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Ms. Jacki Byerley, Planner
Town of Andover
36 Bartlett Street
Andover, MA 01810

September 27, 2022

Ref. T1126

Re: Initial Stormwater Peer Review
Burtt Road Development – Executive Place
Andover, MA

Dear Ms. Byerley and Members of the Planning Board:

On behalf of the Owner/Applicant, TEC is pleased to submit this response to comments letter and attached revised documents for your review. Please see below for TEC's responses. Original comments are from the Initial Stormwater Peer Review letter received from Horsley Witten Group on September 22, 2022, and are shown in **bold**, with TEC responses in *italics*.

Stormwater Review

TEC has reviewed the comments made from HW and has the following comments regarding Stormwater management design:

1. **Standard 1 states that no new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.**
   a. **The Applicant has proposed no new untreated discharges. The proposed development has 3 infiltration basins with outfalls discharging outside of the 25-foot no disturbance zone. Riprap apron sizing calculations for each outfall have been provided in Appendix B of the Drainage Report. The Applicant has illustrated the size of the riprap aprons on Sheet C-5 with a detail on Sheet C-16. The Applicant complies with Standard 1.**

TEC Response: No response necessary.

2. **Standard 2 requires that post-development runoff does not exceed pre-development runoff off-site.**
   a. **The Applicant describes four design points in the Pre-Development Runoff narrative. It appears based on the Hydro CAD model and the Pre-development watershed map, that there are 3 design points. HW recommends that the Applicant clarify the narrative to avoid confusion.**
   b. **The Applicant describes multiple subcatchments in the Pre-Development Runoff narrative that do not appear in the watershed map or the HydroCAD model. HW recommends that the Applicant clarify the narrative to avoid confusion.**

c. **HW recommends that the Applicant include the contours on the Drainage Plan & Profile sheets (C-7 to C-9)**

d. **The Applicant states in the Regulatory Compliance section of the narrative that the proposed storm water management system utilized five infiltration basins. The current plan set shows three infiltration basins and a permeable pavement infiltration system. HW recommends that the Applicant clarify the narrative to avoid confusion.**

e. **The Applicant has provided test pit data for the site. It is unclear where these test pits are located on the plans. It appears that the test pit symbol has been left off the plans. HW recommends that the Applicant verify that all test pits and boring locations are shown on the Grading and Drainage Plan.**

f. **The Applicant has provided details of all the overflow control structures on Sheet C-16 of the plan set. HW recommends that the Applicant include a debris grate over the 2-inch orifice located at the bottom of each of these structures to prevent clogging of the orifice.**

g. **The Applicant has designed three (3) infiltration basins. It appears that Infiltration Basin 3 (P3) does not have an overflow spillway. HW recommends that the Applicant revise the plans and the HydroCAD model to include an emergency spillway for Basin 3.**

h. **HW recommends that the Applicant include an additional detail for the spillway area.**

TEC Response: Please see the response to comments listed below:

a. The Stormwater Report narrative has been updated to three design points.
b. The Pre-development narrative has been corrected.
c. Proposed contours have been added to the Drainage Plan and Profile sheets.
d. The Regulatory Compliance narrative has been updated to three infiltration basins.
e. Test Pit locations have been added to the Grading and Drainage Plan.
f. A debris grate over the 2-inch orifice has been added to the bottom of the overflow control structures in the Detail Sheets.
g. An overflow spillway has been added Basin 3, reflected in the plans and HyrdoCAD model.
h. The construction detail for the infiltration basins has been updated to include the spillway.

3. **Standard 3 requires that the annual recharge from post-development shall approximate annual recharge from pre-development conditions.**
   a. **In Section X. of the Stormwater Management Report, the Applicant has listed the recharge volumes provided by each of the infiltration basins. The Applicant has provided the HydroCAD stage storage print out for each basin to confirm the volume provided below the outlets. HW has no further comment.**

TEC Response: No response necessary.

b. **The Applicant has provided a mounding analysis for three of the basins. The analysis provided shows the infiltration basins can attenuate the design storm as intended. HW has no further comment.**

TEC Response: No response necessary.

4. **Standard 4 requires that the stormwater system be designed to remove 80% Total Suspended Solids (TSS) and to treat 0.5-inch of volume from the impervious area for water quality.**
   a. **The Applicant has chosen to size the infiltration basins to provide water quality treatment as well as recharge volume. The Applicant has provided the Hydro CAD stage storage print outs for each basin to confirm the water quality volume provided below the outlets. No further action required.**

   TEC Response: No response necessary.

   b. **The Applicant has proposed catch basins, sediment forebays and infiltration basins to provide adequate TSS removal. No further action required.**

   TEC Response: No response necessary.

5. **Standard 5 is related to projects with a Land Use of Higher Potential Pollutant Loads (LUHPPL).**
   a. **The site is not considered a LUHPPL, therefore Standard 5 is not applicable.**

   TEC Response: No response necessary.

6. **Standard 6 is related to projects with stormwater discharging into a critical area, a Zone II or an Interim Wellhead Protection Area of a public water supply.**
   a. **The site is not within a critical area, therefore Standard 6 is not applicable.**

   TEC Response: No response necessary.

7. **Standard 7 is related to projects considered Redevelopment. 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.**
   a. **The proposed project is considered a new development. Therefore, Standard 7 does not apply.**

TEC Response: No response necessary.

8. **Standard 8 requires a plan to control construction related impacts including erosion, sedimentation or other pollutant sources.**
   a. **HW recommends that the Applicant include a note on the Erosion & Sediment Control Plan that states catch basins within 100 feet of the construction entrance shall have silt sacks in them for the duration of the construction.**
   b. **HW recommends that the Applicant add fencing around the infiltration basins to prevent heavy vehicles from compacting the soil.**
   c. **HW recommends that the Applicant clarify the number of large trees (greater than 12" diameter) that will be removed as part of the proposed layout. Per Section IX.F.14. of the Andover Stormwater Regulations, tree removal shall be minimized.**
   d. **HW further recommends that the Applicant verify it has reviewed and complies with Section IX.F. of the Andover Stormwater Regulations.**
   e. **The proposed project requires land disturbance of greater than 1 acre. Therefore, a Stormwater Pollution Prevention Plan (SWPPP) per the EPA NPDES Construction General Permit will be required. HW recommends that the Applicant provide a copy of the SWPPP to the Town a minimum of 14 days prior to land disturbance.**

TEC Response: Please see the response to comments listed below:

   a. *The note section on the Erosion and Sediment Control Plan has been updated to state that catch basins within 100 feet of the construction entrance shall have silt sacks in them for the duration of the construction (note #4).*
   b. *The Erosion and Sediment Control Plan has been updated to include fencing around infiltration basins.*
   c. *TEC believes that tree removal has been minimized to the greatest extent practicable. It should be noted that the current plan represents a reduction in total disturbed area with fewer tree removals than the previously approved plans.*
   d. *Section IX.H. of the Andover Stormwater Regulations have been checked and TEC complies with this criterion. Tree removal and grading has been considered and minimized to the greatest extent possible for the proposed construction.*
   e. *The Applicant agrees to provide a SWPPP to the Town of Andover 14 days prior to land disturbance.*

9. **Standard 9 requires a Long-Term Operation and Maintenance (O & M) Plan be provided.**
   a. **The Applicant has provided a Long-Term Pollution Prevention Plan in the Stormwater Management Report as required. HW recommends that the document become a standalone document to be signed by the property owner prior to occupancy.**
   b. **The Applicant has provided a Long-Term Operation and Maintenance (O&M) Plan. HW recommends that the Applicant have the owner and/or responsible party review and sign the O&M Plan.**
   c. **HW recommends the Applicant provide a simple exhibit illustrating where all of the stormwater practices and items that need to be maintained as listed in the O&M Plan are located on the project site. This exhibit should also include locations for snow storage and the components of the septic system.**

TEC Response: Please see the response to comments listed below:

a. *The Long-Term Pollution Prevention Plan in the Stormwater Management Report has become a standalone document. The document as also been revised to include the property owner's signature.*
b. *The Long-Term Operation and Maintenance Plan has been revised to include the property owner's signature.*
c. *A Stormwater System Location Plan has been included with the Long-Term Operations and Maintenance Plan.*

10. Standard 10 requires an Illicit Discharge Compliance Statement to be provided.

a. The Applicant has provided an illicit discharge statement. HW recommends that a signed Illicit Discharge Compliance Statement be provided to the Planning Board and Conservation Commission prior to the discharge of any stormwater to post-construction best management practices (BMPs).

TEC Response: The Applicant agrees to provide a signed illicit discharge statement to the Planning Board and Conservation Commission as a condition of approval.

11. Additional comments per Andover Stormwater Bylaw.

a. The Town of Andover Conservation Commission Wetland Protection Regulations states that Access Roads shall maintain a 35-foot set back from "Any bank, bordering vegetated wetland, isolated vegetated wetland, marsh, wet meadow, bog, swamp, reservoir, pond, creek, river or stream, or any land under said waters". It appears that the access road is located within 25 feet of wetland C which is proposed to be restored.

TEC Response: The Applicant is seeking an Amended Order of Conditions from the Conservation Commission for the proposed driveway location. It shall be noted that the driveway included in the approved submission was located within the wetland, versus the current proposed driveway having a separation of 25 feet.

Please do not hesitate to contact me directly if you have any questions at 978-794-1792.Thank you for your consideration.

Sincerely,
TEC, Inc.
*"**T**he **E**ngineering **C**orporation"*

Peter F. Ellison, PE
Director of Strategic Land Planning