



**Stantec**

**Stantec Consulting Services Inc.**

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

March 31, 2020

File: 179410888

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

MILLBURY PLANNING BOARD

Municipal Office Building

127 Elm Street

Millbury, Massachusetts 01527

**Reference: Stormwater Management Permit**

**Multi-Family Conversion**

**40 Tainter Hill Road**

**Millbury, Massachusetts**

Dear Mr. Gosselin:

Pursuant to the Board's request, Stantec Consulting Ltd. has reviewed the Site Plan submittal for *Multi-Family Conversion Map 43, Lot 10, 40 Tainter Hill Road*, a proposed residential development in Millbury.

The following materials were received at Stantec's Burlington Office by email on February 26, 2020.

- Site Plan dated February 24, 2020; Field Testing Plan dated January 31, 2020; Stormwater Management analysis, dated February 24, 2020 and supporting documentation each as prepared by Allen Engineering & Associates, Inc. (AEA)

The Site Plan submittal was reviewed for conformance with the Town's Zoning Bylaws, the Board's Design Standards, and generally accepted engineering practice. We offer the following comments regarding the Stormwater Management Permit *40 Tainter Hill Road*, submittal for the Board's consideration.

**SITE VISIT**

As part of the Stantec's review, Mr. David Glenn (Stantec) conducted a site visit to view existing surface features and site conditions.

**STORMWATER MANAGEMENT**

The Stormwater Management Report is included under a separate cover entitled "Drainage Analysis for 40 Tainter Hill Road" with the Site Plan submission. The report includes a narrative with attachments which addresses the Town's General Bylaw for Stormwater Management, which includes addressing the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards.

**Stantec offers the following comments and recommendations for the Board's consideration:**

1. Provide detail/cross-section of proposed rip-rap drainage swale and treatment of infiltration basin inlet/outlet pipes (i.e. headwall, flared end section). We also note the proposed snow

Design with community in mind



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storage area will conflict with the proposed swale to Infiltration basin no.1 and recommend snow storage be relocated away from the swale

2. A sediment control barrier has been included in the Construction Details. Stantec recommends an erosion control plan be prepared identifying location and limits of erosion control measures.
3. Stantec recommends the existing drainage system as referenced in email by Laurie Connors, dated March 26, 2020 be shown on the site plan.

**MassDEP Stormwater Standards**

**We offer the following comments on the proposed stormwater management system, specifically for compliance with the ten performance standards as outlined in the MassDEP Stormwater Management Standards. We also note that the Stormwater Report Checklist needs to be stamped by a professional engineer.**

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

**We recommend detail/cross-section of proposed rip-rap drainage swale and treatment of infiltration basin inlet/outlet pipes (i.e. headwall, flared end section) be provided on the site plan.**

2. Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

**Review of the HydroCAD model analysis does not include the existing barn structure as impervious area. Stantec recommends the pre and post development calculations be revised to include the barn structure.**

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

**The applicant's Soil Rawls rate is not in agreement with the soils indicated on site or the rate used for the Water Quality Volume. The soil indicated on site is HSG-C, while the calculation is using HSG-B. We also recommend estimated drawdown time of infiltration basin no. 2 be provided for review.**



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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

**The volume identified in the water quality volume calculations is not in agreement with the infiltration basin volume as identifying in the drainage analysis. We recommend this item be addressed to further clarify the estimated 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 a the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, 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 a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.

**The project is not within a critical area; therefore, this standard is not applicable.**



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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 redevelopment. The existing barn structure will be repurposed into new apartments.**

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

**A sediment control barrier detail has been included in the Construction Details. Stantec recommends an erosion control plan be prepared identifying location and limits of erosion control measures.**

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 has not been provided for review. We recommend this item be addressed by AEA.**

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

**The applicant has provided an Illicit Discharge Compliance Statement which states that no illicit discharges are proposed to the stormwater management system. In Stantec's opinion the standard is met.**

Subsection 8 – *Operation and Maintenance Plans* of the Town's *General Bylaws* identifies information required for the plan to comply with the Permit, this bylaw, and meet the Massachusetts Surface Water Quality Standards.

**An operation and maintenance plan has not been included. Stantec recommends including the plans to comply.**



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If there are any questions regarding our comments and recommendations, please do not hesitate to call at 1-781-221-1134.

Regards,

**STANTEC CONSULTING SERVICES INC.**

Vannary Tan  
Civil Engineer Designer  
Phone: 781-221-1114  
vannary.tan@stantec.com

David Glenn, P.E.  
Senior Transportation Engineer  
Phone: 781-221-1134  
Cell: 617-610-0031  
david.glenn@stantec.com

cc. Ms. Laurie Connors, Town Planner