Environmental Services



Engineering Services

July 08, 2022

Ms. Karen Sherman Town Planner Town of Holliston 703 Washington Street Holliston, MA 01746

# Re: Site Plan, Zoning, & Stormwater Design Engineering Peer Review #1 Master Paving Corp. & Middlesex Asphalt Services, Inc. 157 - 165 Lowland Street Holliston, MA CMG ID 2022-154

Dear Karen,

CMG is providing this letter report detailing our site plan, zoning, and stormwater design engineering peer review of the site improvements for the Master Paving Corp. & Middlesex Asphalt Services, Inc. proposed contractor garage building project. The project is located on an approximately  $7.07 \pm 7.07 \pm 7.07 \pm 7.07$  hours parcel identified as 157 - 165 Lowland Street in Holliston, MA (the "Site").

The project Applicant, *Master Paving Corporation and Middlesex Asphalt Services Inc.* is proposing to construct an approximate 7,200 s.f. contractor garage building, new septic system, and limited pavement areas, and associated access on a portion of the Site. The Site is located within an Industrial District Zone and Groundwater Protection District.

CMG is in receipt of the following documents:

- Four (4) Plan Sheets entitled "Proposed Site Plan of 157-165 Lowland Street in Holliston, MA" prepared by Connorstone Engineering, Inc., date 4/07/22.
- "Stormwater Evaluation" Report for 157-165 Lowland Street Holliston, MA prepared by Connorstone Engineering, Inc., dated 4/07/22.
- "Application for Grant of Site Plan Review and Special Permit" for Master Paving Corporation and Middlesex Asphalt Services Inc. prepared by Attorney George F. Connors, date 4/08/22.
- "NOI and Stormwater Analysis supplemental information 157-165 Lowland St." Email Attachment from Attorney George F. Connors, date 6/29/22.

CMG is providing this letter summarizing our review comments for the above documents to evaluate the project's compliance with the following regulations for Planning Board consideration:

- Town of Holliston Zoning By-Laws date May 10, 2021, Amendments approved by the Attorney General's office on August 26, 2021.
- Town of Holliston Planning Board Rules and Regulations amended through January 5, 2012.
- Town of Holliston Stormwater Management and Land Disturbance Regulations, date May 20, 2021.

CMG provides the following technical comments for the board's consideration:

# Town of Holliston Zoning By-Law Comments:

- 1. Section IV-B Schedule of Intensity Regulations: Plan does not provide a "zoning compliance summary table" or show the proposed building setbacks and uses on the plan to demonstrate compliance with this section.
- 2. Section V-B Exterior Signs: Will the project provide an exterior sign proposed along the Site frontage to identify the driveway for the new use ? If yes, the proposed sign location and details should be provided to determine compliance with this section.
- 3. Section V-C.2: Plan does not provide a calculation for the required number of parking spaces and does not identify a dedicated ADA / AAB Accessible parking space or accessible route for the new building.
- 4. Section V-C.3.c: Proposed eighteen (18) gravel parking spaces and access drive are not surfaced with bituminous or other paving material. CMG recommends fleet storage should be located on paved areas to allow for collection and treatment of stormwater runoff prior to on-site recharge.
- 5. Section V-J.2 Flood Plain District: Site Plans reference a Flood Zone AE 100-year flood elevation = 157 however there is no FEMA FIRM map reference provided.
- 6. Section V-J.2 Flood Plain District: Insufficient information is provided on the "Existing Conditions Plan" to determine if additional existing developed areas within the southeast corner the Site are within the flood plain. It appears the topographic contours may be incorrect as there is a partial 157 contour shown near the pump house and the Test Pit ground elevations within the proposed development area range between 156.78 ~ 157 based on the information provide on Sheet 2 of 4. Additional topographic spot elevations are required to confirm the topographic contours shown. The "Existing Conditions Plan" is not stamped by a licensed State of Massachusetts Land Surveyor.
- 7. Section V-J.2 Flood Plain District: CMG recommends the Applicant provide additional survey information and a FEMA Flood Certificate provided by a licensed State of Massachusetts Land Surveyor for the Site to accurately determine the on-site limits of the 100-year flood plain and floor elevations of existing structures.
- 8. Section V-J.3 Flood Plain District Use and Development Regulations: Existing portions of the Site are identified as being within the Zone AE flood boundaries, however this is not noted on Page 1, Item 8 of the submitted Development Impact Statement.
- 9. Section V-J.3.C Flood Plain District Prohibited Uses: CMG recommends the Applicant verify proposed berms and structures are to be located outside of the 100-year flood plain based on the additional survey work referenced Comment 7.
- 10. Section V-L.4.A.3) c. Groundwater Protection District Zone II Permitted Uses: Portions of the Site constitute redevelopment; however, CMG believes the additional impervious areas beyond existing constitute "new" development in accordance with the MassDEP Stormwater Regulations. Therefore, "new" development areas must recharge roof, parking and drive runoff on-site to the maximum extent practicable with parking and drive runoff discharged to oil/gas trap catch basins with 4 ft. depth sumps prior to recharge as per current MassDEP Stormwater Management Standards.

In addition, 44% TSS Removal pre-treatment and off-line oil/water separator are also required in accordance with the MassDEP Stormwater Management Standards for a land use with higher potential pollutant load prior to recharge to groundwater.

- 11. Section V-L.4.B.2) h. CMG recommends additional information be provided relating to above ground waste oil storage and emergency generator use and locations on the Site to confirm compliance with this section.
- 12. Section V-L.4.B.2) i. CMG recommends additional information be provided to verify compliance with state and federal regulations relating to the proposed storage of liquid hazardous materials and/or liquid petroleum products within the proposed garage building. CMG recommends a list of potential products, quantities, storage practices, and spill prevention measures be provided.
- 13. Section V-L.4.B.2) j. Applicant should confirm there will be no on-site storage sodium chloride and /or chemically treated abrasives or other chemical used for the removal of ice and snow from pavement areas. A note relating to this requirement shall be added to the Stormwater O&M Plan.
- 14. Section V-L.4.B.2) p. Applicant should provide information regarding MassDEP permitting compliance relating to the proposed Floor Drain Tight Tank. Specifically additional information should be provided relating to MassDEP tight tank design and testing requirements prior to operation. CMG recommends tight tank structure be monolithic construction instead of 2-piece construction shown on Detail Sheet 4 of 4. Tight tank rim / invert elevations, vent location, and MDC trap elevations are not shown on the Site plan.

### Holliston Planning Board Site Plan Review & Special Permit Regulations

- 15. 7.3: Existing Conditions Plan must be signed and sealed by a licensed State of Massachusetts Land Surveyor.
- 16. 7.3.1 e): "Certificate of Action" block is not provided on the first page of the Site Plan.
- 17. 7.3.1 o): Zoning compliance summary table is not provided.
- 18. 7.3.2 g): A landscaping plan is not provided and no waiver is requested.
- 19. 7.3.2. h): A lighting plan is not provided and no waiver is requested.
- 20. 7.3.3 a): locations of existing utilities (i.e. water, gas, electric/cable/telephone) both on and within Lowland Street are not shown.
- 21. 7.3.3.b): locations of proposed domestic water, fire service water lines, gas service (if available) are not shown.
- 22. 7.3.4: Landscape Plan signed and sealed by a registered landscape architect must be provided where the Site Plan requires construction of five or more parking spaces.
- 23. 7.4.2.E.8: Finished grades should be limited to no greater than 3:1 slope. Proposed berms are designed at 2:1 slope.
- 24. 7.4.2.F.2.(B): Existing driveway's sight distance should be evaluated for adequacy of the proposed use and shown on the Site plan.
- 25. 7.4.2.F.2.(B) CMG recommends tractor trailer truck turning movement diagrams into and out of the proposed Site curbcuts be provided to illustrate there is adequate space for safe vehicular turning movements based on the current curbcut configuration.

- 26. Section 7.4.2.G. Existing gas main is shown along the front of the Site. If natural gas will be used to heat the proposed building a gas service connection should also be shown.
- 27. Section 7.4.2.G.1. Current plan depicts the schematic layout of the proposed septic system to service the proposed building. CMG recommend the Planning Board require the Applicant provide an approved Septic System Design Plan and proof of Board of Health approval prior to construction.
- 28. Section 7.4.2.G.2. No water services (domestic and/or fire) are shown on the Site Plan. The existing water main and connection locations are also not shown. Applicant's Engineer should provide a water service connection detail, size and type of piping, location and size of the existing water main, and pavement sawcut and patching details if the connection will be within the existing paved roadway.

### **General Engineering & Stormwater Management Design Comments**

- 29. Pre-Development drainage mapping, soil classifications, time of concentrations, are not provided.
- 30. Existing impervious areas are not quantified (concrete pad, building, scale, office building) to determine extent of site redevelopment areas.
- 31. NRCS Soil mapping identifies the Site soils as (655) Udorthents, wet substratum with no hydrologic soil group specified and 52A Freetown Muck, Hydrologic Soil Group B/D. Understanding the Site is a mix of fill material overlying the mapped soil types, Engineer should justify use of Hydrologic Soil type A for the provided Stormwater evaluation. Additional soil testing may be required to confirm soil properties of "fill" material.
- 32. Limits of NRCS soil mapping limits should be shown on the Pre- and Post-Development drainage mapping.
- 33. Post-Development drainage watershed mapping provided should include time of concentration flow path, subcatchment labels, and proposed limits of ponding areas. It appears there are two (2) separate on-site ponding areas (Approx. Elev. 158) and associated watersheds separated by the proposed building and pavement area based on the grading shown on Sheet 2 of 4.
- 34. If existing on-site ponding areas are to be used for infiltration of redevelopment areas, CMG recommends these areas be dedicated solely for stormwater management and defined by the peak elevation resulting from the 25-year storm event.
- 35. CMG agrees portions of the Site are considered re-development. However, all proposed impervious areas greater than existing are considered "new" development and subject to full compliance with the MassDEP Stormwater Management Standards. The Site stormwater management design should comply as a mix of "new" and "redevelopment".
- 36. Proposed gravel access route, on-site driveway areas, and parking spaces should be included in the post-development drainage calculations and considered impervious with a CN = 96.
- 37. Soil Test data is provided on Sheet 2 of 4. Additional information should be provided as to whether this was witnessed by the Town, licensed soil evaluator, or professional engineer.
- 38. Applicant's Engineer should confirm how estimated seasonal high groundwater (ESHW) elevations were determined in the "fill" material and if redoximorphic features were observed. ESHW elevations appear to differ from the identified water elevation = 153.3 in the on-site "Old Sedimentation Pond".
- 39. Additional supporting information for use of the proposed infiltration rate = 0.17 in /hr should be provided to justify its use based on the "fill" material present on-site in the form of textural analysis or in-situ permeability testing.

- 40. Stormwater Management Report and/or Stormwater Checklist stamped by a Professional Engineer is not provided
- 41. A Notice of Intent is required to be filed with the Holliston Conservation Commission for all work within the 100 ft. wetlands buffer zone and / or 200 ft. riverfront zone and flood plain.
- 42. Snow storage areas need to be labelled on the plan and snow management procedures identified in the Long-Term Operation and Maintenance plan to insure snow is not deposited in or near on-site wetland resource areas. Conservation Commission may also have additional requirements.
- 43. A 10 FT height sound barrier fence is noted on the plans. CMG recommends additional detail be provided to confirm it will comply with snow / wind loads and noise mitigation for the project.

**Stormwater Standard 1:** No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.

44. No new stormwater conveyances are proposed; however, adequate treatment is not provided for the proposed Site stormwater runoff given the Site's locations within a Zone II watershed protection area. Proposed new development areas need to comply with pre-treatment best management practices even if recharged on-site.

**Stormwater Standard 2:** *Stormwater management systems shall be designed so that post development peak discharge rates do not exceed pre-development peak discharge rates.* 

- 45. CMG recommends hydrology calculation be revised to reflect the revised watershed areas, time of concentration, and hydrologic soil group.
- 46. Stormwater calculations and peak flow summary should include the 2 year, 10-year, 25-year and 100-year storm event

#### Stormwater Standard 3: Loss of annual recharge of groundwater shall be eliminated or minimized.

- 47. Recharge of "new" development areas must be designed in full compliance with Standard 3. Stormwater report must document compliance to the maximum extent practicable for redevelopment areas.
- 48. No supporting information or on-site in-situ permeability testing is provided to support the infiltration rate of 0.17 cfs used in the hydrology calculation. Hydraulic conductivity values based on on-site soil classification (Rawls Rate) or in-situ permeability testing must be provided for design of on-site recharge systems.
- 49. Stormwater system design must provide supporting information and details to document compliance with infiltration basins and / or drywells design standards outlined in the MA DEP Stormwater Management Structural BMPs Volume 2 Chapter 2.
- 50. Required Recharge Volume must be calculated using the required recharge value specified in the MA DEP Stormwater Management Standards for either Type B or Type D soils depending on the results on-site soil testing.

**Stormwater Standard 4:** *Stormwater management systems shall be designed to remove 80% of the average annual post construction load of Total Suspended Solids (TSS).* 

- 51. Water quality volume requirements for "new" development areas must be designed in full compliance with Standard 4. Stormwater report must also document compliance to the maximum extent practicable for redevelopment areas.
- 52. CMG recommends TSS removal calculation worksheets be provided to document the proposed treatment train for each outfall which receives runoff from the proposed project's pavement areas to document 80% TSS Removal.

53. Site is within a Critical area (Zone II) therefore additional water quality treatment measures are necessary in accordance with MA DEP Stormwater Management Standards 44% TSS removal pre-treatment is required prior to stormwater discharge to an infiltration structure.

**Stormwater Standard 5:** Land uses with higher potential pollutant loads (LUHPPL), source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.

- 54. Site Plan Narrative notes the Applicant proposed "to house their paving operations fleet in a new building". Fleet storage is considered a land use with higher potential pollutant load (LUHPPL) and therefore must comply with the pre-treatment requirements of Standard 5.
- 55. CMG recommends fleet storage areas be limited to pavement areas where the stormwater runoff can be collected and treated prior to on-site recharge.
- 56. Stormwater Report must document full compliance with this standard as it relates to new development areas and the maximum extent practicable for re-development area. This includes required pre-treatment requirements for Site pavement area prior to underground recharge.

# **Stormwater Standard 6:** *Stormwater discharges within a Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area.*

- 57. Current MassGIS mapping shows a portion of the Site is within a Zone II watershed protection area. Stormwater discharges near or to a critical area must include the appropriate best management practices and setbacks in accordance with the MA-DEP Stormwater Management Standards. Stormwater report must document compliance with this standard.
- 58. Calculations must document the treatment train meets the 80% TSS removal requirement and the 1" WQV. CMG recommends Applicant's engineer consider the addition of water quality units in addition to the deep sump catch basins prior to discharge to on-site infiltration best management practices.

### Stormwater Standard 7: Redevelopment Projects

- 59. Site is considered a mix of new and re-development. Re-development standards only apply to existing impervious areas of the Site. All new impervious area must comply fully with the MA Stormwater Management Standards.
- 60. CMG recommends the Applicant's Engineer use the Checklist for Redevelopment Projects located in Volume 2 Chapter 3 of the MADEP Stormwater Management Standards to document compliance for both new and re-development portions of the Site.

### Stormwater Standard 8: Construction period erosion and sedimentation control

- 61. The Project proposes to alter > 1 Acre therefore an EPA NPDES Construction General Permit (CGP) registration and SWPPP is required to be submitted prior to construction. CMG recommends the Planning Board make this a condition of approval.
- 62. CMG recommends a gravel construction entrance and detail be provided.
- 63. Applicant's Engineer should evaluate whether additional erosion controls are necessary closer to Lowland Street for any proposed utility connection activities.
- 64. CMG recommends a construction sequence be provided on the Erosion Control Plan along with additional notes relating to proposed construction dewatering practices, stockpile storage location, and related construction activities to prevent impacts to Site wetlands.

# Stormwater Standard 9: Long term operation and maintenance plan

65. A revised "Long -term Operation and Maintenance Plan" must be provided based on the updated site stormwater management system design in full compliance with Standard 9.

# Stormwater Standard 10: Illicit discharges

66. A signed Illicit Discharge Statement is not provided within the O&M Plan.

If you have any questions or need additional information, please contact me at (508) 864-6802.

Sincerely, CMG

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David T. Faist, PE Principal Engineer