



**Stantec**

**Stantec Consulting Services Inc.**

65 Network Drive 2nd Floor, Burlington MA 01803-2767

January 5, 2022

File: 179410990

**Attention: Mr. Richard Gosselin, Chairman**

MILLBURY PLANNING BOARD

Municipal Office Building

127 Elm Street

Millbury, Massachusetts 01527

Dear Mr. Gosselin,

**Reference: Site Development Plan – 4 Abbott Place  
0 Grafton Road (Route 122)**

Pursuant to the Board's request, Stantec Consulting Services Inc. (Stantec) has reviewed the *Site Development Plan/Stormwater Permit for 4 Abbott Place*, a proposed two-family building located in Millbury. The following materials were received on November 23 and December 3, 2021.

- Site Development Plan for 4 Abbott Place, Millbury, Massachusetts, 01527 (8 Sheets), dated November 2, 2021; Landscape Plan (1 sheet), dated November 22, 2021; Stormwater Management Report, dated November 2, 2021; Drainage Maps, dated November 2, 2021; Operation and Maintenance Plan for Abbott Place (2 pages), dated November 2, 2021; Town of Millbury Application and Checklist for Site Plan Review and Application for Stormwater Permit, Abbot Place Waiver Letter, dated November 22, 2021, each as prepared by as prepared by J.M. Grenier Associates, Inc. (JMGA)
- Elevation & Sections for 4 Abbott Place (3 Sheets), dated October 14, 2021.

The Stormwater Management Permit submittal was reviewed for conformance with the Town's Zoning Bylaws; Municipal Code Chapter 13.15 Post-Construction Stormwater Management of New Developments and Redevelopments, Massachusetts Department of Environmental Protection Stormwater Management Standards, and generally accepted engineering practice.

**We offer the following comments regarding the *Stormwater Management Permit 4 Abbot Place* submittal for the Board's consideration.**

**SITE VISIT**

As part of Stantec's review, Mr. David Glenn (Stantec) conducted a site visit of the project area to observe general site conditions and other relevant features. We also note Mr. Joseph Graham (Stantec) conducted a site visit on November 20, 2020, to witness tests pits performed by JMGA at the project site (See attached report).

Design with community in mind



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### **STORMWATER MANAGEMENT**

The Stormwater Management Report is included under a separate cover of the same name with the Site Plan submission. The report includes a narrative with attachments that address the Town's General Bylaws for Stormwater Management, which includes Municipal Code Chapter 13.15 Post-Construction Stormwater Management of New Developments and Redevelopments which identifies information required for the Board to evaluate the environmental impact, effectiveness, and acceptability of the proposed measures, as well as meet the Massachusetts Stormwater Management Standards as set by the Department of Environmental Protection (DEP).

Stantec offers the following comments for the Board's consideration.

**The following list refers to the Millbury Planning Board Submission of Stormwater Plan Review Checklist. Our review has only included "design" related items as part of the checklist.**

- g) In general, the location of existing and proposed utilities are identified on the Site Plan. **We recommend pipe diameter and direction of flow of existing culvert at Grafton Road be identified on the plan.**
- i) The existing site hydrology is shown on the Site Plans.
- l) Seasonal high groundwater elevation has been provided on Sheet 2 of 8, entitled Existing Conditions. **We note test pit no.1 is not located within the footprint of the propose subsurface infiltration chamber system and recommend an additional test pit be performed by JMGA.**
- m) Existing and proposed ground cover and runoff coefficients have been provided in the Stormwater Report.
- n) A drainage area map showing pre and post conditions have been provided in the Stormwater Report.
- o) See general stormwater comments at the end of this letter report.
- p) The location of proposed improvements has been identified on the plans.
- q) **A sequence of construction has been provided in the Stormwater Report. We recommend the construction sequence be added to the Site Plan.**
- r) A maintenance schedule during construction has been provided.



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MassDEP Stormwater Standards

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

**The applicant provided rip-rap sizing calculations to confirm no erosion or scour at Outlet 1. We recommend discharge from the outlet be redirected to the existing vegetated wetland and required maintenance (removal of sediment/debris) be performed on the existing buried culvert.**

2. Standard 2 – Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development discharge rates. As identified in the summary, the project will not result in an increase in peak flows under post- development conditions for the 2, 10, and 100-yr storm events.

**As noted in the Stormwater Management Report, proposed infiltration chamber system is designed for the 2 through 100-year storm events. It appears modifications to the storm drainage system may be required to ensure during the 25 through 100-year storm events, the estimated drainage areas as identified in the analysis are tributary to the proposed infiltration chamber system. We recommend JMGA provide additional hydraulic calculations identifying the proposed closed drainage system capacities for storm events greater than the 25- year event.**

3. Loss of annual recharge to groundwater should be eliminated or minimized using infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type.

**The applicant provided calculations to confirm the annual recharge from the post-development approximated pre-development conditions. We note the calculations included an infiltration rate of 8.27 inches/hour which is not in agreement with the infiltration rate of 1.02 inches/hour associated with a sandy loam as identified in the test pit log. We recommend this item be addressed by JMGA**

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



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**The applicant provided a worksheet and calculations to confirm the stormwater management system is designed to meet the required TSS removal rate of 80% and required water quality volume.**

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

**The project is not associated with a land use with higher potential pollutant load; therefore, this standard is not applicable.**

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

**The project is not associated with stormwater discharges near a critical area; therefore, this standard is not applicable.**

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

**This project is a new development; therefore, this standard is not applicable.**



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

**An erosion and sedimentation control plan are included as part of the site plan submittal. The Erosion Control Plan (Sheet 6 of 9) identifies the erosion control barrier/limit of disturbance along segments of the site. We recommend the erosion control/limit of disturbance line be extended around the entire site perimeter (northerly property line).**

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

**An operation and maintenance plan are included as part of the stormwater report submittal. We recommend the Applicant provide information regarding the following: snow storage, vehicle washing and management of de-icing chemicals.**

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

**An illicit discharge statement was included as part of this submission.**

## **GENERAL COMMENTS**

### **Stormwater**

1. The Stormwater Report Calculations for G-613-POST list the ADS\_StormTech MC-3500 as 20 chambers in 2 rows. The site plan shows that there are 15 chambers. We recommend this item be addressed by JMGA
2. We recommend cross section of the proposed subsurface infiltration chambers as shown on sheet 7 of 8 identify items such as existing grades and seasonal high groundwater.
3. We recommend additional information/specification be provided regarding the proposed polyethylene barrier and fill material as shown on the impervious barrier detail located on sheet 7 of 8.



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If there are any questions regarding our comments and recommendations, please do not hesitate to call at 781-221-1134.

Regards,

**STANTEC CONSULTING SERVICES INC.**

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Attachment

cc.Ms. Laurie Connors, Planning Director