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January 19, 2012

Town of Seekonk
Conservation Commission and Planning Board
100 Peck Street
Seekonk, MA 02771

Re: Peer Review for Proposed Walmart at 1300 Fall River Avenue, **Third Review**

Dear Members of the Conservation Commission and Planning Board:

On behalf of the Town of Seekonk Conservation Commission (the "Commission") and Town of Seekonk Planning Board (the "Board"), Woodard & Curran completed a third technical and regulatory review of the proposed site improvements of the above referenced project. Woodard & Curran provided review letters (Review Letters) dated November 7, 2011 and December 6, 2011 to the Commission and Board presenting our findings and recommendations. The applicant addressed the December 6, 2011 comments and provided a subsequent submittal dated January 9, 2012. The following is a summary of the documentation reviewed by Woodard & Curran. The items received as part of the January 9, 2012 submittal are indicated in bold type:

DOCUMENTS REVIEWED

The information reviewed in the preparation of this report is as follows:

- **Response Letter dated January 6, 2012, prepared by Bohler Engineering addressing the Woodard & Curran Review Letter dated December 6, 2011;**
- **Supplemental Drainage Report Calculations dated December 30, 2011 prepared by Bohler Engineering;**
- **Guidelines for Geotechnical Investigations dated March 30, 2005, prepared by Rhode Island Department of Transportation, provided as reference information to support the drainage calculations;**
- **Soil Test Pit Logs dated December 22, 2011 and December 27, 2011, prepared by Bohler Engineering;**
- Site Plan Review Application Letter dated October 11, 2011 prepared by Bohler Engineering;
- Town of Seekonk, Planning Board, Application Form for Approval of Site Plan Review (Form D) dated June 3, 2011 prepared by Bohler Engineering;
- Notice of Intent dated May 31, 2011 and revised October 19, 2011, prepared by Bohler Engineering;
- Traffic Impact & Access Study dated March 16, 2011, prepared by Vanasse & Associates, Inc.;
- Stormwater Drainage Report for Walmart dated March 18, 2011, and revised November 15, 2011, prepared by Bohler Engineering;
- Plan Set Entitled; Site Development Plans for Proposed Walmart Store #2184-07 dated March 14, 2011, and **revised December 14**, **2011** (includes 21 sheets), prepared by Bohler Engineering;

- Response Letter dated November 17, 2011, prepared by Bohler Engineering addressing the Woodard & Curran Review Letter dated November 7, 2011;
- Response Letter dated November 17, 2011, prepared by Bohler Engineering addressing the Pare Corporation Review Letter dated November 4, 2011; and
- Supplemental Response Letter dated November 18, 2011, prepared by Vanasse & Associates, Inc. addressing the Traffic Impact and Analysis Study comments in the Pare Corporation Review Letter dated November 4, 2011.

Our findings and recommendations are based on the documents reviewed above. Generally, the Applicant has provided additional information or indicated that information can be produced to satisfy the concerns and recommendations noted by Woodard & Curran in the Review Letters. Woodard & Curran recommends that the outstanding items be incorporated as a condition of approval at the discretion of the approving authority or require decision by the Board or Commission. A summary of the outstanding items which were not completely addressed in the Bohler response letter that may be included as part of the Conditions of Approval is provided in the Conclusions and Recommendations section of this letter. Previous Woodard & Curran comments are in italics. Current Woodard & Curran comments are in bold type. The numbering of each comment is consistent with our initial review letter dated November 7, 2001.

Planning Board Review

3. *The Applicant has stated that the minimum illumination of 2.0 foot-candles in all parking spaces is appropriate for the proposed use for the Site and has presented a lighting plan indicating a minimum of 2.0 foot-candles in all parking spaces. Since the Zoning By-law does not specifically define the designated use for Commercial (minimum of 2.0 foot-candles per Zoning) or Shopping Centers (minimum of 3.0 foot-candles per Zoning), Woodard & Curran will defer to the Planning Board to define the proposed use and minimum illumination level required.*

   Applicant Response: We respectfully request approval from the Planning Board for the proposed lighting as shown on the current plans. As mentioned in our prior letter, the proposed LED light fixtures provide a more uniform light level than standard Halide or High Pressure Sodium lights and therefore a lower foot-candle output is appropriate.

   Woodard & Curran has no further comment.

5. *The Applicant has stated the proposed wastewater treatment plant (WWTP) has not yet been designed and stated, further, that the submission to the Town of the final WWTP design, which will require approval and a permit from the Massachusetts Department of Protection (MassDEP), can instead be made a condition of approval by the Town. Woodard & Curran agrees that the MassDEP has responsibility for issuing a permit for the WWTP; however, we recommend that the Board require the Applicant to provide the wastewater treatment plant design plans to the Board for review PRIOR to submission and final approval by the MADEP. The Board should review the plans for potential impacts of equipment sound levels and odor levels to the adjoining residences, which are elements that the MassDEP may not consider in its permit review.*

   Applicant Response: We will provide the wastewater treatment plant design plans to the Planning Board prior to submission and final approval by the MA DEP.

   Woodard & Curran has no further comment and recommends that the review of the wastewater treatment plant design plans be incorporated as a condition of approval.

Traffic Review

It is our understanding that VAI will prepare a functional design report and off-site improvement plan to MassDOT for a 25% design submission to the agency for its review. The 25% design submission will include an extension of the rumble strip at the un-signalized intersection and also will incorporate lengthening of the left-hand turn lane at the signalized site entrance. At a minimum, to protect the Town's interest, as a condition of approval the Applicant shall incorporate these specific off-site improvements into the project. It is recommended that the Town:

- *Review the FDR and 25% plans prior to submission to MassDOT;*
- *Review the curb cut and/or access permits issued by MassDOT;*
- *Receive MassDOT's comments and approval relative to the 25% submission; and*
- *If MassDOT's finding requires greater or lesser improvements on Route 6 by the applicant than was presented to the Town in the original plans or recommended by the Town in the previous review recommendations, the Applicant should present the differing improvements to the Town for further review and approval before submitting final documents to both MassDOT and the Town.*

For additional traffic related comments see the review letter dated November 28, 2011 prepared by PARE. PARE reviewed the Traffic Impact & Access Study prepared by VAI for this project.

Applicant Response: Comments noted.

Woodard & Curran has no further comment and recommends the items noted above be incorporated as a condition of approval.

Conservation Commission Review and Vernal Pool Assessment

The Applicant has indicated the general location of the buffer zone/vernal pool restoration area and provided a vernal pool buffer area planting schedule on the Landscape Plan, Sheet C-4. The planting schedule includes the type, size, approximate quantity and spacing requirements for the proposed plants. The exact locations of the plants are not depicted on the plans.

Since the exact number and locations of the plantings will be determined in the field at the time of construction, Woodard & Curran recommends that a wetland scientist be present during the installation of the plantings. We further recommend that the Applicant revise the planting plan to include the location and minimum quantity of plantings.

Applicant Response: The Landscape Plan, Sheet C-4 has been updated to include a reference to the buffer zone restoration proposed and an enlarged Vernal Pool Buffer Area Planting Restoration Plan has been added to the Landscape Specifications and Details Sheet C-5, illustrating the locations and total quantity of plantings required.

Woodard & Curran has no further comment and finds the Landscaping Plan to be adequate.

Woodard & Curran recommends that the Applicant provide a monitoring plan for the buffer zone/vernal pool restoration area. The contents of this plan should include criteria for defining restoration success, an approach for monitoring vegetation growth and vitality, proposed mitigation measures, and a schedule for reporting findings to the Commission. We further recommend that monitoring be conducted for a minimum of two years post-restoration.

Applicant Response: After consulting with the wetlands consultant AECOM, we propose that the restoration area be reviewed by site observations performed by a biologist a minimum of two (2) times

each growing season. These site observations shall include the preparation of a record/log containing the vegetative composition of the % cover by each species. The planted vegetation shall also be evaluated to ensure 80% survivability with replacement plantings installed for each planted specimen that does not survive the proposed monitoring period. The overall goal shall be 80% cover by non-invasive plant species after two growing seasons and a memo with the log and summary of findings/recommendations would be issued to the Conservation Commission agent after each observation. We take no exception to the request of performing same for two (2) years post-restoration and ask that this be included as a condition of approval.

Woodard & Curran has no further comment and recommends that the monitoring plan and minimum duration of two (2) years post-restoration be incorporated as a condition of approval.

Notice of Intent – WPA Form 3

The Applicant has stated that a construction schedule has not been developed and that work within the buffer zone/vernal pool restoration area will be avoided in the springtime to the extent that it will not cause delays to the overall construction schedule. Woodard & Curran recommends that the Applicant provide the detailed construction schedule to the Board and Commission. The schedule should be placed on the plans and the Commission shall be notified in advance if work within the ILSF will occur in the springtime.

Applicant Response: As noted in our prior letter, a schedule has not yet been developed, due to the additional state and local permits required for this project. As such, we respectfully request that these requests be included within the conditions of approval, as the actual construction schedule will not be developed until the furtherance of the MEPA, MassDOT, and MA DEP permitting processes.

Woodard & Curran has no further comment and recommends that the construction schedule be submitted to the Town after completion of the permitting process and prior to construction and that the Town be notified in advance if work within the buffer zone/vernal pool restoration area will occur in the springtime.

Stormwater Review

6. *The Applicant has provided boring logs and a Groundwater and Borings Exhibit indicating the test locations to document the on-site soil characteristics. The Applicant has also established the estimated seasonal high groundwater for the site based on observed groundwater elevations in on-site monitoring wells. The Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards (SWMS) design criteria for Best Management Practices (BMPs) requires that soil evaluations for infiltration BMPs be performed in the location where the BMP will be sited. The MassDEP also requires that a minimum of three test pits or borings be performed within infiltration basins and a minimum of two test pits or borings be performed for subsurface infiltration chamber systems one hundred feet or less in length. For each additional fifty (50) foot increment above the one hundred foot length of an infiltration chamber system, an additional test is required. If borings will be performed, MassDEP requires that the borings be a minimum of twenty (20) feet deep or extend to the depth of the limiting layer when testing for infiltration basins. The number of soil tests required by MassDEP at the location of each BMP has not been met by the Applicant.*

   Woodard & Curran recommends additional testing be performed in compliance with MassDEP design criteria for the proposed infiltration BMPs. The table below indicates the number of soil tests required to be performed for each BMP to comply with MassDEP requirements. The

testing shall be witnessed by Beth Hallal, Board of Health (BOH) agent. Applicant is responsible for coordinating testing with the Board of Health.

BMP	Number of Soil Tests
Basin #1	Three (3) tests
Basin #2	Three (3) borings provided. No further testing required.
Basin #3	Three (3) tests
Basin #4	One (1) boring provided. Two additional (2) tests required.
Basin #5	Three (3) tests
Basin #6	Two (2) tests
Basin #7	Three (3) tests
Basin #8	Three (3) tests

Applicant Response: The additional requested test pits were excavated and evaluated on December 22, 2011 and December 27, 2011 under the observation of our field engineer and Ms. Beth Hallal from the Seekonk Board of Health. A total of 22 deep test pits were performed as shown on the enclosed "Soil Test Pit Locations Plan" and soil boring logs.

The groundwater levels were generally found to be similar to, or higher than the levels recorded in the permanent observation wells used to design the stormwater management facilities possibly due to recent rainfall in the preceding days. Data from the National Weather Service's Providence office shows that the 2011 annual rainfall total is nearly 10 inches above average, which may be a factor in abnormally higher than normal groundwater levels. We also note that test pits 9, 10, and 11 (located within proposed Drainage Basin #8) yielded groundwater elevations four to five feet higher than expected, and are located adjacent to an active septic system, which likely accounts for artificially high groundwater levels. As a result of these findings, we revised the drainage designs for Drainage Basins #8 and #5 based on the observed groundwater data.

Drainage Basin #8 is now combined with Drainage Basin #1 and has a bottom elevation more than four feet above any observed groundwater levels. Further, the bottom elevation of Basin #5 has been raised 1.5 feet to provide two feet of separation to the observed groundwater level. Revised hydrologic routing calculations are included with this letter.

Groundwater mounding analyses have been provided for Basins #6 & former Basin #9 (currently Basin #8) based on the new data showing the bottoms of those basins to be within four feet of groundwater. Revised groundwater analyses for Basins #5 and #8 were also calculated and are also included with this letter.

Woodard & Curran finds the modifications to the stormwater system to be adequate and has no further comment.

7. *The Applicant has provided groundwater mounding calculations that indicate the groundwater mounding under the infiltration structures will not rise above the bottom of the infiltration structures. The Applicant should provide documentation to confirm the height of the water table above the base of the aquifer parameter (h_i) used in the groundwater mounding calculations is 100 feet.*

Applicant Response: Please refer to the attached cover and pertinent page taken from the "Guidelines for Geotechnical Site Investigations in Rhode Island" document, published by the University of Rhode Island for the Rhode Island Department of Transportation in 2005. The guidelines note that bedrock in East Providence, RI is 70 to 140 feet below the mudline of the Seekonk River. The average height of the Walmart site is approximately 50 feet. The elevation of the Seekonk River at East Providence is sea level (0 feet) and the mudline is even lower, so if the bedrock elevation remains somewhat similar in adjacent Seekonk, the bedrock should be at least 120 to 190 feet below the ground surface. Therefore, we believe that 100 feet to bedrock is an appropriate and conservative depth.

Woodard & Curran has no further comment.

27. Stormwater Standard 8, Erosion and Sedimentation Control comments:

Woodard & Curran recommends the infiltration areas be encompassed with construction fence and siltation protection devices in order to avoid incidental compaction and clogging during construction operations.

Applicant Response: The proposed E&S measures planned include extensive BMP's which eliminate the transport of sediments to downstream structures. As such, we take no exception to the installation of construction fence, where practicable, once each infiltration area is constructed. However, additional siltation protection devices do not appear to be warranted or of a concern. Further, as noted in our prior response letter, a note has been added to the Grading and Drainage Plan, Sheet C-2 instructing the contractor to limit construction traffic over infiltration areas.

Construction fence is acceptable. Woodard & Curran has no further comment.

Woodard & Curran also recommends that, as a condition of approval, the Applicant submits the final Stormwater Pollution Prevention Plan to the Commission prior to construction for their review.

Applicant Response: We take no exception to this condition of approval as noted in our prior response letter.

Woodard & Curran has no further comment and recommends that the final Stormwater Pollution Prevention Plan be submitted prior to construction as a condition of approval.

30. Stormwater Standard 10, Illicit Discharge comment:

Woodard & Curran recommends that the applicant provide an Illicit Discharge Compliance Statement signed by the Owner to the Commission.

Applicant Response: As noted in our prior response letter, an Illicit Discharge Compliance Statement signed by the Owner will be provided to the Commission prior to the discharge of any stormwater to post-construction BMPs. As such, we respectfully request that this be included as a condition of approval.

Woodard & Curran has no further comment and recommends an Illicit Discharge Compliance Statement signed by the Owner be provided to the Commission prior to approval.

Conclusions & Recommendations

The applicant has adequately addressed Woodard & Curran's comments noted in our Review Letters dated November 7, 2011 and December 6, 2011. Therefore, Woodard & Curran has no further technical or regulatory concerns relative to the project. Woodard & Curran recommends the bulleted items listed below be included as conditions of approval, unless required by the permitting authority to address the items prior to approval.

The Applicant shall:

- **Submit wastewater treatment plant design plans to the Town for review PRIOR to submission and final document approval by MassDEP;**
- **Submit the FDR and 25% plans to the Board for review prior to submission to MassDOT;**
- **Submit MassDOT's comments and approval relative to the 25% submission;**
- **Submit curb cut and/or access permits issued by MassDOT;**
- **Notify the Town if MassDOT's finding requires greater or lesser improvements on Route 6 than was presented to the Town by the Applicant in the original plans or recommended by the Town in previous review recommendations. The Applicant should present the differing improvements to the Town for further review and approval before submitting final documents to both MassDOT and the Town.**
- **Present any improvements to Route 6 by the Applicant that differ from those presented, indicated on the final design documents or recommended by the Town during the Town's review process to the Town for further review and approval.**
- **Monitor the buffer zone/restoration area a minimum of two(2) years post-restoration in accordance with the monitoring plan;**
- **Provide a construction schedule, prior to construction, indicating work within the buffer zone/vernal pool restoration area shall be avoided during the springtime. If work in the buffer zone/vernal pool restoration area will occur during the springtime, the Commision shall be notified in advance;**
- **Submit the final Stormwater Pollution Prevention Plan to the Commission for their review prior to construction; and**
- **Notify the Commission if any plan changes are made after approval by the Commission and submit an amendment if required by the Commission.**

Thank you for the opportunity to provide engineering consulting services relative to this project. We trust the information contained herein is beneficial to your review of the project. Please feel free to call the undersigned below if you have any further questions or comments relative to this matter.

Sincerely,
WOODARD & CURRAN INC.

Jeffery Stearns, P.E.
Project Manager, Associate

Patrick J. Burke, P.E.
Project Engineer

cc: Mathew D. Smith, Bohler Engineering