

September 10, 2018

Wayland Conservation Commission
Town of Wayland
c/o Ms. Linda Hansen
41 Cochituate Road
Wayland, Massachusetts 01778

**Re: Wayland High School Athletic Facilities
BSC Group Notice of Intent Peer Review**

Dear Conservation Commission Members and Ms. Hansen:

Weston & Sampson has reviewed the comments from BSC Group, Inc. that were provided to us by the Wayland Conservation Commission on September 5, 2018. These comments were provided as part of a peer review of the Notice of Intent submission for the Wayland High School Athletic Facilities Improvement Project. Responses to these comments are provided in the enclosed document. As noted, a revised stormwater report is currently being updated to support our responses and will be submitted separately.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.



Brandon Kunkel
Team Leader

Enclosed: Responses to BSC Group, Inc. peer review comments

PROJECT REVIEW COMMENTS

BSC offers the Conservation Commission the following comments based on our review of the project and information detailed above.

I. Procedural Items and/or Miscellaneous Comments

- a. The cover letter notes two copies of the NOI application have been provided. Wayland Wetlands Bylaw requires 8 copies to be submitted.

WESTON & SAMPSON RESPONSE: The Wayland Conservation Commission (Nicole Thomson) confirmed the receipt of all required signature pages and that it was satisfied with the number of hard copies submitted.

- b. Wayland Wetlands Regulations note “The Conservation Commission does not permit an increase in the rate or volume of runoff for frequent storm events (0.5” rainfall, 1” rainfall, 2-year storm event) and generally requires no increase in volume for 10-year, 25-year storm events and generally for 100- year events.” These regulations also require runoff calculations for 1” rainfall, 10-year and 100-year storm events...” No calculations are included within the NOI for 0.5” and 1” storm events.

WESTON & SAMPSON RESPONSE: Calculations have been revised to include the 0.5” and 1” storm events. A full, revised stormwater report will be submitted separately.

- c. A generalized construction schedule is provided with the construction end time, Spring 2020, noted. However, no details of this schedule are provided.

WESTON & SAMPSON RESPONSE: The contractor is obligated to provide a detailed construction schedule following the award of the project.

- d. It is noted under Alternatives Investigation 1 – Field Surface, Natural Grass Fields: last sentence, “Additionally, native soils may contain elevated levels of various metals, carcinogens, etc.” The NOI also notes the use of synthetic fertilizers will be used to support grass growth.

WESTON & SAMPSON RESPONSE: We are unsure as to the question being posed.

- e. Site Plans, Sheet L4.01, Layout Plan Enlargement – at the southern corner of the limits of work for the new Football field, the labels for the “Wetlands 30’ NDZ” and “Wetland 100’ Buffer Zone” are reversed. This occurs on all sheets showing this area.

WESTON & SAMPSON RESPONSE: Labels on the survey have been corrected.

- f. Site Plans, Sheet L2.01, Site Preparation and Demolition Plan Enlargement – the demolition plan clearly indicates that the existing (3) westerly tennis courts are to be removed. The westerly portions of these three courts are within the Zone I Well Head protection district. The NOI narrative indicates that no work will be undertaken within the Zone 1 Wellhead Protection District. The applicant should also demonstrate that no new stormwater discharge to the Zone I Wellhead Protection Area will occur since they are prohibited under the MA Stormwater Guidelines.

WESTON & SAMPSON RESPONSE: The only work occurring in the Zone 1 wellhead protection area is demolition of existing impervious surfaces. No new impervious surfaces are being proposed in the Zone 1 area and limited stormwater discharge from impervious areas is being directed into the Zone 1 area via sheet flow.

- g. The entire site is located in a Zone II Wellhead Protection Area. This is not mentioned or discussed in the NOI or stormwater report. This should be reflected on the WPA form, in the NOI, and Stormwater report/BMPs. The applicant's consultant should address what is being proposed to meet the applicable BMP standards for working in a Zone II Wellhead Protection Area.

WESTON & SAMPSON RESPONSE: The narrative in the stormwater report has been revised to discuss how we are addressing the applicable BMP Standards in the Zone 2 wellhead protection area. A full, revised stormwater report will be submitted separately.

- h. Site Plans, Sheet L6.01, Planting Plan Enlargement – The Landscape planting plans show a stippling symbol for Loam & Seed in the Planting Legend. However, this symbol does not appear on the planting plan itself. The designer should check to see if this symbol should be shown on the planting plan.

WESTON & SAMPSON RESPONSE: Planting plan sheets have been corrected.

- i. Stormwater Report, Checklist for Stormwater Report, LID measures, page 3 – checks “No disturbance to any Wetlands Resource areas.” See Comment d. under Technical Items below.

WESTON & SAMPSON RESPONSE: This item has been addressed as discussed under Technical Item D below.

- j. Stormwater Report Narrative, Standard 2: Peak Rate Attenuation, Table 1 Total Peak Runoff Rate – provides storm depth information in inches for 2- year through 100-year storm. These rates are based upon TP-40 Rainfall data. Actual Rainfall data used in hydrologic calculations appears to be from later studies such as Cornell Rainfall data, e.g. 100-year 24-hour rainfall depth of 8.0 inches was used in the actual calculations. This table should be updated to reflect actual Storm Depth values used in hydrologic calculations.

WESTON & SAMPSON RESPONSE: This table has been revised for consistency with the calculations. A full, revised stormwater report will be submitted separately.

II. Technical Items

- a. Under Wayland Wetlands Bylaw and Regulations, the edge of Riverfront area is measured from Mean High Water, not the bank. It is our understanding that a delineation of the Mean High Water from the Sudbury River was undertaken at the direction of the Conservation Commission Administrator. This delineation extended much closer to the project area than the Sudbury River bank delineation. The Mean High Water line is noted on Plan L4.00 as stated in the August 16th letter. The 200' Riverfront Area should be added to the plans,

extending from the MHW line since it appears some of the work may occur within the Riverfront Area. If work does occur within the 200- foot Riverfront Area to the Sudbury River, it should be confirmed the work complies with the Wetlands Protection Act and Riverfront Area performance standards.

WESTON & SAMPSON RESPONSE: The limit of work is outside the 200' buffer of the MHW line. Plans have been modified to show the MHW line and the 200' buffer.

- b. Site Plans, Sheet L4.01, Layout Plan Enlargement – two monitoring wells are shown on the site plans near Boring B-2-HS, just north of the existing bleachers, and at the beginning of the existing drainage swale adjacent to the track. What are these Monitoring wells used for and do they need to be protected during the proposed site work and kept for future monitoring?

WESTON & SAMPSON RESPONSE: Existing monitoring wells are related to testing groundwater adjacent to the existing synthetic turf field. These will need to be removed to accommodate the proposed improvements. Contract documents will be revised to include the removal of the previously installed monitoring wells.

- c. Site Plans, Sheet L4.01, Layout Plan Enlargement – limits of work are proposed within a BVW – see wetlands flags WF108 through WF113 at the northern corner of the proposed new football field. Please confirm if direct BVW impacts are proposed. If so, mitigation will need be provided at a 1:1 ratio to ensure no net loss. If not, the Designer should review and re-design the limits of work in this area.

WESTON & SAMPSON RESPONSE: All work occurs outside the 30' NDZ buffer. The limit of work line shown on the plans has been modified to reflect this.

- d. Based upon the limit of work shown on Sheet L4.01 of the Site Plans, impacts are proposed within the 30' No Disturbance Zone in the same area as the BVW impacts (see II c above). The Designer should review and redesign. If work is needed in the No Disturbance Zone, a waiver for work in the No Disturbance Zone will need to be obtained from the Conservation Commission.

WESTON & SAMPSON RESPONSE: All work occurs outside the 30' NDZ buffer. The limit of work line shown on the plans has been modified to reflect this.

- e. The NOI application, site plans and submittal materials do not contain any reference as to who flagged the wetlands, when the delineation was completed, and the description of how the delineation was conducted. The NOI application references an Appendix G – Wetlands Memorandum. However, there was not one included in the NOI. There is no description of the wetlands or the dominant species. This information is required under the Wayland Wetlands Bylaw and Regulations and the Wetlands Protection Act.

WESTON & SAMPSON RESPONSE: All work occurs outside the 30' NDZ buffer. The limit of work line shown on the plans has been modified to reflect this. The Town of Wayland had this wetland delineation performed and needs to request a delineation report from the delineator.

- f. Site Plans, Sheet L5.02, Grading, Drainage and Utilities Plan - No information is given for the invert of the 12" diameter drainage pipe, which outlets infiltrated runoff from the underdrainage system beneath the football field. The elevation grade of the football field is at 126.0, and a spot grade elevation of 125.79 is shown at the outer edge of the track surrounding the field. A proposed contour elevation of 125 is shown approximately 5' beyond the 12" pipe outlet. This would indicate that the pipe outlet elevation is above 125.0, which would put the top of the 12" diameter pipe above the ground surface. It is likely the design intent of this pipe is to outlet at a lower elevation. The Designer should review and redesign.

WESTON & SAMPSON RESPONSE: Plans have been updated to reflect a lower pipe outlet elevation.

- g. Site Plans, Sheet L5.03, Grading, Drainage, and Utilities Enlargement Plan – There is what appears to be a double grate catch basin located at the edge of the infield behind second base for the proposed softball field. Such structures are typically avoided within active playing areas. It is suggested that the designer review the use of this structure.

WESTON & SAMPSON RESPONSE: Plans have been updated to show a cleanout structure only.

- h. Site Plans, Sheet L6.01, Planting Plan Enlargement - The new softball field will result in the removal of several existing spruce trees. These are to be replaced, according to the Tree schedule with 3 Red Maples (RS) and 6 Sweet Gum (LS) trees, having calipers of 3 to 3.5". The 3 Red Maples (AR) are shown on this sheet, along with 4 plants labelled "AC". The Overall Planting Plan, Sheet L6.00, indicates considerably more plantings, a total of 18 trees, including the 3 Red Maples noted above, and separately, the 4 "AC" plants.

WESTON & SAMPSON RESPONSE: Planting plan sheets have been corrected.

- i. Site Plans, Sheet L5.04, Grading Drainage and Utilities Enlargement Plan – indicates an underground infiltration system is proposed to be installed under the new parking lot to adjacent to the relocated tennis courts. However, the detail sheets do not provide any detail information for this system.

WESTON & SAMPSON RESPONSE: Details related to the subsurface stormwater chamber system have been added to the plans.

- j. Stormwater Report Narrative, Standard 2: Peak Rate Attenuation, Table 1 Total Peak Runoff Rate – the first sentence of this section notes "Since there will be no net change to impervious area the proposed track and turf field at the northwest portion of the High School Site, this area does not require analysis." The Stormwater Report does not provide any calculations to confirm this statement. While this statement may be accurate, as there is a considerable amount of bituminous concrete pavement being removed from the area of the existing tennis courts, additional impervious materials are being added at other locations in this area. A calculation indicating the net reduction in impervious area would provide the confirmation needed for this statement.

WESTON & SAMPSON RESPONSE: The stormwater report narrative has been revised to provide existing versus proposed impervious areas at the track site. A full, revised stormwater report will be submitted separately.

- k. Stormwater Report Narrative, Standard 2: Peak Rate Attenuation, Table 1 Total Peak Runoff Rate – provides storm depth information in inches for 2- year through 100-year storm. These rates are based upon TP-40 Rainfall data. Actual Rainfall data used in hydrologic calculations appears to be from later studies such as Cornell Rainfall data, e.g. 100-year 24-hour rainfall depth of 8.0 inches was used in the actual calculations. This table should be updated to reflect actual Storm Depth values used in hydrologic calculations.

WESTON & SAMPSON RESPONSE: This table has been revised for consistency with the calculations. A full, revised stormwater report will be submitted separately.

III. Turf Design

- a. The infill material for the new field is not specified in the NOI or site plans. BSC assumes traditional SBR crumb rubber infill will be used, similar to the material on the existing athletic field. Alternative infill materials are available for consideration such as acrylic coated crumb rubber, sand and Thermo Plastic Elastomer (TPE).

WESTON & SAMPSON RESPONSE: Virgin crumb rubber infill will be specified.

- b. Based on the proposed synthetic turf system design and the size of the crumb rubber granules, it is unlikely that crumb rubber infill will migrate through the synthetic turf, the stone drainage layer under the field, the stormwater drainage system and discharge into the adjacent wetlands. Infill migration could occur through tracking from athletes' shoes or maintenance equipment. However, these activities are not expected to discharge to or occur in or around the wetlands.

WESTON & SAMPSON RESPONSE: No response needed.