



ALLEN ENGINEERING & ASSOCIATES, INC.

Civil Engineers, Surveyors
& Land Development Consultants

October 31, 2025

Bellingham Conservation Commission
c/o Hannah Chace, Conservation Agent
10 Mechanic Street
Bellingham, MA 02019

Re: **Comment Responses**
Notice of Intent DEP File #105-0986
Blackstone Street Improvements
AEA Project - 00527

Dear Commissioners:

On behalf of the Applicant, Wall Street Development Corp., Allen Engineering & Associates, Inc. (AEA) is providing responses to comments prepared by the Commission's peer review consultant, Beals and Thomas, dated July 23, 2025.

Each of the comments are restated (*italicized*) with a response following in standard **bold** text.

MassDEP Technical Comments

- Project plans indicate direct impact to Bordering Vegetated Wetland and supplemental documents provided with the application detail the construction of a wetland replication area as mitigation for these impacts. Additionally, existing mapping layers and the accompanying wetland border report indicate that an undelineated intermittent stream exists within the delineated BVW. While the wetland system appears to be bisected by the existing gravel roadway, the applicant should confirm whether Bank impacts will be associated with the project and if so provide documentation demonstrating compliance with the performance standards at 310 CMR 10.54(4) and the MA Stream Crossing Standards.*

B+T Comment: With respect to the intermittent stream, during the time of the site visit, the up-stream portion of this stream was indistinguishable given the ponded condition of the WF-A Series BVW. However, we concur with MassDEP's recommendations for the portion of the stream within the WF-B Series, and recommend the Applicant provide commentary on how the Project conforms to the above-cited standards. We recognize that the situation is nuanced in that the replaced culvert is intended to preserve vernal pool hydrology within the WF-A Series, which may factor into how Bankfull width conformance is proposed.

Response: **No defined stream channel exists on the up-stream side of the road. The intermittent stream located down-stream of the road has been delineated in the field and survey located. See flags labeled SB-1 thru SB-4 and SA-1 thru SA-4. The stream channel originates at flags SB-1 and SA-1. No work is proposed within the stream channel and therefore The Stream Crossing Standards are not applicable.**



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2. *The applicant should provide a revised WPA Form 3 which identifies all resource area impacts and replacement values and MassDEP recommends that project plans be revised to include the siting location of the proposed wetland replication area which have been provided in "draft" form.*

B+T Comment: We request that the Applicant provide a revised WPA Form 3 itemizing resource area impacts with the revised plans as indicated by MassDEP above.

Response: A Revised WPA Form 3 is provided. (The wetland impact is now 2,525 sf was 2,302 sf. Replication areas is not 5,095 sf) The plans also reflect the wetland replication area and associates details. Refer to Sheet C-12.

Site Visit and Application Comments

3. *B+T concurs with the wetland delineation as presented on the plan, except for the following revisions discussed during the July 16, 2025 site visit. Specifically, we recommend:*
 - a. *Connect WF-A1 to the new WF-A1A, then connect WF-A1A to WF-AA1*
 - b. *Connect WF-A5 to the new WF-A5A, then connect WF-A5A to WF-A6*
 - c. *Connect WF-A8 to the new WF-A8A, then connect WF-A8A to the new WF-A8B to WF-A9*

Response: The revisions have been made to the plans including four (4) new flags.

4. *As per Section 247-25(E) of the Bylaw's Regulations, roadway construction is not permissible within the No-Disturbance Zone to a vernal pool. We request that the Applicant consider and prepare the appropriate documentation for a waiver request under Sections 247-10 and 11 of the Bylaw's regulations.*

Response: A waiver request is respectfully submitted along with these responses and revised plans.

Plan Comments

5. *The current site plans propose a box culvert at approximately Station 3+50 connecting the hydrology of the WF-A and WF-B Series. We understand from conversations during the site visit that the Applicant may be considering a weir structure to be able to control and preserve vernal pool hydrology within the up-gradient wetland. We request that the Applicant clarify this design intent and provide appropriate engineering details.*

Response: A weir structure is not proposed. The plans reflect a box culvert with the invert established at the spill-over elevation of the gravel road. This will ensure that the vernal pool hydrology will function as it currently does.

6. *The Buffer Zone nomenclature on the plan does not appear to match the requirements of the Bylaw. We request that the Applicant update to reflect the No Disturbance Zones detailed therein.*

Response: The nomenclature has been revised for consistency with the Bylaw where applicable.



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7. *The Existing Conditions Plan (Sheet C-3) is stamped by a professional engineer, even though professional land surveyor is referenced in the title block. We request that the Applicant provide an existing conditions plan stamped in accordance with 250 CMR 6.00.*

Response: The professional is both a P.E. and a P.L.S. The incorrect stamp was inadvertently placed on the plans. Sheets C-3 and C-4 which now bear the correct P.L.S. stamp.

8. *Where will materials be staged during the expansion and upgrade of the roadway? We request that the Applicant identify where stockpiles and staging will be performed, and that consideration be given to the areas west of Station 6+50 to keep them outside of resource areas and Buffer Zones to the extent practicable.*

Response: Two construction staging areas have been added to the plans. One at station 11+00 where grades are flattest. The second is within the cul-de-sac at the end of the proposed roadway.

9. *Given the site topography and that the WF-A, B, and C Series wetland are situated in a low point near the Site entrance, it appears that there is an increased risk for sediment to settle in this low point, either from overland flow or construction track out. The Commission may wish to consider erosion and sediment control monitoring. We further request that the Applicant consider temporary sediment traps in the upland areas down-gradient and east of Lot 12 to the extent feasible.*

Response: The Applicant is not opposed to typical erosion control monitoring. Erosion control measures are proposed and will be regularly inspected and maintained. It is not possible to utilize the area suggested for temporary sediment traps as the Applicant does not own or control that property.

10. *We request that the plan indicate the horizontal survey coordinate system (i.e. NAD83 State Plane).*

Response: Note no. 4 on Sheet C-2 has been updated accordingly.

11. *Two existing culverts were observed below Blackstone Street connecting the WF-A and B Series wetlands but are not indicated on the plan. We request that the Applicant revise the plans to depict these features.*

Response: After an extensive search, only a single 12" RCP culvert was found. It has been survey located and depicted on the plans.

12. *Sediment control barriers should be provided/extended to areas downgradient of proposed earthwork/trenching. For example, along the eastern perimeter of the drainage easement to Infiltration Basin 1, south of the roadway off-grading west of STA 7+00±, and around Infiltration Basin 2 and associated easement.*

Response: The sediment control barrier has been extended at Basin 1. All other recommended areas are far removed from any wetland resource areas and therefore do not warrant erosion controls

13. *There does not appear to be adequate space to install the retaining wall in the vicinity of the wetland/vernal pool, especially along the southern wall. There appears to be approximately two feet between the face of the wall and sediment control barrier and there appears to be a one-foot toe per the wall detail.*



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Response: The Applicant's goal is to minimize the wetland impact to the extent possible. We do however, concur that the construction corridor is narrow. For this reason, we have adjusted the work limits on both sides to allow additional room for construction. As noted previously, this has resulted in a slight increase in BWV impact from 2,302 sf. to 2,525 sf. The Applicant will also explore the possibility of reducing the width of the traveled way from 22-feet to 20-feet with the Planning Board in the vicinity of the culvert.

14. The proposed 2-foot high box culvert (at STA 3+45) appears as if it will have one foot of substrate placed within (per the roadway profile and invert elevation). Please provide a construction detail specific to the culvert and confirm this is the intent. If so, this will leave a relatively shallow one-foot-high opening. Please provide an operation and maintenance plan outlining measures to keep the culvert clear and functional in the wooded environment. It is also unclear how the substrate will be placed within the 37± foot culvert length, if that is the intent.

Response: There is no substrate proposed within the culvert. The profile view was simplified for clarity, which shows the left and right side of the culvert. A detail of the culvert has been added (see Sheet C-11).

15. The proposed 10-foot-wide box culvert appears as if it may have as little as 10 square feet of open area. Comparatively, the existing low point along the roadway extends at least 100 feet and excess runoff could theoretically crest over this length. Please confirm how the proposed culvert was sized and that it has adequate hydraulic capacity to convey any overflow from the vernal pool and wetland. Hydraulic analyses and water budgets may be warranted to demonstrate there are no adverse effects on the vernal pool or the wetlands.

Response: The proposed box culvert has an open area of 20 square feet. The culvert has been designed to convey the 50-year storm. Please refer to the drainage report. The inlet invert has been established at the same elevation as the gravel road where flow currently overtops the road in larger storm events. This will ensure that the vernal pool hydrology will function as it currently does.

16. There are multiple existing culverts crossing beneath the unimproved way providing hydraulic connections between the wetland systems proximate to the vernal pool. Please evaluate and provide documentation demonstrating the proposed design (consisting of the single box culvert) is consistent with the existing wetland hydrology.

Response: After an extensive search, only a single 12" RCP culvert was found. It has been survey located and depicted on the plans. The culvert was found to be blocked on the upstream side for an unknown period of time and has not been functioning. The Applicant has elected not to pursue the restoration of this culvert to avoid any adverse impact to the recently certified vernal pool. See responses to comment no. 15 above regarding the hydrology function.

17. We recommend the proposed water main be insulated where it crosses beneath proposed culverts, as there is less than 5-feet of separation to the open-air.

Response: A notation has been added to the profile accordingly (see Sheet C-5).



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18. Several stormwater drain pipes are proposed at slopes of 10%, including the 12" HDPE outlet pipe from DMH 3 and the 15" HDPE outlet pipe from DMH 5. This results in maximum flowing full velocities of 14.4 and 16.7 feet per second, respectively. Standard engineering practice is for maximum velocities to not exceed 12 feet per second.
- Response: The outlet pipe from DMH-3 has been lowered to mitigate the excessive velocity. The outlet pipe from DMH-5 is sloped at 1%, not 10%.**
19. There do not appear to be soil test pit locations indicated on the plan in the vicinity of Infiltration Basin 3. Please perform a minimum 3 soil test pits at Infiltration Basin 3 in accordance with the Bellingham Wetlands Regulations Section 247-33.B(2).
- Response: Basin 3 was added after the initial soil testing. Test pits were recently performed within Basin 3. Test pit logs have been added to Sheet C-8.**
20. We request that the Applicant extend the ends of the gabion at Infiltration Basin 3 to the 291± contour elevation.
- Response: The gabion has been extended as requested.**
21. We request the Applicant provide maximum 100-year storm water surface elevations within the Basin Elevation Schedule on the Stormwater Collection and Infiltration Basin detail on C-11. In accordance with the Bellingham Wetlands Regulations Section 247- 33.B(3), basins shall be designed with a minimum one foot of freeboard from the 100-year ponding elevation to the emergency spillway. Standard engineering practice dictates an additional one foot of freeboard above the emergency overflow spillway to the top of berm. Also, please revise this detail to delete what appears to be an erroneous top of berm elevation of 216.60.
- Response: A row of maximum ponding elevation has been added to the table on Sheet C-11. A foot of freeboard has been called for above the spillway for each of the three basins. Also, 216.6 has been removed.**
22. Please confirm the emergency spillways are designed to pass the 100-year inflow rate with 6" of freeboard to the top of berm (i.e. basin in failure) in accordance with Bellingham Wetlands Regulation Section 247-33.B(4).
- Response: The basins have been designed such that the 100-year storm event will not reach the overflow spillway. In addition, AEA has provided analysis of the three basins "in failure" or only the spillway as an outlet and the results show that the peak ponding elevations still do not rise to the level of the spillways.**
23. We request the Applicant consider proposing outlet control structures at each of the infiltration basins, in accordance with the MassDEP Stormwater Handbook. The design is dependent upon the infiltrative capacity of the soils. Under frozen/frost conditions, the basins may not dewater within 72 hours as required by the MassDEP Stormwater Management Policy.
- Response: The basins have been designed with exfiltration and emergency spillways as their outlets. The result is a larger basin than if additional outlets were added. This conservative approach will allow for future outlet control structures to be inserted after the final development of the property has been designed.**



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24. We recommend the Applicant propose a free-draining loam for the bottom of the infiltration basins. The loam shall not impede infiltrative capacity.

Response: The detail on Sheet C-11 has been revised accordingly.

25. We recommend drawdown devices be proposed to dewater each of the basins for maintenance, in accordance with the MassDEP Stormwater Handbook.

Response: As stated in response no. 23, there are no low flow structural outlet control devices designed. In the unlikely event that the basins do not drain, dewatering can be performed by using a temporary pump.

26. The paved widths on the roadway details on sheet C-11 are inconsistent with the notes. Assuming binder is paved 1.5 feet beyond traveled way, the binder width would be 25 feet (not 23 feet) to support the bituminous berm. Revise the roadway cross-sectional details to depict accurate pavement widths including pavement below the berm.

Response: The cross sections have been revised accordingly.

Please feel free to contact me at 508 381-3212 ext. 109 with any questions regarding this correspondence.

Sincerely,

**ALLEN ENGINEERING
& ASSOCIATES, INC.**

A blue ink signature of Michael J. Dryden.

Michael J. Dryden, RLA
Senior Project Manager

A blue ink signature of Mark E. Allen.

Mark E. Allen, P.E.
President

Cc: Lou Petrozzi, Wall Street Development Corp., LLC