

EVALUATION OF EXISTING CONDITIONS

SECTION 3.3.2

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PREFERRED SCHEMATIC REPORT, JUNE 2021

3.3.2 EVALUATION OF EXISTING CONDITIONS

3.3.2.1 PSR Updates

3.3.2.2 Additional Testing Summary

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3.3.2.1 PSR UPDATES

While additional testing of the existing conditions for the 50 Norris Road property was completed after the issuance of the Preliminary Design Program (PDP) to the Massachusetts School Building Authority (MSBA) on March 31, 2021, the new information generated by the additional testing did not alter the conclusions of the PDP evaluation of the existing conditions.

The additional Preferred Schematic Report (PSR) testing combined with the PDP tests provided a comprehensive assessment of the existing conditions for the target property that has informed the recommendations of this report including, but not limited to, the probable Total Project Cost and probable Construction Costs.

3.3.1.2 ADDITIONAL TESTING SUMMARY

Additional testing completed after the PDP was issued to MSBA included the following:

GEOENVIRONMENTAL

The Limited Subsurface Soil Investigation prepared by PEER consultants, PC dated June 23, 2021 offered the following recommendations:

- Based on the results of the limited subsurface soil sampling activities, and subject to all current and future considerations made by representatives of McPhail, the geotechnical engineer, it appears that excavated subsurface soil from specific soil boring locations sampled may be re-used on site, disposed of at a less than RCS-1 facility, or disposed of at a Massachusetts lined or unlined landfill.
- However, considering the detected concentration of TPHs beneath the asphalt-paved parking lot, PEER recommends that the Owner may wish to consider the following:
 - The Owner may wish to separate the asphalt and the soil beneath asphalt-paved areas from other non-asphalt-paved subsurface soil areas during excavation and construction activities on the Property.
- Though soil specifically from the seven (7) boring locations did not exceed MCP Reporting Category RCS-1, did not exceed MADEP Policy #COMM-97-001 for acceptance and use at a Massachusetts lined or unlined landfill, and did not exceed acceptable concentrations under 40 CFR 261, PEER recommends that the Contractor may wish to prepare and implement a field screening and observation plan, including soil stockpile sampling and categorization, especially if excavations occur near or hydrologically downgradient of any areas identified as Suspect RECs on the Property.
- If surplus soil requires off-site disposal to a licensed facility, PEER recommends obtaining approvals from Massachusetts (or out of State) licensed landfills or other appropriate disposal facilities, prior to initiation of construction activities. In this manner, excavated soil may be “live-loaded” and shipped off site, thereby minimizing the need for extensive stockpiling of excavated soil on-site, which in turn, may impact construction schedule.

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- PEER recommends that additional pre-characterization sampling of the subsurface soil in borings or test pits be completed once the exact proposed building or utility excavations depths and locations are known.
- In addition, as it relates to the potential need for dewatering activities (as detailed in the McPhail Preliminary Foundation Engineering Report), PEER understands that McPhail is recommending that “groundwater be recharged on-site in localized sumps”. Should a construction general permit be required for this activity, PEER recommends considering the implementation of a sampling and analysis program for groundwater through the installation of temporary groundwater monitoring wells during any additional subsurface soil investigation, and prior to site redevelopment.

A copy of the Limited Subsurface Soil Investigation is included in Appendix 3.3.6.3 of this report.

GEOTECHNICAL

The Preliminary Foundation Engineering Report prepared by McPhail Associates, LLC dated May 27, 2021 offered the following recommendations:

- The natural undisturbed alluvial deposit is generally within the depth considered for supporting conventional footing foundations at each of the sites and both the on-site fill and alluvial soils are considered suitable for reuse as structural fill to create building pads for new structures.
- The preliminary foundation construction considerations associated with the proposed building include recommended subsurface explorations, site preparation, construction dewatering, reuse of excavated soil, and off-site re-use/disposal of excess soil.
- A supplemental subsurface exploration program consisting of additional borings and/or test pits be performed at the project site once the configuration and location of the proposed structure has been defined.
- Dewatering by means of strategically located sumps and trenches should suffice to perform the proposed excavation, and also to provide for management of water which may become trapped within the excavation areas following periods of precipitation... (adding) that it is recommended that groundwater be recharged on-site in localized sumps.

A copy of the Preliminary Foundation Engineering Report is included in Appendix 3.3.6.4 of this report.

HAZARDOUS BUILDING MATERIALS

The Interim Draft Hazardous Building Materials Inspection Report prepared by PEER Consultants, PC dated June 23, 2021 identified the presence of asbestos containing materials (ACM's) in the existing Classroom Building and existing Gymnasium Building.

A copy of the Interim Draft Hazardous Building Materials Inspection Report is included in Appendix 3.3.6.5 of this report.

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HYDRANT FLOW TEST

The Hydrant Flow Test performed by Architectural Engineers on June 11, 2021 recorded static pressure of 82.00 psig and residual pressure of 42.00 with a flow of 919 gpm through a 2-1/2 inch hydrant nozzle. The test was witnessed by Dracut Water Supply District.

Based on the results, AE recommended there is sufficient capacity to support the proposed automatic fire suppression system without a fire pump for all the options considered by this report.

A copy of the Hydrant Flow Test is included in Appendix 3.3.6.6 of this report.

PHASE 1 ENVIRONMENT SITE ASSESSMENT

The Phase 1 Environmental Site Assessment prepared by PEER Consultants, PC dated May 5, 2021 offered the following conclusions:

- The assessment revealed no evidence of recognized environmental conditions (REC's) in connection with the target property except for the following:
 - Two (2) suspect REC's
 - Eight (8) de minimis conditions

A copy of the Phase 1 Environmental Site Assessment is included in Appendix 3.3.6.7 of this report.

SITE SURVEY

A copy of the Topographic Plan of Land prepared by Samiotes Consultants, Inc. dated April 13, 2021 is included in Appendix 3.3.6.8 of this report.

TRAFFIC ANALYSIS STUDY

A copy of the Traffic Analysis Study prepared by Greenman-Pedersen, Inc. dated June 23, 2021 is included in Appendix 3.3.6.9 of this report.

FUTURE TESTING RECOMMENDATIONS

The following future testing is recommended for the Preferred Solution to be conducted during the execution of Module 6 – Detailed Design services beginning on or about July 1, 2022 following a successful local funding vote:

- Geoenvironmental
- Geotechnical
- Hazardous Building Materials

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