

MEMORANDUM

To: Mr. Pascal Rettig, Chairman Amesbury Planning Board	Date: January 9, 2026
Cc: Mr. Nipun Jain, Director of Planning Community & Economic Development	Applicant: 9 Oakland Street Amesbury LLC Owner: 9 Oakland Street Amesbury LLC
From: Gerard J. Fortin, P.E. Michael Leach Stantec Consulting Services Inc.	RE: Tax Map 53 Lots 94 & 95 "Carriage Hill Lofts" Site Plan 1-9 Oakland Street & Chestnut Street Stormwater Peer Review Project No. 179451191

As requested, Stantec Consulting Services, Inc. (Stantec) has conducted an initial review of the stormwater report and system submitted with the site plan and Special Permit Application relative to the proposed development identified as "Carriage Hill Lofts" located at the 1-9 Oakland Street and submitted on behalf of 9 Oakland Street Amesbury LLC (Applicant). The review was based primarily on plans and stormwater report provided by Millenium Engineering, Inc. (MEI) and additional supporting documents/information that was available and obtained from the City's Planning Board project website. We note the following available materials have been obtained:

1. Proposed Site Plan for Carriage Hill Lofts at Oakland Street in Amesbury MA plan set dated October 2025 prepared by Millennium Engineering, Inc.;
2. Stormwater Analysis for Carriage Hill Lofts at 9 Oakland St., Amesbury MA dated 9/18/2025 prepared by Millennium Engineering, Inc.;
3. Copy of letter to the City of Amesbury Zoning Board of Appeals from the Amesbury Historical Commission dated July 15, 2025;
4. Copy of letter to Sweet Management relative to traffic for the Site Development Plans, 1-9 Oakland Street dated September 8, 2025 prepared by GPI;
5. Copy of Site Plan Application dated 9/29/2025 prepared by Jeffrey L. Roelofs, Esq.;
6. Copy of architectural renderings for Carriage Hill Lofts, dated September 29, 2025 prepared by SV Design LLC;
7. Project Narrative for Carriage Hill Lofts dated September 29, 2025 prepared by SV Design LLC.

Please note the review of the site plan design and entire application information relative to the Site Plan Review under the Zoning Bylaws Section XI.C and the Lower Millyard Overlay District (LMOD) Special Permit per Section XI.H2 was not part of the scope of services for this project and a review was not conducted at the request of the Community & Economic Development Department. It is our understanding that the review of the project site plan design, building design, landscaping, lighting, signs, traffic, etc. per Sections XI.C and XI.H2 will be conducted by the Community & Economic Development Department.

Project Understanding

Stantec understands MEI has submitted an application on behalf of the Applicant for the "Carriage Hill Lofts" redevelopment project to the Planning Board for consideration. The proposed redevelopment project consists of restoration, conversion, and preservation of existing historic buildings and the addition of a new architecturally compatible building to the existing buildings to create/develop residential units and commercial spaces with garage parking spaces. The



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stormwater design proposes to construct two separate subsurface infiltration systems to address the proposed development impacts to the site for the proposed building addition and other site changes. One of the proposed stormwater systems is to be placed below the garage floor of the proposed building addition. In addition, the project proposes relocation of existing sewer lines and proposed connections to existing sewer, stormwater, gas, water, and other utilities within the existing streets. Based upon the above submitted information we offer the following general comments:

A. Stormwater Management Report:

The Applicant has provided a stormwater management report for the project. We note the following general comments and/or concerns:

1. The Applicant's design proposes to place a stormwater system underneath the proposed building with the proposed system to collect a majority of the building roof runoff and infiltrate the runoff under the proposed garage floor of the six story building. This stormwater design appears unconventional and we do not recommend this practice. It is unknown if a geotechnical and/or structural analysis has been conducted and provided to the Planning Board that demonstrates the introduction of stormwater runoff below the building is appropriate and would not impact the building foundation or garage floor. The Planning Board should consider if a report to address this concern is necessary or if this design is even appropriate.
2. The submitted NRCS soils information for the site is noted as "602- Urban Land" with no soil properties to determine the appropriate soil classification and water table characteristics relative to the stormwater system. It is noted that the report includes boings and test probe information, but none are located in or adjacent to the proposed subsurface stormwater locations. In general, the soil tests were not conducted during the spring to identify the estimated seasonal high water table (E.S.H.W.T) and demonstrate proper separation for the water table is provided. It is noted that several of the soil logs indicates fine sand and silt that would imply a lower infiltration rate at the proposed stormwater locations which is contrary to the assumed Hydraulic Soil Group A (HSG A) infiltration rate of 8.27 inches per hour in the analysis. With the proposed chambers to be 6 to 36 feet below the existing ground, it is recommended that additional test pits and in-situ saturated hydraulic conductivity soil field testing be conducted at the elevation of the proposed infiltration surfaces at each proposed stormwater location per Volume 3 of the Massachusetts Stormwater Handbook. A minimum of three infiltration tests should be conducted at each stormwater system consistent with the criteria for infiltration basins per Volume 2 Chapter 2. Since the infiltration rate dictates the size/configuration of the stormwater system, the necessary infiltration testing and soils analysis to identify the E.S.H.W.T should be completed prior to updating the site design and stormwater analysis. The locations of the soil test pits/borings should be added to the existing conditions plan.
3. The Applicant's name noted in the introduction (Sweet Management, Inc.) does not match the Project application information. Please update the report consistent with the application accordingly.
4. Standard 1: This standard appears to be addressed.
5. Standard 2: The existing conditions analysis approach assumes the entire site flows to the City's existing drainage system along Chestnut Street and does not address the specific impacts to each abutter and each street. The limits of the subcatchment

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delineation is unclear. Please note the existing conditions plan information provided on the pre-development plan appears incomplete and does not provide information for comparison to the post development conditions and apparent impacts to all abutters. The following relative to pre-development existing conditions plan is noted:

- The indicated contours imply the runoff from the southwesterly portion of the site would contribute flow to abutting lot 97, but this is not identified.
- The direction of the building roof runoff is not identified. It is unclear/unknown if the current roof runoff is directed to internal roof drains or sheet flows off the roof to abutting lots and streets.
- Spot elevations are absent along the southerly boundary to demonstrate the direction of runoff along the southerly side of the site along abutting lot 214.
- Contour labels are absent from the courtyard area facing Oakland Street to clarify the direction of site runoff.
- The current amount of site area contributing runoff to the catch basin on Oakland Street is not identified.
- The area of site that contributes runoff directly to each catch basin on Chestnut Street is not identified.
- The area of site runoff that bypasses the existing Chestnut Street catch basin and flows directly to Chestnut Street is not identified.
- The plan does not appear to include or address the areas of the proposed improvements shown within Oakland Street or Chestnut Street.
- The plan does not appear to address the proposed sewer line relocation upon abutting lot 97.

The existing pre-development plan and analysis should be revised accordingly to clarify the above items and the associated impacts to all abutters (lots and streets) should be identified in a summary table in the report. The post development drainage plan and analysis should be reviewed and revised accordingly for comparison to demonstrate compliance with no increase in runoff is achieved at each abutter.

6. Standard 2: The predevelopment calculations for subcatchment S1 should be revised to note "Good " conditions consistent with standard engineering practice when no supporting information is provided to demonstrate other conditions. In addition, the limits of the entire existing tree line are absent and the amount of woods could not be confirmed. Also, the location of bare soil areas were not indicated or labeled and could not be confirmed. Please update the calculations and predevelopment plan accordingly.
7. The predevelopment calculations for subcatchment S1 should be revised to clarify the amount of pavement versus roof area for review and comparison to the existing conditions plan and for review and comparison to the post development calculations. Please update the calculations accordingly.
8. The post development analysis indicates a portion of the proposed roof runoff (subcatchment S1-1) will be directed to the proposed infiltration chamber system under the proposed garage – pond IC1, however, the project plans do not indicate/address how this runoff would reach the chamber system. The limit of the subcatchment delineation is unclear and the amount of roof imperious area could not be confirmed. We note the separate architecture plans imply the proposed building

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- will have sloped roofs that would sheet flow runoff away from the site and this appears contrary to the stormwater design information presented. Please provide additional information to clarify that the submitted stormwater design/analysis is consistent with the project design. This should include hydraulic analysis of any piping system (absent) that may be needed to connect the roof to the chamber system to demonstrate the design is appropriate.
9. Post development subcatchment S1-2 is noted to be an isolated area between the existing and proposed building, but the area shown on the post development plan appears to be different than the area shown on the separate architectural plans (sheets A104-A106) which indicate a large opening. Please provide additional information to clarify that the project design is consistent with the stormwater analysis and subcatchment calculations.
 10. Post development analysis indicates subcatchment S1-2 is to be an isolated area between the existing and proposed building and will pond water in this location with the design intent to infiltrate the water between the building foundations. Based upon the assumed rapid infiltration rate, the pond calculations indicate the pond volume would be up to one foot in depth during the 100-year storm and the would be deeper should the soil infiltration rate be significantly less than the optimal assumed. From a practical perspective, the Applicant should consider installation of a catch basin in this area with a connection to the stormwater system to prevent water ponding between the buildings.
 11. The post development subcatchment S1-3 calculations appear to include the remainder of the site roof runoff will be directed to the proposed infiltration chamber system under the parking lot – pond IC2, however, the project plans do not indicate/address how this would occur. The limit of the subcatchment delineation is unclear and the amount of roof impervious area could not be confirmed. We note the separate architecture plans imply the proposed building will have sloped roofs that appear to sheet flow to the streets and abutting lot 214, which is contrary to information presented. Please provide additional information to clarify that the project design is consistent with the stormwater analysis. This should include hydraulic analysis of any piping system (absent) that may be needed to connect to the roofs to chamber system to demonstrate the design is appropriate.
 12. It appears the delineation of post subcatchment S1-3 does not properly address the driveway ramp down into the garage. Please review, clarify, and revise the subcatchment delineation, calculations, and analysis to be consistent with the project design.
 13. Please review and revise the amount of grass area in post subcatchment S1-3 that appears to be more than represented on sheet A102.
 14. Standard 2: The post development plan and project analysis does not appear to include/address the walkway along the southwesterly side of the proposed building shown on sheet A100 or the impacts to abutting lot 97. Please review, clarify, and revise the calculations and analysis to be consistent with the project design. Please verify compliance is achieved – no increase in runoff.
 15. Standard 2: The post development analysis does not address the CDS unit in the analysis or routing diagram. It is unknown if the CDS unit is adequately sized or

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- designed to capture all of the site runoff and direct it to the chamber system as implied in the analysis. Please provide additional information to clarify that the project design is consistent with the stormwater analysis. This should include calculations and supporting information that the top grate and associated grading design would capture all the site runoff and not bypass the structure.
16. Standard 2: It appears the volumes for the proposed chambers in the pond calculations are not representative of the dimensions noted for the chambers. Please review and provide additional information to clarify the chamber volumes are properly represented in the pond calculations.
 17. Standard 2: the post development pond routing calculations for the two chamber systems indicate two primary outlet devices and one secondary automatic overflow device, but the configuration and location of these devices is unknown. In addition, it is unclear how the flow from the three devices merge together into a single pipe and discharge to the street connections as implied in the analysis. The detail in the plan set does not appear to address the outlet devices noted in the analysis. Please review and provide additional information to clarify the location and configuration of each outlet device and clarify how the flow from the devices would be collected and discharge toward the street in a single pipe as represented in the pond calculations.
 18. Standard 2: The report lacks hydraulic pipe calculations for the proposed pipes and pipe network systems for the connections to the City's existing stormwater system. The hydraulic pipe calculations should indicate the system pipe velocities, hydraulic grade line/elevations to demonstrate the proposed systems are of adequate size to convey flow under gravity conditions for the storm events and to demonstrate the flow range is within the minimum velocity of 3 FPS and maximum 10 FPS in accordance with section 7.10.C of the Amesbury Subdivision Rules and Regulations. The analysis should be updated accordingly.
 19. Standard 3: The project design includes infiltration for recharge to groundwater to meet this standard and the design proposes to capture a significant amount of impervious area and infiltrate it. As noted above, the NRCS soils information and the other soil data does not address the actual soil infiltration rate and the assumption of HSG A soils at the elevation of the proposed soil and chamber system interface. Site specific soil testing should be conducted as noted in comment A.2 above.
 20. Standard 4: The analysis does not address the CDS unit in the analysis or routing diagram and demonstrate the unit is properly sized. In addition, the report does not provide information relative to the TSS removal amount provided before infiltration and the final TSS for the site. Please review and update accordingly to demonstrate how compliance for this standard has been met.
 21. Standard 5: The report notes that the site's previous industrial use and remedial efforts have been completed, but the report is absent of supporting documentation of the completion of the remedial efforts. Please update the report to provide supporting information.
 22. Standard 6: The report notes that this standard is not applicable. Stantec concurs with the statement.
 23. Standard 7: Redevelopment: This project is subject to this standard. The updates/clarifications to standards 2-5 noted above would further demonstrate that

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- the proposed stormwater system provides improvements to the existing conditions and compliance with the standard.
24. Standard 8: The report does not include information relative to the Erosion and Sediment Control BMP's but does reference that a separate plan has been prepared that appears to be sheet C6.0 in the separate project plan set prepared by MEI. Relative to the separate plan, please clarify/address the following relative to standard 8 and the project design:
- A. The plan is presented as a demolition plan and erosion control plan with overlapping text that is unclear. The plan is at a reduced scale (1"=30') from the rest of the plan set (1"=20') and the details for the work do not appear to represent all of the proposed demolition work in areas where construction is shown on the site plan including the associated erosion control measures for these areas. It is recommended a separate plan at the same scale as the site plan (1"=20") be provided that clearly identifies all of the project impact areas and the appropriate erosion control measures.
 - B. Names of Persons or Entity Responsible for Plan Compliance needs to be identified;
 - C. Due to the limited site constraints, the initial locations of typical Construction Period Pollution Prevention Measures BMP's such as waste material dumpsters, hazardous waste storage, sanitary waste facilities, concrete/construction washout areas, vehicle maintenance/refueling locations, etc. should be indicated and labeled. Please review and revise the plan accordingly.
 - D. Location of swales ditches and ponds noted under the general maintenance needs to be clearly shown;
 - E. Details/ specifications for the noted erosion control BMPs, such as silt fence, hay bales, stone sump, etc. needs to be provided.
 - F. Inspection and Maintenance Log Form needs to be included;
 - G. Review/correct typographic errors.
25. Standard 9: The report includes a Long Term Pollution Prevention and Operation & Maintenance Plan document.
- A. Please clarify/address the following items in Post Construction BMP's that is part of Standard 9, which typically includes the following:
 - 1. Provisions for storing materials and waste products inside or under cover;
 - 2. Requirements for routine inspections and maintenance of each stormwater BMP (i.e. CDS unit) and checklist that identifies each BMP (provide O&M manuals for all systems);
 - 3. Provisions for maintenance of gardens, and other landscaped areas;
 - 4. Update the street sweeping to include sidewalks and patios;
 - 5. Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - 6. Snow disposal and plowing plans (including snow storage location plan);
 - 7. Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges.
 - 8. A plan identifying each BMP location requiring maintenance under the BMPs should be included in the document. This should include the maintenance requirements as specified for any manufactured BMP's.



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9. Please clarify and provide supporting documentation that the garage design has considered access by men and equipment to conduct maintenance of the chamber system located under the floor.
- B. Amesbury is an MS4 community, and we recommend copies of the stormwater inspection checklists be provided to the City on an annual basis. This should be noted in the document.
- C. Please provide an endorsement for the illicit discharge statement to meet compliance with standard 10.
- D. We recommend the updated document be a separate complete document as typically requested by the Board
26. Standard 9: An estimated operations and maintenance budget in accordance with Standard 9 was absent from the document. Please include with the updated submission.
27. We recommend the Applicant update the report to include a complete 25-year analysis for the pre- and post-development conditions per section 7.10.A of the Subdivision Rules and Regulations as referenced in Section XI.C.8.p of the Amesbury Zoning Ordinance.

B. Site Plan Set:

1. The following relative to existing conditions plan is noted. The plan shall be updated accordingly:
 - Five foot contour interval is indicated and does not comply with XI.C.5.b of the Amesbury Zoning Ordinance requiring 2-foot contours.
 - Spot elevations are absent along the southerly boundary to demonstrate the direction of runoff along the southerly side of the site along abutting lot 214.
 - Spot elevations are absent from the courtyard area to demonstrate the direction of runoff flow.
2. We recommend the Applicant clarify/address the following relative to the civil site plan – sheet C-5.0:
 - A. The drainage design indicates a 10" PVC pipe is proposed for the garage chamber system to the connection point in Chestnut Street, which does not comply with the reinforced concrete pipe class III (RCP-CIII) or minimum 12-inch pipe size required in the specific design and construction standards of Section 8.04.A.1 of the Amesbury Subdivision Rules and Regulations referenced under Section XI.C.8.p of the Bylaws. The stormwater design indicates a "Y" connection to the City's existing stormwater system is proposed. It is unknown if the Department of Public Works (DPW) has agreed to the connection within Chestnut Street, the type of connection proposed, or the type of pipe within the existing street. Since design invert information for the proposed pipe and a profile of the proposed stormwater connection is absent from the project plans, it is unknown if the proposed stormwater pipe would provide proper cover or conflict with the existing water line. The stormwater design and connection should be revised in compliance with the regulations and the separate stormwater report should include documentation the design is acceptable to the DPW. The project details should be revised accordingly and provide any additional details for proper construction.

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- B. Please label the size, type, length, and slope of the drain pipe from CB/WQU to the parking lot chamber system and the proposed pipe from the chamber system to the existing catch basin on Oakland Street. It is unknown if the DPW has agreed to the connection within Oakland Street or the type of connection proposed. Since design invert information for the proposed pipe and a profile of the proposed stormwater connection at Oakland Street is absent from the project plans, it is unknown if the proposed stormwater pipe would have proper cover or properly connect at the catch basin. In addition, it is unknown if the 25-year chamber system peak elevation would backwater the CB/WQU unit outlet. The stormwater design and connection should be revised to include the design information for proper construction and the separate stormwater report should include documentation the design is acceptable to the DPW.
 - C. As noted above, the stormwater analysis indicates all of the building roof runoff is directed to the two proposed subsurface chamber systems, but the plan does not indicate or address how this would occur. The plans should be revised accordingly and consistent with the stormwater analysis and all appropriate details should be provided in the plan set for proper construction.
 - D. The location and rim elevations for the access manholes to the two chamber systems are absent from the plan for proper construction. We recommend a minimum of two inspection manholes be provided for each subsurface chamber system or more if required by the manufacturer. Please update the plan accordingly.
 - E. Please provide spot elevations at parking lot corners, building corners, dumpster pad, patio area and other various locations around the buildings to demonstrate the grading design intent and for proper construction. It is unclear how the runoff along the rear of the building adjacent to Lot 97 is intended to drain with the proposed stone dust walkway and how the runoff would enter into the City's stormwater system as implied in the stormwater analysis. Please review and revise the design accordingly.
 - F. It is unclear whether the necessary minimum cover over the chamber system and below the pavement is provided at the parking lot system near the pipe connection from the CB/WQU. In addition, it is unclear whether sufficient cover is provided over the garage chamber system. Please review and revise the design and provide supporting information, including spot elevations, to demonstrate the proposed design complies with the manufacturer's requirements.
 - G. A spot elevation of 31.47 is shown near the patio area adjacent to the garage that would appear to pond water at the building. Please review and revise as necessary.
3. The drain service connection detail does not properly indicate the existing drain pipe size noted on the existing conditions plan. Please update accordingly.
4. Other items observed during the plan review;
- A. The proposed building is indicated to be placed 5 feet from the existing sewer line and upon a portion of the existing sewer line through the property. The existing conditions plan does not identify an existing sewer easement along the property line or within the property for the sewer line. The proposed design indicates a portion of the existing sewer line will be removed and relocated onto the abutting property, Lot 97, but the plans do not indicate a sewer easement for the relocation. It is unknown if the DPW has agreed to the relocation and the construction of the

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proposed building in close proximity to the existing sewer line. It is unknown if the construction of the building footing (located outside the foundation wall) would be placed upon or below the existing sewer line. It appears the proximity of the proposed building would inhibit or prevent the DPW's men and equipment from maintaining, repairing, or replacing the existing and proposed sewer lines in this location.

- B. The proposed site improvements along Oakland Street include creation of curbed sidewalks and landscape islands for the benefit of the development along the existing courtyard area, and reduce the existing roadway width to approximately 20 feet which is less than the existing conditions and minimum required width of 24 feet per the Subdivision Rules and Regulations design standards 7.09.E It is unknown if the DPW has agreed to the creation of landscape areas within the roadway right-of-way and the reduction of the roadway width. Street parking and snow banks at this reduced roadway width location could impair emergency services for the neighborhood.

Summary:

We recommend the Applicant arrange a meeting with the Community and Economic Department before addressing the issues noted above. After the meeting, we recommend the Applicant address the comments and issues noted above and resubmit revised drawings and supporting information. We recommend the Applicant provide a summary response letter with the revised stormwater report, drawings, and supporting information addressing each comment noted above.

GJF/ml