

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

October 16, 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 May 7, 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 September 20, 2021.

- Rice Pond Village Site Plan of Land (23 Sheets), revised September 3, 2021; Written response dated September 20, 2021 to Stantec's comment letter, dated May 7, 2021; Written response dated September 20, 2021 to Planning Director's comment letter, dated July 28, 2021; Waiver request letter, dated September 7, 2021; Drainage Report, revised September 3, 2021, and supporting documentation each as prepared 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 offer the following comments and recommendations regarding the *Rice Pond Village Site Plan of Land* submittal for the Board's consideration.

We offer the following comments and recommendations which are cross-referenced to our May 7, 2021, letter report for the Board's consideration.

SITE PLAN

The proposed site development at 17 Rice Road consists of the construction of 26 duplexes (52 total units), associated parking, infrastructure, and landscaping. The condominium development, called Rice Pond Village.

Stantec (10/16/21) The revised site development plan consists of a reduction of the number of duplexes/units to 23 duplexes (46 units) and increased visitor parking spaces parking to 15 located at four locations along Hillcrest Circle.

The existing site has an area of 15.6 acres and contains one single family home, a garage and pool area with a large land. The rest of the area consists of undeveloped wooded lands. The site is in the Residential-I Zoning district, with 346.09 ft of frontage along Rice Road



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 2 of 10

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

The existing building, existing driveway curb cut, and existing pool will be removed and replaced with a proposed private looped roadway directly opposite of Thomas Hill Road. The looped roadway (Hillcrest Circle) will be a 24-foot paved section from station 0+00 to station 8+85 and 22-foot-wide paved section from station 9+35 to Station 14+08 with a 50-foot pavement transition from 24 feet to 22 feet. The site proposes 26 duplex condominiums, a total of 52 units, and a two-car garage for each unit. Each unit will also have parking for two cars in the front. A total of ten (10) visitor parking spaces are proposed in three locations on site.

We note segments of the proposed roadway alignment and cross section are not in compliance with the following subdivision design standards: Pavement width, Horizontal alignment, Centerline radii, Two separate means of access and sidewalks. We question if the applicant has requested a waiver of these design standards from the board.

Stantec (10/16/2021) The waiver letter, dated September 7, 2021, requests waivers from the following subdivision design standards: Pavement width, Horizontal alignment, Centerline radii, Two separate means of access and Sidewalks

Topographic features of the site include a ridge separating areas sloping downward to the northeasterly and the southwesterly side. An unnamed pond and wetland is located along the westerly side of the proposed development. The on-site slopes generally fall off in a northeast direction to the existing railroad tracks and to the southwest direction towards the existing unnamed pond.

The submitted plan identifies one wetland resource area located westerly of the project site. The wetland boundaries shown on the site plan were flagged by Goddard Consulting, LLC in 2020, as noted in Note 7 of the Existing Conditions Plan. We note that the proposed infiltration structures to some of the units will occur within 100 feet of the delineated wetland area. Stantec questions whether the wetland delineation as shown on the plan have been approved by the Millbury Conservation Commission and recommend this item be addressed by the applicant.

Stantec (10/16/2021) We recommend status of review from the Millbury Conservation Commission be addressed by ALD.

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. The Site Plan is being shown at a 1" =30' scale. Site Plans at a scale other than 1" =20' shall be approved by the Planning Board. The different scale does not impact the design review and question if the applicant has requested a waiver from the board.

Stantec (10/16/2021) The applicant has requested a waiver from the Planning Board.



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 3 of 10

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

2. The existing conditions plan should be stamped by a professional land surveyor and identify the vertical and horizontal datum used, NAD83 and NAVD 88. Monumentation should also include Massachusetts State Plan coordinates.

Stantec (10/16/2021) Comment addressed by revised submission of sheets L1- L3.

3. The Site Plan currently shows existing and proposed contours at two (2) foot intervals. Existing and proposed contours are to be shown at one (1) foot intervals. We question if the applicant has requested a waiver from the board.

Stantec (10/16/2021) The applicant has requested a waiver from the Planning Board.

4. 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.

5. Request proposed building setback information be provided on the site layout plans (sheets S1-S3) to show compliance with the zoning requirements.

Stantec (10/16/2021) Comment addressed by revised submission of sheets S1-S3 and D4.

6. Location of proposed snow storage shall be included on the Site Plan.

Stantec (10/16/2021) Comment addressed by revised submission of sheets S1, G1, and P1-P2.

7. Information on the location, size, and capacity of existing abutting utilities shall be included on the Site Plans. Existing site drainage, water and sewer along Rice Road should be shown to determine adequacy of capacity. We question if the applicant has received comments from the Millbury DPW regarding connections to the existing sewer and drainage. We also question if Aquarian Water Company has received and reviewed the proposed plans.

Stantec (10/16/2021) Comment partially addressed. We recommend status of review from Aquarian Water Company be addressed by ALD.

8. 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.



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 4 of 10

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

9. Due to the amount of driveway openings, we recommend ALD evaluate the installation of CBs at STA 6+77. Runoff along the gutter will likely enter the driveway of #14 prior to being captured by these downhill CBs.

Stantec (10/16/2021) Comment addressed by revised submission of sheet P1.

10. At least 3 property boundary markers shall be indicated with Massachusetts Grid Plane Coordinates. The plans should identify the elevation and coordinates of the markers.

Stantec (10/16/2021) Comment addressed by revised submission of sheets L1- L3.

11. 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 in 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.

12. An isometric line drawing depicting the entire project and its relation to existing trees, building and roads, for one hundred feet from the project boundaries, is not included with the Site Plan. The Applicant has requested a waiver for the isometric line drawing.

Stantec (10/16/2021) The applicant has requested a waiver from the Planning Board.

13. A locus plan at a scale of 1" = 100' showing the entire project and its relation to existing areas, buildings, and roads for 100 feet from the project boundary is not included with the Site Plan. The Applicant should request a waiver for the locus plan.

Stantec (10/16/2021) The applicant has requested a waiver from the Planning Board.

14. The Building Elevation plans are not at a scale of 1/4" = 1' or 1/2" = 1'. The plans also do not indicate the type and color of materials used on the facades.

Stantec (10/16/2021) As noted by ALD, the proposed building siding will be vinyl in a variety of colors.

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:



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 5 of 10

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

- 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.

- 2) Environmental Impact Assessment (EIA): Information on the location, size, and capacity of existing abutting utilities shall be included on the Site Plans. Existing drainage, water and sewer along Rice Road should be shown to determine adequacy of capacity. We question if the applicant has received comments from the Millbury DPW regarding connection to the existing sewer and drainage. We also question if Aquarian Water Company has received and reviewed the proposed plans.

Stantec (10/16/2021) Comment partially addressed. We recommend status of review from Aquarian Water Company be addressed by ALD.

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:**

1. As previously noted in subsection 12.44, the submitted landscape plan identifies existing and proposed landscape features. Areas to be planted shall be loam and seeded with no less than 6" of compacted depth of loam and seed. The Hillcrest Circle cross-section reveals that only 4" of loam and grass is proposed.

Stantec (10/16/2021) Comment addressed by revised submission of sheet D2 and D4.

2. 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.

3. 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.

4. Landscape within the zoning setbacks is required as part of the site plan by-law. We recommend existing trees along Rice Road to be retained be identified on the plan. Minimal landscaping is proposed in the front yard setback.

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

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.

5. As noted on sheet D4, every building unit will be provided with a two-car garage and space to park two cars in the driveway, thereby providing a total of four parking. In addition, 10 visitor/overflow parking spaces are provided at three locations of Hillcrest Circle. We recommend details and location of signage at these three locations be provided on the plans.

Stantec (10/16/2021) Comment addressed by revised submission of sheet P1, P2 and D2.

6. Proposed curbing is required around the perimeter of all driveways and parking areas, as well as in front of sidewalks abutting buildings. We recommend limits of curbing at the driveways and parking areas be identified on the plan. We note a roadway curb detail/sloped granite is provided on sheet D2 and question if the applicant has requested a waiver from the Board.

Stantec (10/16/2021) The applicant has requested a waiver from the Planning Board.

7. 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.

8. 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.

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



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 7 of 10

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

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.

- The location of the proposed utilities has been identified on the Site Plans. The source of the proposed utilities has not been identified. We recommend including the existing utilities the Site Plans.

Stantec (10/16/2021) We recommend status of review from Aquarian Water Company be addressed by ALD.

- The existing wetlands have not been identified on the Site Plans.

Stantec (10/16/2021) We recommend status of review from the Millbury Conservation Commission be addressed by ALD.

- 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.

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.



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 8 of 10

**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.

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.

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.

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



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 9 of 10

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

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

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.

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.

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.

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.



October 16, 2021
Mr. Richard Gosselin, Chairman
Page 10 of 10

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

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.

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.

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

Stantec (10/16/2021) Comment remains.

4. We recommend hoods be installed in all catch basins.

Stantec (10/16/2021) Comment addressed by revised submission of sheet D2.

5. We request building roof leaders and connection to the drainage system be shown on the plan.

Stantec (10/16/2021) Comment addressed by revised submission of sheet S1-S3.

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