

SUBJECT
RACER Buick City
Fall 2024 Groundwater Sampling Event Work Plan

TO
Grant Trigger, RACER Trust
Brendan Mullen, RACER Trust

DATE
October 9, 2024

PROJECT NUMBER
30512200

NAME
Micki Maki

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, Arcadis of Michigan, LLC (Arcadis) has prepared this work plan for collecting groundwater samples at the Buick City Site (the Site) located in Flint, Michigan (**Figure 1**).

The objectives of these activities are to 1) monitor groundwater elevations at the Site; 2) investigate groundwater impacts at Factory 36 Area; 3) monitor groundwater concentrations downgradient of the lagoon remedy; 4) collect additional groundwater characterization data at the Building 04 area near Hamilton Avenue and 5) collect groundwater data for at Building 09 area for vapor intrusion pathway.

Groundwater Elevations

Groundwater levels will be collected from approximately 65 monitoring wells as shown on **Figure 2**. The monitoring wells selected for gauging are screened shallower than 20 feet below ground surface (bgs).

A Trimble R2 Sub-Foot Receiver paired with a GPS field application will be used by the field sampling crew to locate monitoring wells. If a monitoring well cannot be located using this method, or is found to be too damaged to utilize, another nearby well may be selected as a substitute.

Groundwater Sampling

Groundwater sampling locations were selected based on the constituents of concern (COCs) in each area. Sampling activities and quality assurance/quality control samples will be completed in accordance with the *Field Sampling Plan* (FSP) submitted to EGLE in May 2023. Groundwater samples collected will be submitted to Merit Laboratories, Inc. in Lansing, Michigan for analysis. **Table 1** summarizes the monitoring wells selected for groundwater sampling, including the screen interval, and the COCs that will be analyzed. Further groundwater sampling details are provided in the following sections.

Northend Sampling Plan

Groundwater sampling activities will be completed at two areas in the Northend of the Site as described below:

- The Factory 36 Area is located in the northern portion of the Northend of the Site, north of Stewart Street (**Figure 3**). In this area, the primary COCs are volatile organic compounds (VOCs). Monitoring wells in the Factory 36 area and downgradient were selected for sampling to investigate groundwater impacts. This sampling is proposed to be completed in October/November 2024.
- The Lagoon Area is located east of the CSX railroad tracks, north of Leith Street (**Figure 3**). The primary COCs in this area are PFAS. In order to investigate PFAS impacts southeast of the lagoon, select monitoring wells were sampled in June of this year and are planned to be sampled again in December 2024.

Southend Sampling Plan

Groundwater sampling activities will be completed at two areas in the Southend of the Site as described below:

- The Building 04 area is located north of Hamilton Avenue and west of the CSX railroad tracks. The primary COC at the Building 04 area is PFAS. This sampling event will include collecting groundwater samples from select monitoring wells (**Figure 4**) in the area to supplement data recently collected in August 2024 to characterize current conditions. This sampling is proposed to be completed in October/November 2024.
- The Building 09 area is located in the south portion of Hamilton Avenue. The primary COCs in this area are VOCs. Groundwater samples will be collected from select monitoring wells (**Figure 4**) to characterize current concentrations at the Site boundary. This sampling is proposed to be completed in October/November 2024.

Schedule and Cost Estimate

Groundwater sampling activities will be completed in October through December 2024.

Estimated costs are summarized in the table below. These costs include preparation of this scope of work memorandum, field data collection, data analysis, and reporting of the results of the groundwater monitoring event. Sitewide groundwater levels and sampling activities conducted at the Factory 36 and Building 09 Area will be billed to Task 02404. Groundwater sampling for PFAS at the Lagoon Area and Building 04 Area will be billed to PFAS Task 03200.

Item Description	Estimated Cost
Site Groundwater Sampling (non-PFAS)	\$13,400
Laboratory (non-PFAS)	\$1,600
Groundwater Levels	\$7,500
PFAS Groundwater Sampling (Task 03200)	\$10,200
Laboratory (PFAS)	\$7,600
Total Non-PFAS (Task 02404)	\$22,500
Total PFAS (Task 03200)	\$17,800

Enclosures:

Table 1 – Sitewide Groundwater Sampling Plan

Figure 1 – Site Location Map

Figure 2 - 2024 Sitewide Groundwater Elevation Locations

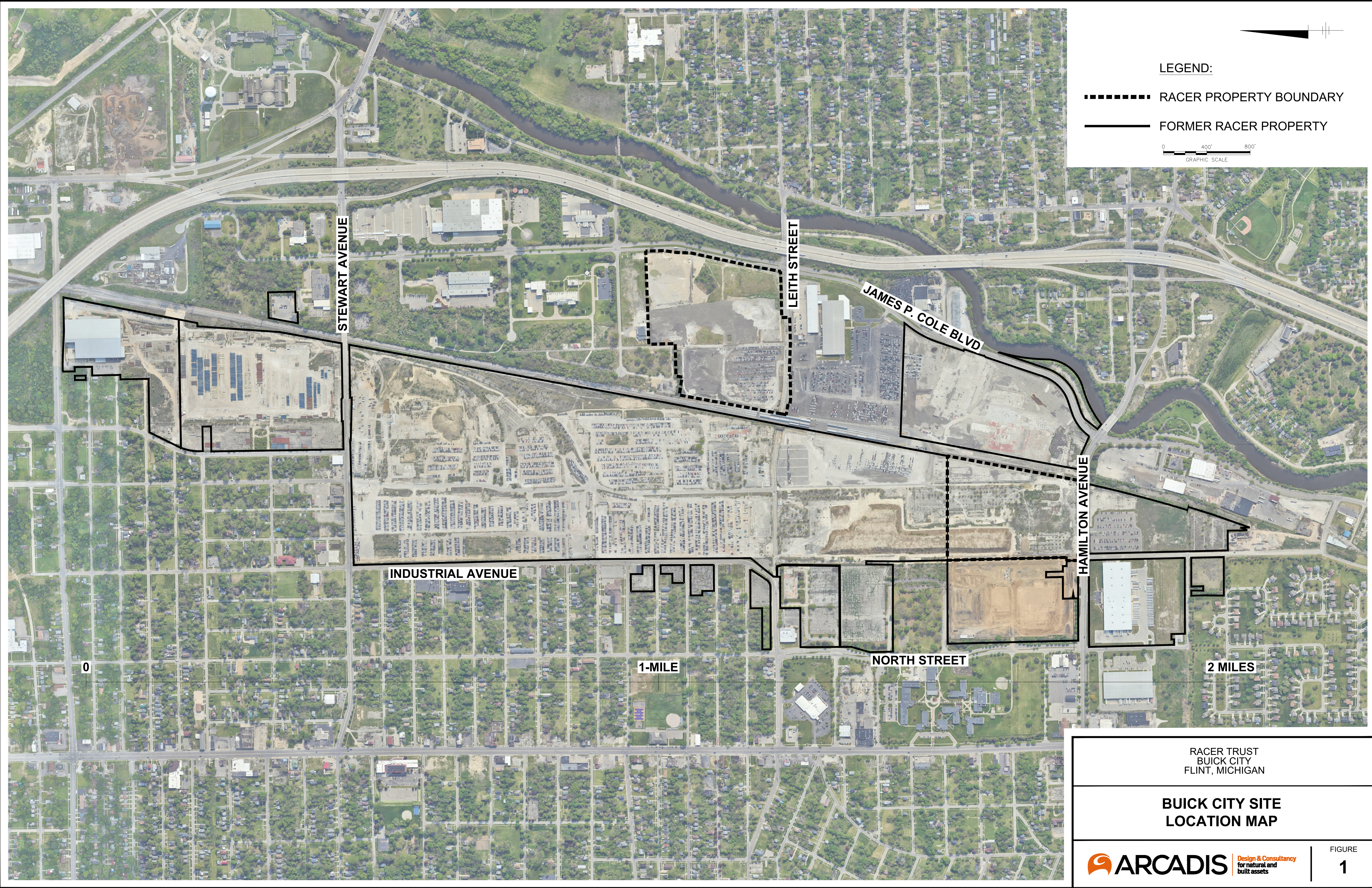
Figure 3 – Northend Groundwater Sampling Plan

Figure 4 – Southend Groundwater Sampling Plan

**Table 1 - Fall 2024 Groundwater Sampling Plan
RACER Buick City Site, Flint, Michigan**

Location	Screen Interval (feet below ground surface)	PFAS	VOCs	Rationale
NORTHEND				
Factory 36 Area				
RFI-36-18	14-24		x	Monitoring Factory 36 VOC impacts
RFI-36-37	--		x	Monitoring Factory 36 VOC impacts
RFI-36-44	9-19		x	Monitoring Factory 36 VOC impacts
RFI-36-53	12-22		x	Monitoring Factory 36 VOC impacts
RFI-36-56R	8-18		x	Monitoring Factory 36 VOC impacts
36-FP1	8-18		x	Monitoring Factory 36 VOC impacts
RFI-36-03	14.5-19.5		x	Monitoring Factory 36 VOC impacts
RFI-36-08	6-16		x	Monitoring Factory 36 VOC impacts
Lagoon Area				
MW-LAG-25(9-14)	9-14	x		Investigating PFAS downgradient of the Lagoon
MW-LAG-35(15-20)	15-20	x		Investigating PFAS downgradient of the Lagoon
MW-LAG-46(3-8)	3-8	x		Investigating PFAS downgradient of the Lagoon
MW-LAG-46(10-15)	10-15	x		Investigating PFAS downgradient of the Lagoon
MW-LAG-59(2-7)	2-7	x		Investigating PFAS downgradient of the Lagoon
SOUTHEND				
Building 04 Area				
04-4	2.5-12.5	x		Building 04 Area PFAS investigation/monitoring
40-160	15-22	x		Building 04 Area PFAS investigation/monitoring
SB-04-20(10-15)	10-15	x		Building 04 Area PFAS investigation/monitoring
SB-04-46(4-9)	4-9	x		Building 04 Area PFAS investigation/monitoring
SB-04-56(5-10)	5-10	x		Building 04 Area PFAS investigation/monitoring
SB-04-56(14-19)	14-19	x		Building 04 Area PFAS investigation/monitoring
SB-04-57(4-9)	4-9	x		Building 04 Area PFAS investigation/monitoring
SB-04-57(14-19)	14-19	x		Building 04 Area PFAS investigation/monitoring
SB-04-71(7-12)	7-12	x		Building 04 Area PFAS investigation/monitoring
SB-04-71(15-20)	15-20	x		Building 04 Area PFAS investigation/monitoring
SB-04-72(5-10)	5-10	x		Building 04 Area PFAS investigation/monitoring
SB-04-72(15-20)	15-20	x		Building 04 Area PFAS investigation/monitoring
Building 09 Area				
RFI-09-04R	14-19		x	Building 09 VOC GW investigation/monitoring
RFI-09-49R	10-20		x	Building 09 VOC GW investigation/monitoring
RFI-09-53	5-15		x	Building 09 VOC GW investigation/monitoring
RFI-09-57	3-13		x	Building 09 VOC GW investigation/monitoring

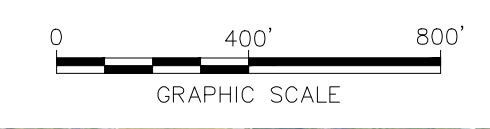
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LEGEND:

----- RACER PROPERTY BOUNDARY

————— FORMER RACER PROPERTY



RACER TRUST
BUICK CITY
FLINT, MICHIGAN

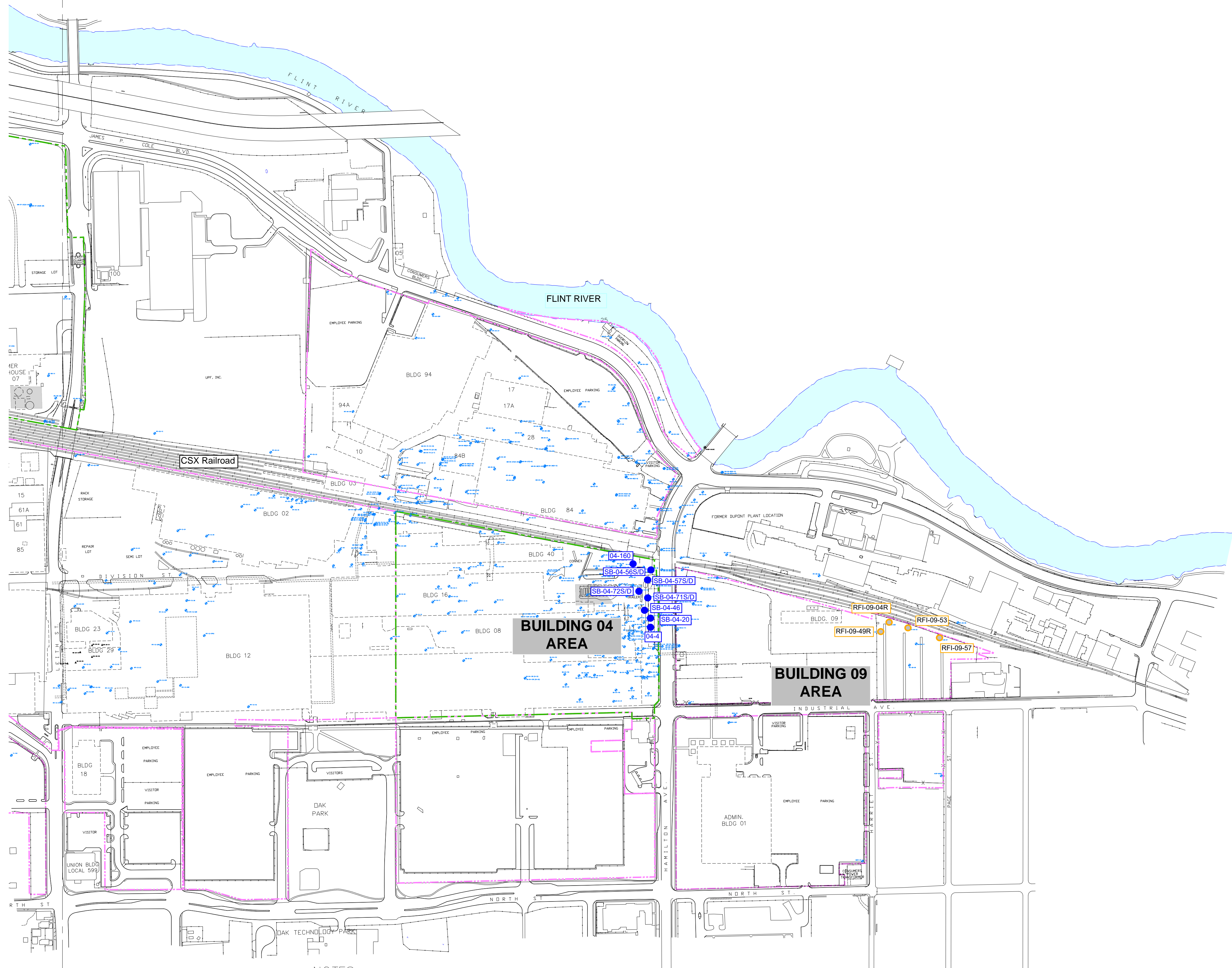
BUICK CITY SITE LOCATION MAP



FIGURE

1

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- LEGEND:
- MONITORING WELL
 - BUILDING 04 PFAS SAMPLING LOCATIONS
 - BUILDING 09 VOC SAMPLING LOCATIONS

0 250' 500'
APPROXIMATE SCALE IN FEET

NOTES:
1. RACER PROPERTY BOUNDARY BASED ON 2023 ROWE SURVEY.

RACER TRUST
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SOUTHEND GROUNDWATER SAMPLING PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4