BEALS AND THOMAS

November 6, 2024

Town of Medfield Board of Health
c/o Nancy M. Bennotti, Administrative Assistant
459 Main Street
Medfield, Massachusetts 02052

Via: Email to nbennotti@medfield.net

Reference: Board of Health Project Review Application
Montrose School Campus Site Improvements
29 North Street
Medfield, Massachusetts
B+T Project No. 3499.02

Dear Ms. Bennotti and Members of the Board of Health:

Beals and Thomas, Inc. (B+T) is pleased to assist the Town of Medfield Board of Health (the BOH) with the review of the Project Review Application for the proposed Montrose School Campus site improvements at 29 North Street (the Site). We understand that The Montrose Foundation, Inc. (the Applicant) is proposing campus modifications including minor building expansions, reconfiguration and reduction of the on-site parking, and expanded athletic fields (the Project).

B+T is also concurrently reviewing the Project on behalf of the Planning Board. Please see our letter to the Planning Board, dated October 15, 2024, for a Project summary and the results of our on-site observations. We understand that our services with the BOH will be limited to review of the stormwater management system.

B+T received the following documentation which served as the basis for our review:

- *Montrose School – 29 North Street, Proposed Campus Improvements Project,* dated September 17, 2024, prepared by Hancock Associates (3 pages)
- *Medfield Board of Health Project Review Application,* dated September 17, 2024, prepared by the Applicant (5 pages)
- *Montrose School, Montrose School Campus Plan, Site Improvements,* dated July 31, 2024, prepared by Hancock Associates (27 sheets)
- *Stormwater Report in Support of Notice of Intent & Special Permit Filing for Montrose School Campus Improvement Project (Parcel ID# 43-029, Medfield, MA,* July 21, 2024, prepared by Hancock Associates (170 pages)
- *Operation and Maintenance Plan in support of Notice of Intent & Special Permit Filing for Montrose School Campus Improvements Project (Parcel ID #43-029), Medfield, MA,* dated July 31, 2024, revised September 25, 2024, prepared by Hancock Associates (25 pages)

We have reviewed the documentation submitted by the Applicant with respect to the Medfield Board of Health Regulations for Stormwater and Runoff Management (the Regulations), dated April 1991, amended January 2000, and the MassDEP Stormwater Handbook.

We note for the BOH's information that this Project lies within jurisdiction of the Massachusetts Wetlands Protection Act and implementing regulations and will therefore be subject to a Notice of Intent filing with the Conservation Commission, which the Applicant indicates they are filing concurrently. We have included Conservation Commission personnel on this correspondence.

Review Comments

1. The site plans have not been stamped by a Professional Land Surveyor (PLS) registered in the Commonwealth of Massachusetts. Through the Planning Board review process, existing conditions plans stamped by a PLS from which the site plans are based were provided. We request that the Applicant provide a final plan set, including the referenced existing conditions plans, to the BOH for the Administrative Record.

2. Standard 4 of the Handbook requires that total suspended solids (TSS) removal rates be documented for each treatment train. The Applicant only provides analysis for one treatment train from catch basin to water quality structure. Other treatment trains are proposed which include catch basins direct to existing infrastructure and large areas of runoff to the pea stone diaphragm and vegetated filter strips. We request that the Applicant provide TSS removal analysis for all proposed treatment trains.

3. Standard 8 of the Handbook requires a construction period erosion and sediment control plan. Given that the area of disturbance is more than 1 acre, the Project will be subject to the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) program. For NPDES compliance, the Applicant will need to provide a Stormwater Pollution Prevention Plan (SWPPP). The Applicant intends to use the SWPPP as their construction period erosion and sediment control plan. As is typical, a SWPPP is not finalized until a project has been bid and awarded to a contractor. The Applicant indicates that the SWPPP will be prepared and provided prior to construction. As a potential condition of approval, we recommend that the BOH require that a SWPPP be provided for review and approval prior to construction.

4. Standard 9 of the Handbook requires that a long-term Operation and Maintenance (O&M) plan be provided. A part of the Planning Board review process, a standalone O&M Plan was provided by the Applicant. This document does not appear to include any turf field maintenance relative to the long-term operation and performance of the underdrain system. We request that the Applicant clarify if any field maintenance practices in support of maintaining the function of the underdrain system should be included in the O&M plan. We further request that a final version of the standalone O&M plan be provided to the BOH for the Administrative Record.

5. Standard 10 of the Handbook requires that an executed Illicit Discharge Statement be provided by the Applicant. The referenced documentation has not been provided, though the Applicant does indicate that an Illicit Discharge Statement will be provided prior to construction. As a potential condition of approval, we recommend that the BOH require that an Illicit Discharge Statement be provided prior to construction.

6. The Regulations require a water quality volume first flush of 2" or another value as designated by the BOH to be appropriate. The Applicant assumed and utilized a first flush of 0.5" within the modeling as prescribed by the Handbook. We note this for the benefit of the BOH, and we defer to the BOH if the assumed value is adequate or the referenced 2" value should be utilized within the analysis.

7. The Regulations require the use of Northeast Regional Climate Center (NRCC) extreme precipitation data. The Regulations provide amounts for each storm event, dated August 17, 2000. The rainfall value listed for the 100-year storm event is 8.5" as listed the Regulations. The current NRCC 100-year storm rainfall value is 8.83". The Applicant utilized a value of 8.29" for the 100-year storm event. Accordingly, we request that the Applicant revise the analysis accordingly to document compliance with the current NRCC stormwater data.

8. The Regulations require that within the modeling, sheet flow lengths shall not exceed 50-ft. This condition was not held for multiple subcatchments in both the pre- and post-development analysis. We request that the Applicant revise the modeling accordingly.

9. The existing and proposed watershed maps provided (W-1 and W-2) do not label or denote the location of specific design points. For W-1 and the pre-development condition, information listed for watershed E2B is inconsistent with the modeling. We request that the Applicant incorporate the design points into the watershed maps for direct comparison and that the noted inconsistently be resolved.

10. The post-development stormwater modeling utilizes a curve number (CN) value for the turf field of 39, which is identical to the CN used for the existing grass field in the existing condition. The turf surface and subsurface material will more closely mimic an impervious surface as the water will quickly enter the underdrain system and continue to the discharge location. A typical impervious CN is 98. The increased rate of runoff with the CN revision will also impact the flow to the water quality structures and potentially impact the sizing of the structures. We request that the Applicant revise the analysis accordingly and confirm the sizing of the water quality structures.

11. The Regulations require the analysis of the pre- and post-development stormwater runoff and volume for 2, 10, 50, 100-year storm events. The Applicant has substituted the 25-year storm event for the 50-year event analysis. The Applicant has not provided any commentary relative to the pre- and post-development volumes that will result from the Project. It appears that the post-development rates and volumes will be considerably less that pre-existing rates and volumes. As noted above, this will need to be confirmed after the requested modeling adjustments relative to the CN values used for the turf field area adjusted. We request that Applicant clarify the use of the 25-year storm event in lieu the 50-year storm event as required by the Regulations.

12. The post-development modeling of the turf storage is unclear. The length of the header pipe appears to include only the eastern portion, and the inverts utilized do not directly correlate to the plans. An infiltrative component is also included which is not contemplated by other application materials. We request that the Applicant clarify the noted inconsistencies.

13. The stormwater modeling utilized existing constructed stormwater wetlands north and south of the Vine Brook channel denoted as ES1 and ES2, respectively. The modeling notes elevations, storage volumes, weir dimensions, and infiltrative components that are not readily able to be confirmed on the plans. We request that the Applicant clearly delineate the limits and label the components of the referenced infrastructure on the plans for direct comparison to the modeling provided.

14. The application documentation notes that no stormwater detention or infiltration components are included in the stormwater management design. However, within the pre- and post-development modeling, exfiltrated discharge of stormwater is included for ES1, ES2 and the Turf Storage. We request that the Applicant clarify the noted inconsistency and revise the documentation as may be applicable.

15. The double catch basin structure north of the Arts and Athletics Building discharges directly to the existing constructed wetland ES1 without any total suspended solids (TSS) beyond the 25% removal assumed for the structure. As noted herein, specific detail related to ES1 has not been provided. We request that the Applicant clarify the design intent for this structure relative to providing the required level of treatment prior to discharge.

16. We acknowledge the flared end section (FES) calculations provided. However, there do not appear to be any accompanying detail dimensions for this infrastructure. The detail provided references to *"See C-3 for Dimensions"* which is a site sediment and erosion control plan without any detailed dimensions. We request that the Applicant clarify the design intent for the referenced infrastructure and revise the documentation as may be applicable.

17. We note the benefit of the Applicant, US EPA has a draft "*General Permit for Private Commercial, Industrial, and Institutional Stormwater Discharges in the Charles, Mystic and Neponset River Watersheds in Massachusetts*" that will require 65% phosphorus removal for existing sites with at least one acres of impervious area in the Charles River basin if promulgated. The Applicant may want to confirm if the current land use is subject to the permit requirements.

B+T is available to attend a future public hearing, upon request, to present the results of our review and be available for discussion regarding the comments listed herein.

We thank you for the opportunity to assist the Town of Medfield with the review of this Project. Should you have any questions, please do not hesitate to contact our office.

Sincerely,

BEALS AND THOMAS, INC.



Matthew Cote PE, SITES AP, ENV SP
Senior Civil Engineer

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