



Via Electronic Mail

October 6, 2023

Ms. Patricia Lambert, Chair
Scituate Planning Board
Town Hall
600 Chief Justice Cushing Highway
Scituate, MA 02066

Re: Peer Review Major Site Plan Review
Stearns Meadow Water Treatment Plant
453 Chief Justice Cushing Highway, Scituate, MA
Assessor's Map/Block/Lot 47/02/26J

Dear Ms. Lambert and Board Members:

Woodard & Curran submits this letter and supporting information in response to the comments provided in the Horsley Witten Group's peer review letter entitled "Peer Review Major Site Plan Review" dated September 6, 2023, for the proposed Stearns Meadow Water Treatment Plant project.

Horsley Witten Group comments that required a response and/or additional information are provided below in **bold**, followed by Woodard & Curran's responses in *italics*.

SECTION 600 DIMENSIONAL REGULATIONS

Section 620.1 BUILDING HEIGHTS

Building Height, Applicant has Provided 36 ft 2 in.

- 1. The maximum building height is 35 feet. HW recommends that the Applicant adjust the height of the treatment plant or justify the need for the extra height to the Planning Board.**

The average height of the facility meets the requirement for average building height to be no more than 35'-0" in Zones R-1, R-2, and R-3, with an average building height of 34'-4". The building height included in the Major Site Plan Approval misreported the maximum building height. The maximum building height of the proposed facility is 45'-1", which exceeds the maximum height requirement of 40'-0". The maximum building height is within the water treatment process area. The height is driven by space requirements for maintenance or future replacement of equipment within treatment process tankage, which has already been minimized to limit building height. The design team met with the Town of Scituate Zoning Official (Bob Vogel) on Monday, September 25, 2023 to review the building height. The Applicant is pursuing a Special Permit (per Zoning Bylaws Section 950.2.B.2) from the Scituate Zoning Board of Appeals related to the proposed maximum building height.



SECTION 770 SITE PLAN REVIEW

Section 770.5 APPLICATION REQUIREMENTS (I)

I. Existing natural features such as waterways, drainage course, large boulders or ledge outcroppings, trees of twelve inches caliper or more, and stone walls. Where a portion of the site is to remain undisturbed by the proposed site work, such area shall be so indicated on the plan.

- 2. The Applicant has located stone walls and isolated vegetated wetlands. The Applicant has also labeled the limit of work on the plan set. The Applicant has not noted if there are trees of twelve inches caliper or more within the limit of disturbance and has not clearly indicated the areas on the site that will remain undisturbed. HW notes that the Applicant has stated that a tree survey is being conducted. HW recommends that the Applicant provide the requested information to the Planning Board.**

Areas outside of the limit of work shown on the site plans will remain undisturbed. A tree survey is in progress and will be shared with the Planning Board when available. Bartlett Tree Experts is anticipating having this completed prior to the end of October.

Section 770.5 APPLICATION REQUIREMENTS (Q)

Q. The location of all public and private water supply wells within the site boundaries or within four hundred feet of the site boundary and, where applicable, the boundary line of the Water Resources Protection District as specified in Section 510 of this bylaw (whether on- or off-site.)

- 3. The Approval Not Required plan prepared by Feldman notes that the Water Resources Protection District blankets the entire site. No drinking water wells are shown on or within 400 feet of the site. HW recommends that the Applicant confirm this.**

No drinking water wells are located within 400-ft of the site.

Section 770.6 STANDARD OF REVIEW (C)

C. Safety and adequacy of driveway layout, pedestrian safety, off-street parking and loading sites, minimizing glare from headlights and light intrusion, sufficiency of access for service vehicles such as electricity, gas, fuel, telephone, laundry, rubbish removal, water, sewer, fire, police, ambulance or other routine or emergency vehicles.

- 4. The Applicant has proposed a site layout considering the safety of pedestrians accessing the building. The visitor parking areas are located adjacent to a sidewalk and the front doors of the treatment plant. HW recommends that the Applicant obtain approval from the fire department to confirm the Scituate fire equipment can adequately access the entire building.**

Woodard & Curran held an initial meeting with Chief Donovan and Deputy Chief Reilly of the Scituate Fire Department on August 2, 2023. A summary of this meeting is included with this



response. After this meeting and the initial planning board submission, the design team received the specification for the Town of Scituate's fire truck. An autoturn analysis was rerun utilizing the Town's specification and the plan is included with this response. A fire hydrant is located on each side of the building. Further coordination with the Fire Department will continue as the fire protection design is progressed.

Section 770.6 STANDARD OF REVIEW (D)

D. Adequacy of the methods of disposal for sewage, refuse and other wastes resulting from the uses permitted on the site, safety and adequacy of water supply and distribution, and of fire fighting facilities on the site.

- 5. The Applicant has proposed an onsite wastewater absorption system. HW recommends that the Applicant document that the Board of Health has reviewed and approved the design. The Applicant has included an enclosed dumpster to manage solid waste.**

Woodard & Curran will be submitting onsite wastewater disposal system plans to the board of health by October 13, 2023. All documentation regarding the proposed onsite wastewater disposal system will be submitted to the Planning Board.

Section 770.6 STANDARD OF REVIEW (G)

G. Minimizing the volume of cut and fill, the number of trees of 6" caliper or greater removed, the length of stone walls removed, soil erosion, and destruction of other natural features.

- 6. The Applicant has included a Cut and Fill Analysis Appendix, but HW has not received the final cut and fill analysis. Furthermore, HW understands that a tree survey is being conducted to confirm the number of trees to be cleared from the site. HW recommends that the Applicant provide the necessary documentation.**

A summary of the anticipated earthwork quantities was submitted to the Planning Board after the initial submittal. It showed an import quantity of approximately 61,000 cubic yards. A tree survey is in progress and will be shared with the Planning Board when available. Bartlett Tree Experts is anticipating having this completed prior to the end of October. Once received, the number of trees of 6" caliper or greater included within the limit of work will be provided to the Planning Board.

Section 770.6 STANDARD OF REVIEW (I)

I. Parking areas shall be adequately buffered and shaded using native vegetation. Parking lots with ten or more spaces shall be planted with at least one shade tree per ten spaces, of a caliper of at least 2 ½ inches dbh, with each tree providing shade to the parking area. Parking areas and visually degrading elements such as dumpsters and loading docks shall be designed to minimize visual intrusion from public ways and residentially owned or zoned areas. In addition, suitable screening of such areas by wood fences and dense, native evergreen hedges of five feet or more at time of planting shall be utilized. The use of chain link fences shall be avoided except in industrial areas. Outdoor lighting, including lighting on the exterior of a building or lighting in parking areas, shall be



arranged to minimize glare and light spillover to neighboring properties. No outdoor light shall be located more than twenty feet above the ground.

7. The proposed parking areas appear to be sufficiently buffered and include trees noted to be between 2" and 3" caliper. The proposed building, parking areas, and dumpsters include a minimum of a 50-foot buffer of natural vegetation from the public roadway and a minimum of a 30-foot buffer from the adjacent residential neighborhood. The proposed lighting around the outer edge of the parking lot and driveways is noted to be 30 feet high. HW recommends that the Applicant provide justification for the height of the light poles.

The drawings have been updated to incorporate 20-foot-tall light posts, increasing the number of light posts. The updated lighting plan is included with this submission. Lighting fixtures will be dark-sky compliant. The light output will be dimmed to 50% after business hours and turned off at midnight. Glare shields will be added in appropriate locations to minimize nuisance to neighboring residential properties.

Section 770.6 STANDARD OF REVIEW (J)

J. Safe, functional, and convenient pedestrian, bicycle, and where practical transit access, and continuity of the pedestrian and bicycle network within the property and to nearby pedestrian and bicycle facilities and trip generators.

8. There do not appear to be any existing pedestrian or bicycle networks in the vicinity of the proposed development. HW recommends that the Applicant confirm this.

There are no pedestrian or bicycle networks in close proximity to the site.

Review of Stormwater Management Report (all comments included)

1. **Standard 1 states, "No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth."**
 - a. **The Applicant has provided a watershed map for pre-development and post-development conditions. The Applicant has evaluated two design points (DP).**
 - i. **DP-1 is the southern property boundary abutting the Patricia Bulter property. The property boundary is parallel to the FEMA Zone AE at elevation 44 and is approximate 230 feet from the bank boundary of Tack Factory Pond. Most of the developed site discharges via the detention basin (4P) and is greater than 100 feet from any resource area. There appear to be five isolated vegetated wetlands (IVW) between the southern property boundary and the**



proposed building. Stormwater from approximately 3,080 sf of the southern driveway (PR9) flows into a bioretention basin (8P) which outlets into one of these IVWs (flags F1-F4). The discharge point is approximately 40 feet from the edge of the IVW and the peak flow rate is minimal. HW recommends that the Applicant provide the velocity of the discharge pipe (6-inch HDPE) to confirm that the proposed discharge will not cause erosion in this IVW. HW further recommends that the Applicant explain to the Scituate Conservation Commission, how this IVW will or will not be impacted by the proposed development.

Bioretention pond 8P discharge velocities for the various storm events as follows:

1-Year Discharge Velocity: 1.64 FPS

2-Year Discharge Velocity: 1.81 FPS

10-Year Discharge Velocity: 3.01 FPS

100-Year Discharge Velocity: 5.31FPS

A rip rap apron will be incorporated into the design to dissipate the discharge velocities from the 6" discharge pipe. The rip rap apron will also serve as protection from impacts by the proposed development adjacent to IVW-F.

- ii. DP-2 is the closed drainage system located within Chief Justice Cushing Highway (Route 3A) along the eastern property boundary. It does not appear that discharge via DP-2 will cause erosion in a resource area. The Applicant will require approval from MassDOT to discharge into the state highway drainage system.**

Woodard & Curran acknowledges the Applicant (the Town) will require approval from MassDOT to discharge into the state highway drainage system.

- b. The Applicant has provided the riprap sizing for the aprons located at the outlets from the Detention Basin (Pond 4P) and the Bioretention Basin (Pond 8P). A detail has been provided on Sheet C-903. HW concurs that the aprons are adequately sized. No further action required.**

Woodard & Curran acknowledges there is no further action required for this comment.

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



exceed pre-development peak discharge rates.”

The Applicant has proposed deep sump catch basins, water quality units, a grass swale, four sediment forebays, four bioretention areas, and a detention basin to capture, treat and manage stormwater runoff from the proposed development. HW offers the following comments pertaining to the HydroCAD model used to evaluate the peak discharge rates:

- a. The Pre and Post-Development catchment areas have been delineated along the property boundary. HW agrees with the roadway boundary on the east and the downgradient boundary on the south. However, it is not clear if stormwater on the upgradient, north side of the project site flows onto the parcel. HW recommends that the Applicant clarify if any stormwater from the residential properties on the north and west sides of the parcel will flow onto the project site and be captured by the proposed stormwater system. Subcatchment areas to be revisited include EX-1, EX-2, PR-1, PR- 4, PR-10 and PR-14.**

Woodard & Curran has reviewed supplemental topography from NOAA Data Access Viewer which illustrates the existing topography north of the site generally slopes south, into the site. Additionally, Woodard & Curran reviewed the topography west of the site which generally also slopes south. As a result of these findings, Woodard & Curran has adjusted its watershed figures (pre & post development) to account for additional area north of the site however, no additional area was assumed to flow into the site from the west. Woodard & Curran acknowledges that some runoff from the west may enter into the site. However, this runoff would not enter into the stormwater management systems and therefore would ultimately discharge to the same design point. EX-1, PR-4 & PR-10 have been updated in the HydroCAD model to reflect the increase in contributing area.

- b. The Applicant has included the Detention Basin (Pond 4P) within subcatchment area PR-14. The detention pond does not include any exfiltration and the basin may contain water for an extended period. HW recommends that the Applicant determine if a portion of subcatchment area PR-14 should be modeled as water with a curve number (CN) of 98.**

Detention basin 4P has been updated to include exfiltration based on the results of the test pits and infiltration testing. Infiltration testing results indicated that this area of the site has an infiltration rate of 0.58 in/hour. Additionally, the test pits indicated that the seasonal high groundwater table elevation is 29-inches below the surface which meets Scituate requirement of 4' separation to groundwater for all infiltrating BMP's.



Woodard & Curran will continue to model this area as grass with a curve number of 74.

- c. **The Applicant has utilized the Northeast Regional Climate Center (NRCC) precipitation depths for the 1-year, 2-year, 10-year, and 100-year storm events. HW finds the values reasonable. No further action required.**

Woodard & Curran acknowledges there is no further action required for this comment.

- d. **The Applicant has conducted soil test pits throughout the site. The test pits indicate the soil type to be silty loam which is classified as Hydrologic Soil Group (HSG) C. The Applicant has utilized an exfiltration rate of 0.17 inches per hour (iph) for three of the bioretention basins. HW has no objection with the chosen rate. The Applicant has noted that the fourth bioretention basin (8P) will be lined therefore no exfiltration was included. The detail for the Bioretention Pond provided on Sheet C-903 does not specify which basin will be lined. HW recommends that the Applicant clarify the detail.**

Woodard & Curran updated the Bioretention Pond detail to include a 40 MIL HDPE Flexible Membrane Liner and specified the liner is only intended for use within pond 8P.

- e. **The Applicant has provided a detention basin (4P) as the final containment basin for the stormwater system. Stormwater from most of the parking area, driveways, and the roof runoff will eventually discharge via this detention basin. The Applicant has not included exfiltration beneath the detention basin. HW was not able to determine the reason for the excluded infiltration. The test pits indicate silty loam, there appears to be adequate separation to groundwater, the bottom of the basin is set approximately 1 foot higher than the existing surface, and the basin is not lined. HW recommends that the Applicant clarify if the exclusion was a conservative design or if there is a specific reason that the basin should not exfiltrate. The Detention Basin detail on Sheet C-903 may need to be modified if exfiltration is prohibited.**

Woodard & Curran excluded exfiltration from this basin as a conservative design approach prior to obtaining infiltration testing results. With the infiltration testing



completed, Detention Basin 4P has been revised to an infiltration basin. The detention basin detail on Sheet C-903 has been updated to reflect an infiltration basin.

- f. The HydroCAD routing diagram indicates that subcatchment area PR-10 discharges direction to the Detention Basin-Pond 4P. The site plan indicates that PR-10 flows into the closed drainage system of PR-11 and into sediment forebay Pond 9P. HW recommends that the Applicant revisit the routing diagram and the design plans and revise accordingly.**

Woodard & Curran adjusted the routing diagram to reflect stormwater runoff entering the closed conduit system of PR-11 and discharging into sediment forebay pond 9P.

- g. The emergency overflow for Sediment Forebay 6P is called out on the plan at elevation 70.34. The HydroCAD model lists elevation 78.60. HW recommends that the Applicant revisit this overflow and adjust the plans or the HydroCAD model accordingly.**

Woodard & Curran reviewed the plans and the model and determined the spot elevation called out on the plans was incorrect however the model indicated the correct emergency overflow elevation of 78.60 feet. The callout on C-402 has been updated to reflect the correct emergency overflow elevation.

- h. The overflow for Bioretention Basin 2P is modeled at elevation 70.34. The elevation does not appear to be called out on the plan or on the detail. HW recommends that the Applicant label the overflow accordingly.**

Woodard & Curran reviewed the plans and HydroCAD model and determined the modeled emergency overflow elevation of 70.34 is the correct elevation. A callout has been added on Sheet C-403.

- i. The Applicant has modeled Sediment Forebay 9P with a bottom elevation set at 70. The proposed grading indicates that the bottom elevation is 72.0. HW recommends that the Applicant revisit this forebay and confirm the elevations shown are accurate. If applicable the contour for elevation 70 should be added to the design plans.**

Woodard & Curran reviewed the plans and HydroCAD model and determined the contour labels on the plans were shown incorrectly. The contour labels have been updated to reflect the modeled elevations.

- j. The Applicant has included a Bio-Retention Pond Schedule on Sheet C-903. The peak elevations listed for**



Bioretention Pond 8P are not consistent with the HydroCAD model output. HW recommends that the Applicant review the model and adjust the table accordingly.

Woodard & Curran has updated the model to reflect the comments herein and modified the Bio-Retention Pond Schedule on Sheet C-903.

- k. The Applicant has included a Detention Basin Elevation Table on Sheet C-903. The elevation listed for the outlet invert is not consistent with the HydroCAD model. HW recommends that the Applicant review the model and adjust the table accordingly.**

Woodard & Curran has updated the model to reflect the comments herein, revised the Detention Basin detail to reflect an Infiltration Basin and updated the table on Sheet C-903. The detention basin detail has been eliminated from the plan set as it is no longer applicable.

- l. The peak discharge rates and volumes for DP-1 and DP-2 have been provided on Tables 3-4 and 3-5 in the Stormwater Management Report. HW recommends that the Applicant update the HydroCAD model as noted above and revise the tables accordingly.**

Woodard & Curran has updated the model to reflect the comments herein and modified the peak discharge rate and volume tables 3-4 and 3-5 respectively. A snippet of the revised tables from the updated stormwater report are listed below:

Table-3-4:→Pre--and-Post-Development-Peak-Discharge-Rates¶

Design¶ Point¶	1-year-(cfs)¶			2-year-(cfs)¶			10-year-(cfs)¶			100-year-(cfs)¶		
	Pre¶	Post¶	Δ¶	Pre¶	Post¶	Δ¶	Pre¶	Post¶	Δ¶	Pre¶	Post¶	Δ¶
DP-1¶	3.90¶	2.59¶	-1.31¶	6.60¶	4.27¶	-2.33¶	15.73¶	13.21¶	-2.52¶	41.20¶	41.20¶	-0¶
DP-2¶	0.33¶	0.29¶	-0.04¶	0.57¶	0.47¶	-0.10¶	1.38¶	1.06¶	-0.32¶	3.59¶	2.67¶	-0.92¶

Note: Δ stands for net difference between the pre- and post-development rates.¶

Table-3-5:→Pre--and-Post-Development-Peak-Volume¶

Design¶ Point¶	2-year-(ac-ft)¶			10-year-(ac-ft)¶			100-year-(ac-ft)¶		
	Pre¶	Post¶	Δ¶	Pre¶	Post¶	Δ¶	Pre¶	Post¶	Δ¶
DP-1¶	1.16¶	0.98¶	-0.18¶	2.56¶	2.37¶	-0.19¶	6.53¶	6.30¶	-0.23¶
DP-2¶	0.052¶	0.046¶	-0.006¶	0.114¶	0.096¶	-0.018¶	0.292¶	0.236¶	-0.056¶

Note: Δ stands for net difference between the pre- and post-development volumes.¶

- m. HW notes that Table 3-4 indicates a reduction of peak discharge rate for every storm event modeled. However, Table 3-5 indicates a slight rise in peak volume to DP-1 during each of the storm events. In accordance with**



Section 9. 3) of the Scituate Stormwater regulations, “post-development discharge volume shall not exceed predevelopment discharge volume for the 2-year, 10-year, and 100-year 24-hour storms, and for each design point if flow leaves the property in more than one direction.” HW recommends that the Applicant revisit the design or justify to the Planning Board why it cannot meet this requirement.

Woodard & Curran modified the HydroCAD model by adjusting infiltration rates, pond depths, outlet/orifice elevation to not exceed predevelopment volumes for the 2-year, 10-year and 100-year 24-hour storms. Table 3-5 has been modified in the stormwater report and a clip of the updated table is shown above.

3. Standard 3 states, “the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type.”

- a. The Applicant is increasing the impervious cover by 1.805 acres (78,626 sf) and therefore is required to recharge 1,638 cubic feet (cf) of stormwater onsite. The Applicant has proposed three bioretention basins to provide the required recharge. It appears that the Applicant has provided adequate recharge. However, HW was not able to confirm the provided volume. HW recommends that the Applicant provide the stage storage area tables that the HydroCAD model creates for each of the basins to confirm the values listed in Appendix E.**

Woodard & Curran has included the stage storage area tables exported from the HydroCAD model for each of the basins in the revised stormwater report. Woodard & Curran has highlighted the Recharge Volume within the table for each basin. It is important to note that recharge volumes for each basin have changed based on the infiltration test results and adjustment of the outlet elevations. The proposed recharge volume still exceeds the required recharge volume.

- b. The Applicant has provided the calculations to confirm the basins will fully infiltrate within 72 hours. No further action required.**

Woodard & Curran acknowledges there is no further action required for this comment. It is important to note that the drawdown calculations have been updated based on the revisions noted herein. Additionally, the recharge volume was adjusted to account for the deduction in subsurface storage and only account for the surface water portion of the recharge volume.



- c. **The Applicant has conducted several soil test pits within the 15.6-acre parcel. HW recommends that the Applicant add the test pits to the Grading and Drainage Plans for clarity.**

Woodard & Curran has added the test pit locations to the grading & drainage plan for clarity.

- d. **In accordance with Volume 3, Chapter 1, page 28 of the MSH a mounding analysis is required for an infiltration system that does not have 4 feet of separation to groundwater. It appears that the Applicant has provided the minimum 4 feet of separation. However as noted above HW requests that the Applicant add the test pits to the grading plan to confirm the depth to groundwater beneath each stormwater practice.**

Woodard & Curran has added the test pit locations and data to the grading & drainage plan.

- 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.**

- a. **The Applicant has proposed 78,626 sf of impervious cover and in accordance with the Town of Scituate Stormwater Regulations is required to provide 6,552 cf of water quality volume onsite. The Applicant has proposed three bioretention basins to provide 6,951 cf. As noted above, HW was not able to confirm the provided volume. HW recommends that the Applicant provide the stage storage area tables that the HydroCAD model creates for each of the basins to confirm the values listed in Appendix E.**

Woodard & Curran has included the stage storage area tables exported from the HydroCAD model for each of the basins in the revised stormwater report. Woodard & Curran has highlighted the water quality volume within the table for each basin. It is important to note that water quality volumes for each basin have changed based on the infiltration test results and adjustment of the outlet elevations. The proposed recharge volume still exceeds the required recharge volume.

- b. **The Applicant has provided the TSS removal worksheets for the water quality provided indicating that it meets the required 90% TSS removal as required by the Town of Scituate. No further action required.**



Woodard & Curran acknowledges there is no further action required for this comment.

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

- a. **The project is not considered an LUHPPL, therefore Standard 5 is not applicable to this site.**

Woodard & Curran acknowledges this standard is not applicable to this site.

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.

- a. **The project is located within the Water Resource Protection District which is considered a critical area. The Applicant has provided a stormwater management system that should retain 1 inch of stormwater runoff and uses stormwater practices in accordance with the recommendations listed for Standard 5. No further action required.**

Woodard & Curran acknowledges there is no further action required for this comment.

7. Standard 7 is related to projects considered Redevelopment.

- a. **The proposed project is not considered a redevelopment. Standard 7 is not applicable to this site.**

Woodard & Curran acknowledges this standard is not applicable to this site.

8. Standard 8 states, "A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented."

- a. **The Applicant has provided Erosion and Sediment Control plans and details. If allowed by MassDOT, HW recommends that inlet protection be installed in any existing catch basins located within 100 feet of the construction entrance as well as any proposed catch basins/yard drains installed for the proposed development.**

Woodard & Curran reviewed a 100' buffer from the construction entrance/exit and added inlet protection where applicable. Inlet protection for proposed structures will be addressed in the SWPPP.



- b. As noted under Section 4.1.8 of the Stormwater Management Report, the Applicant is proposing to disturb more than one acre of land. In accordance with the EPA Construction General Permit, the Applicant is required to file a Notice of Intent with the EPA and prepare a Stormwater Pollution Prevention Plan (SWPPP). HW recommends that the Applicant provide the Town of Scituate with a copy of the SWPPP a minimum of 14 days prior to land disturbance. The Planning Board may choose to require receipt of the final SWPPP signed by the contractor as a condition of approval.**

Woodard & Curran intends to file a Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) prior to any land disturbance. Woodard & Curran is amenable to providing the SWPPP signed by the contractor to the Town prior to any land disturbance.

9. Standard 9 states, "A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed."

- a. The Applicant has provided an Operation & Maintenance (O&M) Plan in Appendix F of the Stormwater Management Report. HW recommends that the Applicant provide it as a separate standalone document signed by the property owner. The Planning Board may choose to require receipt of the O&M Plan signed by the property owner as a condition of approval.**

Woodard & Curran will provide a standalone Operation & Maintenance (O&M) Plan to the Town in addition to Appendix F of the Stormwater Management Report. Woodard & Curran is amenable to obtaining a signature from the property owner and providing the standalone O&M plan to the Town as a condition of approval.

- b. The O&M Plan includes Table 1 that lists the actions and frequency to properly maintain the stormwater system. The Frequency is listed as "ongoing/as needed." HW recommends that a minimum frequency is included to verify that the system is inspected on a routine basis.**

Woodard & Curran has revised the frequencies of the various stormwater BMP's from "ongoing/as needed" to specific frequencies in accordance with Massachusetts Stormwater Handbook.

- c. HW recommends that the Applicant include a simple sketch that clearly labels the various stormwater practices**



that will require inspections and maintenance. The sketch may include the location of the components of the on-site wastewater treatment facility for use by the facility.

Woodard & Curran has updated the O&M plan to include a sketch that clearly labels the various stormwater BMP's that will require inspection and/or maintenance. Woodard & Curran did not include the location of the components of the on-site wastewater treatment facility in the sketch as the O&M plan pertains specifically to stormwater BMPs.

10. Standard 10 states, "All illicit discharges to the stormwater management system are prohibited."

- a. The Applicant has noted in Section 4.1.10 of the Stormwater Management Report that the project will not result in any new illicit discharges. The Applicant has also noted that an Illicit Discharge Statement will be submitted prior to construction. The Planning Board may choose to require receipt of the Illicit Discharge Statement signed by the property owner as a condition of approval.**

Woodard & Curran is amenable to obtaining a signature from the property owner and providing receipt of the Illicit Discharge Statement to the Town as a condition of approval.

We trust that the responses above and supplemental information provided in the referenced documents address your comments. Please feel free to contact us if there are any questions or additional information is required.

Sincerely,

WOODARD & CURRAN, INC.

A handwritten signature in black ink that reads "Kevin A. McCaffery".

Kevin A. McCaffery, PE
Technical Manager – Civil & Stormwater

- Attachments: 1 – Stage Storage Tables (*Provided under separate cover*)
2 – Revised Stormwater Management Report (*Provided under specific cover*)



**ATTACHMENT 1: STAGE STORAGE TABLES
(PROVIDED UNDER SEPARATE COVER)**



**ATTACHMENT 2: REVISED STORMWATER MANAGEMENT REPORT
(PROVIDED UNDER SEPARATE COVER)**