

April 25, 2023

Town of Billerica
Planning Board
365 Boston Road
Billerica, Massachusetts 01821

Attn.: Ms. Isabel Tourkantonis, Director of Environmental Affairs
Ms. Kristel Bennett, Director of Health

Re: 298 Concord Road Stormwater Peer Review Update – (DEP File No. 109-1526/BBL-1526)

Dear Ms Tourkantonis and Ms Bennett:

BETA Group, Inc. has reviewed documents submitted for a project entitled as ***Proposed Buildings 298 Concord Road Billerica, Massachusetts***. This letter is provided to update BETA's findings, comments, and recommendation related to floodplain, wetlands, and stormwater management.

BASIS OF REVIEW

The following documents prepared by Bohler Engineering were received by BETA and will form the basis of the review update:

- Response to comments letter to the Planning Board dated April 4, 2023
- Site Plans (14 sheets) entitled ***Proposed Site Plan Documents for KS Partners Owned & Managed Proposed GMP Lab Facility Location of Site: 298 Concord Road Town of Billerica, Middlesex County, Massachusetts Map 86, Block 108, Lot 5*** dated January 25, 2023, revised April 4, 2023
- ***Drainage Report for KS Partners Owned & Managed Proposed "GMP Lab Facility" 298 Concord Road Billerica, Massachusetts Middlesex County*** dated January 25, 2023, revised April 4, 2023
- ***Stormwater Pollution Prevention Plan for Construction Activities at GMP Lab Facility 298 Concord Road Billerica, MA 01821*** dated February 23, 2023

COMPILED REVIEW LETTER KEY

BETA reviewed previous submissions and provided comments in letters to the Board dated March 6, 2023 (original comments and responses in *italics*). Bohler Engineering (BOHLER) provided responses to these comments (responses in standard text). This letter provides an update to comments by BETA (status in ***bold italics***).

INTRODUCTION

The partially developed 44.4± acre project site, comprised of assessor's map 86 block 108 lot, is located on the east side of Concord Road and west side of Route 3. The existing development comprises 3 partially vacant office buildings. The project parcel is within the Industrial Zoning District. Abutting properties are also in the industrial district while properties on the west side of Concord Road as well as a few on the east side are within the Rural Residence District. Light manufacturing, and R&D are uses allowed by right.

A perennial stream (Mill Brook) flows through the parcel and a wetland on-site. There are also mapped wetlands on the east side of the property. Portions of the subject parcel are located within the FEMA

mapped 100-year flood zone a flood zone shown on Green Engineering Map (59). The property is not in proximity to or estimated habitats of rare or endangered species. NRCS soil maps indicate the presence of Charlton-Urban land-Hollis complex with Hydrologic Soil Group Rating (HSGR) A (high infiltration).

Applicant proposes to demolish buildings 298 and 300 and construct a 121,630± sq. ft. footprint Lab Facility with a 45,000± mezzanine with associated parking, loading, landscaping, utility services, and stormwater management systems within the limits of the existing parking area.

The project includes work within wetland resource areas, including buffer zones to bordering vegetated wetlands areas and bordering land subject to flooding which will require obtaining an Order of Conditions from the Billerica Conservation Commission. The project will disturb more than an acre of land as well as within or within proximity of mapped flood zones and therefore require a Stormwater permit from the Board of Health. Stormwater management systems will need to comply with the MassDEP Stormwater Management Standards and the Billerica Stormwater Management Bylaw and regulations.

A previous project was approved (DEP File No. 109-1450/BBL-1450) for this site (within the east parking lot). The following review assumes that the previously approved project will not be built.

BILLERICA BOARD OF HEALTH RULES & REGULATIONS

The project is subject to the requirements of Chapters 5 and 6 of the Board of Health Regulations. Per the Stormwater Management Bylaw, Chapter 6 of the BOH Regulations applies to the project as it will disturb greater than 1 acre of land. Conformance to Chapter 6 is discussed in the Stormwater Management section below.

Building floor elevations of 193.7 is greater than 2 foot above the estimated seasonal high groundwater, based on test pits completed throughout the Site.

ENVIRONMENTAL REGULATIONS (CHAPTER 5 OF THE BILLERICA BOH RULES AND REGULATIONS)

A portion of the project parcel is within 25 feet of the FEMA-mapped 100-year flood zone (Zone A). Work in this area includes grading, removal of existing pavement, and construction of a wall and parking lot. A portion of the project is also within 100-foot wetland buffer zone, and/or within a 200-foot Riverfront Area. This work includes paving, grading, landscaping, and installation of stormwater BMPs, a wall and light fixtures.

- B1. *Request variance from the Board of Health to allow encroachments, including fill, new construction, or other development within the floodway and/or within twenty-five feet of the flood plain (5.5.005(1)).* **BOHLER:** Work is proposed within 25 feet of the established floodplain. Bohler will seek a variance from the Board of Health for all proposed construction within twenty-five feet of the floodplain. **BETA2: BETA defers to the BOH regarding approval of the proposed variance.**
- B2. *Obtain an Administrative Determination of Applicability for construction and alterations within one-hundred feet of the Floodway and Floodplain.* **BOHLER:** Per previous discussions with the Director of Public Health, Kristel Bennett, serving as an agent representing the Board of Health, the Project as proposed will only require the BOH applications for a Stormwater Management Permit for disturbance of over one (1) acre of land and a variance for work with the Local Green Engineering Floodplain (GEFP) and the FEMA Floodplain. A separate Administrative Determination of Applicability Application is not required and not being sought for this Project since the variance noted in comment B1 is being sought **BETA2: Information provided. Issue resolved.**

- B3. *Include a note prohibiting stockpiles of material within the buffer zone of wetlands.* BOHLER: The Soil Erosion and Sediment Control Plan (Sheet C-601) has been revised to include this note. **BETA2: Plan revised – issue resolved.**

GENERAL

- G1. *Provide additional notes, grading and/or drainage along area of pavement removal and new sidewalk on southeast side of building. Recommend provide at least 1 % slope along curb to reduce ponding.* BOHLER: The Grading and Drainage Plan (Sheet C-401) has been revised to include grading along the southeast side of the building. Under the existing conditions this area drains to the structures to the east. The proposed grading will provide 1% slope to either the proposed or existing drainage infrastructure. **BETA2: Grading information provided - issue resolved.**
- G2. *Update/correct elevation of bottom of replicated pond volume recharge system.* BOHLER: The Grading and Drainage Plan (Sheet C-401) has been revised to the corrected bottom of replicated pond volume recharge system. **BETA2: Plan revised – issue resolved.**
- G3. *Show clearer the existing drain manhole to remain in paver patio areas with rim at grade. Also identify how runoff in the existing courtyard will be handled.* BOHLER: The Grading and Drainage Plan (Sheet C-401) has been revised to show the existing drain manhole, and it has been noted for the rim to be raised to the proposed grade. Two (2) new area drains have been added to facilitate the collection of runoff from the existing courtyard where drainage patterns are impacted by the proposed project. Otherwise, runoff from this area continue to flow as it does in existing conditions. **BETA2: Plan revised – issue resolved.**
- G4. *Drainage for existing conditions plan is incomplete, include inlet, outlet pipe information for the existing stormwater basin to daylight. Also provide adjacent pipe outlet information for swale.* BOHLER: The outlet information for the existing stormwater basin was included within the existing pond node (E1P) in the outlets tab. We have updated the description of this devices within this compound outlet to be noted as the existing 15" RCP for clarity. Additionally, the adjacent pipe information has been modeled as a reach (1R) and named 18" RCP for the corresponding subcatchment (E3). **BETA2: Information provided - issue resolved.**
- G5. *Review/clarify elevations for 3 inlets and bottom of chambers to the Replicated Pond Volume system (C-401).* BOHLER: The Grading and Drainage Plan (Sheet C-401) has been revised to show the corrected inlets and bottom of chambers. **BETA2: Plan revised – issue resolved.**
- G6. *Verify elevations for subsurface infiltration system 1, they do not match HydroCAD and indicate that the bottom of chambers (181.6) is at seasonal high groundwater elevation (181.5). Provide a minimum of 2 feet of separation.* BOHLER: The Grading and Drainage Plan (Sheet C-401) has been revised to show the corrected bottom of chamber (182.60) which matches the proposed HydroCAD. This system is a proposed detention system and does not require 2 feet of separation to groundwater. Water-tight and anti-buoyancy measures will be designed in conjunction with the manufacturer. **BETA2: The plan and model remain inconsistent. A bottom of chamber elevation of 181.10' has been utilized in the model, while an elevation of 181.60' is shown on the plans. In addition, while 2 feet of separation is not required for the detention system, the groundwater elevations of 181.50' and 186.3', as determined by nearby test pits, will submerge a portion of the system which will impact functionality.**
- G7. *Verify elevations for subsurface infiltration storage systems. Based test pit TP-03, the bottom of the system is 4 feet below seasonal high groundwater elevation. Provide a minimum of 2 feet of*

*separation (See SW1-4). BOHLER: The replicated pond volume system and P2P-B are proposed as detention systems. HydroCAD has been updated to not include exfiltration for those points. Water-tight and anti-buoyancy measures will be designed in conjunction with the manufacturer. **BETA2: The HydroCAD model appears to depict a combined system in which both the "detention" and "infiltration" portions of the system will be allowed to exfiltrate. Additionally, the 2' of groundwater separation is provided only in the vicinity of test pits TP2 and TP4; the northern/eastern portion of the infiltration system can be expected to have a shallower groundwater elevation somewhere between the elevations detected in TP1/TP3 and TP2/TP4. Recommend completing a groundwater contour analysis to interpolate the groundwater between the four data points and adjusting the system bottom elevation as needed.***

Furthermore, although the replicated pond volume is not designed to infiltrate, the groundwater elevation detected in TP3 is above the system bottom and will impact the volume provided by this system.

- G8. *Review/clarify elevation of weir in OCS#1 (C-401). BOHLER: The Grading and Drainage Plan (Sheet C-401) has been revised with the weir elevation of 182.65. **BETA2: The Weir elevation on the plans is listed as 182.65', while an elevation of 183.20' has been used in the hydroCAD model. Revise for consistency.***
- G9. *Provide drainage or erosion protection at end of curb on south drive where new sidewalk ends. BOHLER: Compost filter sock sediment control barriers have been provided on the Soil Erosion and Sediment Control Plan (Sheet C-601) to provide erosion protection. Drainage is proposed to be managed as in the existing conditions. **BETA2: Concentrated flow at the end of the curb has the potential to cause erosion in the bank/swale off the road, provide controls/protection.***
- G10. *Review/clarify weir elevation (HydroCAD) in existing pond E2P, BETA could not locate this weir on existing conditions plan. BOHLER: There was no visually observed piped outlet found in this exiting pond area. The lowest elevation where this ponding area will overtop was at the edge of sidewalk which was modeled as a weir in HydroCAD. HydroCAD descriptions have been updated for clarity. **BETA2: Information provided. Issue resolved.***
- G11. *Proposed infiltration system is within five feet of a retaining wall along the west access drive. Provide information on how the wall system, including drainage and foundation, will not be impacted by the infiltration system or vice versa. BOHLER: The wall is proposed at a max of 4' in height and the systems is setback 4.2' away from the wall. A general rule of thumb for geogrids on retaining walls is a 1:1 H:V ratio. As such, the provided separation is not anticipated to cause a conflict. Additionally, the bottom infiltrating elevation of the infiltration system is below the bottom of wall. **BETA2: Information provided. Issue resolved.***

STORMWATER MANAGEMENT

The proposed stormwater management design generally consists of capturing runoff in new catch basins and routing runoff to water quality units to a subsurface infiltration system under the west parking lot. Runoff from roofs will be collected and routed into the subsurface system as well. The existing runoff from the east parking lot is directed to the existing stormwater basin on the south side of the building. The basin will be modified to fit the building and parking area. Compensatory storage for the modifications will be provided in a separate subsurface infiltration system under the parking lot.

EXISTING STORMWATER BASIN

As currently configured the existing open south basin is a dry detention basin which provides no TSS removal and limited phosphorous removal.

- SW1. *BETA recommends modeling this existing (EP1) and the proposed (P1P) stormwater basin as two basins to determine the storage, recharge volumes and peak flows more accurately. BOHLER: Pond P1P which is a proposed detention system has been updated to not include exfiltration to accurately determine peak flows and drawdown times. The two ponds have been modeled together because they are hydraulically connected and will function together from a stage-volume component to more accurately show storage and recharge volume. **BETA2: The HydroCAD model for pond P1P shows an exfiltration component which has been applied to the entire combined system, rather than only the existing pond. Revise to include exfiltration only for existing pond.***
- SW2. *Ponding areas in all open basins should be modeled as water surface (CN=98) to avoid double counting infiltration. BOHLER: The HydroCAD model has been updated to model the area of the infiltration basin as impervious (water surface). The updated HydroCAD report has been included as a part of the supplemental materials provided in support of this response **BETA2: Model revised. Issue resolved.***
- SW3. *Provide stormwater management improvements to meet requirements in §6.7.008 of the BOH Regulations for the existing east parking lot. BOHLER: The existing east parking lot is outside of this scope of work. The only portions of this project included in the east parking lot area are minor striping changes considered maintenance and do not require stormwater management improvements. Stormwater management improvements for the east parking lot to meet requirement §6.7.008 of the Board of Health Regulations have been included in the previous approvals for 300 Concord Road, with an Order of Conditions date of January 10, 2022, and Board of Health Approval dated December 21, 2021. **BETA2: The standalone improvements (provided that 300 is not built) to the 298 Boston Road building require modification to the stormwater basin. This will require that the basin receiving runoff from the east parking lot be updated to comply with the current regulations, update the design accordingly.***
- SW4. *Consider reconfiguring existing stormwater basin, including removing accumulated sediments, potentially creating a berm with raised outlet control to create extended dry detention basin or infiltration basin for upper area to promote treatment and recharge. This could also be completed for the lower ponding area as well potentially reducing the size for subsurface system(s). BOHLER: The stormwater basin has been long established and has significant tree growth and vegetation. We believe of removal of the trees and vegetation in this area would greatly outweigh the benefits from a reconfiguration of the basin, would require additional work in the buffer zones and result in a greater limit of work for this project. Under the proposed condition, there is less stormwater being sent to the existing basin than in the existing conditions and is therefore creating an inherent improvement to the existing basin. **BETA2: There is no pretreatment provided and no evidence that the maintenance has been conducted to maintain the capacity and function of the basin as originally designed.***

EXISTING ACCESS DRIVE ALONG WEST AND SOUTH END OF PROJECT

Stormwater runoff from the existing drive along the west and south sides of the project discharges directly to wetland resource areas with little to no treatment. As a redevelopment project the stormwater design this needs to be upgraded to meet the current stormwater management requirements.

SW5. *Incorporate the proposed improvements, not yet completed, as indicated on plan C-701 (10 of 19) entitled Stormwater Management Restoration Plan as part of the set Proposed Site Plan Documents GMP Lab Facility 300 Concord Road last dated November 5, 2021. BOHLER:* This plan has been updated and included as part of the Site Plan Set as Sheet C-701, Stormwater Management Restoration Plan, with a revision date of April 4, 2023. All items are anticipated to be completed by end of May 2023. **BETA2: x**

SW6. *Provide stormwater management improvements to meet §6.7.008 of the BOH Regulations. BOHLER:* The stormwater management improvements provided meet §6.7.008 with TSS removal of 91%, Total Phosphorus Removal of 95%, and retention of 1 inch of runoff (greater than the required 0.8 inches of runoff). The calculations have been included as part of this submission. **BETA2: There is little to no treatment of stormwater runoff from the access drive provide retrofits/upgrades to meet redevelopment requirements for access drive.**

STORMWATER MANAGEMENT REGULATIONS (CH. 6 OF THE BILLERICA BOH RULES AND REGULATIONS)

The project proposes to disturb land more than one acre within the Town of Billerica. It is therefore subject to the Stormwater Management Regulations and is required to obtain a Stormwater Management Permit from the Board of Health. Compliance with these regulations is outlined throughout the following sections.

As depicted, the project meets the new development treatment requirements by recharging 1 inch of runoff for impervious areas which also provides in excess of 60% phosphorous removal.

MASSDEP STORMWATER STANDARDS

The project is subject to the Massachusetts Stormwater Standards as outlined by MassDEP. Compliance with these standards is outlined below:

NO UNTREATED STORMWATER (STANDARD NUMBER 1): *No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.* The project does not discharge untreated stormwater runoff – **complies with standard.**

POST-DEVELOPMENT PEAK DISCHARGE RATES (STANDARD NUMBER 2): *Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.* The project proposes to mitigate increases to runoff rates with the use of subsurface infiltration systems. Calculations indicate a decrease in peak discharge rate to all watersheds.

RECHARGE TO GROUNDWATER (STANDARD NUMBER 3): *Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to maximum extent practicable.* NRCS soil maps indicates the presence of Charlton-Urban land-Hollis complex with Hydrologic Soil Group Rating (HSGR) A (high infiltration). Four test pits were conducted in the new parking lot area, indicating sandy loam, sand, and loamy sand however the seasonal high groundwater fluctuates by 8.4 feet in 100 feet horizontally. The infiltration systems are modeled with a 2.41 inch/hour infiltration rate consistent with the soils.

SW7. *Provide additional soil tests to meet the minimum required (1/5000 sq. ft.). BOHLER:* Four (4) test pits have been provided within the general area of infiltration and we have provided two (2) test

pits for the 11,250 sq. feet of infiltration area. Bohler feels confident with the coverage of test pits for design and Estimated Seasonal High Ground Water. Bohler requests that if an additional test pit be required this to be a condition of approval to happen at the start of construction along with the town soil observations per comment SW8. **BETA2: The groundwater in the area of the proposed infiltration system is variable and depth to groundwater may be inadequate along the eastern portions of the system (See comment G7). BETA recommends the completion of at least 2 additional test pits along the eastern boundary of the system to confirm adequate separation to groundwater and meet the required number of soil tests.**

SW8. *Recommend a condition that an agent of the town observe native soils after excavation for basins to confirm design assumptions.* **BOHLER:** Preliminary test pits were performed by Bohler on December 21, 2022. It is acceptable that an agent of the Town be present at the time of excavation for the basins to confirm the design assumptions. **BETA2: BETA defers to the Town.**

TOTAL SUSPENDED SOLIDS (STANDARD NUMBER 4): *For new development, stormwater management systems must be designed to remove 80% of the annual load of Total Suspended Solids (TSS).* The proposed design includes the installation of water quality units and subsurface infiltration systems. Proposed proprietary water quality units provide 80% TSS removal or greater.

SW9. *TSS removal calculations indicates proprietary water quality units are CDS units while details indicate Stormceptor STC 450i units. MaSTEP lists TSS removal as 65% and 60% respectively. Clarify and update TSS removal calculations.* **BOHLER:** Report and calculations have been updated to accurately depict where CDS and Stormceptor units are used and TSS removal calculations have been updated to include MaSTEP removal rates. **BETA2: The TSS removal worksheet lists CDS water quality units, while the detail identifies all water quality units as Stormceptor STC. However, the proper value of 60% for STC450i units has been used in the calculations. BETA notes that the 80% TSS removal provided by subsurface infiltration systems is inclusive of required pretreatment. Revise worksheets to exclude the required 44% pretreatment.**

HIGHER POTENTIAL POLLUTANT LOADS (STANDARD NUMBER 5): *Stormwater discharges from Land Uses with Higher Potential Pollutant Loads (LUHPPLs) require the use of specific stormwater management BMPs.* The project traffic generation rate indicates 830 daily trips for this development and use therefore it is not classified as a LUHPPL – **standard not applicable.**

CRITICAL AREAS (STANDARD NUMBER 6): *Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.* The project is not located in a critical area – **standard not applicable.**

REDEVELOPMENT (STANDARD NUMBER 7): *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.* The project is not a redevelopment under the definition of “development, rehabilitation, expansion, and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area.” There is an increase in impervious area – **standard not applicable.**

EROSION AND SEDIMENT CONTROLS (STANDARD NUMBER 8): *Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.* As the project proposes to disturb greater than one acre of land, it will be required to file a Notice of Intent with EPA and develop a Stormwater Pollution Prevention Plan (SWPPP). An erosion control plan has been provided showing stabilized construction entrances, inlet protection, compost filter socks, and silt fence.

- SW10. *Provide Stormwater Pollution Prevention Plan (SWPPP) (6.6.013(1)).* BOHLER: A Stormwater Pollution Prevention Plan (SWPPP) has been provided. **BETA2: A draft SWPPP has been provided. BETA recommends a condition are quiring the final SWPPP be provided to the Town prior to the start of construction.**
- SW11. *Identify trees with a caliper twelve (12) inches or greater noting specimen (6.6.013(3)(c)ii.).* BOHLER: Survey has been requested for an additional trip to identify trees with a caliper twelve inches or greater. A revised plan with tree locations will be provided upon completion. **BETA2: Noted.**
- SW12. *Provide a general construction sequence on plan (6.6.013(3)(i)).* BOHLER: General construction sequence has been provided on the Erosion and Sediment Control Notes and Details, Sheet C-602. **BETA2: Sequence provided. Issue resolved.**
- SW13. *Provide provisions for sediment controls for the west/south access drive. This area discharges directly into wetland resource areas.* BOHLER: An additional row of compost filter socks will be stakes in place along the west/south side of the access drive as an extra layer of protection before discharge to the wetlands. **BETA2: Additional controls provided. Issue resolved.**
- SW14. *Identify proposed staging area for construction and waste materials (6.6.013(3)(i)).* BOHLER: A proposed staging area for construction and waste materials has been shown in the east corner of the existing parking lot per the Soil Erosion and Sediment Control Plan (Sheet C- 601). These areas have been selected as to not intrude upon the buffer zones associated with the wetlands in the vicinity of the Project. **BETA2: Information provided. Issue resolved.**
- SW15. *To better contain construction debris during the proposed demolition for this project provide a silt fence in combination with the proposed compost filter sock.* BOHLER: Soil Erosion and Sediment Control Plan (Sheet C-601) has been revised to include a silt fence in combination with the proposed filter sock. **BETA2: Plan revised. Issue resolved.**
- SW16. *Identify provisions for protecting infiltration systems during construction.* BOHLER: The sequence of construction on sheet C-602 has been revised to include the installation of measures to prevent sedimentation into open excavations. **BETA2: Measures provided. Issue resolved.**

OPERATIONS/MAINTENANCE PLAN (STANDARD NUMBER 9): *A Long-Term Operation and Maintenance Plan shall be developed and implemented to ensure that stormwater management systems function as designed.* A Stormwater Operation and Maintenance Manual was provided with the Stormwater Management Report.

- SW17. *Provide signature of owner.* BOHLER: The illicit discharge statement with signature has been included as part of this submission. **BETA2: Signed statement provided. Issue resolved.**
- SW18. *Add timing (March and late November) to street sweeping requirements.* BOHLER: The Operation and Maintenance Plan has been updated to include this timing. **BETA2: Plan revised. Issue resolved.**
- SW19. *Provide provisions for the inspection and maintenance of the trench drain.* BOHLER: Inspection and maintenance for the trench drain has been updated and included in this submission. **BETA2: Plan revised. Issue resolved.**
- SW20. *Design plans indicate only water quality units are proposed, update map and narrative to match plan.* BOHLER: The BMP map and narrative have been updated to include only water quality inlets. **BETA2: Plan revised. Issue resolved.**

- SW21. *Indicate proposed snow storage areas on the BMP map.* BOHLER: The BMP map has been revised to show snow storage areas and is included in this submission. **BETA2: Map revised. Issue resolved.**
- SW22. *The Operations and Maintenance Plan shall be recorded with the Middlesex Northern Registry of Deeds prior to the issuance of a Certificate of Compliance with the Board of Health (BOH 6.6.012(2)(b)).* BOHLER: The O&M Plan will be recorded with the Middlesex Northern Registry of Deeds prior to the request for issuance of the Certificate of Compliance. **BETA2: Response acknowledged. Issue resolved.**
- SW23. *Update plan and/or map with legend to clarify acronyms (CB=Catchbasin, etc.).* BOHLER: The legend on General Notes (Sheet C-102) has been updated to clarify drainage structure acronyms; CB, OCS, DMH, WQI and WQU. **BETA2: Plan revised. Issue resolved.**
- SW24. *Clarify on map whether systems are infiltration or detention systems. If the intent is detention include separate inspection and maintenance procedures.* BOHLER: The BMP map has been revised to clearly define limits of infiltration and detention. The separate inspection and maintenance procedure have been included as part of this submission. **BETA2: Map and narrative revised. Issue resolved.**
- SW25. *Recommend including a condition that requires the submission of inspection report and maintenance report to the DPW prior to May 30 annually.* BOHLER: Inspection and maintenance report has been updated to include this condition. **BETA2: Report revised. BETA refers to the Town regarding the proposed condition.**

ILLICIT DISCHARGES (STANDARD NUMBER 10): *All illicit discharges to the stormwater management system are prohibited.* An unsigned Illicit Discharge Compliance Statement was provided with the submission.

- SW26. *Provide owner's signature on Illicit Discharge Compliance Statement.* BOHLER: The owner's signature has been included on the Illicit Discharge Compliance Statement. **BETA2: Signature provided. Issue resolved.**

WETLAND RESOURCE AREAS

Wetland resources areas are depicted on the Site Plans and include vegetated wetlands and land subject to flooding. Proposed work within the 100-foot wetland buffer zone, riverfront area, and within 100-feet of land subject to flooding that includes pavement removal, tree clearing, pavement and sidewalk installation, pavement striping, drainage system installation, grading, and erosion controls. Most of this work is located within previously developed areas.

Erosion controls are shown on the plans to contain sedimentation for the work area. Stormwater management improvements are proposed to mitigate peak rate of runoff and provide water quality treatment of stormwater runoff from the site (see above).

MassDEP has issued a file number (DEP 109-1526) and provided the following comments

- W1. *It is unclear from the plans where the reduction in impervious area located within the 200-foot Riverfront Area will occur.* BOHLER: The reduction occurs to the southeast of the proposed building. There is additional open space proposed southwest of the access drive which is pavement in the existing conditions. **BETA2: Information provided. Recommend a callout and hatching identifying the pavement removal on the plans. Issue resolved.**

ADDITIONAL COMMENTS

- A1. BETA2: Screen existing contours to improve legibility of plans and differentiate between existing and proposed grading.**
- A2. BETA2: Provide signature and date on MassDEP Checklist.**

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.



Philip F Paradis, Jr., PE, LEED AP, CPSWQ
Associate

Job No: 7452



Stephen Borgatti, PE, MENG
Project Engineer