



**Stantec Consulting Services Inc.**  
65 Network Drive, 2nd Floor, Burlington MA 01803-2767

November 17, 2021  
File: 179411012

**Attention: Mr. Richard Gosselin, Chairman**  
MILLBURY PLANNING BOARD  
Municipal Office Building  
127 Elm Street  
Millbury, Massachusetts 01527

Dear Mr. Gosselin,

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

Subsequent to our letter report of October 16, 2021, and pursuant to the Board's request, Stantec Consulting Services Inc. (Stantec) has reviewed the *Revised Rice Pond Village Site Plan of Land*, a proposed multi-family residential development located in Millbury.

The following materials were received via email by Stantec on November 12 and 16, 2021.

- Rice Pond Village Site Plan of Land (26 Sheets), revised November 8, 2021; Offsite Improvement Plan (1 Sheet), dated October 6, 2021; Written cover letter, dated November 12, 2021 summarizing modifications to the site plan; Written response to Stantec's traffic comments, dated November 2, 2021; Drainage Report, revised November 9, 2021, Drainage Structure Calculations, dated November 8, 2021; Stormwater Checklist, dated March 26, 2021; Nitrogen-Phosphorus Loading Calculations, dated November 16, 2021; and supporting documentation each as submitted by Azimuth Land Design, LLC (ALD).

**The Revised Site Plan submittal was reviewed for conformance with the Board's Design Standards, the Town's Zoning Bylaws, and generally accepted engineering practice. We recommend ALD confirm requested waivers identified in the letter dated September 7, 2021 are current and address review by the Millbury DPW, Fire Department and Aquarian Water Company.**

**We offer the following comments and recommendations regarding the Rice Pond Village Site Plan, which are cross-referenced to our October 16, 2021, letter report for the Board's consideration.**

#### **SITE PLAN**

Section 12.4 - Site Plan Review, Subsection 12.44 – Contents and Scope of Application of the Town's Zoning Bylaws requires specific information be shown on the Site Development Plan. Our review included "design" related items as part of the Site Plan Review Checklist. In general, The Site Plan appears to conform to the Town's "design" related *Zoning Bylaws*, with the following exceptions:

1. Additional site features along Rice Pond Road such as existing trees and areas of vegetation, etc. should be shown on the existing conditions plan.

Stantec (10/16/2021) We recommend caliper of trees located adjacent to Rice Road within the project limits be identified on the existing condition plans.

**Design with community in mind**



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 2 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

**Stantec (11/17/2021) Comment remains to be addressed on sheet G1. We also recommend trees to be removed be identified on sheet G1.**

2. We recommend additional documentation and design of the sanitary sewer system to service units 23 through 30 be provide on the site plan. As noted on sheet P-1 and P-2 these units will be serviced by E-One Pumps and will discharge to proposed sewer manholes at station 7+50 and 13+00.

Stantec (10/16/2021) Comment partially addressed. A detail of the E-One Pump is provided on Sheet D3. We recommend proposed E-One Pumps and sewer force main be shown on the site layout sheets. Also recommend sewer force main and water line be shown on the profile of the plan/profile sheets.

**Stantec (11/17/2021) Comment addressed by revised submission of sheet S1-S3.**

3. A landscape plan and planting schedule has been included with the Site Plan. We note that there are a few trees that are not labeled on the Landscape Plan Sheet LS-1. The applicant should confirm that the existing trees at the entrance of Hillcrest Circle being noted to remain do not cause a sight line issue.

Stantec (10/16/2021) Comment Remains – As noted io our traffic peer review letter of May 4, 2021 we requested the applicant review the locations of the existing street trees (noted to remain in the landscaping plan within the Site Plans) along the frontage of Rice Road and review if any of these trees will impede proposed sight distances identified within the traffic impact study and the proposed stop sign and stop line location (also to be included in Site Plans). The traffic impact study identified this recommendation as Recommendation #2 within the Recommendations & Conclusion section.

**Stantec (11/17/2021) Comments regarding the traffic memorandum, dated November 2, 2021 will be provided in separate letter report.**

The Applicant has provided a Development Impact Statements to all four elements: traffic impact, environmental impact, fiscal impact, and historical impact assessments. We offer the following comments:

- 1) Traffic Impact Assessment: Stantec reviewed the Traffic Impact Statement submitted for the proposed development under separate letter report dated May 4, 2021

Stantec (10/16/2021) Our comments remain to be addressed by ALD.

**Stantec (11/17/2021) Comments regarding the traffic memorandum, dated November 2, 2021 will be provided in a separate letter report.**

Section 12.4 - *Site Plan Review*, Subsection 12.45 – *Design Standards* of the Town's *Zoning Bylaws* requires applicant to adhere to general principles regarding site design. **In general, the Project Site Plan appears to conform to the Town's *Design Standards*, with the following exceptions:**



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 3 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

1. We recommend sanitary sewer, water, electrical and other service connections from the roadway to the building units be identified on the plans. The method of solid waste disposal from the building units should be addressed by ALD.

Stantec (10/16/2021) Comment partially addressed. We recommend proposed E-One Pumps and sewer force main be shown on the site layout sheets. Also recommend sewer force main and water line be shown on the profile of the plan/profile sheets.

**Stantec (11/17/2021) Comment addressed by revised submission of sheet S1-S3.**

2. The provided Architectural plans do indicate the proposed signage along Rice Road. We also recommend proposed traffic signage location and details be provided on the plans.

Stantec (10/16/2021) Comment partially addressed. We recommend additional traffic and street signage be labeled as shown on sheet S1, G1, P1 and P2. We also recommend additional signage be provided to address the one-way roadway segment of Hillcrest Circle.

**Stantec (11/17/2021) Comment partially addressed. We recommend additional signage be provided in the median island at the revised site entrance of Hillcrest Circle and conform with the Manual on Uniform Traffic Control Devices (MUTCD).**

3. A Lighting and Photometric Plan of outdoor lighting was not provided with the Site Plan.

Stantec (10/16/2021) As noted by ALD, a photometric plan will be submitted by the applicant.

**Stantec (11/17/2021) Comment addressed by submission of photometric plan (sheet LS-2).**

4. With respect to personal safety, the site shall be designed to be accessible by fire, police, and other emergency personal and equipment. Access to the subject property is via a 24-foot-wide paved access drive off Rice Road. We request the applicant provide a turning movement/site circulation template to ensure accessibility for the fire apparatus (Tower 1) at the access drive and within the interior looped roadway alignment. The proposed cross section for Hillcrest Circle do not indicate sidewalks. The applicant should address pedestrian access and we recommend the typical section be updated to reflect a sidewalk on one side of the roadway. In addition, we note building units 21 thru 36 are adjacent to the existing Providence & Worcester Railroad and recommend for personal safety a fence and/or barrier be provided between the building units and railroad.

Stantec (10/16/2021) Comment partially addressed. We request the applicant provide a turning movement/site circulation template to ensure accessibility for the fire apparatus (Tower 1) at the access drive and within the interior looped roadway alignment. We also recommend additional signage be provided to address the one-way roadway segment of Hillcrest Circle.

**Stantec (11/17/2021) Comment remains to be addressed by ALD.**



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 4 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

### **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.**

- A drainage area map showing pre- and post-conditions have been provided in the Stormwater Report. We recommend the Applicant clarify the watershed boundaries, drainage areas and stormwater flow paths on the drainage area maps.

Stantec (10/16/2021) Comment partially addressed. We recommend Design Points/Reaches be labeled on the drainage area maps.

**Stantec (11/17/2021) Comment addressed by revised submission of pre and post development drainage area plans.**

### **MassDEP Stormwater Standards**

1. 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.

Recommend rainfall amounts used be based on the 1998 Cornell University Study, NOAA Atlas Volume 10 Point Precipitation Frequency be used in estimating the pre and post development peak discharge rates for the 2, 10, 25 and 100 yr. storm events.

The Pre-Development and Post-Development Drainage Area Maps be revised to include the location and labels of the Drainage Reach #3 Pre and Reach #13 Post. The maps should also include the location and labels of all sub catchments and ponds.

The Pre-Development and Post-Development Drainage Area Maps outline the areas of the sub catchments.

Stantec (10/16/2021) Comment partially addressed. We recommend a separate routing diagram and HydroCAD analysis for Pre-Development and Post-Development be provided to assist in our review.



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 5 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

As noted in the Drainage 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 ALD provide additional hydraulic calculations identifying the proposed closed drainage system capacities for storm events greater than the 25-year event.

**Stantec (11/17/2021) Comment partially addressed. Request ALD confirm the additional drainage calculations of the closed drainage system are for the 25-year storm event. We question modifications to the drainage system may be required to ensure the estimated drainage areas as identified in the analysis for storm events greater than the 25-year will be conveyed to the proposed infiltration system.**

2. 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.

We recommend that the Applicant provide calculations to confirm the annual recharge from the post-development approximated pre-development conditions.

Stantec (10/16/2021) Comment partially addressed. We recommend computations provided identifying the impervious area; required recharge volume and proposed recharge volume provided by the infiltration chamber system be updated based on the revised plan submission. We also request documentation provided to demonstrate the infiltration system will drain within 72 hours be updated based on the revised plan submission.

**Stantec (11/17/2021) Comment addressed by submission of the stormwater report supporting documentation.**

3. 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

We recommend the Applicant provide Water Quality and TSS Calculations.

Stantec (10/16/2021) Comment partially addressed. We recommend computations regarding the required and provided water quality volume be updated based on the revised plan submission.



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 6 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

**Stantec (11/17/2021) Comment addressed by submission of the stormwater report supporting documentation.**

4. 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.

We recommend a separate erosion and sedimentation control plan be provided identifying the erosion control measure as noted on sheet D4. Grading Plans G1, G2 and G3 identifies the erosion control barrier/limit of disturbance along segments of the site. We recommend location of construction entrance, temporary stockpiles, and inlet protection on existing drainage structures on Rice Road be provided on the plan.

The project is covered by NPDES Construction General Permit, but no Stormwater Pollution Prevention Plan was submitted. We note that the Applicant will need to provide a SWPPP.

The Stormwater Checklist identifies certain items required on the Construction Period Pollution Prevention and Erosion and Sediment Control Plan. We recommend the Applicant provide the Operation and Maintenance Log Form.

Stantec (10/16/2021) Comment partially addressed. We recommend a separate erosion and sedimentation control plan be provided identifying the erosion control measure and details as identified on sheet D1 and D4. The applicant has agreed to provide a copy of the Stormwater Pollution Prevention Plan prior to construction

**Stantec (11/17/2021) Comment addressed by submission of revised sheet ESCS-1 thru ESC-3.**

5. 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: storage materials and waste products inside or under cover, vehicle washing, and management of de-icing chemicals.

Stantec (10/16/2021) Comment remains. Stantec has not received a copy of the revised long term maintenance plan as referenced in the written response dated September 20, 2021.

**Stantec (11/17/2021) Comment addressed by submission of the stormwater report supporting documentation.**

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

An illicit discharge statement was not included as part of this submission. We recommend this be provided by the applicant.



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 7 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

Stantec (10/16/2021) Comment remains. Stantec has not received a copy of the document regarding illicit discharge statement as referenced in the written response dated September 20, 2021.

**Stantec (11/17/2021) Comment Remains.**

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. **In general, the Proposed Site Plan appears to conform to the Town's *Operation and Maintenance Plans* requirements, with the following exceptions.**

- a) The name(s) of the owners for all components of the system have not been identified in the Operation and Maintenance Plan.

Stantec (10/16/2021) Comment remains. Stantec has not received a copy of the latest Operation and Maintenance Plan as referenced in the written response dated September 20, 2021.

**Stantec (11/17/2021) Comment addressed by submission of the stormwater report supporting documentation.**

**Stormwater**

1. We recommend the Applicant provide stormwater calculations for the infiltration structures to clarify that the drawdown is within 72 hours.

Stantec (10/16/2021) We request documentation provided to demonstrate the infiltration system will drain within 72 hours be updated based on the revised plan submission.

**Stantec (11/17/2021) Comment addressed by submission of the stormwater report supporting documentation.**

2. Stantec recommend cross section of the proposed subsurface structure at Station 10+50 identifying items such as existing and proposed grades, refusal and/or seasonal high groundwater be provided on the plans

Stantec (10/16/2021) Comment partially addressed. We recommend a vertical scale be provided on the infiltration structure cross section on sheet D3.

**Stantec (11/17/2021) Comment addressed by submission of revised sheet D3.**

3. Provide calculations regarding the average annual load of Total Phosphorus and estimated pollution removal

Stantec (10/16/2021) Comment remains.



November 17, 2021  
Mr. Richard Gosselin, Chairman  
Page 8 of 8

**Reference: Rice Pond Village  
Site Plan of Land  
17 Rice Road**

**Stantec (11/17/2021) Comment addressed by submission of Nitrogen-Phosphorus Loading Calculations.**

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.**

*David Glenn*

David Glenn, P.E.  
Senior Transportation Engineer  
Phone: 781-221-1134  
Fax: 781-229-1115  
David.Glenn@stantec.com