
**CONCORD PUBLIC WORKS
ENGINEERING DIVISION**

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133 Keyes Road
Concord, MA 01742



DATE: 08/31/2022

MEMORANDUM

TO: Elizabeth Hughes, Town Planner
COPY: Alan Cathcart, Director of Public Works
VIA: Steve Dookran, P.E., Town Engineer
FROM: Justin Richardson, P.E., Assistant Town Engineer
SUBJECT: Concord Academy: ZBA Special Permit and Site Plan Approval Application

Concord Public Works (CPW) Engineering Division has reviewed the ZBA Special Permit and Site Plan Approval Application, Plans, Calculations and Reports for Concord Academy West Campus, which was prepared by the Applicant's design team, dated July 28, 2022, July 15, 2022, July 2022, and July 13, 2022 and submitted by the Applicant Don Kingman. The Engineering Division offers the following:

Engineering Division Comments (08/31/2022):

1. Please provide a Stormwater Pollution Prevention Plan (SWPPP) and make the appropriate filings with National Pollutant Discharge Elimination System (NPDES) for the site alterations that are to be performed.
2. The Traffic Study is required to determine if additional traffic will be generated by the development, and it should include tip generation for each driveway, peak hour volumes, estimated traffic for special events, frequency of events, and does the housing being moved affect the traffic volume for different driveways. Line of sight determinations for all driveways being utilized or improved should also be determined.
3. A Right of Way (ROW) and/or Driveway permit is required for the work being performed on Main Street and work inside the right of way shall comply with CONCORD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS & DETAILS. This includes ADA compliant ramps at all driveway entrances.
4. The accessible space at the southeasterly edge of the parking lot do not appear to be graded at 2% or less.
5. Please explain why in HydroCAD the Dynamic Storage-Indication method was used instead of the more typical Storage-Indication method?
6. Please explain why in HydroCAD the Lag/CN method was used in calculating the Tc instead of the more typical TR-55 method? Additionally, on the Pre and Post Development Subcatchment Plan please label the "longest flow path" lines so that it is clear what was used in the calculations.
7. The Plastic Grid Reinforced Lawn, Permeable Concrete Unit Pavers, and Stabilized Stone Dust Paving while still pervious should be called out separately in the Subcatchments with the appropriate curve number that is based on the compacted base.



8. Inspection reports from the LTOMP are to be submitted to the CPW Engineering Division annually.
9. The Water Quality Swale (that is essentially a Basin), basins and Sediment Forebay need to be detailed. These area shall comply with CPW Design and Construction Standards, Sections 2 "Drainage Standards". Currently, the basin does not have an emergency overflow and the appropriate amount of freeboard. In the 100 year storm event the basins overtop according to the calculations. Please revise the drainage calculations to incorporate the changes necessary to comply with CPW Design and Construction Standards.
10. Water Quality Volume calculations should be provided.
11. Why is no sediment Forebay provided for Basin B? Stormwater runoff from the driveway of #228 Main Street flows into the basin.
12. A groundwater mounding analysis is required for all stormwater infiltration areas with less than 4-foot separation from estimated seasonal high ground water.
13. The Subsurface Infiltration System is required to have an overflow per the CPW Design and Construction Standards, Sections 2 "Drainage Standards".
14. The Stormwater Report should provide rational method calculations in accordance with Concord Public Works Design & Construction Standards & Details, Section 2 - Drainage Standards requires "rational method for a 100 year frequency storm event". Please provide these calculations, and also ensure that the grate capacities for catch basins are not exceeded.
15. Flood Plain fill areas should also include at least portions of the emergency access road. CPW Engineering requires AutoCAD design plans that include the existing and proposed surfaces to confirm the flood plain alteration. Please provide AutoCAD .dwg files for review.
16. The Engineering Divisions reserves the right to comment on future submittals related to any new or previously submitted information provided to the Town for review including the Definitive Subdivision Plan and supporting documentation.