MEMORANDUM

Re: Tri-County Regional Vocational High School
Con-Com and Peer Review Response 06/27/24

SCI File # 52033.02

To: Ms. Breeka Li Goodlander, Agent
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

From: Jeffery Pilat, Greg Melnyk,
Stephen Powers, PE

June 27, 2024

This memo is a response to the Peer Review comments received on June 13, 2024, prepared by Elyse Tripp, Scientist – BETA Group, Inc, and Jonathan Niro, Senior Project Scientist – BETA Group, Inc., regarding the Notice of Intent submission package dated May 2024, for the above referenced project. The following comments from Peer Reviewer are in Bold with our response noted as "SCI2" and colored red:

PLAN AND GENERAL COMMENTS

A1. The Massachusetts Department of Environmental Protection (MassDEP) issued a DEP file number with no technical comments.

SCI: No further response required.

BETA2: No further comment. As of this writing, the following has been added as a technical comment: *"MassDEP has reviewed this application for administrative completeness."*

SCI2: Comment Resolved.

A2. The north arrow reference should be provided on the plans per Bylaw Regulation Section 7.18.1.3.

SCI: A north arrow was provided on all existing conditions plans and NOI plans.

BETA2: Comment addressed. A north arrow reference was provided.

SCI2: Comment Resolved.

A3. Although the existing conditions topography is sourced and a date of survey is provided on the existing conditions plan, a note with this information should also be included on the NOI plans.

SCI: A note with this information has been included on the NOI plans.

BETA2: Comment addressed. Note 1 on the NOI plans reference the source of existing conditions topography and date of survey.

SCI2: Comment Resolved.

A4. The plans indicate that property lines are sourced from MassGIS and do not constitute a formal boundary survey. BETA defers to the Commission on whether this is suitable for the purposes of this NOI filing; however, it appears to be appropriate given that a conventional topographic survey was conducted under the direction of a Professional Land Surveyor.

SCI: Boundary Survey has been added to the Existing Conditions Plan.

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BETA2: Comment addressed. The Existing Conditions Plan has been revised to show a formal boundary survey.

SCI2: Comment Resolved.

A5. The Applicant's representative should provide their signature in Section F of the WPA Form 3. In addition, Section C1 should be completed to confirm the absence of NHESP Estimated Habitat of Rare Wildlife.

SCI: The comment above has been addressed within the revised NOI.

BETA2: Comment addressed.

SCI2: Comment Resolved.

A6. The abutter information provided in Appendix 1 appears to be associated with the previously submitted Abbreviated Notice of Resource Area Delineation (ANRAD). The Applicant should provide proof of notification to abutters associated with this NOI filing that meets the abutter notification requirements of 310 CMR 10.05(4)(a).

SCI: The abutters information has been updated to be associated with this NOI filing. This was previously coordinated with the Peer Reviewer and an updated electronic copy was provided as part of the original submission. Proof of notification will be provided to the Conservation Commission office.

BETA2: Comment addressed. It is anticipated that the Applicant will submit the physical Certified Mail cards to the Conservation Commission if they have not done so already.

SCI2: Comment Resolved.

WETLAND RESOURCE AREAS AND REGULATORY REVIEW

BETA conducted a regulatory review of the submitted revised documents and plans, focusing on compliance with Resource Area definitions and Performance Standards set forth in the Act. BETA's Engineers conducted a Site visit as part of the stormwater management review; however, wetland boundaries were not reassessed due to an ORAD being in effect.

The Applicant has provided an NOI filing that generally describes the Project and characterizes the proposed impacts to Buffer Zone and IVW. However, the NOI is missing detailed information pertaining to filling of onsite IVWs and how impacts to locally protected Resource Areas (IVWs and Buffer Zones) have been avoided, minimized, and mitigated. Specifically, detailed wetland replication plans have not been provided. Construction phasing and sequencing plans should be submitted to demonstrate that the depicted locations of erosion and sediment controls, as proposed, will be effective in preventing additional Resource Area impacts. A Variance request should also be submitted that explicitly identifies the sections of the Bylaw Regulations from which a Variance is being sought, and the associated Alternatives Analysis requires revisions to meet the requirements of the Bylaw Regulations and demonstrate compliance with avoidance/minimization/mitigation sequencing.

At this time, the Applicant has not provided sufficient information to describe the Site, the work, or the effects of the work on the interests of the Act.

BETA2: The revised materials provided by the Applicant have not demonstrated compliance with the requirements of the Bylaw. A Functions and Characteristics Statement required by Section 7.10 of the Bylaw Regulations has not been provided, and a Variance request that explicitly identifies the sections of the Bylaw Regulations from which a Variance is being sought should also be submitted. The Alternatives Analysis also requires revisions to comply with 310 CMR 10.58(4) as required by Section 7.13 of the Bylaw Regulations. In addition, BETA has requested revisions to the wetland replication area related to buffer plantings and treatment of contributing runoff. At this time, the Project is not in full compliance with the Bylaw or the Massachusetts Stormwater Management Regulations.

SCI2: A Functions and Characteristics have been included within the Notice of Intent Report, along with a formal waiver request letter to identify and support the requests being made for the project (Functions and Characteristics, Alternative Analysis, etc)

RESOURCE AREA BOUNDARY COMMENTS

W1. As noted during the ANRAD process, intermittent streams are present interior to the A-Series, B-Series, D-Series, and F-Series wetlands that have not been delineated. StreamStats and USGS topographic maps do not depict any of the stream channels observed interior to the previously mentioned BVW's; therefore, these streams are presumed to be intermittent with no associated Riverfront Area.

SCI: No further comment required.

BETA2: No further comment.

SCI2: Comment Resolved.

W2. The G-Series IVW was identified as a Potential Vernal Pool through the issuance of the ORAD, which notes that a Vernal Pool assessment should be conducted prior to the end of construction associated with this Project and certified if appropriate. Given the distance between the limits of work and the boundary of the Potential Vernal Pool, BETA defers to the Commission on whether the Applicant should complete this study as part of the Project.

SCI: Samiotes also defers to the Commission.

BETA2: No further comment.

SCI2: Comment Resolved.

W3. The BA-Series IVW was identified as a Potential Vernal Pool through the issuance of the ORAD, which notes that a Vernal Pool assessment should be conducted prior to the end of construction associated with this Project and certified if appropriate. Due to the proximity of this Potential Vernal Pool to the Project limits, BETA recommends that the Conservation Commission include a Special Condition setting forth a timeline for the assessment and certification (<u>if applicable</u>) of this Potential Vernal Pool before and/or during construction.

SCI: Per the ANRAD process, a condition was added to perform a study during construction and prior to the completion of construction. Our office has no objection of a condition being added to the Order of Conditions once issued.

BETA2: No further comment. BETA recommends implementing the above-referenced Special Condition.

SCI2: Comment Resolved.

W4. The low-lying ponded areas under the solar array were determined to be non-jurisdictional under the Act and the Bylaw as part of the ORAD process. Therefore, all jurisdictional Buffer Zones projected from these areas should be removed from the plans.

SCI: All Jurisdictional Buffer Zones have been removed from the project.

BETA2: Comment addressed. Jurisdictional Buffer Zones are no longer projected from the low-lying ponded areas under the solar array.

SCI2: Comment Resolved.

CONSTRUCTION COMMENTS

W5. The Project as currently depicted will disturb more than one (1) acre of land; therefore, a Notice of Intent (NOI) must be submitted to the Environmental Protection Agency (EPA) under the Construction General Permit (CGP) and a Stormwater Pollution Prevention Plan (SWPPP) must be prepared.

SCI: A DRAFT SWPPP has been prepared for the project and is included in this submission.

BETA2: No further comment. BETA recommends that the Conservation Commission include a Special Condition that the final SWPPP be provided to the Commission prior to the start of work.

SCI2: Comment Resolved.

W6. The Civil Grading plan sheets (sheets C302 through C305) depict areas where grading is proposed outside of the limit of work and/or interior to the proposed tree line. The limit of grading should be confined to the limit of work and the grading plan sheets should be revised accordingly.

SCI: The limit of grading within the limit of work on all civil grading plans.

BETA2: Portions of the drainage swale and associated check dams are located outside of the limits of works along the rear property lines of the Macarthur Road abutters. Once this work is relocated, this comment will be fully addressed.

SCI2: Limit of work adjusted. Comment Resolved.

W7. Proposed material storage and laydown areas should be depicted on the Project plans and located outside of jurisdictional areas to the extent feasible.

SCI: Construction Phasing exhibits have been provided as part of this revised submittal. Proposed material storage and laydown areas to the site preparation plans. Contractor will determine final locations.

BETA2: Comment addressed. Based on the Mobilization – Field & Parking Lot Exhibit provided in the revised NOI, the existing clearing north of Tri-County School Drive (near the Pond Street entrance, east of 149 and 151 Pond Street.) is anticipated to be used as a construction overflow and material stockpile area. BETA recommends that the Conservation Commission include a Special Condition that should this area be used for construction material storage, erosion controls should be installed and maintained at the 100-foot Buffer Zone to the G-Series IVW.

SCI2: Comment Resolved.

W8. BETA offers the following comments on the proposed erosion and sediment controls per sheets C100 to C105:

a. Erosion and sediment controls should be depicted on all sheets to demonstrate Project constructability.

SCI: Acknowledged.

BETA2: Comment addressed.

SCI2: Comment Resolved.

b. Erosion / sediment controls as shown do not always correspond with the limit of ground disturbing work (i.e., along the secondary access road on sheet C100). The location of controls may be variable depending on the phasing of the Project. BETA recommends that the Applicant consider providing erosion and sediment control plans for different phases of the Project, inclusive of anticipated stabilization goals on a phase-by-phase basis.

SCI: Detailed Phasing exhibits have been included with this submission to illustrate construction phasing.

BETA2: Comment addressed.

SCI2: Comment Resolved.

c. Sediment controls are shown outside of the limit of work and interior to the B-Series wetland (sheet C103). Revise the limit of sediment controls in this location.

SCI: Acknowledged.

BETA2: Original comment addressed. On the Site Preparation and Erosion Control Plan (sheet C104) sediment controls are shown outside of the limit of work south of the solar array. Similarly, erosion controls are shown outside of the limit of work along the eastern shoulder of the proposed access roadway where it connects to existing Site roadways. Revise the limit of sediment controls in these locations.

SCI2: Site Preparation and Erosion Control Plan have been updated to clarify the limit of work along the south of the solar array field, and the eastern shoulder of the proposed access roadway.

d. Sediment controls include use of silt fence and straw wattles. Silt fence is not a permitted erosion control measure in the Town of Franklin (Pg. 13 of Town of Franklin Best Development Practices Guidebook). The Applicant should coordinate with the Conservation Commission to determine the appropriate control measures for the Site. Twelve (12)-inch diameter compost filter tubes may be an appropriate option commensurate with the scope of the Project.

SCI: Per previous discussions, we have eliminated straw wattles in favor of compost filter socks, however we believe silt fence may be required in many areas to protect resource areas due to the steep slopes.

BETA2: Comment addressed. BETA defers to the Commission relating to use of silt fence on an as needed basis downgradient of steep slopes.

SCI2: Samiotes has formally requested a waiver to use Silt Fence as a perimeter control measure. Will defer to the Commission for approval.

SCI: As appropriate, Samiotes has updated the site preparation and erosion control plans per the comments above. Laydown/Storage areas have been indicated as part of the initial phases, however it will be the contractor's responsibility to revise/alter E&SC controls throughout construction to accommodate future phasing. Detailed Phasing exhibits have been included with this submission to illustrate construction phasing.

BETA2: See BETA2 response to Comment W8.c.

SCI2: Site Preparation and Erosion Control Plan have been updated to clarify the limit of work along the south of the solar array field, and the eastern shoulder of the proposed access roadway.

W9. Clearly label all IVW impacts (both permanent and temporary) on the Project plans. It is recommended that this information be included on the Grading and Drainage plans.

SCI: Acknowledged and shown on the Grading plans.

BETA2: Comment not addressed. Although the disturbance calculations are included on grading sheet C-300, the locations of permanent and temporary impacts to IVWs are not labeled.

SCI2: IVWs labels have been added to the plans to identify the permanent and temporary impacts made to the IVWs.

MITIGATION COMMENTS

W10. Based on the NOI plans, it appears that a portion of one of the onsite IVWs (SW1-6 /SW100-SW106 /BA1-BA9) will be filled. In addition, it appears that this IVW is proposed to be extended outside of its delineated limits as part of wetland replication efforts. The Landscape Plan (Sheet L404) indicates that this IVW will be seeded with a native wetland seed mix; however, there is no additional information regarding the proposed wetland replication. BETA offers the following comments on the proposed wetland replication:

a. If wetland replication is proposed along the IVW and at the eastern extent of the Site, a replication plan and protocol describing proposed grading, target wetland complex type, proposed soil amendments, and proposed plantings must be provided to the Commission for review and approval.

b. It is understood that wetland replication will consist of expanding/constructing IVWs in order to mimic the lost functions and values of the impacted IVWs. Given the isolated nature of these Resource Areas, it is recommended that signage prohibiting disturbances (including but not limited to litter and snow storage). In addition, the Commission could consider including a Special Condition in perpetuity that prohibits the use of these wetland replication areas as stormwater basins.

c. It is assumed that the online of the eastern wetland replication area correlates with the proposed edge of wetland and does not include the requisite upland grading required to tie back into existing grade. The Applicant should confirm if the limits of work are sufficient in this area to accommodate grading above the replicated wetland boundary.

SCI: A wetland replication plan has been provided for review and comment. Signage associated with wetlands replication areas will be provided in the final copy. Grading is shown to demonstrate the constructability of the area.

BETA2: The Applicant has provided a wetland replication plan and BETA offers the following comments:

a. The Applicant has indicated that a qualified Wetland Specialist will be onsite to provide guidance to the contractor relative to grading, planting, and overall establishment of the wetland replication area. BETA recommends that the requirements of Notes 1 & 2 on the wetland replication plan be incorporated as Special Conditions. While a plan view of proposed plantings was not provided, the qualified Wetland Specialist will assist the contractor with appropriate plant layout.

b. BETA recommends that the Commission include a Special Condition requiring the specification sheet for the proposed liner be submitted to the Conservation Agent for review and approval prior to installation.

c. Both the wetland replication plan and the landscaping plans should depict the extents of upland seeding (Conservation/Wildlife Mix) to promote habitat around the replication area. Suitable woody plantings (i.e., shrubs) should also be proposed in this area. Restriction on mowing through the installation of signage should also be proposed.

d. Based on discussions held with the Applicant during the scheduled working sessions, BETA concurs that some hydrologic input from overland runoff is required within the replication area to maintain a water budget that can support the proposed plantings. The Applicant presently proposes a rock-lined swale to convey overland runoff at the northern extent of the replication area; however, as noted in Comment SW80, BETA recommends providing treatment of runoff at this location to avoid excessive sedimentation of the replication area.

The Applicant could propose a sediment forebay and vegetated swale if feasible; however, BETA defers to the Commission on any preferences regarding treatment method(s).

SCI2: Comment a will be deferred to the Commission to include notes 1 and 2 within the Order of Conditions. Comment b will be deferred to the Commission to include a special condition requiring the specification sheet for the proposed liner to be submitted to conservation agent for review and approval prior to installation. Comment c has been updated to have a callouts to indicate upland seeding on the wetland replication plan and to see the planting plans provided by the landscaping consultant, additionally a sign has been included to identify the restriction of mowing. Comment d the plans have been revised to indicate a vegetated swale rather than a rock-lined swale in order to provide additional water quality/sediment removal prior to introduction to the replication area.

W11. BETA offers the following comments on the Landscape Plans:

a. Seed mix specifications for the conservation seed mix, the native wetland seed mix, and the fescue seed mix for lawn area should be provided to the Commission for review and approval.

SCI response included seed mix specifications provided as a response have been omitted in this letter for brevity.

BETA2: Comment addressed.

SCI2: Comment Resolved.

b. Clarify if the eastern property line upgradient of the E-Series wetland is proposed to be lawn area since no seed mix was specified. Consideration should be given to vegetating this area with native, herbaceous species to be mowed only once per year during late fall. BETA recommends a Special Condition requiring this mowing schedule for all areas where native, herbaceous species are established (i.e., areas of proposed conservation seed mix).

SCI: Except for immediately around the storage boxes we will include a native conservation seed mix in this upland area to receive only annual mowing.

BETA2: Comment partially addressed. The Applicant's response indicates use of a native conservation seed mix in this area, but the revised Landscape Plans show a fescue seed mix in this area. Clarify which seed mix is proposed in this area. It is recommended that the Commission include a Special Condition in the OOC requiring that permanent signage indicating the mowing schedule requirements be installed here.

SCI2: Landscape Planting Plans have been revised to show an upland/conservation seed mix to the eastern property line upgradient of "E" series wetlands and has been supplemented with woody shrubs, as well. Will agree to any Special Condition from the Commission regarding additional signage for "mowing schedule".

The Applicant proposes several cultivars in the planting plan. Cultivars alter the natural fruiting and flowering processes of plant species and oftentimes diminish their value to native wildlife. It is recommended that cultivars be removed from the plan where present within jurisdictional areas and replaced with true native counterparts.

SCI: We will remove all cultivars and replace with native counterparts within jurisdictional areas.

BETA2: Comment not addressed. Cultivars and species not native to Norfolk County are still proposed on the landscaping plans.

SCI2: Outside of the jurisdiction areas too in Landscape plan 401, it is primarily native trees without cultivars except for the following

1) Using disease resistant cultivar for American Elm

2) A columnar cultivar of Red Maple along the building façade as columnar tree is desired

3) Non-native flowering cherry used sparingly

4) Non-native ornamental grass used sparingly, by entrance plazas for drought tolerance and ease of maintenance.

c. Although not considered an invasive species in Massachusetts, dwarf fern leaf bamboo (*Pleioblastus distichus*) is a species of running bamboo that can become highly aggresive. Considering the large quantity proposed, BETA recommends that a native ground cover species that provides value to wildlife/pollinators be used in replacement of the dwarf leaf fern bamboo.

SCI: Courtyard is fully contained and running bamboo propagates through roots only (not airborne). We will explore other native ground cover options considering cost and maintenance for the project.

BETA2: BETA recommends a Special Condition requiring the Applicant to submit alternative ground cover options at this location for review and approval by the Conservation Agent.

SCI2: Courtyard is partly shaded and non-irrigated. This courtyard is fully contained and running bamboo propagates through roots only (not airborne). The other reasons are:

Facilities want this courtyard to be extremely low maintenance and native groundcovers such as foam flowers, ferns etc. will require lot more maintenance and afraid of just becoming mulch.

No shrubs proposed for cost reasons and visibility.

The grove of multi-stem serviceberry in courtyard will provide lot of value to wildlife/pollinators.

Request consideration from Commission for proposed courtyard plantings but will agree to any Special Condition from the Commission regarding viable (and available) alternative ground cover options within the courtyard and approval by Conservation Agent.

WPA Performance Standards Comments

The Project does not propose any work within Resource Areas Subject to Protection under the Act; however, the Project does propose work within Buffer Zone (a Resource Area under the Bylaw) and IVW.

Bylaw Regulatory Comments

W12. The following materials must be submitted per the submission requirements of the Bylaw Regulations:

a. A Construction Sequence and Schedule (Section 7.15);

b. A completed Resource Area Impact Summary Form (Section 7.1.4); and

c. A Functions and Characteristics Statement (Section 7.10).

SCI: Construction Sequence and Schedule is provided as part of the Construction phasing plans. Specific construction sequencing for the wetlands replication area is included on the Wetlands Replication form. The Resource Area Impact Summary is provided on C100 and C300 sheets.

BETA2: Comment partially addressed. The Resource Area Impact Summary Form was not provided; however, the Applicant has documented the square footage of Resource Area impacts in the NOI submission and on the Project plans. A Functions and Characteristics Statement in compliance with Section 7.10 of the Bylaw Regulations was not provided.

SCI2: A Functions and Characteristics have been included with the resubmission.

W13. Section 4.4.1 of the Bylaw indicates that "mitigation offsets may be required by the Commission when the applicant proposes that more than 30% of the 50–100-foot Buffer Zone Resource Area is proposed to be impervious surface". The Applicant should provide the Commission with calculations of proposed impervious area within the 50–100-foot Buffer Zone as it compares to existing conditions to allow the Commission to determine if additional mitigation measures are warranted.

SCI: Calculations for the 50-100 ft buffer zone impervious area have been provided to NOI report.

BETA2: Comment partially addressed. The provided calculations do not appear to identify existing impervious area needed to determine the increase in overall impervious area in the 50-100 Buffer Zone under the proposed conditions.

SCI2: Calculations have been provided to compare the difference between the existing 50-100 foot buffer zone and the proposed 50-100 foot buffer zone within the NOI report. Additional information has been provided within the variance request showing the impacts of filling the jurisdictional isolated wetlands within the 50-100 ft buffer zone as well.

W14. Based on review of the submitted NOI materials, a Variance request does not appear to have been provided to the Commission to seek approval for work within the 0-25-foot No Disturb and 25-50-foot No Build Buffer Zones or IVWs. Although an Alternatives Analysis pursuant to a Variance request is provided, the Applicant should provide the Commission with a written request that clearly identifies the sections of the Bylaw and Regulations for which a Variance is being requested for future documentation in an Order of Conditions.

The Alternatives Analysis should also be revised to be similar in format to that which is outlined under 310 CMR 10.58(4) as required by Section 7.13 of the Bylaw Regulations. The Applicant should provide additional information to support that there are no alternatives to the proposed location, configuration, and size of the new high school building in consideration of cost, existing technology, the proposed used, and logistics. This Analysis should document how impacts have been avoided, reduced, and/or mitigated for all Areas Subject to Protection that are relevant to the Variance request. For example, the Applicant should demonstrate that clearing limits within jurisdictional areas have been reduced to the extent feasible, and outline the mitigation proposed to offset these impacts.

SCI: An Alternative Analysis has been provided discussing site options (including previous sketches and changes) and preserving local jurisdictional wetlands areas. All efforts to design around jurisdictional resource areas have been kept to a minimum despite the presence of several on-site resource areas.

BETA2: Comment not addressed. No formal request for a Variance that clearly identifies the sections of the Bylaw and Regulations for which a Variance is being requested was provided. In addition, a revised Alternatives Analysis was not provided. The Applicant should provide a revised Alternatives Analysis with additional information to support that there are no alternatives to the proposed location, configuration, and size of the new high school building in consideration of cost, existing technology, the proposed used, and logistics <u>per 310 CMR 10.58(4) as required by Section 7.13 of the Bylaw Regulations.</u>

SCI2: A Functions and Characteristics have been included within the Notice of Intent Report, along with a formal variance request letter to identify and support the requests being made for the project (Functions and Characteristics, Alternative Analysis, etc). The Alternatives Analysis was revised to more closely reflect the format of 310 CMR 10.58(4).

W15. The Applicant proposes to fill two (2) IVWs totaling in a loss of 4,906 sf (IVW 200-219 totaling 2,496 sf; and IVW SW1-6 /SW100-SW106 /BA1-BA9 totaling 2,410 sf). Under the Bylaw, both IVWs are considered Freshwater Wetlands and are therefore subject to the requirements of Section 7.14 of the Bylaw Regulations to replicate altered wetlands at a minimum 2:1 ratio. A replication area plan and procedure should be provided in accordance with the specific requirements of the Bylaw Regulations.

SCI: Wetland Replication Plan has been provided in accordance with BETA peer review comments. We are requesting the Commission approve a 1.3:1 ratio for replication.

BETA2: Comment addressed. See BETA2 response to Comment W10.

SCI2: Comment Resolved.

STORMWATER MANAGEMENT

GENERAL

SW1. Indicate proposed treatment of all existing catch basins, manholes, outfalls, and pipes. Per the utility plans, existing utilities are to be retained unless otherwise noted, but retaining existing catch basins will conflict with the proposed drainage systems.

SCI: Plans have been updated to reflect the comment above. Existing stormwater infrastructure is indicated on Site Preparation plans to be removed/abandoned where applicable. Other stormwater infrastructure to remain (e.g. outfalls) are also indicated to be protected and/or enhanced per proposed stormwater drawings.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW2. Clarify if an underdrain is proposed for the northeastern soccer fields. Underdrains are referenced on Sheet L202 but not identified for these fields on the Landscape Grading Plans.

SCI: Underdrains have been updated to match Landscape Grading Plans

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW3. Identify the proposed subsurface systems as "StormTrap" systems on the plans or details for consistency with the O&M Plan.

SCI: Due to the project being a public bid, the subsurface systems are not allowed to be called out as "proprietary" product systems. Samiotes will provide better clarity within the callout as "precast concrete chambers" and "subsurface plastic chambers" to satisfy this comment.

BETA2: Information provided. Issue resolved.

SCI2: Comment Resolved.

SW4. In coordination with the Town, evaluate if installation of additional catch basins along the southern/western side of Tri-County Drive is appropriate. Based on the existing conditions plan, there is a distance of over 1,000 ft. between a catch basin at the Old West Central St. intersection and a catch basin near the athletic fields.

SCI: Due to budget constraints, work within the existing drive is limited to utility installation. No additional stormwater conveyance structure is proposed other than minor connection work to tie in stormwater infrastructure within the new emergency access drive.

BETA2: Information provided. BETA recommends for the designer to confirm with the Town that excessive overland flows are not currently directed to the drainage structures at the Old West Central Street intersection and notes that providing a catch basin on the west side of the roadway across from Wetland Series-A with minor connecting work may help mitigate the current increase in peak flow rates to POA-7.

SCI2: Due to cost and timing constraints, additional work is not being planned within Tri-County Drive. Existing drainage structures within Tri-County Drive will be maintained. Through conversations with the Commission, it has been confirmed there have been no reports historically from the School and Town about flooding issues in these on-site or downgradient areas.

SW5. Recommend including flow arrows along all pipe spans to clarify stormwater design.

SCI: Samiotes will add flow arrows along all pipe spans.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW6. Recommend providing additional catch basin(s) at the southern driveway to minimize stormwater runoff flowing onto the roadway. Due to the steepness of the driveway evaluate if additional measures are needed to ensure stormwater is captured.

SCI: Curbs and Catch Basins have been added to the access drive and are represented on the revised plans.

BETA2: The closed drainage system design in this area appears to be unchanged from the previous submission and BETA notes the existing catch basin located at the intersection of the southern driveway will only capture flow from Tri-County School Drive.

SCI2: A catch basin has been provided at the gutter line of the curbed access drive upgradient of the intersection at Tri-County Drive to capture the majority of the runoff from the lower portion of the access drive. This catch basin is being connected to the proposed water quality unit providing treatment for the captured runoff prior to discharge to the 12" RCP in Tri-County Drive.

SW7. Review proposed drainage manholes to ensure that a sufficient angle is provided between all pipe connections. Several manholes are shown to require 4 or more pipe connections with minimal vertical and angular separation which may pose constructability issues. Revise manhole diameter as required.

SCI: Manholes with 4 or more connections have been upsized to larger diameter structure and are represented on the plans. Pipe network has been updated to provide separation between pipes.

BETA2: BETA could not locate any manholes identified with a larger diameter. Recommend providing callouts for larger diameter structures or a general note to ensure the system is constructed as designed.

SCI2: Provided callouts with larger diameter sizing have been provided on the plans.

SW8. Review design of drainage pipes. Several pipes appear to have inadequate cover and insufficient depth for frame and grate/cover. Recommend providing table comparing required/provided cover for all structures to ensure constructability or including in hydraulic calculations.

SCI: Drainage plans have been updated to have adequate cover for all drainage pipes within the site. Hydraulic SW pipe calculations are provided in a table included in the Appendix of the revised Stormwater management report.

BETA2: Based on a review of the Stormwater Management Plans, additional pipe cover appears to have been provided. No further comment.

SCI2: Comment Resolved.

SW9. At the discretion of the Town, consider providing a grate or similar measure at the 24" headwall entrance to prevent access.

SCI: Samiotes has added trash grate to headwall at FES#1 and 24" RCP outlet west of new baseball field.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW10. Confirm that all roof drainage can be conveyed to the rear of the building as designed. The building plans show a complex roof with multiple elevations and distinct roof drains.

SCI: Roof drain layouts (size, location, elevations) have been confirmed per plumbing plans.

BETA2: Information provided. Issue resolved.

SCI2: Comment Resolved.

SW11. Clarify outlet design for all subsurface systems. The hydroCAD models indicate a multi-stage outlet design with weir and orifices, but no outlet control structures or similar measures are provided for these systems. Provide detail to demonstrate how outlets will be constructed.

SCI: Outlet control structures are shown on plan and detail has been provided.

BETA2: Plan revised. Provide detail for outlet control structures with weirs and orifices consistent with the hydroCAD model. BETA notes that C3-02-OCS does not appear to have a pipe connection to Infiltration System 3.

SCI2: Outlet control structures have been detailed consistent with the HydroCAD model. Proposed C2-02-OCS is connected to the underground infiltration system (BMP-3) with pipe C2-01-02.

SW12. Provide sizing calculations for vegetated swales.

SCI: Project is taking no credit for stormwater quality for vegetated swales. Existing swales around the edge of the property directing water from upgradient areas are being reconfigured, while maintaining similar grading and drainage patterns to existing on-site underground stormwater infrastructure. See below comment responses for additional information on swale enhancements.

BETA2: Sizing calculations, or at a minimum, demonstrating that proposed swales are the same size as or larger than existing swales should be provided to ensure that the proposed swales can convey anticipated flows without overtopping.

SCI2: In comparing the approximate volume of calculations, we submit the following in an effort to clarify the existing / proposed swales capturing unchanged off-site tributary flow from upgradient areas. In our professional opinion, the changes to the volume are minimal and will continue to operate in an acceptable manner to capture and convey upgradient off-site runoff.

Existing swales:

Soccer Fields: 415L x 12W x 1D, 1% slope

E. Parking: 316L x 5W x 2D, 5% slope

North of solar field: 167L x 5W x 2D, 7% slope (Note: This swale leads to existing local jurisdictional IVW/Basin located in the NW corner)

Proposed swales:

Soccer Fields: 475L x 10W x 1D, 1% slope

E. Parking: 330L x 5W x 2D, 5% slope

North of solar field: Proposed removal of IVW/Basin. Runoff will sheetflow to stormwater conveyance system, which has been sized to capture/accommodate tributary off-site flow.

SW13. Provide additional contour labels, spot grades, and callouts for vegetated swales and headwalls located along the north/northeast side of the Site. Ensure that proposed grading will properly convey flow to the outlet pipes. Indicate the destination of the pipe heading southwest from the eastern headwall.

SCI: See Response to Comment #12. Additionally, flow diagrams and call outs have been added to further clarify existing, reconfigured drainage paths within the swale.

BETA2: Some additional grading information has been provided; however, design information is lacking in the area north and east of the northern parking lot. In this area a callout stating "create vegetated swale" is provided which points to an area with no proposed contours or spot grades. Creating a swale in this area may require additional grading impacts to the existing slope which are not depicted. If a gap in the swale is proposed, ensure that the area draining into the stormwater management system is accounted for in subsurface system sizing.

SCI2: Additional Grading/Spot grades have been included within the grading plans.

SW14. Review design of swale proposed west of the northeastern soccer fields. Determine if stormwater flow discharging from the swale will cause erosion along the 8' slope directly downgradient of its discharge point.

SCI: New swale west of northeastern soccer fields has been reviewed for flow and potential for erosion. Two (2) area drains have been added within the swale to capture stormwater surface runoff from the field and direct it to the underground stormwater conveyance system to reduce flow to the 8' slope thereby limiting potential erosion in that area.

BETA2: Area drains provided. Issue resolved.

SCI2: Comment Resolved.

STORMWATER MANAGEMENT REGULATIONS (CHAPTER 153)

The project proposes to disturb land in excess of one acre within the Town of Franklin. It will be therefore subject to the Stormwater Management Regulations. The project is also required to comply with the Town of Franklin Best Development Practices Guidebook (BDPG). Although these regulations are not under the jurisdiction of the Conservation Commission, compliance with these regulations is outlined below and throughout the following sections to ensure that all comments related to stormwater management are provided in a comprehensive review document.

SW15. Revise the stormwater management system to meet the criteria outlined in §153-16.B. It is anticipated that the project will quality as a redevelopment and must retain the volume of runoff equivalent to 0.8 inches multiplied by the total post-construction impervious surface area or achieve 80% TSS removal and 50% total phosphorus removal by other means. BETA defers to the Town for final determination on the extent of compliance required for the project.

SCI: The project is being designed to meet the redevelopment criteria. Stormwater management is being proposed to either retain the volume of runoff equivalent to 0.8 inches multiplied by the total post-construction impervious surface area or achieve 80% TSS removal and 50% total phosphorus removal by mostly structural means.

BETA2: Information provided. The stormwater management system is designed to convey stormwater runoff to water quality units with the ability to treat TSS and total phosphorus. Although documentation indicates the water quality unit is capable of removing 72% of phosphorus, it is unclear if this information has been evaluated by the EPA or under the Technology Acceptance Reciprocity Partnership (TARP) program. With the understanding that proprietary

products cannot be specified on the project, information or specifications should be provided to ensure that the installed water quality units fully meet treatment requirements.

Also, the detail sheets include two details: one for a "water quality unit" and one for a "phosphorus removal structure." Update callouts on the stormwater management plan sheets to clearly indicate which detail applies to each WQU structure.

SCI2: Water quality unit documentation has been included within the Stormwater report. Details and the stormwater management plans have been updated to clearly indicate which detail applies to which WQU structure (graphically represented by symbol).

SUBDIVISION REGULATIONS - STORMWATER MANAGEMENT REGULATIONS (§300-11)

Additional requirements for stormwater management are outlined in §300-11 of the Town of Franklin Subdivision Regulations. Although these regulations are not under the jurisdiction of the Conservation Commission, compliance with these regulations is outlined below and throughout the following sections to ensure that all comments related to stormwater management are provided in a comprehensive review document.

SW16. Provide comparison of pre- and post-development runoff volume. Post-development runoff volume shall not exceed pre-development volumes from the Site (§300-11.A(3).

SCI: A comparison of pre-and post-development runoff volumes is provided within the stormwater report narrative. Post-development runoff volumes will exceed pre-development volumes at POA-1 as the presence of ledge, high groundwater, and the poor soils encountered on-site are not conducive for infiltration in the vicinity of the new building. All flows to the "A-series" wetlands will be treated prior to discharge, and the detention volume provided in the design will reduce the post-development peak rates of runoff to this wetland system below pre-development values. Post-development runoff volumes will also exceed pre-development values at POA-2 given the low infiltration rates encountered on-site. Underground infiltration systems are being proposed within two of the parking areas west of the new building. These systems have been designed to retain 0.8 inches of runoff over the impervious surfaces tributary to the infiltration systems per the Town's criteria for Redevelopment sites. Even so, with the increase in the catchment area to POA-2, the proposed site will increase runoff volumes for the 10-, 25- and 100-year storm events. All flows to the "B-series" wetland will be treated prior to discharge, and the storage volume provided in the design will reduce the post-development peak rates of runoff to this wetland system below pre-development values. With POA-1 and POA-2 contributing to POA-3, post-development runoff volumes will exceed pre-development volumes at POA-3.

BETA2: The provided tables show an increase in runoff volume to POA1, POA-2, POA-3, and POA-7. These points of analysis represent the "A" and "B" Series wetlands as well as the two Tri-County Drive closed drainage systems. The HydroCAD model has been revised to model the "A" and "B" series wetlands as ponds which serve to demonstrate how these low-lying areas will be impacted by the increased runoff volume. Both wetlands are shown to flood under both existing and proposed conditions, but flooding is increased under post-development conditions resulting in greater overland flow onto Tri-County Drive. Excess stormwater will be directed to the Tri-County Drive system.

§300-11.A(3) stipulates that post-development conditions may not increase the volume of stormwater flow, but allows the Board to authorize an increase following applicant demonstration that such increase will cause no environmental harm or damage to public or private property.

Request waiver for the proposed increase in runoff volume and coordinate with the DPW to identify offsite discharge locations and evaluate if there are any known downstream flooding issues. BETA notes that due to site constraints, including soils with very limited infiltration capacity, maintaining or reducing runoff volumes may not be practicable unless the overall impervious area is reduced. BETA defers to the DPW on the extent of downstream evaluation required.

SCI2: An updated comparison of pre- and post-development runoff rates and volumes is provided below.

Existing Q	2-year	10-year	25-year	100-year
POA-1	14.68	25.66	32.62	43.37
POA-2	17.95	31.93	40.77	54.41
POA-3	55.15	96.97	120.6	152.93
POA-4	3.31	7.77	10.81	15.64
POA-5	2.92	8.63	12.12	17.73
POA-6	3.05	6.38	8.56	11.95
POA-7	2.93	5.56	**9.5**	**27.14**
POA-8	0.83	2.1	2.98	4.41
POA-9	0.15	0.39	0.56	0.84

Existing V	2-year	10-year	25-year	100-year
POA-1	1.146	2.061	2.656	3.59
POA-2	1.585	2.86	3.69	4.98
POA-3	5.011	9.462	12.365	16.741
POA-4	0.314	0.70	0.971	1.409
POA-5	0.353	0.921	1.319	1.967
POA-6	0.254	0.522	0.702	0.99
POA-7	0.239	0.458	0.621	1.078
POA-8	0.091	0.215	0.302	0.445
POA-9	0.014	0.033	0.047	0.07

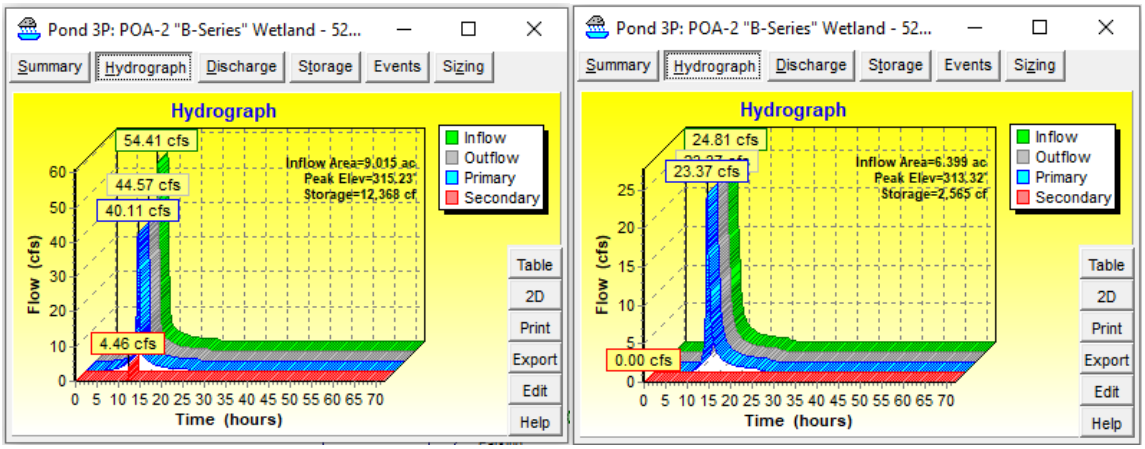
Proposed Q	2-year	10-year	25-year	100-year
POA-1	11.68	19.46	24.65	34.71
POA-2	4.46	13.2	18.1	24.81
POA-3	40.62	81.61	105.73	141.78
POA-4	0.22	0.55	0.78	1.14
POA-5	2.86	8.06	10.59	14.55
POA-6	2.81	5.99	8.1	11.38
POA-7	4.36	7.76	**9.88**	**20.09**
POA-8	0.71	1.85	2.66	3.96
POA-9	0.12	0.31	0.45	0.67

Proposed V	2-year	10-year	25-year	100-year
POA-1	2.06	3.572	4.554	6.095
POA-2	0.78	1.636	2.203	3.10
POA-3	5.574	10.705	14.077	19.112
POA-4	0.02	0.045	0.063	0.093
POA-5	0.331	0.763	1.051	1.51
POA-6	0.235	0.491	0.664	0.941
POA-7	0.357	0.648	0.85	1.461
POA-8	0.07	0.168	0.237	0.352
POA-9	0.011	0.026	0.037	0.056

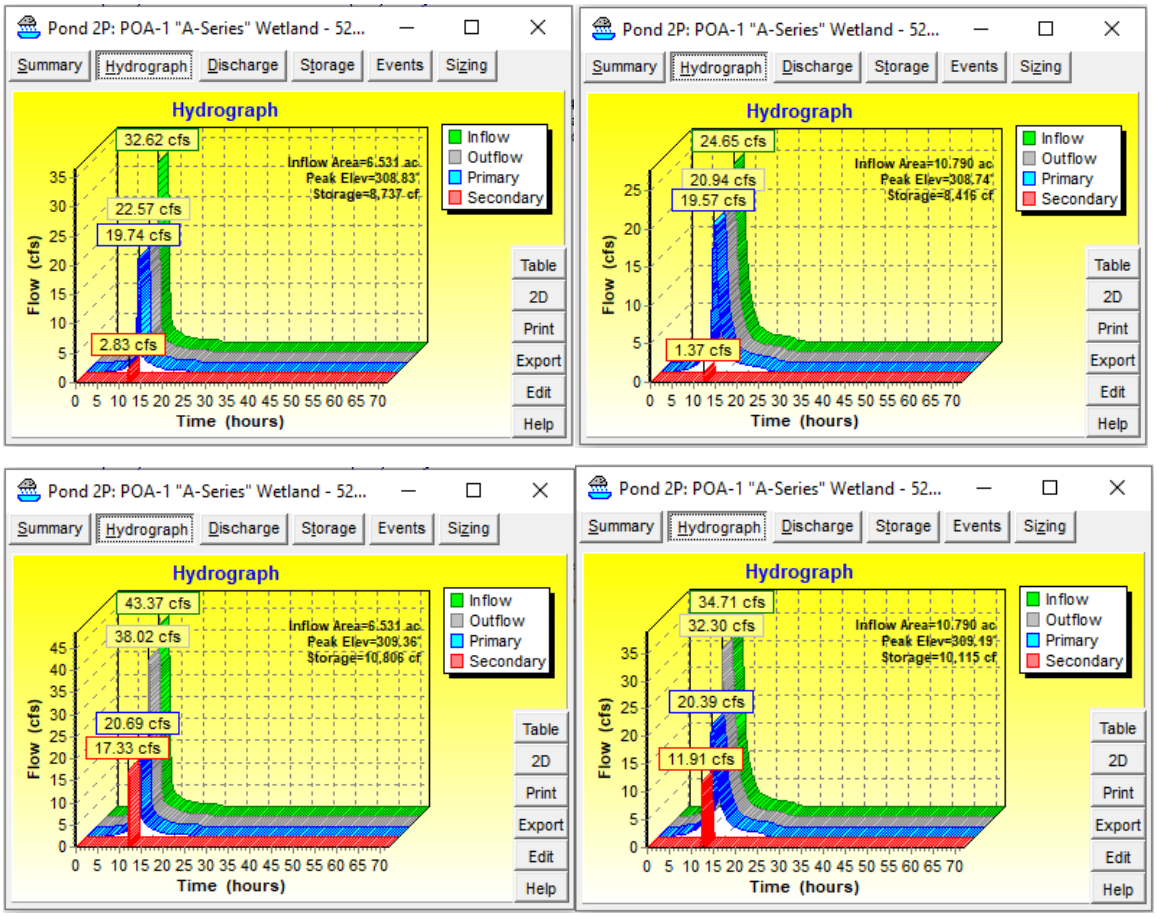
An increase in volume in the post-development condition at POA-1, POA-3 and POA-7 is unavoidable due to site constraints, including soils with very limited infiltration capacity. By adjusting the Stormwater Management design by connecting the discharge from BMP-4 to the 36" RCP located within/adjacent to Tri-County School Drive rather than directing flow to the B-Series Wetland, the post-development runoff volume to this wetland system will be maintained below pre-development values.

As previously discussed, the storage volume provided in the stormwater management design will flatten the peak rates of runoff at POA-1 and POA-3 for the 2-, 10-, 25- and 100-year storm events. Thus, more volume will pass through these points of analysis over a longer period of time, but at lower peak rates. In addition, by directing flow from BMP-4 away from the B-Series Wetland, the model shows that stormwater will no longer overtop the B-Series Wetland to the A-Series Wetland during the 100-year storm event. This will, in turn, reduce the amount of stormwater that overtops the A-Series Wetland to POA-7 in the 100-year event, mitigating the post-development peak rate of runoff to be less than pre-development conditions for this storm event. Through conversations with the Commission, it has been confirmed there have been no reports historically from the School and Town about flooding issues in these on-site or downgradient areas. Therefore, it is reasonable to infer that the slight increases in rate for the 2-, 10-, and 25-year storm events directed to POA-7 can be managed by the existing drainage systems within Tri-County Drive and Old West Central Street. The newly paved and curbed access drive is estimated to add an additional 2.2 cfs to the existing drainage system for the 25-year design storm per the rational calculations. It should be noted that the access drive is being upgraded to 20 feet wide to meet National Fire Protection Association (NFPA) standards. The current gravel drive has a much smaller width and does not meet current standards.

"B-series" Wetland Overflow in Existing (left) and Proposed (right) at the 100-year Storm Event



"A-series" Wetland Overflow in Existing (left) and Proposed (right) at 25-year (top) and 100-year (bottom) Storm Events



SW17. Provide hydraulic calculations to demonstrate that the drainage system is designed to accommodate a 25-year storm frequency with a design velocity between 2.5 and 10 feet per second (§300-11.B(1)). Impacts to the existing drainage systems on Tri-County Drive should also be evaluated.

SCI: Provided per rational calcs within the Appendix in the updated stormwater report.

BETA2: Calculations provided for 25-year design storm. Recommend revising pipe design to the extent practicable such that the design velocity does not exceed 10 feet per second. The Applicants response to Comment SW31 indicates that the 12" RCP drain line at Tri County Drive has been

evaluated; however, these existing drainage pipes appear to be absent from the Hydraulic Calculations.

SCI2: The rational calculations for drainage pipes have been updated to include the 12" RCP drain line within the eastern half of TriCounty Drive connecting to Old West Central Street. Existing flow to the 12" RCP drain is approximately 3.6 cfs for the 25-year design storm per the rational calculations. The newly paved and curbed access drive is estimated to add an additional 2.2 cfs to the existing drainage system. Existing capacity for the 12" RCP is approximately 6.8 cfs.

SW18. Revise proposed drainage pipe to be reinforced concrete or request waiver (§300-11.B(2.a)).

SCI: We will request a waiver to install HDPE for all on-site stormwater piping, unless shallow cover requires RCP which is allowed per Town code.

BETA2: BETA defers to the Town regarding the proposed waiver. No further comment.

SCI2: Comment Resolved.

SW19. Provide riprap apron at all existing outfalls to remain or demonstrate that existing scour protection is sufficient.

SCI: Existing outfalls are currently stabilized by bituminous pavement and are in good condition. Any outfalls that will not receive an increase in flow, will remain per existing conditions. Outfalls that are being changed or will have an increase in flow (e.g. FES #1) will be constructed with rip rap and sized accordingly and included in the revised Stormwater report.

BETA2: Riprap apron provided. Confirm presence of scour protection at the existing outfall near wetland Flags B16 and B17. A paved spillway is not depicted on the survey plans and was not noted during BETA's field visit.

SCI2: From site visit photography on 0-30-22, see below, the presence of scour protection at the existing outfall near wetland Flags B16 and B17 was confirmed to have a bituminous pavement after the outfall of the 24" outlet pipe that is depicted on the ECP plan set.

SW20. Provide calculations for sizing of riprap aprons.

SCI: Acknowledged see comment #19 response.

BETA2: Calculations provided. Issue resolved.

SCI2: Comment Resolved.

SW21. Verify condition of existing outfalls and confirm they are in suitable condition to convey post-development flows.

SCI: Acknowledged see comment #19 response.

BETA2: See response above. No further comment.

SCI2: Comment Resolved.

SW22. Clarify outlet design for the southern baseball field underdrain. The proposed drain linework is a few feet east of the existing outfall. BETA notes that this span of pipe is inconsistent with the Landscape Grading Plans.

SCI: Samiotes has updated stormwater plan to reflect Landscape plans on stormwater management plan.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW23. Evaluate if check dams are required along proposed vegetated swales and include riprap aprons at bottom of each swale.

SCI: Check dams are proposed along existing vegetated swales to remain (and be reconfigured) along the northern and northeastern bottom of slope. Rip-rap has been added to the existing headwall as an added measure to ensure scouring does not take place. It should be noted the slope at the existing headwall is <2% so we do not anticipate erosion.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW24. Clarify if outlet "D" from manhole B2-07-DMH-EX is to remain. This drain pipe ultimately discharges to an existing outfall, down a paved waterway, into a plunge pool located within the B-Series wetlands.

SCI: Confirmed

BETA2: Information provided. A water quality unit is now proposed to provide treatment prior to discharge to wetlands. Issue resolved.

SCI2: Comment Resolved.

SW25. Provide scale on watershed plans.

SCI: Scale has been provided on watershed plan.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW26. Recommend turning off linework for non-drainage utilities on the watershed plans for legibility.

SCI: Non-drainage linework has been turned off per the comment above.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW27. Depict soil group boundaries on watershed plans and clarify why a rating of HSGR C has been applied to the entire project area. Based on NRCS mapping, portions of the Site should be HSGR A or unrated. BETA notes that test pits have only been conducted in a portion of the Site and it is unknown if the poor soil conditions logged in the test pits represent the entire Site.

SCI: Soil group boundaries and callout of NRCS Soil Classification have been added to the watershed maps.

BETA2: Clarify if any subsurface evaluations have been performed in the northerly portions of the site that are mapped as "unrated" to confirm the HSGR C rating used in the calculations.

SCI2: No subsurface evaluations have been preformed at the northly portion of the site and will be evaluated during construction once the existing school has been demolished in 2025.

SW28. Provide names/labels on existing and proposed routing diagram POA nodes to clarify model.

SCI: Samiotes has updated watershed plans per the comment above.

BETA2: Model revised. Issue resolved.

SCI2: Comment Resolved.

SW29. Depict limit of tree clearing on the post-development watershed plan.

SCI: Limit of tree clearing on the post-development watershed plan has been provided.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW30. Provide labels for the northeastern and southeastern watershed areas on the pre-development watershed plan.

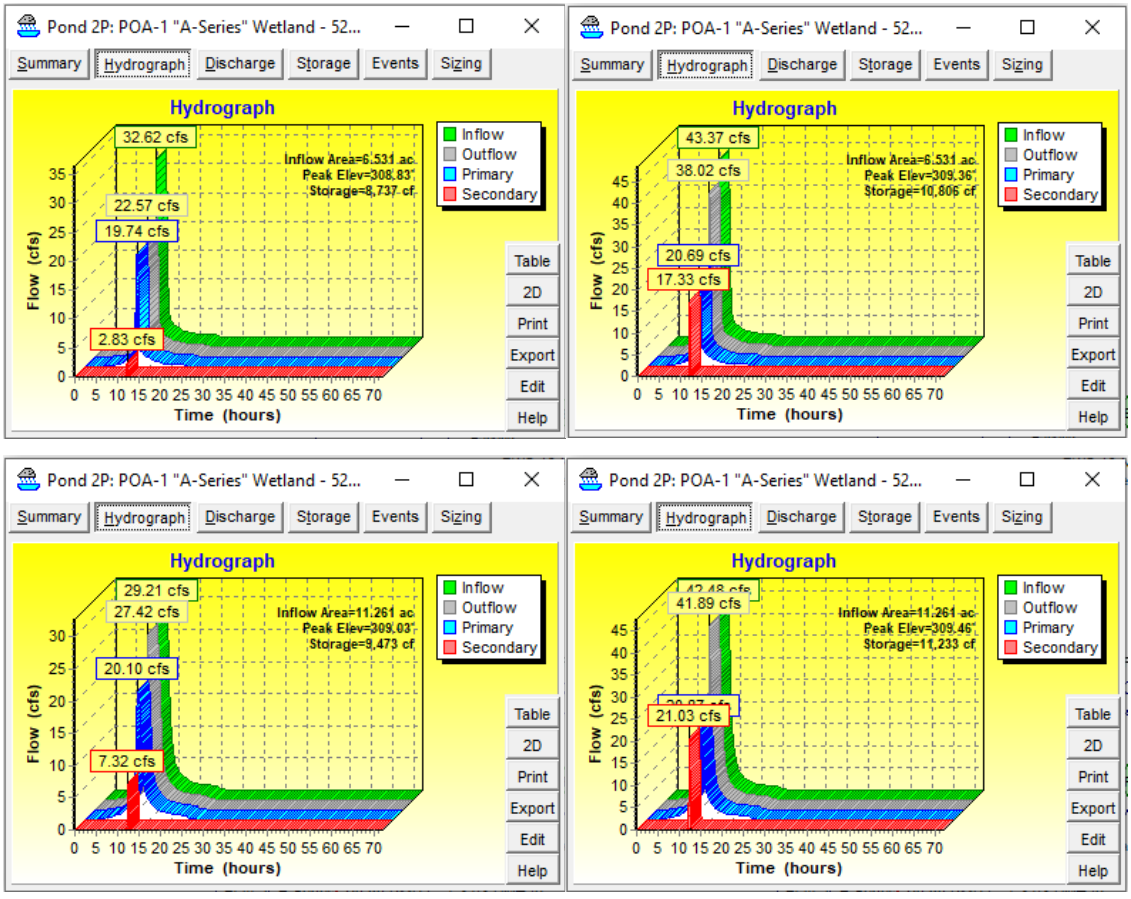
SCI: Catchment labels have been provided for the northeastern and southeastern catchment areas on the pre-development watershed plan, as well as all additional catchments that were delineated to address Comment SW33 below.

BETA2: Labels provided. Issue resolved.

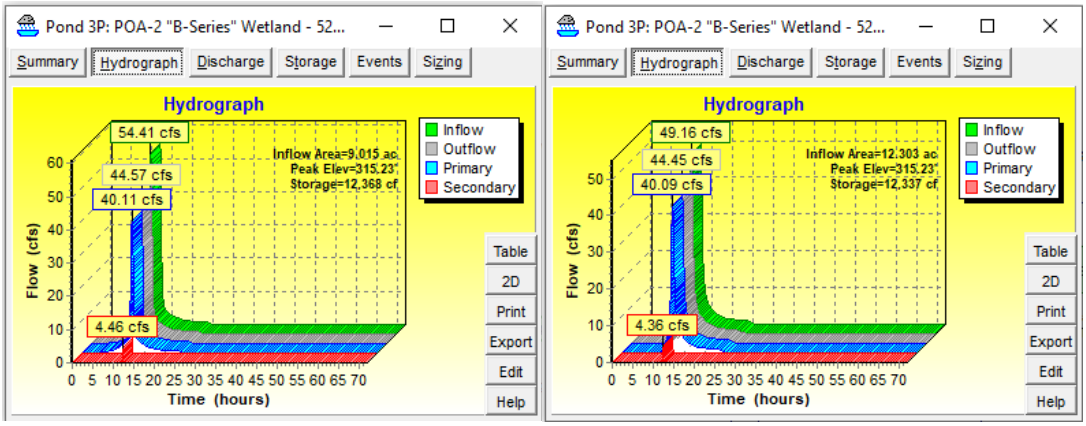
SCI2: Comment Resolved.

SW31. Provide table comparing pre- and post-development runoff volumes for each watershed area to evaluate flooding impacts to wetland resource areas and downgradient properties.

SCI: Refer to Response to Comment SW16 for table comparing pre- and post-development runoff volumes for each watershed area. To evaluate the impacts for increasing volumes to the "A-series" and "B-series" wetlands, the wetlands were included as Ponds in both the existing and proposed HydroCAD models. Given the surface contours and volume available at each wetland, the model shows some overtopping at the "A-series" wetland in the existing condition at the 25- and 100-year storm events. Reviewing existing topography, theoretical runoff that overflows from the "A-series" wetland appears to run down the vegetated slope alongside Tri-County Drive to the inlet upgradient from the existing access drive. Any flows that do not get captured by the inlet appears to be directed on to Tri-County Drive or continue down and alongside Tri-County Drive. In the proposed condition, it appears that runoff will overtop the "A-series" wetland also during the 25- and 100-year storm events, but to a greater degree than existing. "A-series" Wetland Overflow in Existing (top) and Proposed (bottom) at 25-year (left) and 100-year (right) Storm Events



For the "B-series" wetland, the model appears to show that the runoff overtops the wetland in both the existing and proposed conditions at the 100-year storm event. The runoff that overflows from the wetland is slightly less in the proposed condition. "B-series" Wetland Overflow in Existing (left) and Proposed (right) at the 100-year Storm Event



For the additional runoff directed to the 12" RCP in Tri-County Drive, the pipe capacity was evaluated and no conflicts were found per the hydraulic rational calculations provided within the stormwater report appendices.

BETA2: Refer to Comments SW16, SW17, and SW79 for further discussion on this matter.

SCI2: Refer to Responses to Comments SW16, SW17, and SW79 respectively.

SW32. Review existing/proposed watershed narrative in the stormwater report:

a. POA-3 is identified as the wetlands on the southern portion of the Site, presumed to refer to the "C-Series" wetlands. However, the watersheds stated to drain to this POA appear to actually drain to one of several closed drainage systems at Tri County Drive. Clarify how these watersheds will discharge to the wetlands. Provide additional POAs as necessary to represent the existing closed drainage systems.

b. POA-4, POA-5, and "POA" are each identified in the narrative as the wetlands just south of the solar fields of the Site. This appears to be a typo, as EWS-9, 10, and 12 respectively, each drain to a different location. Revise the description of each of these POAs.

SCI: A) POA-3 is at the drain manhole downstream of the "B-series" and "A-series" wetlands that discharges to the 30" RCP drain to Hilltop Road. B) This description has been revised in the stormwater report narrative. The descriptions of the POAs have been revised in the stormwater report narrative.

BETA2: Narrative and model revised. Issue resolved.

SCI2: Comment Resolved.

SW33. Separate EWS-12/PWS-10 into several subcatchments with appropriate points of analysis. This watershed drains in several different directions and should not be considered a single subcatchment. BETA recommends generally dividing the watershed as follows:

a. The northern and western portions of the watershed, which will drain offsite and will not be affected by the development.

b. The southern portion that drains to the 30" RCP drain line west of the Site, towards Hilltop Road. Provide POA at this location to confirm that the peak flow to the system will not exceed its capacity. The "A-Series" and "B-Series" wetlands also appear to drain to this location.

c. The southern portion that drains to the 12" RCP drain line south of the Site, towards Old West Central Street. Include stormwater runoff to catch basins and to the headwall inlet. Provide POA at this location to confirm that the peak flow to the system will not exceed its capacity.

d. The southeastern portion that drains to the nearby "D-Series" wetlands. Provide POA at the wetlands to measure the impact of the new driveway on the wetland resource area.

e. The northeastern portion that drains east towards the "E-Series" wetlands. This subcatchment should likely be combined with EWS-10.

f. The easternmost portion that drains to the southeast to an unknown destination. Evaluate offsite topography to determine ultimate discharge point and provide new POA as necessary.

g. Additionally, smaller portions of this watershed may drain to POA-1, 4, and 5 and should be included in the appropriate subcatchments.

SCI: EWS-12 and PWS-10 have been separated into additional subcatchment areas and points of analysis. These areas will generally remain in their existing condition as they are mostly peripheral to the limit of work for the proposed project. A comparison of pre-and post-development runoff rates at each point of analysis is provided below. A) The northern and western portions of the watershed that will drain offsite and will not be affected by the development have been removed from the analysis. B) POA-3 evaluates the area that drains to the 30" RCP drain line west of the Site, towards Hilltop Road. This point of analysis confirms that the peak flows to the system in the post-development condition do not exceed pre-development rates. This point of analysis is downstream of the "A-series" (POA-1) and "B-series" (POA-2) wetlands, which appear to drain to this location. C) POA-7 has been added to evaluate the peak flows to the 12" RCP drain line south of the Site, towards Old West Central Street in the post-development condition. Stormwater runoff to catch basins within Tri-County Drive and to the headwall inlet immediately north of the access drive have been included in this subcatchment, EWS-17. The runoff generated from the paved access drive is proposed to be collected, treated, and directed to the 12" RCP drain line to avoid disturbing the "D-series" wetlands beyond the grading necessary to upgrade the access drive. This increases flow rates to the 12" RCP drain line in the post-development condition over pre-development values. D) POA-6 has been added to evaluate the southeastern portion (EWS-15) that drains to the nearby "D-series" wetlands. Runoff from the paved access drive is not anticipated to impact the wetland resource area as it is proposed to be collected, treated, and directed to the 12" RCP drain line in Tri-County Drive. E) The northeastern portion that drains east towards the "E-series" wetlands (POA-8) has been separated into its own subcatchment, EWS-16. It is not clear from the survey that EWS-10 drains to the "E-series" wetlands, but rather it appears it drains south of the site. Please provide justification for combining EWS-10 with this subcatchment. F) The easternmost portion that drains to the southeast appears to be subcatchment EWS-10. This subcatchment appears to discharge south to POA-5 (near the southeast corner of the site). G) The easternmost portion that drains to the southeast appears to be subcatchment EWS-10. This subcatchment appears to discharge south to POA-5 (near the southeast corner of the site).

BETA2: The revised points of analysis appear to accurately represent the Site. Issue resolved.

SCI2: Comment Resolved.

SW34. Review routing for the following watershed/nodes:

a. EWS-4. The existing conditions plan shows that this area is collected by a closed drainage system and conveyed to a drain manhole near the EWS 3 / 4 boundary. The DMH is identified as not found with no surveyed inverts, but shows one outlet pipe towards POA-2 and one outlet pipe towards POA-1. Provide information on which of these points of analysis the system discharges to.

b. BMP-1. System BMP-1 is designed to overflow to BMP-2; therefore, BMP-1 should be routed to BMP-2 in the hydroCAD model.

c. BMP-3. System BMP-3 is designed to overflow to BMP-4; therefore, BMP-3 should be routed to BMP-4 in the hydroCAD model.

d. PWS-6. This area is graded to drain to a pair of catch basins which discharge to BMP-4; therefore, PWS-6 should be routed to BMP-4. Recommend combining PWS-4, PWS-6, and PWS-9 into one subcatchment for simplicity.

SCI: A) EWS-4: EWS-4 appears to discharge through the 12" RCP drain to POA-1. The drain line leading to the manhole that connects to the outlet pipe towards POA-2 is record only, and the pipe (direction E) was not visible from that manhole. B) The plan has been revised to route the discharge from BMP-1 around BMP-2 to match the HydroCAD model. C) The plan has been revised to route the discharge from BMP-3 to POA-2 separate from the discharge from BMP-4 to match the HydroCAD model. D) PWS-6 has been routed to BMP-4 in the model. PWS-4, PWS-6, and PWS-9 were delineated as separate subcatchments while the design was being developed in case PWS-6 and PWS-9 could not be directed to BMP-4. These subcatchments will be left as delineated for now.

BETA2: Model revised. Issue resolved.

SCI2: Comment Resolved.

SW35. Revise boundaries of PWS-2 and PWS-10 to account for the wetland and replication areas. These areas are low points to which stormwater runoff will be routed. Model these areas as "impervious water surface" to account for a permanent pool.

SCI: The wetland and replication areas have not yet been modeled as we continue to progress the design for these areas throughout the current phase of the project.

BETA2: Response noted. Issue to be addressed at later design stages.

SCI2: During the meeting on May 17, 2024, it was agreed that a flush condition near the shed could be used to direct stormwater to the wetland replication, and that this would be an acceptable water source. As such, the wetland replication area was included in the model as a Pond, and the area tributary was delineated as a subcatchment and routed to the wetland replication. PWS-1 was reduced accordingly helping to reduce the increase in volume at POA-1 for each of the design storms.

SW36. Review the following subcatchment boundaries:

a. Northeastern portion of EWS-1. It appears that this area will be collected by a drainage ditch which discharges south to EWS-9.

b. PWS-1 and PWS-3. The boundary between these two watersheds does not appear to represent the proposed high point based on the grading plans.

c. Building portion of PWS-2. Based on the roof leader design, the roof area will be conveyed to BMP-1, rather than BMP-2.

d. Southern portion of PWS-2. Based on the drainage system design, the majority of this subcatchment will be collected by catch basins and conveyed west, rather than to BMP-2.

e. Boundary between PWS-4/9 and PWS-5. The proposed football field is designed with an underdrain which conveys stormwater to BMP-4. The entire field and all areas draining to it should be included in either PWS-4 or PWS-9.

SCI: A) Northeastern portion of EWS-1: There appears to be a high point near the northern end of the drainage ditch where some runoff may escape the ditch and drain west to the delineated stormwater basin and catch basins at the eastern edge of the parking lot there. B) PWS-1 and PWS-3: The boundary between these two watersheds has been adjusted according to the latest grading plan. C) Building portion of PWS-2: The stormwater layout has been revised to direct a portion of the building roof to BMP-2. D) Southern portion of PWS-2: The stormwater layout has been revised to direct the catch basins within this subcatchment to BMP-2. E) Boundary between PWS-4/9 and PWS-5: The proposed football field will be grass, not turf; therefore, the delineations were based on surface grading rather than underdrain locations. Since it will take time for the runoff to percolate through

the soils to the underdrains, runoff collected by the underdrains will be discharging past the peak rate of runoff to the POA. As such, the subcatchments will be left as delineated.

BETA2: Boundaries revised. Issue resolved.

SCI2: Comment Resolved.

SW37. Revise limits of watersheds to include all areas, including offsite areas, that will drain to the proposed SCMs and closed drainage systems. Offsite areas to the north will drain to PWS-1 and PWS-3 and thus must be included in the appropriate BMP system sizing. Refer to previous comments relating to swales and headwalls located along the northern portions of the Site; the proper design of these conveyance systems will determine if upgradient areas drain to the BMPs or bypass them.

SCI: Watershed Limits have been updated to provide better understanding to onsite runoff

BETA2: Watershed limits revised. Refer also to comment SW13 regarding potential offsite runoff that may bypass the swales and enter BMP-4. Issue resolved.

SCI2: Comment Resolved.

SW38. Review HydroCAD model for the following subcatchments:

a. EWS-1: Confirm that the time of concentration represents the flowpath from the most hydrologically remote point in the subcatchment. The easternmost portion of the subcatchment may be more appropriate. Include flow through pipes in the calculation.

b. EWS-7: Clarify the location of the 10,693 Sq. Ft. of area attributed to "paved parking." Confirm that the overall area attributed to this subcatchment is consistent between the model and the watershed plans. Revise cover type for sheet flow to be "Woods."

c. EWS-9 and EWS-10: Clarify the location of the areas attributed to "paved parking." If these areas are intended to represent the solar array, then the cover type should be revised to reflect the final land cover type proposed below the panels per MassDEP Wetland Program Policy 17-1.

d. PWS-7: Review area modeled as "Woods." The area depicted on the plans to remain wooded appears to be smaller than that used in the model.

SCI: A) EWS-1: The time of concentration flow path was extended to represent the most hydrologically remote point in the subcatchment. Flow through pipes have been included in the calculations. B) EWS-7: Areas have been updated for consistency between the model and the watershed plans. Cover type for the first segment of sheet flow has been updated to "Woods." C) EWS-9 and EWS-10: The impervious areas attributed to the solar panels has been revised to the land cover type below the panels. D) PWS-7: The area modeled as "Woods" was checked on the plan and in the model.

BETA2: Review time of concentration calculations for EWS-1. The length used for Shallow Concentrated Flow does not match the flowpath depicted on the plans. Comments (b) through (d) have been addressed.

SCI2: Time of concentration calculation has been revised to match the depicted time of concentration illustration on the existing watershed plan.

SW39. Add test pit locations to the Stormwater Management Plans. Recommend providing critical information to plans such as ESHGW elevations and refusal, as applicable.

SCI: Test pits have been added to the stormwater management plans.

BETA2: Plan revised. No further comment.

SCI2: Comment Resolved.

SW40. The March 15, 2024 report by OTO is identified as a draft report. Provide final report.

SCI: Finalized reports have been provided by OTO within the stormwater report Appendices.

BETA2: Final report provided. The content of the report appears generally unchanged from the draft. Issue resolved.

SCI2: Comment Resolved.

SW41. Justify the use of a 0.27 in/hr. infiltration rate for the subsurface infiltration systems. Hydraulic conductivity tests indicate a much lower rate of 0.05 in/hr. is reflective of the Site. BETA notes that the in-situ rate is below the minimum allowable infiltration rate of 0.17 in/hr. and the geotechnical reports note that soils are not favorable for infiltration.

SCI: We have adjusted the infiltration rate to be more conservative as noted above and reflected the change in the updated Hydrology model and SWM report. Please note the project is constrained by consistent poorly draining soils per the exploratory soil testing. The proposed stormwater management design is looking to meet standards to the greatest extent practicable, considering these conditions.

BETA2: The HydroCAD model has been revised to exclude any infiltration. Refer to comment SW51 regarding drawdown. Issue dismissed.

SCI2: Comment Resolved.

SW42. Test pits in the eastern portion of the Site were not completed to the proposed system bottom elevation for Detention System-1 and ledge was encountered in some test pits in proximity to the proposed system. Additional subsurface explorations should be conducted to ensure the system can be constructed.

SCI: While we are aware that ledge may be encountered during construction, we are confident that the system can be installed. Additionally, Detention System-1. Due to the fact that the solar field will be in continuous operation until June 2024, we are limited with respect to the invasive testing that can be accomplished within the solar field area until the system is taken off-line.

BETA2: Following the decommissioning of the solar field BETA recommends that additional test pits be conducted.

SCI2: Additional solar field testing will be deferred to the commission, if the data provided by the geotechnical consultant is not suffice and needs additional testing.

SW43. Test pits in the area of Detention System-1 identified significant areas of organics. Discuss how these organics will be accounted for in the design and during construction.

SCI: Organics or any other delirious material as defined by Earthwork specification 31 00 00 encountered during excavation is to be removed from the footprint of the proposed wrapped watertight detention systems. A separate note referencing the Earthwork Specification has been added to the Precast Detention system detail.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW44. Additional subsurface explorations should be conducted within the footprints of Infiltration System-3 and -4. Though several test pits have been completed in the general vicinity of these BMPs, none are located within the footprints and ledge was encountered in TP-103 and TP-104.

SCI: Infiltration system #4 has one test pit shown within the footprint of the system and one adjacent to it to further confirm groundwater elevations. Additionally, a monitoring well was installed to provide historical documentation to show groundwater separation is maintained. Infiltration system #3 will be built at a later as it is proposed within the existing building footprint that will be removed in later phases of construction. Limited testing areas are available in order to limit interference with ongoing campus operations. The Project team would not be opposed to a condition stating additional

test pits to be performed prior to construction of infiltration systems in each area (Note: Infiltration system #4 is anticipated to be installed in the Summer of 2024).

BETA2: Based on the test pit locations depicted on the plans it does not appear that any explorations were conducted within the footprints of the systems; however, BETA recognizes there are limited opportunities for test pits within the existing developed areas. If a condition for additional test pits were to be approved, the applicant should provide a specific schedule to ensure there is adequate time for test pit review and system redesign, if necessary. Refer to comment SW51.

SCI2: Testing for BMP3 shall be performed during construction within 2025 to ensure the adequate data for the system to perform efficiently and be able be constructed.

SW45. Detention Systems-1 and -2 are located below the groundwater elevation and the design calls for a watertight application to be provided by others. Options for the watertight application should be explored during the design process and requirements/specifications should be added to the plans to ensure the system will function as designed.

SCI: Watertight application is captured in the Plans, as well as the specifications in the form of a performance specification. The Contractor and Engineer will work with the Product manufacturer to ensure the watertight component of the system is met.

BETA2: Information provided. Issue resolved.

SCI2: Comment Resolved.

SW46. Revise Detention System-2 to account for bedrock encountered in test pit TP-110. Bedrock was encountered at elevation 376.5', above the system bottom elevation of 368.25. Also refer to comments related to groundwater.

SCI: Detention System-2 has been raised approximately 1'. Any ledge encountered to be removed. Watertight application is captured in the Plans, as well as the specifications in the form of a performance specification. The Contractor and Engineer will work with the Product manufacturer, once selected, to ensure the watertight component of the system is met.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW47. Not all impervious area is directed to infiltration practices, provide a capture adjustment calculation (see MassDEP Handbook Vol 3, Ch 1, page 27-29).

SCI: Capture adjustment calculations have been added. As previously noted, we are unable to infiltration impervious areas tributary to Detention systems 1 and 2 due to the presence of high groundwater in the post-development conditions (i.e. due to significant cut through the area). We are providing infiltration in Infiltration systems 3 and 4 for a large portion of the impervious on-site area. As stated, the overall stormwater design if being made to the greatest extent practicable.

BETA2: Capture adjustment provided. Issue resolved. Refer to comment SW51.

SCI2: Comment Resolved.

SW48. The proposed grading in the eastern portion of the Site as well as the construction of the building and Detention System-1 and -2 will be below existing groundwater. It is anticipated there may be long-term seepage along the easterly slopes. Evaluate groundwater impacts to the slope, flow onto the site, downstream stormwater management systems, and any adjacent residences or wetlands.

SCI: The Geotechnical Engineer has reviewed the groundwater conditions throughout the building site and a building underdrain system is proposed to be installed in the early phases of the project. Additionally, the site plans propose site underdrainage within the roadway area to intercept groundwater and direct it to the proposed on-site stormwater system. As the timing for "immediate" flow for surface run-off during rain events and subsequent lag for groundwater flow following the

same rain events will be staggered, we do not anticipate a conflict in capacity to accept this "clean" water into the system.

BETA2: Information provided. Refer to Comment SW51 for further discussion.

SCI2: Comment Tracked. No follow up response required.

SW49. Review model for the following systems:

a. Detention System-1 & -2: The bottom and invert elevations are inconsistent between the model and the plans for both systems. Additionally, these systems have been designated as detention systems, but the only "invert out" elevations listed on the plans are above the respective system bottom elevations.

b. Infiltration System-3 & -4: The bottom and invert elevations are inconsistent between the model and the plans for both systems.

SCI: Elevations have been updated to match.

BETA2: The models for all four BMPs remain inconsistent between the plans and hydroCAD. Invert out elevations have been revised to match bottom elevations.

SCI2: The four BMP's have been updated to be consistent between the plans and the hydroCAD.

SW50. Provide required mounding analysis where infiltration BMPs have less than 4 feet of separation to estimated seasonal high groundwater.

SCI: Mounding analysis has been performed and is included in the revised Stormwater Management report Appendix.

BETA2: Analysis provided; however, it is no longer necessary as exfiltration is not being used for the control of peak flow rates. No further comment.

SCI2: Comment Resolved.

SW51. Revise drawdown calculations to use an exfiltration rate consistent with the Geotechnical Report.

SCI: Drawdown time calculations have been revised to be more consistent and more conservative.

BETA2: Provided drawdown calculations use an exfiltration rate (0.17 in/hr) that is significantly higher than the rate determined by field testing (< 0.05 in/hr). With the anticipation that the infiltration systems will not see significant drawdown within 72 hrs, particularly where the system receives flow from subdrains, consider revising the infiltration systems to detention systems with slow drains to ensure adequate storage is available for stormwater events and peak flow mitigation. Any storage volume located below the lowest outlet should be excluded from the storage included in the HydroCAD model. Drawdown calculations should utilize exfiltration rates consistent with the Geotechnical Report.

SCI2: BMP 4 will not be taking credit for drawdown time within Standard 3 of the Stormwater Management Standards.

SW52. Provide required TSS removal for all impervious areas within the limit of work.

SCI: TSS removal for all impervious areas within the limit of work have been included.

BETA2: Clarify if PWS-15, PWS-17, and PWS-20 will receive TSS treatment from B4-11-DMH, noted to be rebuilt as a WQU. The Stormwater Report notes that these watersheds will receive only 0% or 25% TSS removal. Sizing calculations and TSS removal rate documentation should be provided for this and other water quality units (Phosphorus Removal Structure calculations were provided).

SCI2: PWS-15, PWS-17, and PWS-20 will receive TSS treatment per the rebuilt WQU at B4-11-DMH. TSS removal calculations have been updated. Sizing calculations and rate documentation have been provided alongside other WQU structures within the stormwater report.

SW53. Review TSS removal calculation for PR-Watershed-5; the calculation lists catch basins, water quality units, and subsurface infiltration systems which are not proposed for this watershed.

SCI: TSS removal calculation have been updated to be coordinated with updated proposed watershed map.

BETA2: Calculation revised. Issue resolved.

SCI2: Comment Resolved.

SW54. Revise TSS removal calculations to account for subsurface structures where no infiltration is proposed or is feasible.

SCI: TSS Removal has been updated within the stormwater report.

BETA2: Remove or revise 80% TSS removal credit for subsurface detention systems. Detention systems typically do not provide any TSS removal unless provided with additional treatment, such as an isolator row, or designed to perform as an extended dry detention that can be maintained. Clarify is TSS removal rates for water quality units are based upon accepted testing procedures such as the Technology Acceptance Reciprocity Partnership (TARP) program.

SCI2: Detention Structures have been removed from the TSS removal calculations and additional documentation has been provided to clarify the TSS removal rates for the water quality units.

SW55. Provide TSS removal calculations for PWS-7, PWS-8, and PWS-10.

SCI: Additional PWS areas have been included within the proposed watershed map.

BETA2: All watersheds are accounted for in the calculations. Issue resolved.

SCI2: Comment Resolved.

SW56. Remove pretreatment devices from TSS worksheet for infiltration systems; the 80% TSS removal is inclusive of required pretreatment.

SCI: The stormwater report indicates that the TSS removal calculation has been separated between pretreatment and the downgradient stormwater components consisting of the infiltration and detention system.

BETA2: The calculations have been revised to note the provided pretreatment TSS removal, but this pretreatment is still included in the total TSS removal for infiltration structures. Comment remains.

SCI2: The TSS removal calculations have been updated to exclude the pretreatment structures from the overall TSS removal per watershed areas. See revised Stormwater report Standard #4.

SW57. Provide third party TSS removal rate documentation and sizing calculations for proprietary water quality unit. If manufacturer/model are to be determined in the future the minimum criteria for each unit should be specified.

SCI: Third party TSS removal rate documentation and sizing calculation for proprietary water quality unit have been provided within the stormwater report (e.g. NJ Division of Water Quality)

BETA2: Calculations provided. Issue resolved.

SCI2: Comment Resolved.

SW58. Provide calculations for required/provided water quality volume and/or water quality flow rate.

SCI: Water Quality Unit Volume and Water Quality Unit Flow Rates have been included in the stormwater report.

BETA2: Calculations provided. The provided volumes are incorrect as BMP-1 and BMP-2 are detention systems with no water quality volume; however, the required water quality volume will

be provided via the water quality flow rate for which calculations have been provided. Issue resolved.

SCI2: Comment Resolved.

SW59. Provide supporting information for the storage volumes provided, such as a hydroCAD printout of stage/storage.

SCI: Supporting Information for the storage volumes have been provided per the stormwater report.

BETA2: BETA could not locate the referenced information; however, the required water quality will be provided via the water quality flow rate. Issue resolved.

SCI2: Comment Resolved.

SW60. Provide Long-Term Pollution Prevention Plan.

SCI: Long Term Pollution Prevention Plan, specific to system maintenance can be found within the O & M appendix of the stormwater report.

BETA2: Provide long term pollution prevention measures relating to: good housekeeping, vehicle washing, spill prevention and response, storage and use of fertilizers, herbicides, and pesticides, and pet waste management.

SCI2: Trash is picked up around the grounds daily as needed, internal trash is managed and emptied daily, all trash is stored in on-site containers currently hauled as needed by BP Trucking.

Washing of cars in the Auto shop is minimal and run off is captured by the center trough floor drain which is picked up by the building plumbing system. Waste oil is minimal and stored in an on-site storage container which is emptied as needed by a certified HazMat contractor.

We do use pesticide and herbicide on occasion for weed and pest control although we do try to use non toxic formulas whenever possible. They are stored in the Maintenance garage. When needed they are applied by an in house licensed applicator. Pet waste management does not apply to us.

Tank is stored within an overpack containment unit sized for the 275 gallon tank the waste oil is stored. In the event of an overflow/spill HazMat company would be dispatched to assist.

SW61. Evaluate trip generation and provide the following, if necessary:

- Revise narrative to indicate the Site is a LUHPP.
- Provide oil grit separator, sand filter, filtering bioretention area, or equivalent for treatment trains originating in any LUHPPL area. If the water quality units are intended to satisfy this requirement, provide documentation from manufacturer identifying their suitability for LUHPPLs.
- Provide Source Control and Pollution Prevention Plan.
- Indicate means of emergency shut-off or containment prior to discharge to an infiltration BMP.

SCI: We respectfully disagree that the two, separate main parking lots are LUHPPLs. We will supply trip generation data from the Traffic Engineer once received. While there are two (2) separate parking lots that compile 501 parking spaces, only a fraction of those spaces will be used on a daily basis as they will be primarily limited to Staff and legal driving ages students (Seniors) with their own car.

BETA2: This issue can be discussed further once trip generation data is received.

SCI2: To date, a traffic impact study has not been performed by the Traffic Engineer and we do not believe one will be required as part of the Town Permitting process. Our office maintains our belief that the two (2) parking areas (approximately 250+/- parking areas each) do not qualify as LUHPPLs. Furthermore, we are proposing significant improvements to both parking areas from a stormwater quality (e.g. Units with total phosphorus removal) and quantity (e.g. underground

detention/retention systems). We defer to the Conservation Commission for their opinion/direction.

SW62. Based upon provided comments, evaluate if all standards can be met.

SCI: The proposed stormwater management design is attempting to meet the Standards to the maximum extent practicable. Revisions have been made per the Peer review comments and further investigation of stormwater detention/infiltration/treatment measures to achieve this. We defer to the Peer reviewer for final comment, however the existing stormwater management system consists of primarily conveyance without any significant detention/infiltration/treatment capabilities.

BETA2: Following incorporation of additional design revisions the narrative should be updated as necessary.

SCI2: The Notice of Intent and Stormwater reports will be updated and maintained throughout the permitting process of the Town of Franklin Conservation Department permitting procedures.

SW63. The required EPA SWPPP will also need to be filed with the Department of Public Works as part of a Soil Erosion and Sediment Control Plan.

SCI: A DRAFT SWPPP draft has been provided per BETA response above. Once a site contractor is selected in for project, Samiotes will provide additional "Operator" information to complete SWPPP and submit the eNOI.

BETA2: Acknowledged. The provided draft SWPPP has been completed to a reasonable extent at the current design stage. BETA notes that the final SWPPP will need to be submitted to the DPW as part of a construction erosion and sedimentation control permit. No further comment.

SCI2: Comment Resolved.

SW64. Provide inspection and maintenance requirements for construction-period erosion controls.

SCI: The SWPPP includes these requirements.

BETA2: Information provided. Issue resolved.

SCI2: Comment Resolved.

SW65. Provide detail for compost filter sock and clarify if silt fence is proposed per the "silt fence with straw wattle" detail. BETA notes that use of silt fence is typically prohibited in the Town of Franklin.

SCI: Detail has been revised to only show compost filter sock with any silt fencing detail. No straw wattles are proposed and will not be allowed.

BETA2: Detail revised. Issue resolved.

SCI2: Comment Resolved.

SW66. Provide detail for proposed erosion control blanket.

SCI: Detail has been provided.

BETA2: Detail provided. Issue resolved.

SCI2: Comment Resolved.

SW67. Clarify if all construction traffic will be limited to the southerly entrance. Stabilized construction entrances should be provided at all access points to the site from Tri County Drive.

SCI: Any exiting construction traffic for the initial phases of the project will occur at the southerly entrance or the northerly parking lot entrance as shown. Subsequent relocation of construction access points will be a means and methods responsibility for the General Contractor to ensure exiting construction vehicles pass over construction entrances so as to limit tracking sediment onto paved/public roadways.

BETA2: Information provided. Issue resolved.

SCI2: Comment Resolved.

SW68. In coordination with DPW, provide inlet protection at downgradient catch basins within Tri County Drive. Also, include inlet protection for proposed catch basins within the Site.

SCI: Inlet protection not shown on proposed catch basins for visual clarity. Note added to Site Preparation plan for Contractor to add inlet protection to add existing catch basins downgradient of proposed work within Tri-County Drive.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW69. Clarify proposed location of construction staging area. The O&M Plan indicates it will be established "on the existing woodlands."

SCI: Detailed Phasing exhibits have been included with this submission to illustrate construction phasing.

BETA2: Information provided via Phasing Exhibits included in the Notice of Intent. Issue resolved.

SCI2: Comment Resolved.

SW70. Provide measures to protect open excavations for infiltration structures during construction.

SCI: Notes have been added to Sheet C300 that discuss protection of open excavations, specifically in relation to areas that will contain infiltration systems.

BETA2: Notes provided. Issue resolved.

SCI2: Comment Resolved.

SW71. Provide a general construction sequence including phasing of work on the plan.

SCI: Detailed Phasing exhibits have been included with this submission to illustrate construction phasing.

BETA2: Phasing exhibits provided. Issue resolved.

SCI2: Comment Resolved.

SW72. Revise the O&M to include the following information, as required by the Handbook:

- Indicate stormwater management system(s) owners.
- The party or parties responsible for operation and maintenance, including how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance.
- Provide map, drawn to scale, that shows the location of all stormwater BMPs in each treatment train and snow storage areas.
- Provide description of public safety features.

- Provide approximate annual maintenance budget.
- Provide signature of owner on the O&M Plan.

SCI: An O&M cover page has been included within the stormwater report appendices containing Responsible parties and signature requirement. Additionally, the existing use is a school and will continue to operate as a school for the next several decades any ongoing maintenance will continue to be the Facilities Department. Included O&M map has been included within the stormwater report appendices. An annual budget can be provided at a later date once the SWM O&M plan is finalized so local vendors can provide quotes based on the final scheme.

BETA2: Portions of the above comment have been addressed, but the required information has not been fully provided:

- **Clearly state the stormwater management system owner(s). The O&M cover page notes who the plan was "prepared for" but not the owner.**
- **Provide measures for how future property owners will be notified of the existence of the stormwater management system and the need for maintenance. Although the property is currently planned to be used as a school for the foreseeable future, there is no guarantee that it will remain under its current use and ownership.**
- **BETA defers to the Commission regarding a potential condition to provide the estimated annual operations and maintenance budget at a later date.**
- **Provide owner signature to ensure that the owner(s) are aware of the extent of inspection and maintenance required and the likely costs associated with the proposed system.**

SCI2: O & M cover page and plan have been revised to fulfill comments 1 above from BETA2. Comment 2 & 3 shall be deferred to the commission to include within the Order of Conditions. Comment 4 shall be instructed within the order of conditions to receive a signed copy of the O&M to Conservation Commission once NOI approval has been made. A signature block and date are included within the O&M cover page.

SW73. Include operation and maintenance requirements for vegetated swales and headwalls add to maintenance checklist.

SCI: Vegetated swale and headwalls have been added to the maintenance checklist.

BETA2: Inspection and maintenance of grass swales is described in the narrative but not on the maintenance checklist. Inspection and maintenance of headwalls has not been provided. Issue remains outstanding.

SCI2: The Facilities Department can handle inspections and maintenance of the swale and headwalls. Frequency of mowing varies depending on the area and its use but on average weekly/bi-weekly. Game field mowing would be more frequent and likely weekly.

SW74. Revise O&M requirements for infiltration and detentions systems to match manufacturer documentation, which suggests quarterly inspections for the first 12 months.

SCI: Comment has been revised within the stormwater report.

BETA2: The narrative notes that the chambers will be inspected every 12 months. Per the manufacturer documentation, revise narrative to note that the infiltration and detention systems will also be inspected quarterly for the first 12 months.

SCI2: Comment has been addressed per the revision of the stormwater report O & M narrative appendices.

SW75. Clarify how subsurface system inspection and maintenance is performed. The manufacturer documentation references a manhole that will be visually inspected, but no manholes are proposed in the system footprint. Depict any inspection ports or manholes in plan view.

SCI: Inspection ports (and details) have been added to the plans.

BETA2: The plans show inspection ports for the infiltration systems, but not the detention systems. Clarify if inspection ports are needed for the detention systems.

SCI2: Inspection ports have been added to all the underground systems proposed for the project site.Maintenance for all systems are detailed in the updated Stormwater management report.*Clarify if isolator rows are proposed. A manual from ADS Stormtech is included in the O&M Plan but no such system is identified on the plans.*

SCI: Isolator rows are not proposed as part of the proposed infiltration systems.

BETA2: Information provided. In conjunction with other comments related to TSS removal and infiltration system modifications, evaluate if additional TSS removal is required to comply with applicable stormwater standards. BETA notes that an isolator row is typically credited with a TSS removal rate of greater than 60%.

SCI2: TSS removal rates have been met per standard 4. The infiltration system manufacturer provided operation and maintenance documentation only on the isolator row nomenclature and this nomenclature has been removed to clarify intent of documentation.

SW76. Provide manufacturer documentation for inspection and maintenance of water quality units.

SCI: Manufacturer documentation has been included to the Stormwater report for water quality unit.

BETA2: Documentation provided. With the understanding that proprietary products may not be specified as part of the bid documents BETA recommends a condition of approval that requires the O&M to be updated, as necessary, to reference the water quality units to be installed.

SCI2: Samiotes concurs with this statement and defers to the commission to include Manufacturer documentation for the water quality units within the Oder of Conditions.

SW77. Revise O&M Plan to remove information that does not pertain to the project e.g. “level spreaders” and “police equipment.”

SCI: Samiotes to remove non-applicable references. However, a level spreader has been added to wetland replication area.

BETA2: Plan revised. Issue resolved.

SCI2: Comment Resolved.

SW78. **BETA2: Revise Stormwater Management System such that the peak discharge rate to POA-7 (flow to Old West Central Street via Tri-County School Drive) does not increase compared to pre-development conditions. BETA suggests evaluating the following, if not done so already, to facilitate mitigation of peak flow rates.**

a. **Consider increasing storage volumes in subsurface infiltration/detention systems and/or including additional outlet control devices (e.g. slow drains) to further reduce peak flows to downstream wetlands and outlet devices.**

b. **Evaluate if a portion of the southerly access drive can be directed to the D-Series wetland to mimic existing conditions. Any flows directed to the wetland should be treated to the extent practicable and in a manner that will improve existing conditions.**

c. **Evaluate if any detention can be provided in an upland area on the north side of the southerly access road to reduce peak flow rates.**

d. Consider connecting the overflow from Infiltration System 4 to the 36" RCP located within/adjacent to Tri-County School Drive rather than directing flow to the B-Series Wetland.

e. As noted in comment SW4, consider providing a catch basin on the west side of the roadway across from Wetland Series-A with minor connecting work.

SCI2: a. Due to cost constraints, the storage volumes within the underground detention/infiltration systems cannot be expanded further. That said, in redirecting a portion of PWS-1 to the wetland replication, the additional storage capacity regained within the underground detention system BMP-1 was maintained, and the outlet control was adjusted to further reduce peak flows to the "A-Series" wetland. Likewise, in converting the underground infiltration system BMP-4 to full detention, the full storage volume was maintained.

b. The peak rates and volumes at POA-6 ("D-Series" wetland) are close in magnitude. Therefore, it appears that minimal benefit would be gained by adding a new discharge to the wetlands and disturbing the "D-series" wetlands beyond the grading necessary to upgrade the access drive.

c. The opportunity to provide detention for the access drive runoff is limited due to the steep slopes adjacent to the access drive, and the limited space between the access drive and existing tree cover.

d. The discharge from the underground system BMP-4 is being connected to the 36" RCP located within/adjacent to Tri-County School Drive rather than directing flow to the B-Series Wetland. See Response to Comment SW16 for further discussion.

e. Due to cost and timing constraints, additional work is not being planned within Tri-County Drive. Existing drainage structures within Tri-County Drive will be maintained.

SW79. **BETA2: Provide stormwater treatment for impervious areas directed to the isolated wetland replication area. Although this area will not be subject to the DEP standards, some treatment should be provided to the extent requested by the Commission.**

SCI2: Impervious areas have been provided to the isolated wetland replication area within the hydroCAD model and the Notice of Intent site plans.

If you have any questions, or require further information, please call or email me: jpilat@samiotes or (508)-877-6688 (ext. 23) or Stephen Powers, PE at spowers@samiotes.com or (508)-877-6688 (ext. 14).