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April 6, 2020

Town of Millbury Planning Board  
127 Elm Street  
Millbury, MA 01527

Re: **COMMENT RESPONSES**  
**SPECIAL PERMIT, SITE PLAN REVIEW, AND STORMWATER PERMIT**  
Multi-Family Conversion – Map 43, Lot 10  
40 Tainter Hill Road  
Millbury, Massachusetts

Dear Board Members:

Allen Engineering and Associates, Inc. (AEA) has received written comments for the above referenced project from Laurie Connors, Town Planning, date March 30, 2020, and from the Board's peer review consultant, Stantec Consulting Services, Inc., dated March 31, 2020.

On behalf of Melissa Petrillo, Owner/Applicant, we are providing the following responses to each comment. Below are the comments re-stated in standard font with responses to each in **bold font**.

Please note that we are not providing revised plans and supporting materials to the Board at this time. Revised documents will be provided following the initial public hearing on April 13, 2020, so that the Applicant can address any comments from the Board.

**Responses to Town Planner comments dated March 30, 2020:**

**Project Description:** The Applicant proposes to convert an existing barn into a 4-unit multi-family structure on a parcel containing 9.4± acres of area located along Tainter Hill Road. Two units will contain 1 bedroom and a loft and two will be standard two-bedroom units. The subject property will be served by public water and sewer and is located within a Residential II District. The property contains sufficient lot size and frontage to accommodate the development and the building complies with the maximum lot coverage and height requirements.

**Response:** Please note that the number of bedrooms described above is incorrect. Each unit will contain two (2) bedrooms for a total of eight (8) bedrooms.

**Issues:**

1. The Applicant requests a waiver from Zoning Bylaws, Section 12.44(a) and Municipal Code, Chapter 13.15.070(8) regarding the requirement to provide topography at 1-foot contour intervals. Existing and proposed topography is shown at 2-foot intervals with spot grades at the parking lot corners. The Planning Board should determine if they are amenable with this waiver request.

**Response:** The site contains significant topographic relief. For this reason, we believe that 2-foot contours are sufficient for design purposes.

2. The Applicant requests a waiver from Zoning Bylaws, Section 12.44(a)- requirement to provide a photometric plan. Proposed lighting consists of area lights on posts at the rear of the building, at the parking lot location. I assume that all doorways will also contain lighting although that is not depicted on the site plan or elevation drawings. A street light is located along Tainter Hill Road across from the proposed driveway entrance, which will adequately light the entrance. Another residential-scale light is located at the front left corner of the building, although it is not depicted on the existing conditions plan and it is unclear if that light will remain. If it will be removed to make way for the driveway, I recommend installing a new residential-scale light pole and fixture in a similar location along the driveway in front of the building. A light will also be necessary to illuminate the staircase and walkway leading to the lower level entrance of the apartment along the easterly side of the building.

**Response: All door locations will be illuminated, the existing light pole at the south west corner of the building will be retained, and the proposed stairway will be illuminated. Notes have been added to the plans accordingly.**

3. The Applicant requests a waiver from Zoning Bylaws, Section 12.44(c)- requirement to provide an isometric line drawing. The proposal involves the conversion of an existing barn into 4 dwelling units. Photographs of all sides of the barn were submitted in lieu of the isometric line drawing. I recommend that the Planning Board grant the waiver request.

**No response required.**

4. The Applicant requests a waiver from Zoning Bylaws, Section 12.44(f)(1)- requirement to submit a Traffic Impact Assessment. Given the minor scope of the project and limited amount of traffic that will be generated, I recommend that the Planning Board grant this waiver request.

**No response required.**

5. This property was subdivided from 40 Tainter Hill Road. The Applicant should work with the Millbury Police Chief to obtain an address for the property ASAP. The special permit/stormwater management permit decision must specify the new address so that it can be properly recorded at the Worcester Registry of Deeds and tracked through the construction process.

**Response: The Applicant will immediately begin the process of obtaining a separate address for the subject property. This information will be provided to the Board upon receipt.**

6. Please provide floor plan for all proposed units demonstrating 2 means of egress for each unit.

**Response: Each dwelling unit will have two means of entry/egress in accordance with the building code. Architectural plans have been prepared and will be provided to the Board and to the Building Department as part of the Building Permit Application.**

7. The existing conditions plan lacks key information instrumental to understanding the proposed development including fencing, some of the stone walls and significant trees.

**Response: Relevant existing stone walls and fencing are depicted on the plans. Additional tree locations have also been added to the plans.**

8. Please refer to emails received from abutter Ann Gagne regarding the drain line that discharges towards Tainter Hill Road that is within the limits of the road ROW. The Applicant should modify the existing conditions plan to depict the location and extent of said drain line and address her concerns about possible disturbance of the line during construction.

**Response: The existing 6-inch PVC pipe has been added to the plans. The origin of the pipe is unknown and no record plans are available that depict the extents of the pipe. There are no signs of recent flow from the pipe I.E. no erosion or leaf litter disturbances. The abutter has requested that the pipe remain in its current location. The owner has no intentions of modifying the pipe as part of the project. If the pipe is encountered during construction it will be preserved and protected. Note have been added to Sheet 4 of the plan set to require the contractor to notify AEA in the event the pipe is encountered during construction, so that a resolution can be implemented.**

9. Zoning Bylaws, Section 12.45(o) requires concrete curb and gutters to be installed around the perimeter of all driveways and parking areas and vertical granite curb at driveway roundings. The proposed design features no curb. The Applicant should modify the plan to comply with this requirement or submit a written waiver request for Planning Board consideration. Note that the parking lot design does not include catch basins, therefore the water will sheet flow towards the detention basin northeast of the lot.

**Response: The design intent is for water to flow into the basins via “country drainage” without the use of catch basins and manholes. Please allow this response to serve as a request for an additional waiver under Section 12.45(o)**

10. The plan depicts an infiltration basin in the front of the lot, near Tainter Hill Road. For aesthetic reasons, I recommend landscaping the basin to make it more of an amenity or substituting the infiltration basin for a rain garden.

**Response: The proposed basin is intended to be mowed and maintained by the owner consistent with the existing with the adjacent lawn areas. The basin slopes are designed not to exceed 3:1 for this purpose.**

11. The Applicant should provide a walkway that connects the front entrance of the building to Tainter Hill Road, or to the driveway at a minimum. For aesthetic and maintenance reasons, I recommend that the walkway(s) consist of concrete or decorative pavers.

**Response: A 4-foot wide paved walkway has been added to the plans to connect the front entrance to the proposed paved driveway. The applicant will consider pavers or concrete, but at a minimum the walkway will be bituminous concrete.**

12. I recommend requiring the Applicant to pave Tainter Hill Road from curb-to-curb wherever it is disturbed due to the construction as a Condition of Approval.

**Response: The only disturbance proposed with the Tainter Road Right of way is for the water and sewer service connection, which will occur in the shoulder of the roadway. Disturbance to the travel way is not anticipated.**

13. Notes on Sheet 3 state that the existing fence is to be modified per owner’s direction. Please explain how the fence will be modified.

**Response: The note has been modified to read: “existing fence to be removed where in conflict with proposed improvements”. The fencing is associated with former farming operation and serves no current purpose other than esthetics.**

14. The plan shows that a staircase will be installed to access the lower apartment. A concrete retaining wall is currently in that location. Will the existing retaining wall be removed and replaced with a different retaining wall? If so, the new design of the wall should be submitted for Planning Board review and approval. Walls that retain 4’ or more of unbalanced fill require a structural engineer’s stamp and building permit.

**Response: The existing concrete retaining wall and protective fencing will remain as is.**

15. Please submit a detail of the proposed staircase.

**Response: A typical stairway detail has been added to the plan set to reflect pressure treated construction. The Applicant will provide a design plan to the building department in accordance with all applicable building codes as part of the building permit application.**

16. So as to improve the appearance of the blank concrete foundation wall along the lower level of the rear elevation, I recommend retaining the existing sliding barn door in its open position. This will have the added bonus of preserving the charm of the existing barn.

**Response: The applicant will preserve the existing barn door as an architectural feature as suggested. A note has been added to the plans.**

17. In accordance with Zoning Bylaws, Section 12.45(f), modify note #9 on sheet 5 to state that not less than 6" compacted depth of good quality loam and seed will be installed.

**Response: The note has been modified to comply with Section 12.45(f).**

18. Please submit an erosion control plan that depicts the limit of disturbance, large trees that will be removed, if any, and location of erosion control measures, including anti-tracking pad. In accordance with Municipal Code, Chapter 13.15.070, please also provide the following:

- a. Timing, schedule and sequence of development;
- b. A maintenance schedule for the period of construction;
- c. Operation and maintenance plan.

**Response: Sediment control barriers/limits of clearing have been added to Sheet 4 of the plan set. Due to the minor nature of site work and short duration of construction, an anti-tracking pad is not proposed. Sediment (if any) will be swept from the public way at the end of each work day.**

- a. **The Applicant intends to complete all site work during the 2020 construction season. It is estimated that sitework will take approximately 2-3 weeks to complete. The sequencing is straight forward due to the simplistic nature of the project:**
  1. Stormwater basins will be constructed and stabilized.
  2. Utility connections will be made.
  3. Final grades will be established for the access drive and parking area.
  4. The access drive, parking area and walkways will be paved.
  5. The rear stairway and plantings will be installed.
- b. **Construction Period Maintenance is address in the Operation and Maintenance plan to be provided subsequent to the initial public hearing.**
- c. **An Operation and Maintenance Plan is to be provided.**

## **Responses to Stantec comments dated March 31, 2020:**

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

**Response: Details of the rip-rap swale and basin inlet/outlet pipes have been added to the plans. The snow storage has been located to avoid conflicts with the proposed 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.

**Response: The limits of disturbance and Sediment Control Barriers have been added to the plans where warranted.**

3. Stantec recommends the existing drainage system as referenced in email by Laurie Connors, dated March 26, 2020 be shown on the site plan.

**Response: Please refer to the response to Town Planner Comment #8 above.**

### 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.

**Response: A stamped Stormwater Checklist is to be provided subsequent to the initial public hearing.**

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.

**Response: Details of the rip-rap swale and basin inlet/outlet pipes have been added to the plans.**

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.

**Response: The calculations have been revised to include the existing barn as impervious area and will be provided subsequent to the initial public hearing.**

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.

**Response: The calculations have been revised accordingly and will be provided subsequent to the initial public hearing.**

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.

**Response: The calculations have been revised accordingly and will be provided subsequent to the initial public hearing.**

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.

**No response required.**

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.

**No response required.**

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.

**No response required.**

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.

**Response: The limits of disturbance and Sediment Control Barriers have been added to the plans where warranted.**

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.



**Response: An Operation and Maintenance Plan will be provided subsequent to the initial public hearing.**

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.

**No response required.**

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.

**Response: An Operation and Maintenance Plan will be provided subsequent to the initial public hearing.**

Please feel free to contact me at 508 381-3212 with any questions regarding this correspondence.

Sincerely,

**ALLEN ENGINEERING  
& ASSOCIATES, INC.**



Michael J. Dryden, RLA  
Senior Project Manager

Cc: David Glenn, PE – Stantec Consulting Services, Inc.  
Melissa Petrillo, Owner/Applicant