

# Horsley Witten Group

**Sustainable Environmental Solutions**

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April 12, 2016

Ms. Jody Kablack  
Director of Planning and Community Development  
Town of Sudbury  
278 Old Sudbury Road  
Sudbury, Massachusetts 01776

Re: Peer Review for Preliminary Stormwater Management Master Plan  
Meadow Walk, Boston Post Road  
Sudbury, Massachusetts

Dear Ms. Kablack and Board Members:

The Horsley Witten Group (HW) is pleased to provide the Sudbury Planning Board with this letter report summarizing our second review of the Preliminary Stormwater Management Master Plan for 526 & 528 Boston Post Road Redevelopment, Sudbury, Massachusetts (Site). The plans and calculations were prepared for BPR Sudbury Development LLC (Applicant) by VHB.

The following additional documents and plans, prepared by VHB, were reviewed by HW:

- Preliminary Stormwater Management Master Plan, revised April 2016

## **Stormwater Review**

HW has reviewed the proposed stormwater management designs as per the standards of the Massachusetts Stormwater Handbook (MSH) dated February 2008 and the Town of Sudbury Stormwater Management Bylaw Regulations (Stormwater Bylaws), revised January 23, 2013. Our follow up comments are provided below in **bold** font.

1. *Standard 1: No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*

The Applicant has stated that untreated stormwater discharging to or causing erosion in wetlands or water bodies will not be allowed in connection with this project. A review of the preliminary Master Plan suggests that at a minimum prior to discharging to the central retention basin (Wetland 3) stormwater will be treated by deep sump catch basins and forebays and that no new outfalls will be created. However the potential discharge into the various other wetland areas is not clear. It appears that there are existing discharge points into Wetland 1, Wetland 2, Wetland 4, and Wetland 6. HW recommends that the final stormwater design for each phase of development confirm that an appropriate treatment train is being provided prior to each discharge point and that the velocities at the outfalls be provided to

verify that erosion will not occur within any on-site wetland resource area.

**As part of the final design for each phase of development the Applicant has agreed to provide the appropriate treatment train to each discharge point impacted by that phase of development. It is possible that a future phase of development may not trigger a permit from the Sudbury Planning Board or the Conservation Commission. In order to ensure compliance with the Master Plan, HW recommends that the Planning Board consider including the following condition as part of the Master Plan permitting: “The stormwater design for all future development within the Meadow Walk 50 acre parcel, shall include documentation that shall be submitted to the Planning Board demonstrating appropriate stormwater treatment, velocities, and potential erosion at all wetland outfalls impacted by the future development even if a particular phase of development does not trigger the filing of an individual permit application to the Sudbury Planning Board or the Conservation Commission.”**

2. *Standard 2: Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.*

The Applicant has provided both the preliminary Existing and the Proposed Drainage Conditions watershed maps and HydroCAD modeling analysis for the various phases of development. From a preliminary perspective the watershed areas, times of concentration (Tc), and curve numbers (CN) appear appropriate for the various catchment areas and the post-development peak discharge rates and volumes do not exceed the pre-development peak discharge rates. HW recommends that the preliminary Master Plan calculations be included as a reference with the design of each phase to verify that the design features such as the amount of impervious area and the sizing of any proposed best management practices (BMPs) are consistent with the approved Master Plan.

**HW recommends that the Planning Board consider including the following condition as part of the Master Plan permitting: “Future developments shall provide documentation to verify consistency with the Preliminary Stormwater Management sections of the Master Plan. Documentation shall include comparison of the planned development phase with Table 3: Proposed Conditions Hydrologic Data, Figure #3: Existing Drainage Conditions, and Figure #4: Proposed Drainage Conditions.”**

3. *Standard 3 requires that the annual recharge from post-development shall approximate annual recharge from pre-development conditions.*
  - a) The Applicant has noted that the impervious area of the entire site will be reduced under the proposed layout and therefore the recharge criteria are met. The Applicant has provided Table 3 under Proposed Drainage Conditions that will be used as a comparison to verify that each phase of construction is consistent with the Master Plan. Moving forward

with each phase of development, the Applicant will be held to the maximum amount of impervious area allowed within each phase as listed in Table 3. HW recommends that the Applicant include in the Master Plan a list of potential recharge practices that are approvable by the Town of Sudbury as well as acceptable BMPs and an anticipated volume to recharge based on proposed impervious area.

**The Applicant has adequately responded to our comment. Potential recharge practices are included in the Preliminary Stormwater Management Master Plan under Standard 3. It is HW's opinion that the BMPs listed are acceptable practices.**

- b) The Applicant has provided Recharge Calculations in the Master Plan; however it is not clear where the additional 2.2 acres of HSG A is located on the site.

**The Applicant has adequately responded to our comment. Revised calculations have been provided with the correct HSG listed.**

4. *Standard 4 requires that the stormwater system be designed to remove 80% Total Suspended Solids (TSS) and to treat 1.0-inch of volume from the impervious area for water quality.*

The Applicant has stated that the stormwater management system is designed to remove a minimum of 80 percent of the Total Suspended Solids (TSS). To confirm compliance with this standard, HW recommends that the Applicant provide potential BMP trains that are anticipated with TSS removal rates. The trains may include deep sump catch basins, infiltration, water quality units, forebays (with sizing criteria considered), and the existing wet pond. It is important to note that the 80% TSS removal rate must be achieved at each outlet discharging to a receiving wetland and that 44% TSS removal rate must be achieved prior to discharging to an infiltration system. HW recommends that the Master Plan document the anticipated water quality volume required for each phase based on the expected impervious area.

**It is possible that future designs may include utilizing existing catch basins that discharge directly to a wetland resource area. Therefore HW recommends that the Planning Board consider including the following condition as part of the Master Plan permitting: "The stormwater design for future development within the Meadow Walk 50 acre parcel shall include documentation that 80% TSS removal rate will be achieved at each outfall impacted by the future development. This documentation shall be submitted to the Planning Board even if an individual permit is not required."**

5. *Standard 5 is related to projects with a Land Use of Higher Potential Pollutant Loads (LUHPPL).*

The Applicant has acknowledged that the site will include parking lots with high-intensity-uses and that these areas of the project site will be considered Land Use of Higher Potential Pollutant Loads (LUHPPL). HW recommends that the Applicant provide guidance in the Master Plan

listing the BMPs recommended for the project areas designated as LUHPPLs.

**The Applicant has adequately responded to our comment. Potential BMPs are included in the Preliminary Stormwater Management Master Plan under Standard 5. It is HW's opinion that the BMPs listed are acceptable practices.**

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.*

The project site is located within a Zone II Interim Wellhead Protection Area; HW recommends that the Applicant provide guidance in the Master Plan listing recommended BMPs that would be appropriate for this site.

**The Applicant has adequately responded to our comment. Potential BMPs are included in the Preliminary Stormwater Management Master Plan under Standard 6. It is HW's opinion that the BMPs listed are acceptable practices to be used within a Zone II.**

7. *Standard 7 is related to projects considered Redevelopment.*

The proposed project is considered a redevelopment and the Applicant has stated that the Project will be designed to be substantially compliant with the MSH for new development. The intention to design the site in accordance with the new development criteria, except where impractical due to depth to groundwater, appears reasonable and is required. The Redevelopment criteria as described in the MSH also requires improving existing conditions. It appears that the intentions described in the Preliminary Stormwater Management Master Plan will improve the quantity and quality of stormwater discharging from the site. The recommendations suggested by HW are to further manage future designs in the event the proposed development is put on hold for a significant period of time.

**No further comment is necessary.**

8. *Standard 8 requires a plan to control construction related impacts including erosion, sedimentation or other pollutant sources.*

The Applicant has stated that an erosion control plan and a Stormwater Pollution Prevention Plan (SWPPP) will be developed individually for each phase of construction. It is reasonable to evaluate the specific details during the permitting process for each phase. In the event that various phases are constructed simultaneously the Applicant should verify that the proposed erosion control methods function in harmony. For instance it may be reasonable to utilize the same construction entrance for various phases and verify that the location of the erosion control barriers (e.g. straw bale or silt sock) for one phase are not in conflict with the vehicle access to a separate phase.

**HW notes that a SWPPP is a living document that must be available for review during the entire construction process. HW recommends that during the permitting of each future phase of development, the Planning Board evaluate the status of previously approved Phases, the need to revise an active SWPPP to accommodate future development, and any potential enforcement actions that may have been issued on the Meadow Walk parcel.**

9. *Standard 9 requires a Long Term Operation and Maintenance (O & M) Plan to be provided.*

The Applicant has stated that the Long Term Operation and Maintenance (O&M) Plan will be developed during the review process of the future filings. If the O&M Plan will be specific to each phase of development it appears reasonable to evaluate the specific details during the permitting process for each phase of development. If the property owner for the entire 50 acre parcel will be the same party it would be reasonable to provide the name and contact information of the property owner at the Master Plan stage. The maintenance of the stormwater basin in the center of the project site is critical to the success of the entire stormwater management system. It may be valuable to the Town of Sudbury to have a commitment from the property owner for future maintenance of the central stormwater basin.

**The Applicant has adequately responded to our comment. HW recommends that the Planning Board consider including the following condition as part of the Master Plan permitting: “Within 45 days of the sale of the property, the contact information of the new owner and/or maintenance operator shall be provided in writing to the Town of Sudbury.”**

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

The Applicant has stated that the wastewater and stormwater designs as well as the long term Pollution Prevention Plan will include measures to prevent illicit discharges from occurring post construction. HW recommends that as stated in Volume 1, Chapter 1, page 25 of the Massachusetts Stormwater Handbook, a Certificate of Compliance should not be issued by the Sudbury Conservation Commission until it has been determined that the Illicit Discharge Compliance Statement has been submitted and that it has been verified that there are no illicit discharges occurring on the site.

**The Applicant has adequately responded to our comment. The Conservation Commission should be aware that the Applicant has agreed to provide an illicit discharge statement in support of each phase of the project.**

11. *Water Quality Certification Regulations*

The Applicant has stated that the Preliminary Stormwater Management Master Plan has been prepared to demonstrate compliance with the Water Quality Certification Regulations (314

CMR 9.00). It is not clear from the submitted documents how this project triggers the Certification or how they have demonstrated compliance.

**The Applicant has adequately responded to our comment. A Water Quality Certification is not required for this project.**

#### 12. Massachusetts Category 5 Waters

The Applicant has stated that Site lies within the Nobscot sub-watershed which flows via an unnamed stream to Hop Brook. Hop Brook is listed as "Waters requiring a TMDL". HW recommends that the Applicant contact MassDEP to determine whether the discharge from this Site is required to comply with the TMDL for Hop Brook.

**The Town of Sudbury may wish to document the removal of impervious area from this site within the Nobscot Watershed. The NPDES MS4 General Permit is anticipated to be issued in the next month. Documentation of outfalls will likely be required.**

#### **Conclusions**

HW is satisfied that the Applicant has addresses our previous comments. The Planning Board may choose to include a condition for future phases of development within the Project Site, stating: "Any future design must meet the design standards as outlined in the Preliminary Stormwater Management Master Plan as well as the most current MSH and the most current Sudbury Stormwater Bylaws."

The Applicant is advised that provision of these comments does not relieve him/her of the responsibility to comply with all Town of Sudbury Codes and Bylaws, Commonwealth of Massachusetts laws, and federal regulations as applicable to this project. Please contact Janet Carter Bernardo at [jbernardo@horsleywitten.com](mailto:jbernardo@horsleywitten.com) or at 857-263-8193 if you have any questions regarding these comments.

Sincerely,

HORSLEY WITTEN GROUP, INC.



Janet Carter Bernardo, P.E.  
Senior Project Manager