

# HANCOCK ASSOCIATES

February 6, 2017

Sudbury Zoning Board of Appeals  
Jonathan F.X. O'Brien, Chairman  
278 Old Sudbury Road  
Sudbury, MA 01776

Subject: Coolidge at Sudbury Phase 2  
187-189 Boston Post Road  
Response to Horsley Witten Group 2<sup>nd</sup> Peer Review

Dear Member of the Board:

Hancock Associates, acting on behalf of B'nai B'rith Housing is pleased to present the following response to the peer review letter prepared by Janet Carter Bernardo, PE of Horsley Witten Group dated January 26, 2017. Please note we have sequentially numbered the comments requiring response for ease of tracking.

Comment 1: The Applicant appears to be in compliance with Standard 1

**Response:** We concur.

Comment 2a: The Applicant has provided the 25-year 24-hour design calculations as requested. The flow does not appear to be increasing over predevelopment conditions.

**Response:** We concur.

Comment 2b: The Applicant has provided the 1-inch and the 10-year 24-hour design calculations as requested. The flow does not appear to be increasing over predevelopment conditions; however the volume increases for all storm events. The Applicant is utilizing the storage within the isolated/bordering vegetated wetland to accommodate the increase in volume. The raising of the wetland by approximately 3 inches is considered an alteration to a resource area subject to protection in accordance with the Wetlands Protection Act. HW recommends that the Applicant obtain an Order of Conditions from the Sudbury Conservation Commission.

**Response:** It is important to note that there are two separate issues regarding the added volume to the wetland area which is separated from the downstream wetlands by a railroad bed barrier. The first is a stormwater issue. The submitted plans and calculations verify that all requirements of the MassDEP Stormwater Standards are met or exceeded, and use of this area in major storm events to temporarily store volume is permitted under such standards. As Horsley Witten has noted, there is no increase in the rate of runoff.

The second is a wetlands issue under the Wetlands Protection Act. The area separated from the larger wetland by the railroad bed barrier is functionally acting as an isolated depression – the only link to the downstream wetland on the other side of the railroad barrier is by an old culvert which appears to have either failed or filled in and blocked with sediment. However, it is correct that it is technically listed as a Bordering Vegetated Wetland. The evaluation of any potential wetland impacts is highly technical and is therefore specifically assigned under MGL Chapter 40B regulations to the Conservation Commission after fully engineered drawings are developed so that precise calculations and evaluations can be made and refined, if necessary, through that technical process. We therefore look forward to discussing the matter in great detail with the Conservation Commission upon filing a full Notice of Intent. We understand, of course, that if the review and permitting process under the Wetlands Protections Act necessitates changes to the preliminary plans approved as part of the Comprehensive Permit, we will need to return to the Zoning Board for review and approval of any such changes.

**Comment 2c:** The Applicant has adequately addressed this comment.

**Response:** Issue resolved.

**Comment 2d:** The Applicant has addressed this comment; however they have included a statement that the flow from 20f decreases when the flow from 20f appears to increase over the original submission. This increase does not impact the overall stormwater management design.

**Response:** We acknowledge the misstatement and concur with the finding that there is no impact to the overall design.

**Comment 2e:** As previously stated, to function as designed the BMPs must be constructed with the storage included in the modeling calculations. HW recommends that the Applicant provide complete details and cross sections for the BMPs and a condition be included in any approval that requires an as-built of the BMPs to ensure that the systems have the required capacity. The Applicant has suggested that the Building Inspector will be responsible for the final review of these details, if the project will be presented to the Conservation Commission for an Order of Conditions then the Conservation Commission will require complete details. It is HW's opinion that the stormwater details should be prepared and reviewed prior to final permitting of the ZBA or the Conservation Commission.

**Response:** The plan set has been revised to include the requested cross sections and details.

**Comment 2f:** The Applicant has adequately addressed this comment and is providing approximately 10.5 inches of freeboard.

**Response:** Issue resolved.

**Comment2g (first bullet):** The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 2g (second bullet): The Applicant's suggestion to provide three borings prior to construction appears reasonable.

**Response:** We concur.

Comment 2g (third bullet): The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 2g (fourth bullet): The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 2g (fifth bullet): The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 2h: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 2i: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 3a: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 3b: The Grasspaves have been included in the calculations to meet the recharge requirements. HW recommends that the Applicant provide the necessary documentation to verify that the Grasspaves can provide the recharge credited.

**Response:** The report tracks the total recharge from the entire site (Phases 1 and 2), the grass pavers cited in the recharge calculation are those associated with the Phase 1 fire lane. The grass pavers proposed as part of Phase 2 are not considered in the calculation. The intent is for these to be treated as pervious but are not required for compliance with the recharge standard.

Comment 3c: The Applicant has provided an outlet structure with a low flow orifice; however the HydroCAD calculations indicate that the low flow orifice is not reached for the 10- year storm event. HW recommends that the Applicant provide the required mounding analysis.

**Response:** The surface area of the infiltration basin has been modified to 4300 square from 4700 square feet increasing the stage of the basin during the 10 year storm to elevation 138.27, which is above the 6-inch outlet. Therefore a mounding analysis will not be required. The attached summaries for all storms demonstrate that this small change results in no change to the post development rates entering the wetlands. The attached plan shows the change to the basin bottom. The slight reduction in recharge volume from 1,204 cf to 1,115 cf still has us meeting the recharge required of 4,770 cf on a site wide basis at 4,927 cf provided.

Comment 4a: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 4b: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 4b: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 8: The Applicant is in agreement that a SWPPP will be provided prior to construction. Again the Applicant suggests that this be reviewed by the Building Inspector. It is HW's opinion that the Sudbury Conservation Commission should have an opportunity to review and comment on this document.

**Response:** We concur and propose that the Board consider a condition of any approval as follows: *"A stormwater pollution prevention plan illustrating controls to mitigate erosion, sedimentation and other pollutant sources including specific details and locations of erosion shall be submitted to the Conservation Commission as part of the Notice of Intent process".*

Comment 9a and b: The Applicant has adequately responded to this comment.

**Response:** Issue resolved.

Comment 9c: The Applicant has acknowledged this comment.

**Response:** Issue resolved.

Comment 10: The Applicant has acknowledged this comment.

**Response:** Issue resolved.

Comment 11: The Applicant has adequately addressed this comment.

**Response:** Issue resolved.

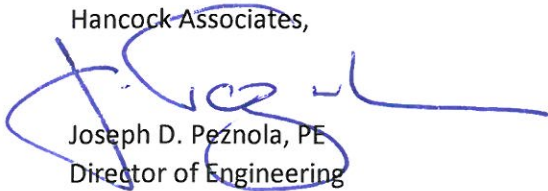
Comment 12: The Applicant is proposing a private well for irrigation for the proposed Project. In accordance with Section 8.A.4 of the Sudbury Stormwater Regulations to conserve water supplies and maximize recharge it may be appropriate for some sites to store and reuse clean runoff (i.e., from roofs) for reuse on the site for irrigation. HW recommends that the Applicant demonstrate why a private well was chosen for irrigation as opposed to a reuse system. HW defers to the ZBA for the acceptance of the Applicant's response to this comment.

**Response:** A private well is preferable to collection of roof runoff as irrigation is needed during the driest part of the year when rain (runoff) is not available. Reuse systems routinely require a secondary source; since the Sudbury Water Department has advised against use of municipal water for irrigation, a well would be required. Also note that to reduce the need for irrigation, drought resistant plantings are being used wherever practical.

Hancock hereby submits the revised plans set and Stormwater Report. We believe we have now satisfied all of Horsley Witten Group's outstanding issues.

Sincerely,

Hancock Associates,



Joseph D. Peznola, PE  
Director of Engineering

cc: B'nai B'rith Housing