn Head personnel on a full-time basis. The test boring soil samples were classified using the Modified Burmister System. A legend describing the classification system is provided in Appendix B. Standard Penetration Tests (SPT) were completed for each test borings in general accordance with American Society of Testing and Materials (ASTM) Standard D1586.

Logs of geotechnical test borings by Sanborn Head are provided in Appendix B. The test borings were located based on tape measurements from existing site features. The approximate ground surface elevations at the test boring locations were estimated by interpolating between the existing ground surface contours on a survey prepared by Feldman Land Surveys of Boston, Massachusetts and dated April 10, 2017. As such, the locations and ground surface elevations should be considered approximate.

5.0 SUBSURFACE CONDITIONS

The following sections provide general descriptions of the subsurface strata observed in the explorations logged by Sanborn Head.

5.1 Surface Material

Explorations advanced across the proposed development area encountered a surface layer of asphalt pavement approximately 2 to 4 inches thick.

5.2 Existing Fill

Existing historic (urban) fill consisting of granular soil was encountered across the project area. The fill thickness ranges from approximately 4 to 6 feet. The existing fill typically consists of inorganic, fine to coarse sand with varying amounts of gravel and silt. In some areas, the fill was reported to also contain brick, ash, glass, coal, wood, asphalt and debris. At exploration locations SH-101 and SH-103, fill materials also contained very few organic particles/fibers. Standard penetration test (SPT) N-values in the existing fill typically ranged from 3 to 16 blows per foot (bpf), indicating the existing fill has variable density.

5.3 Organic Silt

A layer of organic soils was encountered below the fill. The organic layer, where encountered, varied in thickness from 2 feet to approximately 9 feet thick. Samples of the organic soils indicated the water content varied between approximately 80% and 200%, and organic content ranging between approximately 10 and 30%.

5.4 Silty Sand/Sandy Silt

A natural sandy silt layer was encountered below the existing fill and organic silt, generally extending 16 to 19 feet bgs. The natural sandy silt typically consists of silt with varying amounts of sand and clay. At exploration SH-103, the sandy silt also contained organic particles. SPT N-values in the silt typically ranged from 5 to 26 bpf, indicating the sandy silt is generally medium stiff to very stiff medium dense.

5.5 Boston Blue Clay

Boston Blue Clay (BBC) is present below the sand layer and was observed, where advanced through the full thickness of the layer, to be between approximately 40 and 100 feet thick. The silty clay decreases in thickness from north to south (as the glacial till comes up). The clay layer was observed to have an approximately 10-foot thick crust of highly over-consolidated, stiff to very stiff clay underlain by an approximately 20-foot thick medium stiff layer underlain by approximately 40 to 60 feet of soft to very soft clay. Undrained shear strengths were estimated between approximately 700 and 1800 pounds per square foot (psf).

5.6 Glacial Till

Glacial till was encountered at SH-101W, SH-102W, and SH-103W and generally consists of dense to very dense soils that contain fine to coarse sand, silt, and gravel in varying proportions. The depth to the top of the glacial till soils (where encountered) ranges from approximately 59 to 115 feet bgs. SPT N-values in the glacial till typically ranged from 30 to 58 bpf, indicating the material is dense to very dense.

5.7 Groundwater

During drilling, three (3) monitoring wells were installed in the locations shown on Figure 1. Groundwater readings during drilling indicated groundwater is approximately 5 feet below grade. Stabilized groundwater levels were not collected (due to the addition of water into the borehole during drive-and-wash drilling). The wells will need to be developed and purged of drill water to measure stabilized water levels.

It should be noted that groundwater levels will fluctuate depending on construction, presence of utilities and seasonal variations in temperature and precipitation. It is also possible that tidal effects may influence the groundwater level.

6.0 GEOTECHNICAL LABORATORY TESTING

Sanborn Head submitted soil samples to GeoTesting Express of Acton, Massachusetts for the following laboratory analyses:

- Seven (7) samples for Atterberg Limits (ASTM D4318);
- Ten (10) samples for moisture content (D2216);
- Four (4) samples for organic content (ASTM D2974);

- One (1) sample for incremental consolidation (ASTM D2435) and digital imaging (ASTM D4452);

Laboratory reports are included in Appendix C.

7.0 GEOTECHNICAL CONSIDERATION AND RECOMMENDATIONS

The following paragraphs present our geotechnical engineering evaluation of the impact of subsurface conditions on the proposed site development and our recommendations related to subgrade preparation and foundation design.

7.1 Primary Geotechnical Engineering Issues

Based on the subsurface information collected to date, we have identified the following primary geotechnical issues:

- **Presence of Variable Density Fill and Organic Soil:** Variable density urban fill and organic deposits were encountered across the Site. The fill and organic soils are not considered suitable for support of the proposed buildings in their current condition due to the compressibility of the soil and their variable density. In addition, the estimated settlement from the proposed raise in grade fill ranges from approximately 4 to 20 inches from the organic layer depending on the thickness of organics and raise in grade fill.
- **Presence of Thick Compressible Clays:** The approximately 3-acre site will be raised by approximately 8 to 12 +/- feet in the central portion of the site (and by lesser amounts around the perimeter of the site), resulting in consolidation of the underlying clay deposit with a thickness ranging from 40 to 100 feet. Settlement is estimated between 3 to 8 inches from the raise-in-grade fill.

7.2 Preliminary Foundation Alternatives

To address potential settlement concerns outlined above, we evaluated three options: 1) pre-loading the clay to induce settlement prior to construction and installation of shallow ground improvement to support the buildings given the organic soils; 2) Deep ground improvement to support both the raise in grade fill and the buildings across the Site; and, 3) limited raise in grade fill and shallow ground improvement supporting both the buildings and raise in grade fill across the Site. Given the estimated settlement of the deeper clays from the proposed raise in grade fills (8 to 12 feet), shallow ground improvement alone would still result in unacceptable settlements. Ground improvement, would likely consist of rigid inclusions, or grouted rammed aggregate piers allowing the buildings to be constructed with spread footings and a slab-on-grade. The installation of ground improvement may require placement of a load transfer platform (LTP) which may consist of 2 feet of dense-graded crushed stone. The need for an LTP could be waived pending the thickness and quality of the proposed raise-in-grade fill.

- **Option 1:** A staged pre-load program that would consist of an initial surcharge of 18 feet (total, including raise-in-grade fill), which would be removed upon achieving the

desired consolidation of the underlying organics and BBC deposits. The estimated time to achieve the required settlement is approximately 3 to 5 years given the thickness of the clay. As such, we recommend the installation of wick drains to shorten the drainage path and increase the rate of consolidation to a feasible duration of 6 to 9 months. Additional explorations and further analysis will be required to evaluate wick drain spacing and depths to achieve a feasible preload duration. It is anticipated the pre-load program also will achieve adequate settlement of the organic layer to limit long-term settlement outside of the building footprints to acceptable levels.

We recommend the buildings be supported by spread footings with a slab-on-grade bearing on shallow ground improvement extending in the clay crust to address the long-term settlement of the organic deposit.

- **Option 2:** Due to the soft compressible nature of the clay deposits underlying the crust, we analyzed a deep ground improvement system to identify a depth which would carry the load of the fill (~8+ feet) and building loads and allow for a conventional foundation system of spread footings and a slab-on-grade while limiting post construction settlement to approximately one (1) inch or less.

Based on our preliminary analysis, the anticipated fill thicknesses and the general soil profile previously discussed, the estimated depth of ground improvement from the existing ground surface (Approximately El. 8 to El. 14) ranges from 45 to 85 feet long and bearing in clay.

- **Option 3:** The proposed 8 to 12 feet of fill is the major contributor to the amount of settlement. Options 1 and 2, provide preliminary recommendations to achieve the proposed grades. As an alternative, we evaluated reducing the fill thickness to limit settlement of the underlying clays to less than 1 inch of total settlement with shallow ground improvement to support the raise in grade fill and buildings through the fill and organics. Our preliminary analyses indicate that shallow ground improvement (25 to 30 feet long) could support the building and up to approximately 3 feet of raise-in-grade fill.

7.3 Preliminary Building Foundation Design Criteria

7.3.1 Slab and Footing Design Criteria

Further evaluation of possible slab and footing support is necessary; however, preliminary considerations are provided below assuming the site will be prepared using ground improvement to support raise-in-grade fill and foundation loads.

Conventional, shallow spread footings (following ground improvement) should be proportioned based on a net allowable bearing pressure of 4 kips per square foot (ksf), while limiting the potential, long-term settlement to less than 1 inch, and limiting post-construction differential settlement to less than ½-inch.

The slab-on-grade should be supported by ground improvement. The slab should bear on 6 inches of compacted dense-graded crushed stone meeting the requirements for MassDOT Item M2.01.7. The modulus of subgrade reaction should be assumed as 150 pounds per cubic inch (pci).

As noted above, an LTP may be required to transfer loads from the foundations/slabs to the ground improvement. The LTP would likely consist of 2 feet of dense-graded crushed stone, but could be waived pending the actual thickness and quality of the proposed raise-in-grade fill material.

7.3.2 Building Foundation Drains and Underdrains

It is our opinion that perimeter foundation drains and/or subslab underdrains are not required as part of the foundation design based on the subsurface conditions encountered and the proposed raise in grade. A vapor barrier is not required for geotechnical purposes due to the presence of groundwater. However, we understand that the architect or structural engineer may require a vapor barrier to meet building code requirements.

7.3.3 Seismic Design

The draft 9th Edition (CMR 780) of the Massachusetts State Building Code (MSBC9) is based on the International Building Code 2015 (IBC 2015) with amendments. We recommend using the following design parameters for the proposed buildings as defined by MSBC9 and IBC 2015:

- Site Class: Based on the proposed building location, elevation and available subsurface information, Site Class D is recommended for the proposed structures;
- Design Spectral Response Accelerations: $S_{DS} = 0.231g$ and $S_{D1} = 0.110g$ (MSBC9 and IBC 2015).

If needed, revised seismic design acceleration may be provided upon promulgation of the new code. It is our opinion that the soils at the site are not susceptible to liquefaction as defined in Section 1806.4 of the MSBC.

8.0 ADDITIONAL RECOMMENDATIONS

Given the variability of the clay thickness and the proposed grades, additional explorations will be necessary to evaluate the length and spacing of ground improvement options and/or wick drain spacing to further evaluate the feasibility of a pre-load program.

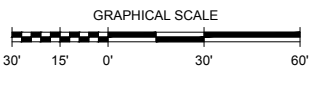
Limiting the thickness of the raise in grade fill to 3 feet or less should be considered to lessen the premium costs associated with foundation construction.

FIGURE



- NOTES:**
1. THE BASE MAP WAS TAKEN FROM AN ELECTRONIC PLAN ENTITLED, "PARTIAL TOPOGRAPHIC PLAN OF LAND WITH BUILDING FOOTPRINT OVERLAY", PREPARED BY FELDMAN LAND SURVEYORS OF BOSTON, MA, DATED APRIL 10, 2017 WITH AN ORIGINAL SCALE OF 1" = 30'.
 2. EXPLORATIONS DESIGNATED SH-101W THROUGH SH-105 WERE ADVANCED BY CRAWFORD DRILLING SERVICES, LLC (CDS) OF WESTMINSTER, MA AND OBSERVED BY SANBORN HEAD BETWEEN AUGUST 14 AND 16, 2017.
 3. APPROXIMATE LOCATIONS OF EXPLORATIONS ARE BASED ON TAPED MEASUREMENTS MADE IN THE FIELD RELATIVE TO PROMINENT SITE FEATURES. THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

- LEGEND:**
- SH-104 APPROXIMATE LOCATION AND DESIGNATION OF TEST BORING OBSERVED BY SANBORN HEAD (AUGUST 2017)
 - SH-101W APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL OBSERVED BY SANBORN HEAD (AUGUST 2017)



NO.	DATE	DESCRIPTION	BY

DRAWN BY: C.GREEN
 DESIGNED BY: P.MALONE
 REVIEWED BY: S.SADKOWSKI
 PROJECT MGR: P.MALONE
 PIC: S.SADKOWSKI
 DATE: AUGUST 2017

PROJECT NUMBER: 4232.00

GEO TECHNICAL ENGINEERING SERVICES
 144 ADDISON STREET
 EAST BOSTON, MASSACHUSETTS

SHEET NUMBER: 1

EXPLORATION LOCATION PLAN

APPENDIX A
LIMITATIONS

APPENDIX A

LIMITATIONS

Explorations

1. The analyses, recommendations, and designs submitted in this preliminary report are based in part on the data obtained from subsurface explorations by Sanborn Head and others. The nature and extent of variations between these explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.
2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretation of widely spaced explorations and samples; actual soil transitions may be more or less gradual than indicated. For specific information, refer to the test boring logs.
3. Water level readings have been made in the drill holes at the times and under the conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors differing from those occurring at the time measurements were made.

Review

4. In the event that any changes in the nature, design, or location of the proposed buildings are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of the report modified or verified in writing by Sanborn Head.

Construction

5. It is recommended that this firm be retained to provide soil engineering services during the excavation and earthwork construction phases of the work. This is to observe compliance with the design concepts, specifications, or recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

Use of Report

6. This preliminary report has been prepared for the exclusive use of Gate Residential for the Addison Street Redevelopment project located at 144 Addison Street in East Boston, Massachusetts, in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

7. This preliminary geotechnical engineering report has been prepared for this project by Sanborn Head for design purposes only and is not sufficient to prepare an accurate bid. Contractors wishing a copy of this report may secure it with the understanding that its scope is limited to design considerations only.

\\wesserv2\shdata\4200s\4232.00\Source Files\GT Report\Appendix A - Limitations\20170908 Limitations.docx

APPENDIX B

BORING LOGS BY SANBORN HEAD

Description and Classification of Soil

1. **Density or Consistency:** The density or consistency of a soil sample is based on the Standard Penetration Test N-value according to the following table:

Density of Granular Soil	SPT N-Value		Consistency of Cohesive Soil
Very Loose	0-4	<2	Very Soft
Loose	4-10	2-4	Soft
Medium Dense	10-30	4-8	Medium Stiff
Dense	30-50	8-15	Stiff
Very Dense	>50	15-30	Very Stiff
		>30	Hard

The Standard Penetration Resistance, or N-value in blows per foot, is the sum of the blows recorded over the second and third 6-inch interval.

A number followed by "/3" indicates the distance that the sampler advanced. For example "100/4" indicates that 100 blows of a 140 pound hammer falling 30 inches advanced the sampler 4 inches. "WOR/24" indicates the weight of the drilling rods without the hammer caused the sampler to advance 24 inches.

"WOH" indicates the static weight of the 140 pound hammer and the drilling rods attached to the split spoon sampler were sufficient to cause the sampler to advance.

"WOR" indicates the static weight of the drilling rods attached to the split spoon sampler was sufficient to cause the sampler to advance.

2. **Color:** The color of a soil sample is based on visual observation.

3. Soil Components

- A. **Description:** The components of a soil sample are described by visually estimating the percentage of each component by weight of the total sample using a Modified Burmister System.

- i. **Major Component:** The major soil component is written with upper case letters for granular soil (e.g., SAND, GRAVEL) and a combination of upper and lower case letters for fine grained soil (e.g., Silty CLAY, Clayey SILT).
- ii. **Minor Component:** The minor soil components are written with the first letter of each soil type in upper case, and the remaining letters in lower case (e.g., Gravel, Silt). The minor components are identified and prefaced in the description based on the following percentages:

Preface	Percentage
and	35-50
some	20-35
little	10-20
trace	0-10

- iii. **Note:** The actual percentages of gravel soil may differ from that measured when sampling with a standard split spoon sampler because of the relatively small sampler diameter. Also, it is not possible to identify the presence of boulders and cobbles using a standard split spoon sampler.

B. Definitions

- i. **Granular Soil:** A granular soil sample is defined by the following particle sizes as referenced to a standard sieve:

Material	Description	Standard Sieve Limit	
		Upper	Lower
Boulders	C-sized	--	36 inch
	B-sized	36 inch	24 inch
	A-sized	24 inch	12 inch
Cobbles	--	12 inch	3 inch
Gravel	coarse	3 inch	3/4 inch
	fine	3/4 inch	No. 4
Sand	coarse	No. 4	No. 10
	medium	No. 10	No. 40
	fine	No. 40	No. 200

- ii. **Fine Grained Soil:** The degree of plasticity of fine-grained soils is defined as follows:

Material	Degree of Plasticity	Plasticity Index (PI)	Smallest Thread Diameter (in.)
SILT	Non-Plastic	0	None
Clayey SILT	Slight	1 to 5	1/4
SILT & CLAY	Low	5 to 10	1/8
CLAY & SILT	Medium	10 to 20	1/16
Silty CLAY	High	20 to 40	1/32
CLAY	Very High	40+	1/64

- iii. **Organic Soil:** An organic soil sample is classified by observation of the sample structure as follows:

Material	Description
TOPSOIL	Surficial soils that support plant life and which contain organic matter.
SUBSOIL	Soil underlying the topsoil which may contain very fragments of plant fibers.
PEAT	Deposits of plant remains in which the original plant fibers may be visible.
ORGANIC SILT	Deposit of plant remains in which the original plant fibers have been destroyed, may have high sand content. Usually found underlying peat.

- iv. **Non-Soil Constituents:** Non-soil constituents (artificial or anthropogenic material, organic materials, cobbles and boulders) are described as follows:

The following terminology is used to denote size ranges of non-soil constituents:

Descriptive Term	Size Range	Comparative Term
Specks	< No. 200 Sieve	Silt and Clay fines
Particles	No. 200 Sieve to No. 4 Sieve	Sand
Fragments	No. 4 Sieve to 3 in.	Gravel
Pieces	3 in. to 12 in.	Cobbles
Blocks	> 12 in.	Boulders

The following terminology is used to describe the frequency that a non-soil constituent is observed by estimating the percentage of the constituent by weight of the total sample:

Descriptor	Percentage
very few	0-5
few	5-10
common	10-20
frequent	20-35
numerous	35-50

4. **Moisture Content:** The moisture content of a soil sample is based on the observable presence of water according to the following table:

Dry	Moisture is not apparent, dusty.
Moist	No visible water.
Wet	Visible free water.

5. **Other Pertinent Characteristics:** Pertinent characteristics observed in a soil sample should be noted according to the following table:

Soil Structure Produced by Deposition of Sediments	
Stratified	Random soil deposits of varying components of color.
Varved	Alternating soil deposits of varying thickness (i.e., clays or silts).
Stratum	Soil deposit > 12 inches thick.
Layer	Soil deposit 3 inches to 12 inches thick.
Seam	Soil deposit 1/8 inch to 3 inches thick.
Parting/Lens	Soil deposit < 1/8 inch thick.

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/14/17

Date Finished: 08/14/17

Logged By: C. Sobchuk

Checked By:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/14/17	12:55	5'	Ground Surface	9'	58'	~45 Minutes
08/15/17	07:20	3.2'	Ground Surface	9'	Well Installed	~16 Hours
08/23/17	---	0.8'	Top of PVC		12'	9 Days

BORING LOG P:\4200S\4232.00\WORK\LOGS\4232.00 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 9/8/17

Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
0	S-1	0.1 - 2	9 5 3 2	24/14	PID: 0.4 ppmv			(0 to 0.1'): ASPHALT.		6" Dia. Flushmounted Road Box Set in Concrete (0 to 1')
2	S-2	2 - 4	2 1 2 1	24/10	PID: ND		FILL	S-1 (0.1 to 2'): Loose, dark brown, fine to coarse SAND, little Gravel, trace Silt, very few Organic particles, very few Glass particles, very few Ash particles, very few Tile particles. Moist. FILL. S-2 (2 to 4'): Very loose, dark brown, fine to coarse SAND, little Gravel, trace Silt, very few Organic particles, very few Glass particles, very few Ash particles, very few Tile particles. Moist. FILL.		2" Dia. Sch. 40 PVC Riser (1 to 2') Bentonite Chips (1 to 1.5')
4	S-3	4 - 6	5 2 1/12"	24/0	PID: NA			S-3 (4 to 6'): Very soft, No Recovery.		2" Dia. Sch. 40 PVC Well Screen (0.010" Slots) (2 to 12')
6	S-4	6 - 8	1/24"	24/0	PID: NA			S-4 (6 to 8'): Very soft, No Recovery.		
8	S-5	8 - 10	1 1 1/12"	24/15	PID: 10.8 ppmv PP: ND Tv: 0.1 PID: 15.9 ppmv		ORGANIC SILT	S-5A (8 to 9'): Very soft, dark gray, SILT, some Sand. Wet. ORGANIC SILT. S-5B (9 to 10'): Very soft, Clayey SILT, very few Organic particles. Wet. ORGANIC SILT.		
10	S-6	10 - 12	4 6 5 11	24/24	PID: 34 ppmv PP: 2.25 Tv: 0.35 PID: ND			S-6A (10 to 11.3'): Stiff, Clayey SILT, numerous Organic particles. Wet. ORGANIC SILT. S-6B (11.3 to 12'): Stiff, gray, SILT & CLAY, trace Organic particles. Wet. ORGANIC SILT.		
14	S-7	14 - 16	5 7 8 8	24/24	PID: ND		SILTY SAND	S-7 (14 to 16'): Medium stiff, SILT and Sand. Wet.		Filter Sand (1.5 to 67')
16										
18										
20	S-8	19 - 21	6 5 5 7	24/1	PID: NA			S-8 (19 to 21'): Stiff, gray, SILT & CLAY. Wet.		
22							SILT & CLAY			
24	S-9	24 - 26	2 4 3 6	24/2	PID: ND			S-9 (24 to 26'): Medium stiff, gray, CLAY & SILT. Wet.		
26	S-10	26 - 28	5 3 4 5	24/0				S-10 (26 to 28'): Medium stiff, No Recovery.		
28										



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

Log of Monitoring Well SH-101W

Ground Elevation: 9.4 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57,
 Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
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Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/14/17

Date Finished: 08/14/17

Logged By: C. Sobchuk

Checked By:

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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
28	S-11	29 - 31	1/12"	24/24	PID: ND PP: 0.5 Tv: 0.3	[Hatched Pattern]		S-11 (29 to 31'): Very soft, gray, Clayey SILT, little Sand. Wet. layer of Silt & Clay from approximately 29-29.3 feet.	[Dotted Pattern]	
30			1							
32			2							
34	S-12	34 - 36	4	24/24	PID: ND PP: 0.5 Tv: 0.1	[Hatched Pattern]		S-12 (34 to 36'): Medium stiff, gray, Clayey SILT, little Sand. Wet.	[Dotted Pattern]	Filter Sand (1.5 to 67')
36			3							
38			3							
40	S-13	39 - 41	4	24/22	PID: ND PP: 0.5 Tv: 0.15	[Hatched Pattern]		S-13 (39 to 41'): Medium stiff, gray, Clayey SILT, little Sand. Wet.	[Dotted Pattern]	
42			3							
44			4							
46	S-14	44 - 46	1	24/20	PID: ND PP: 0.0 Tv: 0.18	[Hatched Pattern]	SILT & CLAY	S-14 (44 to 46'): Medium stiff, gray, Clayey SILT, little Sand. Wet.	[Dotted Pattern]	
48			3							
50			5							
52	S-15	49 - 51	WOH/18"	24/24	PID: ND PP: 0.5 Tv: 0.25	[Hatched Pattern]		S-15 (49 to 51'): Very soft, CLAY & SILT, trace Sand. Wet. Stratified.	[Dotted Pattern]	
54			1							
56	S-16	54 - 56	WOH/12"	24/24	PID: ND PP: 0.5 Tv: 0.25	[Hatched Pattern]		S-16 (54 to 56'): Very soft, gray, SILT & CLAY, trace Sand. Wet. Stratified.	[Dotted Pattern]	
			2							



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

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Ground Elevation: 9.4 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/14/17	12:55	5'	Ground Surface	9'	58'	~45 Minutes
08/15/17	07:20	3.2'	Ground Surface	9'	Well Installed	~16 Hours
08/23/17	---	0.8'	Top of PVC		12'	9 Days

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/14/17

Date Finished: 08/14/17

Logged By: C. Sobchuk

Checked By:

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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
56										Filter Sand (1.5 to 67')
58	S-17	59 - 61	1/12" 1 2	24/24	PID: ND PP: 0.0 Tv: 0.2			S-17 (58 to 61'): Very soft, gray, SILT & CLAY, trace Sand. Wet. Stratified.		
60										
62										
64	S-18	64 - 66	WOR/6" WOH/6" 3 4	24/24	PID: ND PP: 0.0 Tv: 0.25			S-18 (64 to 65'): Very soft, gray, CLAY & SILT, trace Sand. Wet. Stratified.		
66										
68										
70							SILT & CLAY			
72										
74	S-19	74 - 76	WOH/6" 1 1 2	24/24	PID: ND PP: 0.3 Tv: 0.2			S-19 (74 to 76'): Very soft, gray, Silty CLAY, trace Sand. Wet. Stratified.		
76										
78										
80										
82										
84										Formation Material (67 to 99.4')



Project: 144 Addison Street
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Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

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08/23/17	---	0.8'	Top of PVC		12'	9 Days

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/14/17

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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
84										
86										
88										
90							SILT & CLAY			
92										
94										
96	S-20	95.4 - 97.4	7 7 2 3	24/1	PID: ND			Roller bit to GLACIAL TILL at 95.4 feet.		
98	S-21	97.4 - 99.4	7 4 4 6	24/1	PID: ND		GLACIAL TILL	S-20 (95.4 to 97.4'): Loose, gray, SILT and Sand, some Gravel, little Clay. Wet. TILL. S-21 (97.4 to 99.4'): Loose, gray, SILT and Sand, some Gravel, little Clay. Wet. TILL.		
100								Boring terminated at 99.4 feet. No refusal encountered.		
102								NOTES:		
104								1. Soil samples were screened for volatile organic compounds (VOCs) using a MiniRAE 3000 Photoionization Detector (PID) with a 10.6 eV lamp, calibrated to a 100 parts per million by volume (ppmv) isobutylene-in-air standard using a response factor of 1.0. Results are presented in ppmv; the typical detection limit is 1 ppmv. ND indicates not detected. NA indicates not available. The PID measures relative levels of VOCs. Although PID screening cannot be used directly to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator for the presence of VOCs.		
106								2. The ground surface elevation was estimated from a plan entitled "Partial Topographic Plan of Land, 175 McClellan Highway & 144 Addison Street, Boston, Mass." Prepared by Feldman Land Surveyors of Boston, MA dated April 10, 2017.		
108								3. Abbreviations: PP = Pocket Penetrometer (DGS Pocket Penetrometer); Tv = Torvane (DGS Stiff Torvane).		
110								4. Values shown for the Stiff Torvane are uncorrected and require a 2.5 ratio (multiplied) for correction.		
112										



Project: 144 Addison Street
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Log of Monitoring Well SH-101W

Ground Elevation: 9.4 ± feet
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Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/14/17

Date Finished: 08/14/17

Logged By: C. Sobchuk

Checked By:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/14/17	12:55	5'	Ground Surface	9'	58'	~45 Minutes
08/15/17	07:20	3.2'	Ground Surface	9'	Well Installed	~16 Hours
08/23/17	---	0.8'	Top of PVC		12'	9 Days

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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
112								5. Top of organic silt layer interpreted from drilling action. 6. Blow counts for glacial till are not considered representative due to disturbed soils.		
114										
116										
118										
120										
122										
124										
126										
128										
130										
132										
134										
136										
138										
140										



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

Log of Monitoring Well SH-102W

Ground Elevation: 9.8 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/15/17	11:45	5'	Ground Surface	14'	56'	~45 Minutes
08/16/17	07:15	3.7'	Ground Surface	14'	117'	~16 Hours
08/23/17	---	1'	Top of PVC		12'	8 Days

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/15/17

Date Finished: 08/15/17

Logged By: C. Sobchuk

Checked By:

BORING LOG P:\4200S\4232.00\WORK\LOGS\4232.00 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 9/8/17

Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
0	S-1	0.3 - 2	8 4 5 6	24/16	PID: 0.7 ppmv		---0'--- ---0.3'---	(0 to 0.3'): ASPHALT.		6" Dia. Flushmounted Road Box Set in Concrete (0 to 1')
2	S-2	2 - 4	4 3 8 6	24/5	PID: ND			FILL		2" Dia. Sch. 40 PVC Riser (1 to 2')
4	S-3	4 - 6	4 2 2/12"	24/0	PID: NA		---4'---	S-3 (4 to 6'): Very soft, No Recovery.		Bentonite Chips (1 to 1.5')
6	S-4	6 - 8	WOH/18 1	24/17	PID: 35.5 ppmv			S-4 (6 to 8'): Very soft, dark brown, SILT, little Sand, common Organic particles. Wet. ORGANIC SILT.		2" Dia. Sch. 40 PVC Well Screen (0.010" Slots) (2 to 12')
8	S-5	8 - 10	WOH/24"	24/3	PID: 54.6 ppmv			ORGANIC SILT		
14	S-6	14 - 16	4 4 6 5	24/18	PID: ND PP: 3.5 Tv: 0.45		---13'---	SILTY SAND		Filter Sand (1.5 to 82')
16	S-7	16 - 18	8 7 9 10	24/0	PID: NA		---16'---	S-7 (16 to 18'): Very stiff, No Recovery.		
20	S-8	19 - 21	2 2 3 5	24/19	PID: ND PP: 0.5 Tv: 0.15			SILT & CLAY		
24	S-9	24 - 26	WOH/9" 1/3" 1 1	24/15	PID: ND PP: 0.0 Tv: 0.2			SILT & CLAY		



Project: 144 Addison Street
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 Project No.: 4232.00

Log of Monitoring Well SH-102W

Ground Elevation: 9.8 ± feet
 Datum: Boston City Base

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Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
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Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/15/17

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Checked By:

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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
28	S-10	29 - 31	WOH/24	24/24	PID: ND PP: 0.3 Tv: 0.3			S-10 (29 to 31'): Very soft, gray, SILT & CLAY, trace Sand. Wet. Stratified.		
32	U-1	32 - 34		---				U-1 (32 to 34'): SILT & CLAY, Shelby Tube collected.		
34	S-11	34 - 36	3 3 3 2	24/12	PID: ND PP: 0.0 Tv: 0.15			S-11 (34 to 36'): Medium stiff, gray, Clayey SILT, trace Sand. Wet. Stratified.		Filter Sand (1.5 to 82')
42							SILT & CLAY			
44	S-12	44 - 46	WOH/6	24/24	PID: ND PP: 0.0 Tv: 0.2			S-12 (44 to 46'): Soft, gray, SILT & CLAY, trace Sand. Wet. Stratified.		
54	S-13	54 - 56	WOH/24	24/24	PID: ND PP: 0.0 Tv: 0.2			S-13 (54 to 56'): Very soft, gray, CLAY & SILT, trace Sand. Wet. Stratified.		



Project: 144 Addison Street
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Log of Monitoring Well SH-102W

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Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
56								Roller bit to GLACIAL TILL at 115 feet.		
58										
60										Filter Sand (1.5 to 82')
62										
64										
66										
68										
70										
72										
74										
76										
78										
80										
82										
84										



Project: 144 Addison Street
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Log of Monitoring Well SH-102W

Ground Elevation: 9.8 ± feet
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Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
84								Roller bit to GLACIAL TILL at 115 feet.		
86										
88										
90										
92										
94										
96										
98										
100							SILT & CLAY			Formation Material (82 to 117')
102										
104										
106										
108										
110										
112										



Project: 144 Addison Street
 Location: East Boston, MA
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Log of Monitoring Well SH-102W

Ground Elevation: 9.8 ± feet
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Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
112										
114							SILT & CLAY			
115	S-14	115 - 117	18	24/12	PID: ND		-----115'	S-14 (115 to 117'): Dense, gray, fine to coarse GRAVEL, little Sand, little Silt. Wet. TILL.		
116			22							
117			21				GLACIAL TILL			
118			13				-----117'			
120								Boring terminated at 117 feet. No refusal encountered.		
122								NOTES: 1. Soil samples were screened for volatile organic compounds (VOCs) using a MiniRAE 3000 Photoionization Detector (PID) with a 10.6 eV lamp, calibrated to a 100 parts per million by volume (ppmv) isobutylene-in-air standard using a response factor of 1.0. Results are presented in ppmv; the typical detection limit is 1 ppmv. ND indicates not detected. NA indicates not available. The PID measures relative levels of VOCs. Although PID screening cannot be used directly to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator for the presence of VOCs. 2. The ground surface elevation was estimated from a plan entitled "Partial Topographic Plan of Land, 175 McClellan Highway & 144 Addison Street, Boston, Mass." Prepared by Feldman Land Surveyors of Boston, MA dated April 10, 2017. 3. Abbreviations: PP = Pocket Penetrometer (DGSI Pocket Penetrometer); Tv = Torvane (DGSI Stiff Torvane). 4. Values shown for the Stiff Torvane are uncorrected and require a 2.5 ratio (multiplied) for correction. 5. Top of organic silt layer interpreted from drilling action.		
124										
126										
128										
130										
132										
134										
136										
138										
140										



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

Log of Monitoring Well SH-103W

Ground Elevation: 12.8 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/16/17	11:00	9.2'	Ground Surface	8'	63'	5 Minutes
08/23/17	---	0.3'	Top of PVC		15'	7 Days

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/16/17

Date Finished: 08/16/17

Logged By: C. Sobchuk

Checked By:

BORING LOG P:\4200S\4232.00\WORK\LOGS\4232.00 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 9/8/17

Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
0	S-1	0.3 - 2	18 10 6 5	24/12	PID: ND	---	0'----- 0.3'	(0 to 0.3'): ASPHALT.		6" Dia. Flushmounted Road Box Set in Concrete (0 to 1')
2	S-2	2 - 4	4 6 7 7	24/16	PID: ND PID: 1.7 ppmv	---	FILL	S-1A (0.3 to 1.5'): Medium dense, dark brown, fine to coarse SAND, little Gravel, little Silt, few Coal/Ash particles. Moist. FILL. S-1B (1.5 to 2'): Stiff, gray, SILT, little Sand, trace Organic particles. Moist. FILL. S-2 (2 to 4'): Stiff, gray, Clayey SILT, little Sand, common Organic particles. Moist. FILL.	2" Dia. Sch. 40 PVC Riser (1 to 5')	
4	S-3	4 - 6	5 4 4 6	24/16	PID: ND	---	FILL	S-3 (4 to 6'): Medium stiff, gray, Clayey SILT, little Sand, trace Gravel, very few Organic particles. Moist. FILL. seam of Silt & Clay from approximately 4-4.3 feet.	Bentonite Chips (1 to 2')	
6	S-4	6 - 8	2 1 2 2	24/12	PID: ND	---	ORGANIC SILT	S-4 (6 to 8'): Soft, brown, SILT, frequent Organic particles. Wet. ORGANIC SILT.	2" Dia. Sch. 40 PVC Well Screen (0.010" Slots) (2 to 15')	
8	S-5	8 - 10	1 2 3 9	24/20	PID: ND	---	SAND & SILT	S-5 (8 to 10'): Medium stiff, gray, Clayey SILT, trace Sand, very few Organic particles. Wet.		
10	S-6	10 - 12	7 13 13 17	24/18	PID: ND	---	SAND & SILT	S-6 (10 to 12'): Hard, gray/brown, Clayey SILT and Sand, very few Organic particles. Wet.		
14	S-7	14 - 16	3 4 5 5	24/24	PID: ND	---	SAND & SILT	S-7 (14 to 16'): Loose, brown, SAND and Silt, trace Clay. Wet.	Filter Sand (1.5 to 63')	
18	S-8	19 - 21	2 2 2 2	24/24	PID: ND PP: 1.0 Tv: 0.35	---	SILT & CLAY	S-8 (19 to 21'): Soft, gray/brown, CLAY & SILT, trace Sand. Wet.		
24	S-9	24 - 26	1 1 1 2	24/24	PID: ND PP: 0.0 Tv: 0.2	---	SILT & CLAY	S-9 (24 to 26'): Very soft, gray, SILT & CLAY, trace Sand. Wet. Stratified.		



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

Log of Monitoring Well SH-103W

Ground Elevation: 12.8 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/16/17

Date Finished: 08/16/17

Logged By: C. Sobchuk

Checked By:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/16/17	11:00	9.2'	Ground Surface	8'	63'	5 Minutes
08/23/17	---	0.3'	Top of PVC		15'	7 Days

Depth (ft)	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description			
56										
58							SILT & CLAY			
59	S-14	59 - 61	57	24/12	PID: ND					
60			38					S-14 (59 to 61'): Very dense, gray/brown, fine to coarse SAND & GRAVEL, little Silt. Wet. TILL.		Filter Sand (1.5 to 63')
61			20							
62	S-15	61 - 63	13	24/8			GLACIAL TILL	S-15 (61 to 63'): Dense, gray/brown, fine to coarse SAND & GRAVEL, little Silt. Wet. TILL.		
63			18							
64			12					Boring terminated at 63 feet. No refusal encountered.		
66			11							
68	NOTES: 1. Soil samples were screened for volatile organic compounds (VOCs) using a MiniRAE 3000 Photoionization Detector (PID) with a 10.6 eV lamp, calibrated to a 100 parts per million by volume (ppmv) isobutylene-in-air standard using a response factor of 1.0. Results are presented in ppmv; the typical detection limit is 1 ppmv. ND indicates not detected. NA indicates not available. The PID measures relative levels of VOCs. Although PID screening cannot be used directly to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator for the presence of VOCs. 2. The ground surface elevation was estimated from a plan entitled "Partial Topographic Plan of Land, 175 McClellan Highway & 144 Addison Street, Boston, Mass." Prepared by Feldman Land Surveyors of Boston, MA dated April 10, 2017. 3. Abbreviations: PP = Pocket Penetrometer (DGSI Pocket Penetrometer); Tv = Torvane (DGSI Stiff Torvane). 4. Values shown for the Stiff Torvane are uncorrected and require a 2.5 ratio (multiplied) for correction.									
70										
72										
74										
76										
78										
80										
82										
84										

BORING LOG P:\4200S\4232.00\WORK\LOGS\4232.00 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 9/8/17



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

Log of Boring SH-104

Ground Elevation: 11.5 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57, Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/16/17	13:00	4'	Ground Surface		6'	<5 Minutes

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/16/17

Date Finished: 08/16/17

Logged By: C. Sobchuk

Checked By:

Depth (ft)	Sample Information					Stratum		Geologic Description	Remarks
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/Rec (in)	Field Testing Data	Log	Description		
0	S-1	0.3 - 2	23 6 4 6	24/8	PID: 1.6 ppmv		-----0'----- -----0.3'----- (0 to 0.3'): ASPHALT. S-1 (0.3 to 2'): Loose, dark brown, fine to coarse SAND, little Silt, trace Gravel, few Glass fragments, few Ash/Coal particles/fragments. Moist. FILL. S-2 (2 to 4'): Loose, No Recovery.		
2	S-2	2 - 4	4 3 4 4	24/0	PID: NA		FILL		
4	S-3	4 - 6	4 3 3 2	24/12	PID: 5.8 ppmv			S-3 (4 to 6'): Loose, gray/brown, SAND and Silt, trace Gravel, trace Clay, very few Brick particles, very few Organic particles. Moist. FILL.	
6							-----6'-----	Boring terminated at 6 feet. No refusal encountered.	
8								NOTES: 1. Soil samples were screened for volatile organic compounds (VOCs) using a MiniRAE 3000 Photoionization Detector (PID) with a 10.6 eV lamp, calibrated to a 100 parts per million by volume (ppmv) isobutylene-in-air standard using a response factor of 1.0. Results are presented in ppmv; the typical detection limit is 1 ppmv. ND indicates not detected. NA indicates not available. The PID measures relative levels of VOCs. Although PID screening cannot be used directly to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator for the presence of VOCs. 2. The ground surface elevation was estimated from a plan entitled "Partial Topographic Plan of Land, 175 McClellan Highway & 144 Addison Street, Boston, Mass." Prepared by Feldman Land Surveyors of Boston, MA dated April 10, 2017. 3. Abbreviations: PP = Pocket Penetrometer (DGS Pocket Penetrometer); Tv = Torvane (DGS Stiff Torvane). 4. Values shown for the Stiff Torvane are uncorrected and require a 2.5 ratio (multiplied) for correction.	
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28									

BORING LOG P:\4200S\4232.00\WORK\LOGS\4232.00 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 9/8/17



Project: 144 Addison Street
 Location: East Boston, MA
 Project No.: 4232.00

Log of Boring SH-105

Ground Elevation: 12.5 ± feet
 Datum: Boston City Base

Sanborn, Head & Associates, Inc.

Drilling Method: Drive & Wash, 4in OD Casing Mobile Drill Rig B57,
 Truck Mounted Rig

Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

Drilling Company: Crawford Drilling Services, LLC

Foreman: T. Martinelli

Date Started: 08/16/17

Date Finished: 08/16/17

Logged By: C. Sobchuk

Checked By:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
08/16/17	14:00	4'	Ground Surface		6'	<5 Minutes

Depth (ft)	Sample Information					Stratum		Geologic Description	Remarks
	Sample No.	Depth (ft)	Spoon Blows per 6 in	Pen/ Rec (in)	Field Testing Data	Log	Description		
0	S-1	0.3 - 2	32 7 5 6	24/12	PID: 0.3 ppmv		---0'--- ---0.3'---	(0 to 0.3'): ASPHALT.	
2	S-2	2 - 4	3 3 1 1	24/10	PID: 4.6 ppmv		FILL	S-1 (0.3 to 2'): Medium dense, brown, fine to coarse SAND, trace Silt, trace Gravel, common Ash particles, very few Wood particles. Moist. FILL. S-2 (2 to 4'): Loose, brown, fine to coarse SAND, little Gravel, trace Silt, common Ash particles. Moist. FILL.	
4	S-3	4 - 6	1/8" 1/8" 1/8"	24/0	PID: NA		---4'---	S-3 (4 to 6'): Very soft, No Recovery.	
6	S-4	6 - 8	1/8" 1/8" 1/8"	24/2	PID: 5.2 ppmv		ORGANIC SILT	S-4 (6 to 8'): Very soft, gray/brown, SILT, trace Sand, common Organic particles. Wet. ORGANIC SILT.	
8							---8'---	Boring terminated at 8 feet. No refusal encountered.	
10								NOTES: 1. Soil samples were screened for volatile organic compounds (VOCs) using a MiniRAE 3000 Photoionization Detector (PID) with a 10.6 eV lamp, calibrated to a 100 parts per million by volume (ppmv) isobutylene-in-air standard using a response factor of 1.0. Results are presented in ppmv; the typical detection limit is 1 ppmv. ND indicates not detected. NA indicates not available. The PID measures relative levels of VOCs. Although PID screening cannot be used directly to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator for the presence of VOCs. 2. The ground surface elevation was estimated from a plan entitled "Partial Topographic Plan of Land, 175 McClellan Highway & 144 Addison Street, Boston, Mass." Prepared by Feldman Land Surveyors of Boston, MA dated April 10, 2017. 3. Abbreviations: PP = Pocket Penetrometer (DGS Pocket Penetrometer); Tv = Torvane (DGS Stiff Torvane). 4. Values shown for the Stiff Torvane are uncorrected and require a 2.5 ratio (multiplied) for correction. 5. Top of organic silt layer interpreted from drilling action.	
12									
14									
16									
18									
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26									
28									

BORING LOG P:\4200S\4232.00\WORK\LOGS\4232.00 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 9/8/17

APPENDIX C

GEOTECHNICAL LABORATORY REPORTS



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	---	Sample Type:	---
Sample ID:	---	Test Date:	08/24/17
Depth :	---	Test Id:	421358
		Tested By:	jbr
		Checked By:	emm

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
SH-1	S- 5A	8-9	Moist, gray clay with organics	78.4
SH-1	S- 6A	10-11.3	Moist, dark brown silt with organics	201.0
SH-1	S- 9	24-26	Moist, gray clay	33.3
SH-1	S- 19	74-76	Moist, gray clay	40.8
SH-2	S- 4	6-8	Moist, olive brown clay with organics	126.9
SH-2	S- 8	19-21	Moist, gray clay	28.9
SH-2	S- 13	54-56	Moist, gray clay	32.1
SH-3	S- 4	6-8	Moist, grayish brown clay with organics	147.4
SH-3	S- 8	19-21	Moist, olive gray clay	28.0
SH-3	S- 13	49-51	Moist, gray clay	29.1

Notes: Temperature of Drying : 110° Celsius



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	---	Sample Type:	---
Sample ID:	---	Test Date:	08/25/17
Depth :	---	Test Id:	421376
		Tested By:	cam
		Checked By:	emm

Moisture, Ash, and Organic Matter - ASTM D2974

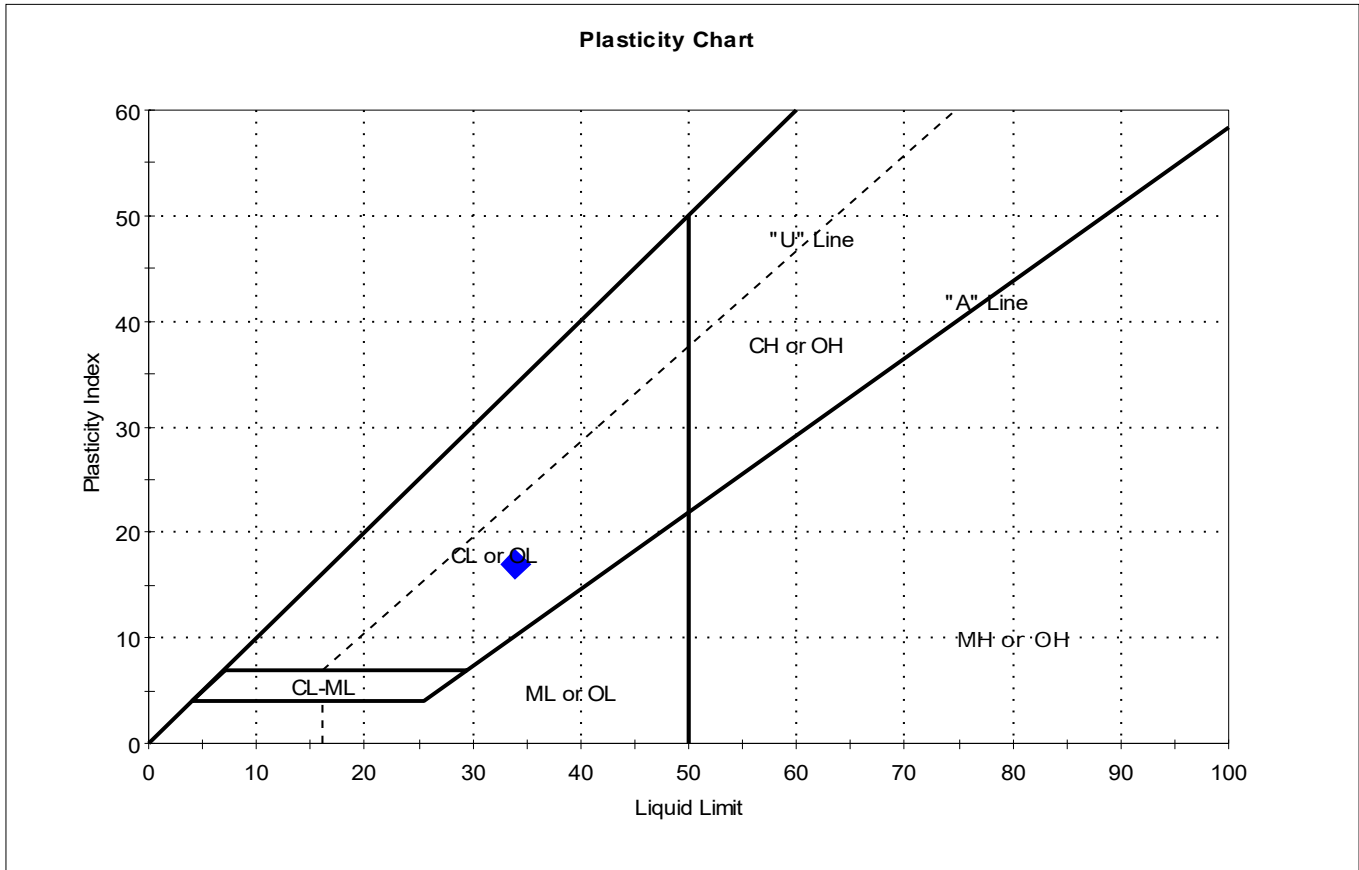
Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
SH-1	S-5A	8-9	Moist, gray clay with organics	78	91.4	8.6
SH-1	S-6A	10-11.3	Moist, dark brown silt with organics	201	71.0	29.0
SH-2	S-4	6-8	Moist, olive brown clay with organics	127	86.2	13.8
SH-3	S-4	6-8	Moist, grayish brown clay with organics	147	74.7	25.3

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass; dried to a constant mass at temperature of 105° C
 Ash content and organic matter determined by Method C; dried to constant mass at temperature 440° C



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-1	Sample Type:	jar
Sample ID:	S-9	Test Date:	08/25/17
Depth :	24-26	Test Id:	421370
Test Comment:	---		
Visual Description:	Moist, gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-9	SH-1	24-26	33	34	17	17	1	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

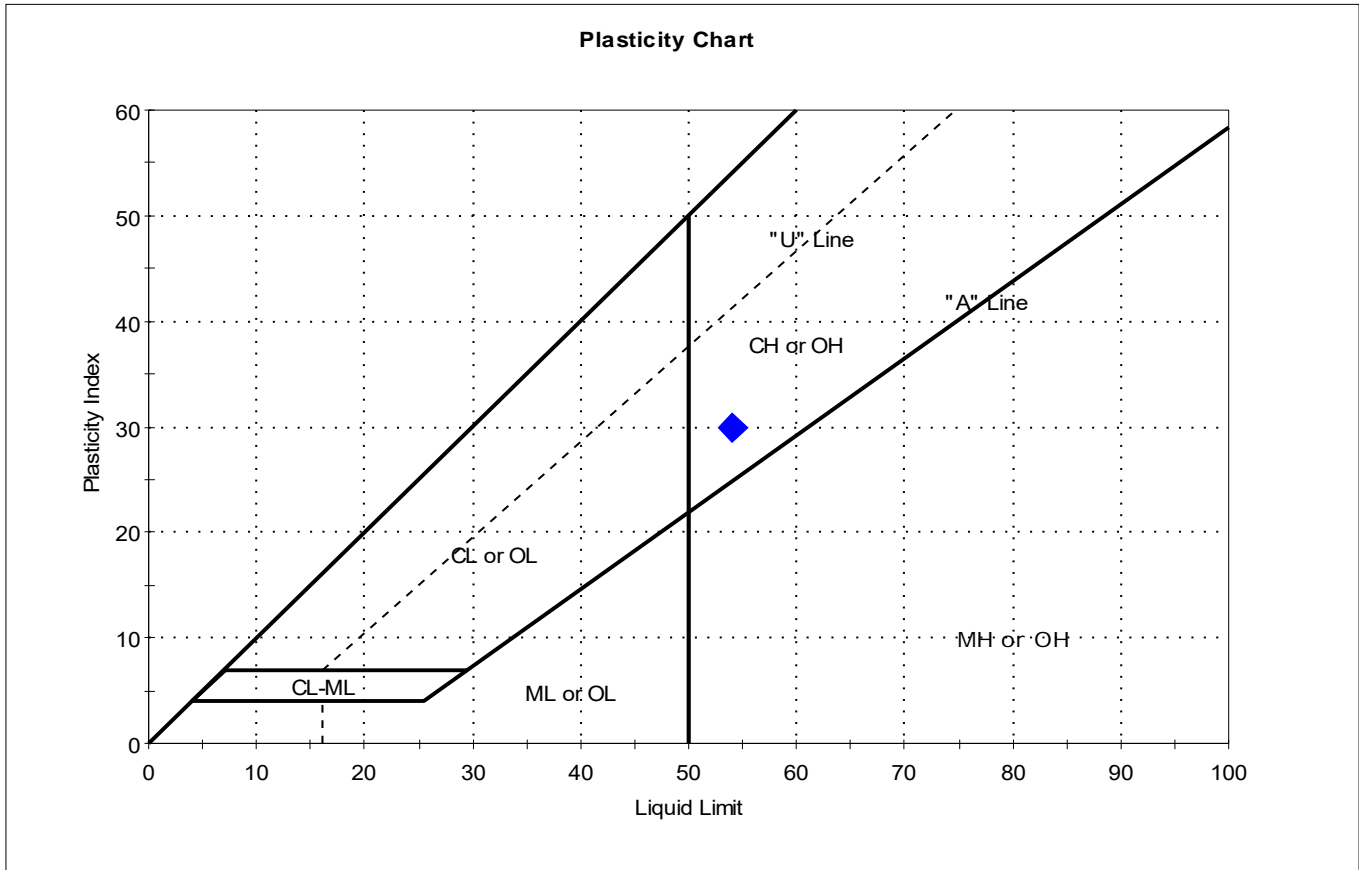
Dilatancy: SLOW

Toughness: LOW



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-1	Sample Type:	jar
Sample ID:	S-19	Test Date:	08/24/17
Depth :	74-76	Test Id:	421367
Test Comment:	---		
Visual Description:	Moist, gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-19	SH-1	74-76	41	54	24	30	0.6	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

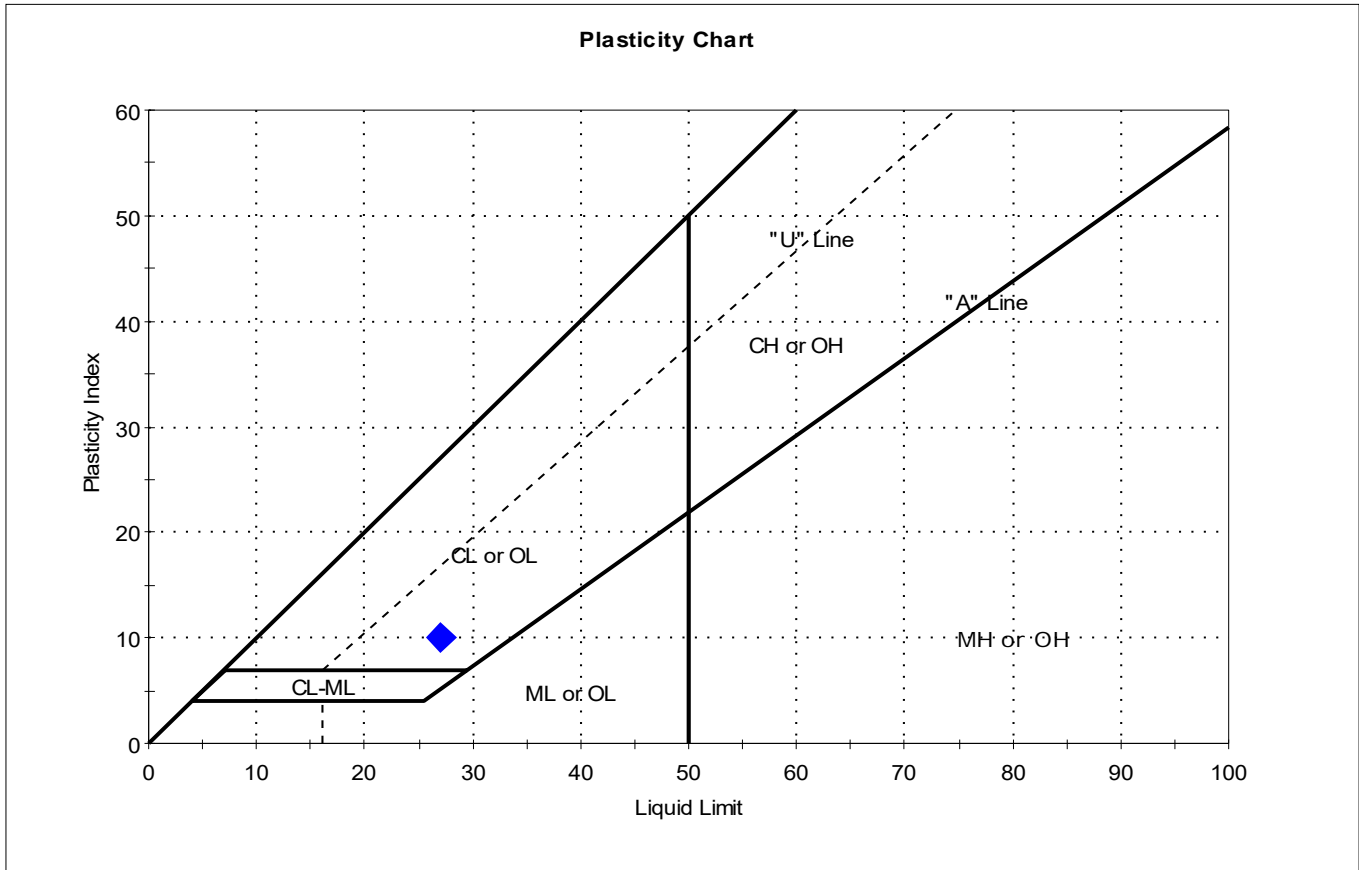
Dilatancy: SLOW

Toughness: LOW



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-2	Sample Type:	jar
Sample ID:	S-8	Test Date:	08/25/17
Depth :	19-21	Test Id:	421371
Test Comment:	---		
Visual Description:	Moist, gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-8	SH-2	19-21	29	27	17	10	1.2	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

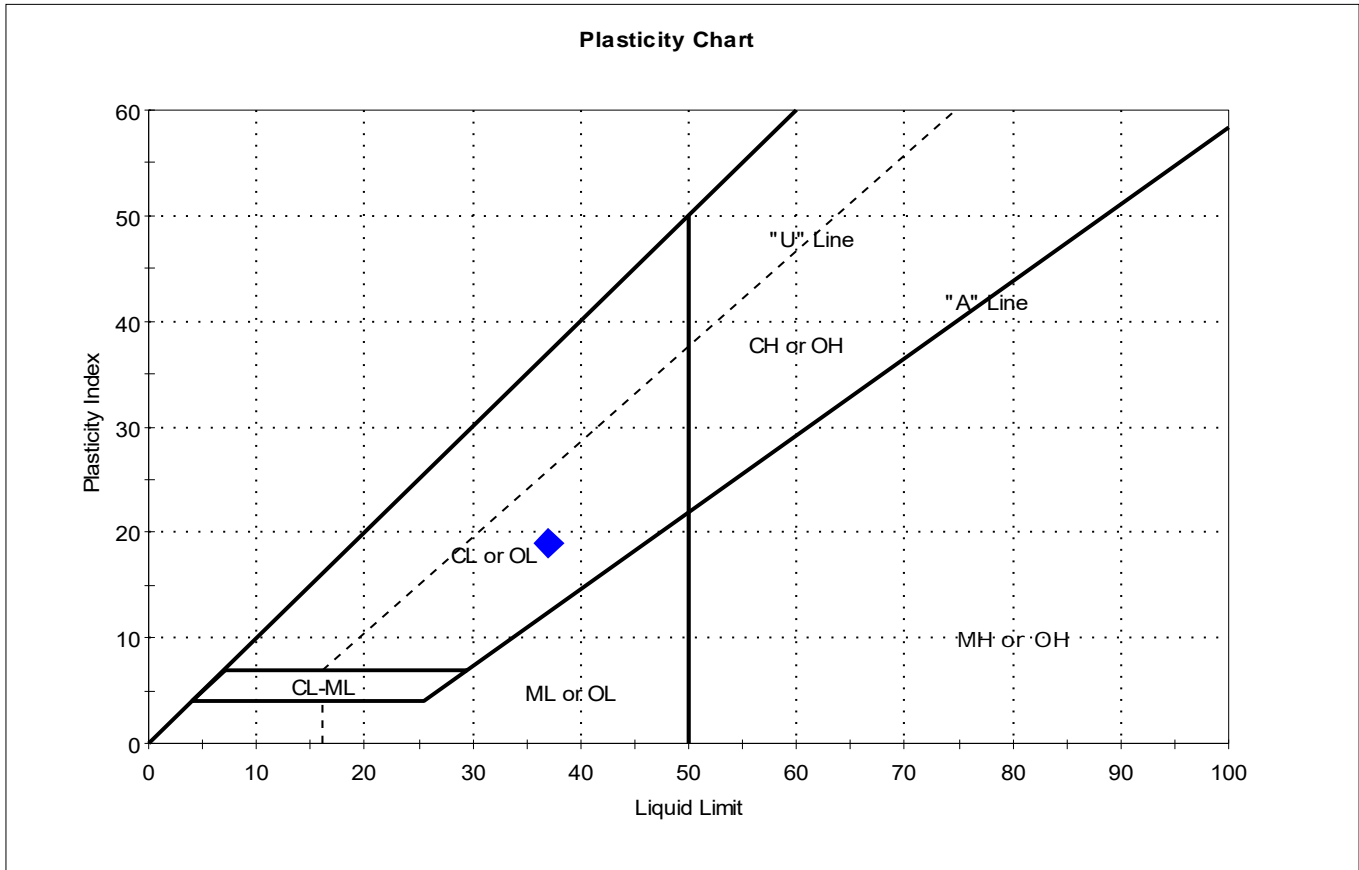
Dilatancy: SLOW

Toughness: LOW



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-2	Sample Type:	jar
Sample ID:	S-13	Test Date:	08/24/17
Depth :	54-56	Test Id:	421368
Test Comment:	---		
Visual Description:	Moist, gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-13	SH-2	54-56	32	37	18	19	0.7	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

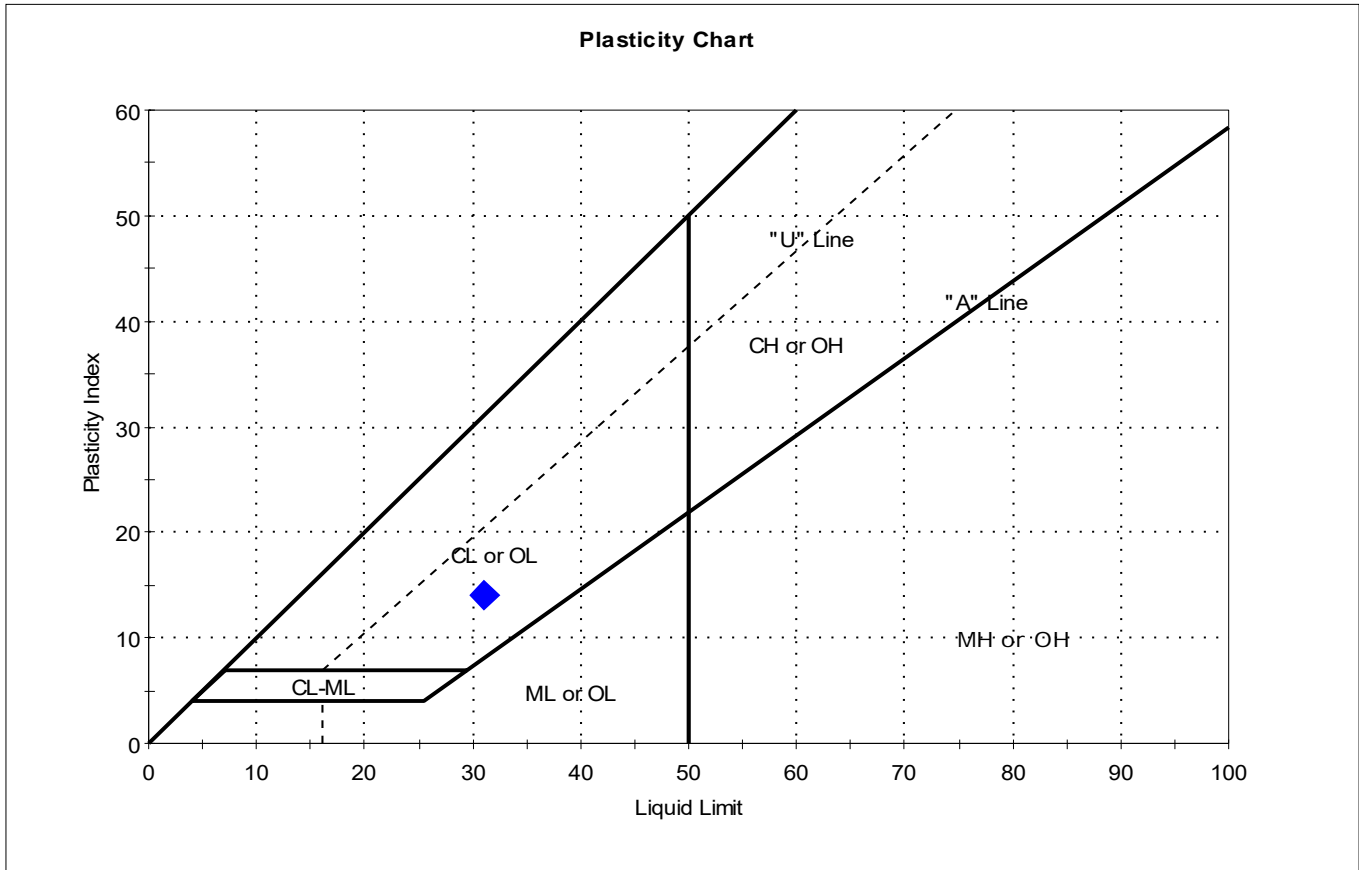
Dilatancy: SLOW

Toughness: LOW



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-3	Sample Type:	jar
Sample ID:	S-8	Test Date:	08/24/17
Depth:	19-21	Test Id:	421372
Test Comment:	---		
Visual Description:	Moist, olive gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-8	SH-3	19-21	28	31	17	14	0.8	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

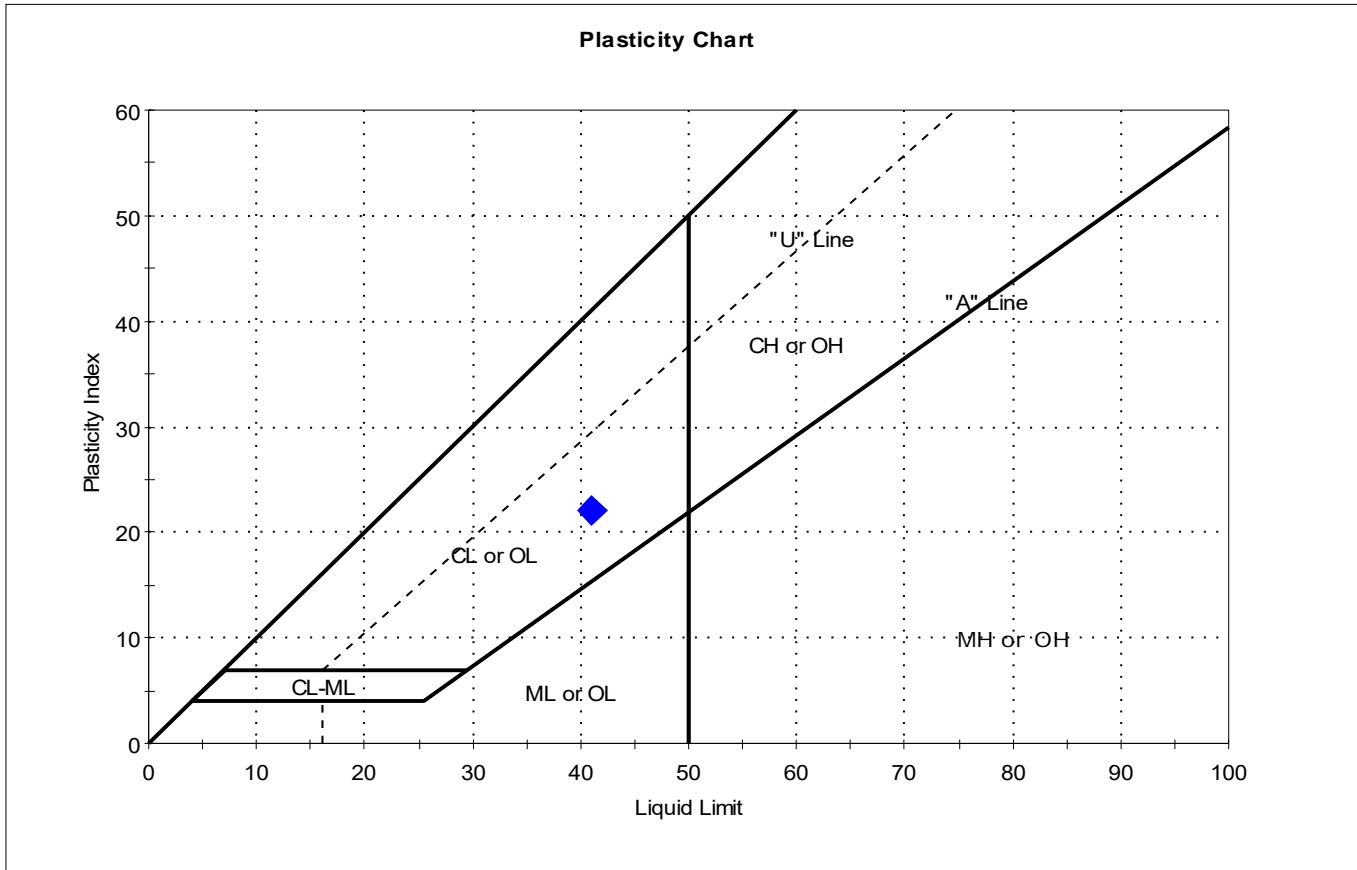
Dilatancy: SLOW

Toughness: LOW



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-3	Sample Type:	jar
Sample ID:	S-13	Test Date:	08/24/17
Depth:	49-51	Test Id:	421369
Test Comment:	---		
Visual Description:	Moist, gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S-13	SH-3	49-51	29	41	19	22	0.5	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-2	Sample Type:	tube
Sample ID:	U-1	Test Date:	08/30/17
Depth :	32-34	Test Id:	421355
Test Comment:	---		
Visual Description:	Wet, gray silty clay with sand		
Sample Comment:	---		

Moisture Content of Soil and Rock - ASTM D2216

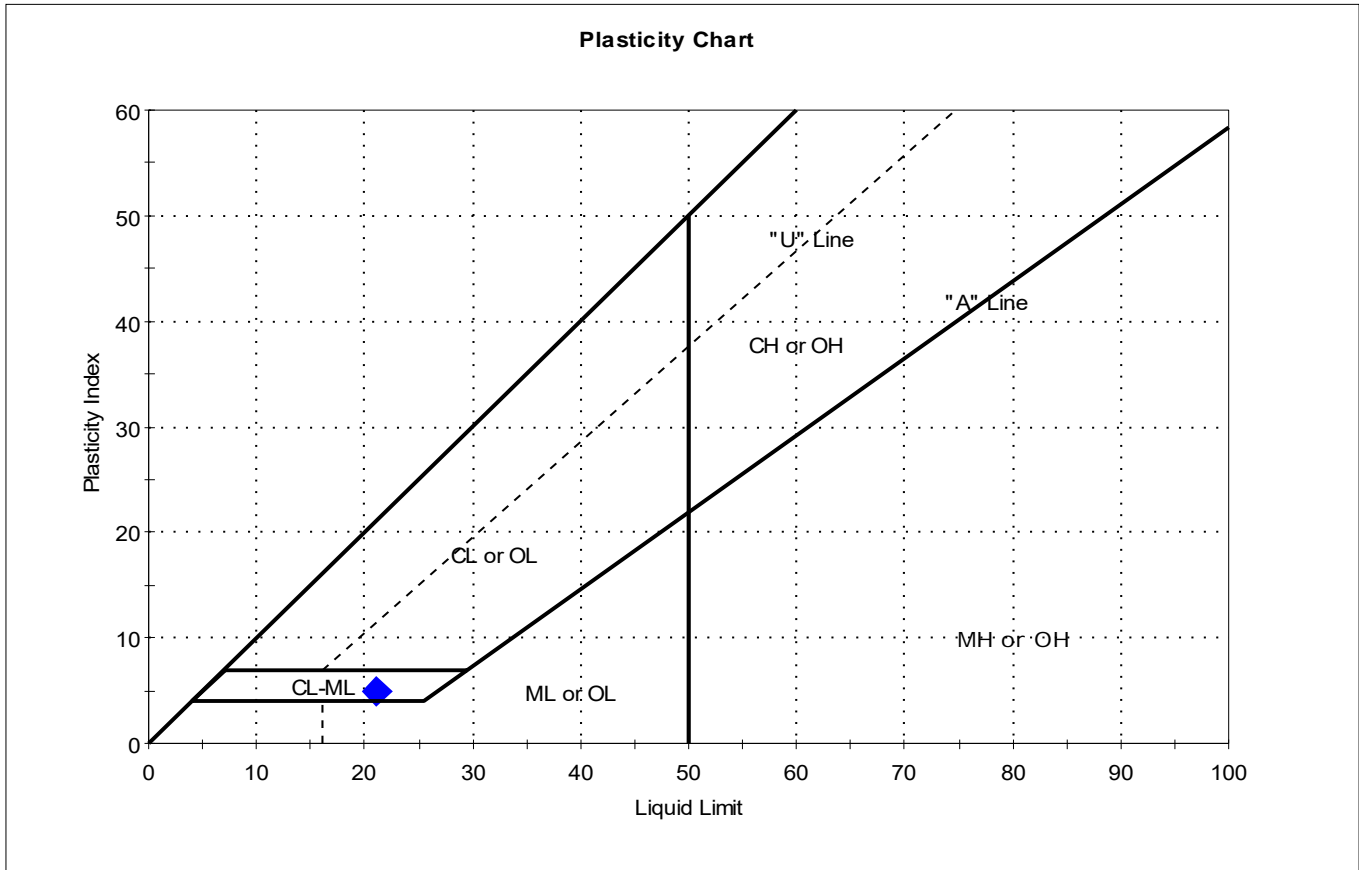
Boring ID	Sample ID	Depth	Description	Moisture Content, %
SH-2	U- 1	32-34	Wet, gray silty clay with sand	25.6

Notes: Temperature of Drying : 110° Celsius



Client:	Sanborn, Head & Associates, Inc.		
Project:	144 Addison St		
Location:	East Boston, MA	Project No:	GTX-306889
Boring ID:	SH-2	Sample Type:	tube
Sample ID:	U-1	Test Date:	08/30/17
Depth :	32-34	Test Id:	421366
Test Comment:	---		
Visual Description:	Wet, gray silty clay with sand		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U-1	SH-2	32-34	26	21	16	5	1.9	

Sample Prepared using the WET method

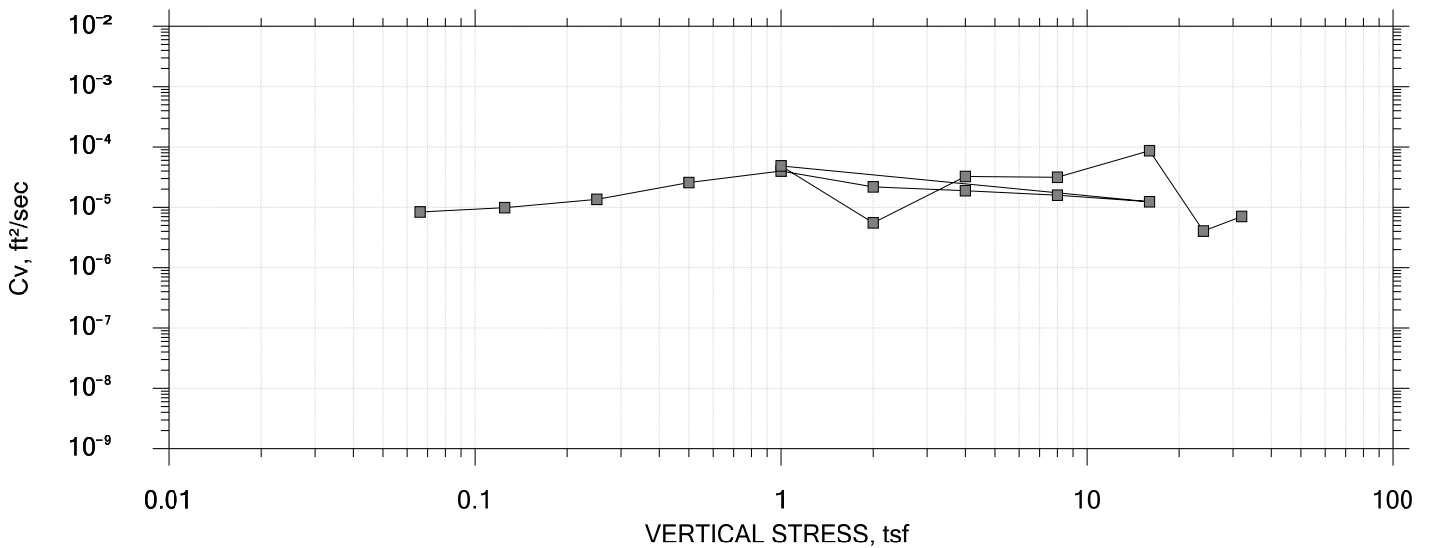
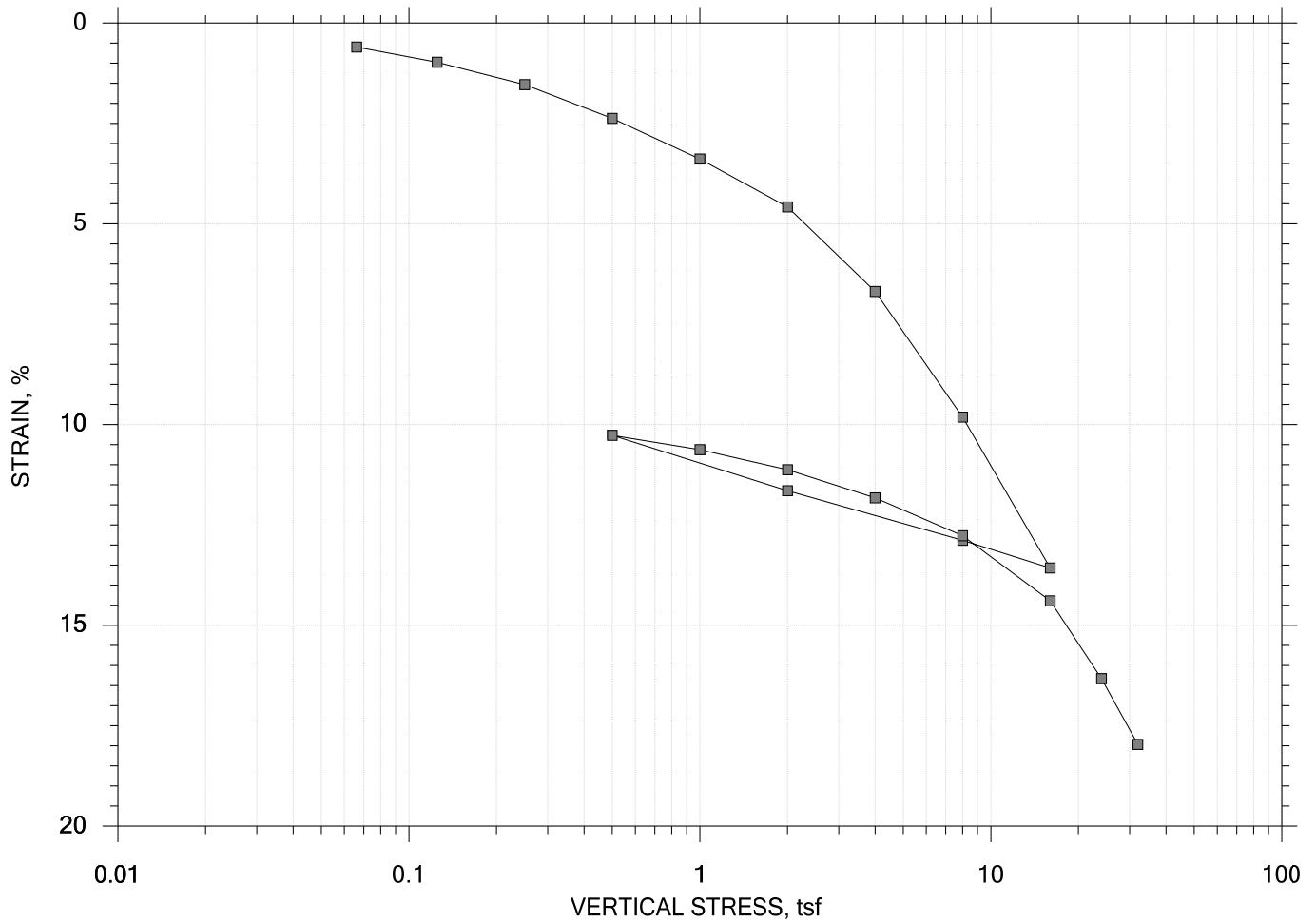
Dry Strength: HIGH


Dilatancy: SLOW

Toughness: LOW

One-Dimensional Consolidation by ASTM D2435 - Method B

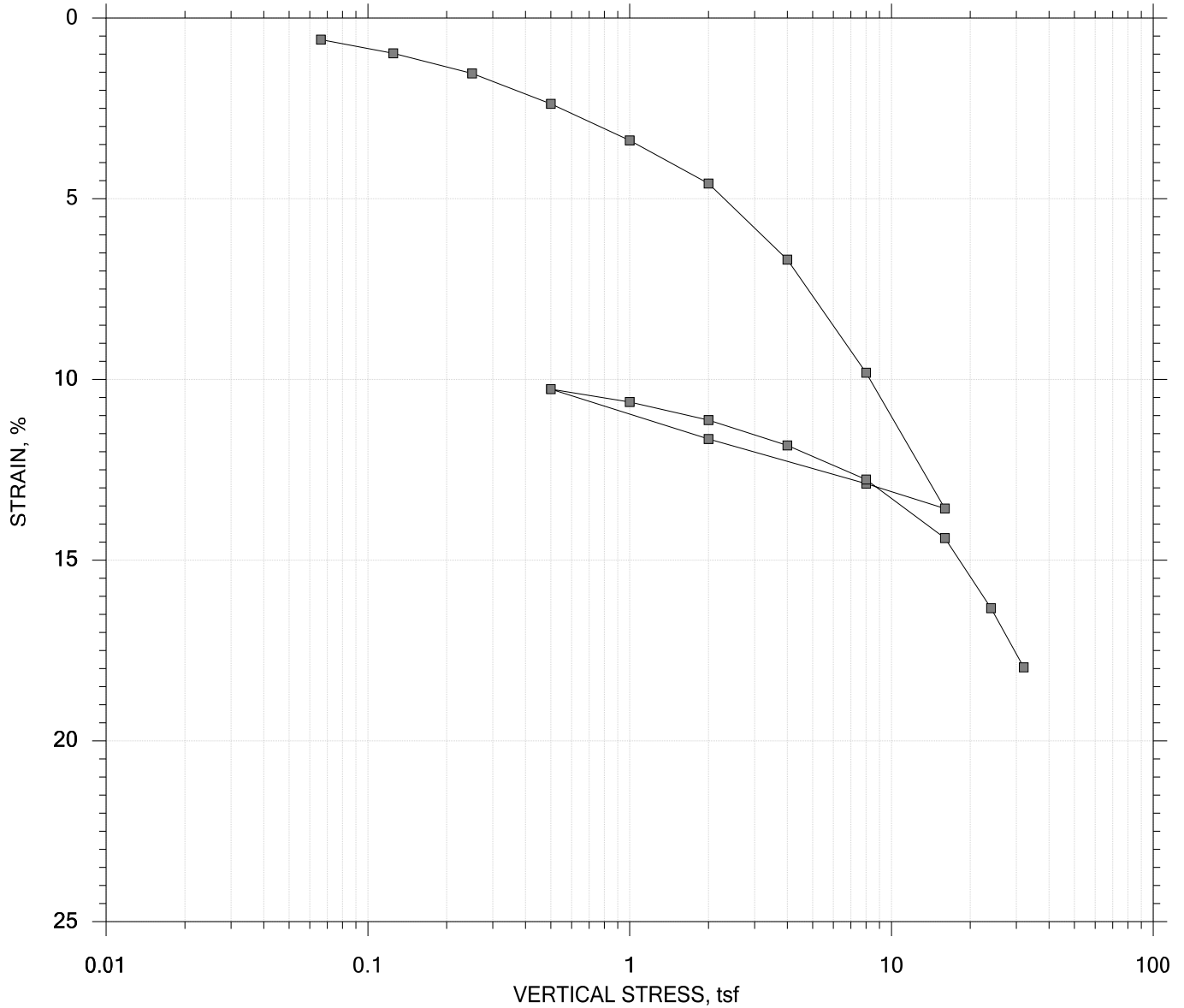
SUMMARY REPORT




	Project: 144 Addison St	Location: East Boston, MA	Project No.: GTX-306889
	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT



				Before Test	After Test	
Current Vertical Effective Stress: ---				Water Content, %	27.91	19.76
Preconsolidation Stress: ---				Dry Unit Weight, pcf	95.989	110.33
Compression Ratio: ---				Saturation, %	98.92	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.77	0.54
LL: 21	PL: 16	PI: 5	GS: 2.72			

	Project: 144 Addison St		Location: East Boston, MA		Project No.: GTX-306889	
	Boring No.: SH-2		Tested By: md		Checked By: njh	
	Sample No.: U-1		Test Date: 08/26/17		Test No.: IP-1	
	Depth: 32-34 ft		Sample Type: intact		Elevation: ---	
	Description: Wet, gray silty clay with sand					
	Remarks: System R& D, Swell Pressure = 0.0664 tsf					
	Displacement at End of Increment					

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: 144 Addison St
 Boring No.: SH-2
 Sample No.: U-1
 Test No.: IP-1

Location: East Boston, MA
 Tested By: md
 Test Date: 08/26/17
 Sample Type: intact

Project No.: GTX-306889
 Checked By: njh
 Depth: 32-34 ft
 Elevation: ---

Soil Description: Wet, gray silty clay with sand
 Remarks: System R& D, Swell Pressure = 0.0664 tsf

Estimated Specific Gravity: 2.72
 Initial Void Ratio: 0.766
 Final Void Ratio: 0.537

Liquid Limit: 21
 Plastic Limit: 16
 Plasticity Index: 5

Specimen Diameter: 2.50 in
 Initial Height: 1.00 in
 Final Height: 0.87 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	C-1892	RING		D-1159
Wt. Container + Wet Soil, gm	153.02	269.51	259.43	157.03
Wt. Container + Dry Soil, gm	123.24	234.99	234.99	132.62
Wt. Container, gm	8.4900	111.31	111.31	9.0700
Wt. Dry Soil, gm	114.75	123.68	123.68	123.55
Water Content, %	25.95	27.91	19.76	19.76
Void Ratio	---	0.766	0.537	---
Degree of Saturation, %	---	98.92	100.00	---
Dry Unit Weight, pcf	---	95.989	110.33	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: 144 Addison St
 Boring No.: SH-2
 Sample No.: U-1
 Test No.: IP-1

Location: East Boston, MA
 Tested By: md
 Test Date: 08/26/17
 Sample Type: intact

Project No.: GTX-306889
 Checked By: njh
 Depth: 32-34 ft
 Elevation: ---

Soil Description: Wet, gray silty clay with sand
 Remarks: System R & D, Swell Pressure = 0.0664 tsf

Displacement at End of Increment

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Sq.Rt T90 min	Cv ft ² /sec	Mv 1/tsf	k ft/day
1	0.0661	0.005973	0.756	0.597	3.504	6.96e-006	9.04e-002	1.70e-003
2	0.125	0.009743	0.749	0.974	2.502	9.65e-006	6.40e-002	1.67e-003
3	0.250	0.01532	0.739	1.53	1.808	1.32e-005	4.47e-002	1.59e-003
4	0.500	0.02375	0.724	2.37	1.049	2.25e-005	3.37e-002	2.04e-003
5	1.00	0.03383	0.706	3.38	0.897	2.58e-005	2.02e-002	1.40e-003
6	2.00	0.04578	0.685	4.58	2.367	9.56e-006	1.19e-002	3.08e-004
7	4.00	0.06683	0.648	6.68	2.166	1.01e-005	1.05e-002	2.86e-004
8	8.00	0.09811	0.593	9.81	2.496	8.27e-006	7.82e-003	1.75e-004
9	16.0	0.1357	0.526	13.6	2.561	7.47e-006	4.70e-003	9.47e-005
10	8.00	0.1288	0.539	12.9	0.697	2.65e-005	8.63e-004	6.17e-005
11	2.00	0.1165	0.560	11.6	0.886	2.13e-005	2.06e-003	1.18e-004
12	0.500	0.1027	0.585	10.3	5.422	3.59e-006	9.20e-003	8.91e-005
13	1.00	0.1062	0.578	10.6	0.875	2.25e-005	7.15e-003	4.34e-004
14	2.00	0.1112	0.570	11.1	3.087	6.31e-006	4.99e-003	8.50e-005
15	4.00	0.1182	0.557	11.8	0.948	2.03e-005	3.50e-003	1.92e-004
16	8.00	0.1277	0.541	12.8	0.988	1.91e-005	2.36e-003	1.22e-004
17	16.0	0.1439	0.512	14.4	0.818	2.24e-005	2.03e-003	1.22e-004
18	24.0	0.1633	0.478	16.3	3.791	4.64e-006	2.42e-003	3.03e-005
19	32.0	0.1796	0.449	18.0	3.332	5.06e-006	2.04e-003	2.79e-005

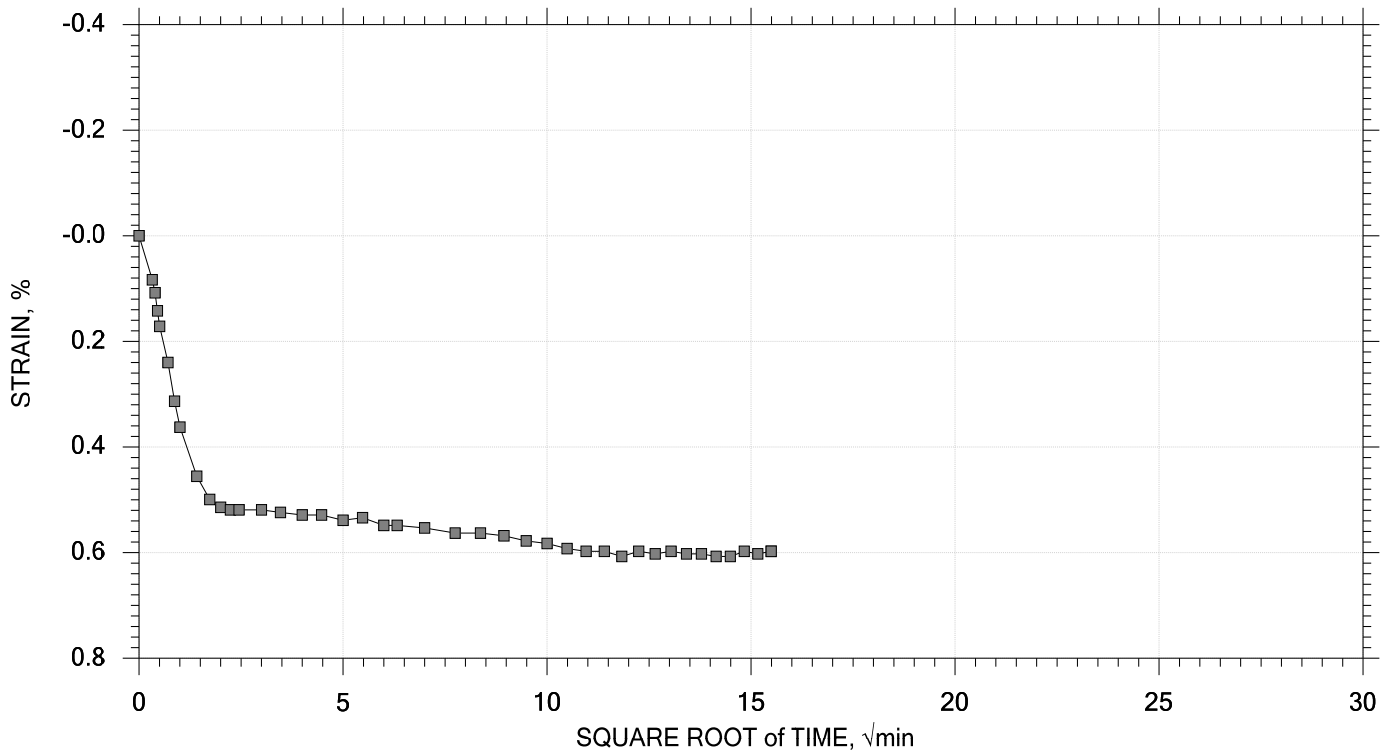
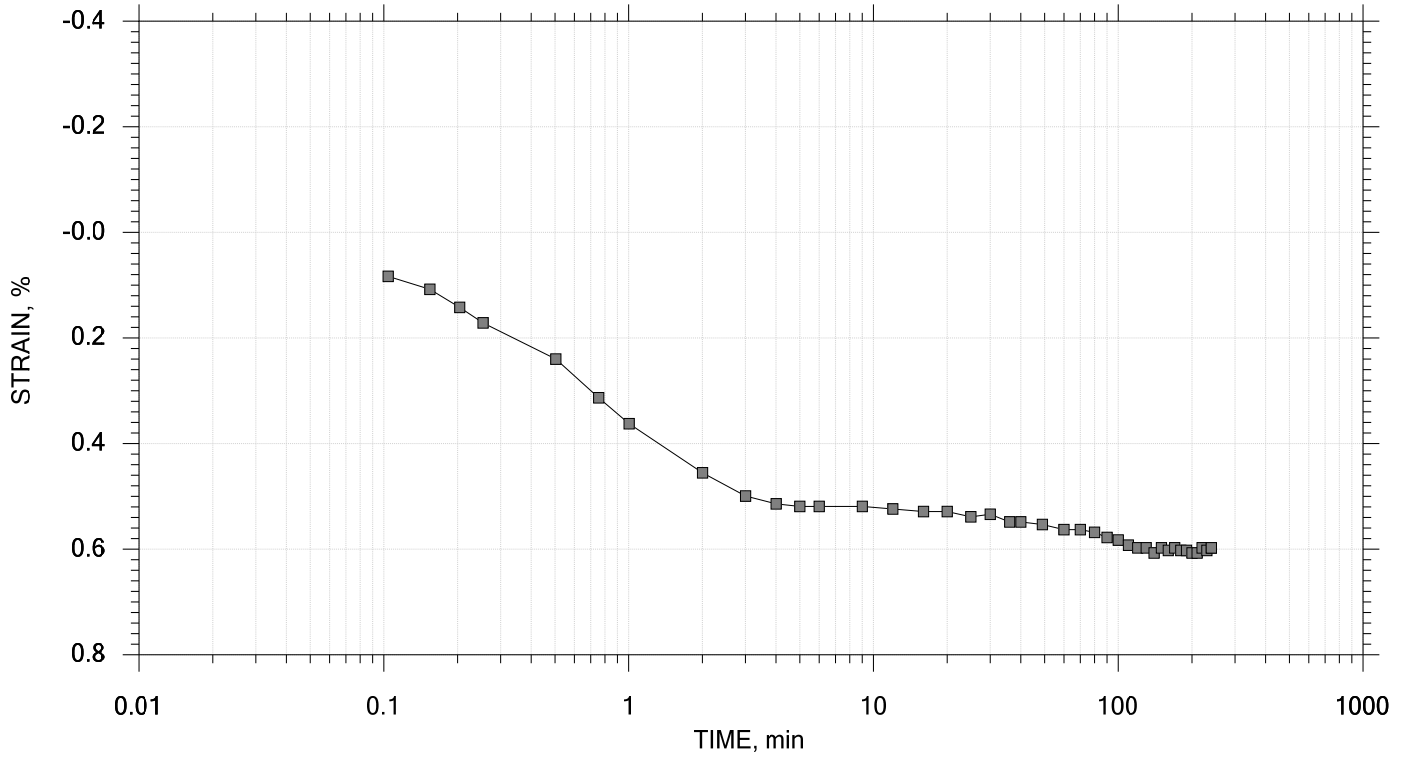
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv ft ² /sec	Mv 1/tsf	k ft/day	Ca %
1	0.0661	0.005973	0.756	0.597	0.000	0.00e+000	9.04e-002	0.00e+000	0.00e+000
2	0.125	0.009743	0.749	0.974	0.000	0.00e+000	6.40e-002	0.00e+000	0.00e+000
3	0.250	0.01532	0.739	1.53	0.373	1.49e-005	4.47e-002	1.80e-003	0.00e+000
4	0.500	0.02375	0.724	2.37	0.222	2.47e-005	3.37e-002	2.24e-003	0.00e+000
5	1.00	0.03383	0.706	3.38	0.139	3.86e-005	2.02e-002	2.10e-003	0.00e+000
6	2.00	0.04578	0.685	4.58	0.121	4.33e-005	1.19e-002	1.40e-003	0.00e+000
7	4.00	0.06683	0.648	6.68	0.167	3.04e-005	1.05e-002	8.63e-004	0.00e+000
8	8.00	0.09811	0.593	9.81	0.137	3.51e-005	7.82e-003	7.40e-004	0.00e+000
9	16.0	0.1357	0.526	13.6	0.206	2.16e-005	4.70e-003	2.74e-004	0.00e+000
10	8.00	0.1288	0.539	12.9	0.000	0.00e+000	8.63e-004	0.00e+000	0.00e+000
11	2.00	0.1165	0.560	11.6	0.000	0.00e+000	2.06e-003	0.00e+000	0.00e+000
12	0.500	0.1027	0.585	10.3	0.000	0.00e+000	9.20e-003	0.00e+000	0.00e+000
13	1.00	0.1062	0.578	10.6	0.000	0.00e+000	7.15e-003	0.00e+000	0.00e+000
14	2.00	0.1112	0.570	11.1	0.000	0.00e+000	4.99e-003	0.00e+000	0.00e+000
15	4.00	0.1182	0.557	11.8	0.130	3.43e-005	3.50e-003	3.24e-004	0.00e+000
16	8.00	0.1277	0.541	12.8	0.135	3.25e-005	2.36e-003	2.07e-004	0.00e+000
17	16.0	0.1439	0.512	14.4	0.001	6.75e-003	2.03e-003	3.69e-002	0.00e+000
18	24.0	0.1633	0.478	16.3	0.000	0.00e+000	2.42e-003	0.00e+000	0.00e+000
19	32.0	0.1796	0.449	18.0	0.000	0.00e+000	2.04e-003	0.00e+000	0.00e+000


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Volume Step 1 of 19

Stress: 0.066104 tsf



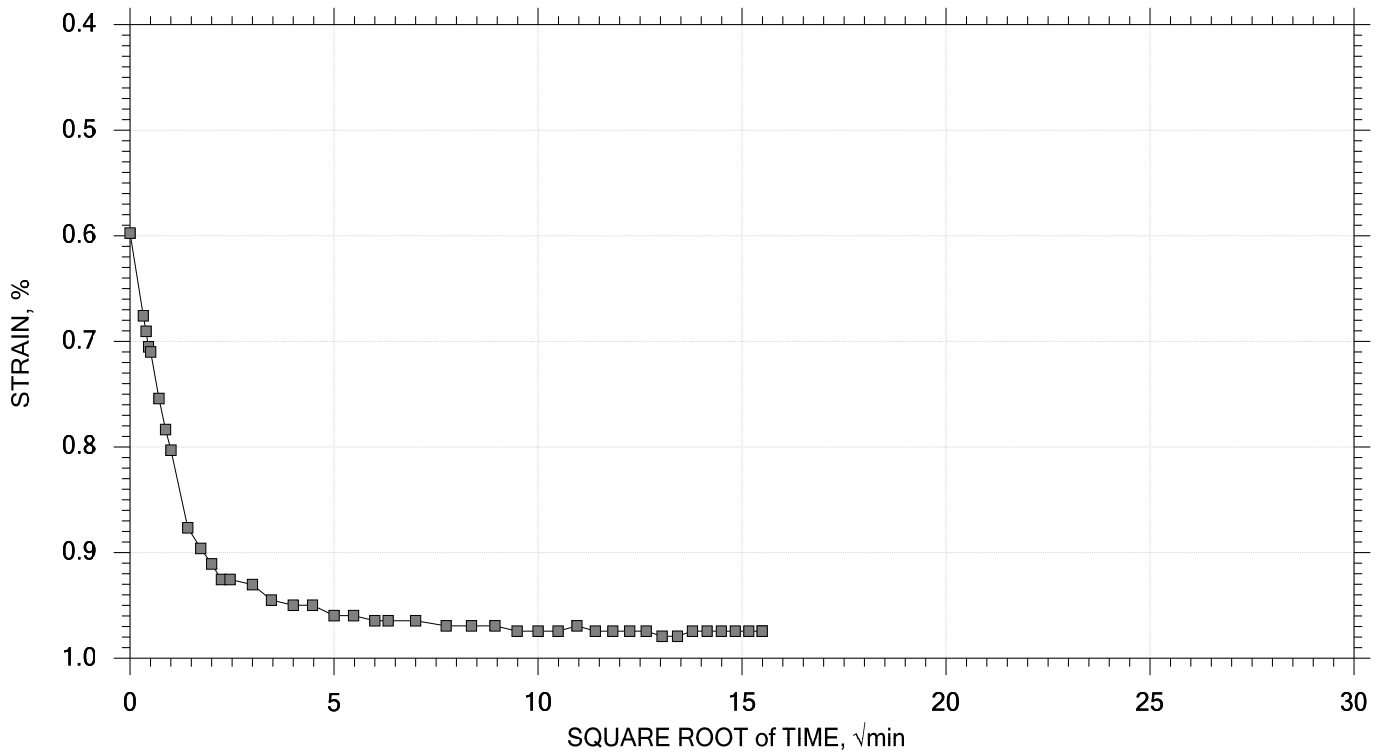
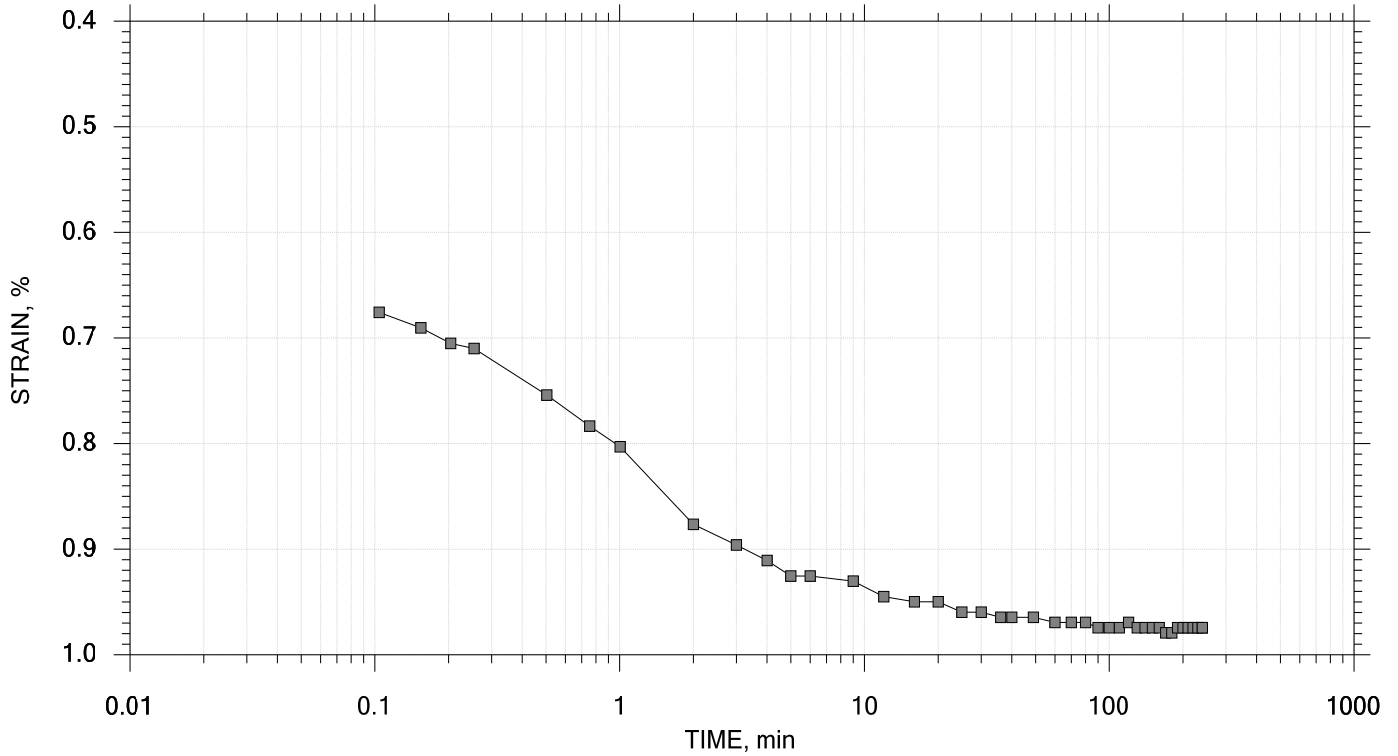
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 2 of 19

Stress: 0.125 tsf



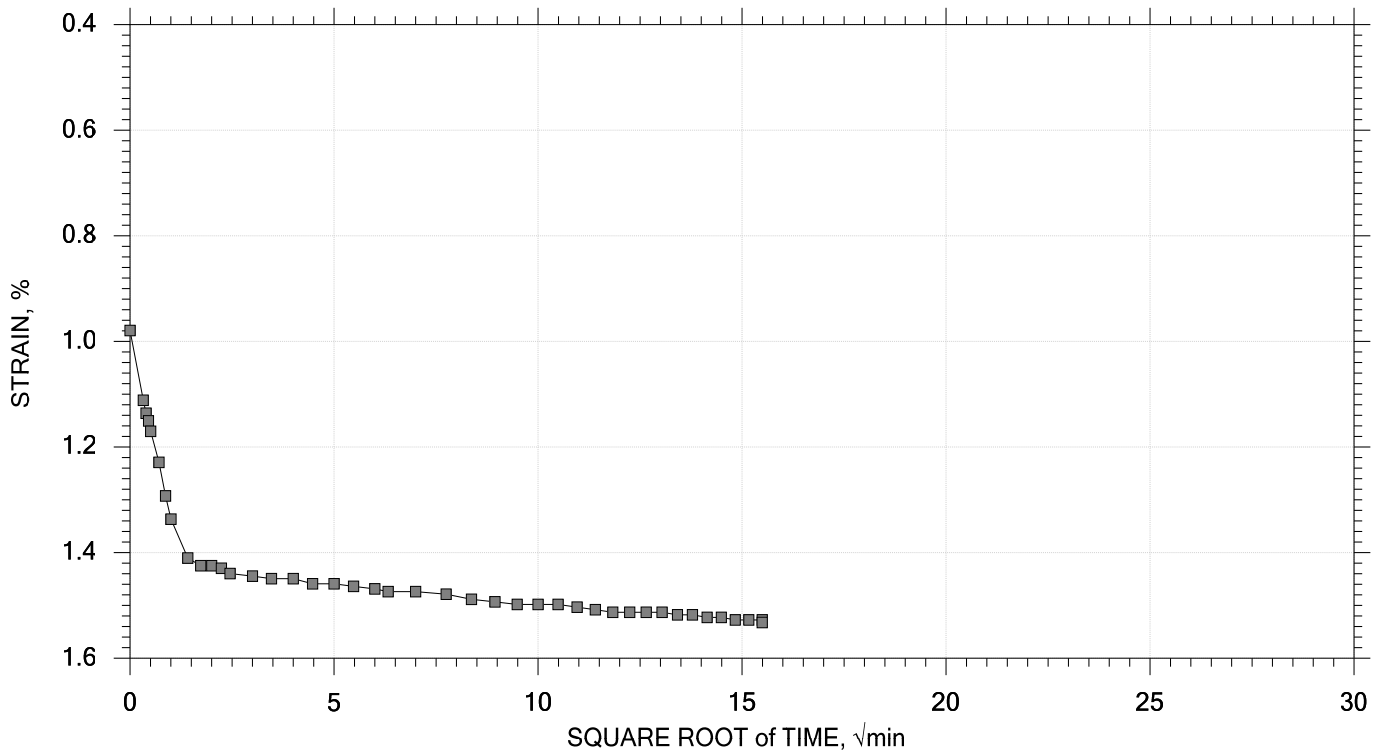
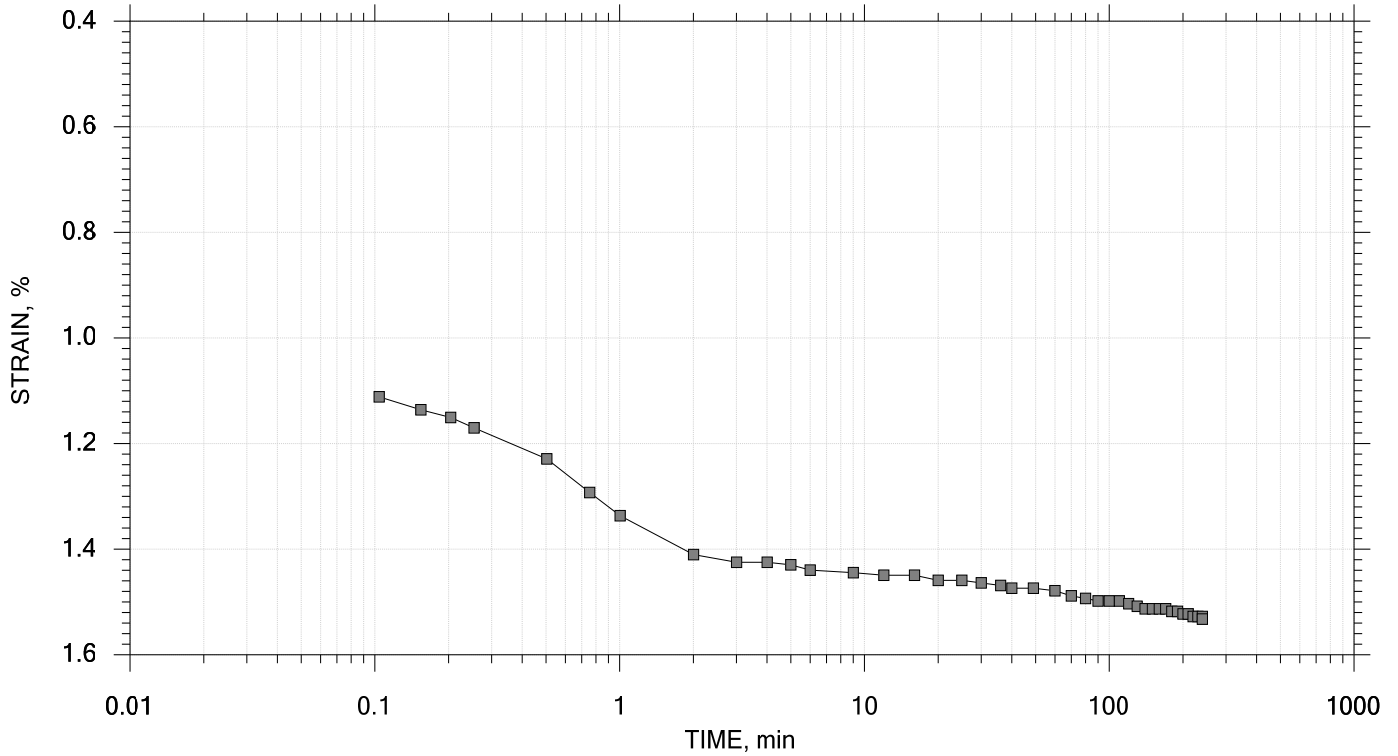
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 3 of 19

Stress: 0.25 tsf



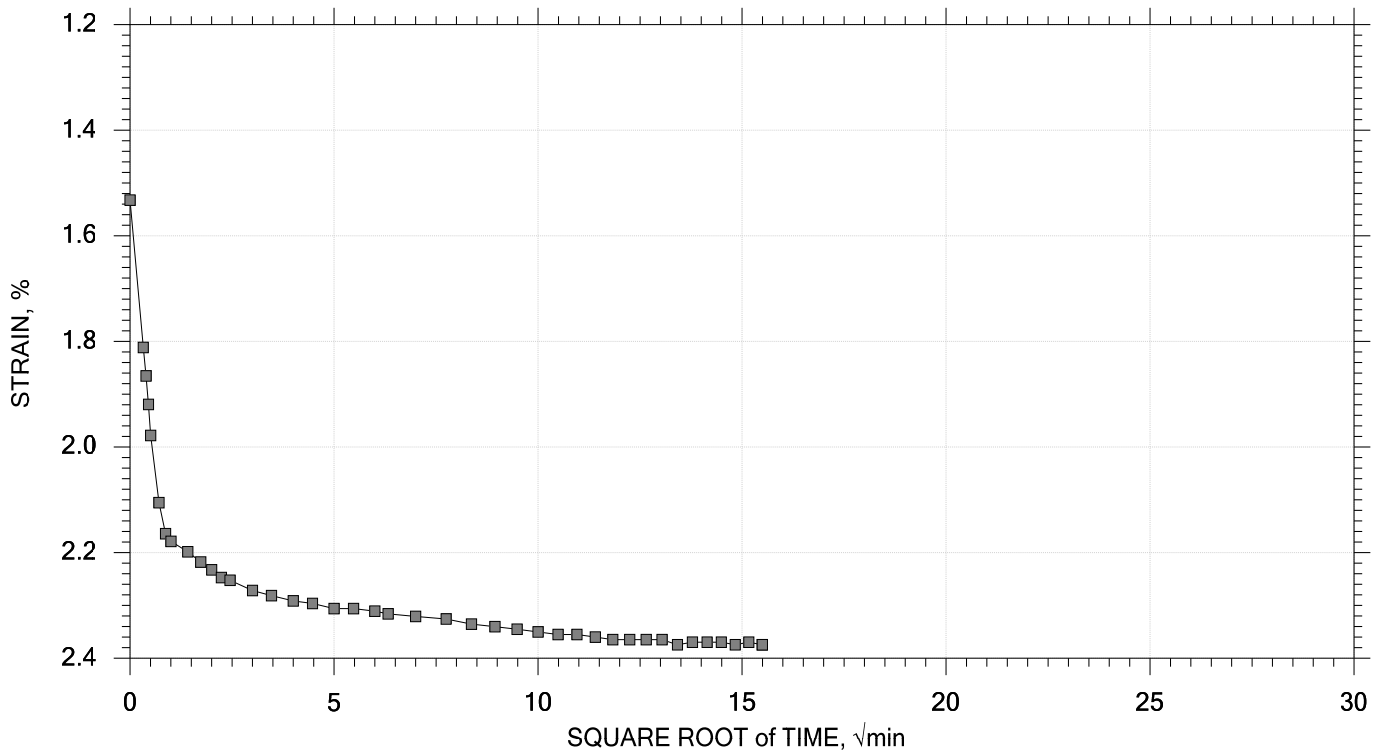
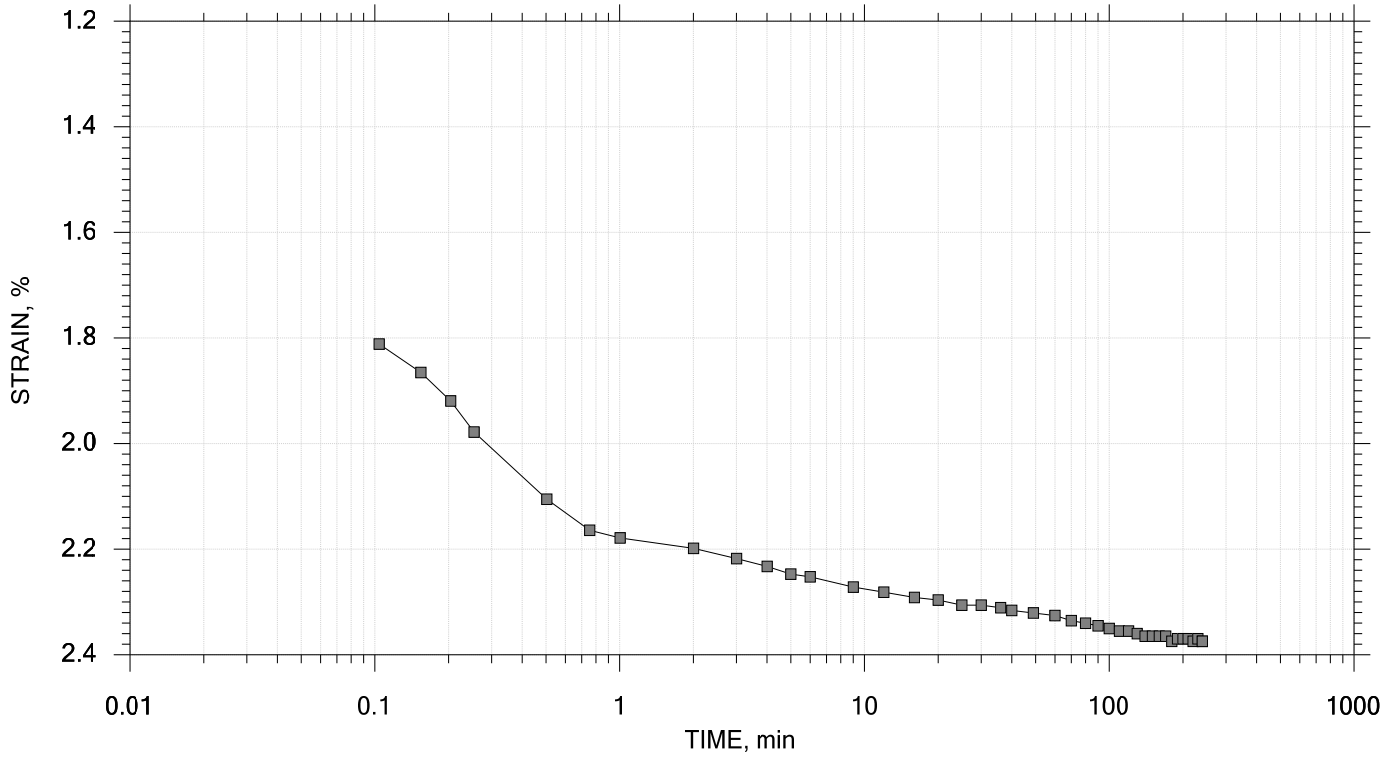
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 4 of 19

Stress: 0.5 tsf



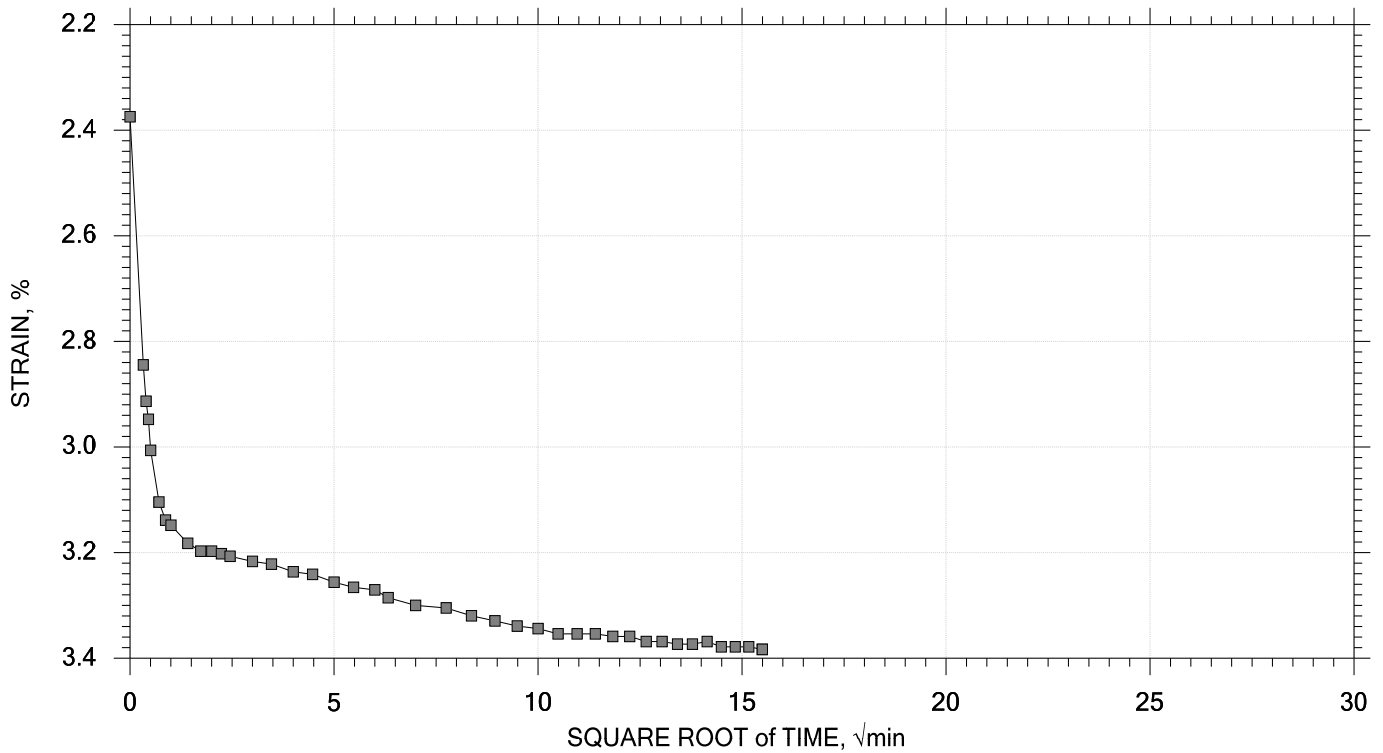
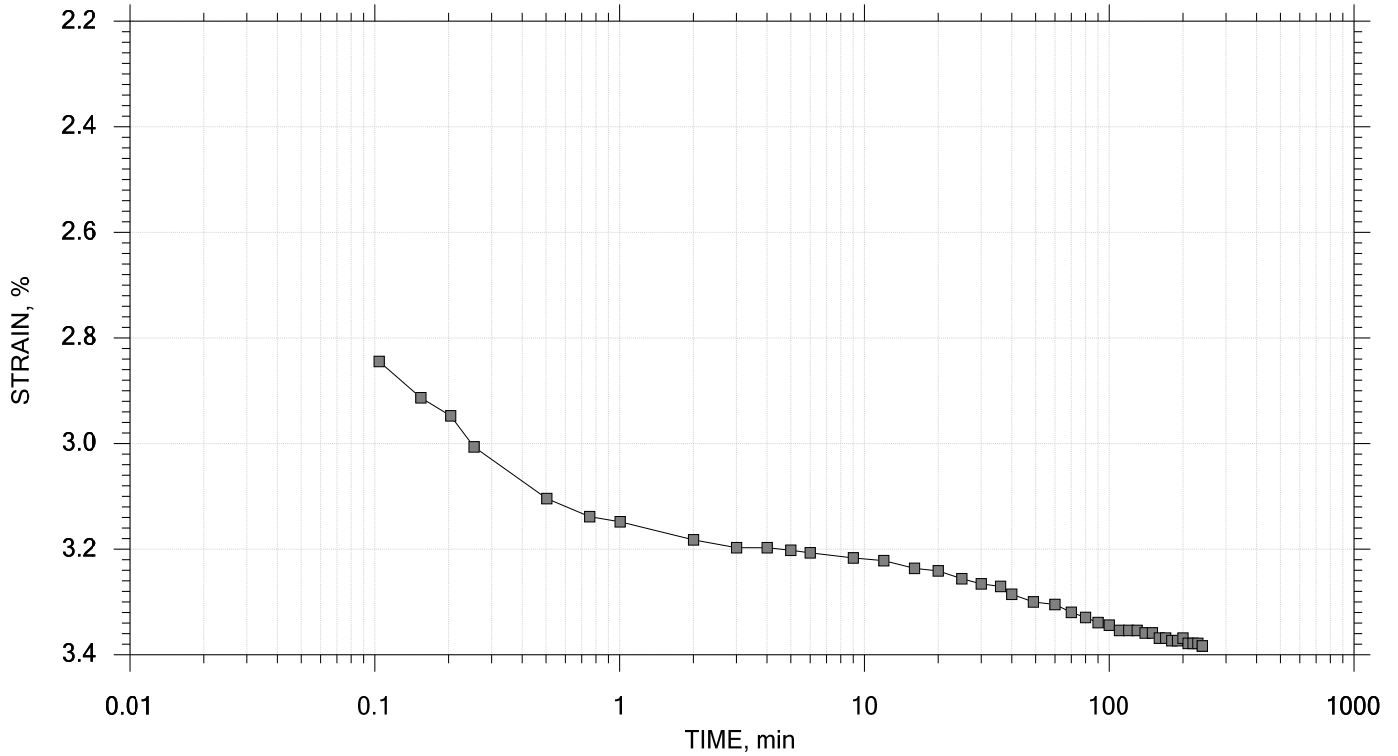
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 5 of 19

Stress: 1 tsf



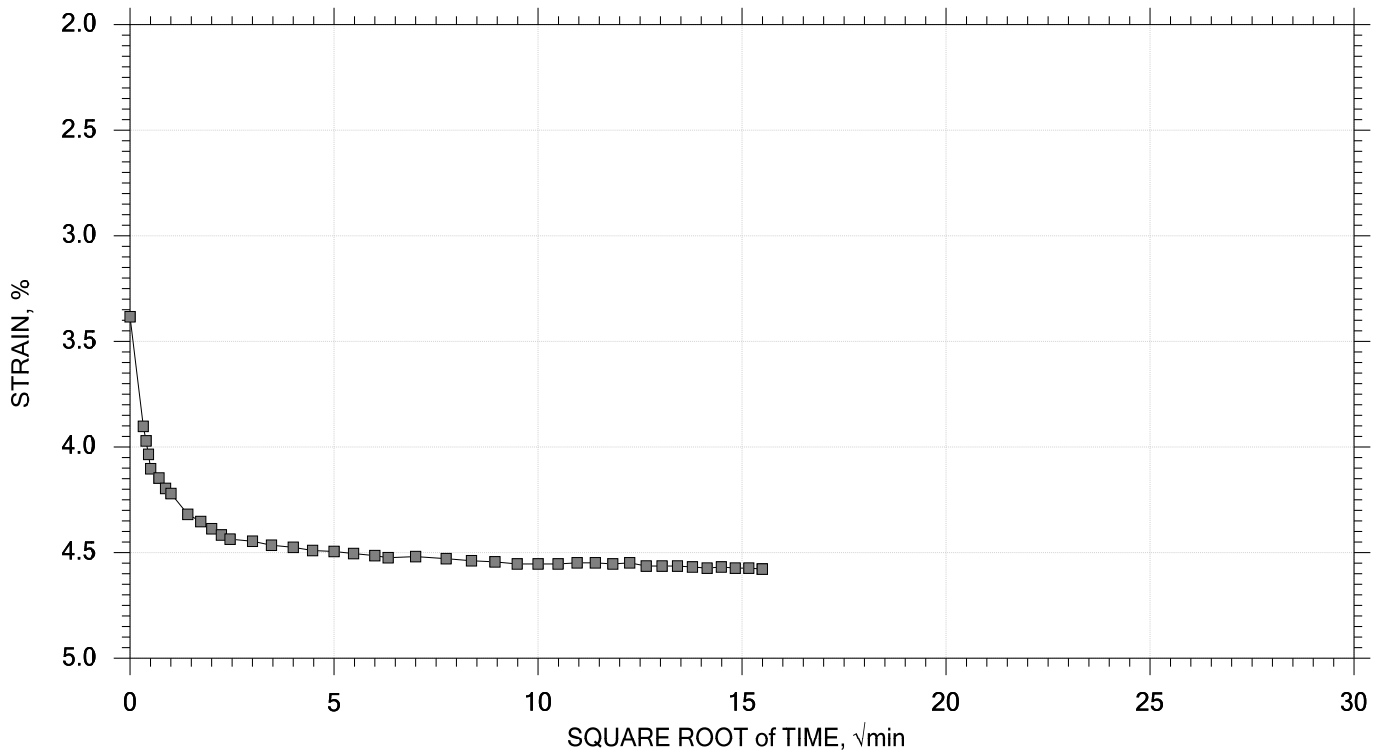
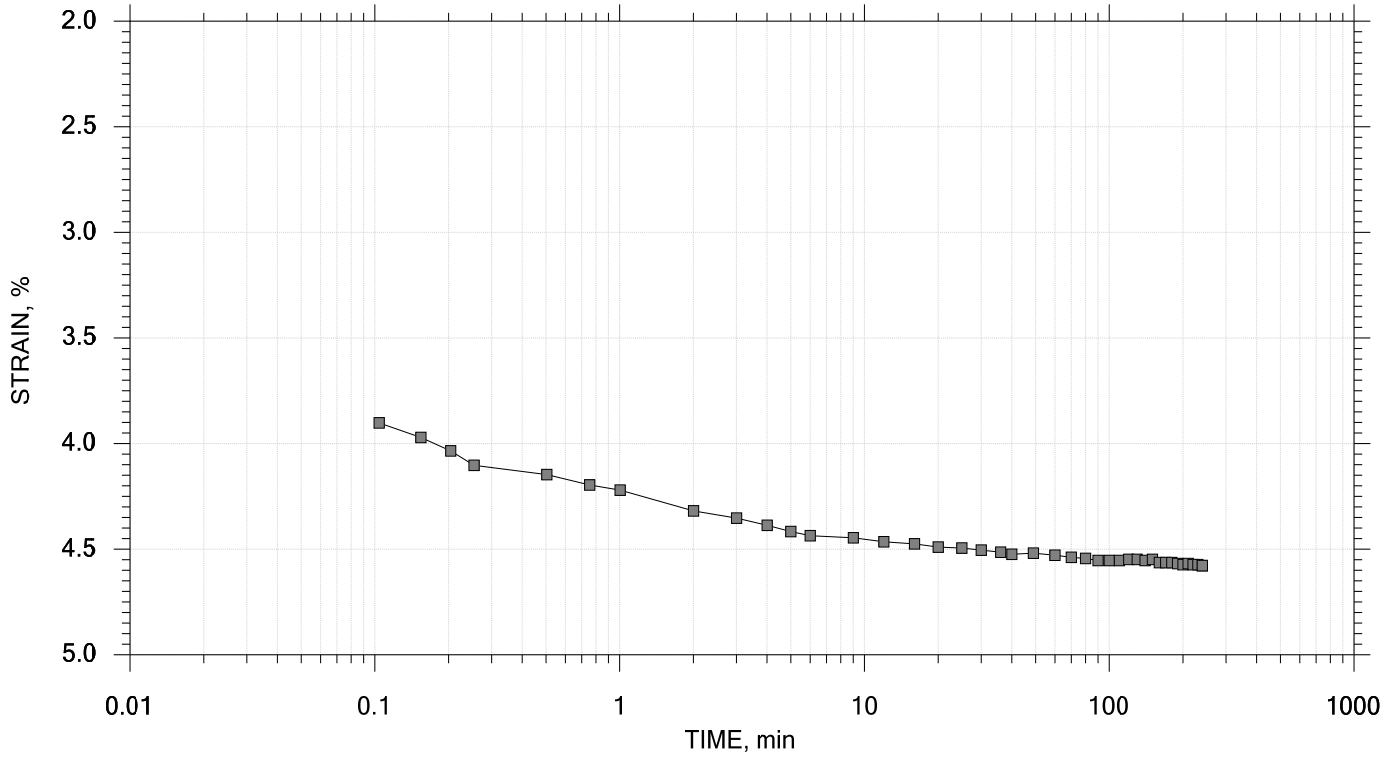
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 6 of 19

Stress: 2 tsf



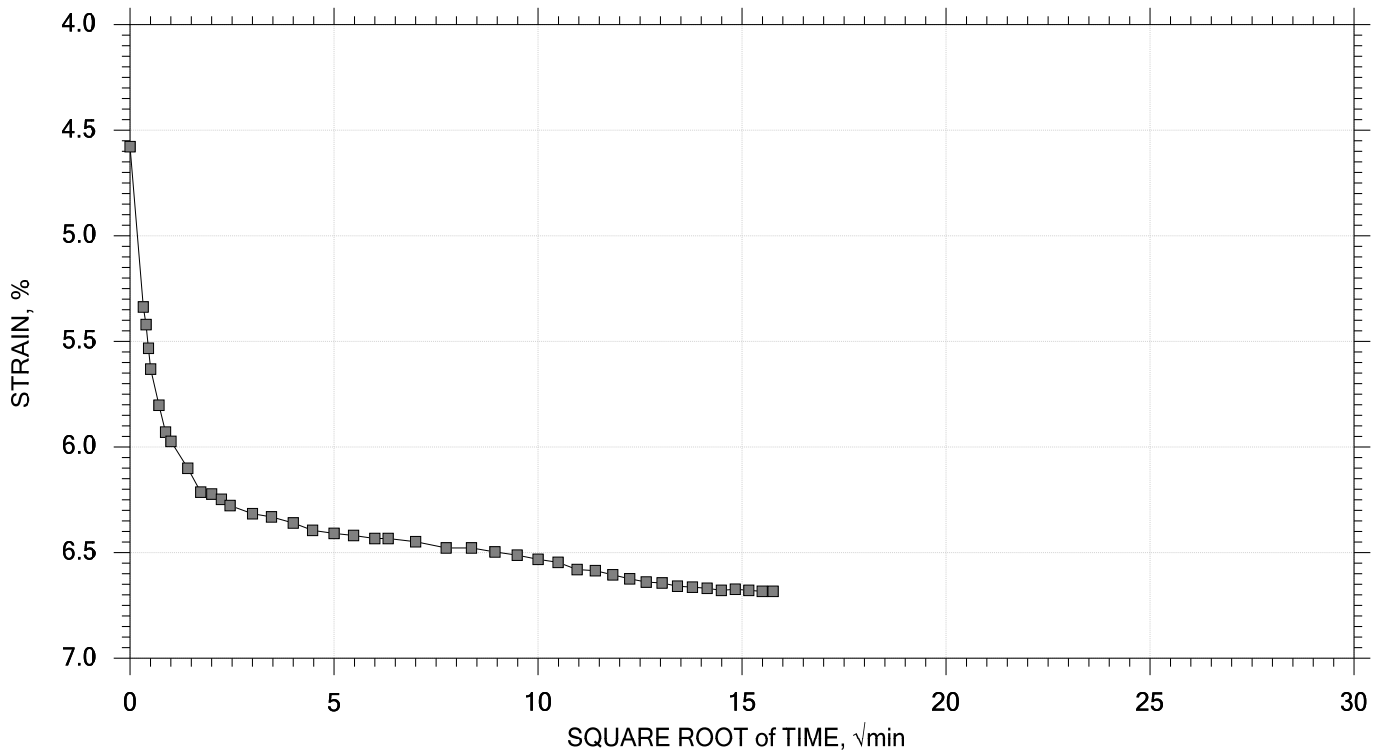
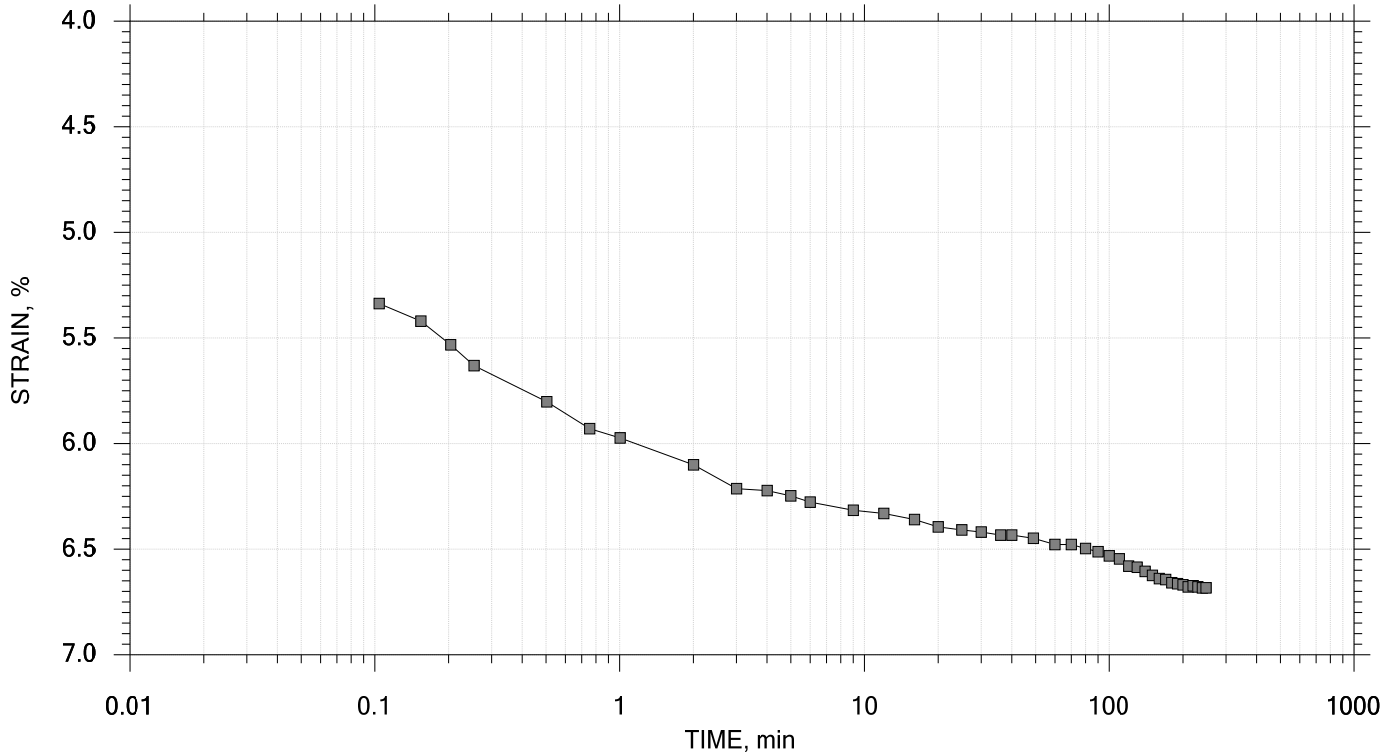
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 7 of 19

Stress: 4 tsf



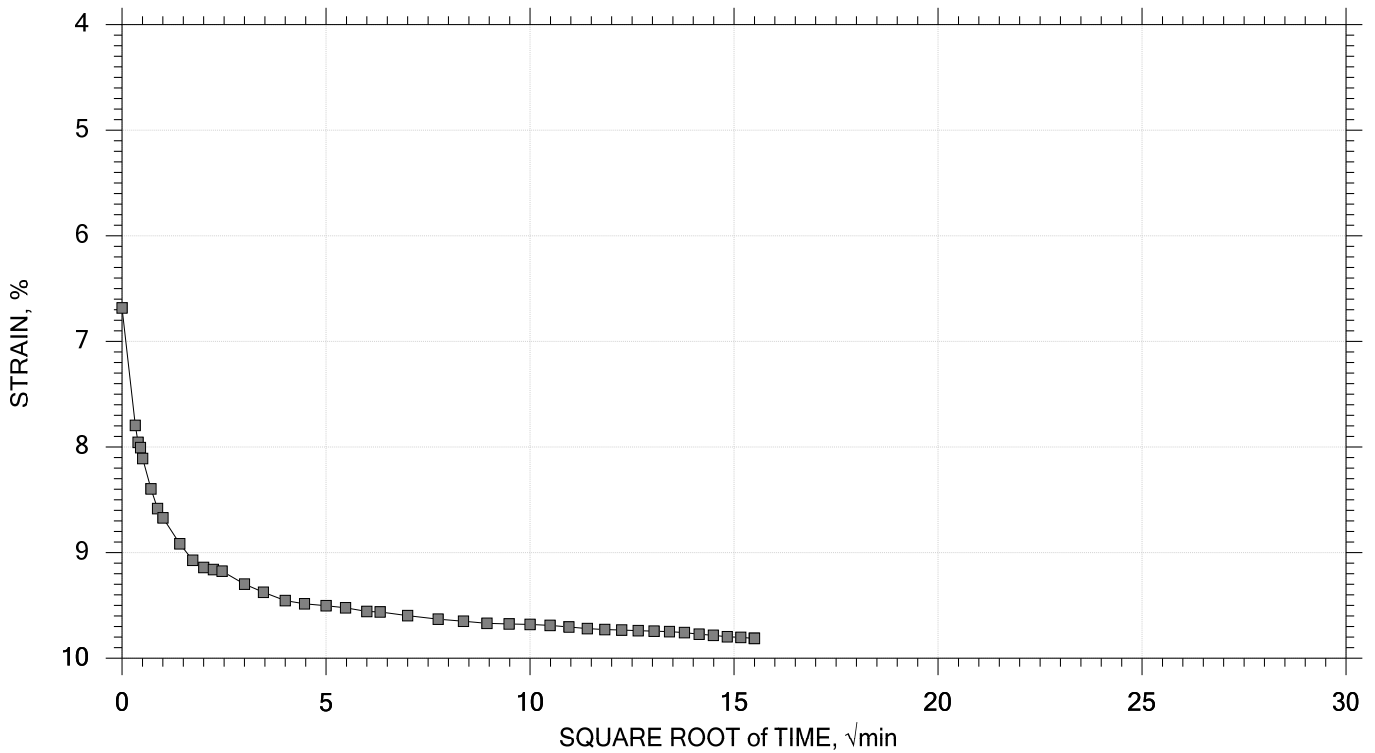
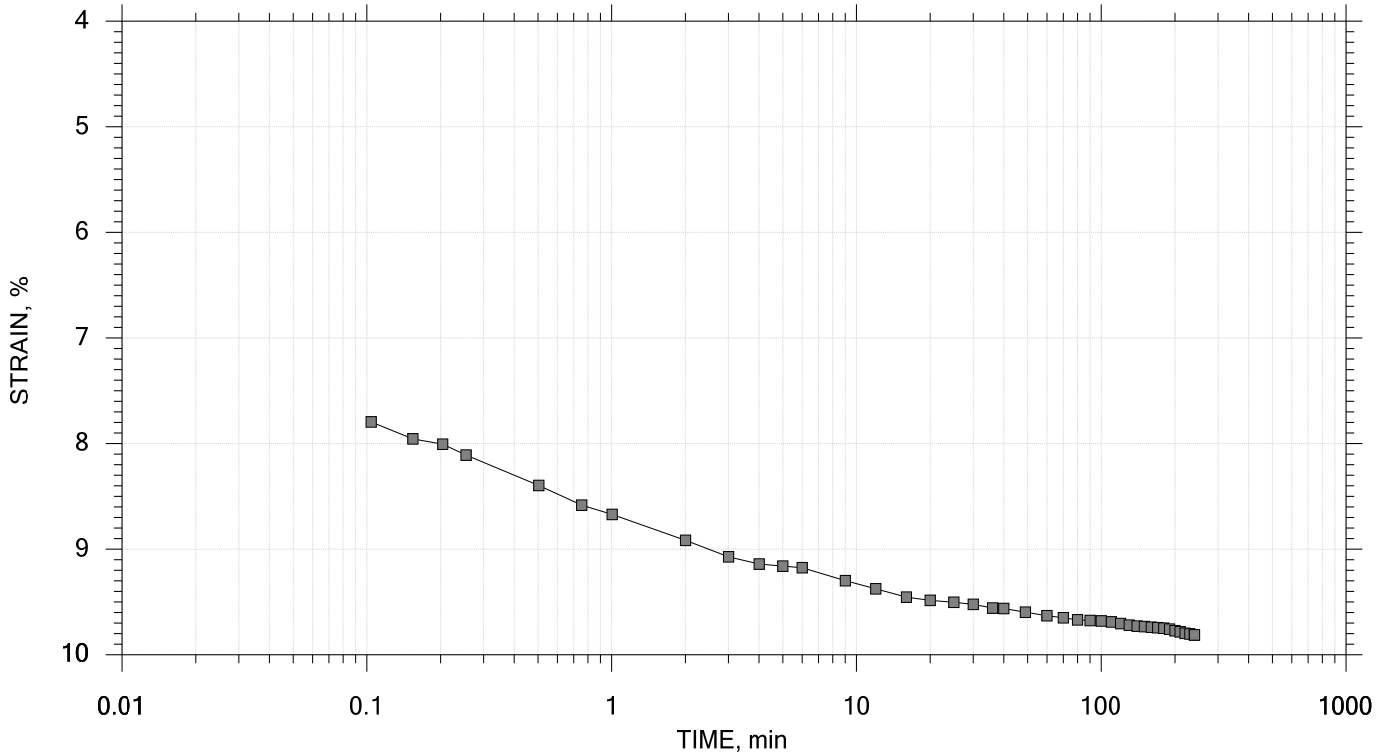
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 8 of 19

Stress: 8 tsf



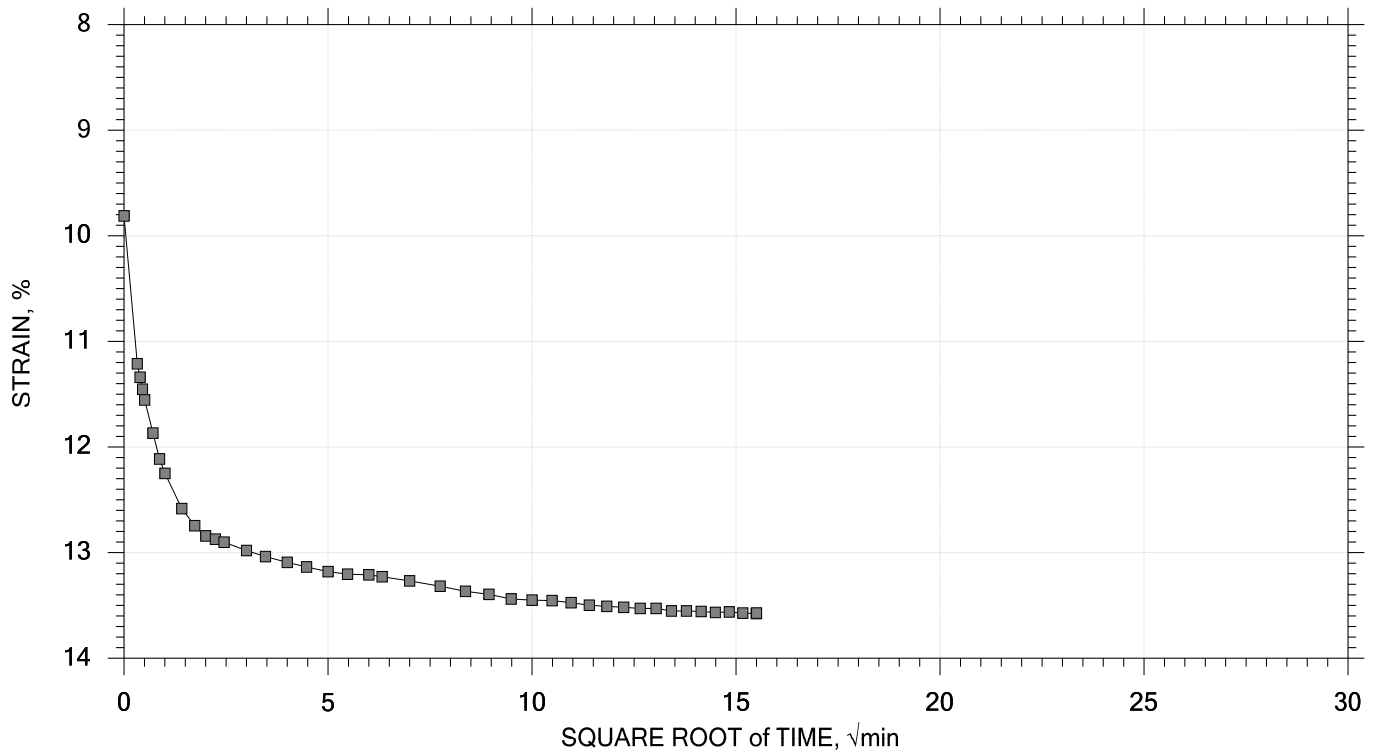
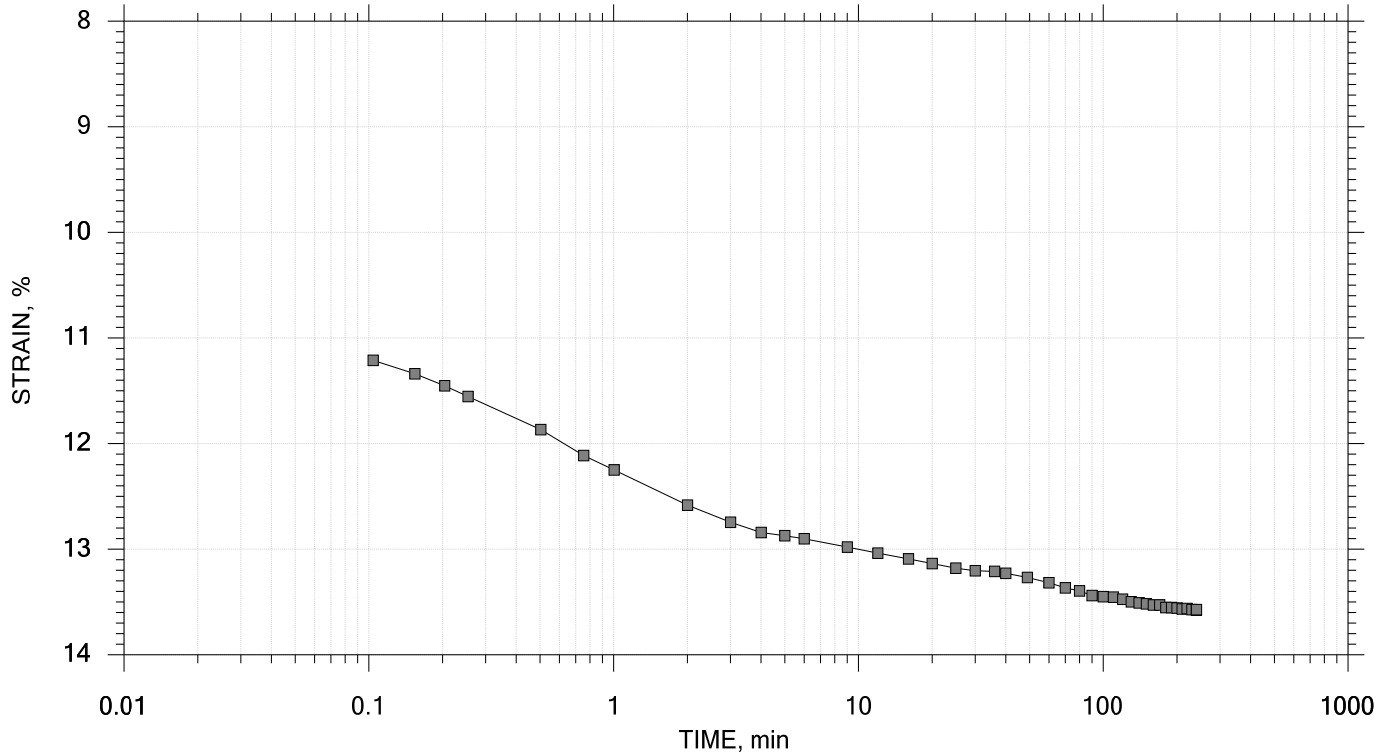
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 9 of 19

Stress: 16 tsf



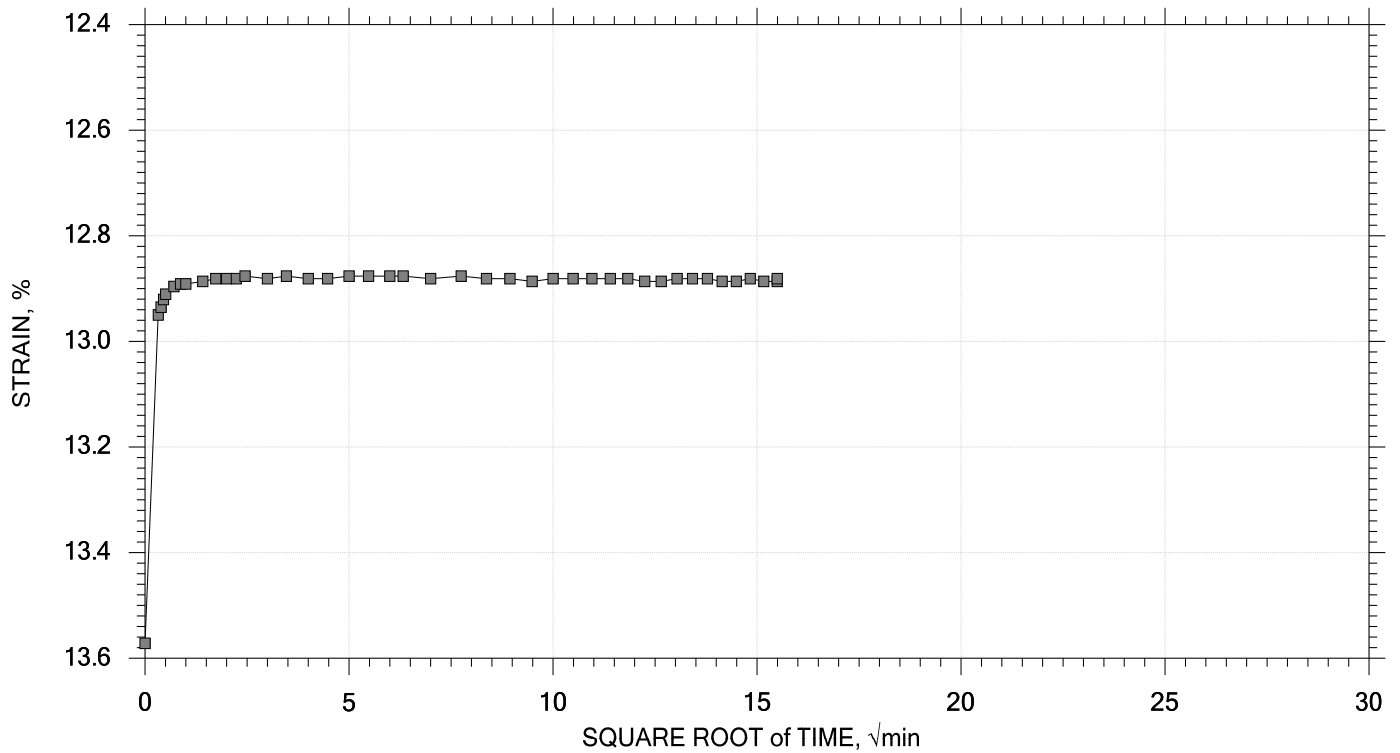
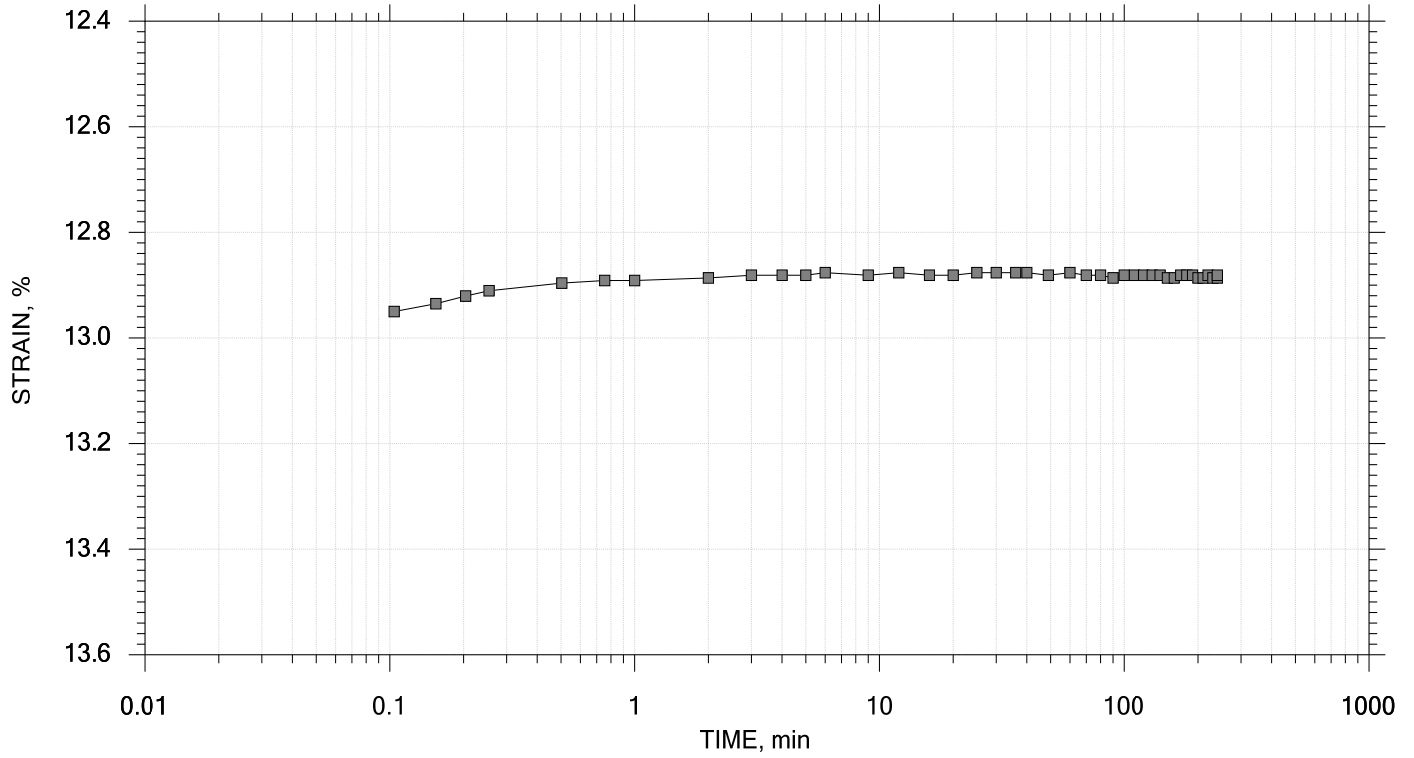
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 10 of 19

Stress: 8 tsf



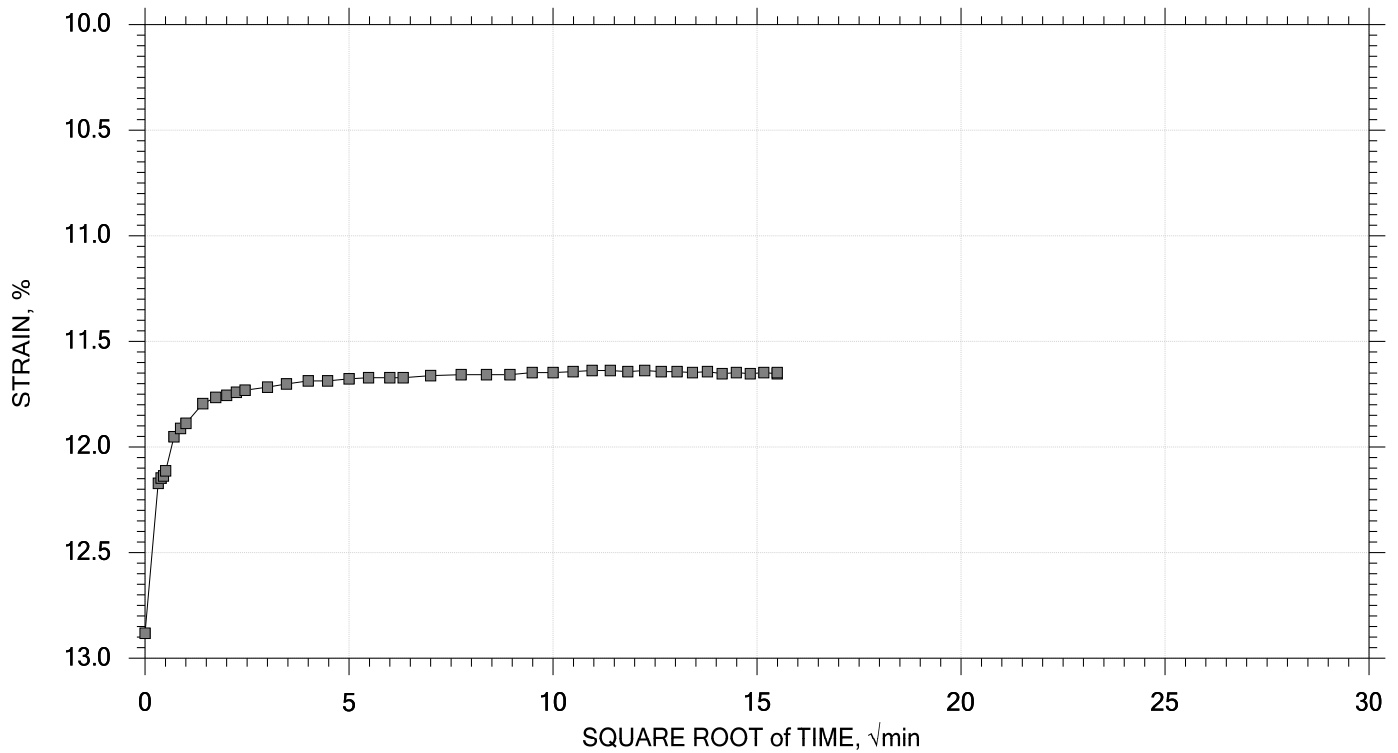
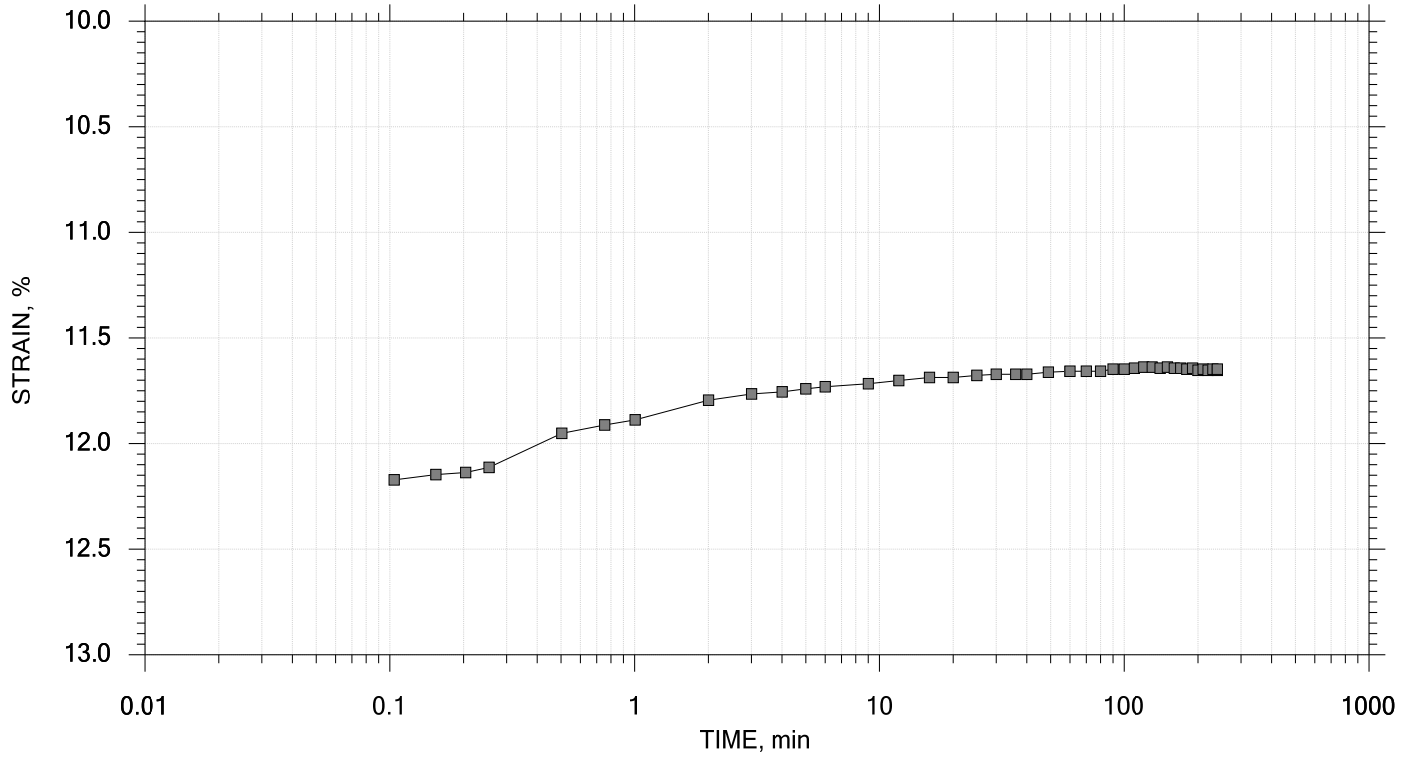
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 11 of 19

Stress: 2 tsf



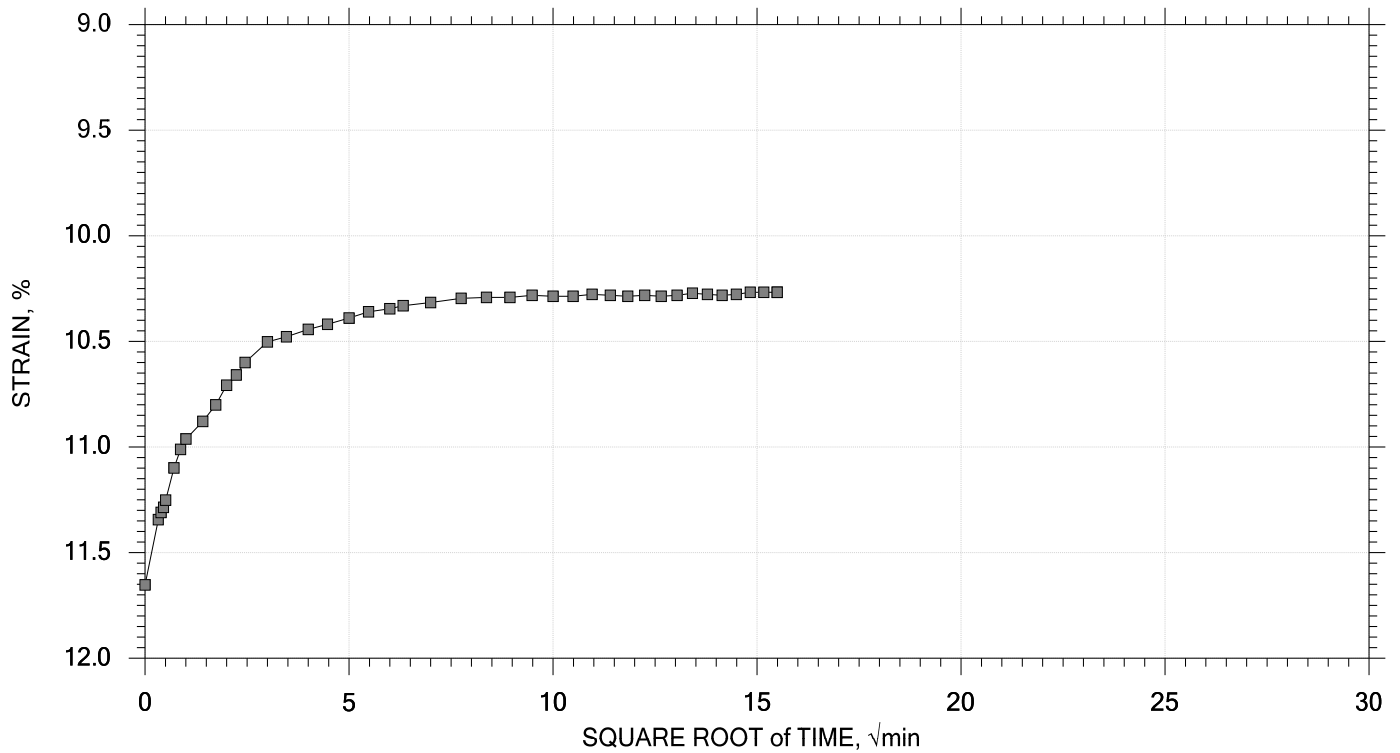
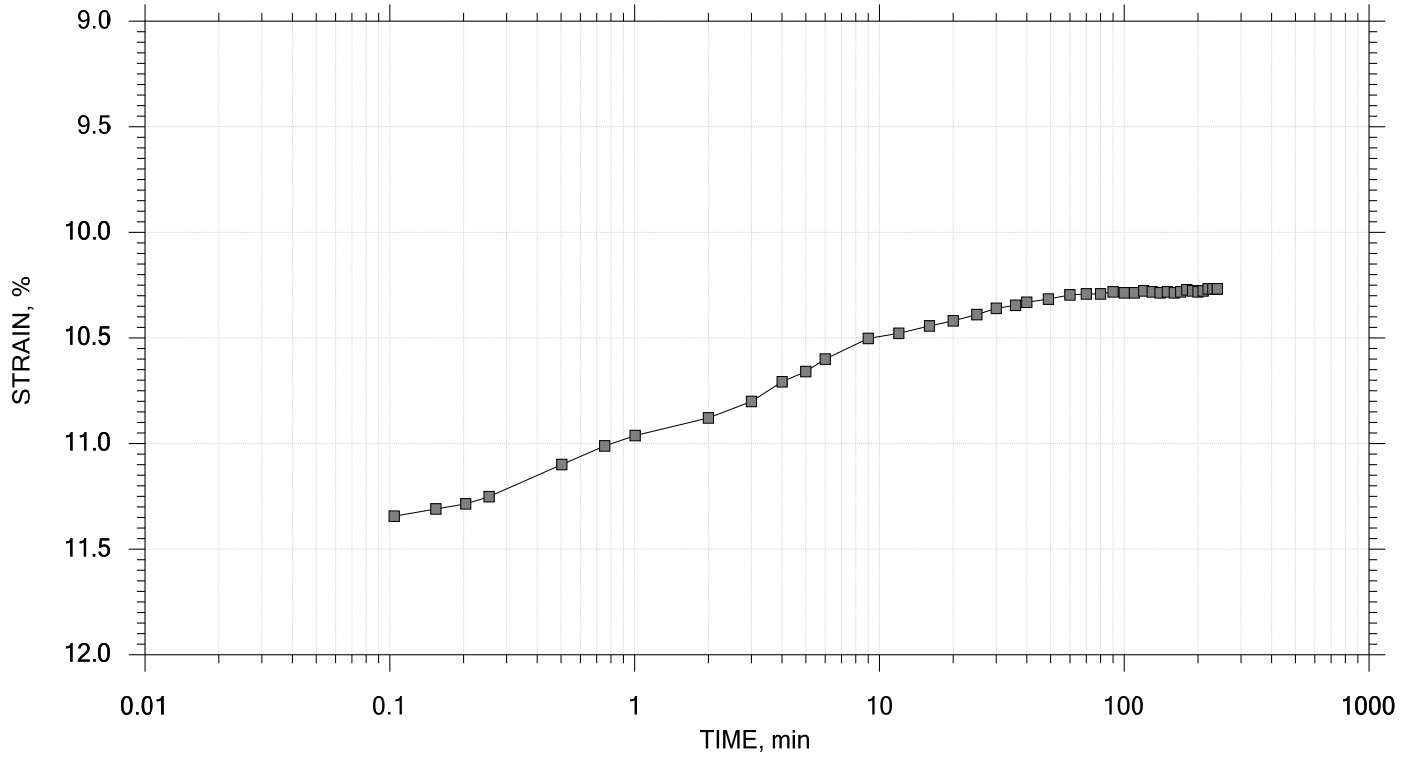
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 12 of 19

Stress: 0.5 tsf



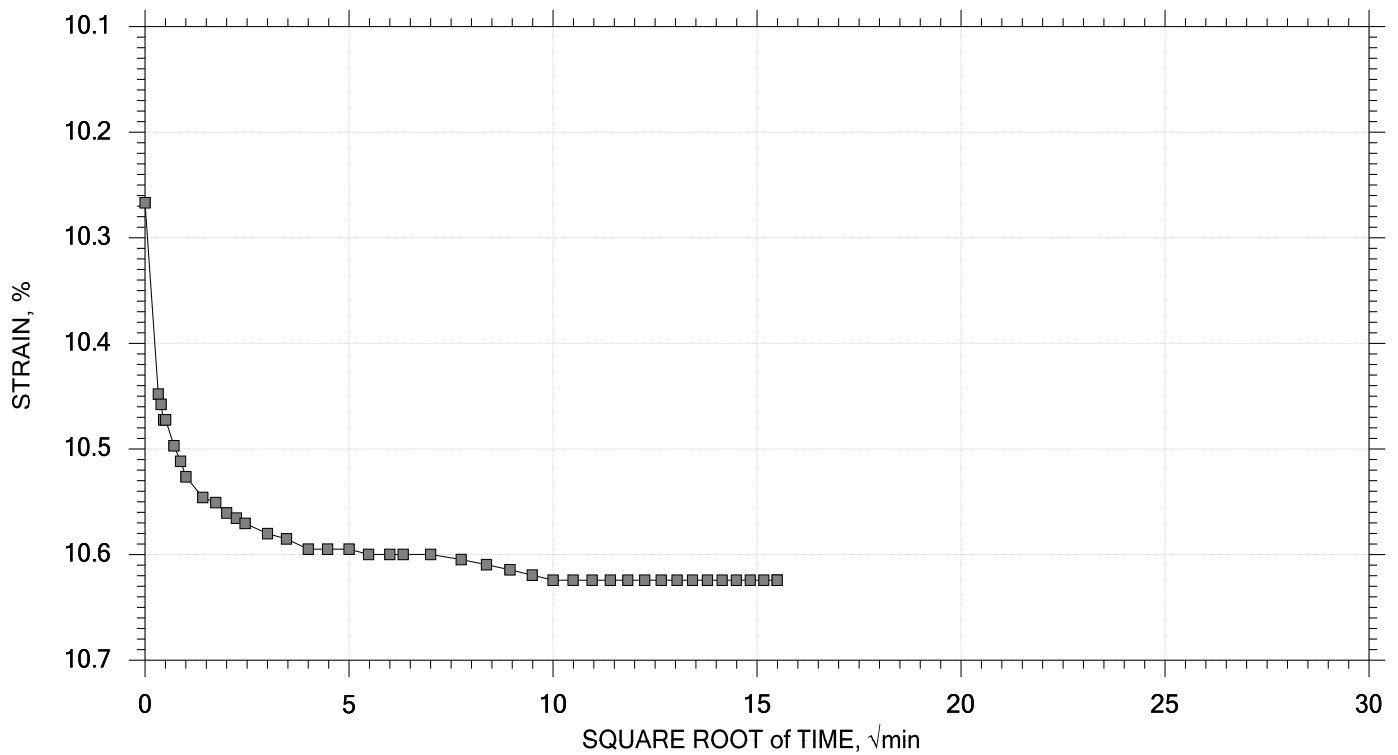
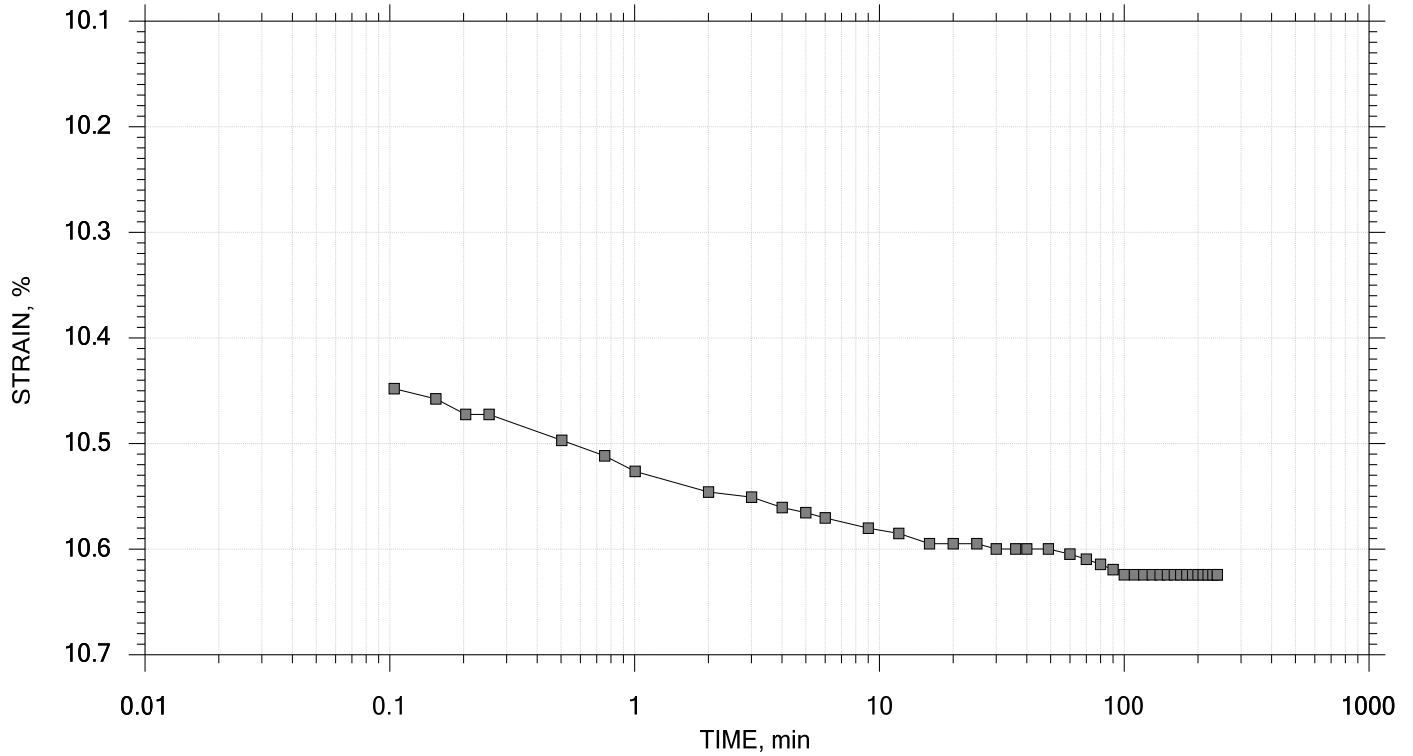
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 13 of 19

Stress: 1 tsf



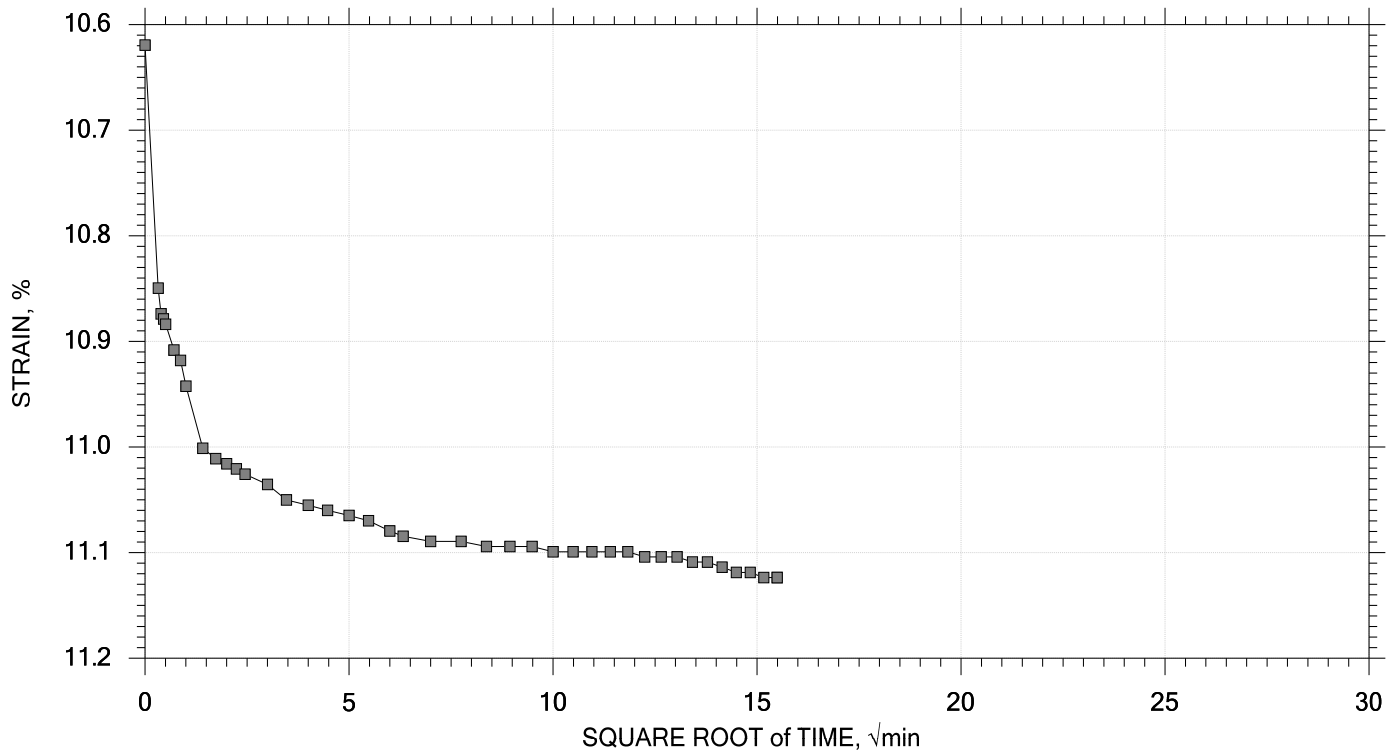
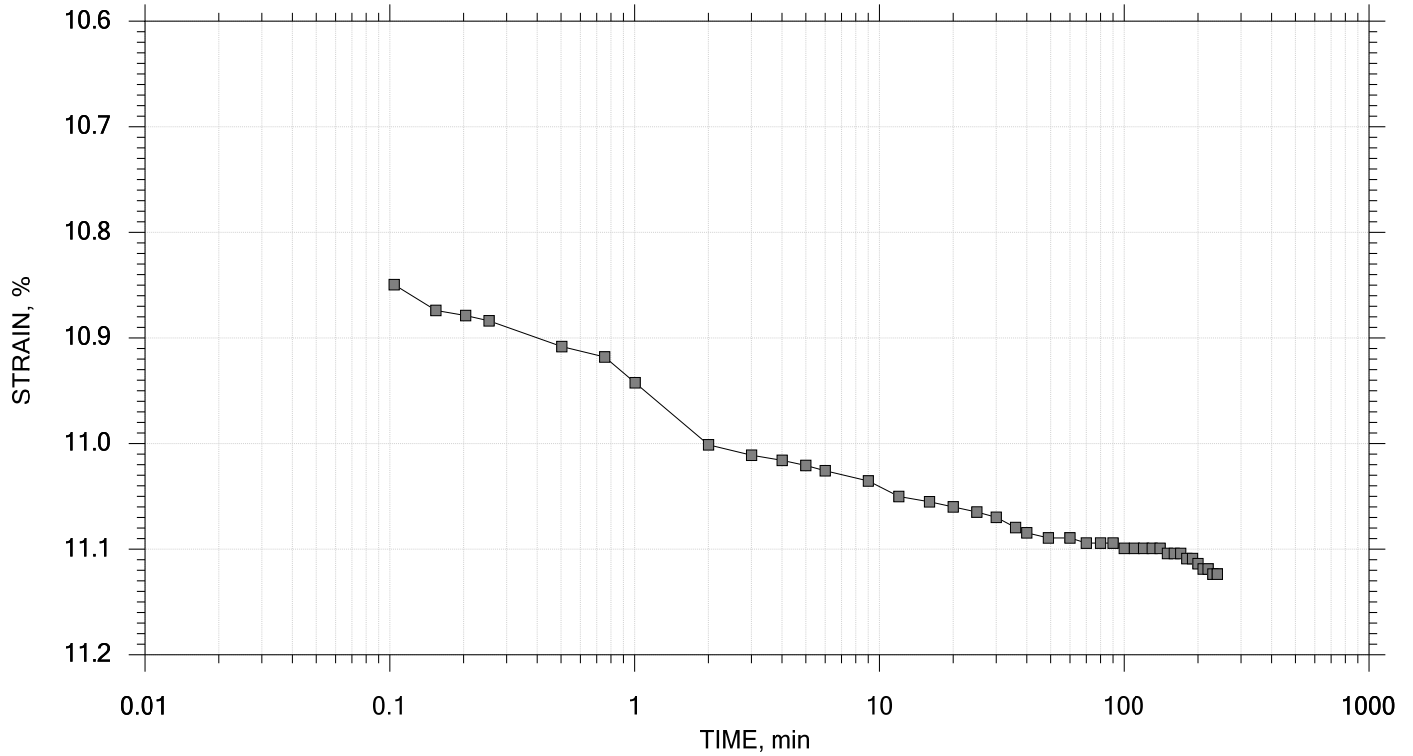
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 14 of 19

Stress: 2 tsf



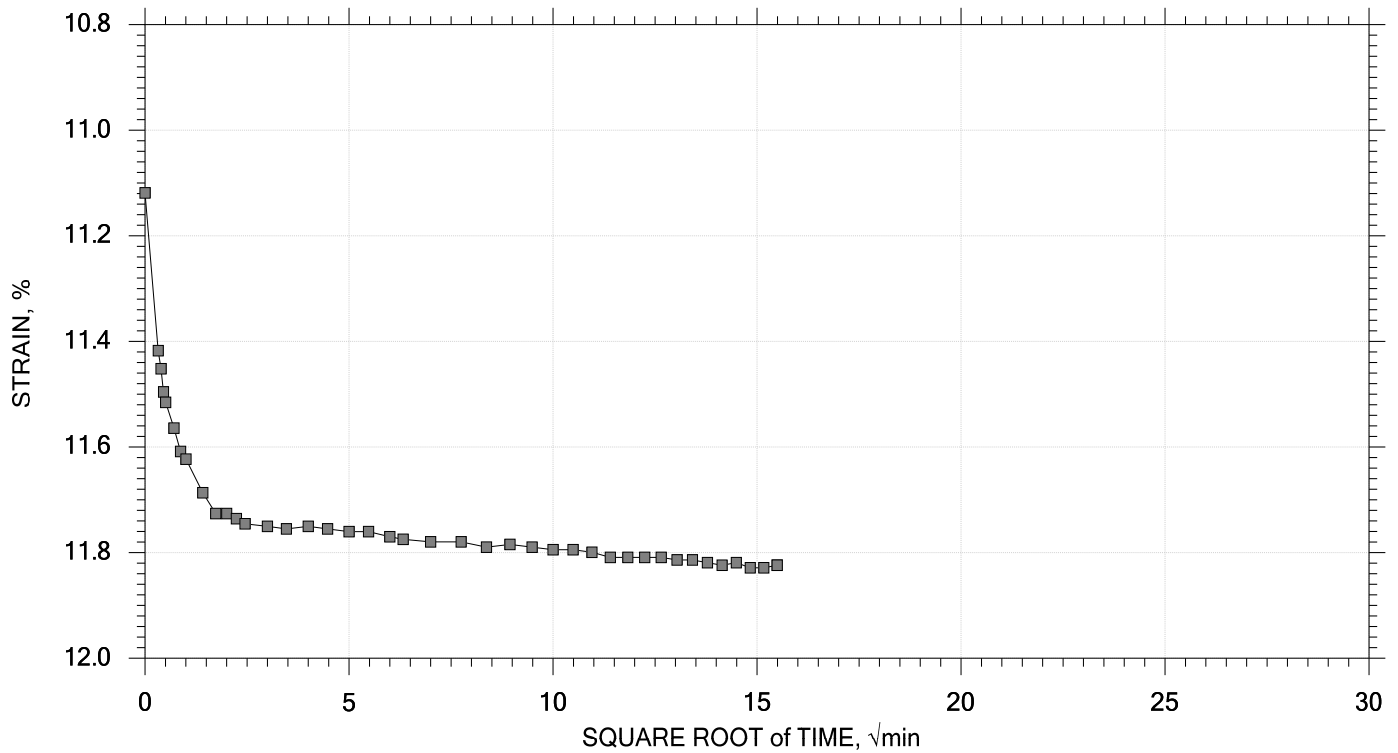
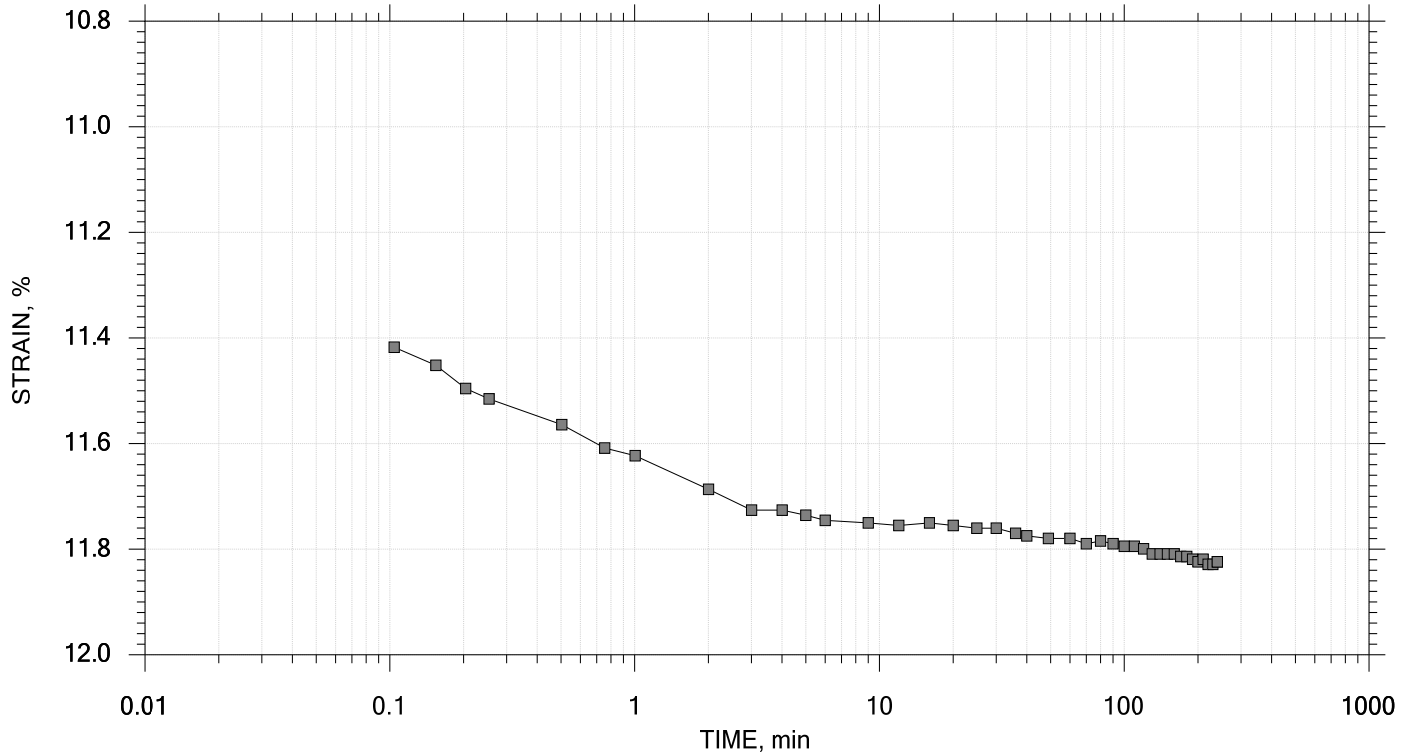
	Project: 144 Addison St	Location: East Boston, MA	Project No.: GTX-306889
	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 15 of 19

Stress: 4 tsf



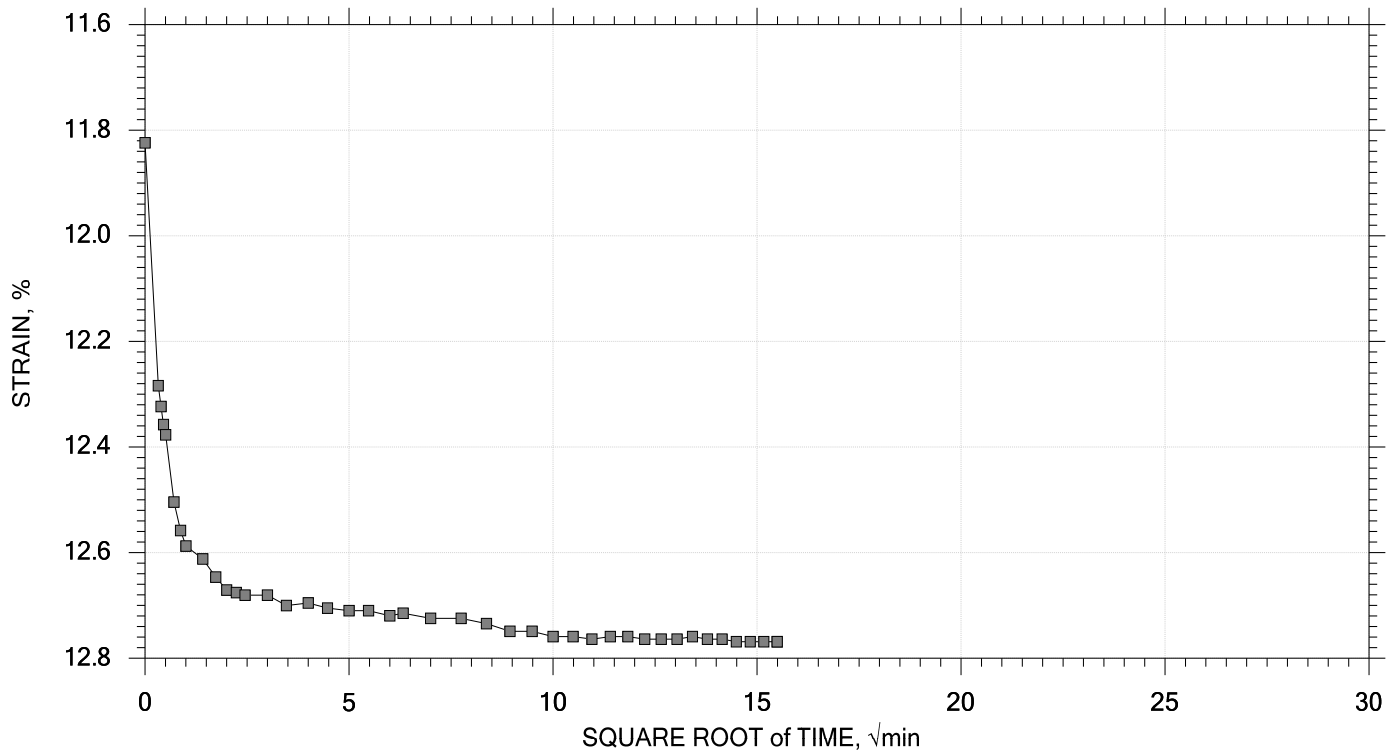
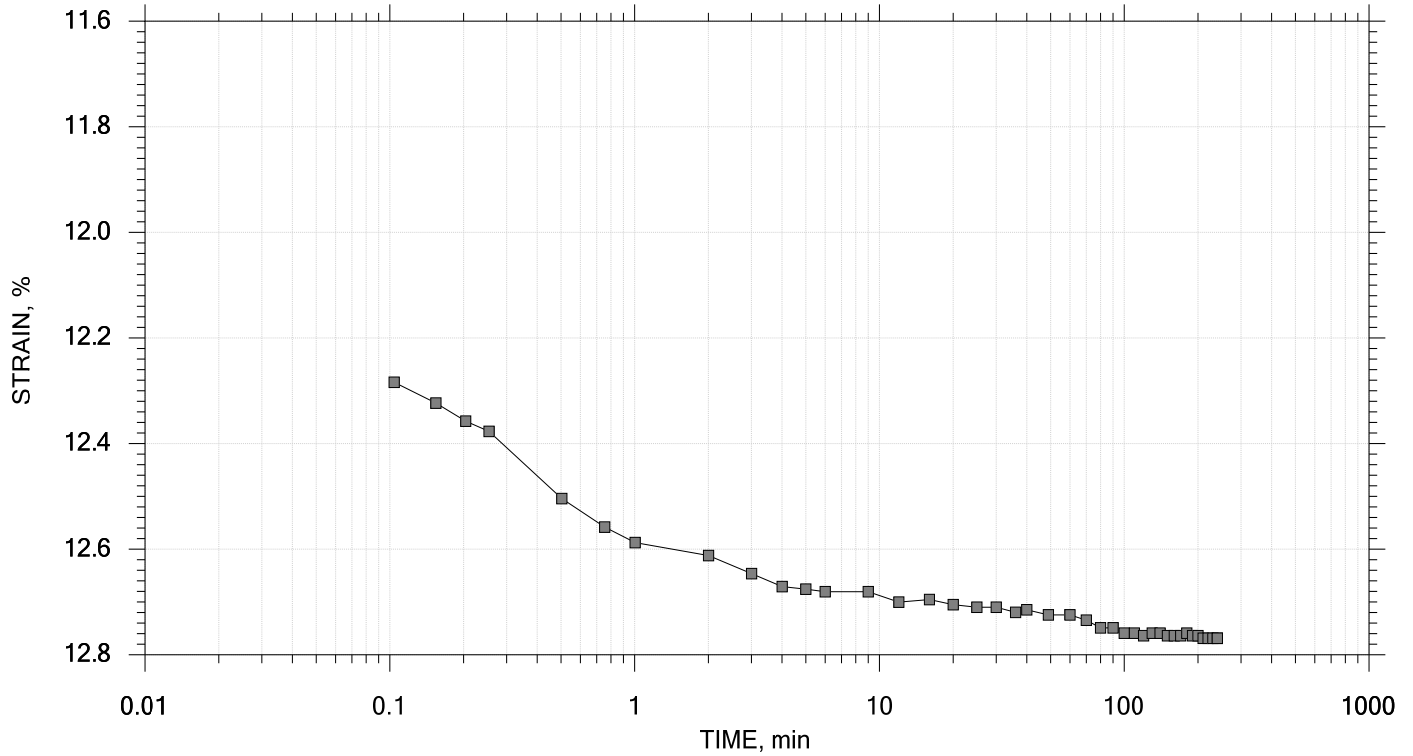
	Project: 144 Addison St	Location: East Boston, MA	Project No.: GTX-306889
	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 16 of 19

Stress: 8 tsf



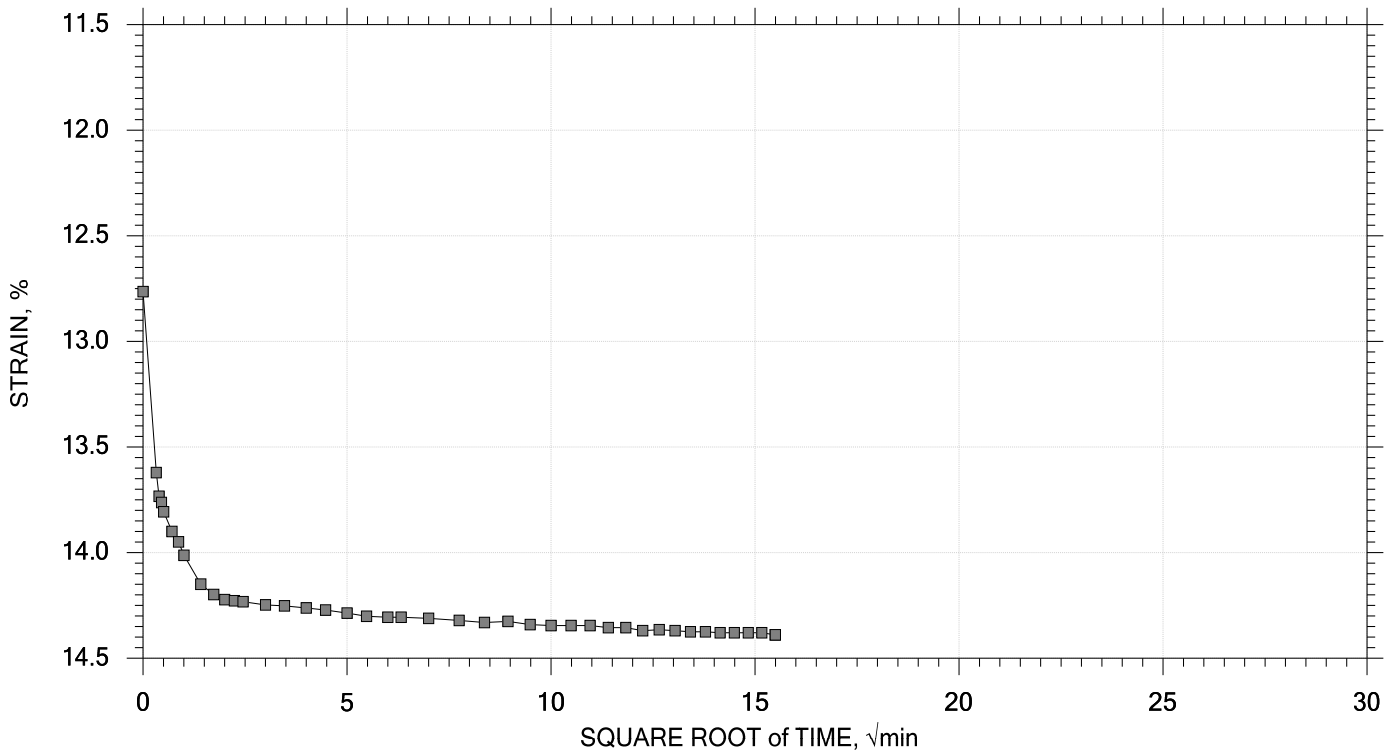
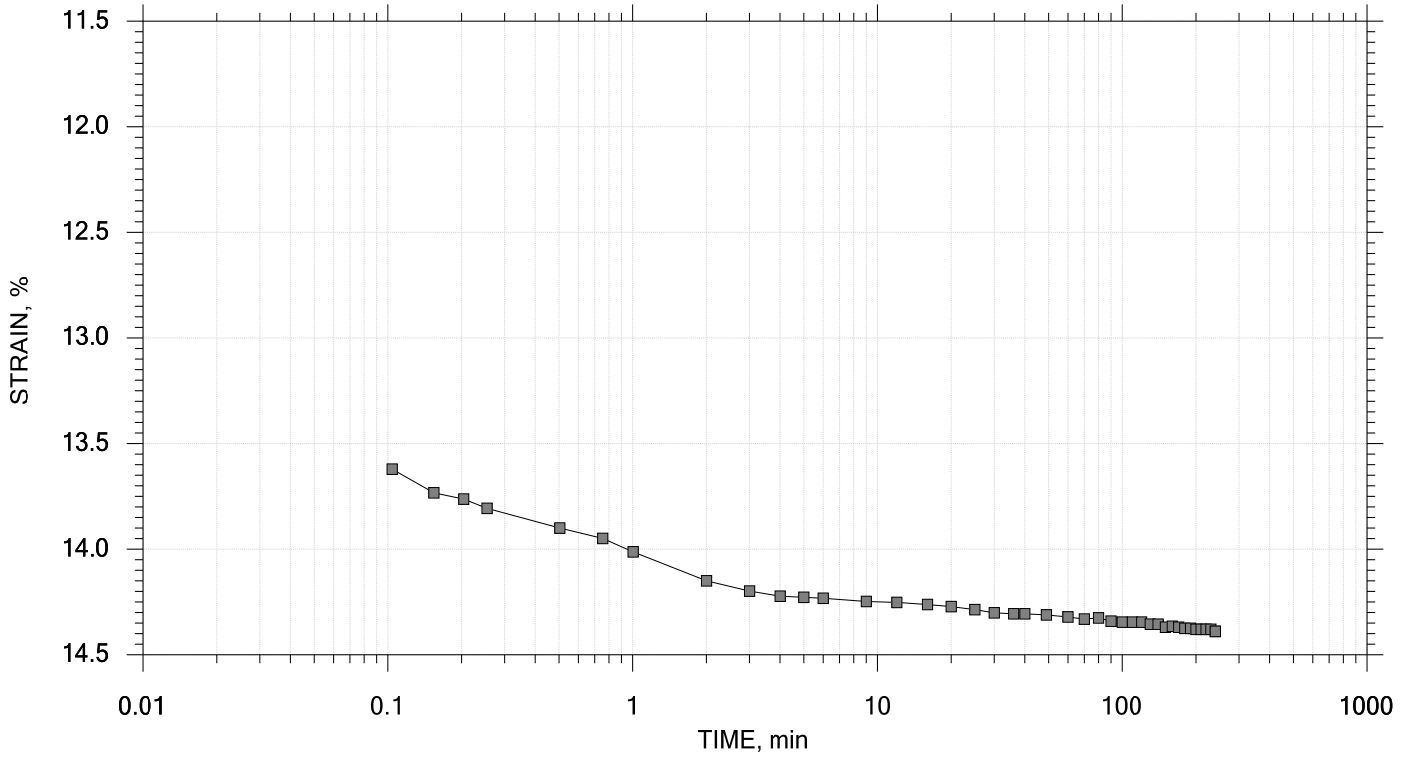
	Project: 144 Addison St	Location: East Boston, MA	Project No.: GTX-306889
	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 17 of 19

Stress: 16 tsf



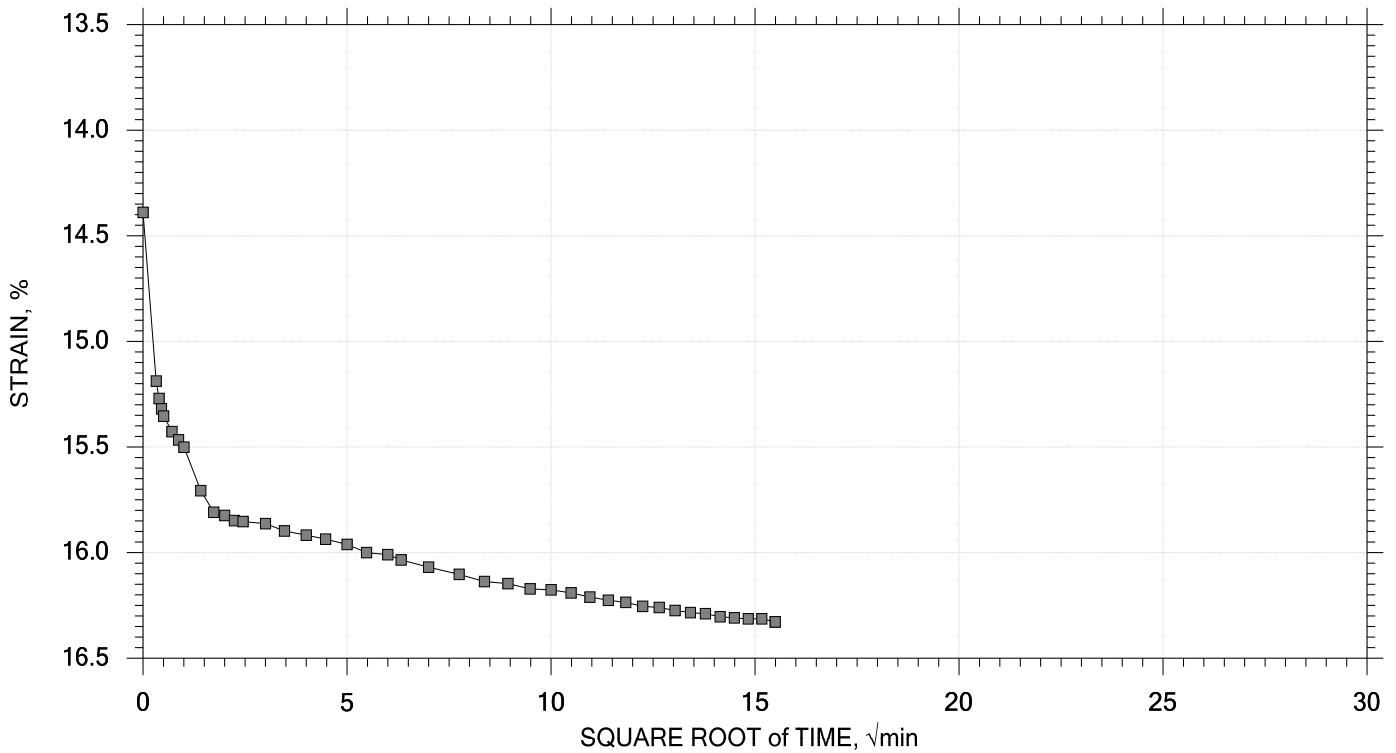
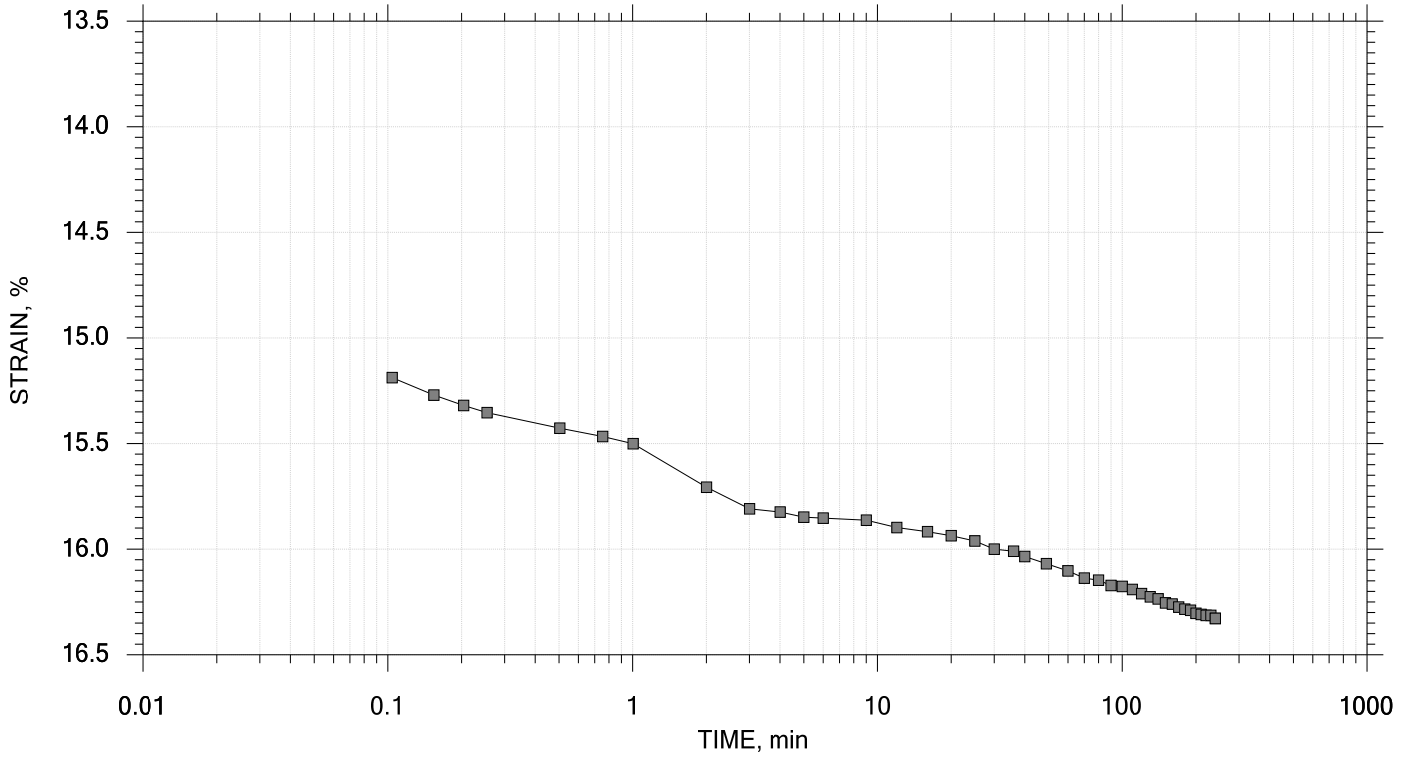
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	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 18 of 19

Stress: 24 tsf



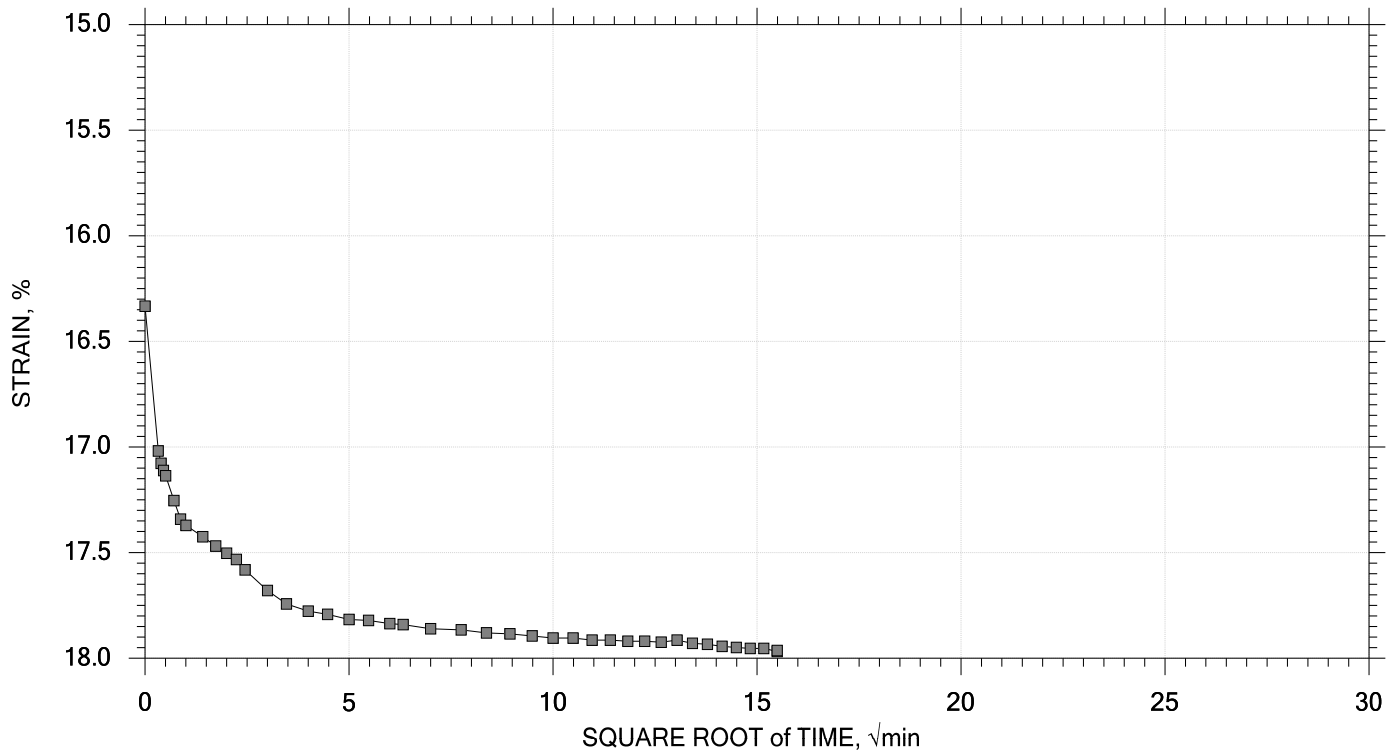
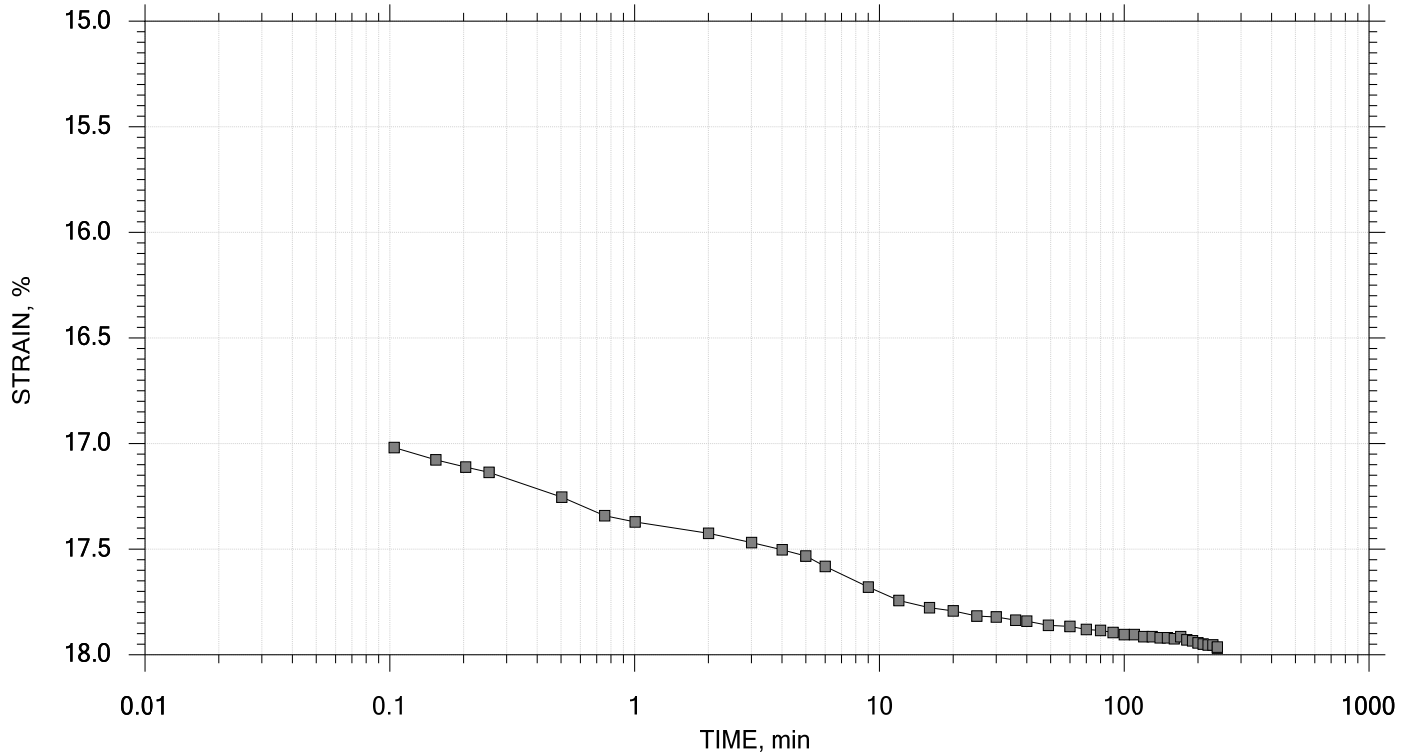
	Project: 144 Addison St	Location: East Boston, MA	Project No.: GTX-306889
	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 19 of 19

Stress: 32 tsf



	Project: 144 Addison St	Location: East Boston, MA	Project No.: GTX-306889
	Boring No.: SH-2	Tested By: md	Checked By: njh
	Sample No.: U-1	Test Date: 08/26/17	Test No.: IP-1
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Wet, gray silty clay with sand		
	Remarks: System R& D, Swell Pressure = 0.0664 tsf		



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Attachment D

CLIMATE CHANGE
QUESTIONNAIRE

NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).

A.1 - Project Information

Project Name:	144 Addison Street		
Project Address:	144 Addison Street, Boston, MA 02128		
Project Address Additional:	N/A		
Filing Type	DPIR		
Filing Contact	<i>Damian Szary, Principal</i>	<i>Gate Residential</i>	<i>das@gateresidential.com</i> (617) 904-7111
Is MEPA approval required	No		N/A

A.3 - Project Team

Owner / Developer:	Addison Street Partners, LLC
Architect:	Arrowstreet, Inc.
Engineer:	Wozny Barbar & Associates
Sustainability / LEED:	Arrowstreet, Inc.
Permitting:	Fort Point Associates, Inc.
Construction Management:	TBD

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Residential
List the First Floor Uses:	Residential
List any Critical Site Infrastructure and or Building Uses:	n/a

Site and Building:

Site Area:	143,139 SF	Building Area:	226,400 GSF
Building Height:	53'-4"	Building Height:	5 Stories
Existing Site Elevation - Low:	7'-10" BCB	Existing Site Elevation - High:	19'-0" BCB
Proposed Site Elevation - Low:	8'-0" BCB	Proposed Site Elevation - High:	21'-6" BCB
Proposed First Floor Elevation:	21'-0" BCB	Below grade levels:	0 Stories

Article 37 Green Building:

LEED Version - Rating System :	BD+C: Multifamily Midrise	LEED Certification:	No
Proposed LEED rating:	Silver/Gold	Proposed LEED point score:	61 Pts.

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined

Energy modeling was performed using eQuest 3.65.			
Annual Electric:	2,007,800(kWh)	Peak Electric:	1,033 (kW)
Annual Heating:	415,000 (kWh)	Peak Heating:	784 (kW)
Annual Cooling:	126,000 (kWh)	Peak Cooling:	754 (kW)
Energy Use - Below ASHRAE 90.1 - 2013:	17.3%	Have the local utilities reviewed the building energy performance?:	No
Energy Use - Below Mass. Code:	17.3%	Energy Use Intensity:	43.8 (kBtu/SF)

Back-up / Emergency Power System

Electrical Generation Output:	n/a	Number of Power Units:	n/a
System Type:	n/a	Fuel Source:	n/a

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	n/a	Heating:	n/a
		Cooling:	n/a

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City’s goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: 960 (Tons)

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

A sustainability consultant has been engaged during the filing process to brainstorm ideas to improve energy performance. As part of this process, the consultant has performed an energy model to understand energy use distribution and to prioritize Energy Conservation Measures (ECMs).

Describe building specific passive energy efficiency measures including orientation, massing, envelope, and systems:

The massing on site is meant to maximize open space and allow for potential natural ventilation strategies. The building is positioned with the long façade oriented southeast and southwest, which allows optimum solar gains and daylight. Optimized envelope systems have been considered in the design, along with high performance glazing that are operable and double pane Low-E coated, LED lighting fixtures in common areas, and low flow fixtures.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

Energy Star appliances for kitchen and laundry, Dedicated Outdoor Air System (DOAS) with heat recovery for ventilation and Vertical fan coil units (heat pump) systems for mechanical cooling and heating have been considered in estimating the GHG emissions.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

Domestic hot water, heating, and plug loads are the three predominant energy use loads. The focus was on reducing loads on these end uses to achieve the maximum return on investment for the project. Strategies include low flow fixtures, optimized envelope, and Energy Star Appliances. The Proponent will consider Power Purchase Agreement (PPA) for future installation of PV panels.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

N/A

Describe any energy efficiency assistance or support provided or to be provided to the project:

The Proponent will apply for eligible rebates or incentives through the Mass Save program. It is expected the Project will receive rebates for the installation of high efficiency >95% combined heating and hot water equipment and wireless Nest thermostats in all residential units. In addition, the Project Team will contact National Grid and Eversource, and participate in applicable incentive programs.

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

The project goal is to minimize the building loads such that future upgrades do not involve cost prohibitive strategies such as added insulation or a major retrofit to reduce loads. The building is targeting an EUI that can be offset by potential PV system via PPA in the future.

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2 °F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 - Extreme Heat - Design Conditions

Temperature Range - Low:	10.4 F	Temperature Range - High:	90.5 F
Annual Heating Degree Days:	4973	Annual Cooling Degree Days:	3421

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	90	Days - Above 100°:	33
Number of Heatwaves / Year:	3	Average Duration of Heatwave (Days):	3

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

The Project Site will remain more than 50% open area, mostly vegetated, with areas of trees and shrubs to provide shading. The building materials and non-vegetated surfaces will have a high reflectivity, to avoid absorption of additional heat.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

The project design parameters will be optimized for both heating and cooling, with consideration to projected extreme heat temperatures. Strategies include shading devices, insulated operable windows with Low-E coating and optimum solar heat gain coefficient (SHGC), natural ventilation strategies, and added cooling capacity by using higher design temperatures.

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

A high performing envelope will allow the indoor temperature to change gradually, while operable windows promote natural ventilation. Potable water for drinking, food preparation, sinks, and sanitary systems will be maintained.

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm: 6 in.

Describe all building and site measures for reducing storm water run-off:

The Project Site will retain its original grading, which is currently lower than its surrounding neighbors, and will not produce storm water run-off to adjacent sites. The large amount of vegetated, open space will promote water capture and gradual ground water recharge.

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

The Project will replace an entirely impervious surface parking lot with a largely green, open space surfaced with hearty and native vegetation and permeable surfaces. The selected plantings will be able to withstand periods of drought as well as over saturation and flooding, while reducing heat island effect, improving air quality and dramatically improving the quality of stormwater run-off.

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?

What Zone:

Current FEMA SFHA Zone Base Flood Elevation:

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online [BPDA SLR-FHA Mapping Tool](#) to assess the susceptibility of the project site.

If you answered YES to either of the above questions, please complete the following questions. Otherwise you have completed the questionnaire; thank you!

E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online [BPDA SLR-FHA Mapping Tool](#) to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24” of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12” of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	<input type="text" value="16.5 Ft BCB"/>	
Sea Level Rise - Design Flood Elevation:	<input type="text" value="21.3 Ft BCB"/>	First Floor Elevation: <input type="text" value="21.5 Ft BCB"/>
Site Elevations at Building:	<input type="text" value="(varies) 8 Ft BCB to 19 Ft BCB"/>	Accessible Route Elevation: <input type="text" value="21.5 Ft BCB"/>

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

All occupiable space (residential, entry, amenities, etc.) will be elevated to 21.5’ BCB, which is 5’ above 100 year flood levels defined by FEMA, and in compliance with the BPDA’s requirements for Sea Level Rise-Design Flood Elevation (SLR-DFE). The Project Site itself will remain low-lying at 8’ BCB at its lowest point with open air parking below the enclosed floors, at 10’ BCB. The large amount of low-lying open space will be able to manage a large influx of water. The vegetated, pervious open areas will help reduce and slow water leaving the Project Site.

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

All mechanical systems will be located above the Sea Level Rise-Base Flood Elevation (SLR-BFE) as defined by the BPDA. The Project will also provide water tight utility conduits, as well as stormwater and wastewater back flow prevention.

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Occupants will be able to remain in their residences during these events; all inhabited areas are raised well above the anticipated flood level.

Describe any strategies that would support rapid recovery after a weather event:

If the adjacent roadways remain un-altered, occupants will be able to resume normal activities post-weather event. The ground floor and main entry of the building will be elevated 4'-6" above the anticipated flood plain.

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

The ground floor and main entry of the building will be elevated above the SLR-DFE and should remain accessible to Addison Street, located at an average grade of 19' BCB. Should Sea Level Rise affect the low-lying areas of Orient Heights, the main entry drive to this Project Site could be relocated from McClellan Highway to Addison Street

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

All critical equipment will be located above the floodplain or on the roof.

A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. **NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).**

For questions or comments about this checklist or Climate Change best practices, please contact: John.Dalzell@boston.gov

Attachment E

LANDSCAPE PLANS

PLANTING SCHEDULE

Sym.	Qty.	Botanical Name	Common Name	Size	Comments
Deciduous Trees					
AA	17	Amelanchier arborea	Serviceberry	8'-10' ht.	3-5 Stems, B&B
BP	62	Betula nigra 'Cully'	Heritage River Birch	10'-12' ht.	3-5 Stems, B&B
NS	13	Nyssa sylvatica	Black Tupelo	2.5"-3" cal.	B&B
PS	0	Prunus serotina	Black Cherry	8'-10' ht.	3-5 Stems, B&B
QP	9	Quercus palustris	Pin Oak	3"-3.5" cal.	B&B, Matched
QA	26	Quercus alba	White Oak	3"-3.5" cal.	B&B, Matched
RG	32	Rhus glabra	Smooth Sumac	8'-10' ht.	3-5 Stems, B&B

Evergreen Trees

IO	7	Ilex opaca 'Jersey Princess'	Jersey Princess American Holly	8'-10' ht.	B&B, Full to base, Matched
JV	13	Juniperus virginiana	Eastern Redcedar	10'-12' ht.	B&B, Full to base, Matched
PR	8	Pinus rigida	Pitch Pine	10'-12' ht.	B&B, Full to base, Matched

Shrubs

CA	38	Ceanothus americanus	New Jersey Tea	24"-30" ht.	Container grown, 30" O.C.
CP	122	Comptonia peregrina	Sweetfern	18"-24" ht.	Container grown, 36" O.C.
CR	22	Cornus racemosa	Gray Dogwood	18"-24" ht.	Container grown, 36" O.C.
DF	19	Dasiphora fruticosa 'Pink Beauty'	Pink Shrubby Cinquefoil	18"-24" ht.	Container grown, 24" O.C.
JH	72	Juniperus horizontalis 'Wiltonii'	Creeping Juniper	12"-18" w.	Container grown, 24" O.C.
MP	43	Myrica pensylvanica	Bayberry	36"-48" ht.	Container grown, 42" O.C.
RV	59	Rosa virginiana	Virginia Rose	24"-30" ht.	Container grown, 30" O.C.
VA	94	Vaccinium angustifolium 'Brunswick'	Lowbush Blueberry	12"-18" ht.	Container grown, 30" O.C.
VD	72	Viburnum dentatum	Arrowwood Viburnum	24"-30" ht.	Container grown, 30" O.C.

Perennials / Grasses / Groundcovers

AB	1750	Ammophila breviligulata	American Beachgrass	#SP4	Container grown, 12" O.C.
AU	1409	Arctostaphylos uva-ursi 'Massachusetts'	Massachusetts Bearberry	#SP4	Container grown, 12" O.C.
AI	1750	Asclepias incarnata	Swamp Milkweed	1 gal.	Container grown, 12" O.C.
BA	10	Baptisia australis	False Blue Indigo	5 gal.	Container grown, 30" O.C.
CV	1750	Carex vulpinoidea	Fox Sedge	#SP4	Container grown, 12" O.C.
EA	22	Echinacea purpurea	Purple Coneflower	3 gal.	Container grown, 18" O.C.
EP	22	Eutrochium purpureum	Purple Joe-Pye Weed	3 gal.	Container grown, 24" O.C.
GP	553	Gaultheria procumbens	Wintergreen	#SP4	Container grown, 12" O.C.
PV	1750	Panicum virgatum	Switchgrass	1 gal.	Container grown, 12" O.C.
ST	1409	Sedum ternatum	Woodland Stonecrop	#SP4	Container grown, 12" O.C.
SS	1750	Solidago sempervirens	Seaside Goldenrod	1 gal.	Container grown, 12" O.C.
SN	45	Symphotrichum novi-belgii 'Peter Harrison'	New York Aster	3 gal.	Container grown, 18" O.C.
VR	553	Vaccinium angustifolium 'Ruby Carpet'	Ruby Carpet Lowbush Blueberry	1 gal.	Container grown, 12" O.C.
VH	1750	Verbena hastata	Swamp Verbena	1 gal.	Container grown, 12" O.C.

Seed Mix

MIX		Erosion Control / Restoration Mix for Dry Sites	Seed at rate of 35 lbs/ acres. Cover crop, erosion control fabric, and soil amendments according to mfr.'s recommendations. As sold by New England Wetland Plants, Inc. or approved equal.
	29055 SF	Red fescue, Canada wild rye, annual ryegrass, perennial ryegrass, little bluestem, indian grass, switchgrass, upland bentgrass	

Attachment F

NOI PLANS

GENERAL NOTES:

- 1. TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING SITE FEATURES WERE OBTAINED FROM A PLAN ENTITLED "TOPOGRAPHIC PLAN NORTHEASTERN UNIVERSITY BURKE STREET PARKING LOT", PREPARED BY R.E. CAMERON & ASSOCIATES, INC., DATED 10/02/2015.
2. FLOODPLAIN INFORMATION WAS OBTAINED FROM THE FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 25025C 0079J. THE SITE IS NOT LOCATED IN A FLOODPLAIN ZONE.
3. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY UTILITY CONNECTIONS OR CROSSINGS OF PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THEIR LINES. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO NITSCHE ENGINEERING.
4. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS PIPELINE COMPANIES, AND MUNICIPAL UTILITY DEPARTMENTS THAT SUPPLY GAS, ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
5. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, ALSO REFERRED TO AS JACKIE'S LAW, AS DETAILED IN SECTION 520 CMR 14.00 OF THE CODE OF MASSACHUSETTS REGULATIONS.
6. ALL UTILITY CONNECTIONS ARE SUBJECT TO THE APPROVAL OF, AND GRANTING OF PERMITS BY, THE CITY OF BOSTON. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO SEE THAT ALL PERMITS AND APPROVALS ARE OBTAINED BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS FOR AND FOR PERFORMING ANY NECESSARY WORK INVOLVED IN CONNECTION WITH THE DISCONTINUANCE OF ANY UTILITIES OR WITHIN THE JURISDICTION OF ANY UTILITY COMPANIES, SUCH AS ELECTRICITY, TELEPHONE, WATER, GAS, AND ANY SYSTEM OR SYSTEMS WHICH WILL BE AFFECTED BY THE WORK TO BE PERFORMED UNDER THIS CONTRACT. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE AGENCIES, DEPARTMENTS, AND UTILITY COMPANIES, IN WRITING, AT LEAST 48 HOURS AND NOT MORE THAN 30 DAYS PRIOR TO ANY CONSTRUCTION. CONSTRUCTION SHALL NOT INTERFERE WITH OR INTERRUPT UTILITIES WHICH ARE TO REMAIN IN OPERATION.
7. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.
8. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS AND SITE DETAILS OUTSIDE OF THE LIMITS OF REGRADING AND WORK AS SHOWN ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.
9. THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL RUBBISH AND DEBRIS FOUND THEREON. STORAGE OF SUCH MATERIALS ON THE PROJECT SITE WILL NOT BE PERMITTED. THE CONTRACTOR SHALL LEAVE THE SITE IN SAFE, CLEAN, AND LEVEL CONDITION UPON COMPLETION OF THE SITE CLEARANCE WORK.
10. THE CONTRACTOR SHALL REMOVE FROM THE AREA OF CONSTRUCTION PAVEMENT, CONCRETE, GRANITE CURBING, CEMENT CURBING, POLES AND FOUNDATIONS, ISLANDS, TREE BERMS AND OTHER FEATURES WITHIN THE LIMITS OF CONSTRUCTION AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION WHETHER SPECIFIED ON THE DRAWINGS OR NOT.
11. FOR SITE LAYOUT, GRADING, MATERIALS, PLANTINGS, GROUND COVER, EROSION CONTROL, AND DETAILS SEE LANDSCAPE ARCHITECT'S DRAWINGS.
12. FOR STRUCTURAL DETAILS AND INFORMATION SEE STRUCTURAL DRAWINGS.
13. ALL WATER, SEWER, AND DRAIN WORK SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE CITY OF BOSTON.
14. ELEVATIONS REFER TO XXXX.
15. GAS, TELEPHONE AND ELECTRIC SERVICES ARE TO BE DESIGNED BY EACH UTILITY COMPANY IN COORDINATION WITH THE MECHANICAL, ELECTRIC AND PLUMBING CONSULTANTS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND DESIGN OF NEW UTILITIES WITH ELECTRIC, CABLE TELEVISION AND TELECOMMUNICATION UTILITIES.
16. INSTALL WATER LINES WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF SEVEN FEET.
17. MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18" VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SEWER AND WATER LINES. WHEREVER THERE IS LESS THAN 10 FEET OF HORIZONTAL SEPARATION AND 18" OF VERTICAL SEPARATION BETWEEN A PROPOSED OR EXISTING SEWER LINE TO REMAIN AND A PROPOSED OR EXISTING WATER LINE TO REMAIN BOTH WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10-FEET ON EITHER SIDE OF THE CROSSING. ONE (1) FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER AT THE CROSSING.
18. UTILITY STRUCTURES TO BE ABANDONED SHALL BE REMOVED TO A DEPTH OF NO LESS THAN 3 FEET BELOW FINISHED GRADE, THE BOTTOMS OF THE STRUCTURES SHALL BE BROKEN AND THE STRUCTURES SHALL BE BACKFILLED WITH GRAVEL BORROW AND COMPACTED.
19. CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED OR REMOVED & DISPOSED.
20. THE CONTRACTOR SHALL COMPLY WITH THE ORDER OF CONDITIONS DATED XXXX XX, XXXX AND ISSUED BY THE XXXX CONSERVATION COMMISSION (DEP #XXX-XXX).
21. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING, AND SURFACE RESTORATION FOR THE GAS LINE INSTALLATION.
22. FOR SOIL INFORMATION REFER TO GEOTECHNICAL REPORT.
23. ALL GRATES IN WALKWAYS SHALL BE ADA COMPLIANT.

UTILITY NOTES:

- 1. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY UTILITY CONNECTIONS OR CROSSINGS OF PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THEIR LINES. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NITSCHE ENGINEERING.
2. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS PIPELINE COMPANIES, AND MUNICIPAL UTILITY DEPARTMENTS THAT SUPPLY GAS, ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
3. ALL UTILITY CONNECTIONS ARE SUBJECT TO THE APPROVAL OF, AND GRANTING OF PERMITS BY, THE CITY OF BOSTON. IT SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO SEE THAT ALL PERMITS AND APPROVALS ARE OBTAINED BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS FOR AND FOR PERFORMING ANY NECESSARY WORK INVOLVED IN CONNECTION WITH OR THE DISCONTINUANCE OF ANY UTILITIES WITHIN THE JURISDICTION OF ANY UTILITY COMPANIES, SUCH AS ELECTRICITY, TELEPHONE, WATER, GAS, AND ANY SYSTEM OR SYSTEMS WHICH WILL BE AFFECTED BY THE WORK TO BE PERFORMED UNDER THIS CONTRACT. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE AGENCIES, DEPARTMENTS, AND UTILITY COMPANIES, IN WRITING, AT LEAST 48 HOURS AND NOT MORE THAN 30 DAYS PRIOR TO ANY CONSTRUCTION.
4. CONSTRUCTION SHALL NOT INTERFERE WITH OR INTERRUPT UTILITIES WHICH ARE TO REMAIN IN OPERATION.
5. ALL WATER, SEWER, AND DRAIN WORK SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE BOSTON WATER AND SEWER COMMISSION.
6. GAS, TELEPHONE AND ELECTRIC SERVICES ARE TO BE DESIGNED BY EACH UTILITY COMPANY IN COORDINATION WITH THE MECHANICAL, ELECTRIC AND PLUMBING CONSULTANTS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND DESIGN OF NEW UTILITIES WITH ELECTRIC, CABLE TELEVISION AND TELECOMMUNICATION UTILITIES.
7. INSTALL WATER LINES WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF SEVEN FEET COVER FROM THE FINAL DESIGN GRADES.
8. MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18" VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SEWER AND WATER LINES. WHEREVER THERE IS LESS THAN 10 FEET OF HORIZONTAL SEPARATION AND 18" OF VERTICAL SEPARATION BETWEEN A PROPOSED OR EXISTING SEWER LINE TO REMAIN AND A PROPOSED OR EXISTING WATER LINE TO REMAIN BOTH WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10-FEET ON EITHER SIDE OF THE CROSSING. ONE (1) FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER AT THE CROSSING.
9. UTILITY STRUCTURES TO BE ABANDONED SHALL BE REMOVED TO A DEPTH OF NO LESS THAN 3 FEET BELOW FINISHED GRADE, THE BOTTOMS OF THE STRUCTURES SHALL BE BROKEN AND THE STRUCTURES SHALL BE BACKFILLED WITH GRAVEL BORROW AND COMPACTED.
10. CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED AND/OR REMOVED & DISPOSED.
11. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING, AND SURFACE RESTORATION FOR THE GAS LINE INSTALLATION.
12. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
13. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
14. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.

BWSC INSPECTION SIGN OFF LIST

Table with 4 columns: BWSC INSPECTION SIGN OFF LIST, DATE AND SIGNATURE, COMMENT, DYE TEST. Contains a list of items from (A) 8" FIRE PROTECTION SERVICE to (C) AS BUILT.

BWSC & CONTRACTOR NOTES:

- 1. THE ESTIMATED SANITARY SEWAGE DISCHARGE IS XXXX GALLONS PER DAY (GPD). THIS ESTIMATE IS BASED ON 310 C.M.R. 15.000 THE STATE ENVIRONMENTAL CODE, TITLE 5; STANDARD REQUIREMENTS FOR THE SITING, CONSTRUCTION, INSPECTION, UPGRADE AND EXPANSION OF ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS AND FOR THE TRANSPORT AND DISPOSAL OF SEPTAGE.
2. THE ESTIMATED DAILY WATER USE IS XXXX GPD BASED ON THE ESTIMATED SANITARY SEWAGE DISCHARGE WITH A 10% PEAKING FACTOR. THE PEAK DOMESTIC FLOW BASED ON FIXTURE COUNTS IS APPROXIMATELY 450 GPM.
3. TWO 3" COMPOUND WATER METERS WILL BE EITHER NEPTUNE OR ELSTER AMCO COMPOUND TYPE METERS. THE METERS MUST BE PURCHASED BY THE CONTRACTOR. A METER TRANSMITTER UNIT (MTU) SHALL BE SUPPLIED BY THE COMMISSION AT THE OWNER'S EXPENSE. A FEE OF \$325/MTU WILL BE PAID TO THE COMMISSION AT THE TIME OF FILING THE GENERAL SERVICE APPLICATION.
4. BACKWATER VALVES SHALL BE PROVIDED BY THE PLUMBER AT ALL GRAVITY SANITARY SEWER AND STORM DRAIN CONNECTIONS FOR ANY FIXTURE LOCATED AT AN ELEVATION BELOW THE TOP OF THE SEWER OR DRAIN MANHOLE.
5. THE CONTRACTOR SHALL NOTIFY THE BWSC CROSS-CONNECTION DEPARTMENT AT 617-989-7283 ONCE BACKWATER VALVES ARE INSTALLED FOR BWSC INSPECTION.
6. DYE TESTING SHALL BE PERFORMED ON NEW STORM DRAIN AND SANITARY SEWER CONNECTIONS AFTER INSTALLATION IS COMPLETE. DYE TESTS SHALL BE WITNESSED BY THE BWSC.
7. A PREREQUISITE FOR FILING A GENERAL SERVICE APPLICATION WITH THE BWSC FOR NEW CONSTRUCTION IS THE ROUGH CONSTRUCTION SIGN-OFF DOCUMENT FROM THE CITY OF BOSTON'S INSPECTION SERVICES DEPARTMENT.
8. IN ADDITION TO THE INSPECTION FEES, A DEPOSIT BASED ON THE SIZE OF THE WATER SERVICE, FIRE PIPE, SEWER OR DRAIN CONNECTION MUST ACCOMPANY THE GSA SUBMISSION. UPON RECEIPT OF THE APPROPRIATE DEPOSIT, THE COMMISSION WILL ESTABLISH A WATER AND SEWER ACCOUNT AND ASSIGN AN ACCOUNT NUMBER TO THE PROPERTY. THE TOTAL AMOUNT OF A DEPOSIT FOR A GSA SHALL NOT EXCEED TEN THOUSAND DOLLARS (\$10,000.00).
9. AN AS-BUILT PLAN (AUTOCAD 2012 OR EARLIER RELEASE) SHALL BE PROVIDED BY THE CONTRACTOR AND ENDORSED BY A CIVIL ENGINEER OR PROFESSIONAL LAND SURVEYOR SHOWING THE LOCATION, DEPTH, AND INVERT OF EVERY BEND, FITTING, VALVE, CLEANOUT AND ANCHOR. THE AS-BUILT DRAWING SHALL BE SUBMITTED TO THE BOSTON AND WATER SEWER COMMISSION FOR REVIEW AND APPROVAL.
10. WATER SHUT DOWN SHALL BE COORDINATED WITH BWSC WATER OPERATIONS, (617) 989-7276, 24 HOURS NOTICE REQUIRED.
11. PROVIDE "DON'T DUMP" PLAQUES AT ALL CATCH BASIN AND DRAIN INLET LOCATIONS. "DON'T DUMP" PLAQUES TO BE PURCHASED FROM BWSC.
12. THE CONTRACTOR SHALL PURCHASE THE NEW HYDRANT(S) FROM THE BWSC. THE CONTRACTOR SHALL PURCHASE THE HYDRANT(S) FROM THE COMMISSION WHEN FILING THE GENERAL SERVICE APPLICATION.

PROPOSED RECHARGE VOLUME CALCULATIONS:

Roof Area (SF) = 45,619
ImperVIOUS Area (SF) = 35,888
Total ImperVIOUS Area (SF) = Roof Area + ImperVIOUS Area = 84,507
Required Recharge = 1.25" storm depth = 84,507 SF x (1.25"/12") = 8,803 CF
Storage Available in Recharge System 1 = 360 LF of 24" Perforated CPP Pipe + Crushed Stone
Volume of Pipe = pi * Length of Pipe * pi * Length of Header Pipe = pi(12") x 420 LF + pi(12") x 22.74 LF x 2 = 1462.3 CF
Volume of Stone = [(L * W * H of Stone) - Volume of Pipe] x 30% Voids = [(66.78' x 3.39' x 24.74') - 1252.6 CF] x 0.30 = 1241.5 CF
Total Volume = 1462.3 CF + 1241.5 CF = 2703.8 CF
Storage Available in Recharge System 2 = 300 LF of 24" Perforated CPP Pipe + Crushed Stone
Volume of Pipe = pi * Length of Pipe * pi * Length of Header Pipe = pi(12") x 360 LF + pi(12") x 16 LF x 2 = 1252.6 CF
Volume of Stone = [(L * W * H of Stone) - Volume of Pipe] x 30% Voids = [(66.78' x 3.39' x 21.90') - 1252.6 CF] x 0.30 = 1074.2 CF
Total Volume = 1252.6 CF + 1074.2 CF = 2326.8 CF
Storage Available in Recharge System 3 = 468 LF of 24" Perforated CPP Pipe + Crushed Stone
Volume of Pipe = pi * Length of Pipe * pi * Length of Header Pipe = pi(12") x 468 LF = 1470.3 CF
Volume of Stone = [(L * W * H of Stone) - Volume of Pipe] x 30% Voids = [(468' x 3.50' x 3.56') - 1470.3 CF] x 0.30 = 1338.3 CF
Total Volume = 1470.3 CF + 1338.3 CF = 2808.6 CF
Storage Available in Recharge System 4 = 160 LF of 24" Perforated CPP Pipe + Crushed Stone
Volume of Pipe = pi * Length of Pipe * pi * Length of Header Pipe = pi(12") x 160 LF + pi(12") x 12.6 LF x 2 = 581.5 CF
Volume of Stone = [(L * W * H of Stone) - Volume of Pipe] x 30% Voids = [(46.8' x 3.58' x 14.61') - 581.5 CF] x 0.30 = 509.3 CF
Total Volume = 581.5 CF + 509.3 CF = 1102.1 CF
Total Storage = 2703.8 CF + 2326.8 CF + 2808.6 CF + 1102.1 CF = 8940.7 CF

PROPOSED LEGEND

- LIMIT OF WORK
EXISTING UTILITY TO BE ABANDONED, REMOVED AND DISPOSED IN CONFLICT WITH NEW SITE IMPROVEMENTS, OR AS INDICATED ON DRAWINGS.
EROSION CONTROL BARRIER
CONSTRUCTION FENCE
DOMESTIC WATER PIPE
FIRE PROTECTION PIPE
SANITARY SEWER PIPE
STORM DRAIN PIPE
GAS PIPE
ELECTRIC DUCTBANK
TELECOM DUCTBANK
CHILLED WATER PIPE
STEAM PIPE
CONDENSATE RETURN PIPE
HOT WATER PIPE/RETURN
HEATING HOT WATER
REUSE WATER PIPE
GREY WATER PIPE
FUTURE UTILITY, SHOW FOR INFORMATION ONLY
INLET PROTECTION
ELEVATION CONTOURS
MATCH LINE
CENTERLINE
CLEANOUT
AREA DRAIN
ACCESS BASIN
DRAIN MANHOLE
WATER QUALITY STRUCTURE
CATCH BASIN
DOUBLE CATCH BASIN
WATER QUALITY INLET
SEWER MANHOLE
STEAM MANHOLE
TELECOM MANHOLE
ELECTRIC MANHOLE
CHILLED WATER VALVE
WATER VALVE
FIRE HYDRANT

ABBREVIATIONS

- AB ACCESS BASIN
AD AREA DRAIN
BC BOTTOM OF CURB ELEVATION
CB CATCH BASIN
CCB CAPE COD BERM
CI CAST IRON
CJ CONTROL JOINT
CL CENTER LINE
CO CLEANOUT
COP CENTER OF PIPE
CP CARRIER PIPE
CPP CORRUGATED POLYETHYLENE PIPE
DCB DOUBLE CATCH BASIN
DI DUCTILE IRON PIPE CEMENT LINED
DMH DRAIN MANHOLE
EJ EXPANSION JOINT
EMH ELECTRIC MANHOLE
FD FOUNDATION DRAIN
FEE FINISHED FLOOR ELEVATION
HP HIGH POINT
HYD FIRE HYDRANT
INV INVERT ELEVATION
LF LINEAR FEET
LOW LIMIT OF WORK
LP LOW POINT
LW LAB WASTE
M&P MAINTAIN AND PROTECT
NIC NOT IN CONTRACT
OC ON CENTER
OCS OUTLET CONTROL STRUCTURE
PD PERIMETER DRAIN
PERF PERFORATED
PVC POLYVINYL CHLORIDE PIPE
RAO REMOVE AND DISPOSE
RAS REMOVE AND STOCKPILE
RD ROOF DRAIN
RIM RIM ELEVATION
SMH SEWER MANHOLE
SS SEWER SERVICE
TC TOP OF CURB ELEVATION
THH TELECOM HANDHOLE
TMH TELECOM MANHOLE
TOP TOP OF PIPE
TOD TOP OF DUCT BANK
TYP TYPICAL
UD UNDERDRAIN
USD UNDERSLAB DRAIN
VCC VERTICAL GRANITE CURB
WCI WATER QUALITY INLET
WQS WATER QUALITY STRUCTURE
WV WATER VALVE

CLIENT:

ARCHITECT:



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PROJECT INFORMATION:

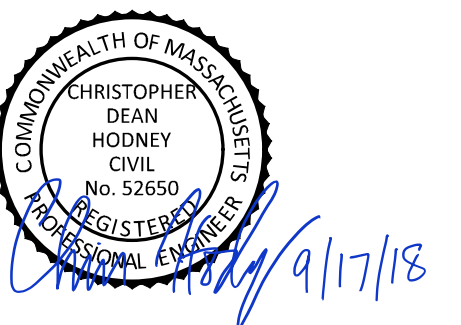
ADDISON STREET

Boston, MA 02128

ISSUANCE:

CONSERVATION COMMISSION SUBMISSION

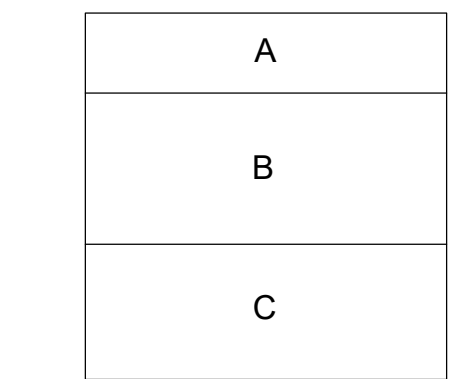
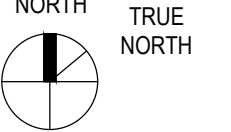
STAMP:



REVISIONS:

Table with 3 columns: No., Date, Description. Empty rows for revisions.

PROJECT NORTH TRUE NORTH



KEY PLAN

DRAWING TITLE:

Notes, Legend and Abbreviations

Table with 2 columns: Field, Value. Project No. 12433, Drawn By CH/WS, Date 09.19.2018, Scale As Noted.

DRAWING NUMBER:

C-000

