

January 10, 2014

Mr. Michael Behrendt, AICP
Town of Durham
15 Newmarket Road
Durham, New Hampshire 03824

RE: A&M Project # 1925-01
Orion Student Housing -Design Review # 1
25-35 Main Street
Tax Map 5 Lots 1-6, 1-7, and 1-8
Durham, New Hampshire
Response to Peer Review

Dear Mr. Behrendt,

Please find Allen & Major Associates, Inc. (A&M) responses to the Peer Review comments issued by Tighe & Bond in a letter dated January 7, 2014 regarding the Site Plan Application for the above referenced project.

General Comments:

1. The ability to connect to the sewer main located within Main Street is currently unknown and is not the preferred location as stated by the Durham DPW. The existing sewer main is a very old clay line that passes under the Campus Convenience and Durham Book Exchange buildings. At this time it is not known if the existing line can accommodate the proposed sewer flows and/or if the line can be upgraded since it is located below two existing buildings. We recommend that the applicant perform a capacity analysis for this line and propose any improvements that may be required if they intend to move forward with the connection in this location. We also recommend that the applicant work with the Town to secure any easements that may be required for improvements to this sewer line on any privately owned property. ***A&M's Response: The design team has had several discussions and meetings with the Durham DPW regarding this matter. (We recommend that this item be made a condition of approval).***

2. The applicant will be required to file a Sewer Connection Permit with the NHDES. ***A&M's Response: Agreed. A sewer connection permit will be obtained as a matter of course for the project. (We recommend that this item be made a condition of approval).***

3. The applicant will be required to file a Utility Connection Permit with the Town of Durham. ***A&M's Response: Agreed. A utility connection permit will be obtained as a matter of course for the project. (We recommend that this item be made a condition of approval).***

4. The amount of land disturbance will exceed one acre, therefore the owner and contractor will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) with the EPA. ***A&M's Response: Agreed. The preparation of a SWPPP and filing of an NOI will be completed prior to any construction activities on the site. (We recommend that this item be made a condition of approval).***

5. We recommend the addition of a Demolition (or similar) Plan to help clarify the limits of items to be removed or demolished.

A&M's Response: The majority of the site features will be removed. Additional clarifying notes have been added to the construction management plan.

6. We recommend a Truck Turning Plan be provided to confirm the ability of fire trucks to access the site, garbage trucks to access the dumpsters and utility vehicles to access the electrical transformer, etc.

A&M's Response: A truck turn plan has been added to the updated submission.

7. The final Site Plans and Stormwater Management Plan should be stamped by a professional engineer licensed in the state of New Hampshire.

A&M's Response: Agreed. Final plans will be stamped by a professional engineer. (We recommend that this item be made a condition of approval).

Stormwater Summary Comments:

8. The applicant should submit a Stormwater Management Plan in accordance with the Site Plan Review Regulations Section 9.03. Currently only a "Stormwater Summary" has been submitted. As part of the Stormwater Management Plan an updated Stormwater Checklist should be submitted as required by the Town. The Stormwater Management plans should include the Water Quality Volume (WQV) calculations and proposed treatment methods for impervious areas.

A&M's Response: A stormwater management plan has been submitted.

9. As proposed the porous paver system does not appear to meet the NHDES AoT standard for stormwater treatment as there is no "filter" layer, or if infiltration is the proposed treatment method, there is no depth to groundwater shown to confirm appropriate separation. The specific treatment measures should be described so as to meet the intent of the Town of Durham Site Plan Review Regulations.

A&M's Response: The cross section of the permeable pavers has been updated.

10. An Operation and Maintenance Plan should be included for the stormwater system.

A&M's Response: A stormwater management plan has been submitted.

11. The watershed "nodes" shown in the HydroCAD drainage analysis provided do not match those shown on the Watershed Plans (Sheets EWP & PWP) and should be revised for clarification.

A&M's Response: The watershed plans and HydroCAD have been updated.

12. The flow paths for determining the Time of Concentration (Tc) for each watershed area has not been shown on the plans and should be added. We could not verify the lengths of these paths due to this omission.

A&M's Response: The watershed plans have been updated.

13. The sub-watershed boundaries were not shown on the proposed Watershed Plan (Sheet PWP) and should be added. Therefore, we could not verify these boundaries.

A&M's Response: The watershed plans have been updated.

14. It is unclear why the watershed boundary on the eastern portion of the site extends over only a portion of the abutting building and not the entire building or surrounding parking area which appears to drain towards the site. This should be clarified and/or revised.

A&M's Response: A small portion of the abutting site at the eastern portion of the parcel does drain on to our site; it is part of a pitched roof system. The rear portion of the abutting parcel flows away from our project. The watershed plans have been updated.

15. A Tc of 790 minutes (13.2 hours) was used for the post-development watersheds, "Pr2a" and "Pr2b". There was no calculation or rationale why such a long Tc was used (typically in such a small watershed a Tc of just a few minutes would be used). Although longer Tc's for porous pavement may be used they are typically associated with thicker cross-sections that include a filtering/sand layer. The proposed stone layers below the porous pavers are only two feet thick and consist of washed/clean stone that would not likely produce a Tc of over 13 hours. Therefore this Tc should be revised to be more realistic and back-up calculations should be provided.

A&M's Response: The Tc for the proposed watersheds has been updated.

16. It is unclear why a stormwater runoff curve number (CN) of 80 is being used in the post-development watershed "Pr1" when in the other watershed the CN's are 98. This should be clarified.

A&M's Response: The stormwater model has been updated to remove this situation.

17. The soils being used in the drainage analysis are based on publically available NRCS soils data, and include Suffolk Silt Loam (SfC) and Hollis-Charlton (HcB) fine sandy loams. From our understanding no additional soils investigation has been completed. Since the primary method of stormwater treatment and quantity reduction is based on infiltration practices (porous pavers and rain gardens) we strongly recommend that additional soil investigation be performed on-site to confirm the acceptability of the underlying soils to accept stormwater.

A&M's Response: At this time it is unfeasible to conduct and Subsurface Investigations while students currently occupy the site. Subsurface explorations will be conducted in the spring and the findings will be compared to the NRCS data.

18. An infiltration rate of 0.85 inches per hour is being used below the porous pavers. Typically a rate of one half the lowest published rates below the infiltration practice should be used unless additional field testing has been performed. Based on the Society of Soil Scientists of Northern New England (SSSNNE) Special Publication No.5, "Ksat Values for New Hampshire Soils", the published values for SfC are 0-0.2 inches per hour (the majority of soil below the porous pavers), and the low values for the HcB soils complex range from 0.6-2 inches per hour. In addition the Hollis portion of the HcB soil complex states that ledge may be encountered within 10-20 inches of the surface. Therefore a more conservative infiltration rate should be used if in-place soil testing is not performed.

A&M's Response: The stormwater model has been updated to use a more conservative infiltration value.

19. The entire porous paver complex was modeled with a subsurface reservoir ("pond") that infiltrates water into the sub-soils and therefore has no runoff in the post- development condition. However, the proposed underdrain shown in the detail was not modeled and therefore misrepresents the actual stormwater leaving the system. The model should be revised to include this underdrain.

A&M's Response: The stormwater model has been updated to include an underdrain.

20. The porous paver system was modeled as flat in the stormwater analysis. However there is a 4% slope in one section of the porous paver area. To more accurately model this system, at least two porous paver sections should be modeled. In addition a subsurface check dam is recommended to separate the upper porous paver section from the lower section so that stormwater does not bypass the upper system and overwhelm the lower system.

A&M's Response: The permeable paver system continues to be modeled as flat. Additional details and cross sections will be added to the final plans to aid in the construction of this system and to prevent short circuiting of this system. (We recommend that this item be made a condition of approval).

21. The roofs of the buildings "A" and "B" appear to be modeled as being connected directly to the porous pavers. A detail or description of this connection should be added to clarify the intent and/or constructability.

A&M's Response: Bldg. A roof is sloped and will sheet flow off to landscaped areas around the building. Bldg B has a combination of sloped and flat. The sloped roofs will sheet flow off to landscaped areas around the building while the flat roof areas will have internal drains which will discharge to landscaped areas at the building perimeters. Additional details will be added to the final plans. (We recommend that this item be made a condition of approval).

22. The roof runoff modeled in the post-development watershed "Pr2" does not appear to receive any treatment.

A&M's Response: In accordance with NHDES regulations, roof runoff is not required to have pre-treatment.

Construction Management Plan

23. A Memorandum of Understanding (MOU) or similar agreement between the Town and the developer is recommended for any work within the Main Street right-of-way (ROW) including the reconstruction of the sidewalk.

A&M's Response: Agreed. An MOU will be executed prior to construction. (We recommend that this item be made a condition of approval).

24. Due to the extremely close proximity of construction to the abutting properties and buildings, construction easements will likely be required. These easements will need to be in place prior to the start of any work that will affect the abutting properties.

A&M's Response: Agreed. If required temporary construction easements will be obtained during construction. (We recommend that this item be made a condition of approval).

25. Due to the site constraints deliveries to the site will likely be required to occur within the Main Street ROW. We recommend that weekly meetings be held between the Town, developer and contractors to determine deliveries to the site and review traffic mitigation measures as required.

A&M's Response: Any required construction related meetings will be coordinated with the Town during the construction process. (We recommend that this item be made a condition of approval).

26. The Construction Management Plan (CMP) states that the site will be gated and locked at the end of each work day during construction. We recommend that the Durham Fire Department and Police Department be given copies of the keys for emergency access.

A&M's Response: Security of the site during construction will be coordinated with the Police and Fire departments prior to start of construction. (We recommend that this item be made a condition of approval).

27. Due to the silty soils anticipated on-site we recommend that sweeping of Main Street be performed daily during earthmoving operations.

A&M's Response: The condition of the public roads within the immediate vicinity of the construction site will be monitored daily and street sweeping will be performed if warranted. A note has been added to the SWPPP plans directing the contractor to this situation.

28. A Construction Sequencing Plan should be developed to protect the porous paver section and subsoil during construction. Due to the limited space on-site it is anticipated that this area will be trafficked during construction. Therefore we recommend pre- and post-construction soil testing to ensure that the subsoil and stone base maintain the infiltration capabilities assumed in the design.

A&M's Response: A construction sequencing plan will be developed by the General Contractor prior to the start of construction. (We recommend that this item be made a condition of approval).

29. If blasting of ledge is required on-site, the Durham Blasting Ordinance should be followed and pre- and post-blast surveys should be performed.

A&M's Response: Agreed. No comment required. (We recommend that this item be made a condition of approval).

Site Plans

Existing Features Plan

30. The plan appears to show a portion of the lot in the "CH" District. We understand that this is an outdated plan and that there are no lots located within the CH District.

A&M's Response: Agreed. No comment required.

Layout and Materials Plan -Sheet C-1

31. It appears that entrance to buildings "C" and "D" are within the Main Street ROW. The Town should determine if this is allowed and if not, the plans should be revised.

A&M's Response: The entrances are designed to replicate those which currently exist on site. The plans were approved by the ZBA with this condition.

32. The main portions of buildings "C" and "D" are being constructed as close as 1.5 feet from the Main Street ROW. It is possible that the footings for these buildings will be located within the ROW. The Town should determine if this is allowed and if not, the plans should be revised.

A&M's Response: The proposed footings for the buildings will be constructed wholly within the parcel limits. Refer to Item #31 response for additional clarification.

33. The proposed sidewalk, stairway and retaining wall in front of existing building #35 is within the Main Street ROW. The Town should determine if this is allowed and if not, the plans should be revised.

A&M's Response: At the request of the Town, the existing sidewalk along Main Street will be widened. This required with reconstruction of the existing stairs and retaining wall at #35. Refer to Item #31 response for additional clarification.

34. The constructability of the perimeter retaining walls and buildings in close proximity to the property lines is uncertain (including footings which may extend beyond the property lines). The designer should provide a construction sequence on how these walls and buildings are to be constructed without impacting the abutting properties and buildings. In addition, to scale cross-sections of each of the most limiting areas should be provided to determine if the proposed construction is feasible. For example the proposed "Redi-Rock" retaining wall cross-section shown on Sheet D-3 would appear to encroach on the abutting property.

A&M's Response: A construction sequencing plan will be provided by the General Contractor prior to construction. The plans have been updated to alleviate some of these conditions. Additional details & cross sections will be added to the final plans. (We recommend that this item be made a condition of approval).

35. Snow storage for the site is currently shown within the Main Street ROW. The Town should determine if this is allowed and if not, the plans should be revised.

A&M's Response: The plans have been updated to remove the snow storage within the ROW. Note #13 on Sheet C1 calls for the removal of snow from the site in accordance with state and local regulations.

36. The proposed porous pavers are shown directly adjacent to the Main Street vehicular travel way. We recommend setting the pavers back a few feet from the travel way so that Town plows do not damage the pavers if differential settlement occurs.

A&M's Response: The plans have been updated to stop the brick pavers at the back edge of the concrete sidewalk/driveway apron. Additional details will be added to the final plans with specific details for this condition. (We recommend that this item be made a condition of approval).

37. It appears that a portion of the existing stone wall to the east of building "A" is being removed. This should be shown on the plans.

A&M's Response: A note has been added to the plans.

38. The light pole that is being relocated to the northeast of building "A" appears to be located within the new concrete sidewalk. This should be revised.

A&M's Response: The plans have been updated.

39. The surface material for the walks behind buildings "C", "D", and building #25 should be specified.

A&M's Response: The plans have been updated.

40. Sign details should be added to the plan set for the "One Way" and do not enter signs. In addition, additional signage may be required to adequately depict the one way traffic flow (e.g. a "Do Not Enter" sign on the back of the "Stop" Sign, etc.).

A&M's Response: Additional sign details have been added to the updated plans.

41. We recommend the addition of signage for the porous paver areas that state the appropriate winter use of salting and sanding practices.

A&M's Response: No additional signage was added to the plans. The property will be managed by a property management company and will be fully versed in the appropriate winter maintenance of the permeable pavers.

42. The Zoning Summary Table should be revised to remove references to the Church Hill District as no portion of the property is located with that district. In addition, the corresponding setbacks shown on the plan should be removed.

A&M's Response: The zoning summary has been updated.

43. The allowed residential unit calculation should be added to the Zoning Summary Table.

A&M's Response: The zoning summary table will be updated on the final plans to include this information. (We recommend that this item be made a condition of approval).

44. It is unclear if the porous pavers are counted in the impervious area calculation on the Zoning Summary Table. This calculation should be revised to break-out the porous paver as a separate number.

A&M's Response: The zoning summary has been updated to include a separate number for the permeable pavers..

45. The legend should be revised to be consistent with the plan (this should be for all plans in the set).

A&M's Response: The legend has been updated.

Grading and Drainage Plan - Sheet C-2

46. The areas to the south of buildings "A" and "B" that are bounded by retaining walls appear to have no outlet for stormwater from these areas and may take a significant portion of roof runoff creating a "bathtub" type situation. There appears to be "drywells" located in these locations but no detail has been provided. These areas are located in significant cuts on the site (8-9 feet) in unconfirmed soil types with the possibility of encountering ledge. Further description of the drainage intent in these areas should be provided along with details of the "drywells". If the "drywells" are to be used for infiltration of the stormwater, further on-site soil investigation in these locations should be performed to verify the design assumptions as there is no overflow or back-up drainage system proposed.

A&M's Response: The plans have been updated to alleviate this condition.

47. A similar situation as described above occurs at the northwest of building "B". Only in this location the "drywell" sits above the retaining wall in a space that is only a couple of feet wide. Further detail in this area should be provided and a description of the interaction of the "drywell" on the adjacent retaining wall should be provided. It is uncertain if this could be constructed.

A&M's Response: The plans have been updated to alleviate this condition.

48. There appears to be an area in the middle of the western wall of building "B" that is surrounded by a retaining wall with no outlet for stormwater. This should be addressed.

A&M's Response: The plans have been updated to alleviate this condition.

49. Drains should be provided for all window wells.

A&M's Response: The plans have been updated to alleviate this condition. The window well will be covered so as to not allow stormwater or debris to enter.

50. The "small versa lok" retaining wall to the west of building "B" is greater than 4 feet high and may require geo-grid reinforcement. This reinforcement would likely encroach on the abutting property and should be addressed.

A&M's Response: The retaining wall has been removed from this area. The plans have been updated to alleviate this condition.

51. The "large redi-rock" retaining wall shown on the south of building "B" is higher than the maximum 8'-6" shown on the detail and may require geo-grid reinforcement. This reinforcement would likely encroach on the abutting property and should be addressed.

A&M's Response: The plans have been updated to alleviate this condition.

52. The underdrain layout and sizes for the porous paver system has not been shown on this plan however, the detail depicts an underdrain. This should be provided.

A&M's Response: An underdrain is proposed at the downstream side of the pavers with will act as an overflow. Additional details and cross sections will be added to the final plans. (We recommend that this item be made a condition of approval).

53. The connection of the porous paver system to the municipal storm drain system is shown but no detail has been provided. Also, the DPW would prefer the connection to the municipal drainage system occur on the northern side of Main Street/Madbury Road. The current connection point is to a drop inlet that has an unknown capacity to accept additional stormwater runoff.

A&M's Response: An underdrain is proposed at the downstream side of the pavers with will act as an overflow. Additional details and cross sections will be added to the final plans. (We recommend that this item be made a condition of approval).

54. The proposed grading of the sidewalk within the Main Street ROW to the northeast of building "A" appears to direct stormwater towards the building and should be revised.

A&M's Response: The plans have been updated to alleviate this condition.

55. There appears to be missing finished grades at the east of building "A" near the termination of the proposed retaining wall. The grading in this location should be clarified and revised as necessary.

A&M's Response: The plans have been updated to alleviate this condition with the construction of a pour in place concrete retaining wall. This wall be integrally connected to the building foundation and designed by the project structural engineer. Foundation plans will be submitted for approval during the building permit process.

56. It appears that the stormwater runoff from the abutting property east of building "A" will be directed towards the proposed concrete sidewalk which is at a grade of less than 1%. This sidewalk is graded towards one of the aforementioned "drywells". This area is a significant icing concern in the winter. Also, the off-site drainage area should be considered in the design of the "drywell" in this location.

A&M's Response: This area has been regarded to alleviate this condition.

57. The slope of the sidewalk at the south of building "A" is essentially flat and should be regraded to provide proper drainage and avoid icing in the winter.

A&M's Response: This area has been regarded to alleviate this condition.

58. The proposed roof drain sizes, locations and connection points to the porous paver system (if applicable) should be shown on the plans.

A&M's Response: Building B is the only building with internal roof drains which will be day lighted to the gravel area at the rear of the building. This condition has been captured in the updated HydroCAD model and illustrates that there is no increase in rate and volume for the specific design storms.

59. A detail of the roof drains being tied into the rain gardens should be provided.

A&M's Response: Roof runoff associated with the rain gardens will be collected via stone drip strips and directed to the rain gardens. Additional details and cross sections will be added to the final plans. (We recommend that this item be made a condition of approval).

60. The elevations and spot grades within the rain gardens should be shown on the Grading Plans. In addition, we recommend that the rain gardens be designed with over flow structures.

A&M's Response: Additional spot grades have been added to the updated plans. The rain gardens are designed as an 8" depressed planting area to collect roof runoff and areas between the small buildings. The areas around the rain gardens are graded to divert water to the permeable paver areas should an overflow occur and stormwater overtop the rain gardens.

61. The proposed grades along the new sidewalk with the Main Street ROW should be shown (e.g. in front of buildings #35, "C", "D", and #25, etc.).

A&M's Response: The plans have been updated.

62. Additional spot grades to show the grading and drainage intent should be provided in front of buildings #35, "A" and between buildings "A" and "B" (e.g. near the proposed transformer location).

A&M's Response: The plans have been updated.

Utility Plan - Sheet C-3

63. The sewer connection point within Main Street is of concern as noted above. If this location is used the inverts of the existing sewer line should be obtained to determine if it is feasible to connect to this location by gravity sewer as proposed.

A&M's Response: The design team has had several discussions and meetings with the Durham DPW regarding this matter. (We recommend that this item be made a condition of approval).

64. The plan notes that the basement level apartments in building "B" will require "Sewer Ejector Pumps". We do not recommend that sewer pumps be located within the building. An exterior pump station should be designed to meet the standards of the NHDES and the Town of Durham.

A&M's Response: The basement level apartments will be designed with "sewer ejector pumps" as allowed and will be designed by the mechanical engineer and reviewed during the building permit process.

65. The NHDES requires that all sewer lines located below paved areas should have a minimum of 6 feet of cover. The proposed sewer lines do not meet this requirement and should be revised to provide the appropriate cover or the sewer lines shall be insulated.

A&M's Response: Although not required for private property, the sewer system on site has been updated to meet this criterion.

66. The proposed sewer inverts to buildings "C" and "D" should be added to the plans.

A&M's Response: The plans have been updated.

67. The existing sewer service locations for the existing buildings to remain should be added to the plans if available.

A&M's Response: At the time of this submission, the existing sewer serve information was not available.

68. The proposed 8" drain line in Main Street appears to be in conflict with the new tri-cluster valve location for the waterline.

A&M's Response: The plans have been updated.

69. It is unclear if the existing buildings #35 and #25 and the proposed buildings "C" and "D" will be fire sprinkler protected. A note should be added to the plans clarifying this.

A&M's Response: The plans have been updated.

70. The size of the water and fire sprinkler connections to the buildings should be shown on the plan.

A&M's Response: The plans have been updated.

71. The Town should determine if the underground telephone/communication line shown within Main Street is allowed.

A&M's Response: The plans have been updated to provide power to the site via the proposed utility pole near Building A.

72. All of the utility notes on the plan should be numbered.

A&M's Response: The plans have been updated.

73. The third and fourth utility notes state that the contractor should pay for the cost of the utility inspections made by the Town of Durham personnel. This should be revised to state that the developer/owner is responsible for these costs.

A&M's Response: The required fees will be paid to the Town as needed for inspections.

74. The water main note should be revised to state that the water lines require a minimum of 5 feet of cover (not 4.5 feet as shown).

A&M's Response: The plans have been updated.

75. Note number 22 does not appear to be applicable if no force mains are proposed.

A&M's Response: The plans have been updated to remove this note.

76. The sewer flow calculations use incorrect sewer data for a NHDES Sewer Connection Permit. This table should be revised to use the values from Tables 3-2, 3-3, 3-4, from "Wastewater Engineering, Treatment and Reuse", Fourth Edition, Metcalf and Eddy, 2003, as specified by the NHDES Env-Wq 700, Standards of Design and Construction for Sewerage and Wastewater Treatment Facilities.

A&M's Response: The sewer flow calculations have been updated.

Stormwater Pollution Prevention Plan - Sheet SWPPP 1

77. The stockpiling/construction staging area and stabilized construction entrance shown in the legend are not shown on the plan.

A&M's Response: The plans have been updated.

78. The silt sacks shown within Main Street should be adjusted so that they are located on the existing catch basins.

A&M's Response: The plans have been updated.

79. Due to the presence of silty/loamy soils on-site we recommend the use of silt sock in place of silt fence.

A&M's Response: The plans have been updated.

Stormwater Pollution Prevention Plan - Sheet SWPPP 2

80. The notes should be revised to reflect the current EPA NPDES Construction General Permit (e.g. 14 day NOI filing deadline, 0.25 inch rainfall inspection amount, etc.).

A&M's Response: The plans have been updated.

81. Note 4 should be revised to reflect the actual plans in the set (currently noted as "XX").

A&M's Response: The plans have been updated.

82. The construction entrance thickness specified in Note 6 should be revised to 8" to be consistent with the detail.

A&M's Response: The plans have been updated.

83. As previously noted, due to the presence of silty/loamy soils on-site we recommend the use of silt sock in place of silt fence.

A&M's Response: The plans have been updated.

84. Note 9 should be revised to require street sweeping daily during earthmoving operations.

A&M's Response: The condition of the public roads within the immediate vicinity of the construction site will be monitored daily and street sweeping will be performed if warranted. A note has been added to the SWPPP plans directing the contractor to this situation.

Stormwater Pollution Prevention Plan - Sheet SWPPP 3

85. The "Crushed Stone Inlet Protection Detail" notes should be revised for the 0.25 inch rainfall event inspection frequency.

A&M's Response: The plans have been updated.

86. The "Temporary Sediment Area" and "Erosion Control Fabric" detail have missing notes and leaders that should be fixed.

A&M's Response: The plans have been updated.

Details- Sheet D-1

87. The details not being used on the project should be removed (e.g. drain manhole, etc.).

A&M's Response: The plans have been updated.

88. The "Typical Drain/Sewer Trench Detail" should be revised to show the 6 foot minimum cover for sewer under paved areas and/or insulation as required. The detail should also be revised to show the pipe bedding as crushed stone in place of gravel and show a minimum of 6" of stone below the pipe in earth and 12" of stone below the pipe in rock excavations.

A&M's Response: Although not required for private property, the sewer system on site has been updated to meet this criterion.

Details - Sheet D-2

89. The details not being used on the project should be removed (e.g. post indicator valve, etc.).

A&M's Response: The plans have been updated.

90. The "Typical Water Trench Section" detail should be revised to show sand as bedding in place of gravel. The detail should also be revised to show a minimum of 6" of sand below the pipe in earth and 12" of sand below the pipe in rock excavations.

A&M's Response: The plans have been updated.

91. The "Building Sewer Service" detail shows a flexible "Fernco" joint. This is not recommended. Also, the detail should be revised to remove the reference to the "Mass. Bldg. & Plumbing Code".

A&M's Response: The plans have been updated.

Details- Sheet D-3

92. The "Vertical Granite Curb Detail" should be revised to remove the reference to the Massachusetts Highway Department.

A&M's Response: The plans have been updated.

93. The "Permeable Paver Detail" should be revised to remove the reference to the "stream".

A&M's Response: The plans have been updated.

94. The "Typical Gravity Wall with 41" Blocks" detail should be revised for a New Hampshire Professional Engineer versus one from Massachusetts.

A&M's Response: The plans have been updated.

Details - Sheet D-4

95. The "Concrete Sidewalk Detail" does not show any reinforcement. This detail should be revised to meet the Town of Durham standards where it is being constructed in the Main Street ROW.

A&M's Response: The plans have been updated.

96. Additional sign details should be provided for the other signs being used on-site (e.g. "One Way" sign, etc.).

A&M's Response: The plans have been updated.

Mr. Michael Behrendt, AICP
Town of Durham
15 Newmarket Road
Durham, New Hampshire 03824

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Should you have any questions about what is contained herein, please do not hesitate to contact me.

Very truly yours,
ALLEN & MAJOR ASSOCIATES, INC.

Michael A. Malynowski, PE
Project Manager

Enclosures
Cc:

DRAFT