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ARCADIS Design & Consultancy for natural and built assets

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Subject:

Former Aeration Lagoon Geotechnical Borings

RACER Buick City Site, Flint, Michigan

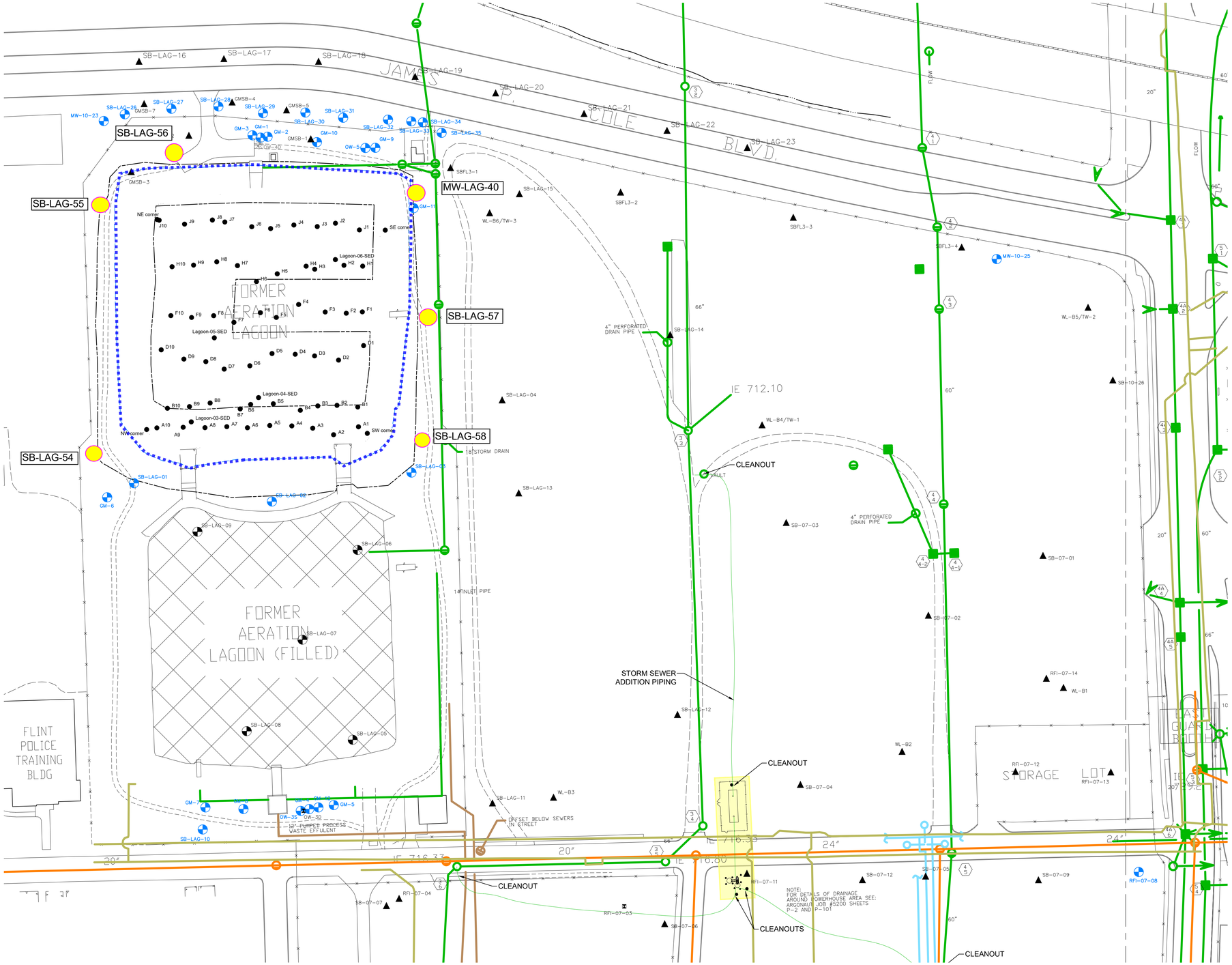
Based on the results of the previous phases of work, the objective of this work plan is to collect soil samples from geotechnical analysis to further characterize the soils in the vicinity of the pond.

This scope of work includes the following activities.

- Complete soil borings at six locations adjacent to the former Eastern Lagoon to collect soil samples for geotechnical analysis (**Figure 1**). The borings will be completed to a targeted elevation of 709 feet above mean sea level (amsl). Borings along the west side of the lagoon are expected to be completed to a depth of 18 to 22 ft below ground surface (bgs), while the remaining borings will be completed to 16 feet bgs.
- At each location, an initial boring will be advanced using sonic techniques, continuously sampling to the targeted elevation for the purpose of describing soil types. A second boring will be completed adjacent to the initial boring to target depths of clay for collection of Shelby tubes for the purpose of determining vertical hydraulic conductivity analysis. The second boring will be advanced using split spoon samples collected every 5 feet and Shelby tubes collected in clay soils at a depth corresponding to the top and base of the pond (elevation 724 to 719 feet amsl and 714 to 709 feet amsl). The precise interval for the Shelby tube will be based on the lithology described in the initial hole. If Shelby tubes fail due to hard clay, then sample collection will be attempted using either a piston core sampler or a Denison sampler.

- Blow counts from the split spoon sampler, pocket penetrometer readings, and lithology will be recorded at each location.
- The Shelby tubes will be submitted for laboratory analysis of:
    - Permeability (ASTM D5084),
    - Grain Size Analysis (ASTM D422),
    - Atterberg Limits (ASTM D4318),
    - Moisture Content (ASTM D 2216), and
    - Visual Description (ASTM D2488).
- If the lithology indicates the potential presence of water bearing units, temporary wells will be installed at those intervals. Monitoring wells will be installed by slowly retracting the outer casing while the sand pack is placed around the screen. Hydrated bentonite pellets will be placed in the same manner, as the outer casing is removed from the borehole. In cases where the bottom of the borehole is more than 2-feet below the well screen, bentonite chips will be placed, followed by at least 1-foot of sand pack between the bentonite and the bottom of the well screen.
- In addition, soil samples will be collected for PFAS analysis from MW-LAG-40 (0 to 2 feet, 4 to 6 feet and 2 feet above the water table or last 2 feet of boring if water not present), SB-LAG-54 (0 to 2 feet and 2 feet above the water table or last 2 feet of boring if water not present), and SB-LAG-55 (0 to 2 feet and 2 feet above the water table last 2 feet of boring, if water not present).
- Borings will be abandoned by backfilling the borehole with hydrated bentonite pellets.

This work is planned to begin the week of November 8, 2021.



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RACER TRUST
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FORMER AERATION LAGOONS PROPOSED GEOTECHNICAL LOCATIONS

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FIGURE
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