

**SUBJECT**

Proposed Area of Contamination Boundaries  
Blocks 2,3,5, and 6

**DATE**

March 24, 2023

**DEPARTMENT**

Environment

**COPIES TO**

Micki Maki, Arcadis

**TO**

Grant Trigger, RACER Trust

**OUR REF**

30174223

**PROJECT NUMBER**

30174223

**NAME**

Chris Peters

DRAFT

## Background

This memo summarizes the current understanding of lead impacts at Blocks 2, 3, 5, and 6 and requests approval of the Area of Contamination (AOC) delineations proposed herein for these blocks at the RACER Buick City Site (Site) located in Flint, Michigan (**Figure 1**). The basis for defining the AOCs was presented in the January 26, 2023 memo "Summary of Proposed AOCs for Block 4 and Updated Lead Data" (revised January 27) (Block 4 Memo), which was forwarded to the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Formal approval of the AOCs on Block 4 was requested on March 15, 2023.

As indicated in the above referenced memo, the definition of these AOCs was based upon lead soil concentrations greater than 600 ppm. The 600 ppm level was in turn based on an evaluation of Toxicity Characteristic Leaching Procedure (TCLP) concentrations compared with total lead concentrations in soil. An evaluation of groundwater concentrations in areas containing elevated lead concentrations in soil indicated no material effect on groundwater concentrations. As such, the limits of the AOCs for soils in Blocks 2, 3, 5, and 6 have been based on 600 ppm lead.

Note that most of the AOCs are associated with lead Soil Impact (SI) areas. The SI designation indicates the area contains lead concentrations greater than 900 ppm, which represents the Michigan Part 201 non-residential direct contact (NDC) value for lead. For simplicity purposes, the SI boundary was made equivalent to the AOC boundary, and as such the direct contact area is more conservative than would otherwise be required under Part 201. The SI/AOC areas in the Northend of the Site are presented on **Figure 2** and in the Southend on **Figure 3**. Also note that where there is an AOC designation only, lead concentrations exceed 600 ppm but are less than 900 ppm.

Detailed delineations of the AOCs for Blocks 2, 3, 5, and 6 are presented in the following sections.

## AOC Summaries

### Block 2

The proposed AOC limits for Block 2 are presented in **Attachment A** and are summarized below.

- Seven SI/AOC areas – SI/AOC #1, SI/AOC #2, SI/AOC #34, SI/AOC #35, SI/AOC #40, SI/AOC #41, and SI/AOC #42.
- At SI/AOC #1, SI/AOC #2, SI/AOC #34, SI/AOC #41, and SI/AOC #42 there is only one sample at each area where the lead concentration exceeds 600 ppm.
  - SI/AOC #1 – 1 to 3 ft bgs
  - SI/AOC #2 – 1 to 3 ft bgs
  - SI/AOC #34 – 1 to 3 ft bgs
  - SI/AOC #41 – 2.5 to 5 ft bgs
  - SI/AOC #42 – 3 to 5 ft bgs
- At SI/AOC #35 the extent of the AOC was primarily determined using the 40-foot step-out proposed in the Block 4 memo. However, at locations where lead was detected at concentrations greater than 10,000 ppm, the extent was determined using existing borings with lead concentrations less than 600 ppm.
- WMU #4 and WMU #5 are located within SI/AOC #35.
- A transportation corridor between SI/AOC #35 and SI/AOC #40 is proposed to enable movement of lead impacted soils between these areas.

### Block 3

The proposed AOC limits for Block 3 are presented in **Attachment B** and are summarized below.

- Two SI/AOC areas – SI/AOC #7 and SI/AOC #30
- Both areas have only one sample at each area where the lead concentration exceeds 600 ppm.
  - SI/AOC #7 – 6.9 to 8.9 ft bgs
  - SI/AOC #30 – 0 to 2 ft bgs

### Block 5

The proposed AOC limits for Block 5 are presented in **Attachment C** and are summarized below.

- Five SI/AOC areas – SI/AOC #24, SI/AOC #26, SI/AOC #27, SI/AOC #36, and AOC #37
- SI/AOC #27 is delineated to the west by the former Factory 12 basement.
- At SI/AOC #24, SI/AOC #27, SI/AOC #36, and AOC #37 there is only one sample at each area where the lead concentration exceeds 600 ppm.
  - SI/AOC #24 – 0.9 to 2 ft bgs
  - SI/AOC #27 – 6 to 8 ft bgs
  - SI/AOC #36 – 5 to 6 ft bgs

- AOC #37 – 1 to 2 ft bgs

## Block 6

The proposed AOC limits for Block 6 are presented in **Attachment D** and are summarized below.

- Three SI/AOC areas – SI/AOC #21, AOC #38, and AOC #39.
- SI/AOC #21 extends to the property boundary to the north and west.
- At AOC #38 and AOC #39 there is only one sample at each boring where the lead concentration equals or exceeds 600 ppm.
  - AOC #38 – 1 to 3 ft bgs
  - AOC #39 – 0.5 to 2.8 ft bgs
- A transportation corridor between AOC #38 and AOC #39 is proposed to enable movement of lead impacted soils between these areas.

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Figure 1 – Proposed Lead SI/AOC Areas Sitewide

Figure 2 – Proposed Lead SI/AOC Areas Northend

Figure 3 – Proposed Lead SI/AOC Areas Southend

Attachment A – Block 2 – Proposed AOCs

Attachment B - Block 3 – Proposed AOCs

Attachment C - Block 5 – Proposed AOCs

Attachment D - Block 6 – Proposed AOCs



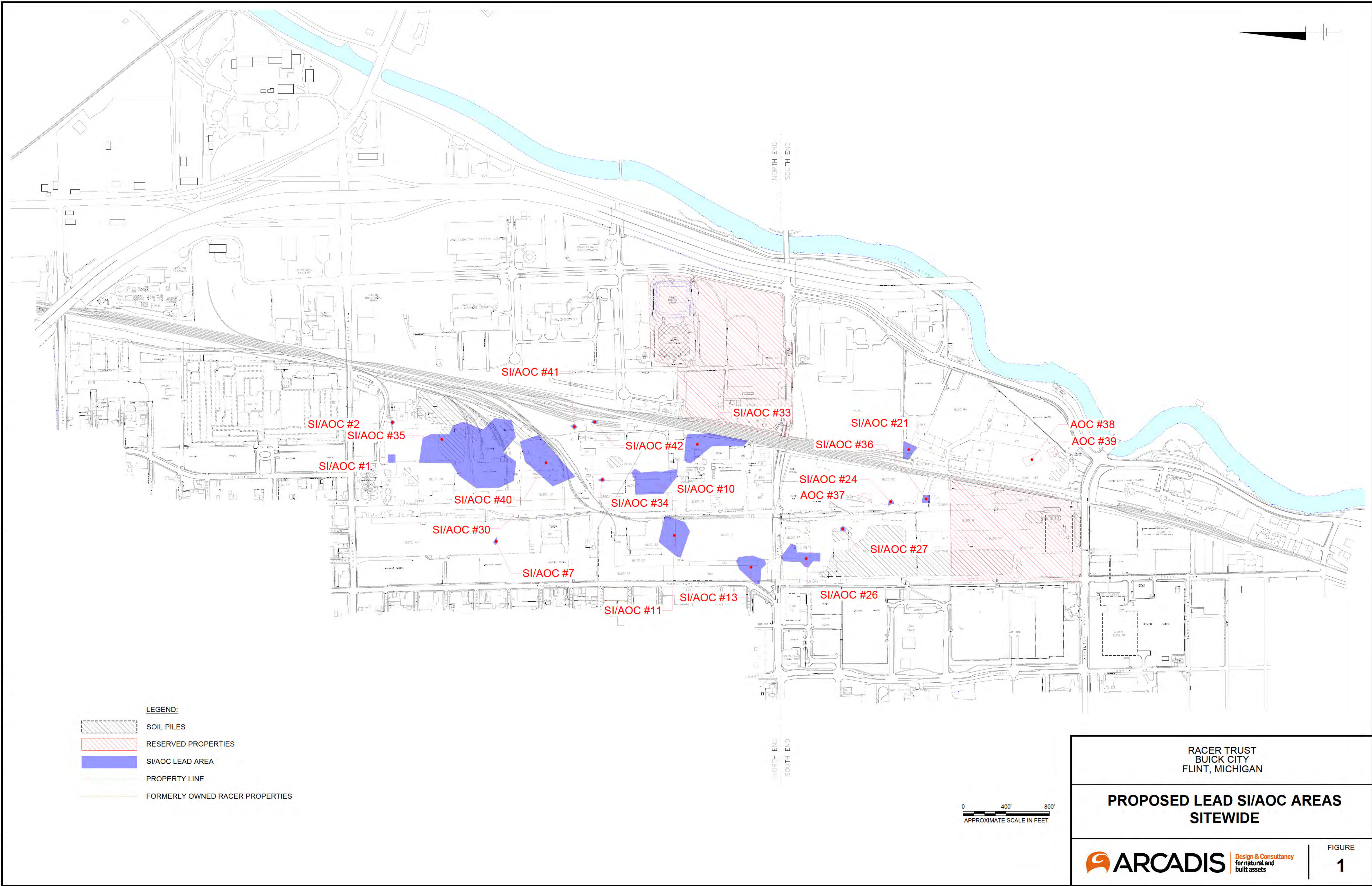
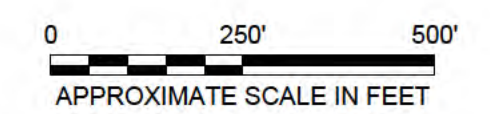




FIGURE  
2





## PROPOSED LEAD SI/AOC AREAS SOUTHEND

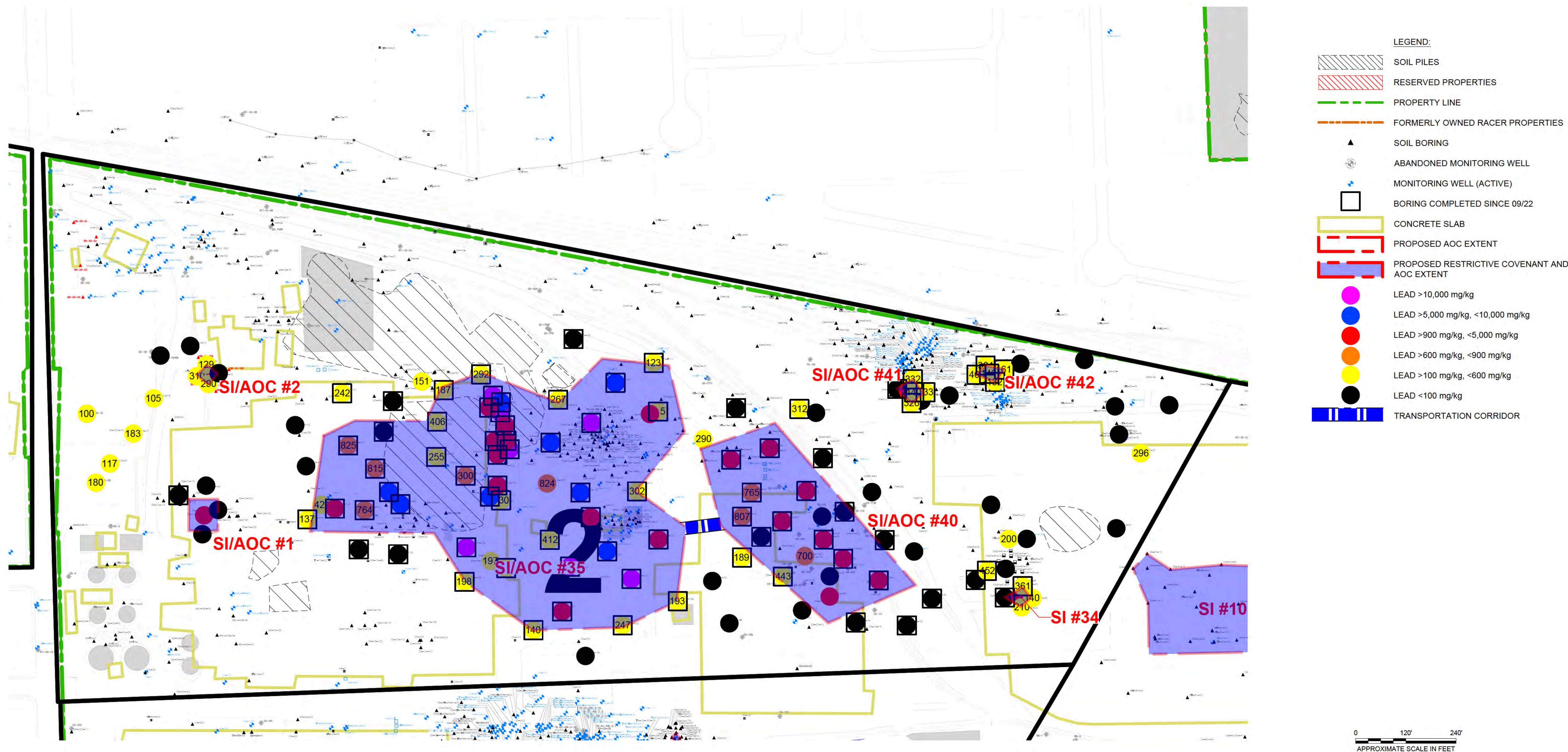


# Attachment A

## Block 2 - Proposed AOCs



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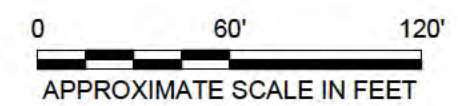
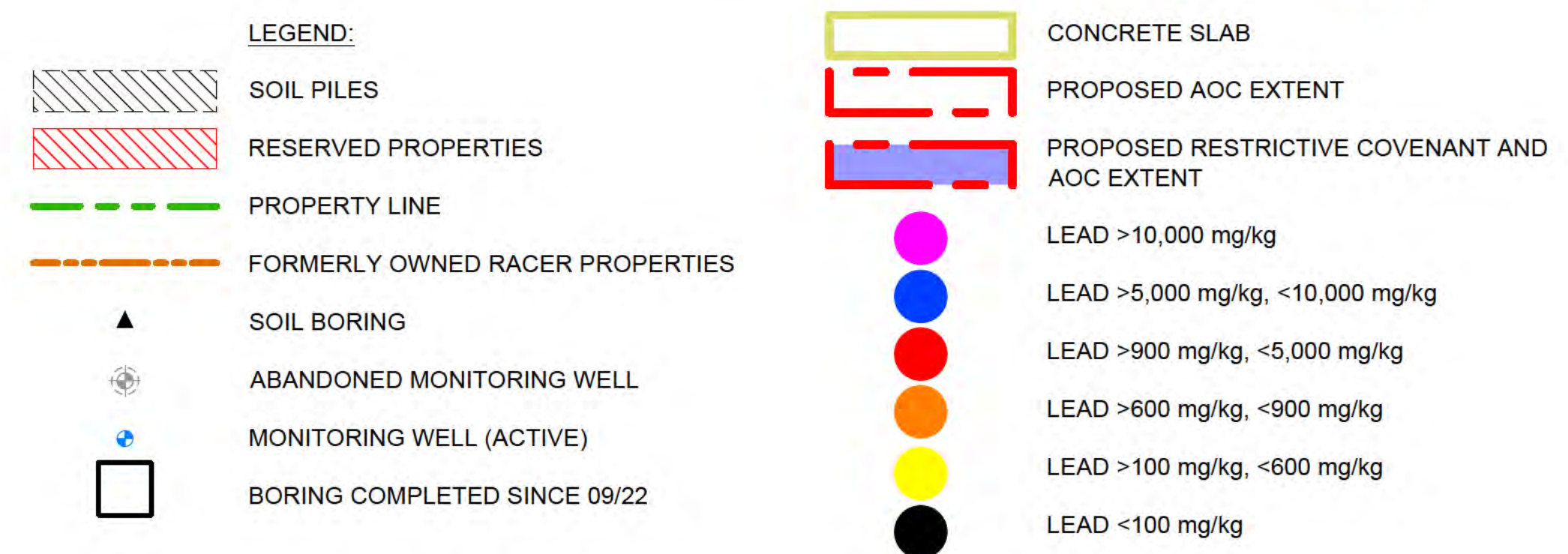
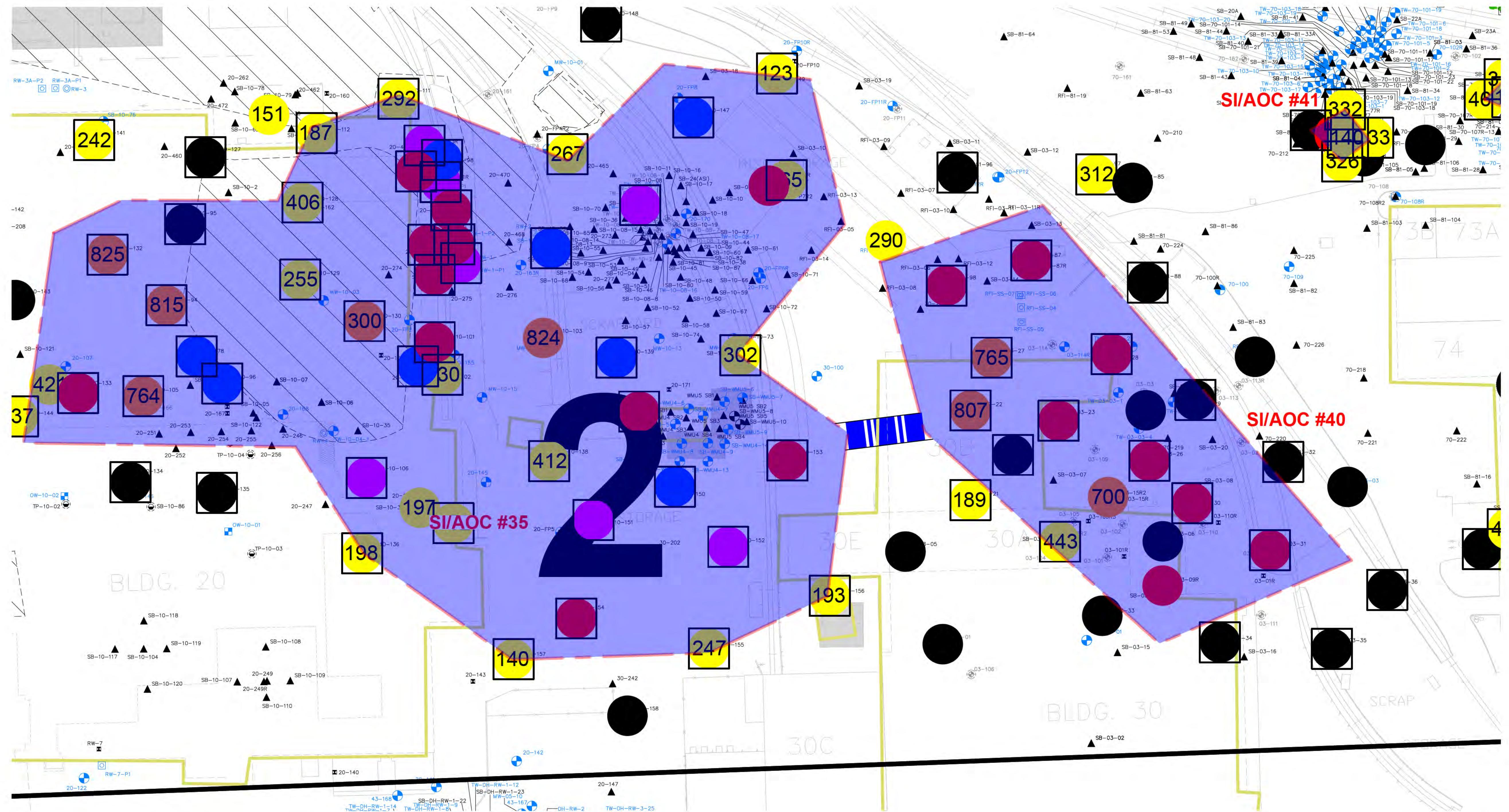
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**BLOCK 2  
PROPOSED RESTRICTIVE  
COVENANT/AOC EXTENTS FOR LEAD  
SI/AOC AREAS**

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FIGURE  
**1**





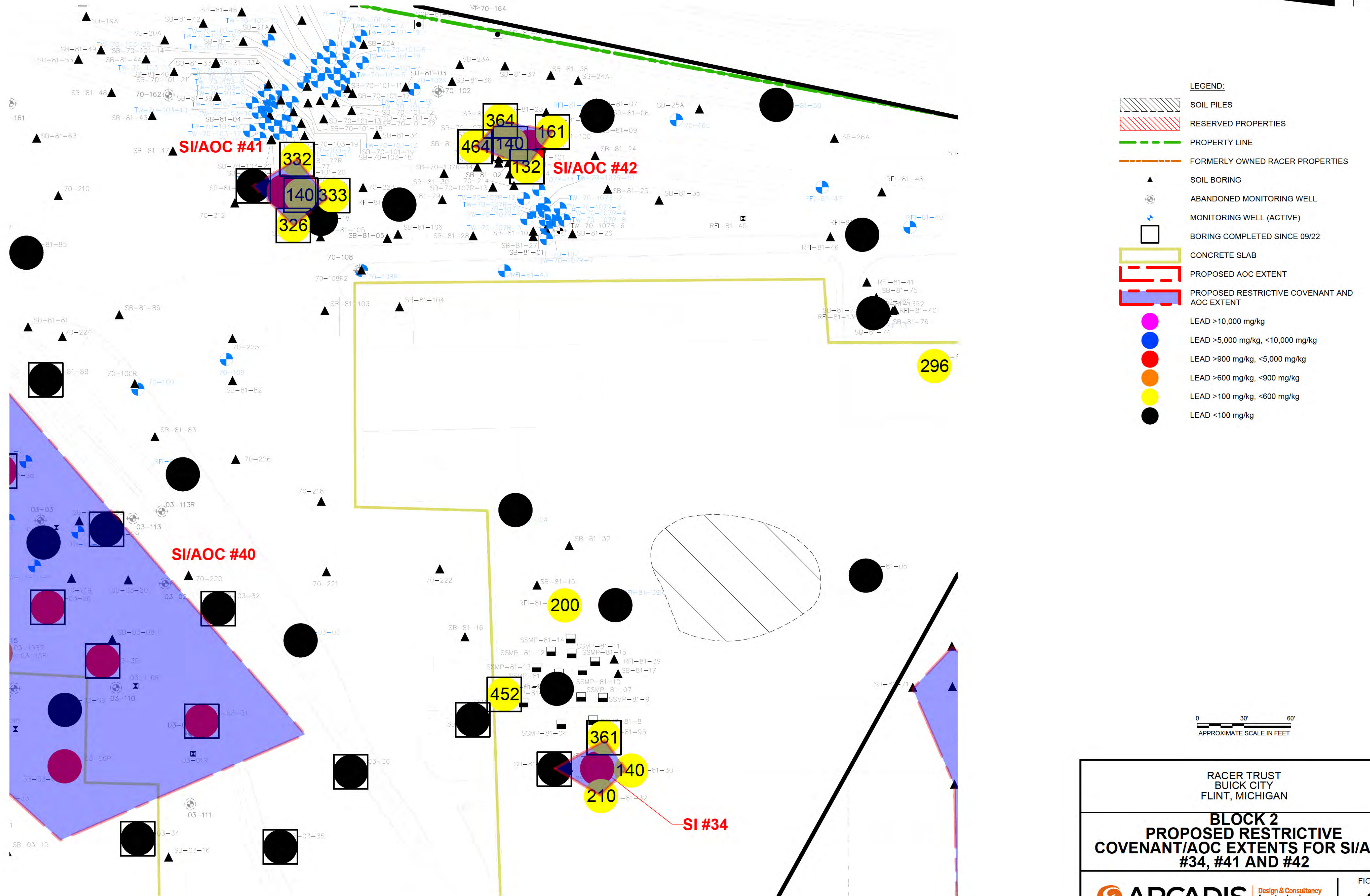
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**BLOCK 2  
PROPOSED RESTRICTIVE  
COVENANT/AOC EXTENTS FOR SI/AOC  
#35 AND #40**

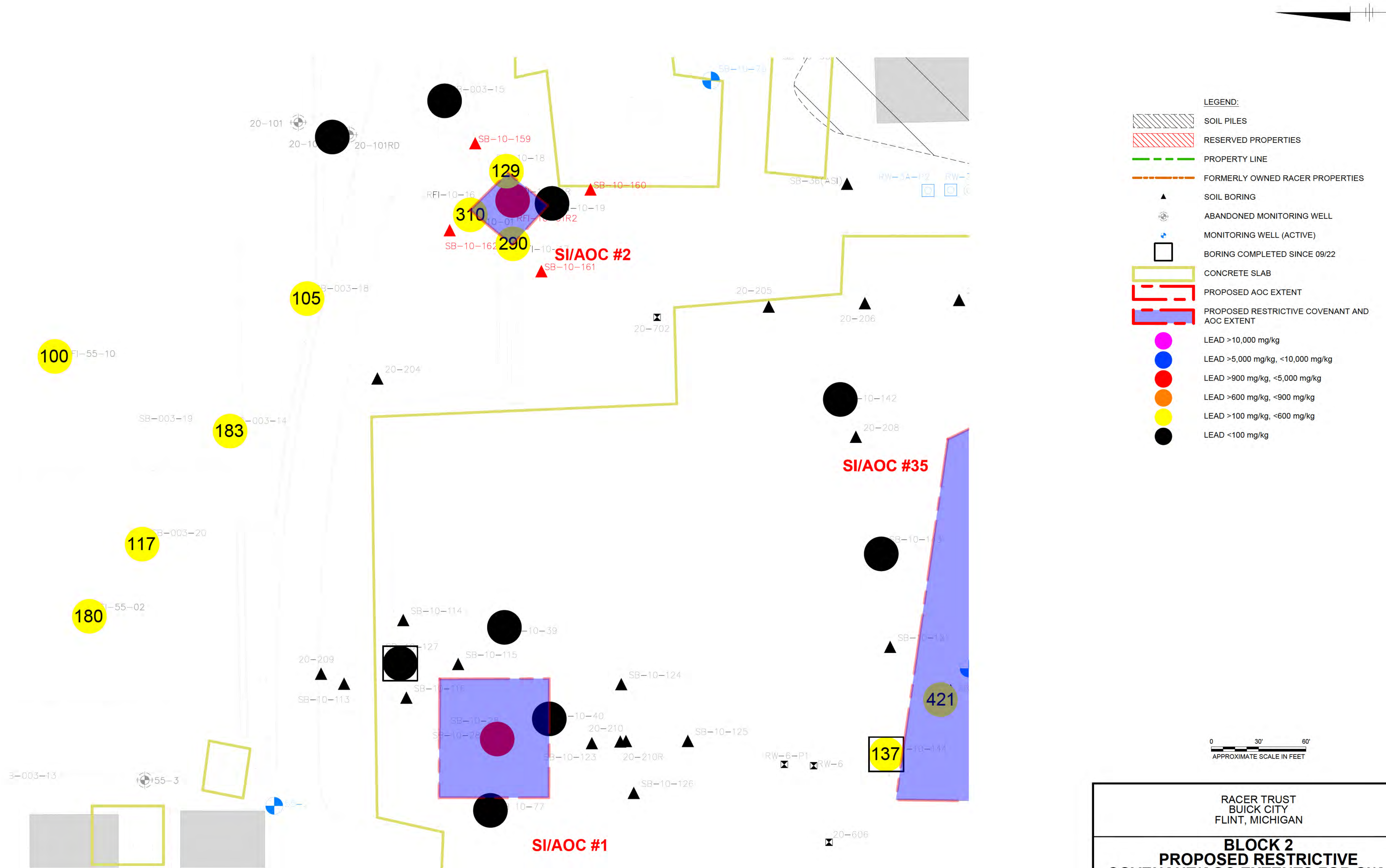
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FIGURE  
**2**











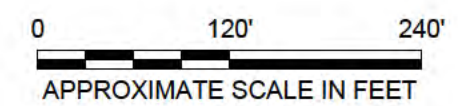
# Attachment B

## Block 3 - Proposed AOCs





- LEGEND:
- SOIL PILES
  - RESERVED PROPERTIES
  - PROPERTY LINE
  - FORMERLY OWNED RACER PROPERTIES
  - SOIL BORING
  - ABANDONED MONITORING WELL
  - MONITORING WELL (ACTIVE)
  - BORING COMPLETED SINCE 09/22
  - CONCRETE SLAB
  - PROPOSED AOC EXTENT
  - PROPOSED RESTRICTIVE COVENANT AND AOC EXTENT
  - LEAD >10,000 mg/kg
  - LEAD >5,000 mg/kg, <10,000 mg/kg
  - LEAD >900 mg/kg, <5,000 mg/kg
  - LEAD >600 mg/kg, <900 mg/kg
  - LEAD >100 mg/kg, <600 mg/kg
  - LEAD <100 mg/kg



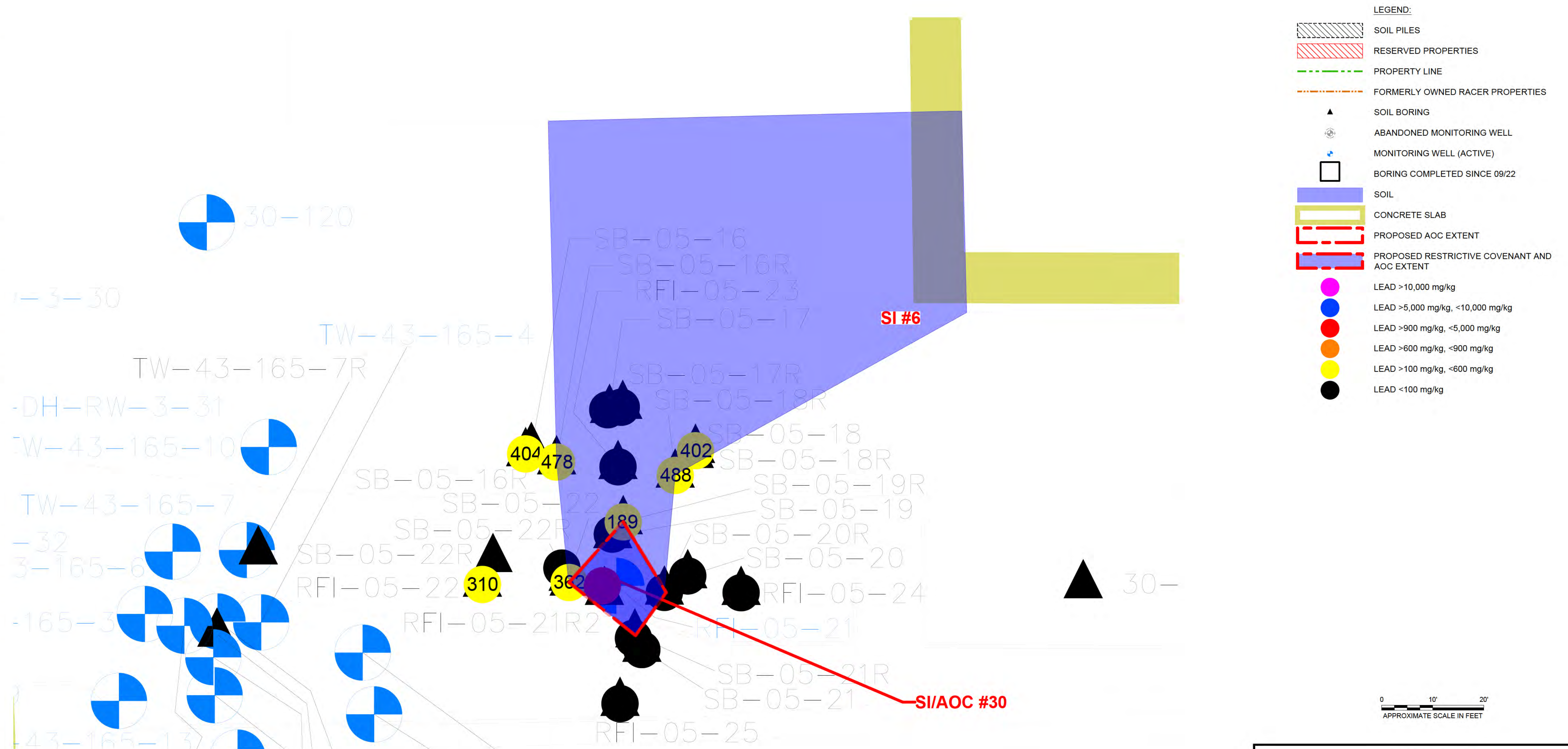
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**BLOCK 3**  
**PROPOSED LEAD RESTRICTIVE**  
**COVENANT/AOC EXTENTS**

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FIGURE  
**1**



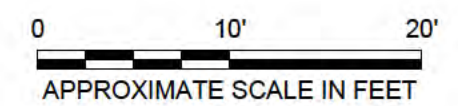
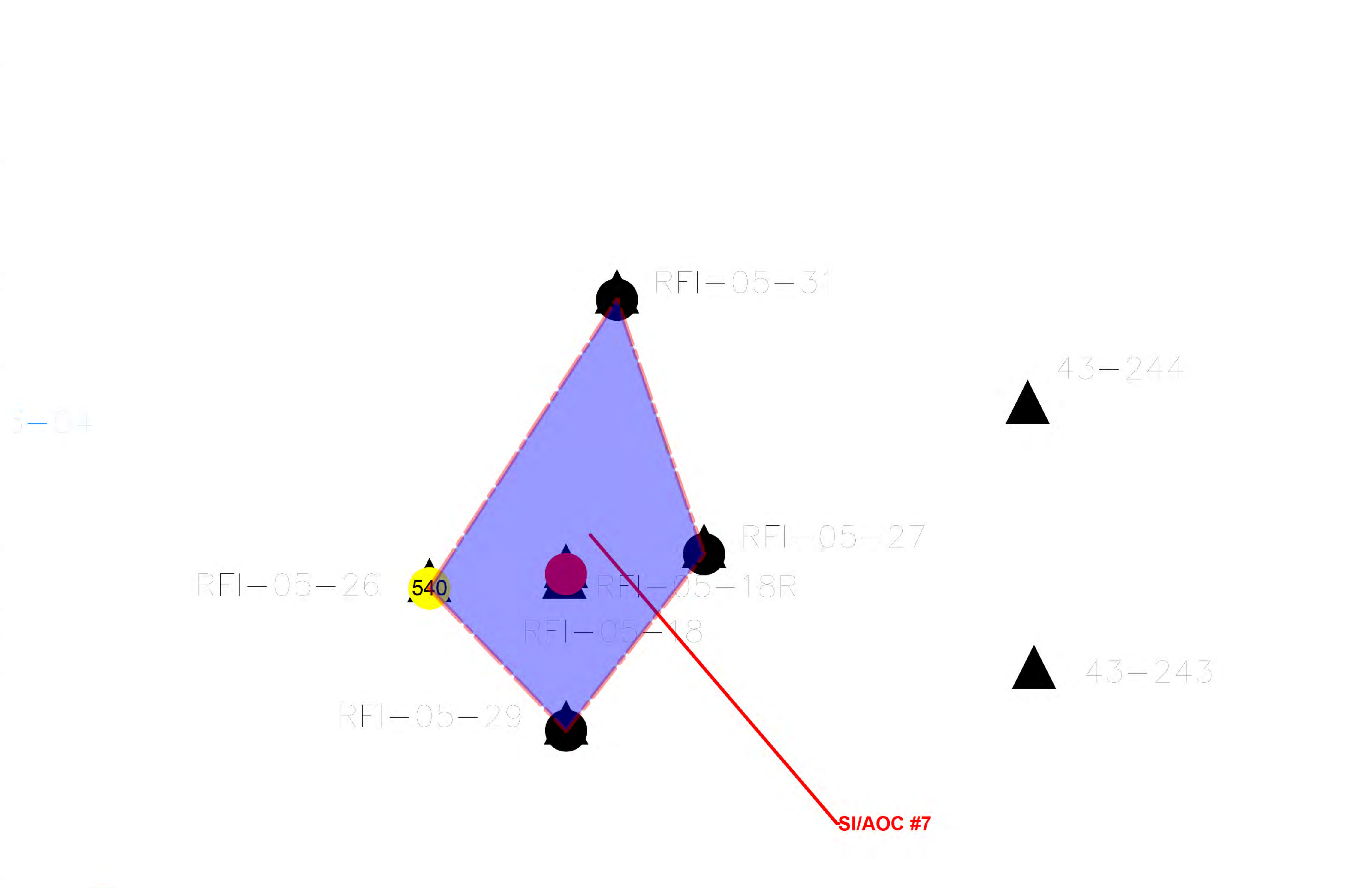


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**BLOCK 3  
PROPOSED RESTRICTIVE  
COVENANT/AOC EXTENTS FOR SI AND  
AOC #6**




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**BLOCK 3**  
**PROPOSED RESTRICTIVE COVENANT/  
AOC EXTENTS FOR SI/AOC #7**



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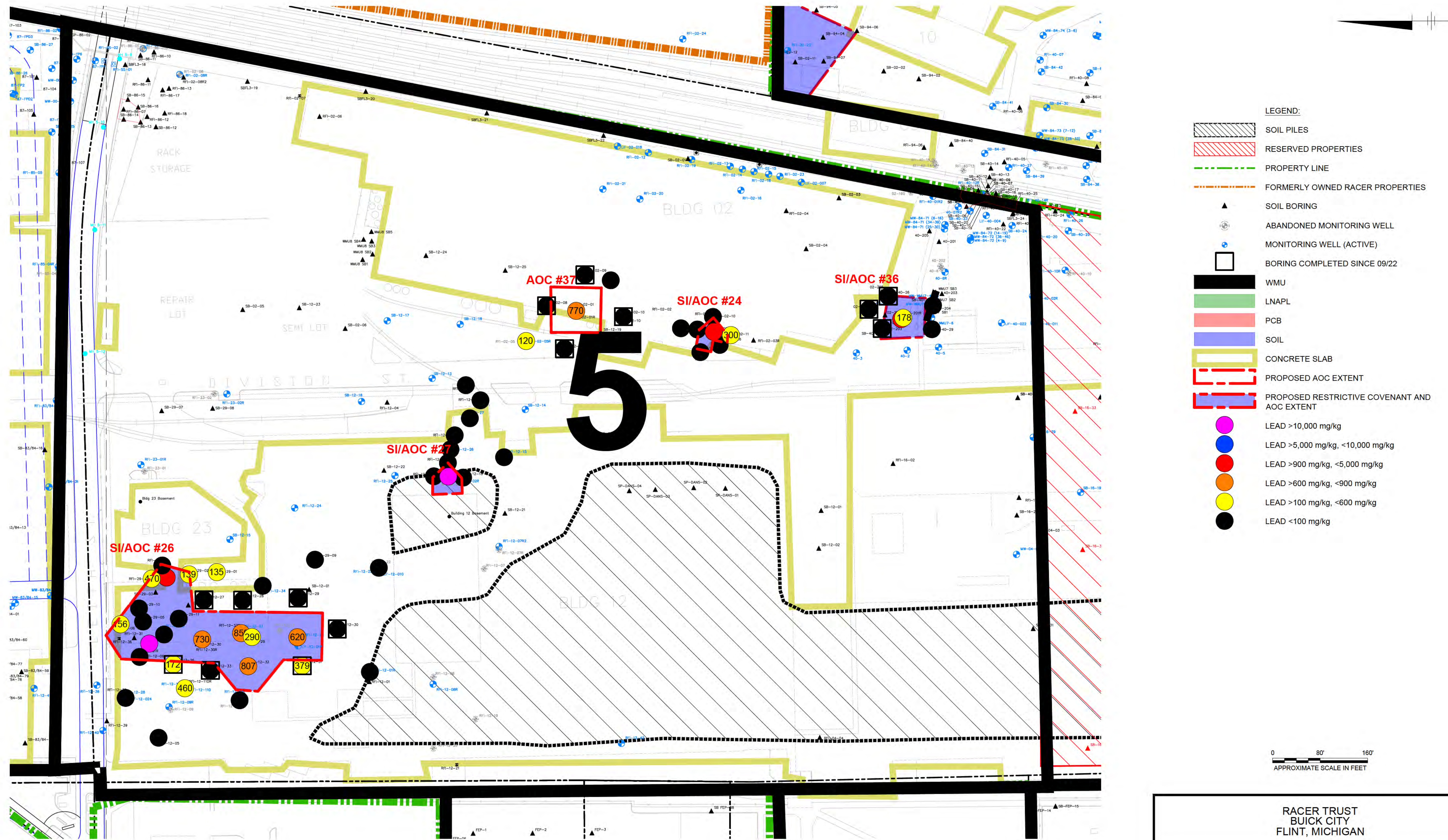
FIGURE  
**3**



# Attachment C

## Block 5 - Proposed AOCs



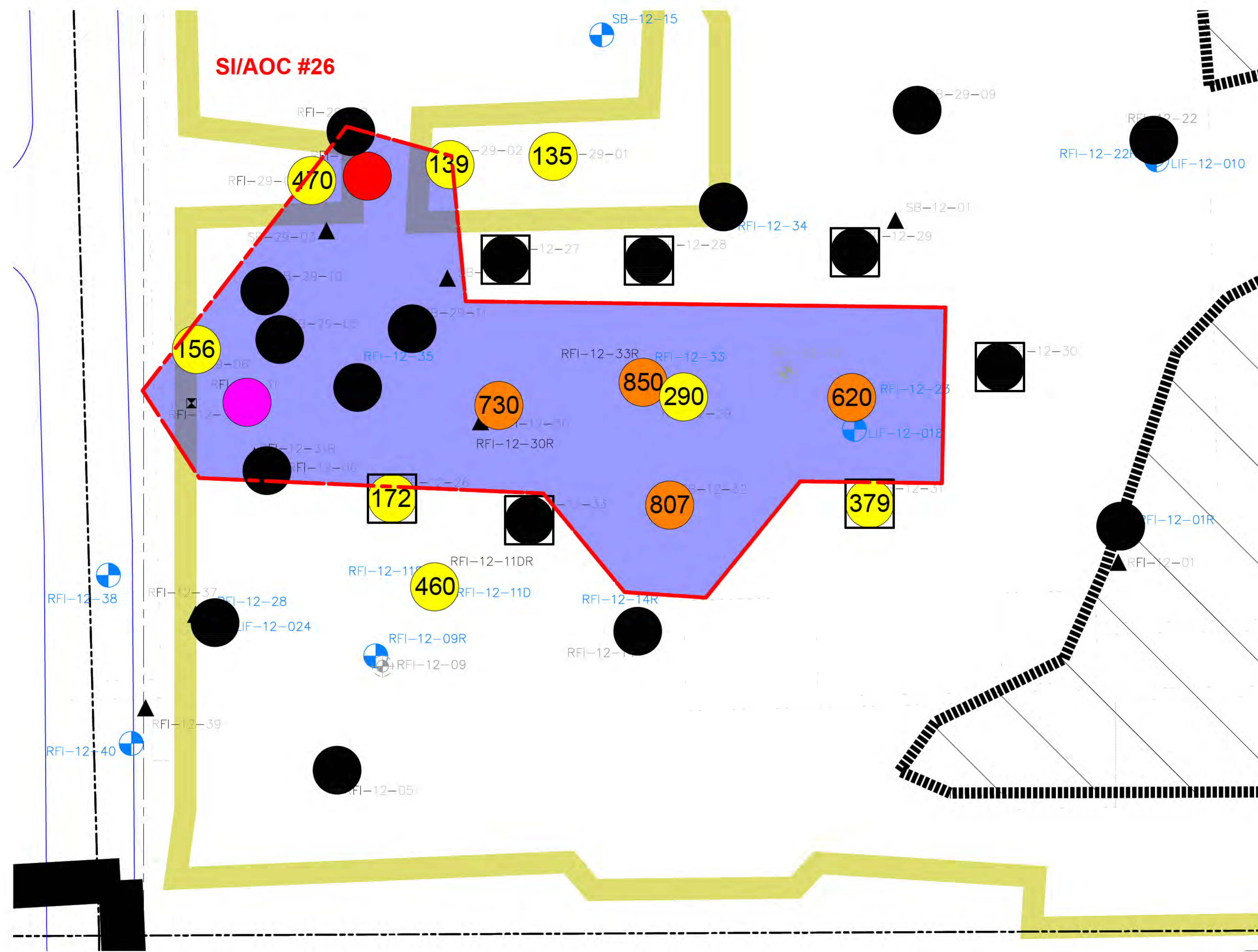


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**BLOCK 5  
PROPOSED LEAD RESTRICTIVE  
COVENANT/AOC EXTENTS**



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- LEGEND:
- SOIL PILES
  - RESERVED PROPERTIES
  - PROPERTY LINE
  - FORMERLY OWNED RACER PROPERTIES
  - SOIL BORING
  - ABANDONED MONITORING WELL
  - MONITORING WELL (ACTIVE)
  - BORING COMPLETED SINCE 09/22
  - CONCRETE SLAB
  - PROPOSED AOC EXTENT
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  - LEAD >10,000 mg/kg
  - LEAD >5,000 mg/kg, <10,000 mg/kg
  - LEAD >900 mg/kg, <5,000 mg/kg
  - LEAD >600 mg/kg, <900 mg/kg
  - LEAD >100 mg/kg, <600 mg/kg
  - LEAD <100 mg/kg

0 30' 60'  
APPROXIMATE SCALE IN FEET

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**BLOCK 5**  
**PROPOSED RESTRICTIVE**  
**COVENANT/AOC EXTENTS FOR SI/AOC**  
**#26**



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FIGURE  
**2**







# Attachment D

## Block 6 - Proposed AOCs



