

February 28, 2014

Mr. Colin Cronin  
DTN Management Company  
2502 Lake Lansing Road, Suite C  
Lansing, Michigan 48912

**RE: Summary of Previous Subsurface Investigations within the Proposed Park District Development Area in East Lansing, Michigan  
PM Environmental, Inc. Project No. 01-3023**

Mr. Cronin,

This letter provides a brief summary of subsurface investigation activities conducted by PM Environmental Inc. (PM) in 2008, within the proposed Park District development area, as part of pre-purchase due diligence activities for the previous City Center II project.

The investigation activities included the following locations, which were referred to as Area 1 and Area 2 during previous development planning evaluations:

#### Area 1

- The eastern right of way of Valley Court Park
- 237 Valley Court (Parcel ID 33-20-01-13-226-003)
- Parking lot located between Valley Court and Evergreen Avenue (Parcel ID 33-20-01-13-226-002)
- 315 Evergreen Avenue (Parcel ID 33-20-01-13-226-004)
- 341 and 345 Evergreen Avenue (Parcel ID 33-20-01-13-226-001)

#### Area 2

- The north and south Albert Avenue right of ways, immediately west of Abbott Road
- East Lansing Parking Lot #10 (Parcel ID 33-20-01-13-229-011)

### **SUMMARY OF AREA 1 SUBSURFACE INVESTIGATION ACTIVITIES**

In February and March 2008, PM advanced 15 soil borings (SB-1 through SB-15) within Area 1 (Figure 1) to document whether contamination was present in association with the long term presence/use of parking lots and roadways, and the potential for releases of regulated substances in association with those uses.

Soil samples collected from Area 1 were submitted for laboratory analysis of volatile organic compounds (VOCs), polynuclear aromatic compounds (PNAs), and the metal species arsenic, cadmium, chromium, lead, and selenium.

Laboratory analytical results identified concentrations of the PNA species fluoranthene and phenanthrene, and the metal specie selenium in soil above Michigan's Part 201 Residential and Nonresidential Drinking Water Protection (DWP) and/or Groundwater Surface Water Interface Protection (GSIP) cleanup criteria at soil boring SB-8, which was advanced in the parking lot located between Valley Court and Evergreen Avenue.

Concentrations of the metal specie arsenic were also identified in soil borings SB-13 and SB-14 above the Part 201 DWP and Soil Direct Contact (DC) cleanup criteria at the 341 and 345 Evergreen Avenue property. Cadmium, chromium, lead concentrations identified above laboratory method detection limits (MDLs) were consistent with statewide default background concentrations for soil in Michigan and/or below the most restrictive Part 201 Generic Cleanup Criteria (GCC).

Concentrations of VOCs were not detected above laboratory method detection limits (MDLs) in any of the soil samples submitted for laboratory analysis.

Based upon the above, the following locations within Area 1 are "facilities" (i.e. contaminated), as defined in Section 20101(1)(s) of Part 201 of P.A. 451 of 1994, as amended (Part 201):

- Parking lot located between Valley Court and Evergreen Avenue (Parcel ID 33-20-01-13-226-002)
- 341 and 345 Evergreen Avenue (Parcel ID 33-20-01-13-226-001)

## **SUMMARY OF AREA 2 SUBSURFACE INVESTIGATION ACTIVITIES**

In June 2008, PM advanced 12 soil borings (SB-1 through SB-12) within Area 2 (Figure 2) to document whether contamination was present in association with the long term presence/use of parking lots and roadways, and the potential for releases of regulated substances in association with those uses.

Soil samples collected from Area 2 were submitted for laboratory analysis of VOCs, PNAs, and the metal species arsenic, cadmium, chromium, lead, and selenium.

Concentrations of various petroleum VOCs and PNAs were detected in the soil samples collected from soil borings SB-9 through SB-11 in soil above Michigan's Part 201 Residential and Nonresidential DWP and GSIP cleanup criteria, and the Residential Soil Volatilization to Indoor Air Inhalation (SVII) cleanup criteria. Several petroleum VOC compounds were also identified at soil boring location SB-11 above the Part 201 Soil Saturation (Csat) Screening Levels.

A concentration of the metal specie arsenic was also identified at soil boring SB-12 above the Part 201 Residential DC cleanup criteria. Cadmium, chromium, lead, and selenium concentrations identified above laboratory MDLs were consistent with statewide default background concentrations for soil in Michigan and/or below the most restrictive Part 201 GCC.

Based upon the above, the following locations within Area 2 are "facilities" as defined under Part 201, as amended:

- The north Albert Avenue right of way, immediately west of Abbott Road
- East Lansing Parking Lot #10 (Parcel ID 33-20-01-13-229-011)

**RECOMMENDATIONS**

Owners/operators of land that meets the definition of a “facility” are eligible to conduct a Baseline Environmental Assessment (BEA) to obtain liability protection against the existing contamination. For a BEA to be used as a basis for an exemption of liability, it must be conducted prior to or within 45 days of purchase or occupancy, and submitted to the Michigan Department of Environmental Quality (MDEQ) within six months of purchase or occupancy.

Although a BEA will provide liability protection from existing contamination, an owner/operator of a property that is a “facility” must exercise “due care” with regard to contaminated media in accordance with Section 20107a of Part 201. Due care obligations generally include 1) undertaking measures to prevent exacerbation of existing contamination, 2) undertaking activities necessary to prevent unacceptable human exposures to contamination, 3) taking reasonable precautions against reasonably foreseeable acts or omissions of third parties, 4) providing access and cooperation to parties conducting response activities in association with contamination, 5) complying with land or resource use restrictions implemented as part of response activities, and 6) not impeding the effectiveness and integrity of implemented land or resource use restrictions.

As summarized above, the following parcels within the proposed Park District development area are “facilities” under Part 201:

- Parking lot located between Valley Court and Evergreen Avenue (Parcel ID 33-20-01-13-226-002)
- 341 and 345 Evergreen Avenue (Parcel ID 33-20-01-13-226-001)
- The north Albert Avenue right of way, immediately west of Abbott Road
- East Lansing Parking Lot #10 (Parcel ID 33-20-01-13-229-011)

Therefore, PM recommends that prospective owners/operators of the above parcels conduct and submit a BEA within the relevant timeframes to obtain liability protection for existing contamination. A Documentation of Due Care Compliance (DDCC) should also be prepared, which outlines appropriate due care response activities and related actions necessary to maintain compliance with the due care provisions of Section 20107a of Part 201.

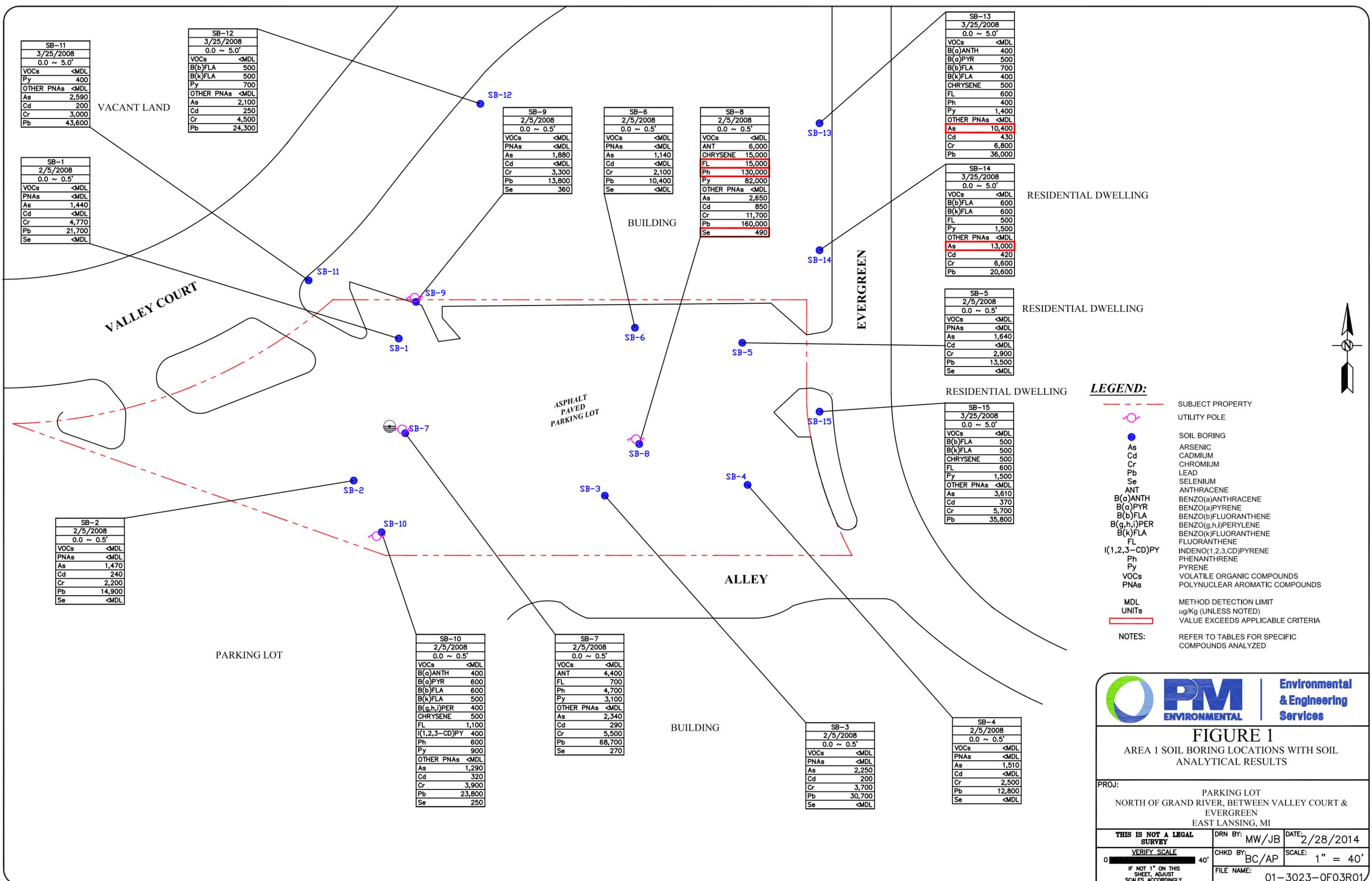
If you have any questions regarding the information in this summary, please contact me at (800) 485-0090.

Sincerely,  
**PM ENVIRONMENTAL, INC.**



J. Adam Patton, CHMM  
Manager of Site Investigation Services

Attachments: Figure 1 – Area 1 Soil Boring Locations with Soil Analytical Results  
Figure 2 – Area 2 Soil Boring Locations with Soil Analytical Results



SB-11	
3/25/2008	
0.0 ~ 5.0'	
VOCs	<MDL
Py	400
OTHER PNAAs	<MDL
As	2,590
Cd	200
Cr	3,000
Pb	43,600

SB-12	
3/25/2008	
0.0 ~ 5.0'	
VOCs	<MDL
B(b)FLA	500
B(k)FLA	500
Py	700
OTHER PNAAs	<MDL
As	2,100
Cd	250
Cr	4,500
Pb	24,300

SB-1	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	1,440
Cd	<MDL
Cr	4,770
Pb	21,700
Se	<MDL

SB-9	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	1,880
Cd	<MDL
Cr	3,300
Pb	13,800
Se	360

SB-6	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	1,140
Cd	<MDL
Cr	2,100
Pb	10,400
Se	<MDL

SB-8	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
ANT	6,000
CHRYSENE	15,000
FL	15,000
Ph	130,000
Py	82,000
OTHER PNAAs	<MDL
As	2,650
Cd	850
Cr	11,700
Pb	160,000
Se	490

SB-13	
3/25/2008	
0.0 ~ 5.0'	
VOCs	<MDL
B(o)ANTH	400
B(o)PYR	500
B(b)FLA	700
B(k)FLA	400
CHRYSENE	500
FL	600
Ph	400
Py	1,400
OTHER PNAAs	<MDL
As	10,400
Cd	430
Cr	6,800
Pb	36,000

SB-14	
3/25/2008	
0.0 ~ 5.0'	
VOCs	<MDL
B(b)FLA	600
B(k)FLA	600
FL	500
Py	1,500
OTHER PNAAs	<MDL
As	13,000
Cd	420
Cr	6,600
Pb	20,600

SB-5	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	1,640
Cd	<MDL
Cr	2,900
Pb	13,500
Se	<MDL

SB-15	
3/25/2008	
0.0 ~ 5.0'	
VOCs	<MDL
B(b)FLA	500
B(k)FLA	500
CHRYSENE	500
FL	600
Py	1,500
OTHER PNAAs	<MDL
As	3,610
Cd	370
Cr	5,700
Pb	35,800

SB-2	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	1,470
Cd	240
Cr	2,200
Pb	14,900
Se	<MDL

SB-10	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
B(o)ANTH	400
B(o)PYR	600
B(b)FLA	600
B(k)FLA	500
B(g,h,i)PER	400
CHRYSENE	500
FL	1,100
I(1,2,3-CD)PY	400
Ph	600
Py	900
OTHER PNAAs	<MDL
As	1,290
Cd	320
Cr	3,900
Pb	23,800
Se	250

SB-7	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
ANT	4,400
FL	700
Ph	4,700
Py	3,100
OTHER PNAAs	<MDL
As	2,340
Cd	290
Cr	5,500
Pb	68,700
Se	270

SB-3	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	2,250
Cd	200
Cr	3,700
Pb	30,700
Se	<MDL

SB-4	
2/5/2008	
0.0 ~ 0.5'	
VOCs	<MDL
PNAAs	<MDL
As	1,510
Cd	<MDL
Cr	2,500
Pb	12,800
Se	<MDL

**LEGEND:**

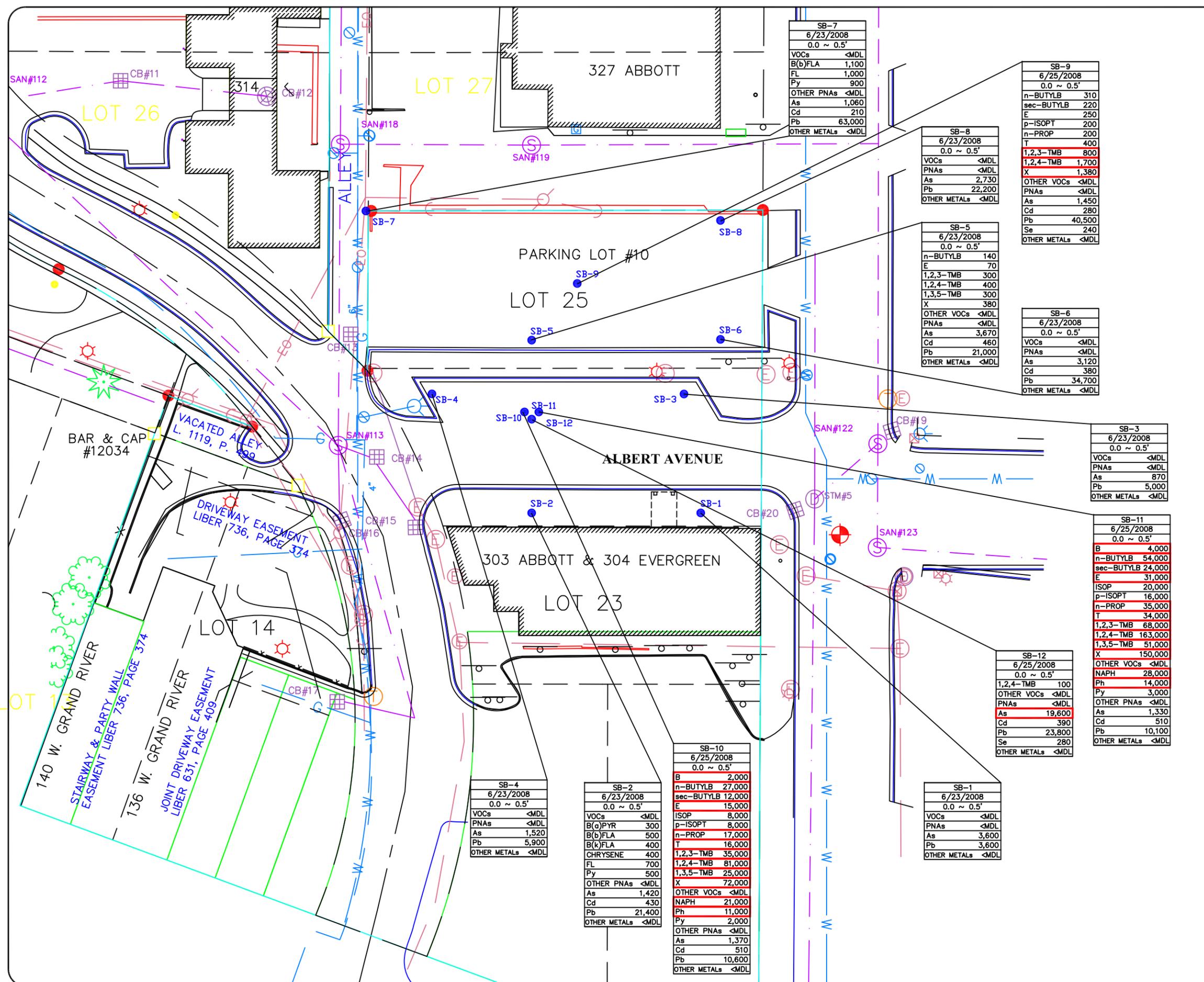
- SUBJECT PROPERTY
- UTILITY POLE
- SOIL BORING
- As ARSENIC
- Cd CADMIUM
- Cr CHROMIUM
- Pb LEAD
- Se SELENIUM
- ANT ANTHRACENE
- B(o)ANTH BENZO(a)ANTHRACENE
- B(o)PYR BENZO(a)PYRENE
- B(b)FLA BENZO(b)FLUORANTHENE
- B(g,h,i)PER BENZO(g,h,i)PERYLENE
- B(k)FLA BENZO(k)FLUORANTHENE
- FL FLUORANTHENE
- I(1,2,3-CD)PY INDENO(1,2,3,CD)PYRENE
- Ph PHENANTHRENE
- Py PYRENE
- VOCs VOLATILE ORGANIC COMPOUNDS
- PNAAs POLYNUCLEAR AROMATIC COMPOUNDS
- MDL METHOD DETECTION LIMIT
- UNITs ug/Kg (UNLESS NOTED)
- VALUE EXCEEDS APPLICABLE CRITERIA

NOTES: REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED



**FIGURE 1**  
AREA 1 SOIL BORING LOCATIONS WITH SOIL ANALYTICAL RESULTS

PROJ: PARKING LOT NORTH OF GRAND RIVER, BETWEEN VALLEY COURT & EVERGREEN EAST LANSING, MI		
THIS IS NOT A LEGAL SURVEY	DRN BY: MW/JB	DATE: 2/28/2014
VERIFY SCALE	CHKD BY: BC/AP	SCALE: 1" = 40'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		FILE NAME: 01-3023-0F03R01



**LEGEND:**

- SUBJECT PROPERTY
- SANITARY SEWER
- STORM SEWER
- WATER
- GAS LINE
- UNDERGROUND TELEPHONE
- UNDERGROUND TELEVISION
- UNDERGROUND ELECTRIC
- OVERHEAD WIRES
- CATCHBASIN
- ⊕ FIRE HYDRANT
- ⊠ TRANSFORMER
- E ELECTRIC METER
- G GAS METER
- W WATER METER
- S SANITARY MANHOLE
- D DRAINAGE MANHOLE
- E ELECTRICAL MANHOLE
- SOIL BORING



**Environmental & Engineering Services**

### FIGURE 2

AREA 2 SOIL BORING LOCATIONS WITH SOIL ANALYTICAL RESULTS

PROJ: PARKING LOT NORTH OF GRAND RIVER, BETWEEN VALLEY COURT & EVERGREEN EAST LANSING, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: MW/JB	DATE: 2/28/2014
VERIFY SCALE	CHKD BY: BC/AP	SCALE: 1" = 40'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	FILE NAME: 01-3023-1F03R01	

SB-4
6/23/2008
0.0 ~ 0.5'
VOCs <MDL
PNAAs <MDL
As 1,520
Pb 5,900
OTHER METALS <MDL

SB-2
6/23/2008
0.0 ~ 0.5'
VOCs <MDL
B(a)PYR 300
B(b)FLA 500
B(k)FLA 400
CHRYSENE 400
FL 700
Py 500
OTHER PNAAs <MDL
As 1,420
Cd 430
Pb 21,400
OTHER METALS <MDL

SB-10
6/25/2008
0.0 ~ 0.5'
B 2,000
n-BUTYLB 27,000
sec-BUTYLB 12,000
E 15,000
ISOP 8,000
p-ISOPT 8,000
n-PROP 17,000
T 16,000
1,2,3-TMB 35,000
1,2,4-TMB 81,000
1,3,5-TMB 25,000
X 72,000
OTHER VOCs <MDL
NAPH 21,000
Ph 11,000
Py 2,000
OTHER PNAAs <MDL
As 1,370
Cd 510
Pb 10,600
OTHER METALS <MDL

SB-1
6/23/2008
0.0 ~ 0.5'
VOCs <MDL
PNAAs <MDL
As 3,600
Pb 3,600
OTHER METALS <MDL

SB-12
6/25/2008
0.0 ~ 0.5'
1,2,4-TMB 100
OTHER VOCs <MDL
PNAAs <MDL
As 19,600
Cd 390
Pb 23,800
Se 280
OTHER METALS <MDL

SB-11
6/23/2008
0.0 ~ 0.5'
B 4,000
n-BUTYLB 54,000
sec-BUTYLB 24,000
E 31,000
ISOP 20,000
p-ISOPT 16,000
n-PROP 35,000
T 34,000
1,2,3-TMB 68,000
1,2,4-TMB 163,000
1,3,5-TMB 51,000
X 150,000
OTHER VOCs <MDL
NAPH 28,000
Ph 14,000
Py 3,000
OTHER PNAAs <MDL
As 1,330
Cd 510
Pb 10,100
OTHER METALS <MDL

SB-3
6/23/2008
0.0 ~ 0.5'
VOCs <MDL
PNAAs <MDL
As 870
Pb 5,000
OTHER METALS <MDL

SB-5
6/23/2008
0.0 ~ 0.5'
n-BUTYLB 140
E 70
1,2,3-TMB 300
1,2,4-TMB 400
1,3,5-TMB 300
X 380
OTHER VOCs <MDL
PNAAs <MDL
As 3,670
Cd 460
Pb 21,000
OTHER METALS <MDL

SB-8
6/23/2008
0.0 ~ 0.5'
VOCs <MDL
PNAAs <MDL
As 2,730
Pb 22,200
OTHER METALS <MDL

SB-9
6/25/2008
0.0 ~ 0.5'
n-BUTYLB 310
sec-BUTYLB 220
E 250
p-ISOPT 200
n-PROP 200
T 400
1,2,3-TMB 800
1,2,4-TMB 1,700
X 1,380
OTHER VOCs <MDL
PNAAs <MDL
As 1,450
Cd 280
Pb 40,500
Se 240
OTHER METALS <MDL

SB-7
6/23/2008
0.0 ~ 0.5'
VOCs <MDL
B(b)FLA 1,100
FL 1,000
Py 900
OTHER PNAAs <MDL
As 1,060
Cd 210
Pb 63,000
OTHER METALS <MDL