Memo

SUBJECT
RACER Buick City PFAS Building 86 and 97 Investigation

DATE
May 20, 2024

DEPARTMENT
Environment

COPIES TO
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TO
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PROJECT NUMBER
30215500

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On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, Arcadis of Michigan, LLC (Arcadis) has prepared this work plan for investigating a potential source area of sampling per- and polyfluoroalkyl substances (PFAS) impacts at a recently identified former Fire Station (Building 97) and delineating recent impacts identified in soil at the Building 86 Area at the Buick City Site (the Site) located in Flint, Michigan (**Figure 1**).

Building 86

Several soil and groundwater investigations have been completed in the Building 86 area. During the January 2024 drilling investigation, a soil sample collected at SB-86-74 from 6 to 8 feet below ground surface (ft bgs) was found to have 14,000 ppt of PFOS (**Figure 2**). This work plan proposes completing three soil borings to delineate this impact. The proposed boring locations are shown on **Figure 3** and SB-86-74 is shown in red. The ground surface elevation of SB-86-74 is approximately 2 to 3 feet lower than the ground surface elevation of the proposed borings, therefore, the soil sample intervals will be adjusted in the field to correct for the difference in elevation between locations. Soil samples will be collected from the equivalent of 2 to 4, 4 to 6, and 6 to 8 ft bgs. The soil samples collected from the proposed boring location closest to SB-86-74 (SB-86-78) will be submitted for analysis. The samples collected from the other two proposed boring locations (SB-86-79 and SB-86-80) will be held for analysis pending the results of samples collected from SB-86-78. No groundwater samples are proposed for this portion of the investigation due to the extensive groundwater data that has already been collected in the Building 86 area.

Building 97 – Former Fire Station

A review of historical maps identified a former fire station at Building 97 (**Figure 1**). Two soil borings are proposed downgradient and outside of the former building footprint to the east and southeast (**Figure 3**).

Soil samples will be collected from 1-2 (or just below the concrete), 2 to 4, and 4 to 6, ft bgs. One soil sample will be collected above the saturated interval at proposed boring SB-21-06. The groundwater table is expected to be encountered at approximately 12 feet below ground surface in this area. A groundwater sample will also be collected from one boring location (SB-21-06).

Investigation activities will follow the procedures previously submitted in the *Field Sampling Plan Update* (May, 2023).

Estimated Costs

The estimated costs for this event are summarized in the table below. The range of laboratory costs reflect the samples that will be held pending analysis. The high end reflects the costs if all the collected samples are analyzed.

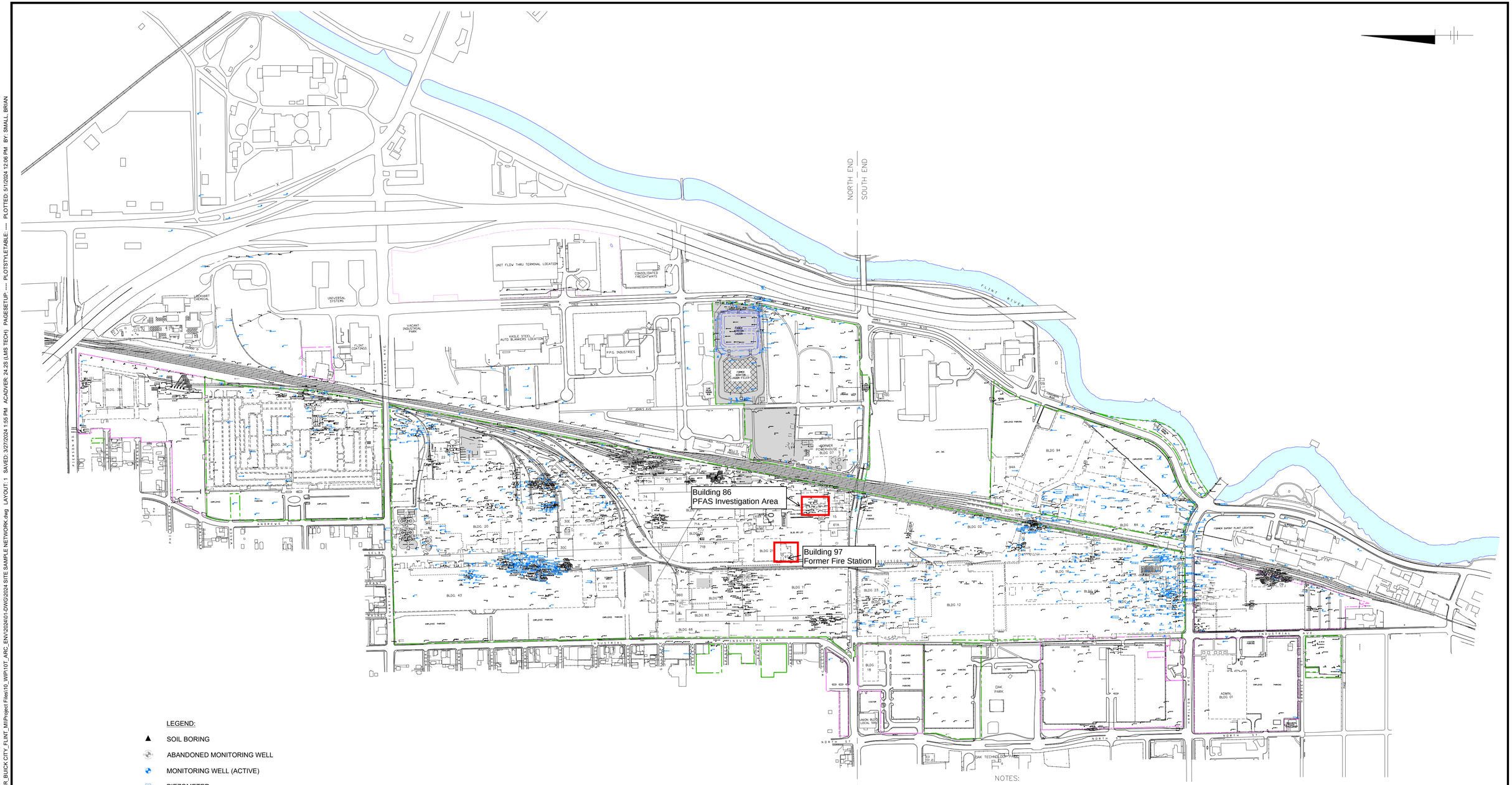
Item Description	Estimated Cost
Arcadis Labor	$7,200
Equipment and Supplies	$800
Laboratory Costs	$3,900-$8,400
Drilling Subcontractor	$11,000
Surveying Subcontractor	$1,500
Waste Disposal	$1,000
Total	$25,400 - $29,900

Enclosures:

Figure 1 – Site Map

Figure 2 – Summary of PFOS Concentrations in Building 86 Soil

Figure 3 – Proposed Boring Locations



LEGEND:

- SOIL BORING
- ABANDONED MONITORING WELL
- MONITORING WELL (ACTIVE)
- PIEZOMETER
- RECOVERY WELL
- OBSERVATION WELL
- SOIL GAS POINT
- SUB-SLAB MONITORING POINT
- TRANSECT POINT
- SURFACE WATER
- RIVER GAUGE
- TEST PIT
- UNABLE TO LOCATE

NOTES:

1. RACER PROPERTY BOUNDARY BASED ON 2023 ROWE SURVEY.
2. FORMER PROPERTY BOUNDARY BASED ON 2021 BMJ SURVEY.

0 400' 800'
APPROXIMATE SCALE IN FEET

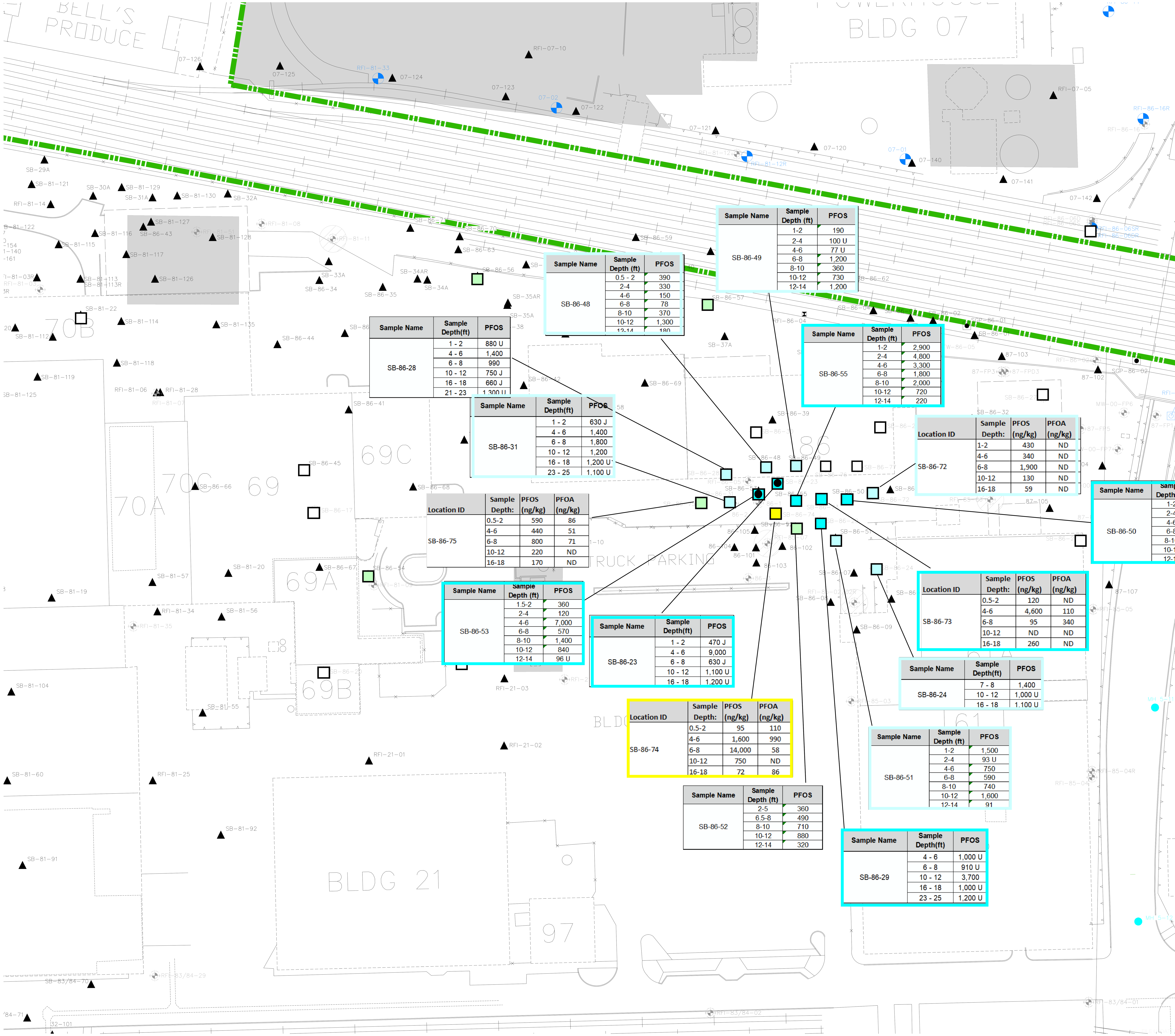
RACER TRUST
BUICK CITY
FLINT, MICHIGAN

SITE LAYOUT

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

C:\Users\BSSmall\DC\ACCDocs\Arcadis ACC US\AUS-99999999-RACER_BUICK CITY_FLINT_MI\Project Files\10_WIP\10T_ARC_ENV\2024\01-DWG\2024-BUILDING 86.dwg LAYOUT: 1D SAVED: 3/6/2024 9:26 AM ACADVER: 24.2S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 3/6/2024 9:39 AM BY: SMALL, BRIAN



Sample Name	Sample Depth (ft)	PFOS
SB-86-48	0.5 - 2	390
	2-4	330
	4-6	150
	6-8	78
	8-10	370
	10-12	1,300
	12-14	180

Sample Name	Sample Depth (ft)	PFOS
SB-86-49	1-2	190
	2-4	100 U
	4-6	77 U
	6-8	1,200
	8-10	360
	10-12	730
	12-14	1,200

Sample Name	Sample Depth(ft)	PFOS
SB-86-28	1 - 2	880 U
	4 - 6	1,400
	6 - 8	990
	10 - 12	750 J
	16 - 18	660 J
	21 - 23	1,300 U

Sample Name	Sample Depth (ft)	PFOS
SB-86-55	1-2	2,900
	2-4	4,800
	4-6	3,300
	6-8	1,800
	8-10	2,000
	10-12	720
	12-14	220

Sample Name	Sample Depth(ft)	PFOS
SB-86-31	1 - 2	630 J
	4 - 6	1,400
	6 - 8	1,800
	10 - 12	1,200
	16 - 18	1,200 U
	23 - 25	1,100 U

Location ID	Sample Depth:	PFOS (ng/kg)	PFOA (ng/kg)
SB-86-72	1-2	430	ND
	4-6	340	ND
	6-8	1,900	ND
	10-12	130	ND
	16-18	59	ND

Location ID	Sample Depth:	PFOS (ng/kg)	PFOA (ng/kg)
SB-86-75	0.5-2	590	86
	4-6	440	51
	6-8	800	71
	10-12	220	ND
	16-18	170	ND

Sample Name	Sample Depth (ft)	PFOS
SB-86-50	1-2	340
	2-4	2,900
	4-6	440
	6-8	52
	8-10	61 U
	10-12	81 U
	12-14	62 U

Sample Name	Sample Depth (ft)	PFOS
SB-86-53	1.5-2	360
	2-4	120
	4-6	7,000
	6-8	570
	8-10	1,400
	10-12	840
	12-14	96 U

Sample Name	Sample Depth(ft)	PFOS
SB-86-23	1 - 2	470 J
	4 - 6	9,000
	6 - 8	630 J
	10 - 12	1,100 U
	16 - 18	1,200 U

Location ID	Sample Depth:	PFOS (ng/kg)	PFOA (ng/kg)
SB-86-73	0.5-2	120	ND
	4-6	4,600	110
	6-8	95	340
	10-12	ND	ND
	16-18	260	ND

Sample Name	Sample Depth(ft)	PFOS
SB-86-24	7 - 8	1,400
	10 - 12	1,000 U
	16 - 18	1,100 U

Location ID	Sample Depth:	PFOS (ng/kg)	PFOA (ng/kg)
SB-86-74	0.5-2	95	110
	4-6	1,600	990
	6-8	14,000	58
	10-12	750	ND
	16-18	72	86

Sample Name	Sample Depth (ft)	PFOS
SB-86-51	1-2	1,500
	2-4	93 U
	4-6	750
	6-8	590
	8-10	740
	10-12	1,600
	12-14	91

Sample Name	Sample Depth (ft)	PFOS
SB-86-52	2-5	360
	6.5-8	490
	8-10	710
	10-12	880
	12-14	320

Sample Name	Sample Depth(ft)	PFOS
SB-86-29	4 - 6	1,000 U
	6 - 8	910 U
	10 - 12	3,700
	16 - 18	1,000 U
	23 - 25	1,200 U

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- OBSERVATION WELL
- SOIL GAS POINT
- SUB-SLAB MONITORING POINT
- TRANSECT POINT
- SURFACE WATER
- RIVER GAUGE
- TEST PIT
- UNABLE TO LOCATE
- STORM SEWER

PFOS CONCENTRATIONS

- <240 ng/kg
- >240 ng/kg
- >1,000 ng/kg
- >2,500 ng/kg
- >5,000 ng/kg
- >10,000 ng/kg
- >50,000 ng/kg
- >100,000 ng/kg

DEPTH TO WATER -
GW elevation 735 to 736
feet above mean sea level

Ground surface 743 to 744
feet above mean sea level

DTW ~ 7 feet below ground
surface, dependent on
location

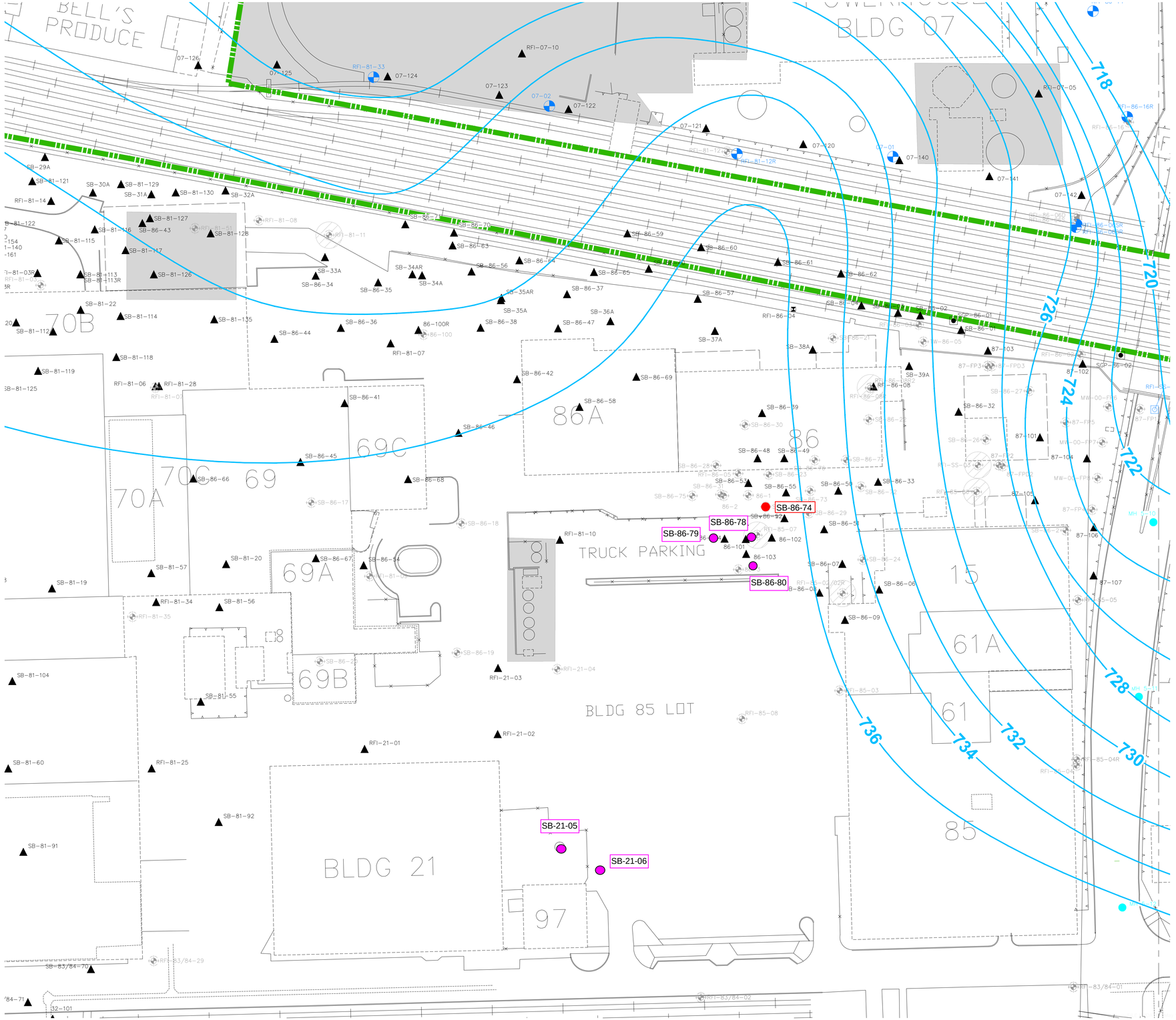
0 50' 100'
APPROXIMATE SCALE IN FEET

RACER TRUST
BUICK CITY
FLINT, MICHIGAN

BUILDING 86 AREA SELECT
PFOS SOIL CONCENTRATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2



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- TEST PIT
- UNABLE TO LOCATE

- PROPOSED BORING LOCATION
- 724 GROUNDWATER CONTOUR LINE

0 50' 100'
APPROXIMATE SCALE IN FEET

RACER TRUST
BUICK CITY
FLINT, MICHIGAN

PROPOSED INVESTIGATION LOCATIONS

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FIGURE 3