



MEMORANDUM

29 March 2012
File No. 37517-006

TO: Revitalizing Auto Communities Environmental Response Trust:
Grant Trigger

Michigan Department of Environmental Quality:
Karen Williams

C: Revitalizing Auto Communities Environmental Response Trust:
David Favero

FROM: Haley & Aldrich of Michigan, Inc.
Derek C. Kaiding, P.E.

SUBJECT: Work Plan to Further Investigate Soil at
6241 Cass Avenue, Detroit, MI, Site # 1294

This memorandum (hereafter referred to as Work Plan) has been prepared by Haley & Aldrich of Michigan, Inc. on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), and serves as a Work Plan to further investigate soil at 6241 Cass Avenue, Detroit, MI, Site # 1294 (the Site), pursuant to Part 201 of the Michigan Natural Resources and Environmental Protection Act (NREPA), 1994 Public Act 451, as amended (Part 201).

This Work Plan provides a brief description of Site background, a summary of prior work completed, an overview of the evaluation of existing data, and a description of work proposed (including descriptions of fieldwork, surveying, quality assurance, quality control, and laboratory analyses) to be conducted to fill specific data gaps identified based on the evaluation of existing data. All activities will be performed using standard field and laboratory methods.

1. SITE LOCATION AND HISTORY

The Site is located in a commercial area of Detroit, at the intersection of Amsterdam Street and Cass Avenue (see Figures 1 and 2). It is rectangular in shape, and is comprised of a fenced, asphalt-paved parking lot. The Site is bordered by railroad tracks to the north (with a parking lot beyond railroad tracks), and local small businesses and/or parking lots in other directions. The Site is accessed on the east side via two entrances along Cass Avenue, and on the south side via one entrance from Amsterdam Street.

The Site historically housed the Detroit Motor Company, a lead smelting building, and two fire department structures dating back to 1897. The Cadillac Motor Car Company replaced the Detroit

Motor Company building prior to 1910. The Cadillac Motor Car Company building encompassed the Site, except for the fire department structures. The Cadillac Motor Car Company was present until sometime before 1941 when the entire building was removed along with the fire department structures. A used car sales building was present on the southern portion of the Site from prior to 1941 until prior to 1951, when it was replaced with a different automobile sales and service building in the same vicinity. This structure was present until prior to 1961, when it was removed from the Site. A second structure was present on the northeastern portion of the Site from before 1941 until before 1977, when it was removed. From 1977 until present, the Site has been vacant and used as a surface parking lot.

2. PAST SITE INVESTIGATIONS/ASSESSMENTS

Various assessments of the Site have been conducted between 1996 and 2009 (see Section 7.0 – References) to identify and document environmental conditions of the Site and the presence of substances posing an adverse environmental impact as a result of past operations.

Most notably, in June 2004, a geophysical survey was conducted at the Site to determine the presence or absence of former underground storage tanks (USTs). The results of the geophysical survey identified anomalies in several sections of the surveyed areas. The anomalies were further investigated during subsequent test pit and soil sampling activities conducted in March 2007. Three test pits were excavated on the subject property in the locations identified in the geophysical survey to potentially contain USTs (Figure 2). The material observed in the pits consisted of soil, building materials (i.e., wood, bricks), concrete, and metal pipe. In addition to the test pits, five soil borings were advanced using a truck-mounted Geoprobe® drill-rig. Borings were advanced to depths ranging from 5 to 15 feet below the ground surface (bgs) (Figure 2). Groundwater was not encountered during the investigation.

Soil samples were collected from the test pits and at each soil boring location, and were subject to laboratory analysis for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and 13 priority-pollutant metals (Metals). The corresponding soil analytical results revealed the presence of benzo(a)pyrene, lead, and arsenic above the Part 201 Residential & Commercial I Generic Cleanup Criteria and Screening Levels (The Traverse Group [Traverse] 2007a, b, and c). Traverse 2007b indicates that the Drinking Water Protection and Groundwater/Surface Water Interface Protection pathways are not relevant for the property. This conclusion is appropriate, given that groundwater was not found during the past investigations.

3. EVALUATION OF PAST SITE INVESTIGATIONS/ASSESSMENTS RESULTS

Based on the screening results presented in Section 2, it was estimated that approximately 150 cubic yards of soil contaminated with lead and arsenic are present in the southern portion of the Site. Additionally, approximately 150 cubic yards of soil contaminated with benzo(a)pyrene are estimated to be present in the northern portion of the Site. As such, the excavation and off-site disposal of these soils served as the basis for the 26 May 2010 Remediation Cost Estimate Summary (RCES) for this Site.

However, upon more recent review (Haley & Aldrich, August 2011) of Traverse 2007a, b, and c, it is noted that these documents presented screening results and conclusions regarding the referenced data, with respect to the superseded 12 December 2004 Part 201 Residential & Commercial I Generic Cleanup Criteria and Screening Levels. The RCES for this property was prepared based on these screening results and associated conclusions. The RCES calls for further investigation and follow-up remediation of arsenic-/lead-contaminated soil, as well as benzo(a)pyrene-contaminated soil.

Haley & Aldrich has reviewed the instances where Traverse 2007a, b, and c identify arsenic, lead, and/or benzo(a)pyrene to exceed the superseded 12 December 2004 Part 201 Residential & Commercial I Generic Cleanup Criteria and Screening Levels, and have, as appropriate, compared the reported concentrations of these contaminants to the corresponding updated 25 March 2011 Part 201 Generic Cleanup Criteria and Screening Levels. The only potentially “actionable” exceedances of the superseded 12 December 2004 Part 201 Residential & Commercial I Generic Cleanup Criteria and Screening Levels pertain to the Direct Contact pathway, and the RCES considers that the future use of the property will be restricted to commercial uses via deed restrictions. Accordingly, the concentrations of arsenic, lead, and benzo(a)pyrene identified by Traverse 2007a, b, and c to exceed the associated superseded 12 December 2004 Part 201 Residential & Commercial I Direct Contact Cleanup Criteria have been compared to the corresponding updated 25 March 2011 Part 201 Nonresidential Generic Direct Contact Cleanup Criteria.

Based on the comparison of the referenced data to the updated 25 March 2011 Part 201 Nonresidential Generic Direct Contact Cleanup Criteria, no arsenic- or lead-containing soil warrants further investigation or remediation, and only one instance of benzo(a)pyrene-containing soil warrants further investigation and possible remediation.

The RCES considers 150 cubic yards of arsenic-/lead-contaminated soil needing to be removed and disposed. This remediation is not warranted based on the criteria comparisons and intended future use noted above.

As for benzo(a)pyrene-contaminated soil, such instances involve soil boring locations identified by Traverse 2007b as locations GP-3 and DB-3, as well as location GP-5. Benzo(a)pyrene concentrations of 2,600 micrograms per kilogram (ug/kg) and 2,400 ug/kg were reported in association with the 2- to 4-foot depth interval at locations GP-3 and GP-5, respectively. These concentrations do not exceed the associated updated 25 March 2011 Part 201 Nonresidential Generic Direct Contact Cleanup Criteria (8,000 ug/kg). Therefore, no further action is warranted at these locations. A benzo(a)pyrene concentration of 12,400 ug/kg was reported in association with the 2- to 4-foot depth interval at location DB-3, which is denoted (Traverse 2007b) to be among the points of delineation associated with location GP-3. This concentration does exceed the updated 25 March 2011 Part 201 Nonresidential Generic Direct Contact Cleanup Criteria, and warrants further action.

A Draft Site Map, dated 14 May 2009, that was prepared by ARCADIS as a member of Encore Environmental Consultants, LLC, illustrates sampling location DB-3 relative to nearby sampling locations denoted as GP-3, DB-1, DB-2, and DB-4. Based on the review of the DRAFT Site Map, the extent of benzo(a) pyrene exceeding the current Part 201 Nonresidential Generic Direct Contact Cleanup Criteria at location DB-3 appears to be delineated to the north and northeast by location DB-1, DB-2, and GP-3, but further delineation appears to be needed to the east, south, and west.

The estimated benzo(a)pyrene-contaminated soil volume subject to removal (Traverse 2007b) of 150 cubic yards apparently involved soil associated with both of the separate areas involving locations GP-3 and DB-3, as well as location GP-5. Since it is concluded above that no further action is warranted at locations GP-3 or GP-5, the volume of soil subject to removal at location DB-3 would be expected to be less than 150 cubic yards. This volume of impacted soil must be further evaluated with additional field reconnaissance, survey, and soil sampling and analysis.

4. PROPOSED WORK PLAN

Three soil borings are proposed to be installed immediately to the east, south, and west of location DP-3 as shown on Figure 2 in order to further delineate the associated presence of benzo(a)pyrene in soil at this location. These borings will be advanced within approximately 10 feet of location DP-3, to its east, south, and west, and samples will be collected and analyzed as described below. These locations will be cleared of utilities through MISSDIG prior to any drilling activities. Soil borings will be advanced at these locations to a depth of 6 feet bgs using a truck-mounted Geoprobe® drilling rig. Soil samples will be collected continuously at 2-foot depth intervals at each of these locations (three samples per boring), with each sample being subject to the following:

- Logged according to Unified Soil Classification System;
- Screened in the field using a photoionization detector (PID); and
- Submitted to Merit Laboratories, Inc. of East Lansing, Michigan for laboratory analysis of benzo(a)pyrene, using standard methods as prescribed by United States Environmental Protection Agency publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846 Method 8270C).

Additionally, the following quality assurance/ quality control samples will be collected and analyzed for verification of laboratory results

- Two blind field duplicates;
- One matrix spike;
- One matrix spike duplicate; and
- One method blank.

One additional soil sample will also be collected in the immediate vicinity of location DP-3 from the 2- to 4-foot depth interval, and this sample will be submitted for laboratory analysis of Toxicity Characteristics Leachate Procedure to support waste disposal profiling.

All sampling equipment will be thoroughly decontaminated between sample locations to reduce the potential for cross-contamination. Decontamination will consist of thoroughly washing the sampling equipment in an Alconox and distilled water wash followed by a distilled water rinse and/or by high-pressure steam cleaning. Samples will be placed in the appropriate containers and stored in a cooler containing ice for preservation prior to submittal to the analytical laboratory. Standard chain-of-custody procedures will be followed. The soil removed during boring installation will be used to backfill the borings. At each boring location the surface will be repaired with asphalt patch material, if applicable. Used personal protective equipment will be disposed with general refuse with no special handling.

5. REPORTING

Upon receipt of the analytical data discussed in Section 4, it will be tabulated in context with the related prior data, and will be screened against the corresponding updated 25 March 2011 Part 201 Nonresidential Generic Direct Contact Cleanup Criteria, for the purpose of delineating the conditions discussed in Section 3.

6. SCHEDULE

Assuming that the Michigan Department of Environmental Quality (MDEQ) approves this Work Plan by end of April 2012, and the associated work commences on or about 1 May 2012, it is anticipated that a summary of the data collected would be distributed along with proposed follow-up action by the end of July 2012.

7. REFERENCES

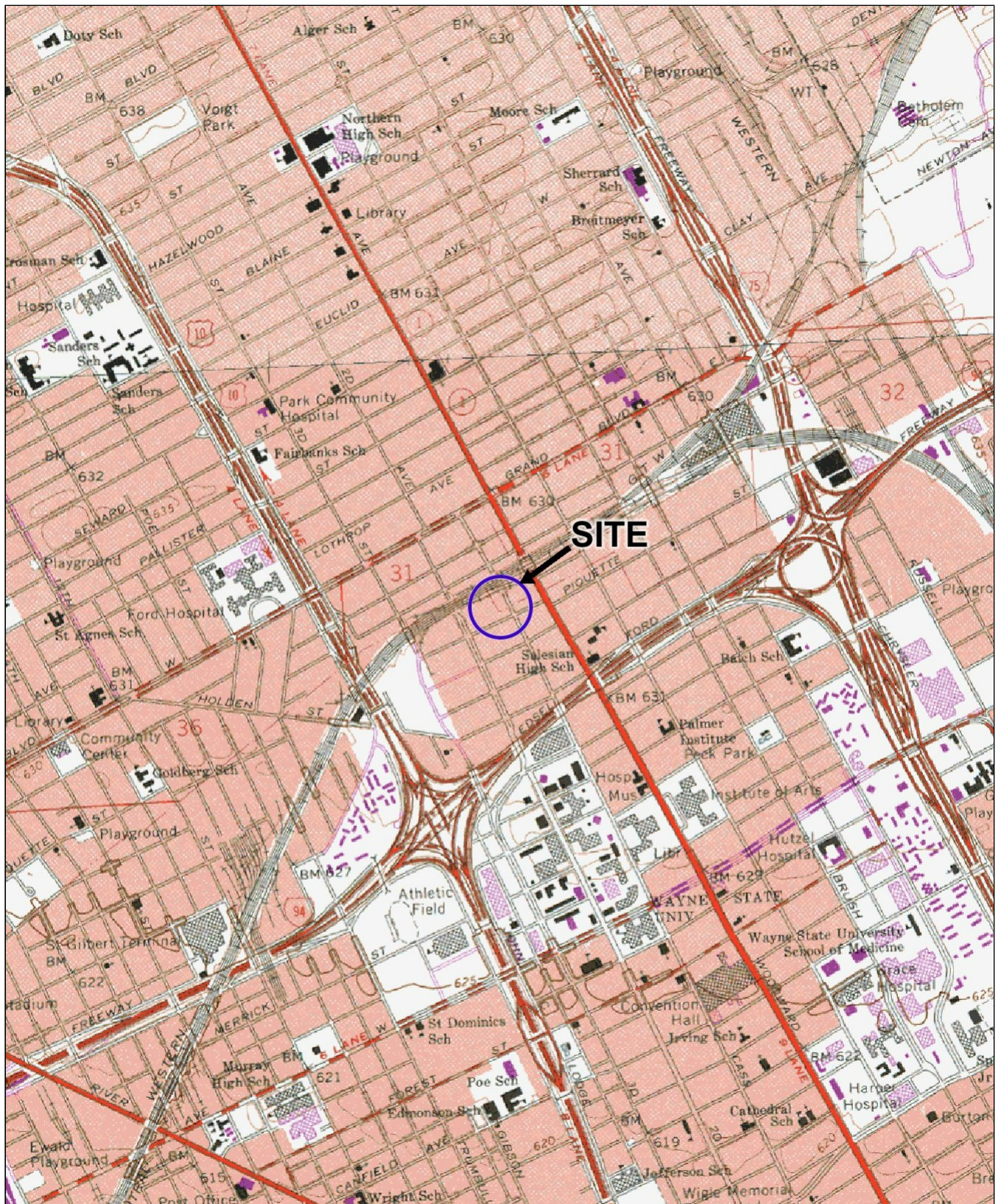
1. ARCADIS (as a member of Encore Environmental Consultants, LLC), May 2009 – DRAFT Site Map.
2. Enecotech Environmental Consultants, October 1996 – Phase I ESA, Part of Outlot 116, Northwest Corner of Amsterdam and Cass Avenues, Detroit, Wayne County, MI.
3. Encore Environmental Consortium, LLC., May 2009 – Phase I Environmental Site Assessment, Parking Lot 8, 6241 Amsterdam and 406 Cass, Detroit, Michigan 48202.
4. Haley & Aldrich of Michigan, Inc., August 2011 – Memorandum To: RACER Trust: Grant Trigger and MDEQ: Karen Williams, RE: Evaluation of Soil Data Generated by The Traverse Group at 6241 Cass Avenue, Detroit, MI, Site # 1294.
5. The Traverse Group, Inc. (TGI), January 2005 – Phase I ESA, Parking Lot 8, 6241 Cass Avenue, Detroit, MI 48202.
6. The Traverse Group, Inc. (TGI), December 2006 – Phase I ESA Update, Parking Lot 8, 6241 Cass Avenue, Detroit, MI 48202.
7. The Traverse Group, Inc. (TGI), March 2007a – Phase II ESA, General Motors Parking Lot 8, 6241 Cass Avenue, Detroit, Wayne County, MI 48202.
8. The Traverse Group, Inc. (TGI), July 2007b – Debris Disposal and Parking Lot Restoration, Parking Lot 8, 6241 Cass Avenue, Detroit, MI 48202.
9. The Traverse Group, Inc. (TGI), August 2007c – Draft Lot 8 Delineation, Summary of Findings, General Motors Parking Lot 8, 6241 Cass Avenue, Detroit, Wayne County, MI 48202.

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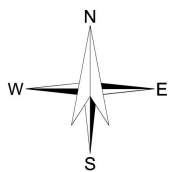
Attachments:

Figure 1 – Project Locus

Figure 2 – Site Plan



SITE COORDINATES: 42°21'59"N 83°4'23"W



U.S.G.S. QUADRANGLE: DETROIT, MI

HALEY & ALDRICH

6241 CASS AND 406 AMSTERDAM
DETROIT, MICHIGAN

PROJECT LOCUS

SCALE: 1:24,000
MARCH 2012

FIGURE 1

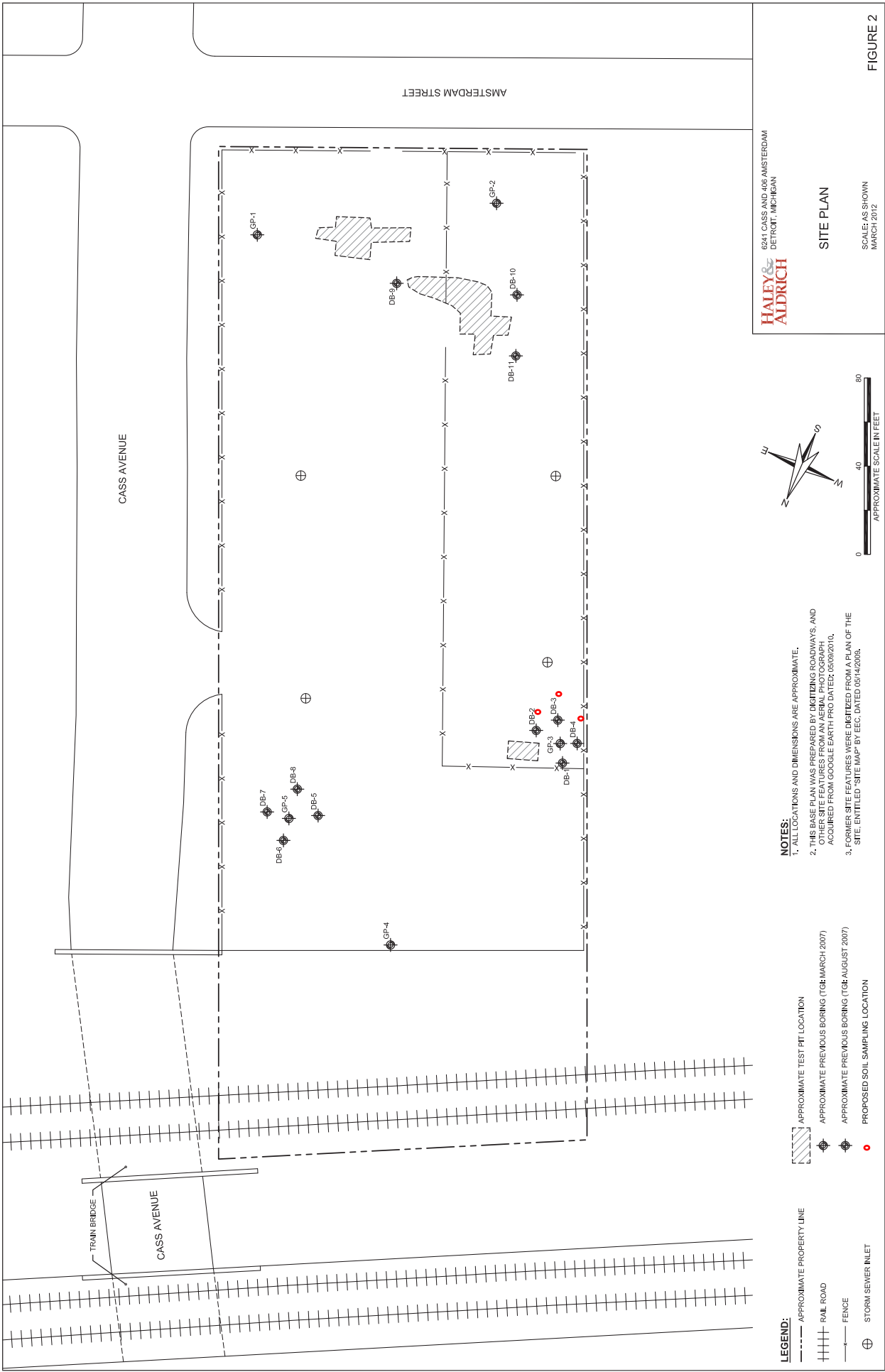


FIGURE 2