September 23, 2019

Mr. Justin DeBruin, AICP, Community Development Director
Town of Hanover, Department of Municipal Inspections
Town Hall
550 Hanover Street
Hanover, MA 02339

RE: Site Plan Review Response to Comments: Hanover Crossing
1775 Washington Street, Hanover, MA

Dear Mr. DeBruin:

The purpose of this letter is to summarize our previous comments submitted to the Planning Board regarding our peer review of Hanover Crossing. CEI submitted three review letters for the Planning Board's use. The initial letter was provided on June 27, a follow-up letter on July 25, which was based on the Applicant's response-to-comments (RTC), and a supplementary traffic review letter regarding Woodland Drive on August 16.

On July 18, the Applicant provided an RTC letter, which resolved a majority of our comments. At this time, CEI is satisfied with the responses to our comments, revised documents, and supporting information provided by the Applicant, with the exception of two issues needing resolution in stormwater and compensatory flood storage. It is our understanding that these two outstanding issues fall under the scope of the Conservation Commission and that the possible resolutions would not impact the Planning Board.

Below is a list of all our comments with an indication of whether or not the comment has been satisfied and any recommended conditions of approval.

A. Related Environmental Permitting Required for the Project

Please note that in addition to the Special Permit, the project must comply with regulatory requirements under a number of state and federal environmental programs. The Applicant will be required to obtain permit authorization for the following:

1. *Review under the Massachusetts Environmental Policy Act (MEPA) is required when one or more of the review thresholds have been exceeded, per 301 CMR 11.00.*

   Comment addressed.

2. *The proposed project includes permanent impacts to Wetland Resource Areas, Wetland Buffer Zone, and Riverfront Area as defined under the Massachusetts Wetlands Protection Act (WPA) and will therefore require WPA permitting under jurisdiction of the Hanover Conservation Commission.*

   Comment addressed.

3. *A National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) is required from USEPA for construction activities that disturb over one acre of land.*

   Comment addressed.

B. Environmental Resource Areas

1. *Work is proposed within the 200-foot Riverfront Area of Third Herring Brook, which was recently designated as an Outstanding Resource Water (ORW). The site will be subject to Stormwater Standard 6, for critical areas.*

   Comment addressed.

2. *The proposed redevelopment occurs within the 100-foot Buffer Zone to bordering vegetated wetlands (BVW) and will require review by the Hanover Conservation Commission.*

   Comment addressed.

3. *Proposed work occurs in Hanover's Aquifer Protection Zone which is subject to zoning bylaws. It does not appear the applicant has requested waivers from the Aquifer Protection Zoning Bylaw.*

   Comment addressed.

4. *Work is proposed to directly alter BVW in the southern portion of the site at the Hanover Crossing Way and Mill Street intersection.*

   Comment addressed.

5. *CEI recommends that wetland delineations should be field-verified. Additionally, CEI is concerned that there may be an existing hydrologic connection between the wetlands at Hanover Crossing Way and Mill Street intersection to Third Herring Brook.*

   Comment addressed.

C. Civil Site Design

1. *The application and site plans do not appear to describe the design of the proposed "riverfront enhancement" area.*

   The riverfront enhancement area and compensatory flood storage location is an outstanding issue. However, the comment can be resolved through the Conservation Commission review, results of which will not impact the Planning Board.

2. *CEI received preliminary boring logs and boring locations via email from Kelly Engineering. CEI recommends that the final subsurface data is submitted to the Town for review.*

   Comment addressed.

3. *Not all completed boring locations are shown on the site plans. For example: no borings are shown on the Tetra Tech Plans, and borings beyond #31 do not appear on the Kelly engineering plans.*

   Comment addressed.

4. *Most of the proposed sub surface infiltration systems, as well as the infiltration basin, are located where a boring has not been completed at the same location. CEI recommends additional borings completed at the proposed locations of infiltration systems, prior to final design.*

   Comment addressed. We recommend to the Board to consider a condition to require the Applicant to notify the Town prior to additional subsurface investigations to enable Town personnel, or its agent, to witness the test.

5. *Some catch basins are shown on the proposed conditions plans with leaders on the existing conditions plans. Confirm if these catch basins are existing and to remain without modifications.*

   Comment addressed.

6. *For the culvert at the Hanover Crossing Way and Mill St intersection, CEI recommends providing, to the Town for review, a calculation verifying the sizing of the culvert is adequate.*

   Comment addressed.

7. *The planting plan for the proposed bioretention areas appears to be incomplete.*

   Comment addressed. The Applicant agreed to include a planting plan for the bio-retention area based on a phone conversation on 9/20/2019.

8. *CEI recommends that the specification for Bioretention Soil Organic Matter should be 4 to 8 percent as determined by TMECC 05.07 A, Loss on Ignition Method.*

   Comment addressed.

9. *On drawing sheet 35, we recommend labeling the subsurface infiltration systems for ease of review.*

   Comment addressed.

10. *Is the gravel access drive to the wetland replication area a permanent feature, or will it be restored after the replication area is self-sufficient?*

    Comment addressed.

D. Stormwater Management Design

1. *It appears that there are several locations have inadequate pretreatment of stormwater that does not meet the required 44% pretreatment for Land Use with High Potential Pollutant Loads (LUHPPL) and drainage to ORWs.*

   Comment addressed.

2. *In some locations, it appears that stormwater is only treated with pretreatment devices. For example, see catch basin at Hanover Crossing Way and Mill Street in the southern portion of the site, and WQD #2 at the northern portion of the site. Proprietary separators are not permitted as terminal BMPs when draining to critical areas. CEI recommends redirecting drainage of such cases to infiltration BMPs.*

   CEI reviewed a concept of the stormwater management design to address our concerns in discharging stormwater to the ORW, but the Applicant has not produced a detailed design. We believe this issue is an open item that can be resolved through the Conservation Commission without impact to the Planning Board.

3. *CEI recommends a thorough review of all stormwater inverts, since it appears that there are errors found in a number of locations.*

   Comment addressed.

4. *It appears that the MASTEP Technology reviews of the proprietary Stormceptor units do not necessarily verify TSS removal rates. Do the NJCAT reviews provide additional information?*

   Comment addressed.

E. Stormwater Management Calculations

1. *The proposed condition stormwater calculations indicate that the BVW south of the site (Area 16) will receive approximately 10% less water, which may impact this wetland. This appears to be the result of filling the BVW area east of Hanover Crossing Way at Mill Street and directly runoff from this area to the east. Additionally, there is a proposed wetland replication area of 2,000SF at the edge of Area 16. The proposed changes in*

hydrology should be reviewed further to ensure that both the existing wetland and proposed replication area have adequate water to sustain wetland ecology.

Comment addressed.

2. *Not all stormwater BMP treatment trains seem to be represented in the TSS calculation sheets (see comments D.1 and D.2). In addition to the aforementioned issues in D.1 and D.2, bioretention areas are not listed in the worksheets where subsurface infiltration is used. However, bioretention areas and subsurface infiltration systems appear to be utilized in the same treatment train (see bioretention area and subsurface infiltration system "Grocer" on sheet 23).*

Comment addressed.

3. *Based on a preliminary review of the draft boring logs, separation to groundwater is less than 4 feet at some infiltration BMP locations; therefore, mounding analysis will be required.*

Comment addressed.

F. Construction Phase Pollution Controls

1. *It appears that fill material will be required for this project. The plan should describe practices to stabilize temporary soil stockpiles. If the practices do not provide for routine covering of soils stockpiles with tarps, we recommend a condition of approval that, in the event the specified practices do not adequately control wind and water-borne erosion of the stockpiles, the Town may require the applicant to cover stockpiles at the end of each working day with properly anchored tarps which should remain in place when the stockpiles are not being actively used.*

Comment addressed.

2. *The site requires a NPDES Construction General Permit, since it involves construction activities disturbing greater than one acre. We recommend a condition of approval requiring both the Applicant and its contractor to provide evidence prior to beginning construction, that each has filed a Notice of Intent with US EPA Region 1 under this permit.*

Comment addressed.

G. Operation and Maintenance Plan

1. *For standard 10, please list the allowable non-stormwater discharges per Volume 1 of the Stormwater Handbook.*

   Comment addressed.

2. *We recommend including the manufacturer's specific operation and maintenance manual for the Stormceptor and Cultec Units.*

   Comment addressed.

H. Traffic

All traffic comments provided to the Board from CEI on June 27 were resolved adequately in the VAI response letter with supporting documentation dated July 18, 2019. CEI provided additional recommendations for traffic calming measures for the Town's consideration on Woodland Drive on August 16, 2019.

If you have any questions or comments regarding this report, please contact Matthew Lundsted, PE, CFM at 800-725-2550 ext. 305 or Matthew Doyon, PE at ext. 380.

Sincerely,
COMPREHENSIVE ENVIRONMENTAL, INC.

Matthew Doyon, P.E.
Senior Engineer

Cc: David N. Kelly, P.E., Kelly Engineering Group (via email)
Brandon Li, Kelly Engineering Group (via email)
Jeffrey S. Dirk, P.E., PTOE, FITE, Vanasse & Associates (via email)