Construction Stormwater Pollution Prevention Plan Template

To be covered under the U.S. Environmental Protection Agency's (EPA) Construction General Permit (CGP), all construction operators are required to develop a "Stormwater Pollution Prevention Plan" (or "SWPPP") prior to submitting a Notice of Intent (NOI) for permit coverage. EPA created this SWPPP Template to help you develop a SWPPP that is compliant with the minimum requirements of Part 7 of EPA's 2017 Construction General Permit ("2017 CGP"), and is customizable to your specific project and site.

Instructions for Using the SWPPP Template

Each section of the SWPPP Template includes instructions and space for your project and site information. Read the instructions for each section before you complete that section. Specific instructions on what information to include is indicated in each text field in blue text. Click on the blue text and the instructions will disappear once you start typing. The SWPPP Template is an editable document file so that you can easily add tables and additional text, and delete unneeded or non-applicable fields. Note that some sections may require only a brief description while others may require several pages of explanation.

The following tips for using this template will help ensure that you meet the minimum permit requirements:

- Read the 2017 CGP thoroughly before you begin preparation of your SWPPP to ensure that you have a working understanding of the permit's underlying requirements. You will also need to consult Part 9 of the permit to determine if your state or tribe has included additional requirements that affect you.
- Complete the SWPPP prior to submitting your Notice of Intent (NOI) for permit coverage. This is required in Parts 1.4 and 7.1.
- If you prepared a SWPPP under a previous version of EPA's CGP, you must update your SWPPP to ensure that the 2017 CGP requirements are addressed prior to submitting your NOI.
- If there is more than one construction operator for your project, consider coordinating development of your SWPPP with the other operators.
- Once EPA has provided you coverage under the CGP, include your NOI, your authorization email, and a copy of the CGP as attachments to the SWPPP. See Appendices B and C of the SWPPP Template.

While EPA has made every effort to ensure the accuracy of all instructions contained in the SWPPP 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 SWPPP Template and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the SWPPP 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.

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

Arlington High School
869 Massachusetts Ave
Arlington, Ma 02476
(781)316-3594

SWPPP Prepared For:

Town of Arlington
730 Massachusetts Ave
Arlington, Ma 02476
(781)316-3000

SWPPP Prepared By:

Samiotes Consultants, Inc.
Stephan Garvin, P.E.
20 A Street
Framingham, MA 01701
(508) 877-6688 ext. #13
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SWPPP Preparation Date:

04/15/2020

Estimated Project Dates:

Project Start Date: 04/15/2020

Project Completion Date: 06/27/2025

Contents

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Operator(s) / Subcontractor(s)

Operator(s):

Consigli Construction Company
72 Sumner St
Milford MA 01757

John LaMarre
617-293-5296
jlamarre@consigli.com

Subcontractor(s):

TBD

Emergency 24-Hour Contact:

Chuck McWilliams
Senior Superintendent
508-962-2237
cmcwilliams@consigli.com

1.2 Stormwater Team

Stormwater Team		
Name and/or position, and contact	Responsibilities	I Have Read the CGP and Understand the Applicable Requirements
Chuck McWilliams Senior Superintendent 508-962-2237 cmcwilliams@consigli.com	Project oversight & implementing, maintaining and inspecting stormwater controls	☒ Yes Date: 3/27/2020

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1 Project/Site Information

Project Name and Address

Project/Site Name: Arlington High School Early Bidding Package
Project Street/Location: 869 Massachusetts Ave
City: Arlington
State: Massachusetts
ZIP Code: 02476
County or Similar Subdivision: Middlesex

Business days and hours for the project: M – F, Saturday. 7:00 am to 3:30 PM

Project Latitude/Longitude

Latitude: 42.417100° N (decimal degrees)

Longitude: - 71.162990 ° W (decimal degrees)

Latitude/longitude data source:

☐ Map ☒ GPS ☐ Other (please specify): _____

Horizontal Reference Datum:

☐ NAD 27 ☒ NAD 83 ☐ WGS 84

Additional Project Information

Are you requesting permit coverage as a "federal operator" as defined in Appendix A of the 2017 CGP? ☐ Yes ☒ No

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

If yes, provide the name of the Indian tribe associated with the area of Indian country (including the name of Indian reservation if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property:

If you are conducting earth-disturbing activities in response to a public emergency, document the cause of the public emergency *(e.g., natural disaster, extreme flooding conditions)*, information substantiating its occurrence *(e.g., state disaster declaration)*, and a description of the construction necessary to reestablish effective public services:

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?	☒ Yes	☐ No
Are there any waters of the U.S. within 50 feet of your project's earth disturbances?	☐ Yes	☒ No

For each point of discharge, provide a point of discharge ID (a unique 3-digit ID, e.g., 001, 002), 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, and the following receiving water information, if applicable:								
Point of Discharge ID	Name of receiving water:	Is the receiving water impaired (on the CWA 303(d) list)?	If yes, list the pollutants that are causing the impairment:	Has a TMDL been completed for this receiving waterbody?	If yes, list TMDL Name and ID:	Pollutant(s) for which there is a TMDL:	Is this receiving water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If yes, specify which Tier (2, 2.5, or 3)?
[001]	Boston Harbor: Mystic	☒ Yes ☐ No	Pathogens	☒ Yes ☐ No	Boston Harbor (MA70-01)	Fecal Coliform, Enterococci bacteria	☒ Yes ☐ No	Tier 2

2.3 Nature of the Construction Activities

General Description of Project

Early Bid Package- The proposed project will consist of removal/abandonment of existing utilities with re-routing of necessary utilities to keep the existing high school's services up and running throughout the construction project. It will also include relocation of a large culvert currently running beneath the school and temporary parking lots and parking.

Size of Construction Site

Size of Property	21 Acres
Total Area Expected to be Disturbed by Construction Activities	6.0 Acres
Maximum Area Expected to be Disturbed at Any One Time	6.0 Acres

Type of Construction Site *(check all that apply)*:

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

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 ☐ N/A

Was the pre-development land use used for agriculture (see Appendix A for definition of "agricultural land")? ☐ Yes ☒ No

Pollutant-Generating Activities

List and describe all pollutant-generating activities and indicate for each activity the type of pollutant that will be generated. 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 during construction.

Pollutant-Generating Activity (e.g., paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations)	**Pollutants or Pollutant Constituents** (e.g., sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels)
Paving Operation	Petroleum
Concrete/Paving	Cement
Landscaping	Fertilizers, sediment
Grading, Clearing & Grubbing	Sediment
Hydraulic Fluid/Fluids	Mineral Oil
Construction Vehicles	Benzene, ethyl benzene, toluene, xylene, MTBE, petroleum distillate, oil, grease, naphthalene, xylenes, mineral oil

Glue/Solvents	Polymer, epoxies

Construction Support Activities *(only provide if applicable)*

Describe any construction support activities for the project (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas):

Grading

Concrete Paving

Equipment/Material Staging areas

Contact information for construction support activity:

TBD

2.4 Sequence and Estimated Dates of Construction Activities

Phase I

Early Bid Package Phase 1	
Estimated Start Date of Construction Activities for this Phase	4/15/2020
Estimated End Date of Construction Activities for this Phase	12/24/2021
Estimated Date(s) of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	3/31/2020 *[Add additional dates as necessary]*
Estimated Date(s) when Stormwater Controls will be Removed	11/26/2021 *[Add additional dates as necessary]*

Phase II

Construction Phase 2, 3 & 4	
Estimated Start Date of Construction Activities for this Phase	1/3/2022
Estimated End Date of Construction Activities for this Phase	6/27/2025
Estimated Date(s) of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	11/26/2021 *[Add additional dates as necessary]*
Estimated Date(s) when Stormwater Controls will be Removed	8/1/2025 *[Add additional dates as necessary]*

2.5 Authorized Non-Stormwater Discharges

List of Authorized Non-Stormwater Discharges Present at the Site

Type of Authorized Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	☐ Yes ☒ No
Fire hydrant flushings	☐ Yes ☒ No
Landscape irrigation	☐ Yes ☒ No
Waters used to wash vehicles and equipment	☒ Yes ☐ No
Water used to control dust	☒ Yes ☐ No
Potable water including uncontaminated water line flushings	☐ Yes ☒ No
External building washdown (soaps/solvents are not used and external surfaces do not contain hazardous substances)	☐ Yes ☒ No
Pavement wash waters	☐ Yes ☒ No
Uncontaminated air conditioning or compressor condensate	☐ Yes ☒ No
Uncontaminated, non-turbid discharges of ground water or spring water	☐ Yes ☒ No
Foundation or footing drains	☐ Yes ☒ No
Construction dewatering water	☒ Yes ☐ No

2.6 Site Maps

Will be provided under separate cover.

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 Endangered Species Protection

Eligibility Criterion

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

☒ **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/Supporting documentation: A basis statement supporting the selection of Criterion A should identify the USFWS and NMFS information sources used. Attaching aerial image(s) of the site to your 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. Check the applicable source(s) of information you relied upon:

☐ Specific communication with staff of the USFWS and/or NMFS.

☒ Species list from USFWS and/or NMFS. See the CGP ESA webpage, Step 2 for available websites. Oliver GIS See Appendix K

☐ **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/Supporting documentation: A basis statement supporting the selection of Criterion B should identify the eligibility criterion of the other CGP NOI, the authorization date, and confirmation that the authorization is effective.

- ✓ Provide the 9-digit NPDES ID number from the other operator's NOI under the 2017 CGP: __ __ __ __ __ __ __ __ __
- ✓ Authorization date of the other 2017 CGP operator: INSERT AUTHORIZATION DATE OF OTHER OPERATOR
- ✓ Eligibility criterion of the other 2017 CGP operator: ☐A ☐C ☐D ☐E ☐F
- ✓ Provide a brief summary of the basis the other operator used for selecting criterion A, C, D, E, or F: Review of NHESP data provided within State GIS system.

☐ **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/Supporting documentation: A basis statement supporting the selection of Criterion C 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.

- ✓ Resources used to make determination: INSERT RESOURCES YOU USED TO DETERMINE THAT DISCHARGES ARE NOT LIKELY TO ADVERSELY AFFECT ESA-LISTED SPECIES OR DESIGNATED CRITICAL HABITAT
- ✓ ESA-listed Species/Critical Habitat in action area: INSERT LIST OF ESA-LISTED SPECIES OR DESIGNATED CRITICAL HABITAT LOCATED IN YOUR ACTION AREA
- ✓ Distance between site and ESA-listed Species/Critical Habitat: INSERT DISTANCE BETWEEN YOUR SITE AND THE ESA-LISTED SPECIES OR CRITICAL HABITAT (in miles)
- ✓ How adverse effects will be avoided: DESCRIBE SPECIFICALLY HOW ADVERSE EFFECTS TO ESA-LISTED SPECIES WILL BE AVOIDED FROM THE DISCHARGES AND DISCHARGE-RELATED ACTIVITIES

☐ **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/Supporting documentation: A basis statement supporting the selection of Criterion D 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.

- ✓ Agency coordinated with: ☐USFWS ☐ NMFS
- ✓ Field/regional office(s) providing coordination: INSERT FIELD/REGIONAL OFFICE(S) PROVIDING COORDINATION
- ✓ Date coordination concluded: INSERT DATE COORDINATION CONCLUDED

- ✓ Attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding coordination activities.

☐ **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:

- ☐ 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/Supporting documentation: A basis statement supporting the selection of Criterion E 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.

- ✓ Federal agency(ies) involved: INSERT FEDERAL AGENCY(IES) INVOLVED
- ✓ Field/regional office(s) providing consultation: INSERT FIELD/REGIONAL OFFICE(S) PROVIDING CONSULTATION
- ✓ Tracking numbers associated with consultation: INSERT CONSULTATION TRACKING NUMBER(S)
- ✓ Date consultation completed: INSERT DATE CONSULTATION COMPLETED
- ✓ Attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding consultation.

☐ **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/Supporting documentation: A basis statement supporting the selection of Criterion F 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.

- ✓ Agency providing section 10 permit: ☐USFWS ☐NMFS
- ✓ Field/regional office(s) providing permit: INSERT FIELD/REGIONAL OFFICE(S) PROVIDING PERMIT

- ✓ Tracking numbers associated with consultation: INSERT CONSULTATION TRACKING NUMBER(S)
- ✓ Date permit granted: INSERT DATE PERMIT GRANTED
- ✓ Attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service.

3.2 Historic Preservation

Appendix E, 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: INSERT SPECIFIC TYPE OF STORMWATER CONTROL

(Note: If you will not be installing any ground-disturbing stormwater controls, no further documentation is required for Section 3.2 of the Template.)

Appendix E, Step 2

If you answered yes in Step 1, have prior surveys or evaluations conducted on the site already 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, no further documentation is required for Section 3.2 of the Template.
- If no, proceed to Appendix E, Step 3.

Appendix E, Step 3

If you answered no in Step 2, have you determined that your installation of subsurface earth-disturbing 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 answered no in Step 3, did the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), or other tribal representative (whichever applies) respond to you within 15 calendar days 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 no historic properties will be affected by the installation of stormwater controls. INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE APPLICABLE SHPO, THPO, OR OTHER TRIBAL REPRESENTATIVE
- ☐ 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

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
- ☐ 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 YES, INSERT COPIES OF LETTERS, EMAILS, OR OTHER COMMUNICATION BETWEEN YOU AND THE STATE AGENCY OR EPA REGIONAL OFFICE

SECTION 4: EROSION AND SEDIMENT CONTROLS

4.1 Natural Buffers or Equivalent Sediment Controls

Buffer Compliance Alternatives

Are there any waters of the U.S. 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 on to Part 4.2.)

Check the compliance alternative that you have chosen:

☐ (i) I will provide and maintain a 50-foot undisturbed natural buffer.

(Note (1): You must show the 50-foot boundary line of the natural buffer on your site map.)

(Note (2): You must show on your site map how all discharges from your construction disturbances through the natural buffer area will first be treated by the site's erosion and sediment controls. Also, show on the site map any velocity dissipation devices used to prevent erosion within the natural buffer area.)

☐ (ii) I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

(Note (1): You must show the boundary line of the natural buffer on your site map.)

(Note (2): You must show on your site map how all discharges from your construction disturbances through the natural buffer area will first be treated by the site's erosion and sediment controls. Also, show on the site map any velocity dissipation devices used to prevent erosion within the natural buffer area.)

- INSERT WIDTH OF NATURAL BUFFER TO BE RETAINED
- INSERT EITHER ONE OF THE FOLLOWING:

  (1) THE ESTIMATED SEDIMENT REMOVAL FROM A 50-FOOT BUFFER USING APPLICABLE TABLES IN APP. G, ATTACHMENT 1. INCLUDE INFORMATION ABOUT THE BUFFER VEGETATION AND SOIL TYPE THAT PREDOMINATE AT YOUR SITE

  OR

  (2) IF YOU CONDUCTED A SITE-SPECIFIC CALCULATION FOR THE ESTIMATED SEDIMENT REMOVAL OF A 50-FOOT BUFFER, PROVIDE THE SPECIFIC REMOVAL EFFICIENCY, AND INFORMATION YOU RELIED UPON TO MAKE YOUR SITE-SPECIFIC CALCULATION.
- INSERT DESCRIPTION OF ADDITIONAL EROSION AND SEDIMENT CONTROLS TO BE USED IN COMBINATION WITH NATURAL BUFFER AREA
- INSERT THE FOLLOWING INFORMATION:
  - (1) SPECIFY THE MODEL OR OTHER TOOL USED TO ESTIMATE SEDIMENT LOAD REDUCTIONS FROM THE COMBINATION OF THE BUFFER AREA AND ADDITIONAL EROSION AND SEDIMENT CONTROLS INSTALLED AT YOUR SITE, AND
  - (2) INCLUDE THE RESULTS OF CALCULATIONS SHOWING THAT THE COMBINATION OF YOUR BUFFER AREA AND THE ADDITIONAL EROSION AND SEDIMENT CONTROLS INSTALLED AT YOUR SITE WILL MEET OR EXCEED THE SEDIMENT REMOVAL EFFICIENCY OF A 50-FOOT BUFFER

☒ (iii) It is infeasible to provide and maintain an undisturbed natural buffer of any size, therefore I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

Contractor will provide appropriate erosion control methods to simulate a 50 ft vegetated buffer.

☐ I qualify for one of the exceptions in Part 2.2.1.b. (If you have checked this box, provide information on the applicable buffer exception that applies, below.)

Buffer Exceptions

Which of the following exceptions to the buffer requirements applies to your site?

☐ There is no discharge of stormwater to the water of the U.S. that is located 50 feet from my construction disturbances.

(Note: If this exception applies, no further documentation is required for Section 4.1 of the Template.)

☒ No natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for this project.

(Note (1): If this exception applies, no further documentation is required for Section 4.1 of the Template.)

(Note (2): Where some natural buffer exists but portions of the area within 50 feet of the surface water are occupied by preexisting development disturbances, you must still comply with the one of the CGP Part 2.2.1.a compliance alternatives.)

☐ For a "linear construction sites" (defined in Appendix A), site constraints (e.g., limited right-of-way) make it infeasible to meet any of the CGP Part 2.2.1.a compliance alternatives. INCLUDE DOCUMENTATION HERE OF THE FOLLOWING: (1) WHY IT IS INFEASIBLE FOR YOU TO MEET ONE OF THE BUFFER COMPLIANCE ALTERNATIVES, AND (2) BUFFER WIDTH RETAINED AND/OR SUPPLEMENTAL EROSION AND SEDIMENT CONTROLS TO TREAT DISCHARGES TO THE SURFACE WATER

☐ The project qualifies as "small residential lot" construction (defined in Appendix A) (see Appendix G, Part G.3.2).

- ☐ For Alternative 1:
  - INSERT WIDTH OF NATURAL BUFFER TO BE RETAINED
  - INSERT APPLICABLE REQUIREMENTS BASED ON TABLE G-1
  - INSERT DESCRIPTION OF HOW YOU WILL COMPLY WITH THESE REQUIREMENTS
- ☐ For Alternative 2:
  - INSERT (1) THE ASSIGNED RISK LEVEL BASED ON APP. G APPLICABLE TABLE G-2 THROUGH G-6 AND (2) THE PREDOMINANT SOIL TYPE AND AVERAGE SLOPE AT YOUR SITE
  - INSERT APPLICABLE REQUIREMENTS BASED ON APP. G, TABLE G-7
  - INSERT DESCRIPTION OF HOW YOU WILL COMPLY WITH THESE REQUIREMENTS

☐ Buffer disturbances are authorized under a CWA Section 404 permit. INSERT DESCRIPTION OF ANY EARTH DISTURBANCES THAT WILL OCCUR WITHIN THE BUFFER AREA

(Note (1): If this exception applies, no further documentation is required for Section 4.1 of the Template.)
(Note (2): This exception only applies to the limits of disturbance authorized under the Section 404 permit, and does not apply to any upland portion of the construction project.)

☐ Buffer disturbances will occur for the construction of a water-dependent structure or water access area (e.g., pier, boat ramp, and trail). INSERT DESCRIPTION OF ANY EARTH DISTURBANCES THAT WILL OCCUR WITHIN THE BUFFER AREA

(Note (1): If this exception applies, no further documentation is required for Section 4.1 of the Template.)

4.2 Perimeter Controls

General

- Straw Wattles and Silt Fences shall be installed as shown on the Soil Erosion plans provided by Samiotes Consultants, Inc. prior to the commencement of construction. Additional erosion control barriers will be placed at the limit of work as needed and in any sensitive areas as work progresses.

Specific Perimeter Controls

Straw Wattles	
Description: Straw Wattles shall be manufactured from rice straw and be wrapped in a tubular plastic netting. Straw Wattles shall be a minimum of 9 to 12 inches in diameter.	
Installation	• Prior to the start of construction. • Straw Wattles shall be installed as shown on the plans. They shall be placed in rows with ends overlapping each other by 36" minimum. Each row shall be securely anchored in place in a 4" deep trench with stakes installed downstream of the wattles at sufficient spacing to prevent wattles from moving.
Maintenance Requirements	• Sedimentation shall be removed once the total depth of silt reaches 6". • Silt shall be disposed of in accordance with SWPPP.
Design Specifications	See sheet C-5.0 and specification 31 25 00 Erosion and Sediment Control.

Silt Fences	
Description: A geotextile fabric shall consist of long-chain synthetic polymers, composed of at least 85% by weight polyolefin, polyesters, or polyamides. The support fences shall be at least 48 inches high and strong enough to support applied loads.	
Installation	• Prior to the start of construction. • Straw Wattles shall be installed as shown on the plans. Wood posts shall consist of 1 ½" square, kiln dried, and hardwood posts. Steel posts of U, T, L, or C shape weighing 1.3 pounds per linear foot. Filter fabric shall be attached to wood posts with staples with 13 gage minimum, galvanized steel wire for steel post application.
Maintenance Requirements	• Sedimentation shall be removed once the total depth of silt reaches 6". Silt shall be removed off site abiding by local jurisdiction.
Design Specifications	See specification 31 25 00 Erosion and Sediment Control.

4.3 Sediment Track-Out

General

- The construction entrances shall be placed at the West and South sides of the building site off of Massachusetts Ave and Schouler Court and off of Mill Brook Drive. In addition to the construction entrance, an geotextile fabric shall be nonwoven fabric conforming to AASHTO M288, Grade C or better will be installed to ensure no debris leaves the site. A mechanical street sweeper shall be utilized clean the existing paved areas on an as-needed basis.

Specific Track-Out Controls

GeoTextile Fabric	
Description: The construction entrance shall be a minimum of 50-feet in length and 10-feet wide, and the thickness shall not be less than 6" of crushed stone. In addition to the construction entrance, a mechanical street sweeper shall be utilized to clean the existing paved areas on an as-needed basis.	
Installation	Prior to the start of construction
Maintenance Requirements	• The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. All sediment spoiled, dropped, washed, or tracked onto public rights of way must be removed immediately. • The area of the construction entrance shall be cleared of all vegetation, roots, and other objectionable material. The filter fabric should be placed on the subgrade prior to the gravel placement. The gravel shall be placed to the specified dimensions depicted on the plans. The filter fabric should be placed on the subgrade prior to the gravel placement. The gravel shall be placed to the specified dimensions depicted on the plans.
Design Specifications	Stone shall be clean, crushed stone, ranging from [1 in. to 3 in.] in size. Stone shall not be less than 6 in. thick. The rock shall be dumped and spread into position in approximately horizontal layers not to exceed 3 ft. in thickness. It shall be placed to produce a reasonably homogeneous stable fill that contains no segregated pockets of large or small fragments or large unfilled spaces caused by bridging of the larger rock fragments. No compaction is required beyond that resulting from the placing and spreading operations.

4.4 Stockpiled Sediment or Soil

General

1. Cut and fill slopes and stockpiled materials shall be protected to prevent erosion with permanent erosion protection when erosion exposure period is expected to be greater than or equal to six months, and temporary erosion protection when erosion exposure

period is expected to be less than six months. Cut and fill slopes shall be limited to a grade of 2:1 (horizontal:vertical).

Specific Stockpile Controls

Stockpile	
Description: Stripping and stockpiling	
Installation	• As needed. • Locate and retain soil materials away from edge of excavations, brush, trash, large stones and other extraneous materials.
Maintenance Requirements	• Do not strip topsoil in tree protection zones. • Remove sod and grass before stripping topsoil. • Surplus topsoil and fill not required to fulfill the requirements of the contract shall become the property of the contractor and shall be removed from the site and legally disposed of at no cost to the owner.
Design Specifications	See specification 31 25 00 Erosion and Sediment Control.

- All temporary stockpiles will be surrounded by straw wattles and/or silt fences to minimize erosion and limit the discharge of pollutants. It is expected that minimal stockpiling will occur on site, if straw wattles provide proper erosion control they may be used without silt fences.

Silt Fence with Straw Wattles	
Description: Silt Fence with Straw Wattles	
Installation	• As needed
Maintenance Requirements	• Silt fence shall be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly set in the ground.
Design Specifications	See Specification 312500 Erosion and Sediment Control, detail 1 on sheet C-5.0.

4.5 Minimize Dust

General

- The contractor shall employ dust control methods and materials at all times using sprinkled water or other approved means. Do not use oil or similar penetrants. Chemical materials may not be used on subgrades of areas to be seeded or planted. Water used for dust control measure shall be applied using appropriate quantities and equipment.

Specific Dust Controls

Sprinkler	
Description: On-site truck or sprinkler	
Installation	As needed

Maintenance Requirements	• Water used for dust control and equipment washes shall be clean and free of salt, oil, and other injurious materials. • If water is not available on site, the contractor shall provide a source of water for dust control; either a water truck on-site or permitted connection to City Fire Hydrant throughout the period of construction. • No calcium chloride may be used
Design Specifications	N/A

4.6 Minimize Steep Slope Disturbances

General

- Steep slopes are not anticipated to occur on this project. Except where specified slope is indicated on drawings, fill slopes shall be limited to a grade of 2:1 (horizontal: vertical), cut slopes shall be limited to a grade of 2:1.

Specific Steep Slope Controls

Erosion Protection Materials	
Description: N/A	
Installation	N/A
Maintenance Requirements	N/A
Design Specifications	N/A

Seeding with grass	
Description: N/A	
Installation	N/A
Maintenance Requirements	N/A
Design Specifications	N/A

4.7 Topsoil

General

- All temporary stockpiles shall be protected from rain and wind erosion with compost filler tubes and straw waddles.

Specific Topsoil Controls

Silt fences with straw wattles	
Description: Silt fences with straw wattles	
Installation	As needed.
Maintenance Requirements	Weekly inspection and after any significant rainstorm.
Design Specifications	See specification 31 25 00 and sheet C-5.0.

Straw wattles	
Description: Straw wattles	
Installation	As needed.
Maintenance Requirements	Weekly inspection and after any significant rainstorm.
Design Specifications	See specification 31 25 00.

4.8 Soil Compaction

General

- Areas with fill, backfill, and subgrades will be required for compaction. This includes any earthwork, paving, drainage trenches and retaining walls. See respective specifications for all description and maintenance requirements.

Specific Soil Compaction Controls

Soil Compaction	
Description: Soil compaction on site.	
Installation	As needed
Maintenance Requirements	• Subgrade of areas to be paved shall be re-compacted as required to bring top 9 in. of material immediately below gravel base course to a compaction of at least 90% of maximum dry density, as determined by ASTM D 1557, Method D Subgrade compaction shall extend for a distance of at least 1 ft. beyond pavement edge. • Gravel shall be spread and compacted in layers not exceeding 8 inches in depth, except the last layer of gravel sub-base (conforming to Mass DOT specifications section M1.03.0 Type B) will be 4" in depth. Layers shall be compacted to 95 percent of the maximum dry density of the material as determined by standard AASHTO test designation T99 compaction test method C at optimum moisture content as determined by the architect. • Dense graded crushed stone shall be spread and compacted in layers not exceeding 8 inches in depth, except the last layer of gravel sub-base (conforming to Mass DOT specification M1.03.0 Type B) will be 4" in depth. Layers shall be compacted to 95 percent of the maximum dry density of the material as determined by Standard AASHTO test designation T99 compaction test Method C at optimum moisture content as determined by the architect. • If the geotechnical engineer determines that the fill material is too dry for proper compaction, water shall be added to provide the specified optimum moisture content, as necessary for proper compaction.
Design Specifications	See specification 32 12 16 Asphalt Paving, 33 10 00 Water Systems, 33 30 00 Sanitary Sewage System, and 33 30 00 Storm Drainage System.

4.9 Storm Drain Inlets

General

- Catch Basins Rain Gardens and Slab Drains shall be used to filter suspended sediments from entering stormwater flow.

Specific Storm Drain Inlet Controls

Catch Basin Insert	
Description: • Catch Basin insert shall be installed in retained existing and proposed catch basins and area drains as shown on Construction Documents and as required by the Engineer of Record. • Catch basin filters shall be manufactured from a woven polypropylene geotextile and sewn by a double needle machine, using a high strength nylon thread. Seams have a certified average wide width strength per ASTM D-4884 of 165.0 lbs./in. • The filters will be manufactured to fit the opening of the catch basin or drop inlet. The filters will have the following features: two dump straps attached at the bottom to facilitate the emptying of the filters; the filters will also have lifting loops as an integral part of the system to be used to lift the filters from the basin. The filters will have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls; this yellow cord shall also be a visual means of indicating when the sack should be emptied.	
Installation	• Catch basin, filters shall be placed at all inlets to drainage structures as structures are installed and prior to construction. Outlet protection work shall be constructed before runoff is allowed to enter the drainage system. Construction and location of catch basin filters shall be as indicated on the Drawings. • Once the strap is covered with sediment, the catch basin filter should be emptied, cleaned and placed back into the basin with a depth of 6 inches.
Maintenance Requirements	• The Contractor shall inspect the condition of catch basin insert after each rainstorm and during major rain events. • Catch basin insert shall be cleaned periodically to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Department. • When emptying the catch basin insert, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. • The silt and sediment from the catch basin insert shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction. • All curb openings shall be blocked to prevent stormwater from bypassing the device.
Design Specifications	See Specification 312500 Erosion and Sediment Control and detail 6 on C-5.1.

4.10 Stormwater Conveyance Channels

General

- No conveyance channels are anticipated as part of the project.

Specific Conveyance Channel Controls

N/A	
Description: N/A	
Installation	• N/A
Maintenance Requirements	• N/A
Design Specifications	N/A

4.11 Sediment Basins

General

- No sediment basins are anticipated as part of this project.

4.12 Chemical Treatment

Soil Types
List all the soil types (including soil types expected to be found in fill material) that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems: Reference McPhail NOI RGP dated 02/24/20

Treatment Chemicals
List all treatment chemicals that will be used at the site and explain why these chemicals are suited to the soil characteristics: Reference McPhail NOI RGP dated 02/24/20
Describe the dosage of all treatment chemicals you will use at the site or the methodology you will use to determine dosage: Reference McPhail NOI RGP dated 02/24/20

Provide information from any applicable Safety Data Sheets (SDS): TBD

Describe how each of the chemicals will stored: In a locked secure on site storage container. Access controlled by treatment subcontractor.

Include 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: INSERT TEXT HERE

Special Controls for Cationic Treatment Chemicals (if applicable)
If the applicable EPA Regional Office authorized you to use cationic treatment chemicals, include the official EPA authorization letter or other communication, and identify 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: INSERT (1) ANY LETTERS OR OTHER DOCUMENTS SENT FROM THE EPA REGIONAL OFFICE CONCERNING YOUR USE OF CATIONIC TREATMENT CHEMICALS, AND (2) DESCRIPTION OF ANY SPECIFIC CONTROLS YOU ARE REQUIRED TO IMPLEMENT

Schematic Drawings of Stormwater Controls/Chemical Treatment Systems
Provide schematic drawings of any chemically-enhanced stormwater controls or chemical treatment systems to be used for application of treatment chemicals: Reference McPhail NOI RGP dated 02/03/20 Figure 3 pg. 11.

Training
Describe the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to the use of treatment chemicals: TBD

4.13 Dewatering Practices

General

- Dewatering: Prevent water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area. Under no circumstances shall pipe be installed in water. Keep all trenches free from water until they have been backfilled.

Specific Dewatering Practices

Dewatering	
Description: • Dewatering shall be used to prevent damages, reduce erosion and control runoff. • The discharge water generated by the construction dewatering will be directed to a temporary detention basin or settling basin as permitted by state regulation. • The pumping discharge shall not be allowed to enter directly into the wetlands. The water from the work areas shall be pumped to a temporary sedimentation and de-watering basin. Approximately 70 percent sedimentation trapping efficiency shall be achieved in sizing the basins to ensure that the basins are adequate to prevent overtopping from dewatering and to provide the required filtering. The outlet from the basin shall be located so as not to cause erosion of the surrounding area. • Locations of the temporary sedimentation and de-watering basins are to be selected by the Contractor within Limit of Work Layout subject to approval from the Design Engineer/ Landscape Architect.	
Installation	At the conclusion of construction dewatering activities, any and all well point and casings, and equipment will be removed from the site.
Maintenance Requirements	• Inspect basin at least twice daily during dewatering operations • Repair any damages to the basin immediately. • Clean basin outlet daily. • Remove any debris immediately. • Remove sediments frequently to maintain efficiency and function of the basin. • Legally dispose sediments outside of wetland areas at a location approved by the Engineer. • Monitor dewatering systems continuously. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations. Comply with governing EPA notification regulations before beginning dewatering. Comply with hauling and disposal regulations of authorities having jurisdiction.
Design Specifications	N/A

4.14 Other Stormwater Controls: N/A

General

N/A

Specific Stormwater Control Practices

N/A	
Description: N/A	
Installation	N/A
Maintenance Requirements	N/A
Design Specifications	N/A

4.15 Site Stabilization

Total Amount of Land Disturbance Occurring at Any One Time

☐ *Five Acres or less*

☒ *More than Five Acres*

Use this template box if you are <u>not</u> located in an arid, semi-arid, or drought-stricken area

Temporary Seeding	
☒ *Vegetative* ☐ *Non-Vegetative* ☒ *Temporary* ☐ *Permanent*	
Description: ▪ During construction it may be necessary to temporarily stabilize areas that will not be brought to final grade for a period longer than 30 working days. Temporary seeding is accomplished using fast-growing grass seed species such as ryegrass. ▪ All exposed soil finish grades shall be immediately landscaped, riprapped, loamed, seeded, mulched or otherwise protected and stabilized as shown on the drawings with a layer of straw mulch hay.	
Installation	Exposed grades for longer than 30 days
Completion	As needed
Maintenance Requirements	• Inspect within 6 weeks to see if stands are adequate. • Check for damage after heavy rains. • Stands should be uniform and dense. • Fertilize, reseed, and mulch damaged and sparse areas immediately. Track or tie down much as necessary. • Seeds should be supplied with adequate moisture. • Furnish water as needed.

Design Specifications	See Specification 31 25 00 Erosion and Sediment Control

Straw Hay	
☐ *Vegetative* ☐ *Non-Vegetative* ☒ *Temporary* ☐ *Permanent*	
Description: ▪ All exposed soil finish grades shall be immediately landscaped, riprapped, loamed, seeded, mulched or otherwise protected and stabilized as shown on the drawings with a layer of straw mulch hay. ▪ Outside of the growing season, exposed soil finish grade surfaces shall be stabilized with a layer of straw hay until climate conditions allow for seeding.	
Installation	Exposed grades for longer than 30 days outside of the growing season.
Completion	As Needed
Maintenance Requirements	• Inspect within 6 weeks. • Check for damage after heavy rains.
Design Specifications	See Specification 312500 Erosion and Sediment Control

SECTION 5: POLLUTION PREVENTION STANDARDS

5.1 Potential Sources of Pollution

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)
Construction Vehicles	Benzene, ethyl benzene, toluene, xylene, MTBE, petroleum distillate, oil, grease, naphthalene, xylenes, mineral oil	Within limit of work
Hydraulic Fluid/Fluids	Mineral oil	Potential leaks from broken hoses
Glue/Solvents	Polymer, epoxies	PVC pipe for ductwork
Concrete	Cement	See site plans
Landscaping	Sediment, Fertilizers	See site plans
Grading	Sediment	See site plans
Clearing and Grubbing	Sediment	Topsoil to be removed from within limit of work

Paving	Petroleum	Parking, access ways

5.2 Spill Prevention and Response

- **Material Management Practices:**
  The following are the material management practices that shall be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.
- **Good Housekeeping:**
  The following good housekeeping practices will be followed on site during the construction project.
  1. A concerted effort shall be made to store only enough product required to complete a particular task.
  2. All materials stored on site shall be stored in a neat and orderly fashion in their appropriate containers and, if possible, under a roof or other secure enclosure.
  3. Products shall be kept in their original containers with the original manufacturer's label.
  4. Substances shall not be mixed with one another unless recommended by the manufacturer.
  5. Whenever possible, all of a product shall be used up before disposing of the container.
  6. Manufacturer's recommendations for proper use and disposal shall be followed.
  7. The site superintendent shall perform a daily site inspection to ensure proper use and disposal of materials on site.
- **Hazardous Products:**
  The following practices are intended to reduce the risks associated with hazardous materials.
  1. Products shall be kept in original containers unless they are not resealable.
  2. Where feasible, the original labels and material safety data shall be retained, whereas they contain important product information.
  3. If surplus product must be disposed, follow manufacturer's or local and state recommended methods for proper disposal.
- **Product Specific Practices:**
  The following product specific practices shall be followed on site:

  Petroleum Products:
  All on site vehicles shall be monitored for leaks and receive regular preventative maintenance to reduce the risk of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any bituminous concrete or asphalt substances used on site shall be applied according to the manufacturer's recommendations.

  Fertilizers:
  Fertilizers shall be applied in the minimum amounts recommended by the manufacturer. Once applied, fertilizers shall be worked into the soil to limit exposure to stormwater. Storage shall be in a covered shed or trailer. The contents of any partially used bags of fertilizers shall be transferred to a sealable plastic bag or bin to avoid spills. Fertilizers shall be applied in the minimum amounts recommended by the manufacturer. Once applied, fertilizers shall be worked into the soil to limit exposure to stormwater. Storage shall be in a covered shed or trailer. The contents of any partially used bags of fertilizers shall be transferred to a sealable plastic bag or bin to avoid spills.

  Paints:
  All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged into any catch basin, drain manhole, or any portion of the stormwater management system. Excess paint shall be properly disposed of according to manufacturer's recommendations or State and local regulations.

  Concrete Trucks:
  Concrete trucks shall not be allowed to wash out or discharge surplus concrete or drum wash water on site.
- **Spill Control Practices:**
  In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices shall be followed for spill prevention and cleanup:

1. Manufacturer's recommended methods for cleanup shall be readily available at the on site trailer and site personnel shall be made aware of the procedures and the location of the information.
2. Materials and equipment necessary for spill cleanup shall be kept in the material storage area on site. Equipment and materials shall include, but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
3. All spills shall be cleaned up immediately after discovery.
4. The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
5. Spills of toxic or hazardous material shall be reported to the appropriate State and/or local authority in accordance with local and/or State regulations.

6. The spill prevention plan shall be adjusted to include measures to prevent a particular type of spill from reoccurring and how to clean up the spill if there is another occurrence. A description of the spill, what caused it, and the clean up measures shall also be included.
7. The Town of Needham or their assigned designee shall be the spill prevention and cleanup coordinator. The c Saugus shall designate at least three other site personnel who will be trained in the spill control practices identified above.

If a substantial release occurs that is equal to or exceeds a reportable quantity (RQ) as defined under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, site personnel must notify the National Response Center (NRC) at 1-800-424-8802 as soon as knowledge of the discharge is obtained. Additionally, releases exceeding an RQ as identified in the Massachusetts Contingency Plan

(310 CMR 40.0000) must be reported to the MA DEP. The local fire department should also be informed.

5.3 Fueling and Maintenance of Equipment or Vehicles

General

- Several types of vehicles and equipment will be used on-site throughout the project, including but not limited to graders, scrapers, excavators, loaders, trucks and trailers, backhoes, and forklifts. All major equipment/vehicle maintenance will be performed off-site. When equipment fueling must occur on-site, the fueling activity will occur in the staging area.

Specific Pollution Prevention Practices

Fueling and Maintenance of Equipment or Vehicles	
Description: If necessary, only minor equipment maintenance will occur on-site. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area.	
Installation	As needed
Maintenance Requirements	Equipment shall be inspected daily
Design Specifications	N/A

5.4 Washing of Equipment and Vehicles

General

- Construction equipment and vehicles shall be rinsed of dirt and debris before being stored or leaving the site.

Specific Pollution Prevention Practices

Washing of Equipment and Vehicles	
Description: • Construction vehicles shall be rinsed thoroughly of dirt and debris at the construction entrance before leaving the site. • Concrete trucks will wash out, or discharge surplus concrete or drum wash water, at the site in the staging area. Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete will be properly disposed of off-site. • A washout area will be constructed before concrete pours occur on the site, if required. It shall be lined with a plastic sheet (6 mils thick) free of any holes or tears. Signs shall be posted marking designated washout areas to ensure the concrete equipment operators use the proper facility. • Washing requiring soap or solvents shall be conducted in a tub, bucket, or barrier to contain contaminated water runoff. Wash water shall be discarded in the concrete washout station.	
Installation	Washout area will be installed before concrete is poured,
Maintenance Requirements	The washout area will be inspected daily to ensure all concrete washing is being discharges to the washout area, and no tears or leaks are present. When the temporary washout is full or no longer needed for the project, the hardened concrete be removed and disposed of legally.
Design Specifications	N/A

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

5.5.1 Building Products

General

- All building products shall be stored under temporary cover.

Specific Pollution Prevention Practices

Building Products	
Description: Building products shall be covered with an impermeable barrier at the end of each working day.	
Installation	When necessary, as building products arrive.
Maintenance Requirements	• Materials shall be stored in a dry location, off the ground and in such manner as to prevent damage, and intrusion of foreign matter and weather. All materials which have become damaged or otherwise unfit for use during delivery or storage shall be replaced at the expense of the contractor.
Design Specifications	N/A

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

General

- Seed, fertilizer, mulch and water shall be mixed and applied to achieve application quantities specified. The use of Pesticides, Herbicides, and Insecticides is subject to the approval of the Engineer / Landscape Architect, and is to be handled by state-licensed operators only. Fertilizer quantity, gradation, and rate of application shall be determined based on soil tests and recommendations conducted by an approved soil testing laboratory. If this changes, it shall be requested in writing by the Contractor, approved in writing by the Landscape architect, and the SWPPP will be updated.

Specific Pollution Prevention Practices

Fertilizers, pesticides and herbicides control	
Description: Fertilizers, pesticides, herbicides shall not be used within 50 feet of any wetlands resource areas on this property. Fertilizers utilized for landscaping and lawn care in the outer Buffer Zone shall be organic and used sparingly.	
Installation	• Fertilizer shall not be applied outside the growing season, defined as April 15th to October 31st. No late season fertilization is allowed. • No fertilizer shall be applied during rainfall or before prediction of rain.
Maintenance Requirements	All fertilizers, herbicides and pesticides shall be stored off site or in a dry area that is protected from weather and secured to prevent children from obtaining access to them. Any major spills shall be reported to municipal officials.
Design Specifications	Order of Conditions.

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

General

- Diesel fuel, oil, hydraulic fluids, other petroleum products and other chemicals shall not be stored on site. Truck beds shall be kept free of kerosene, gasoline, fuel, oil, solvents, or other materials.
- Contractor to provide off-site trucks to refuel on-site vehicles (backhoes, bulldozers, etc.).

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Installation	N/A
Maintenance Requirements	N/A
Design Specifications	N/A

5.5.4 Hazardous or Toxic Waste

General

- Remove, haul from site, and legally dispose of all waste materials and debris not required to be saved. Accumulation is not permitted. Comply with all regulations regarding handling, storage, and disposal of all hazardous materials and waste. Consult local agencies or disposal companies for individual instructions and requirements. Improper disposal of paint and their related materials is illegal and may result in large fines. Please comply with all regulations and minimize waste whenever possible.

Specific Pollution Prevention Practices

Hazardous or Toxic Waste	
Description: The container storing hazardous and toxic materials shall be bolted, or chained to a permanent structure and shall be locking with separate keys. If this container itself is not weather tight and is exposed to the weather, it shall be covered with an impermeable barrier at the end of each working day.	
Installation	As Needed
Maintenance Requirements	• Maintain disposal routes clear, clean, and free of debris. • On-site burning of combustible cleared materials is not permitted. • Cover trucks used for hauling, follow approved routes, obtain disposal permits required and pay all fees in connection with disposal of materials removed. • Upon completion of site preparation work. Clean areas of work, remove tools and equipment. Provide site clear, clean, and free of materials and debris and suitable for site construction operations.
Design Specifications	N/A

5.5.5 Construction and Domestic Waste

General

- All waste materials will be collected and disposed of into metal trash dumpsters. Dumpsters will have a secure watertight lid, be placed away from stormwater conveyances and drains, and meet all federal, state, and municipal regulations. Only trash and construction debris from the site will be deposited in the dumpster. No construction materials will be buried on-site. All personnel will be instructed, during tailgate training sessions, regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted in the office trailer and the individual who manages day-today site operations will be responsible for seeing that these practices are followed.

Specific Pollution Prevention Practices

Construction and Domestic Waste	
Description: Clean entire area daily. All trash and job related debris shall be removed from the site or stored in an approved dumpster at the contractor's discretion, unless otherwise specified by Town Official. The location of any dumpsters shall be coordinated with the school department. Dumpsters shall be covered at all times other than to provide adequate capacity for job related debris at all times.	
Installation	Prior to Start of Construction
Maintenance Requirements	Dumpsters shall be inspected twice per week and immediately after storm events. Remove waste material promptly from premises. Store material and equipment in dry location, in neat and orderly fashion. Ensure adequate security for electrical material and equipment stored at job.
Design Specifications	N/A

5.5.6 Sanitary Waste

General

- Portable sanitary units will be provided for use by all workers throughout the life of the project. A licensed sanitary waste management contractor will regularly collect all sanitary waste from the portable units.

Specific Pollution Prevention Practices

Sanitary Waste	
Description: Portable toilets will be self-contained units meeting local, State and Federal requirements.	
Installation	• Prior to Start of Construction • The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the Site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work.
Maintenance Requirements	• Waste for the portable toilets shall be collected a minimum of once a week. The toilets shall be inspected weekly for sign of leaking. Toilets that are leaking shall be removed from the site and replaced. • The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He/she shall vigorously prohibit the committing of nuisance on the Site of the Work, on lands of the Owner, or an adjacent property.
Design Specifications	N/A

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

General

- See section 5.4

Specific Pollution Prevention Practices

See section 5.4	
Description: See section 5.4	
Installation	See section 5.4
Maintenance Requirements	See section 5.4
Design Specifications	See section 5.4

5.7 Fertilizers

General

- The contractor shall provide all labor, materials, equipment and services necessary for, and incidental to, preparation of ground surfaces, fertilizing, liming, seeding, mulching, and maintenance of seeded areas as shown on the Drawings.

Specific Pollution Prevention Practices

Fertilizers	
Description: See Section 5.5.2.	
Installation	See Section 5.5.2
Maintenance Requirements	See Section 5.5.2.
Design Specifications	See Section 5.5.2.

5.8 Other Pollution Prevention Practices

General

- N/A

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Installation	N/A
Maintenance Requirements	N/A
Design Specifications	N/A

SECTION 6: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION

6.1 Inspection Personnel and Procedures

Personnel Responsible for Inspections

Steve Thulin

Note: All personnel conducting inspections must be considered a "qualified person." CGP Part 4.1 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 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 Schedule

Select the inspection frequency(ies) that applies, based on CGP Parts 4.2, 4.3, or 4.4

(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 (if applicable):
For areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3 ☒ Every 7 days and within 24 hours of a 0.25" rain
Reduced Frequency (if applicable)
For stabilized areas ☐ Twice during first month, no more than 14 calendar days apart; then once per month after first month; (Note: It is likely that you will not be able to include this in your initial SWPPP. If you qualify for this reduction (see CGP Part 4.4.1), you will need to modify your SWPPP to include this information.)
For stabilized areas on "linear construction sites" ☐ Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of a 0.25" rain (Note: It is likely that you will not be able to include this in your initial SWPPP. If you qualify for this reduction (see CGP Part 4.4.1), you will need to modify your SWPPP to include this information.)
For arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought ☐ Once per month and within 24 hours of a 0.25" rain Insert beginning and ending dates of the seasonally-defined dry period for your area or the valid period of drought: ▪ Beginning date of seasonally dry period: 7/6/2020 ▪ Ending date of seasonally dry period: 9/7/2020

For frozen conditions where earth-disturbing activities are being conducted

☒ Once per month

Insert beginning and ending dates of frozen conditions on your site:

- Beginning date of frozen conditions: NA
- Ending date of frozen conditions: NA

Inspection Report Forms

See Appendix D

- All area-drain, catch basins, drain manholes and other structures shall be inspected before and after construction. The condition of the structures shall be recorded.
- All stormwater control devices are to be inspected weekly (7 days) and within 24-hours of the occurrence of a storm even event of 0.25" depth or greater (even if the storm is still continuing.
- Litter and debris clean-up shall be performed daily.
- If a problem is observed with an erosion and sediment control (needs repair or replacement), work must be initiated immediately to fix the problem, and shall be completed by the end of the next work day. If the repair or replacement is more substantial, it shall be completed within 7 calendar days from the time of discovery. If a repair takes longer than 48-hours, the repair procedures should be documented and recorded.
- If discharge of stormwater is occurring during an inspection, the location and quality of the discharge shall be noted as well as the effectiveness of erosion and sediment controls.

Rain Gauge Location (if applicable)

N/A

(Note: EPA has developed a sample inspection form that CGP operators can use. The form is available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources)

6.2 Corrective Action

Personnel Responsible for Corrective Actions

See section 1.1

Corrective Action Forms

See Appendix E

(Note: EPA has developed a sample corrective action form that CGP operators can use. The form is available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources)

6.3 Delegation of Authority

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

Consigli Construction Company
72 Sumner St
Milford MA 01757

John LaMarre
617-293-5296
jlamarre@consigli.com

SECTION 7: TRAINING

Table 7-1: Documentation for Completion of Training

Name	Describe Training	Date Training Completed
INSERT NAME OF PERSONNEL		INSERT COMPLETION DATE
TBD		

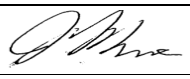
SECTION 8: CERTIFICATION AND NOTIFICATION

Instructions (CGP Appendix I, Part I.11.b):

- The following certification statement must be signed and dated by a person who meets the requirements of Appendix I, Part I.11.b.
- This certification must be re-signed in the event of a SWPPP Modification.

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: John LaMarre Title: Senior Project Manager

Signature:  Date: 03/30/20

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – Site Maps

Appendix B – Copy of 2017 CGP
(Note: The 2017 CGP is available at https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents)

Appendix C – NOI and EPA Authorization Email

Appendix D – Inspection Form
(Note: EPA has developed a sample inspection form that CGP operators can use. The form is available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources)

Appendix E – Corrective Action Form
(Note: EPA has developed a sample corrective action form that CGP operators can use. The form is available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources)

Appendix F – SWPPP Amendment Log

Appendix G – Subcontractor Certifications/Agreements

Appendix H – Grading and Stabilization Activities Log

Appendix I – Training Log

Appendix J – Delegation of Authority

Appendix K – Endangered Species Documentation

Appendix L – Historic Preservation Documentation

Appendix A – Site Maps

Under separate cover

Appendix B – Copy of 2017 CGP

Insert copy of the CGP.

(Note: The 2017 CGP is available at https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents)

Appendix C – Copy of NOI and EPA Authorization email

INSERT COPY OF NOI AND EPA'S AUTHORIZATION EMAIL PROVIDING COVERAGE UNDER THE CGP

LaMarre, John

From: NPDES, GeneralPermits <Npdes.Generalpermits@epa.gov>
Sent: Tuesday, March 17, 2020 4:07 PM
To: LaMarre, John
Cc: William Burns; catherine.vakalopoulos@state.ma.us; achapdelaine@town.arlington.ma.us; PubWorks@town.arlington.ma.us
Subject: RE: Arlington High School - RGP NOI
Attachments: MAG910911_Authorization_signed.pdf

Good afternoon,

Attached, please find the written authorization to discharge under the Remediation General Permit (RGP) for the referenced site.

Please let me or Shauna Little (little.shauna@epa.gov) know if you have any questions or concerns.

Best,
Michelle Vuto
Stormwater & Construction Permits
U.S. EPA Region 1
5 Post Office Square (06-4)
Boston, MA 02109-3912
617-918-1222

From: William Burns <wb@mcphailgeo.com>
Sent: Monday, March 02, 2020 12:43 PM
To: NPDES, GeneralPermits <Npdes.Generalpermits@epa.gov>
Subject: RE: Arlington High School - RGP NOI

Thank you, Shauna.

Bill Burns, L.S.P., L.E.P.

McPHAIL ASSOCIATES, LLC
617-868-1420 Ext. 341

From: Little, Shauna [mailto:Little.Shauna@epa.gov] **On Behalf Of** NPDES, GeneralPermits
Sent: Monday, March 02, 2020 12:42 PM
To: William Burns <wb@mcphailgeo.com>; NPDES, GeneralPermits <Npdes.Generalpermits@epa.gov>
Cc: Lori Cowles <lcowles@hmfh.com>; Jonathan Patch <JWP@mcphailgeo.com>; Christopher P. Miller <CMiller@mcphailgeo.com>; jlamarre@consigli.com
Subject: RE: Arlington High School - RGP NOI

EPA received the NOI and it will be reviewed shortly.

Regards,

Shauna Little
Physical Scientist
Water Division
U.S. EPA Region 1
Phone: (617) 918-1989

From: William Burns <wb@mcphailgeo.com>
Sent: Monday, March 02, 2020 10:52 AM
To: NPDES, GeneralPermits <Npdes.Generalpermits@epa.gov>
Cc: catherine.vakalopoulos@state.ma.us; Lori Cowles <lcowles@hmfh.com>; Jonathan Patch <JWP@mcphailgeo.com>; Christopher P. Miller <CMiller@mcphailgeo.com>; jlamarre@consigli.com
Subject: Arlington High School - RGP NOI

To Whom it May Concern,

For your approval, attached is a copy of the Notice of Intent for Discharge under the MA Remediation General Permit for the upcoming construction activities associated with the new Arlington High School project . In addition, attached is the MA Limit Book working spreadsheets which were utilized as part of our evaluation of discharge limitations. Please let me know if you have any questions or require any additional information. Thank you.

-Bill

William J. Burns, L.S.P., L.E.P.

McPHAIL ASSOCIATES, LLC
2269 Massachusetts Avenue
Cambridge, MA 02140
Tel: 617-868-1420 ext. 341
Direct: 617-349-7341
www.mcphailgeo.com

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

VIA EMAIL

March 17, 2020

John LaMarre
Consigli Construction Co., Inc.
72 Sumner Street
Milford, MA 01757
JLaMarre@consigli.com

Re: Authorization to discharge under the Remediation General Permit (RGP) Œ Authorization #MAG910911 for the Arlington High School site located at 869 Massachusetts Ave in Arlington, MA

Dear John LaMarre:

Based on the review of a Notice of Intent (NOI) received March 2, 2020 submitted by McPhail Associates, LLC for the site referenced above, the U.S. Environmental Protection Agency, Region 1 (EPA) hereby authorizes Consigli Construction Co., Inc., as the named operator, to discharge in accordance with the provisions of the RGP from this site via the Town of Arlington storm sewer system to the Mill Brook (MA71-07). Please note that the operator is responsible for obtaining permission to discharge to this system, prior to initiating discharges. EPA™s authorization to discharge does not convey any such permission. The authorization number is listed above. The effective date of coverage is the date of this authorization letter. The RGP and this authorization to discharge will expire on April 8, 2022, or upon Notice of Termination, whichever occurs first. In accordance with Part 5.3 of the RGP, your permit coverage will be administratively continued upon expiration if the RGP has not been reissued.

Enclosed with this RGP authorization to discharge is a summary of the applicable effluent limitations and monitoring requirements for your activity category III, contaminated site dewatering discharge. Where a given parameter does not apply to the discharge, EPA has indicated fiNot Requiredfl in the enclosed summary. A dilution factor of 1.79, approved by the Massachusetts Department of Environmental Protection, was used in calculating effluent limits applicable to the proposed discharge from this site, except for parameters for which the receiving water is impaired, if applicable. Please note that this summary does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of the RGP, including influent and effluent monitoring, record keeping, and reporting requirements. For the complete general permit, see EPA™s RGP website, currently available at: https://www.epa.gov/npdes-permits/remediation-general-permit-rgp-massachusetts-new-hampshire.

Your authorization to discharge includes a technology-based effluent limit for cyanide because

you disclosed that this parameter is present at the site.

Monitoring requirements begin upon initiation of discharge. Please ensure that sufficiently sensitive test methods are used for all sample analyses conducted for this permit. To be considered sufficiently sensitive, test methods must achieve a minimum level (ML) for analysis for a given parameter that is no greater than the effluent limitation for that parameter, unless otherwise specified for that parameter. Where no effluent limitation applies, EPA has provided the ML required with the enclosed summary. Where a compliance level applies, EPA has provided the required compliance level with the enclosed summary. See Part 4.1, 4.3, and 4.4 of the RGP for more information regarding monitoring requirements. Also see Appendix VII for more information regarding sufficiently sensitive test methods.

You must submit a Notice of Termination (NOT) within thirty (30) days of the termination of discharges, which must include an electronic attachment in accordance with Appendix VIII of all monitoring data collected. Since you have reported your discharges are expected to last twelve (12) months or more, EPA expects you will be subject to NetDMR reporting requirements. You must begin submitting monitoring data using NetDMR for the monitoring period beginning on April 1, 2021. See Parts Parts 4.6, 5.1, 5.2 and 6, Appendix IV, and Appendix VIII of the RGP for more information regarding reporting requirements. For additional Appendix VIII resources, including instructions for establishing a NetDMR account, see EPA™s RGP website noted above.

Thank you in advance for your cooperation in this matter. Please contact Shauna Little at (617) 918-1989 or little.shauna@epa.gov, if you have any questions.

Sincerely,

Warner, Suzann Digitally signed by Warner, Suzanne
Date: 2020.03.17 12:44:10 -04'0

Suzanne Warner, Acting Chief
Stormwater & Construction Permits Section
Water Division

cc: Adam Chapdelaine,Town of Arlington, via email
Bill Burns, McPhail Associates, LLC, via email
Cathy Vakalopoulos, MassDEP, via email
Town of Arlington DPW, via email

Table 1: Authorization Information

Permit Number	MAG910911
Receiving Water	Mill Brook
Outfall Number	Outfall 001 to Town of Arlington
Monitoring Requirements	See Table 2 through Table 6, below; See Parts 4.1, 4.3 and 4.4 of the RGP; WET testing not required
Reporting Requirement	See Parts 4.6, 5.1, 5.2 and 6 of the RGP; NetDMR reporting will begin April 1, 2021 unless NOT received by EPA

Table 2: Chemical-Specific Effluent Limitations and Monitor-Only Requirements[1]

Parameter	Effluent Limitation[2]
A. Inorganics	
Ammonia[3]	Report mg/L
Chloride[4]	Report µg/L
Total Residual Chlorine[5]	Not Required
Total Suspended Solids	30 mg/L
Antimony[6]	206 µg/L
Arsenic[6]	104 µg/L
Cadmium[6]	10.2 µg/L
Chromium III[6]	323 µg/L
Chromium VI[6]	20.5 µg/L
Copper[6]	242 µg/L
Iron[6]	5,000 µg/L
Lead[6]	160 µg/L
Mercury[6]	0.739 µg/L
Nickel[6]	1,450 µg/L
Selenium[6]	235.8 µg/L
Silver[6]	35.1 µg/L
Zinc[6]	420 µg/L
Cyanide[7]	178 mg/L
B. Non-Halogenated Volatile Organic Compounds	
Total BTEX	Not Required
Benzene	Not Required
1,4 Dioxane	Not Required
Acetone	Not Required
Phenol	Not Required
C. Halogenated Volatile Organic Compounds	

Carbon Tetrachloride	Not Required
1,2 Dichlorobenzene	Not Required
1,3 Dichlorobenzene	Not Required
1,4 Dichlorobenzene	Not Required
1,1 Dichloroethane	Not Required
1,2 Dichloroethane	Not Required
1,1 Dichloroethylene	Not Required
Ethylene Dibromide	Not Required
Methylene Chloride	Not Required
1,1,1 Trichloroethane	Not Required
1,1,2 Trichloroethane	Not Required
Trichloroethylene	5.0 µg/L
Tetrachloroethylene	5.0 µg/L
cis-1,2 Dichloroethylene	70 µg/L
Vinyl Chloride	2.0 µg/L
D. Non-Halogenated Semi-Volatile Organic Compounds	
Total Phthalates	Not Required
Diethylhexyl Phthalate	Not Required
Total Group 1 Polycyclic Aromatic Hydrocarbons[8]	Not Required
Benzo(a)anthracene[8]	Not Required
Benzo(a)pyrene[8]	Not Required
Benzo(b)fluoranthene[8]	Not Required
Benzo(k)fluoranthene[8]	Not Required
Chrysene[8]	Not Required
Dibenzo(a,h)anthracene[8]	Not Required
Indeno(1,2,3-cd)pyrene[8]	Not Required
Total Group II Polycyclic Aromatic Hydrocarbons	100 µg/L
Naphthalene	20 µg/L
E. Halogenated Semi-Volatile Organic Compounds	
Total Polychlorinated Biphenyls[9]	Not Required
Pentachlorophenol	Not Required
F. Fuels Parameters	
Total Petroleum Hydrocarbons	5.0 mg/L
Ethanol	Not Required
Methyl-tert-Butyl Ether	Not Required
tert-Butyl Alcohol	Not Required
tert-Amyl Methyl Ether	Not Required

Table 2 Notes:

[1] The following abbreviations are used in Table 2, above:
- [a] mg/L = milligrams per liter
- [b] µg/L = micrograms per liter

[2] The limitation type for all parameters is monthly average.

[3] The minimum level (ML) for analysis of ammonia must be less than or equal to 0.1 mg/L.

[4] The ML for analysis of chloride must be less than or equal to 230 mg/L.

[5] The ML for analysis of total residual chlorine (TRC) must be less than or equal to 50 µg/L.

[6] The limitation for this parameter is on the basis of total recoverable metal in the water column.

[7] Total cyanide must be reported. The ML for analysis of total cyanide must be less than or equal to 5.0 µg/L. The compliance level for total cyanide is 5.0 µg/L.

[8] The ML for analysis of group I polycyclic aromatic hydrocarbons (PAHs) must be less than or equal to 0.1 µg/L.

[9] The ML for analysis of total polychlorinated biphenyls (PCBs) must be less than or equal to 0.5 µg/L.

Table 3: Effluent Flow Limitation[1]

Effluent Flow	Effluent Limitation[2]
	0.144

Table 3 Notes

[1] The following abbreviations are used in Table 3, above:
- [a] MGD = million gallons per day

[2] The limitation type for effluent flow is daily maximum.

Table 4: pH Limitations[1]

Receiving Water Class	Effluent Limitation[2]
Freshwater	6.5 to 8.3 SU

Table 4 Notes

[1] The following abbreviations are used in Table 4, above:

[a] SU = standard units

[2] The limitation type for pH is range.

Table 5: Temperature Limitations[1]

Receiving Water Class		Effluent Limitation[2]	ΔT Limitation [3]
Class B	---	Not Required	Not Required

Table 5 Notes

[1] The following abbreviations are used in Table 5, above:

[a] ^{o}F = degrees Fahrenheit

[b] ΔT = change in temperature

[c] $\leq$ = less than or equal to

[2] The limitation type for temperature is daily maximum.

[3] Change in temperature from background shall be determined by subtracting the temperature of the effluent from the temperature of the receiving water measured at a point immediately upstream of a discharge's zone of influence at a reasonably accessible location

Table 6: Additional Requirements[1]

Parameter[2]	Effluent Limitation [3]
None Required	NA

Table 6 Notes

[1] The following abbreviations are used in Table 6, above:

[a] NA = not applicable

[2] NA

[3] NA

Appendix D – Copy of Inspection Form

INSERT COPY OF ANY INSPECTION FORMS YOU WILL USE TO PREPARE INSPECTION REPORTS

(Note: EPA has developed a sample inspection form that CGP operators can use. The form is available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources)

Appendix E – Copy of Corrective Action Form

INSERT COPY OF CORRECTIVE ACTION FORMS YOU WILL USE

(Note: EPA has developed a sample corrective action form that CGP operators can use. The form is available at https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources)

Appendix F – *Sample* SWPPP Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]
		INSERT DATE	
		INSERT DATE	
		INSERT DATE	
		INSERT DATE	
		INSERT DATE	
		INSERT DATE	
		INSERT DATE	
		INSERT DATE	

Appendix G – *Sample* Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: Arlington High School

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. 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: _____

Appendix H – *Sample* Grading and Stabilization Activities Log

Date Grading Activity Initiated	**Description of Grading Activity**	**Description of Stabilization Measure and Location**	**Date Grading Activity Ceased** (Indicate Temporary or Permanent)	**Date When Stabilization Measures Initiated**
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE
INSERT DATE			INSERT DATE ☐ Temporary ☐ Permanent	INSERT DATE

Appendix I – *Sample* SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name: **Arlington High School**

Project Location: **869 Massachusetts Ave, Arlington MA 02476**

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ☐ **Sediment and Erosion Controls**
- ☐ **Stabilization Controls**
- ☐ **Pollution Prevention Measures**
- ☐ **Emergency Procedures**
- ☐ **Inspections/Corrective Actions**

Specific Training Objective:_____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Appendix J – *Sample* 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 (CGP), 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 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 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: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Appendix K – Endangered Species Documentation

INSERT DOCUMENTATION CONSISTENT WITH SWPPP TEMPLATE SECTION 3.1 AND CGP APPENDIX D

Appendix L – Historic Properties Documentation

INSERT DOCUMENTATION CONSISTENT WITH SWPPP TEMPLATE SECTION 3.2 AND CGP APPENDIX E

Appendix 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		
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14			14			14		
15			15			15		
16			16			16		
17			17			17		
18			18			18		
19			19			19		
20			20			20		
21			21			21		
22			22			22		
23			23			23		
24			24			24		
25			25			25		
26			26			26		
27			27			27		
28			28			28		
29			29			29		
30			30			30		
31			31			31		

Example Rainfall Gauge Recording

April 2017			May 2017			June 2017		
Day	7:00 am	4:400 pm	Day	7:00 am	4:00 pm	Day	7:00 am	4:00 pm
1	--	--	1	0.2	0	1	0	0.4
2	--	--	2	0	0	2	0	0
3	0	0	3	0.1	0.3	3	--	--
4	0	0.3	4	0	0	4	--	--
5	0	0	5	0	0	5	0	0

In this example (for only partial months), 0.25-inch rainfall inspections would have been conducted on April 4 and June 1.

NOTICE OF INTENT FOR DISCHARGE PURSUANT TO MASSACHUSETTS REMEDIATION GENERAL PERMIT MAG9100000

ARLINGTON HIGH SCHOOL
ARLINGTON, MASSACHUSETTS

FEBRUARY 24, 2020

Prepared For:

United States Environmental Protection Agency
Office of Ecosystem Protection
5 Post Office Square, Suite 100
Mail Code OEP06-01
Boston, MA 02109-3912

On Behalf Of:

Consigli Construction Co. Inc.
72 Sumner Street
Milford, MA 01757

PROJECT NO. 6531

2269 Massachusetts Avenue
Cambridge, MA 02140
www.mcphailgeo.com
(617) 868-1420

February 24, 2020

United States Environmental Protection Agency
Office of Ecosystem Protection
5 Post Office Square, Suite 100
Mail Code OEP06-01
Boston, MA 02109-3912

Attention: EPA RGP Applications Coordinator

Reference: Arlington High School; 869 Massachusetts Avenue, Arlington, MA;
Notice of Intent for Temporary Construction Dewatering Discharge;
Massachusetts Remediation General Permit MAG910000

Ladies and Gentlemen:

On behalf of Consigli Construction Co., Inc., McPhail Associates, LLC (McPhail) has prepared the attached Notice of Intent (NOI) for coverage under the Remediation General Permit (RGP) MAG910000 for the discharge of construction dewatering effluent into the Mill Brook which flows into the Lower Mystic Lake via the on-site storm drainage system. The temporary construction dewatering discharge will occur during redevelopment of the Arlington High School located at 869 Massachusetts Avenue in Arlington, Massachusetts (project site). Refer to **Figure 1** for the general site locus.

These services were performed and this permit application was prepared in accordance with the authorization of HMFM Architects, Inc. These services are subject to the limitations contained in **Appendix A**.

This project is considered Activity Category III-G as defined in the RGP. Category III-G is defined as Contaminated Site Dewatering from Sites with Known Contamination. Based on historical and current soil and groundwater analysis completed at the site, the constituents of concern (COCs) are those identified under subcategory A (Inorganics), subcategory C (halogenated VOCs), subcategory D (non-halogenated SVOCs), and subcategory F (fuel parameters). The required Notice of Intent (NOI) Form contained in the RGP permit is included in **Appendix B**.

Applicant/Operator

The applicant for the Notice of Intent-Remediation General Permit is:

Consigli Construction Co., Inc.
72 Sumner Street
Milford, MA 01757

Attention: Mr. John LaMarre; Senior Project Manager

Existing Conditions

Fronting onto Massachusetts Avenue to the south, the approximately 22-acre Arlington High School campus is bounded by the Arlington Department of Public Works (DPW) facility and residential properties to the west, the Minuteman Commuter Bikeway with residential properties on the other side thereof to the north, and to the east by residential and commercial properties. The existing school complex is located near the center of the campus and is surrounded by athletic fields, asphalt paved parking lots and landscaped areas. The remaining exterior portions of the site are occupied by a grassed area located along Massachusetts Avenue, a playground and basketball courts located adjacent to the northeast of the school complex as well as parking lots and driveways that connect to Millbrook Drive to the east and Massachusetts Avenue to the south. The existing conditions of the Arlington High School campus are shown on **Figure 2**.

Existing ground surface to the south of the existing school complex generally slopes downward from south to north from about Elevation +77 to Elevation +68. Within the northern portion of the campus, a majority of which is occupied by athletic fields, the existing grade gradually slopes from west to east from approximately Elevation +54 to about Elevation +45.

Proposed Scope of Site Development

The Arlington High School project includes the phased construction of a new school building in conjunction with phased demolition of the existing school building. The new school building will generally consist of four "wings" ranging from three to five stories which are connected by a central spine with a total plan area of approximately 145,900 square-feet. Additional site improvements will include the construction of parking lots, driveways, new athletic fields as well as a geothermal well field. In general, the proposed ground surface elevations and finish floor elevations will be higher than those currently existing across the school campus.

Site Environmental Setting and Surrounding Historical Places

Based on an on-line edition of the Massachusetts Geographic Information Systems MassDEP MCP Numerical Ranking System Map, the project site is not located within the boundaries of a Sole Source Aquifer, Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. Further, there are no public drinking water supply wells, no Areas of Critical Environmental Concern, no fish habitats, no habitats of Species of Special Concern or Threatened or Endangered Species within specified distances of the project site. No areas designated as solid waste facilities (landfills) are located within 0.5 miles of the subject site. A culverted portion of the Mill Brook traverses beneath the northern portion of the project site. The Mill Brook is classified by the DEP as a Class B surface water body and flows in a northeasterly direction into the Lower Mystic Lake. A copy of the Massachusetts DEP Phase I Site Assessment Map is included in **Appendix C**.

A review of information provided by the U.S. Fish and Wildlife Service in an Information for Planning and Conservation (IPaC) Trust Resource Report for the project site did not identify the presence of threatened or endangered species at or in the vicinity of the discharge location and/or discharge outfall. Further, the Trust Resource Report did not identify the presence of a critical habitat in the vicinity of the discharge outfall and/or discharge location. Based upon the above, the site is considered a criterion A pursuant to Appendix IV of the RGP. A copy of the IPaC Trust Resource Report and U.S. Fish and Wildlife Service's Nationwide Standard Conservation Measures are included in **Appendix C**.

As further discussed below, treated construction dewatering effluent will be discharged into the Mill Brook that flows into the Lower Mystic Lake. The dewatering of groundwater at the site will be temporary and intermittent. Groundwater discharged as part of the proposed project will be controlled and monitored. Treatment systems will consist of temporary structures. Therefore, based on the anticipated duration of construction dewatering and the location of its discharge into the Mill Brook, construction dewatering activities are not anticipated to affect historical listings. Hence, the site meets Permit Eligibility Criterion A in accordance with Appendix III of the RGP.

Site & Release History

Prior to its construction, the school campus consisted of undeveloped land. During this time period, the northern portion of the campus was occupied by Cutter's Mill Pond which was fed by Mill Brook. In 1908, the pond was drained and the area was backfilled over the next 20 years using soils and wastes from the former industrial sites that occupied the neighboring properties. Backfilling of the pond was completed by 1930, and the area was converted into a playground and playing field.

Historical records indicate that the project site was initially developed in 1914 with the construction of the 6-story Fusco Building (southwestern portion of the current school complex). Subsequently, from 1938 through 1981 the phased construction of the remaining buildings of the school complex were completed. During this time period, portions of the school complex were formerly heated by fuel oil that was stored within underground storage tanks (USTs) located to the north of the Collomb House and Downs House.

In summary, the former industrial and commercial use of surrounding properties has contaminated soil and groundwater across the project site. In addition, localized areas of soil have been contaminated by fuel oil that was stored in USTs and formerly used to heat the school complex. These releases of contamination have been documented with the DEP under Release Tracking Numbers (RTNs) 3-4241, 3-22352, 3-22371, 3-24460 and 3-30236.

In particular, soil and groundwater across the northern portion of the project site is contaminated by a release of hexavalent chromium, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), petroleum hydrocarbons, lead and cyanide to which the DEP has assigned RTN 3-4241. In 2005, significant response actions were completed across the northern portion of the project site to mitigate exposure to soil and

groundwater that was contaminated by hexavalent chromium. Currently, the RTN 3-4241 site is being managed under the Remedy Operation Status provisions of the MCP.

Soil and groundwater at the southern portion of the project site is affected by a release of tetrachloroethene (PCE) to which RTN 3-30236 was assigned by the DEP. The release of PCE has migrated onto the site with the north-northeasterly direction of groundwater from a former off-site drycleaners located on the opposite side of Massachusetts Avenue.

Furthermore, soil and groundwater located beneath a portion of the Collomb House was affected by a waste oil release to which RTN 3-24460 was assigned by the DEP. The waste oil release was identified during the removal of a UST from beneath the former automotive shop that was located in the basement of the Collomb House. Petroleum constituents as well as PCE was identified in soil and groundwater within the UST grave. While response actions included the removal of contaminated soil, post remedial testing of soil samples from the vicinity of the excavation identified elevated levels of PCE. A Class A-2 Response Action Outcome Statement (Permanent Solution) was filed with the DEP for RTN 3-24460 site.

Construction Site Dewatering

Given its potential to mobilize contamination that is present in soil and groundwater, on-site recharge of dewatered groundwater is not considered feasible at the project site. In general, the depth of excavation required to install the proposed building foundation elements and subsurface utilities will not encounter groundwater, the surface of which ranges from about Elevation +46.7 at the northern portion of the project site to about Elevation +38.3 at the southern portion of the project site. However, there may be localized areas of excavation that may encounter groundwater and hence require dewatering. If required, the rate of construction dewatering within these localized areas of excavation may range from approximately 25 to 50 gallons per minute (gpm). These estimates do not include surface run-off which will be removed from the excavation during periods of precipitation.

However, it is anticipated that excess groundwater will be generated during the drilling of the geothermal boreholes that will require off-site discharge. Although difficult to estimate, the rate of excess groundwater generated during the drilling of the geothermal boreholes may range from 75 to 100 gpm.

Catch basins and associated stormwater drains located on the Arlington High School Campus connect to the Mill Brook culvert which traverses the northern portion of the project site. As mentioned above, Mill Brook eventually flows into the Lower Mystic Lake which is located approximately 0.65 miles to the northeast of the project site. The flow path of the discharge is shown on **Figure 2**.

Summary of Groundwater Analysis

On December 23, 2019, McPhail Associates, LLC obtained a sample of groundwater from monitoring well GP-108 (OW) located within the interior courtyard of the school complex. Additionally, on December 24, McPhail obtained a groundwater sample from monitoring well MW-04-5 located adjacent to the baseball field which occupies the western side of the school campus. The groundwater samples were submitted to a certified laboratory for analysis for the presence of compounds required under the EPA's Remediation General Permit (RGP) application, including total suspended solids (TSS), total residual chlorine, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) including total benzene, toluene, ethylbenzene and xylenes (BTEX), poly-aromatic hydrocarbons (PAHs), total phenols, PCBs, and total recoverable metals. Additionally, previous groundwater testing was completed to further evaluate the presence of VOCs at the southern portion of the project site as well as extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) near a UST located beneath the courtyard of the school complex. The results of the laboratory analysis are summarized in **Table 1**, and laboratory data reports are included in **Appendix D**.

Pursuant to Section 4.2.2 of the EPA 2017 RGP, a receiving water sample was obtained from the Mill Brook (42° 25' 12" N, 71° 09' 50" W), which is located approximately 240 feet upstream of the discharge location on January 8, 2020. The receiving water sample was analyzed for the presence of total recoverable metals, pH, and hardness. The results of the surface water testing are summarized on **Table 2** and the laboratory data report is included in the enclosed **Appendix E**.

A Dilution Factor (DF) was calculated for the detected levels of metals pursuant to the procedure contained in RGP MAG910000, Appendix V. The purpose of the DF calculation is to establish Total Recoverable Limits for metals, taking into consideration the anticipated dilution of the detected analyte upon discharge into the Mill Brook. The calculated DF was then used to find the appropriate Dilution Range Concentrations (DRCs) contained in MAG910000, Appendix IV. The Minimum Flow Rate calculated by the USGS Streamstats GIS database at the location of discharge into the Mill Brook for 7 consecutive days with a recurrence interval of 10 years (7Q10 flow) is 0.114 MGD thus resulting in a DF of 1.79 assuming a design flow rate of 100 GPM.

With the exception of hexavalent chromium, the results of the laboratory testing did not detect concentrations of the tested compounds which triggered Water Quality-Based Effluent Limitations (WQBELs). It is noted that the concentrations of trivalent chromium, naphthalene, trichlroroethene, tetrachlorothene and total petroleum hydrocarbons did not exceed applicable MCP reporting thresholds established in Appendix VI of the RGP. Documentation of NOI support calculations is included in **Appendix C**.

Although trivalent chromium, naphthalene, trichlroroethene, tetrachlorothene and total petroleum hydrocarbons were not detected at concentrations which exceed the applicable Technology Based Effluent Limitations (TBELs), these compounds have been identified as contaminants of concern in soil and groundwater at the project site. As a result, these

compounds are considered to be potentially present in the construction dewatering effluent. It is anticipated that the construction dewatering treatment system that is discussed below, which includes granular activated carbon and ion resin filtration will reduce potential concentrations of the above referenced contaminants of concern in the effluent to below the applicable TBELs.

In accordance with the RGP, and given that the project site is an MCP site, the proposed dewatering associated with this permit application is considered Contaminated Site Dewatering from Sites with Known Contamination (Category III-G). Based on historical and current groundwater analysis completed at the site and the constituents of concern (COCs) detected, subcategory A (Inorganics), subcategory C (halogenated VOCs), subcategory D (non-halogenated SVOCs), and subcategory F (fuel parameters) apply to the discharge.

Groundwater Treatment

Based upon the anticipated rates of construction dewatering in conjunction with the results of the above referenced groundwater analyses, it is our opinion that one 10,000-gallon capacity settling tank, bag filters, a granular activated carbon (GAC) filter, and ion resin exchange filter in series will be necessary to settle out and remove particulate matter as well as to remove potential chlorinated solvents and metals in effluent to meet the limits established by the US EPA prior to off-site discharge. A schematic of the treatment system is shown on **Figure 3**.

A Best Management Practices Plan (BMPP) has been prepared as **Appendix F** to the RGP and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

Summary and Conclusions

The purpose of this report is to summarize site environmental conditions and groundwater data to support a Notice of Intent to discharge under the Remediation General Permit for the off-site discharge of dewatered groundwater which will be encountered during redevelopment of the Arlington High School campus that is located at the 869 Massachusetts Avenue in Arlington, Massachusetts. The groundwater testing results reported in this application have been provided to the site owner.

Based on the results of the above referenced groundwater analyses, treatment of construction dewatering will be necessary to meet the effluent limits established by the US EPA prior to off-site discharge. The proposed construction dewatering effluent treatment system will consist of one 10,000-gallon capacity settling tank, bag filters, a granular activated carbon (GAC) filter and ion exchange resin filter in series. However, should the effluent monitoring results identify concentrations of contaminants that are in excess of the limits established by the RGP, additional mitigative measures will be implemented to meet the allowable discharge limits.

We trust that the above satisfies your present requirements. Should you have any questions or comments concerning the above, please do not hesitate to contact us.

Sincerely,

McPHAIL ASSOCIATES, LLC

William J, Burns L.S.P.

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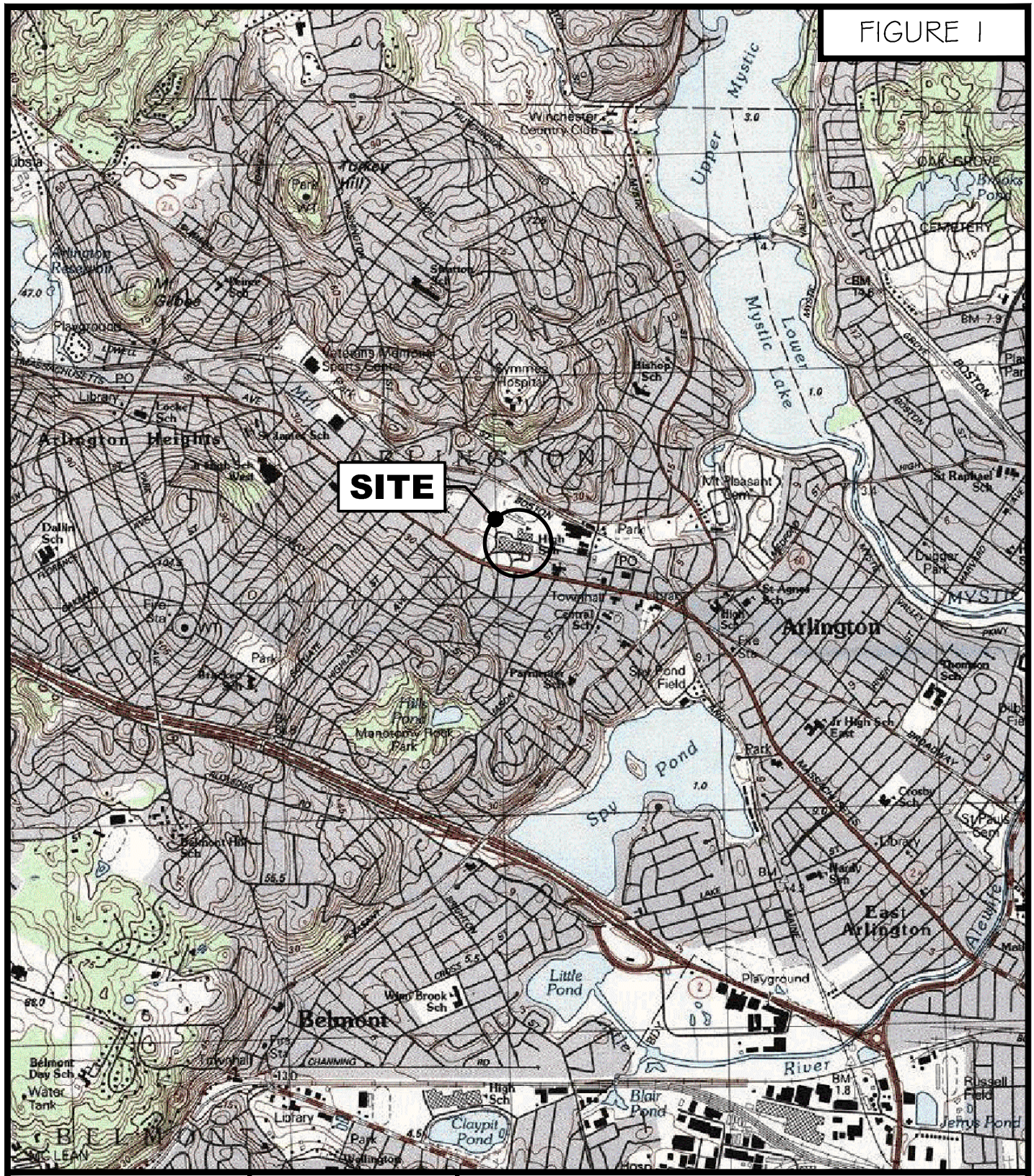
WJB/jwp

FIGURE 1



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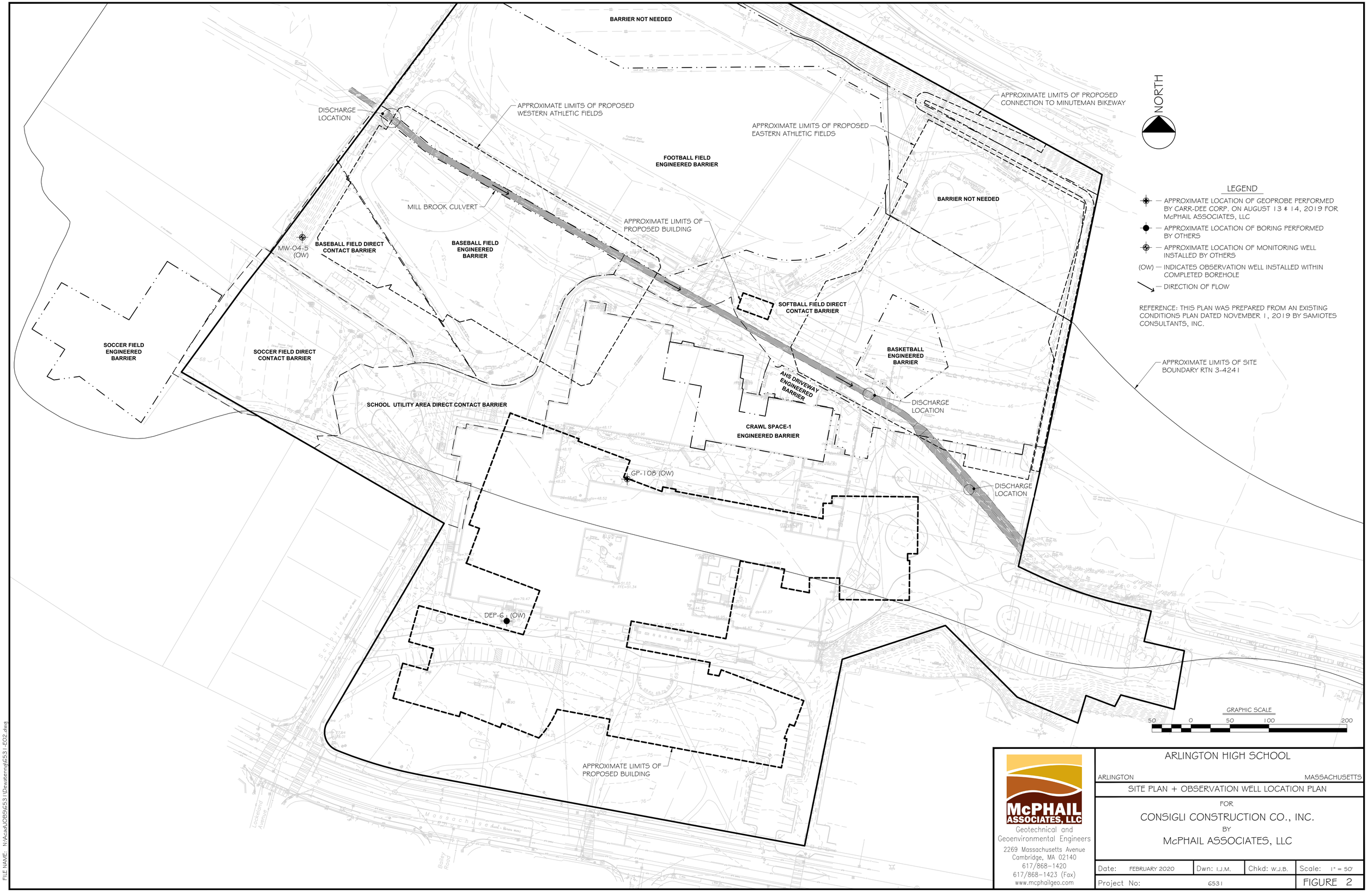
SCALE 1:25,000

PROJECT LOCATION PLAN

ARLINGTON HIGH SCHOOL

ARLINGTON MASSACHUSETTS



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ARLINGTON HIGH SCHOOL

ARLINGTON MASSACHUSETTS

SITE PLAN + OBSERVATION WELL LOCATION PLAN

FOR

CONSIGLI CONSTRUCTION CO., INC.

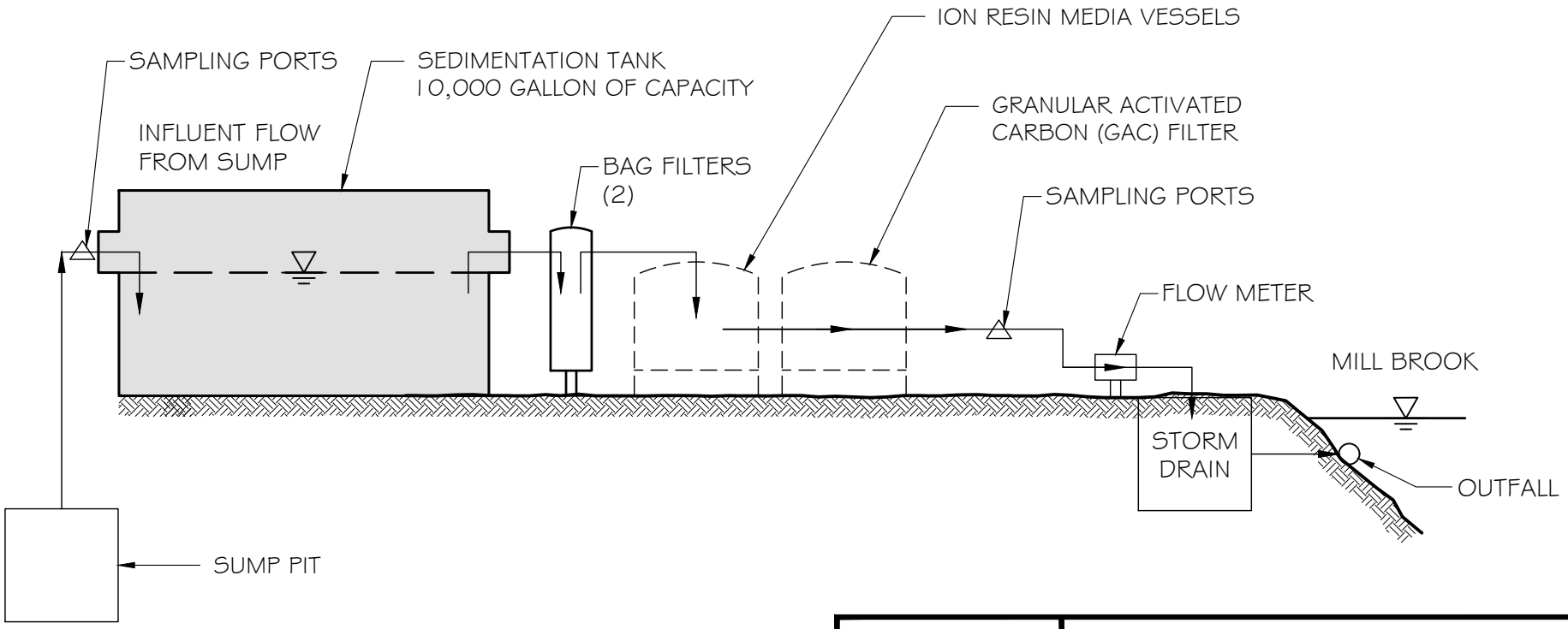
BY

McPHAIL ASSOCIATES, LLC

Date: FEBRUARY 2020	Dwn: I.J.M.	Chkd: W.J.B.	Scale: 1" = 50'
Project No: 6531			FIGURE 2

FILE NAME: N:\Acad\JOBS\6531\Dewatering\6531-E03.dwg

FIGURE 3



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ARLINGTON HIGH SCHOOL

ARLINGTON MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR

CONSIGLI CONSTRUCTION CO., INC.

BY

McPHAIL ASSOCIATES, LLC

CONSULTING GEOTECHNICAL ENGINEERS

Date: JANUARY 2020	Dwn: I.J.M.	Chkd: W.J.B.	Scale: N.T.S.
Project No: 6531			

TABLE 1
ANALYTICAL RESULTS - GROUNDWATER

Arlington High School
869 Massachusetts Avenue; Arlington, MA
Project No. 6531.9.T7

LOCATION	EPA ALFCCC	GW-2-14	GW-3-14	GP-108 (OW)	MW-04-5	GP-108 (OW)	DEP-6	MW-103
SAMPLING DATE				12/23/2019	12/24/2019	9/24/2019	9/24/2019	9/24/2019
LAB SAMPLE ID				L1961508-01	L1961602-01	L1944134-01	L1944134-02	L1944134-03
SAMPLE TYPE				Groundwater	Groundwater	WATER	WATER	WATER
Anions by Ion Chromatography								
Chloride (ug/l)	230000			**444000**	**748000**	-	-	-
General Chemistry								
Solids, Total Suspended (ug/l)				ND(5000)	ND(5000)	-	-	-
Cyanide, Total (ug/l)	5.2		30	ND(5)	5	-	-	-
Chlorine, Total Residual (ug/l)				ND(20)	ND(20)	-	-	-
pH (S.U.)				6.5	-	-	-	-
Nitrogen, Ammonia (ug/l)				77	856	-	-	-
TPH, SGT-HEM (ug/l)		5000	5000	ND(4000)	ND(4000)	-	-	-
Phenolics, Total (ug/l)				ND(30)	ND(30)	-	-	-
Hardness				111000	94000	-	-	-
Total Metals (ug/l)								
Antimony, Total			8000	ND(4)	ND(4)	-	-	-
Arsenic, Total	150		900	ND(1)	2.77	-	-	-
Cadmium, Total	0.25		4	ND(0.2)	ND(0.2)	-	-	-
Chromium, Total			300	143.1	19.5	-	-	-
Copper, Total				ND(1)	11.57	-	-	-
Chromium, Trivalent	74		600	ND(10)	19	-	-	-
Chromium, Hexavalent	11		300	**160**	ND(10)	-	-	-
Iron, Total	1000			ND(50)	284	-	-	-
Lead, Total	2.5		10	ND(1)	ND(1)	-	-	-
Mercury, Total	0.77		20	ND(0.2)	ND(0.2)	-	-	-
Nickel, Total	52		200	ND(2)	ND(2)	-	-	-
Selenium, Total	5		100	**ND(5)**	**ND(5)**	-	-	-
Silver, Total			7	ND(0.4)	ND(0.4)	-	-	-
Zinc, Total	120		900	ND(10)	ND(10)	-	-	-
Polychlorinated Biphenyls by GC (ug/l)								
Aroclor 1016		5	10	ND(0.25)	ND(0.25)	-	-	-
Aroclor 1221		5	10	ND(0.25)	ND(0.25)	-	-	-
Aroclor 1232		5	10	ND(0.25)	ND(0.25)	-	-	-
Aroclor 1242		5	10	ND(0.25)	ND(0.25)	-	-	-
Aroclor 1248		5	10	ND(0.25)	ND(0.25)	-	-	-
Aroclor 1254		5	10	ND(0.25)	ND(0.25)	-	-	-
Aroclor 1260		5	10	ND(0.2)	ND(0.2)	-	-	-
SUM				ND	ND	-	-	-
Semivolatile Organics by GC/MS (ug/l)								
Bis(2-ethylhexyl)phthalate			50000	ND(2.2)	ND(2.2)	-	-	-
Butyl benzyl phthalate				ND(5)	ND(5)	-	-	-
Di-n-butylphthalate				ND(5)	ND(5)	-	-	-
Di-n-octylphthalate				ND(5)	ND(5)	-	-	-
Diethyl phthalate		50000	9000	ND(5)	ND(5)	-	-	-
Dimethyl phthalate		50000	50000	ND(5)	ND(5)	-	-	-
SUM				ND	ND	-	-	-
Semivolatile Organics by GC/MS-SIM (ug/l)								
Acenaphthene			10000	ND(0.1)	2.9	-	-	-
Fluoranthene			200	ND(0.1)	ND(0.1)	-	-	-
Naphthalene		700	20000	ND(0.1)	0.89	-	-	-
Benzo(a)anthracene			1000	ND(0.1)	ND(0.1)	-	-	-
Benzo(a)pyrene			500	ND(0.1)	ND(0.1)	-	-	-
Benzo(b)fluoranthene			400	ND(0.1)	ND(0.1)	-	-	-
Benzo(k)fluoranthene			100	ND(0.1)	ND(0.1)	-	-	-
Chrysene			70	ND(0.1)	ND(0.1)	-	-	-
Acenaphthylene		10000	40	ND(0.1)	0.55	-	-	-
Anthracene			30	ND(0.1)	ND(0.1)	-	-	-
Benzo(ghi)perylene			20	ND(0.1)	ND(0.1)	-	-	-
Fluorene			40	ND(0.1)	0.6	-	-	-
Phenanthrene			10000	ND(0.1)	ND(0.1)	-	-	-
Dibenzo(a,h)anthracene			40	ND(0.1)	ND(0.1)	-	-	-
Indeno(1,2,3-cd)pyrene			100	ND(0.1)	ND(0.1)	-	-	-
Pyrene			20	ND(0.1)	0.23	-	-	-
Pentachlorophenol	15		200	ND(1)	ND(1)	-	-	-
SUM				ND	5.17	-	-	-
Microextractables by GC (ug/l)								
1,2-Dibromoethane		2	50000	ND(0.01)	ND(0.01)	-	-	-
Volatile Organics by GC/MS (ug/l)								
Methylene chloride		2000	50000	ND(1)	ND(1)	-	-	-
1,1-Dichloroethane		2000	20000	ND(1.5)	ND(1.5)	-	-	-
Carbon tetrachloride		2	5000	ND(1)	ND(1)	-	-	-
1,1,2-Trichloroethane		900	50000	ND(1.5)	ND(1.5)	-	-	-
Tetrachloroethene		50	30000	4.1	ND(1)	-	-	-
1,2-Dichloroethane		5	20000	ND(1.5)	ND(1.5)	-	-	-
1,1,1-Trichloroethane		4000	20000	ND(2)	ND(2)	-	-	-
Benzene		1000	10000	ND(1)	ND(1)	-	-	-
Toluene		50000	40000	ND(1)	ND(1)	-	-	-
Ethylbenzene		20000	5000	ND(1)	10	-	-	-
Vinyl chloride		2	50000	ND(1)	ND(1)	-	-	-
1,1-Dichloroethene		80	30000	ND(1)	ND(1)	-	-	-
cis-1,2-Dichloroethene		20	50000	ND(1)	ND(1)	-	-	-
Trichloroethene		5	5000	ND(1)	ND(1)	-	-	-
1,2-Dichlorobenzene		8000	2000	ND(5)	ND(5)	-	-	-
1,3-Dichlorobenzene		6000	50000	ND(5)	ND(5)	-	-	-
1,4-Dichlorobenzene		60	8000	ND(5)	ND(5)	-	-	-
p/m-Xylene		3000	5000	ND(2)	ND(2)	-	-	-
o-xylene		3000	5000	ND(1)	2.3	-	-	-
Xylenes, Total		3000	5000	ND(1)	2.3	-	-	-
Acetone		50000	50000	ND(10)	ND(10)	-	-	-
Methyl tert butyl ether		50000	50000	ND(10)	ND(10)	-	-	-
Tert-Butyl Alcohol				ND(100)	ND(100)	-	-	-
Tertiary-Amyl Methyl Ether				ND(20)	ND(20)	-	-	-
SUM				4.1	12.3	-	-	-
Volatile Organics by GC/MS-SIM (ug/l)								
1,4-Dioxane		6000	50000	ND(50)	ND(50)	-	-	-

ND-not detected in excess of the laboratory reporting limit in ()
Bold - exceeds EPA water quality criteria - freshwater (chronic)
Tested compounds not shown do not exceed labortory reporting limits

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ANALYTICAL RESULTS - GROUNDWATER

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Project No. 6531.9.T7

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LAB SAMPLE ID				L1961508-01	L1961602-01	L1944134-01	L1944134-02	L1944134-03
SAMPLE TYPE				Groundwater	Groundwater	WATER	WATER	WATER
MCP Volatile Organics (ug/l)								
Tetrachloroethene		50	30000	-	-	-	**130**	11
Trichloroethene		5	5000	-	-	-	**8.6**	ND(1)
cis-1,2-Dichloroethene		20	50000	-	-	-	**38**	ND(1)
1,2-Dichloroethene, Total				-	-	-	38	ND(1)
SUM				-	-	-	176.6	11
EPH w/MS Targets (ug/l)								
C9-C18 Aliphatics		5000	50000	-	-	ND(100)	-	-
C19-C36 Aliphatics			50000	-	-	ND(100)	-	-
C11-C22 Aromatics, Adjusted		50000	5000	-	-	ND(100)	-	-
Naphthalene		700	20000	-	-	ND(0.4)	-	-
2-Methylnaphthalene		2000	20000	-	-	ND(0.4)	-	-
Acenaphthylene		10000	40	-	-	ND(0.4)	-	-
Acenaphthene			10000	-	-	ND(0.4)	-	-
Fluorene			40	-	-	ND(0.4)	-	-
Phenanthrene			10000	-	-	ND(0.4)	-	-
Anthracene			30	-	-	ND(0.4)	-	-
Fluoranthene			200	-	-	ND(0.4)	-	-
Pyrene			20	-	-	ND(0.4)	-	-
Benzo(a)anthracene			1000	-	-	ND(0.4)	-	-
Chrysene			70	-	-	ND(0.4)	-	-
Benzo(b)fluoranthene			400	-	-	ND(0.4)	-	-
Benzo(k)fluoranthene			100	-	-	ND(0.4)	-	-
Benzo(a)pyrene			500	-	-	ND(0.2)	-	-
Indeno(1,2,3-cd)Pyrene			100	-	-	ND(0.4)	-	-
Dibenzo(a,h)anthracene			40	-	-	ND(0.4)	-	-
Benzo(ghi)perylene			20	-	-	ND(0.4)	-	-
Volatile Petroleum Hydrocarbons (ug/l)								
C9-C10 Aromatics		4000	50000	-	-	ND(100)	-	-
C5-C8 Aliphatics, Adjusted		3000	50000	-	-	ND(100)	-	-
C9-C12 Aliphatics, Adjusted		5000	50000	-	-	ND(100)	-	-
Benzene		1000	10000	-	-	ND(2)	-	-
Toluene		50000	40000	-	-	ND(2)	-	-
Ethylbenzene		20000	5000	-	-	ND(2)	-	-
p/m-Xylene		3000	5000	-	-	ND(2)	-	-
o-Xylene		3000	5000	-	-	ND(2)	-	-
Methyl tert butyl ether		50000	50000	-	-	ND(3)	-	-
Naphthalene		700	20000	-	-	ND(4)	-	-

ND-not detected in excess of the laboratory reporting limit in ()
Bold - exceeds EPA water quality criteria - freshwater (chronic)
Tested compounds not shown do not exceed labortory reporting limits

Table 2 - Analytical Results
Surface Water

Arlington High School
869 Massachusetts Avenue; Arlington, MA
Project No. 6531.9.T7

LOCATION	EPA-ALFCCC	Units	MILL BROOK
SAMPLING DATE			1/8/2020
LAB SAMPLE ID			L2000855-01
SAMPLE TYPE			Seep Water
SAMPLE DEPTH (ft.)			
General Chemistry			
Chromium, Trivalent	74	ug/l	ND(10)
pH (H)		SU	7.5
Nitrogen, Ammonia		ug/l	88
Chromium, Hexavalent	11	ug/l	ND(10)
Total Hardness by SM 2340B			
Hardness		ug/l	79800
Total Metals			
Antimony, Total		ug/l	ND(4)
Arsenic, Total	150	ug/l	ND(1)
Cadmium, Total	0.25	ug/l	ND(0.2)
Chromium, Total		ug/l	ND(1)
Copper, Total		ug/l	1.87
Iron, Total	1000	ug/l	891
Lead, Total	2.5	ug/l	1.71
Mercury, Total	0.77	ug/l	ND(0.2)
Nickel, Total	52	ug/l	ND(2)
Selenium, Total	5	ug/l	**ND(5)**
Silver, Total		ug/l	ND(0.4)
Zinc, Total	120	ug/l	ND(10)

ND-not detected in excess of the laboratory reporting limit in ()
Bold - exceeds EPA water quality criteria - freshwater (chronic)
Tested compounds not shown do not exceed labortory reporting limits

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present the results of testing of groundwater samples obtained from monitoring wells located at the Arlington High School campus located at 869 Massachusetts Avenue in Arlington, Massachusetts, in support of an application for approval of construction site dewatering discharge into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Remediation General Permit MAG910000.

The observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the nature and extent of subsurface conditions between the spaced subsurface explorations become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon laboratory test data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in the seasonal water table, past practices used at the site, and other factors.

Laboratory analyses have been performed for specific constituents during this assessment, as described in the text.

This report and application have been prepared on behalf of and for the exclusive use of HMFH Architects, Inc., the Town of Arlington and Consigli Construction Co., Inc. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than submission to relevant governmental agencies, nor used in whole or in part by any other party without the prior written consent of McPhail Associates, LLC.

APPENDIX B:

NOTICE OF INTENT TRANSMITTAL FORM
ARLINGTON DEWATERING DISCHARGE PERMIT

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Arlington High School</td><td colspan="3">Site address: 869
Street: Massachusetts Avenue</td></tr>
<tr><td>City: Arlington</td><td>State: MA</td><td>Zip: 02476</td></tr>
<tr><td rowspan="4">2. Site owner
Town of Arlington

Owner is (check one): ☐ Federal ☐ State/Tribal ☐ Private
■ Other; if so, specify: Municipal</td><td colspan="3">Contact Person: Mr. Adam Chapdelaine</td></tr>
<tr><td colspan="2">Telephone: 781-316-3010</td><td>Email: achapdelaine@town.arlington.ma</td></tr>
<tr><td colspan="3">Mailing address: 730
Street: Massachusetts Avenue Annex</td></tr>
<tr><td>City: Arlington</td><td>State: MA</td><td>Zip: 02476</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Consigli Construction Co., Inc.</td><td colspan="3">Contact Person: John LaMarre</td></tr>
<tr><td colspan="2">Telephone: 617-293-5296</td><td>Email: JLaMarre@consigli.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 72 Sumner Street</td></tr>
<tr><td>City: Milford</td><td>State: MA</td><td>Zip: 01757</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s):
3-4241, 3-30236, 3-24460
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Mill Brook	MA71-07	Class B

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No

Are sensitive receptors present near the site? (check one): ☐ Yes ■ No
If yes, specify:

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Not an ORW, No TMDL Listed, Escherichia Coli - Impairment

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.114 MGD
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	1.79

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 01/30/2020

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants: Chromium VI, Chromium III, CVOCs, TPH	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): Outfall No. 1. Outfall No. 2 Outfall No. 3	Outfall location(s): (Latitude, Longitude) 42.4197, -71.1628 42.4186, -71.1609 42.4180, -71.1601
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: On-site storm drain system which discharges in Mill Brook culvert ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): 04/01/2020 - 05/01/2025 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="4">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>■ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

■ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
■ C. Halogenated Volatile Organic Compounds
■ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
■ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	2	121.4500	75	856	466.5	Report mg/L	---
Chloride		✔	2	443000	500	748000	596000	Report µg/l	---
Total Residual Chlorine	✔		2	121,4500	20	<DL	<DL	0.2 mg/L	
Total Suspended Solids		✔	2	121,2450I	5000	<DL	<DL	30 mg/L	
Antimony	✔		2	1,6020A	4	<DL	<DL	206 µg/L	
Arsenic	✔		2	1,6020A	1	2.77	1.885	104 µg/L	
Cadmium	✔		2	1,6020A	0.2	<DL	<DL	10.2 µg/L	
Chromium III		✔	2	1,6020A	10	19	14.5	323 µg/L	
Chromium VI		✔	2	1,6020A	1	160	85	323 µg/L	
Copper	✔		2	1,6020A	1	11.57	6.29	242 µg/L	20
Iron	✔		2	19200.7	50	284	167	5,000 µg/L	
Lead	✔		2	1,6020A	1	<DL	<DL	160 µg/L	
Mercury	✔		2	3,245.1	0.2	<DL	<DL	0.739 µg/L	
Nickel	✔		2	1,6020A	2	<DL	<DL	1,450 µg/L	
Selenium	✔		2	1,6020A	5	<DL	<DL	235.8 µg/L	
Silver	✔		2	1,6020A	0.4	<DL	<DL	35.1 µg/L	
Zinc	✔		2	1,6020A	10	<DL	<DL	420 µg/L	
Cyanide	✔		2	121.4500	5	5	5	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		2	128,624.1	1	14.3	9.15	100 µg/L	---
Benzene	✔		2	128,624.1	1	<DL	<DL	5.0 µg/L	---
1,4 Dioxane	✔		2	128,624.1	50	<DL	<DL	200 µg/L	---
Acetone	✔		2	128,624.1	10	<DL	<DL	7.97 mg/L	---
Phenol	✔		2	128,624.1	2.0	<DL	<DL	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		2	128,624.1	1	<DL	<DL	4.4 µg/L	
1,2 Dichlorobenzene	✔		2	128,624.1	5	<DL	<DL	600 µg/L	---
1,3 Dichlorobenzene	✔		2	128,624.1	5	<DL	<DL	320 µg/L	---
1,4 Dichlorobenzene	✔		2	128,624.1	5	<DL	<DL	5.0 µg/L	---
Total dichlorobenzene	✔		2	128,624.1	5	<DL	<DL	763 µg/L in NH	---
1,1 Dichloroethane	✔		2	128,624.1	1.5	<DL	<DL	70 µg/L	---
1,2 Dichloroethane	✔		2	128,624.1	1.5	<DL	<DL	5.0 µg/L	---
1,1 Dichloroethylene	✔		2	128,624.1	1	<DL	<DL	3.2 µg/L	---
Ethylene Dibromide	✔		2	128,624.1	1	<DL	<DL	0.05 µg/L	---
Methylene Chloride	✔		2	128,624.1	1	<DL	<DL	4.6 µg/L	---
1,1,1 Trichloroethane	✔		2	128,624.1	2	<DL	<DL	200 µg/L	---
1,1,2 Trichloroethane	✔		2	128,624.1	1.5	<DL	<DL	5.0 µg/L	---
Trichloroethylene		✔	2	128,624.1	1	<DL	<DL	5.0 µg/L	---
Tetrachloroethylene		✔	2	128,624.1	1	4.1	2.55	5.0 µg/L	
cis-1,2 Dichloroethylene		✔	2	128,624.1	1	<DL	<DL	70 µg/L	---
Vinyl Chloride		✔	2	128,624.1	1	<DL	<DL	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		2	129,625.1	0.1	<DL	<DL	190 µg/L	
Diethylhexyl phthalate	✔		2	129,625.1	0.1	<DL	<DL	101 µg/L	
Total Group I PAHs	✔		2	129,625.1	0.1	5.17	3.89	1.0 µg/L	---
Benzo(a)anthracene	✔		2	129,625.1	0.1	<DL	<DL	As Total PAHs	
Benzo(a)pyrene	✔		2	129,625.1	0.1	<DL	<DL		
Benzo(b)fluoranthene	✔		2	129,625.1	0.1	<DL	<DL		
Benzo(k)fluoranthene	✔		2	129,625.1	0.1	<DL	<DL		
Chrysene	✔		2	129,625.1	0.1	<DL	<DL		
Dibenzo(a,h)anthracene	✔		2	129,625.1	0.1	<DL	<DL		
Indeno(1,2,3-cd)pyrene	✔		2	129,625.1	0.1	<DL	<DL		

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs			2	18270D-S	0.1	5.17	3.89	100 µg/L	---
Naphthalene		✔	2	129,625.1	2.5	0.89	0.5	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		2	127.608.3	0.25	<DL	<DL	0.000064 µg/L	---
Pentachlorophenol	✔		2	18270D-S	0.8	<DL	<DL	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	2	74.1664A	400	<DL	<DL	5.0 mg/L	---
Ethanol	✔							Report mg/L	---
Methyl-tert-Butyl Ether	✔		2	1,8260C	1.0	<DL	<DL	70 µg/L	
tert-Butyl Alcohol	✔		2	1,8260C	10	<DL	<DL	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		2	1,8260C	20	<DL	<DL	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH - Influent			1	121,4500		6.5	6.5		
temperature -Influent			1	Horiba					
hardness - Influent			2	EPA 300		111000	102500		
pH - receiving water			1	121,4500		7.5	7.5		
Hardness - Receiving Water			1	EPA 300		79800	79800		
Temp - Receiving Water									
		✔							

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
■ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☐ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Bag filters, sedimentation tank, GAC filter and ion resin exchange filter in series

Identify each major treatment component (check any that apply):
■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ■ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Fractionation tank Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	100
Provide the proposed maximum effluent flow in gpm.	100
Provide the average effluent flow in gpm.	50
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	N/A

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:

a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ■ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ■ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

☐ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ☐ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ☐ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ☐ Yes ■ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ■ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

J. Certification requirement

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.	
BMPP certification statement: A BMPP Statement has been implemented in accordance with good engineering practices following Part 2.5 of the RGP and shall be implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ■ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ■ NA ■
Signature:	Date: 2/24/20
Print Name and Title: John LaMarre, Senior Project Manager	

APPENDIX C:

DEP PRIORITY RESOURCES MAP

USGS STREAMFLOW STATISTICS REPORT

DILUTION FACTOR AND WQBEL CALCULATIONS

ADDITIONAL NOI SUPPORT INFORMATION

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

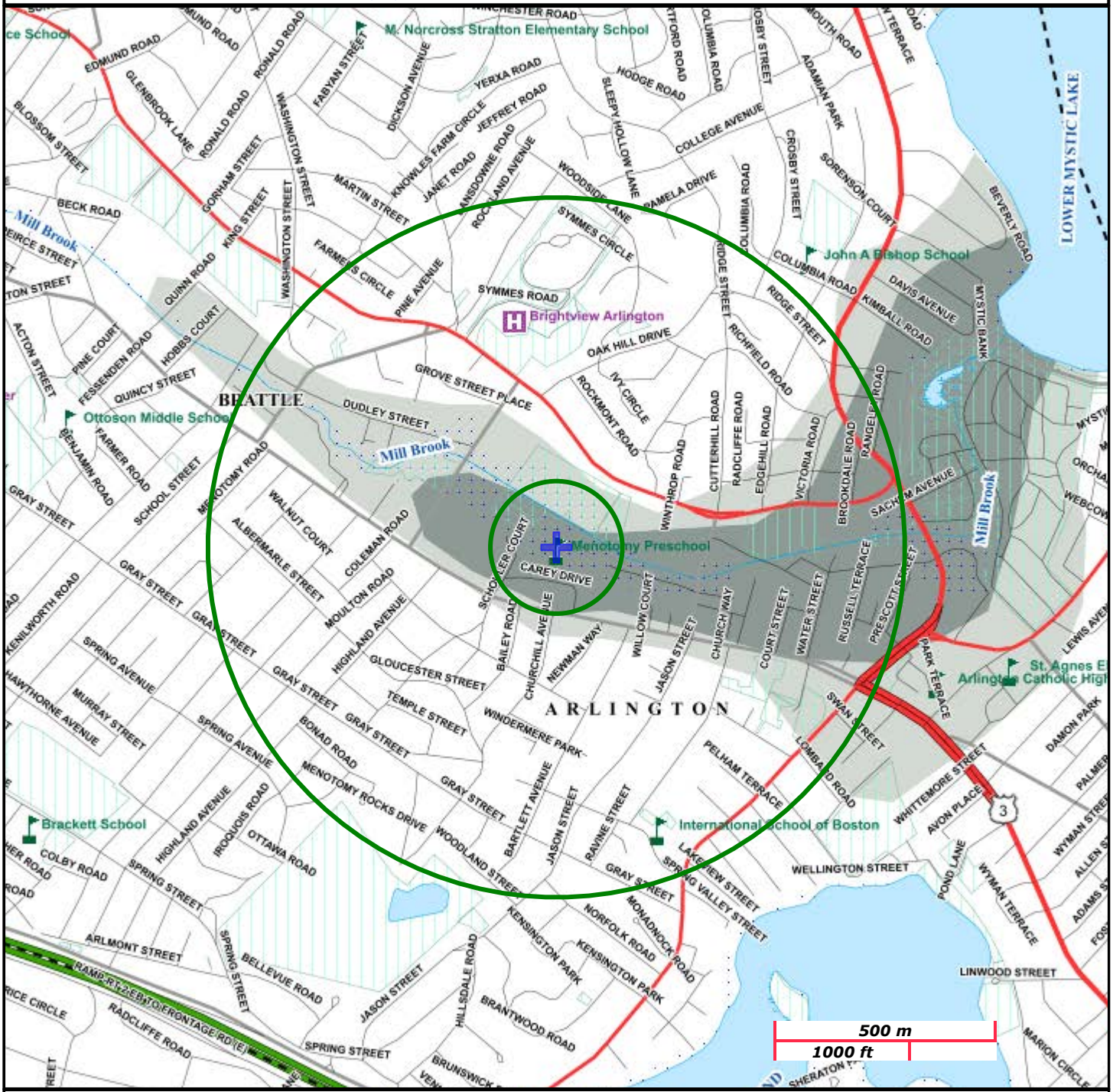
Site Information:

869 MASSACHUSETTS AVE ARLINGTON, MA

NAD83 UTM Meters:
4698487mN , 322146mE (Zone: 19)
February 3, 2020

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

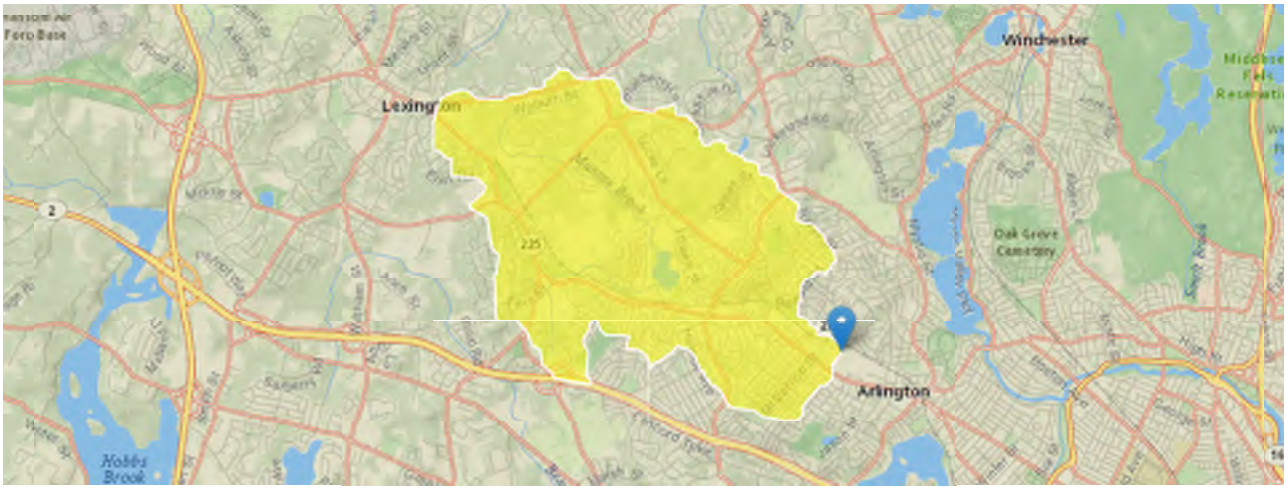
FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

StreamStats Report

Region ID: MA
Workspace ID: MA20191230143442307000
Clicked Point (Latitude, Longitude): 42.42008, -71.16407
Time: 2019-12-30 09:34:57 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	4.5	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	3.065	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.17	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

Low-Flow Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.5	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	3.065	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.17	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Flow Report[Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	SEp
7 Day 2 Year Low Flow	0.417	ft^3/s	0.15	1.12	49.5	49.5
7 Day 10 Year Low Flow	0.176	ft^3/s	0.0495	0.585	70.8	70.8

Low-Flow Statistics Citations

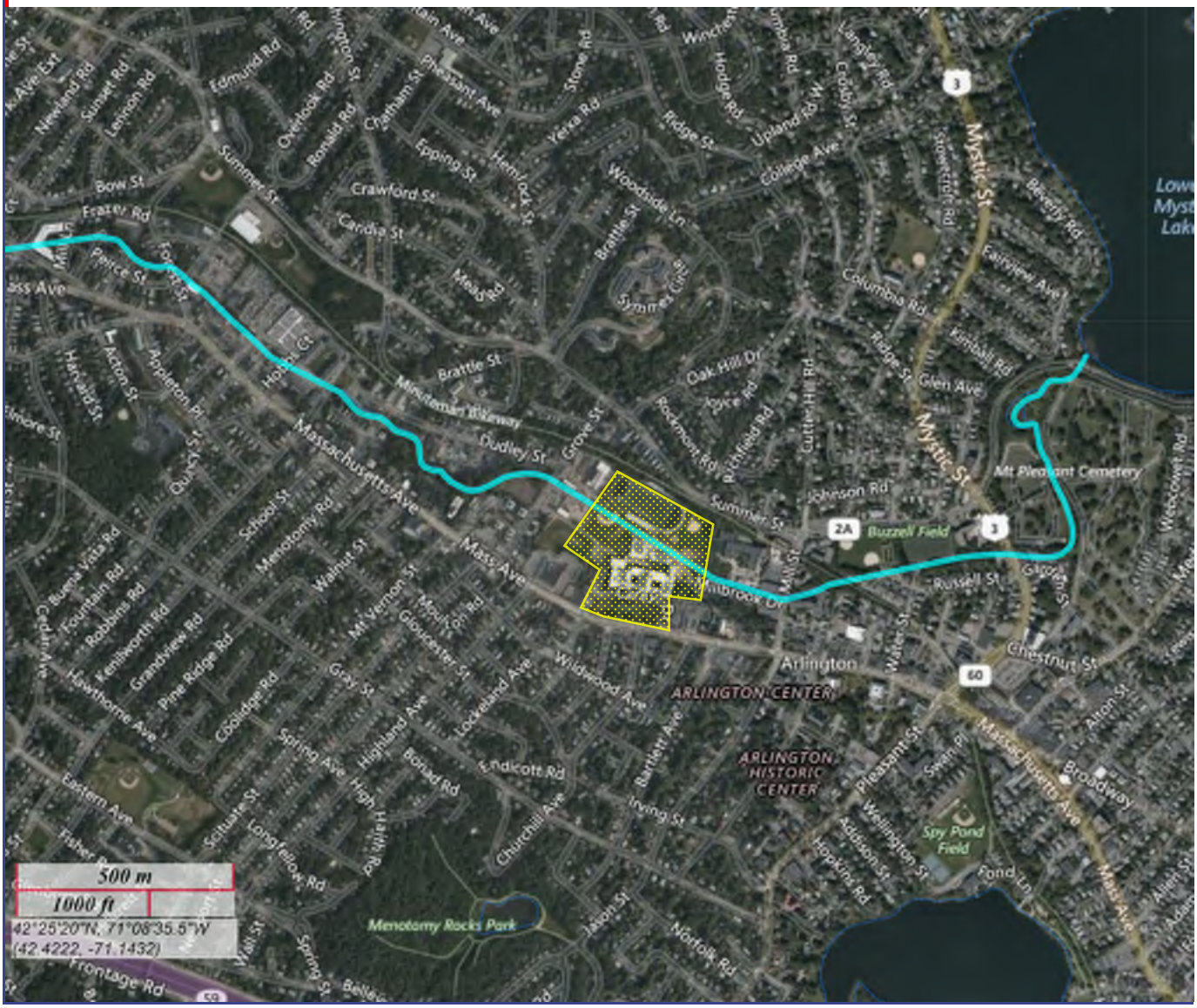
Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

MassDEP Online Map Viewer

2014 Integrated List of Waters Map

Helpful Links:

- The Clean Water Act
- MassDEP Total Maximum Daily Loads



Dilution Factor	1.8					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	0.2	mg/L	**20**	µg/L	50	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	1147	µg/L		
Arsenic	**104**	µg/L	18	µg/L		
Cadmium	**10.2**	µg/L	1.4844	µg/L		
Chromium III	**323**	µg/L	531.9	µg/L		
Chromium VI	323	µg/L	**20.5**	µg/L		
Copper	**242**	µg/L	59.3	µg/L		
Iron	**5000**	µg/L	1086	µg/L		
Lead	**160**	µg/L	37.62	µg/L		
Mercury	**0.739**	µg/L	1.62	µg/L		
Nickel	**1450**	µg/L	335.3	µg/L		
Selenium	**235.8**	µg/L	9.0	µg/L		
Silver	**35.1**	µg/L	91.1	µg/L		
Zinc	**420**	µg/L	771.8	µg/L		
Cyanide	**178**	mg/L	9.3	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	**100**	µg/L	---			
Benzene	**5.0**	µg/L	---			
1,4 Dioxane	**200**	µg/L	---			
Acetone	**7970**	µg/L	---			
Phenol	**1,080**	µg/L	538	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	2.9	µg/L		
1,2 Dichlorobenzene	**600**	µg/L	---			
1,3 Dichlorobenzene	**320**	µg/L	---			
1,4 Dichlorobenzene	**5.0**	µg/L	---			
Total dichlorobenzene	**---**	µg/L	---			
1,1 Dichloroethane	**70**	µg/L	---			
1,2 Dichloroethane	**5.0**	µg/L	---			
1,1 Dichloroethylene	**3.2**	µg/L	---			
Ethylene Dibromide	**0.05**	µg/L	---			
Methylene Chloride	**4.6**	µg/L	---			
1,1,1 Trichloroethane	**200**	µg/L	---			
1,1,2 Trichloroethane	**5.0**	µg/L	---			
Trichloroethylene	**5.0**	µg/L	---			
Tetrachloroethylene	**5.0**	µg/L	5.9	µg/L		
cis-1,2 Dichloroethylene	**70**	µg/L	---			
Vinyl Chloride	**2.0**	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	190	µg/L	---	µg/L		
Diethylhexyl phthalate	**101**	µg/L	3.9	µg/L		

Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0068	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	36	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Malden River	MA71-05	Headwaters south of Exchange Street, Malden to confluence with Mystic River, Everett/Medford.	2.3	MILES	(Debris/Floatables/Trash*)	
					Chlordane	
					DDT	
					Dissolved oxygen saturation	
					Escherichia coli	
					Fecal Coliform	
					Foam/Flocs/Scum/Oil Slicks	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					pH, High	
					Phosphorus (Total)	
					Secchi disk transparency	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
					Taste and Odor	
					Total Suspended Solids (TSS)	
Mill Brook	MA71-07	Headwaters south of Massachusetts Avenue, Lexington to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	3.9	MILES	(Physical substrate habitat alterations*)	
					Escherichia coli	
Mill Creek	MA71-08	From Route 1, Chelsea/Revere to confluence with Chelsea River, Chelsea/Revere.	0.02	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Mystic River	MA71-02	Outlet Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett.	4.9	MILES	(Fish-Passage Barrier*)	
					Arsenic	
					Chlordane	
					Chlorophyll-a	
					DDT	
					Dissolved oxygen saturation	
					Escherichia coli	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Secchi disk transparency	
					Sediment Bioassays -- Chronic Toxicity Freshwater	

APPENDIX F:

BEST MANAGEMENT PRACTICE PLAN

A Notice of Intent for a Remediation General Permit (RGP) under the National Pollutant Discharge Elimination System (NPDES) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction dewatering that will occur during redevelopment of the Arlington High School located at 869 Massachusetts Avenue in Arlington, Massachusetts. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP application and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

Water Treatment and Management

During installation of the proposed geothermal wells and excavation activities related to the construction of the proposed Arlington High School complex, dewatering effluent is anticipated to be pumped from localized sumps and trenches within the excavation directly into a settling tank. Existing plans that have been prepared for the Arlington High School campus indicate that the on-site storm drainage system connects to the Mill Brook culvert which traverses beneath the northern portion of the site. Dewatering effluent treatment will consist of a settling tank and bag filters to remove suspended soil particulates as well as a granular activated carbon filter and ion resign exchange filter to remove CVOCs and metals prior to off-site discharge.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted of both the influent to the system and the treated effluent as required by the RGP. During the first week of discharge, the operator must sample the untreated influent and treated effluent two times: one (1) sample of untreated influent and one (1) sample of treated effluent be collected on the first day of discharge, and one (1) sample of untreated influent and one (1) sample of treated effluent must be collected on one additional non-consecutive day within the first week of discharge. Samples must be analyzed in accordance with 40 CFR §136 unless otherwise specified by the RGP, with a maximum 5-day turnaround time and results must be reviewed no more than 48 hours from receipt of the results of each sampling event. After the first week, samples may be analyzed with up to a ten (10)-day turnaround time and results must be reviewed no more than 72 hours from receipt of the results. If the treatment system is

operating as designed and achieving the effluent limitations outlined in the RGP, on-going sampling shall be conducted weekly for three (3) additional weeks beginning no earlier than 24 hours following initial sampling, and monthly as described below. Any adjustments/reductions in monitoring frequency must be approved by EPA in writing.

In accordance with Part 4.1 of the RGP, the operator must perform routine monthly monitoring for both influent and effluent beginning no more than 30 days following the completion of the sampling requirements for new discharges or discharges that have been interrupted. The routine monthly monitoring is to be conducted through the end of the scheduled discharge. The routine monthly monitoring must continue for five (5) consecutive months prior to submission of any request for modification of monitoring frequency.

Dewatering activity for the Site is classified as Category III-G: Sites with Known Contamination. Monitoring shall include analysis of influent and effluent samples dictated by the EPA.

Monitoring will include checking the condition of the treatment system, assessing the need for treatment system adjustments based on monitoring data, observing and recording daily flow rates and discharge quantities, and verifying the flow path of the discharged effluent.

The total monthly flow will be monitored by checking and documenting the flow through the flow meter to be installed on the system. Flow will be maintained below the "system design flow" by regularly monitoring flow and adjusting the amount of construction dewatering as needed. Monthly monitoring reports will be compiled and maintained at the site. Any exceedances will be documented and conveyed to the EPA within 24 hours of received concentrations.

System Maintenance

A number of methods will be used to minimize the potential for excursions during the term of this permit discharge. Scheduled regular maintenance and periodic cleaning of the treatment system will be conducted to verify proper operation and shall be conducted in accordance with Section 1.11 of the project earthwork specifications. Regular maintenance will include checking the condition of the treatment system equipment such as the settling tanks, bag filters, filtration media, hoses, pumps, and flow meters. Equipment will be monitored daily for potential issues and unscheduled maintenance requirements.

Employees who have direct or indirect responsibility for ensuring compliance with the RGP will be trained by the Contractor.

Miscellaneous Items

It is anticipated that the erosion control measures and the nature of the site will minimize potential runoff to or from the site. The project specifications also include requirements for

erosion control. Site security for the treatment system will be addressed within the overall site security plan.

No adverse effects on designated uses of surrounding surface water bodies is anticipated. The closest body of water is the Lower Mystic Lake located approximately 0.65-miles to the northeast of the project site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will pumped through bag filters, a GAC filter and ion resin exchange filter prior to discharge into the storm drains.

Management of Treatment System Materials

Dewatering effluent will be pumped directly into the treatment system from geothermal well installation and the excavation with use of hoses and localized sumps to minimize handling. The Contractor will establish staging areas for equipment or materials storage that may be possible sources of pollution away from any dewatering activities, to the extent practicable.

Sediment from the tank used in the treatment system will be characterized and removed from the site to an appropriate receiving facility, in accordance with applicable laws and regulations. Bag filters as well as spent carbon and ion resin filtration media will be replaced/disposed of as necessary.