



August 27, 2020

Joe Graham, P.E.
Senior Civil Engineer
Stantec Consulting Services
5 Burlington Woods Drive, STE 210
Burlington, MA 01803-4542

RE: *Response to Engineering Peer Review Comments, August 21, 2020*
Colton Road Extension
7 Colton Road – Millbury, MA
ADE Job #3085.00

Dear Mr. Graham:

This response letter addresses the comments made in the Peer Review Comment letter from David Glenn, P.E. of Stantec Consulting Services Inc. dated August 21, 2020 for the above-referenced project. Please note Stantec's comments are italicized, and our responses follow in bold text.

Section 5.3.6 – Erosion and Sediment Control Plan

Revise the Colton Road Extension profile to identify existing ground right and left side. The applicant has provided 10ft offset information along the proposed profiles. These offsets should be labeled on the profiles.

ADE RESPONSE: The Profiles include labels for the left and right side offsets.

Section 6 – Roadway Design Standards

6. *We recommend the control of stormwater runoff within the existing Colton Road be addressed by ADE. No formal stormwater analysis of the existing Colton Road (approximately 2,000 feet) was provided by ADE.*

This has not been addressed. The applicant does not illustrate via Pre vs. Post runoff calculations, etc. how the control of stormwater will be greatly improved. Standard stormwater design practice utilizing Best management Practices (BMPs) require the calculation of runoff volumes, impervious areas, and other site characteristics in order to determine sizing and treatment. In many areas of the project the variable roadway cross section is increasing, a crown is being established and swales are being proposed. The engineer should illustrate via calculations the sizing and treatment of the riprap settling areas, roadside swales, the settling trench, grassed swale, infiltration trench, and pipe crossings. Please see below discussion regarding the Stormwater Management Plan.

ADE RESPONSE: A stormwater report for the existing portion of Colton Road is included with this submittal. The report contains calculations, a HydroCAD model, watershed drawing and narrative addressing these items.

Chapter 16 – Water, Sewer, and Sewage Disposal, Section 16-3 – Post-construction Stormwater Management of New Developments and Redevelopments, Subsection 7 – Stormwater Management Plan of the Town’s General Bylaws 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). The Project Definitive Plan appears to conform to the Town’s Stormwater Management Plan requirements, with the following exceptions.

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

l) The estimated seasonal high groundwater elevation near the proposed infiltration trench is not shown on the plans and the prepared boring logs are not provided in the Stormwater Management Report.

The applicant has changed the design of this stormwater feature. It is unclear how this stormwater feature was sized.

ADE RESPONSE: This BMP has been modified to be an Infiltration Area. Note that the bottom of the BMP is located 6 ft over existing ground and therefore it is our opinion that high ground water is not an issue. If soils information here is still a concern, we could offer to perform this test as a condition of the approval prior to construction. This SW feature was sized using the calculations contained in SW Addendum #1 (Colton Road Extension).

MassDEP Stormwater Standards

2. Standard 2 - Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

Our review of the drainage calculations is as follows:

a. We note that the applicant has changed the design of the basin. The applicant should illustrate BMP sizing calculations.

ADE RESPONSE: Comment addressed in a previous response.

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

ADE has provided a revised Long-Term Operation and Maintenance Plan as part of the Stormwater Management Report. Our review of the Operation and Maintenance Plan is as follows:

a. An Operation and Maintenance Log has been submitted in accordance with the requirements.

b. According to the Millbury Planning Board Submission of Stormwater Plan Review Checklist, the plan shall include: i. The list of easements with the purpose and location of each. – This has not been signed.

ADE Response: A signed version was provided previously via Email to the town planner. A revision to the Long Term Operation and Maintenance plan has been made and a signature of this document (including the drainage easement) will be provided.

ii. Signatures of the owners. – The applicant should submit a signed version of this document.

ADE Response: See Response above.

We recommend ADE revise the Operation & Maintenance Plan to include the above-listed.

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

An illicit discharge signed statement has been provided in the revised O&M

ADE Response: No response required.

General Stormwater Comments

1. We note that the proposed infiltration trench requires a test pit performed within the footprint of the trench. A boring log and infiltration rate shall also be provided by ADE.

The applicant has changed this BMP to not require recharge. No further action is needed.

ADE Response: For the BMP in the Extension portion of Colton Road, see previous response above. For infiltrating BMP's located in the existing portion of Colton Road: This portion of the road is considered to be a Redevelopment classification per MassDEP Stormwater Regulations and therefore we are proposing these BMP's to address standards 3, 4 and 5 to them maximum extent practicable. A soil boring log will unlikely change the design and location of these BMP's due the limited space (as

**explained in the Existing portion of Colton Road Extension Stormwater Report).
Exfiltration was not used in the HydroCAD model.**

- 2. Stantec recommends modeling the infiltration trench in the drainage calculations. We note that the proposed infiltration trench overflow is at an elevation 492.7'. Clarify the depth and elevations of the trench and model in HydroCAD. Clarify the overflow in the detail.*

While the details of the structure are provide on sheet 7. The applicant should provide calculations illustrating proper sizing of this BMP. Callouts on this sheet still refer to the proposed BMP as an infiltration trench.

ADE Response: Calculations are provided in Stormwater Addendum 1 and the callouts have been updated.

- 3. Stantec recommends including an observation well in the 30 ft long infiltration trench.*

The applicant should provide information to illustrate the settling basin is sized correctly per Mass Stormwater Regulations, providing treatment to the required water quality volume.

ADE Response: An observation well is shown on the Infiltration area at Culdesac detail. Additionally sizing calculations show that this structure (now an Infiltration area) is sized per Mass SW Regulations and has adequate volume for recharge and water quality. Additionally, the Infiltration area is included in the HydroCAD model.

Please call us at (508) 888-9282 if you should have any questions.

Sincerely,

ATLANTIC DESIGN ENGINEERS, INC.

Richard J. Tabaczynski, P.E.
Vice President

cc: Laurie Connors, Town Planner