7711 N. Port Washington Road
Milwaukee, WI 53217
T: 414.751.7200 • F: 414.351.4117

September 17, 2021

Ms. Linda Michalets
Wisconsin Department of Natural Resources
Remediation and Redevelopment
2300 N. MLK Drive
Milwaukee, Wisconsin 53212

RE: **Additional Information and Response to DNR Review of No Further Action (NFA) Request, 1818 W National Ave (now Cristo Rey Jesuit Highschool)**
1818 W. National Avenue, Milwaukee, Wisconsin
BRRTs #02-41-583465 FID #241878450
Regulatory Status: Open ERP

Dear Ms. Michalets:

Kapur Inc. (Kapur) is providing the following information in response to an email dated June 23, 2021. The information is in addition to the Environmental Activities Update Addendum dated August 4, 2021 submitted to the department further detailing the environmental investigation and remediation activities completed at the above referenced site. Kapur believes the additional information being provided would allow department concurrence that further investigation activities are not warranted.

The items being requested in the above referenced email included:

Historic Fill Material

The DNR's May 10, 2019 letter stated, "If material that will be managed under this exemption includes solid waste other than soil, a historic fill exemption may be required to be obtained from the DNR prior to excavating the waste or constructing any structure over the materials per Wis. Admin. Code § NR 506.085."

1. In the Discharge Notification Form (received on April 19, 2019), the discharge was described as "Unknown (presumed surface release)" and the substances are VOCs, PAHs and lead. In the Update's Findings and Recommendations section, it states that the

contamination is most likely attributed to historic filling (waste fill/foundry sand). A detailed description of the extent of this contaminant source must be provided. Include the boring logs for all sampling conducted for this investigation and describe observations of fill during property redevelopment.

Response: Please Note the Discharge Notification was for a select (isolated) area on the property where contaminant impacts were encountered during geotechnical drilling activities. The initial presumption was potential impacts from a former tank/tank system; however, further review of readily available documentation (historical aerial photographs, fire insurance maps) did not indicate any obvious presence of a tank at the location of the release. The likely source was either an historic surface release associated with previous onsite operations at that location or potential filling activities stemming from the former onsite structures being razed. Fill observed during construction activities was consistent with that identified during initial soil borings completed onsite including asphalt rubble, cinders, concrete fragment, glass fragments (possible construction/demolition debris) and clay/sand. It should be noted, however, that the fill material was not present in all soil borings nor was it observed at all areas disturbed during construction activities. Boring logs have previously been provided and are also attached.

2. If historic fill material is present on this property, then a historic fill exemption was required to build over the waste materials, as stated in the DNR's May 10, 2019 letter. Confirm if an exemption to build on historic fill material was requested.

Response: Per correspondence with Mr. Thomas Wentland, Engineer for the WDNR, an exception was not required based upon the makeup of fill observed onsite, in particular cinders identified within the fill would not be a likely source of concern for harmful vapors. That said, a passive sub-slab vapor mitigation system was installed under the newly constructed school building as a proactive measure to remove such concern for the future.

3. Explain how you determined that the ERP contaminant plume, associated with historic fill material (waste fill/foundry sand), is much smaller than originally estimated using field screening only for PAH and lead contaminants. Generally, if fill material is the source of PAHs and lead, then either contamination must be inferred wherever fill material is present or on the entire property.

Response: The open ERP case, BRRTS #02-41-583465, specifically applies to a small area at the southwest portion of the subject property where, during geotechnical drilling

activities being performed, contaminant impacts were identified via laboratory analysis that exceeded established ch. NR 720 Residual Contaminant Levels (RCLs) (see attached figures). The area in question was in the immediate vicinity of soil boring B-21 that appeared to be an unidentified historic release, not associated with the previously investigated and closed LUST cases onsite.
The area in question surrounding B-21 was over excavated to an average depth of 3 to 4 feet below grade both to remediate the near surface impacted soils and due to site conditions necessitating excavation and importing of compactible gravel and tracking pad stone for construction activities. Excavation for new stormwater utility was also completed immediately to the east and south/southwest of B-21. The excavated soils were transported to Waste Management Orchard Ridge landfill for disposal and throughout the course of excavation activities being completed, Kapur performed periodic inspections and field screening of the soils being disturbed. Soil conditions observed during construction did not vary significantly from those identified during previous geotechnical and soil profiling activities completed (see attached soil boring logs). General fill material is likely present throughout the entire property, though contaminant impacts (PAHs, RCRA Metals and VOCs) do not appear to mirror the fill extents as several boring completed did not reveal concentrations above applicable RCLs (see attached analytical data tables). PLEASE NOTE: Within the vicinity of B-21 (Open ERP) and the surrounding area, the existing grade was also raised with clean material to meet elevation requirements of the final design that would subsequently place the identified contamination at depths below the zone of Direct Contact risk. Thus, no cap maintenance requirements would be necessary for the Open ERP case, although the area would be included in the approved greater site cap maintenance plan part of the approved MMP.

The extent of contaminant impacts appeared to be limited based upon field screening and visual observations throughout excavation activities that did not reveal any significant odor, soil staining or other identifier for the elevated contaminants identified within B-21. There is a very strong likelihood that the contamination present is likely due to ‘filling’ of raised former structures previously located withing the area in question. The elevated lead may be due to lead bearing paint (deteriorated) being present in the sample submitted for analysis, that would contribute to such an isolated elevated concentration. The sample did not exceed the TCLP limits during laboratory analysis completed and thus would not represent a leaching concern to impact the groundwater onsite nor would it be considered hazardous.

Documentation

The DNR's May 10, 2019 letter stated that documentation of material management activities "must include:

a. A cover letter that contains the information required by Wis. Admin. Code § NR 724.05 (2)(e) 1.

b. Owner contact and property location information for the Former NDC Inc./Mega Marts.

c. Maps, drawings, and cross sections that depict how contaminated material was managed.

d. A synopsis of the work conducted and an explanation as to how it complied with the material management plan and the conditions in this exemption approval.

e. A description of any changes made to the planned management activity and an explanation as to why they were necessary for the project.

f. Any field observations or results of monitoring conducted during the management activity.

g. A description of how new site conditions are protective of human health, safety, welfare and the environment at the Former NDC Inc./Mega Marts."

Your Update references a Soil Management Plan Completion Report that was received by the DNR on May 4, 2021. This Completion Report did not include the requested cross sections to depict how the contaminated material was managed (e.g., before and after material management activities).

4. Provide cross sections showing sub-surface conditions with the depths and locations of contaminants detected (including the residual contamination associated with the 5 closed LUST cases) and the relationship between the contaminants detected and the presence of fill material.

Response: See attached figure.

Your Update includes Pre-Construction Figure 5: Soil Disposal / Relocation Map indicating that the soil in the vicinity of B-21 requires landfill disposal. A Post-Construction Figure 5: Soil Disposal / Relocation Map and Residual Soil Plume Contaminant Plume is also included that indicates the soil in the vicinity of B-21 remains in

place. Neither the Completion Report nor the Update include a description or explanation of any changes made to the planned management activity at B-21.

5. Provide a description of the management of soil at B-21. Describe how the new site conditions, specifically allowing the soil at B-21 to remain on-site, are protective of human health, safety, welfare and the environment.

Response: As provided in the Kapur Environmental Activities Update addendum (August 4, 2021)…the area in question surrounding B-21 was over excavated to an average depth of 3 to 4 feet below grade both to remediate the near surface impacted soils and due to site conditions necessitating excavation and importing of compactible gravel and tracking pad stone for construction activities. Excavation for new stormwater utility was also completed immediately to the east and south/southwest of B-21. The excavated soils were transported to Waste Management Orchard Ridge landfill for disposal and throughout the course of excavation activities being completed, Kapur performed periodic inspections and field screening of the soils being disturbed. Soil conditions observed during construction did not vary significantly from those identified during previous geotechnical and soil profiling activities completed. NOTE: Within the vicinity of B-21 (Open ERP) and the surrounding area, the existing grade was also raised with clean material to meet elevation requirements of the final design that would subsequently place the identified contamination at depths below the zone of Direct Contact risk. Thus, no cap maintenance requirements would be necessary for the Open ERP case, although the area would be included in the approved greater site cap maintenance plan part of the approved MMP.

Engineered Barrier:

Your Update mentions that an engineered barrier is in place and will be maintained to address the residual contamination. If a barrier is needed, then an NFA would not be appropriate, as maintenance of a barrier is a continuing obligation after closure. None of the closed LUST sites had caps as continuing obligations after closure, so this would be a new CO applied to this site. You would have to support closure without a cap to request an NFA.

Response: Within the vicinity of B-21 (Open ERP) and the surrounding area, the existing grade was also raised with clean material to meet elevation requirements of the final design that would subsequently place the identified contamination at depths below the zone of Direct Contact risk. Thus, no cap maintenance requirements would be necessary for the

Open ERP case and a NFA would be appropriate, although the area would be included in the approved greater site cap maintenance plan part of the approved MMP.

6. Provide the analytical data (after completion of material management activities) on a site figure that shows where contamination requires maintenance of an engineered barrier. Include the residual contamination associated with the 5 closed LUST cases. For case closure, additional details will need to be provided to conclude that the barriers in place are protective for the contamination that remains.

Response: See attached figures.

Passive Venting System:

7. Discuss the reasons why the new building was installed with a passive venting system. Was the new building constructed over known petroleum contamination at the closed petroleum cases? Was a new contaminant source(s) encountered? A figure should be provided that shows where the new building is located in relation to the known residual contamination at the closed cases and in relation to the open ERP site contamination.

Response: The passive sub-slab vapor mitigation system was installed under the newly constructed school building facility as a proactive measure to remove any potential concern of vapor intrusion for the future. Obvious petroleum or volatile contamination was not encountered or noted during field inspections within the footprint of the school building nor was a new potential source identified. The figure titled 'Historic BRRTS Case Location Map' (also attached) was previously provided to the department that provided the location of each of the recorded BRRTS cases in relation to the proposed redevelopment layout.

FINDINGS AND CONCLUSIONS

Onsite excavation activities and utility installations indicate the area of impact associated with the open ERP case is much smaller than originally estimated, as adjacent utility trench excavations did not trigger any PID reading above background levels nor were any stained or odorous soils noted. The same area was excavated down a minimum 2-3 feet as a larger area of soil material onsite was deemed not suitable for construction and disposed of at a licensed landfill facility. The area was filled with gravel/stone material and compacted acting as a tracking pad for vehicles entering and leaving the construction site. Groundwater was not encountered during excavation activities.

The area in question has had the general elevation raised and is now located at mostly, if not entirely under an engineered barrier of asphalt driveway and concrete walkway. A grass and landscaped area lie adjacent to the north between the engineered barrier (cap) and school building. This area is capped with topsoil and seed over clean imported clay type material that was distributed over existing site soils. The area will be maintained to be sure the existing engineered barriers (cap) remains in place and without defect.

Research of the site history and potential contaminant source has been performed and though no clear point source for the petroleum contamination has been identified, the impacts are most likely attributed to historic filling (waste fill/foundry sand) that occurred onsite as previous commercial and residential buildings were being razed and site grading was completed.

OPINIONS AND RECOMMENDATIONS

The above redevelopment and monitoring activities have shown that the current site conditions and development are protective of the soil direct contact, groundwater migration and vapor intrusion pathway risk factors. Understanding only field screening of the subsurface soil was completed in the area of the Open ERP contaminant plume, it is likely the contaminant plume is much smaller than originally estimated. Based upon the extent of soil excavation completed and the engineered barriers constructed over the estimated plume, natural attenuation processes are anticipated to further breakdown the residual contamination. **As such, Kapur does not believe additional investigation activities are warranted and that No Further Action be granted for the open ERP case.**

If you have any questions or comments, please feel free to call me at 414-751-7279.

Sincerely,

KAPUR INC.

Travis W. Peterson

Travis Peterson

Associate, Economic Development Manager

cc: Andrew Stith, Cristo Rey Jesuit High School astith@cristoreymilwaukee.org

Attachments:

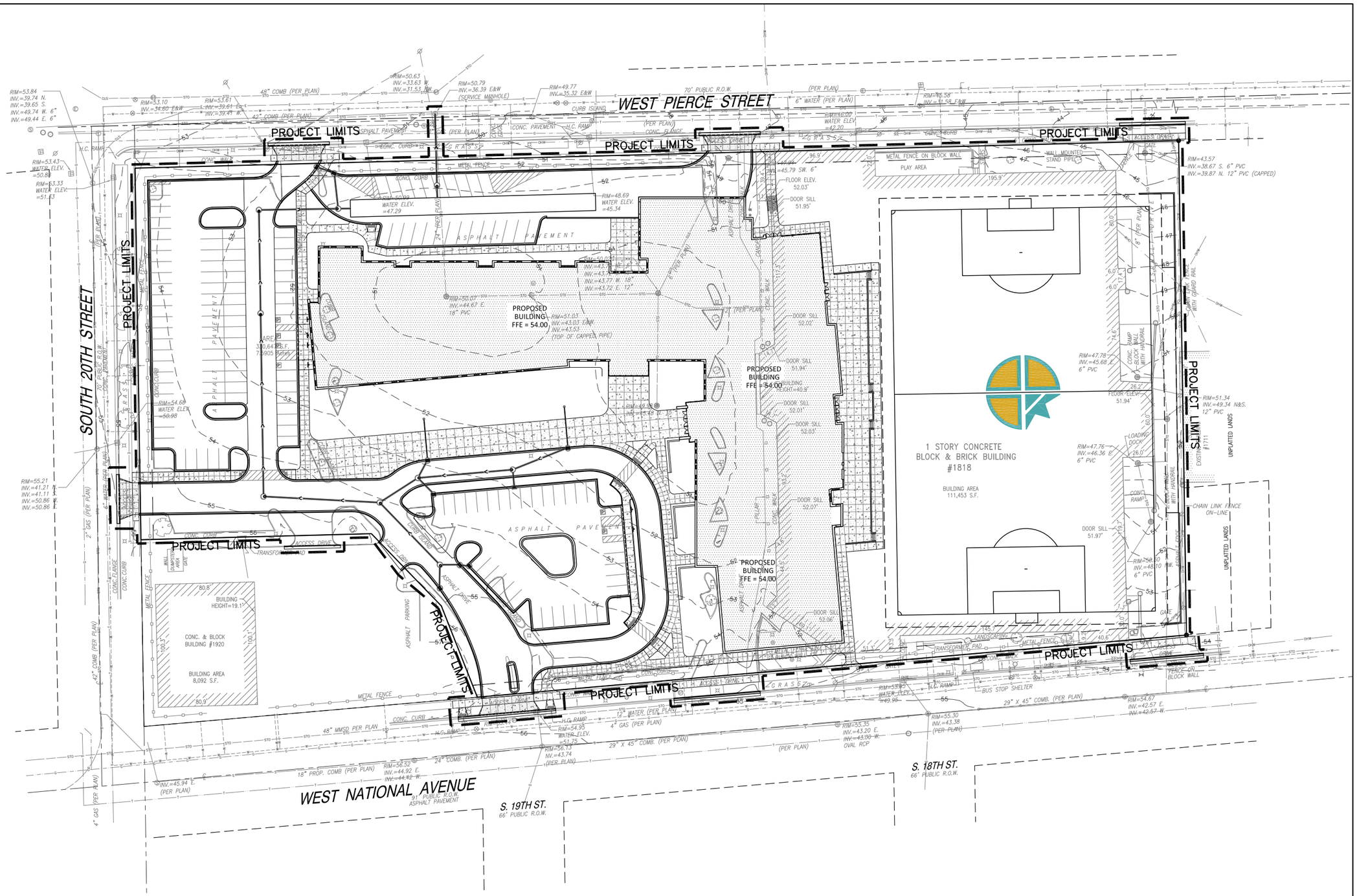
Attachment A Figures
Attachment B Tables
Attachment C Soil Boring Logs

References:

1. Kapur, Inc. (May 13, 2021) Technical Assistance, Environmental Liability Clarification Request, Form 4400-237 and Environmental Activities Update. 1818 W NATIONAL AVE, BRRTS No. 0241583465, 1818 W. National Avenue, Milwaukee, Wisconsin 53204
2. Kapur, Inc. (August 4, 2021) Environmental Activities Update Addendum. 1818 W National Ave (now Cristo Rey Jesuit Highschool) 1818 W. National Avenue, Milwaukee, Wisconsin 53204, BRRTS No. 0241583465

ATTACHMENT A

FIGURES



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www.kapurengineers.com

PROJECT:
CRISTO REY JESUIT HIGH SCHOOL

LOCATION:
1818 WEST NATIONAL AVE. MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1 = 80'

0 40 80

SEAL:

SHEET:
DETAILED SITE MAP

PROJECT MANAGER:	TP
PROJECT NUMBER:	180231.01
DATE:	02/04/2019

SHEET NUMBER:
2

FILENAME: S:_SiteDsgn\Bray Architects\180231 Cristo Rey Jesuit HS\Environmental\Figures\DETAILED SITE MAP.dwg

Area of Approved Soil Relocation

Area of Over-Excavation showing location of Utility Trench work and Estimated Extent of Residual Soil Impacts

WEST PIERCE STREET

WEST NATIONAL AVENUE

SOUTH 20TH STREET

S. 19TH ST.
66' PUBLIC R.O.W.

S. 18TH ST.
66' PUBLIC R.O.W.

PROJECT LIMITS

PROPOSED BUILDING FFE = 54.00

GRASS/LANDSCAPING

CONCRETE

ASPHALT

1 STORY CONCRETE BLOCK & BRICK BUILDING #1818

BUILDING AREA 111,453 S.F.

CONC. & BLOCK BUILDING #1920

BUILDING AREA 8,092 S.F.

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11 B-12 B-13 B-14 B-15 B-16 B-17 B-18 B-19 B-20

B-12/DP-17

B-13/DP-13

B-14/DP-14

B-15/DP-15

B-16/DP-16

LEGEND

- REASSESSED ESTIMATED AREA OF RESIDUAL SOIL CONTAMINATION
- EXTENT OF UTILITY EXCAVATION ADJOINING 'SOURCE AREA' FIELD SCREENED HAVING NO OBVIOUS IMPACTS
- MINIMUM AREA OF OVER-EXCAVATION OF 3-4 FEET BGS OR GREATER
- B-1 GEOTECHNICAL SOIL BORING LOCATIONS

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LOCATION:
1818 WEST NATIONAL AVE.
MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

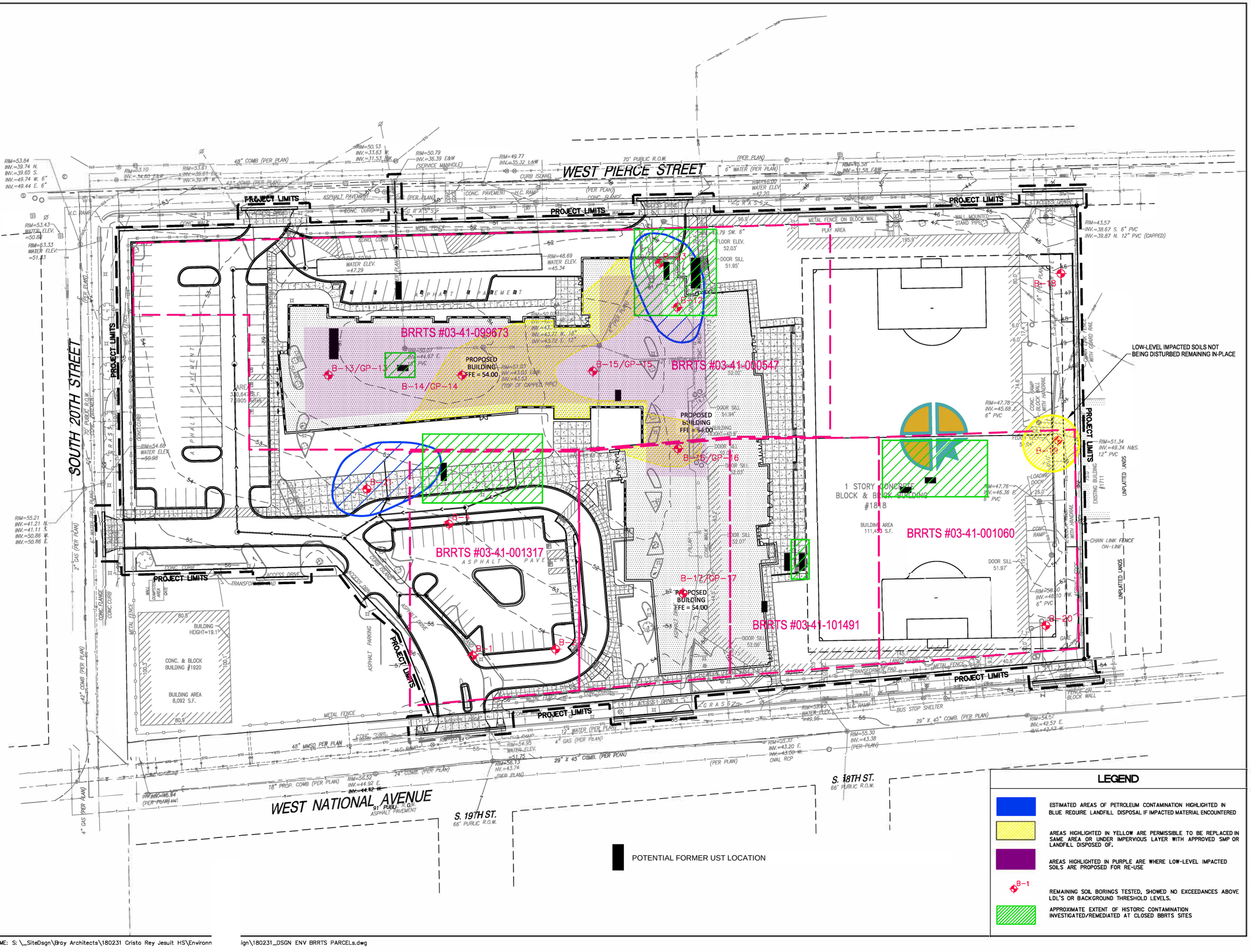
SCALE: 1 = 80'
0 40 80

SEAL:

SHEET:
SOIL DISPOSAL / RELOCATION MAP AND RESIDUAL SOIL CONTAMINANT PLUME

PROJECT MANAGER:	TP
PROJECT NUMBER:	180231.01
DATE:	01/29/2019

SHEET NUMBER:
5



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PROJECT:
CRISTO REY JESUIT HIGH SCHOOL

LOCATION:
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MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

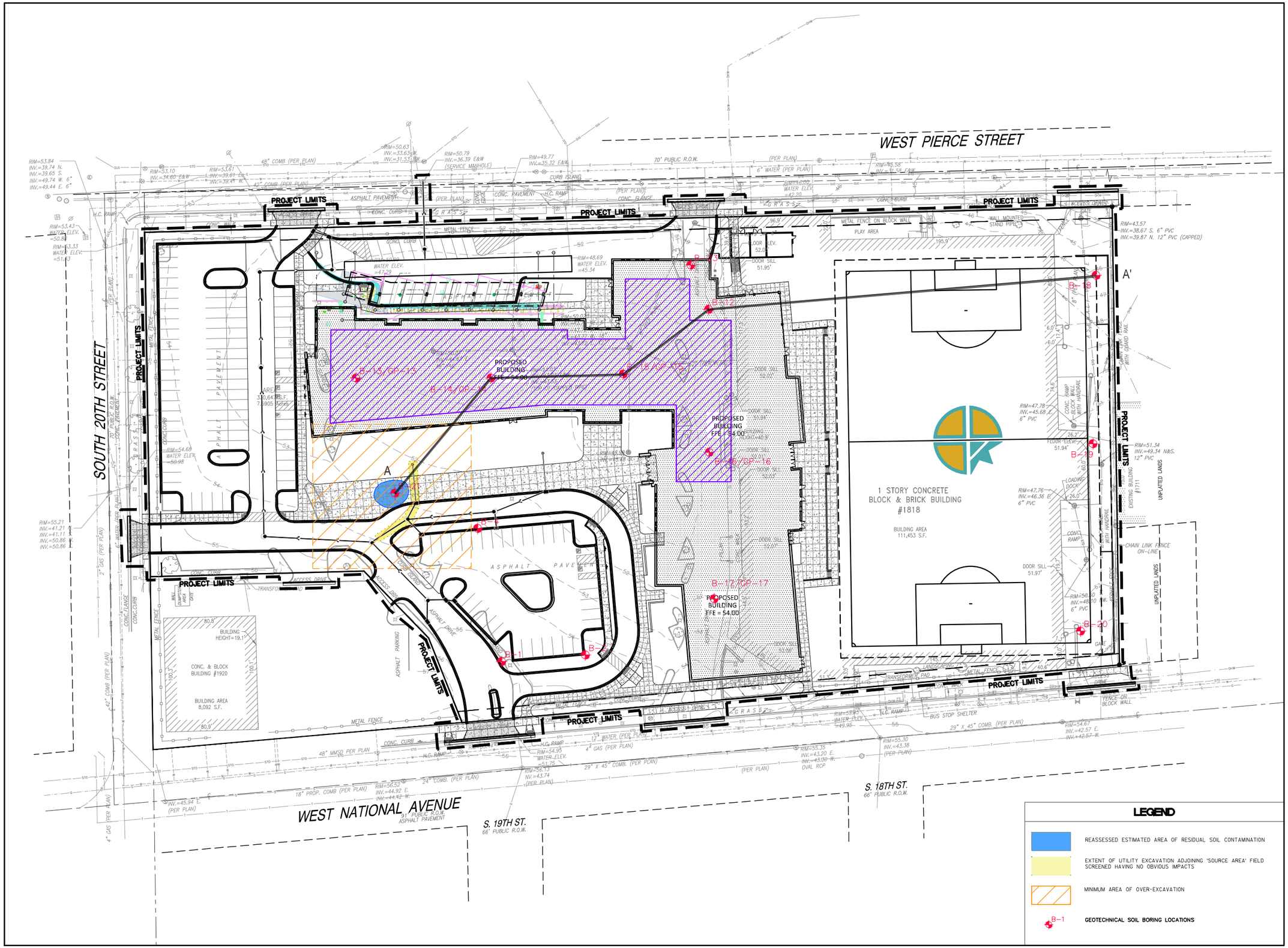
SCALE: 1 = 80'
0 40 80

SEAL:

SHEET:
HISTORIC BRRTS CASE LOCATION MAP

PROJECT MANAGER:	TP
PROJECT NUMBER:	180231.01
DATE:	01/29/2019

SHEET NUMBER:
6



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PROJECT:
CRISTO REY JESUIT HIGH SCHOOL

LOCATION:
1818 WEST NATIONAL AVE. MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1 = 80'
0 40 80

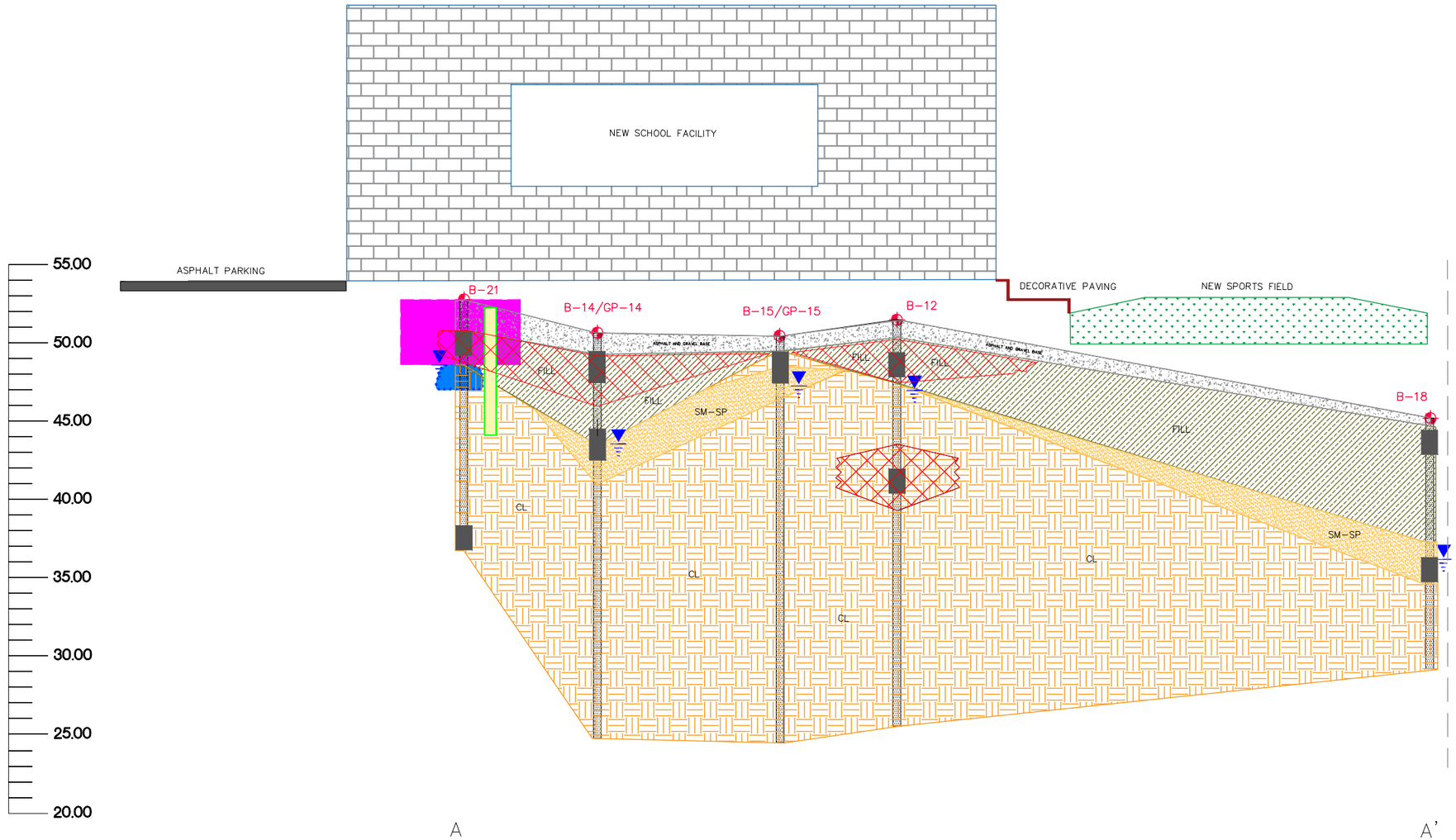
SEAL:

SHEET:
GEOLOGIC CROSS-SECTION PLAN VIEW

PROJECT MANAGER:	TP
PROJECT NUMBER:	180231.01
DATE:	01/29/2019

SHEET NUMBER:
B.3.a.

FILENAME: S:_SiteDsgn\Bray Architects\180231 Cristo Rey Jesuit HS\Environmental\Figures\Cross-Section Plan View.dwg



PRE-CONSTRUCTION ESTIMATED EXTENT OF SOIL CONTAMINATION FOLLOWING GEOTECHNICAL/ENVIRONMENTAL ASSESSMENT

Soil Classification:
CL = Clay of low plasticity
CH = Clay of high plasticity
MH = Elastic silt
ML = Silt
SC = Clayey sand
SM = Silty sand
SP = Poorly graded sand
SW = Well graded sand, fine to coarse

LEGEND

- REASSESSED ESTIMATED AREA OF RESIDUAL SOIL CONTAMINATION
- EXTENT OF UTILITY EXCAVATION ADJOINING 'SOURCE AREA' FIELD SCREENED HAVING NO OBVIOUS IMPACTS
- MINIMUM AREA OF OVER-EXCAVATION OF 3-4 FEET BGS OR GREATER
- B-1 GEOTECHNICAL/ENVIRONMENTAL SOIL BORING LOCATIONS
- SOIL SAMPLING INTERVAL
- APPARENT SHALLOW (PERCHED) WATER TABLE IDENTIFIED VIA GEOTECH SOIL BORINGS

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Milwaukee, Wisconsin 53217
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PROJECT:
CRISTO REY JESUIT HIGH SCHOOL

LOCATION:
1818 WEST NATIONAL AVE. MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1 = 80'
0 40 80

SEAL:

SHEET:
PRE-CONSTRCUTION GEOLOGIC CROSS-SECTION A-A'

PROJECT MANAGER:	TP
PROJECT NUMBER:	180231.01
DATE:	01/29/2019

SHEET NUMBER:
B.3.a.i

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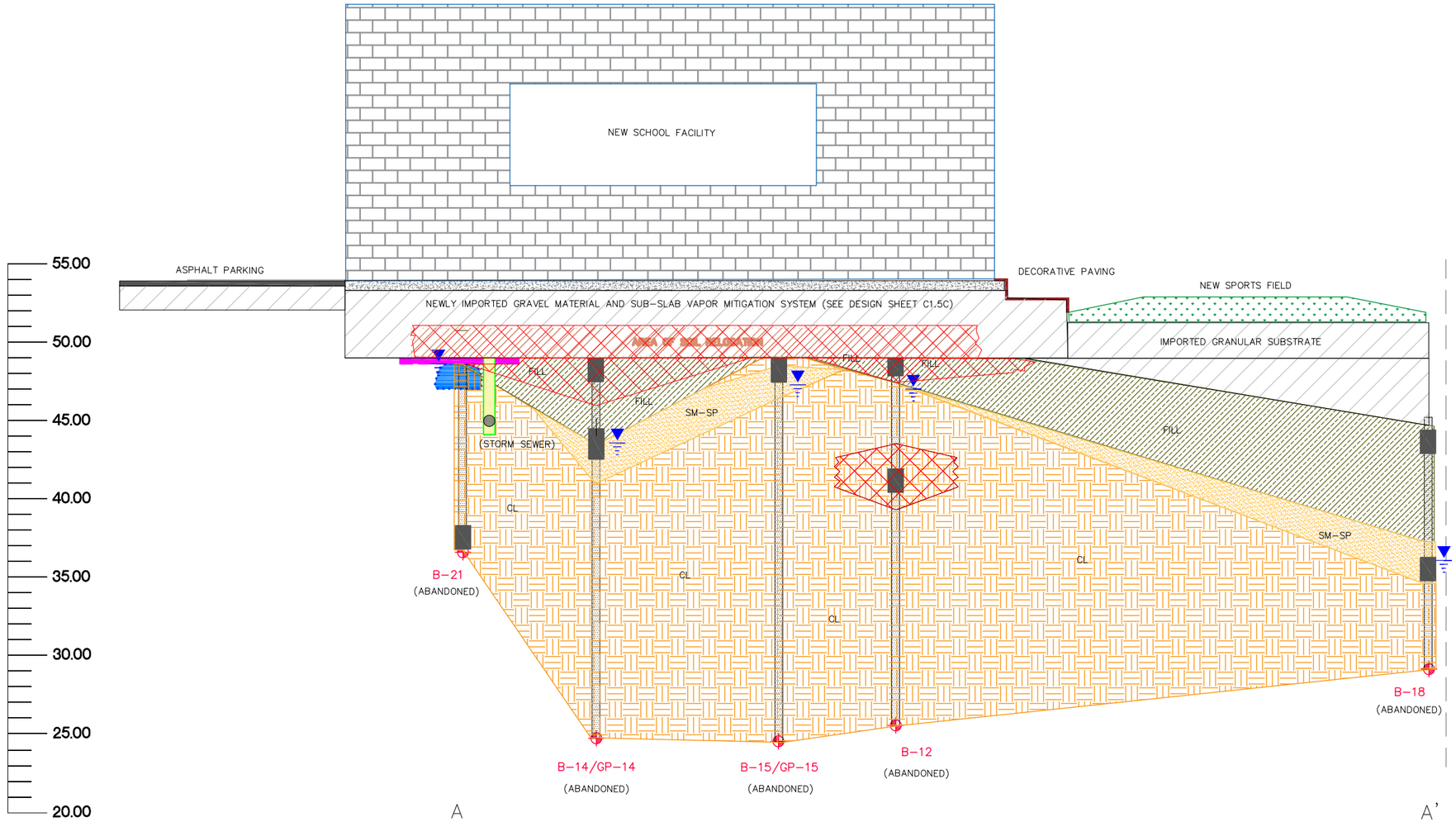

POST-CONSTRUCTION ESTIMATED EXTENT OF SOIL CONTAMINATION FOLLOWING GEOTECHNICAL/ENVIRONMENTAL ASSESSMENT

LEGEND

- REASSESSED ESTIMATED AREA OF RESIDUAL SOIL CONTAMINATION
- EXTENT OF UTILITY EXCAVATION ADJOINING 'SOURCE AREA' FIELD SCREENED HAVING NO OBVIOUS IMPACTS
- MINIMUM AREA OF OVER-EXCAVATION OF 3-4 FEET BGS OR GREATER
- B-1 GEOTECHNICAL/ENVIRONMENTAL SOIL BORING LOCATIONS
- SOIL SAMPLING INTERVAL
- APPARENT SHALLOW (PERCHED) WATER TABLE IDENTIFIED VIA GEOTECH SOIL BORINGS (PRE-CONSTRUCTION)

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Milwaukee, Wisconsin 53217
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PROJECT:
CRISTO REY JESUIT HIGH SCHOOL

LOCATION:
1818 WEST NATIONAL AVE. MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1 = 80'
0 40 80

SEAL:

SHEET:
POST-CONSTRUCTION GEOLOGIC CROSS-SECTION A-A'

PROJECT MANAGER: TP
PROJECT NUMBER: 180231.01
DATE: 01/29/2019

SHEET NUMBER:
B.3.a.ii

FILENAME: S:_SiteDsgn\Bray Architects\180231 Cristo Rey Jesuit HS\Environmental\Figures\Cross-Section A-A' Post Construct REV.dwg

WEST PIERCE STREET

70' PUBLIC R.O.W.

CURB ISLAND

ASPHALT PAVEMENT

CONC. EDGE

CONC. PAVEMENT

H.C. RAMP

CONC. FLANGE

CONC. CURB

GRASS

PROJECT LIMITS

RISER LOCATION FOR SUB SLAB VAPOR MITIGATION SYSTEM. RISER PIPE TO BE SOLID SCHEDULE 40 PVC PIPE. COORDINATE RISER LOCATION WITH ARCHITECTURAL PLANS. CONTRACTOR TO TERMINATE RISER PIPE AT A MINIMUM OF 18" ABOVE THE ROOF LINE OR AT LEAST ABOVE THE PARAPET WALL IF APPLICABLE WITH A "GOOSE NECK" FITTING. TYPE OF SYSTEM TO BE DETERMINED IN THE FIELD. CONTRACTOR TO MAKE PROPER ADJUSTMENTS BASED ON THE SYSTEM TYPE.

SUB SLAB VAPOR MITIGATION SYSTEM TO BE CONSTRUCTED OF 4" SCHEDULE 40 PERFORATED PVC PIPE USING STANDARD SCHEDULE 40 FITTINGS FOR ALL CONNECTIONS. ALL VAPOR MITIGATION WORK TO BE PERFORMED BY INTERIOR PLUMBING CONTRACTOR.

VAPOR MITIGATION AREA SEE SLAB SECTION DETAIL

NON VAPOR MITIGATION AREA REFER TO STRUCTURE PLANS FOR SLAB INFORMATION

SOUTH 20TH STREET

70' PUBLIC R.O.W.

CONC. PAVEMENT

GRASS

DETAIL A

DETAIL B

80.8'

100.2'

100.1'

80.9'

WALL MOUNTED GAS METER

METAL FENCE

ASPHALT PARKING

BUS STOP SHELTER

WEST NATIONAL AVENUE

66' PUBLIC R.O.W.

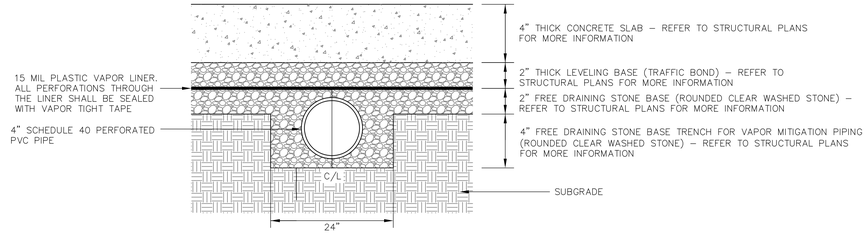
ASPHALT PAVEMENT

S. 19TH ST.

66' PUBLIC R.O.W.

S. 18TH ST.

66' PUBLIC R.O.W.



X INTERIOR CONCRETE SLAB OVER VAPOR MITIGATION PIPING
N.T.S.

N

Scale: 0 15 30 60
Scale: 1" = 30'

DIGGERS HOTLINE
Dial 811 or (800)242-8511
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MILWAUKEE, WISCONSIN 53217
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Project Title:
NEW BUILDING FOR:
CRISTO REY JESUIT HIGH SCHOOL
CRISTO REY - MILWAUKEE
1818 W. NATIONAL AVE. MILWAUKEE, WI 53204

REVISIONS:

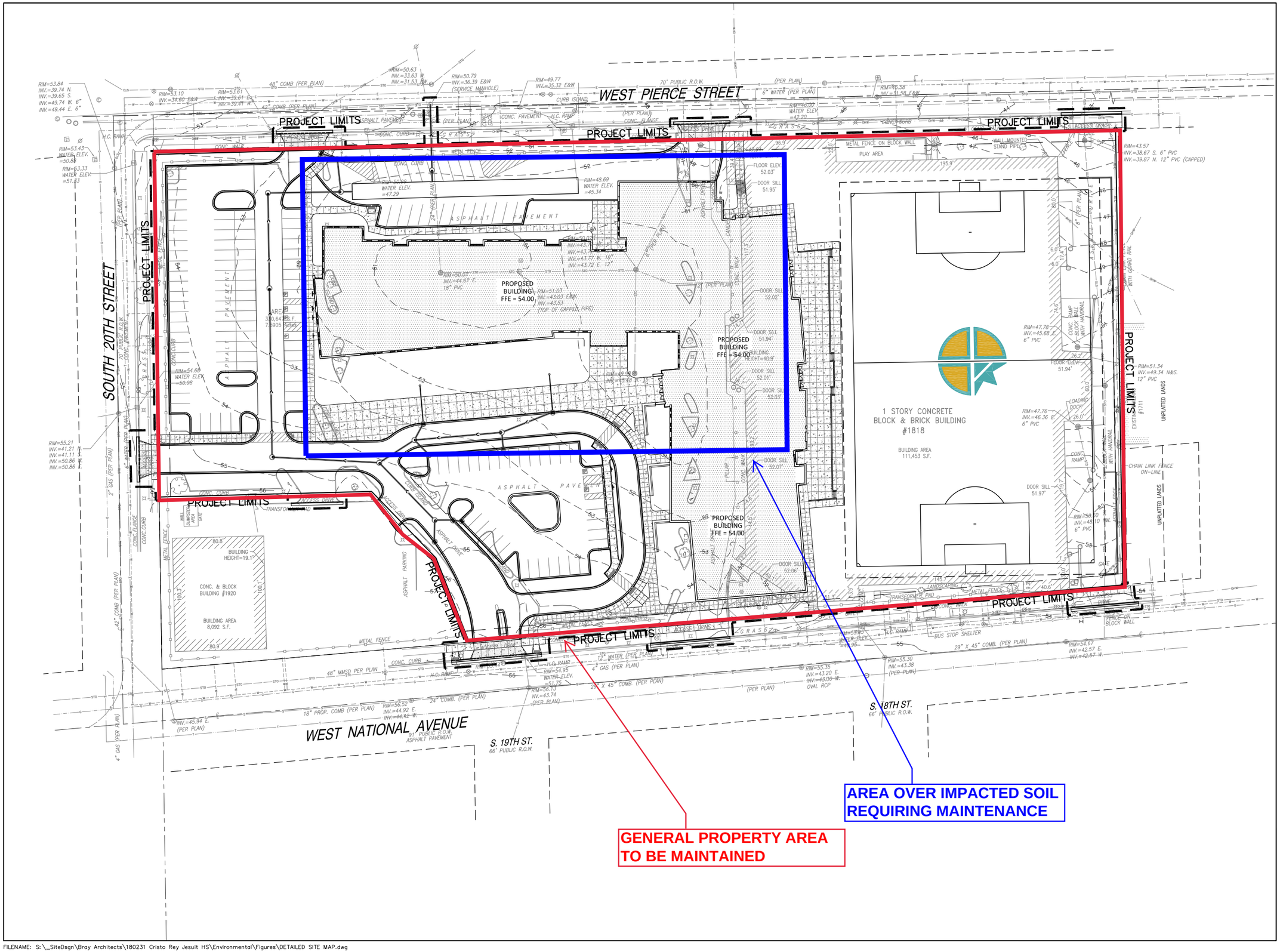
△	DATE	DESCRIPTION
1	05/02/19	ADDENDUM 1
3	05/15/19	ADDENDUM 3
4	06/01/19	PROJ. SUPP. 01
5	06/27/19	PROJ. SUPP. 02
6	10/01/19	PROJ. SUPP. 02r
7	10/16/19	PROJ. SUPP. 04
8	01/07/20	PROJ. SUPP. 08
9	06/05/20	PROJ. SUPP. 14
10	06/19/20	PROJ. SUPP. 15
11	07/02/20	PROJ. SUPP. 16

Project Number:
3367

Issued For:
CONSTRUCTION DOCUMENTS
04/24/2019

Sheet Title:
VAPOR MITIGATION SYSTEMS PLAN

Sheet Number:
C1.5C



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PROJECT:
CRISTO REY JESUIT HIGH SCHOOL

LOCATION:
1818 WEST NATIONAL AVE. MILWAUKEE, WI 53204

CLIENT:

RELEASE:

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1 = 80'
0 40 80

SEAL:

SHEET:
DETAILED SITE MAP

PROJECT MANAGER:	TP
PROJECT NUMBER:	180231.01
DATE:	02/04/2019

SHEET NUMBER:
7

FILENAME: S:_SiteDsgn\Bray Architects\180231 Cristo Rey Jesuit HS\Environmental\Figures\DETAILED SITE MAP.dwg

MILWAUKEE COUNTY INTERACTIVE MAPPING SERVICE

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

1: 1,129

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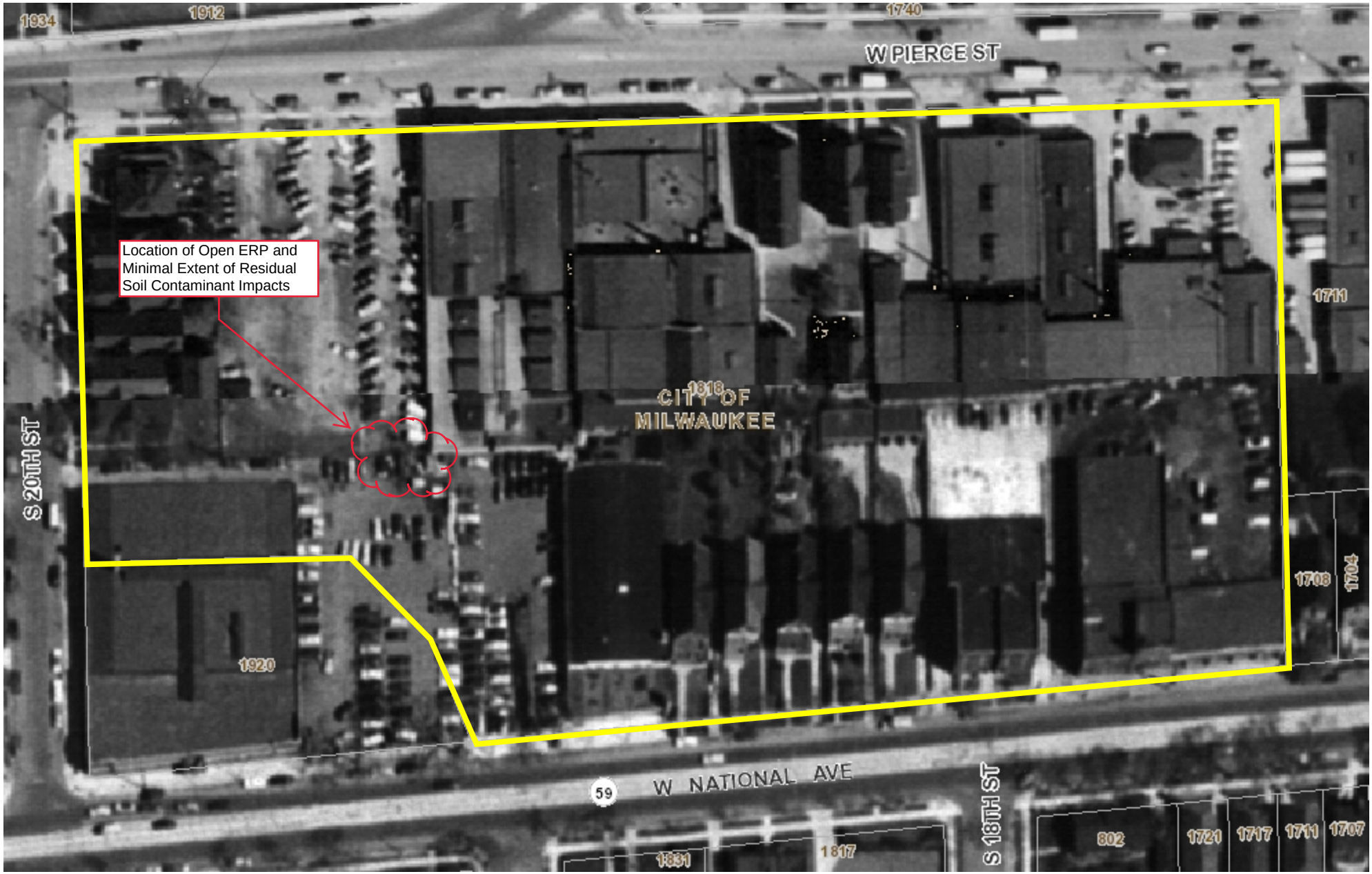
Notes

1937

MILWAUKEE COUNTY INTERACTIVE MAPPING SERVICE



188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

1: 1,129

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1951

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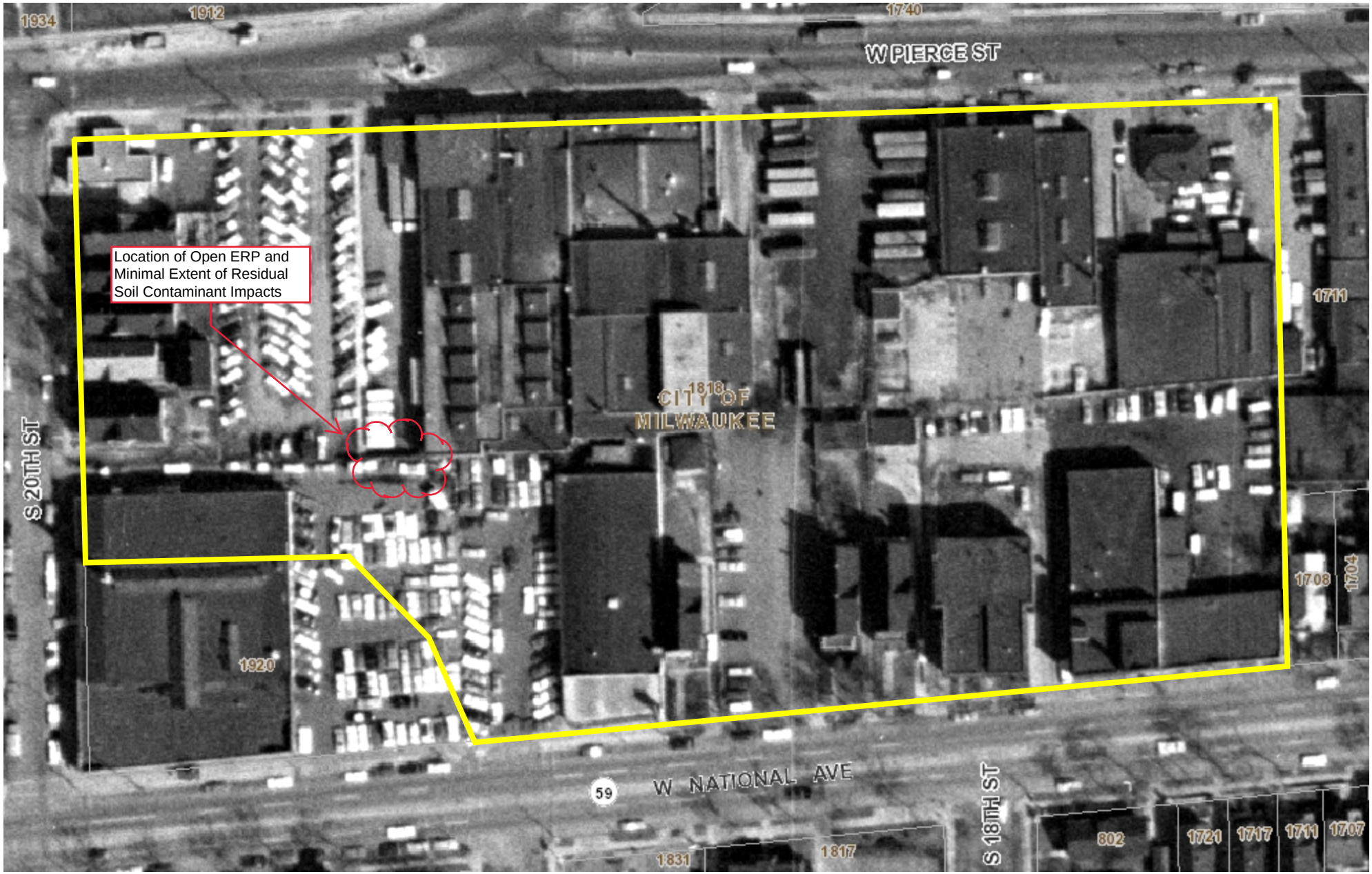

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

1: 1,129

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1963

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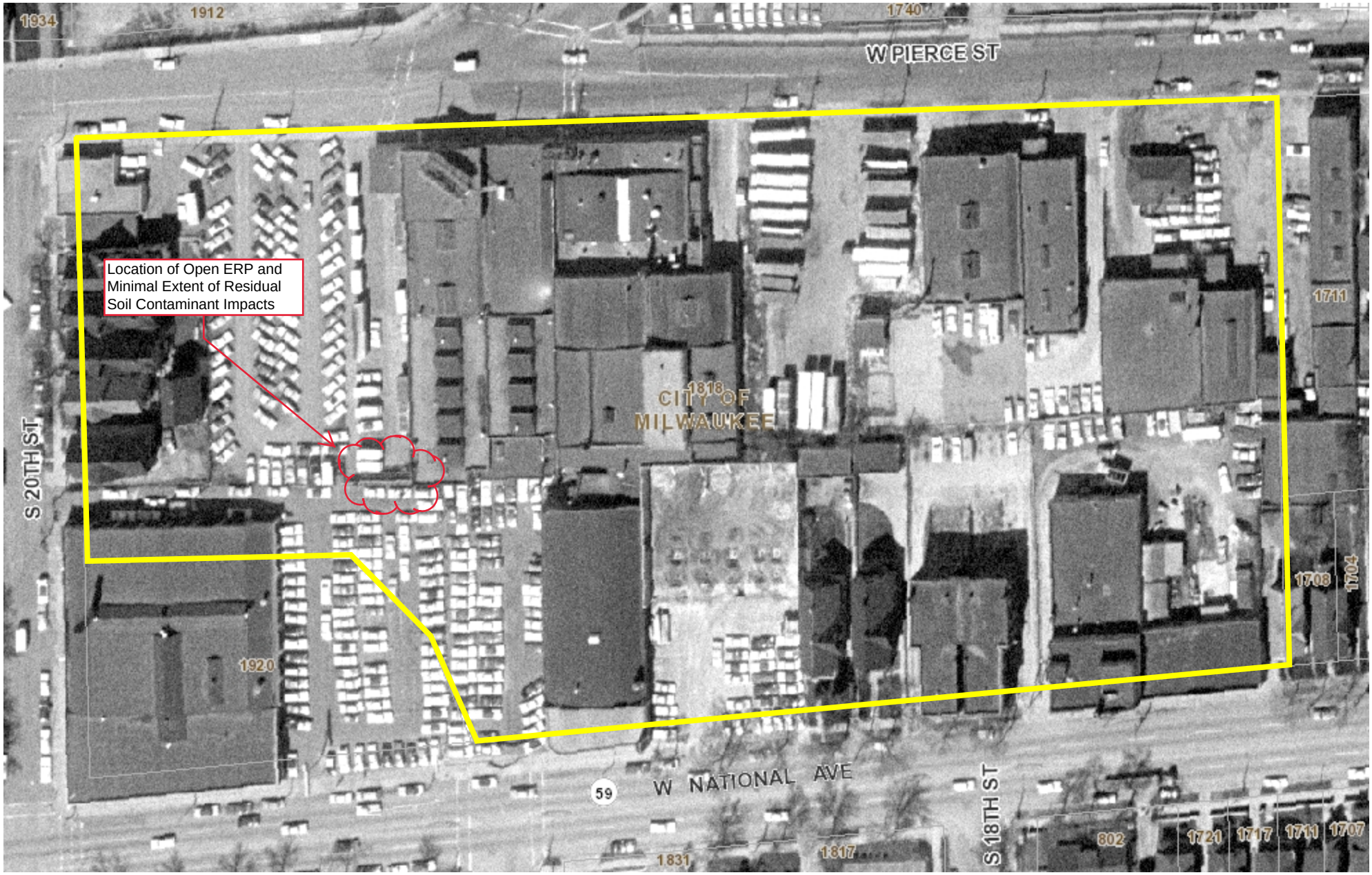

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

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1967

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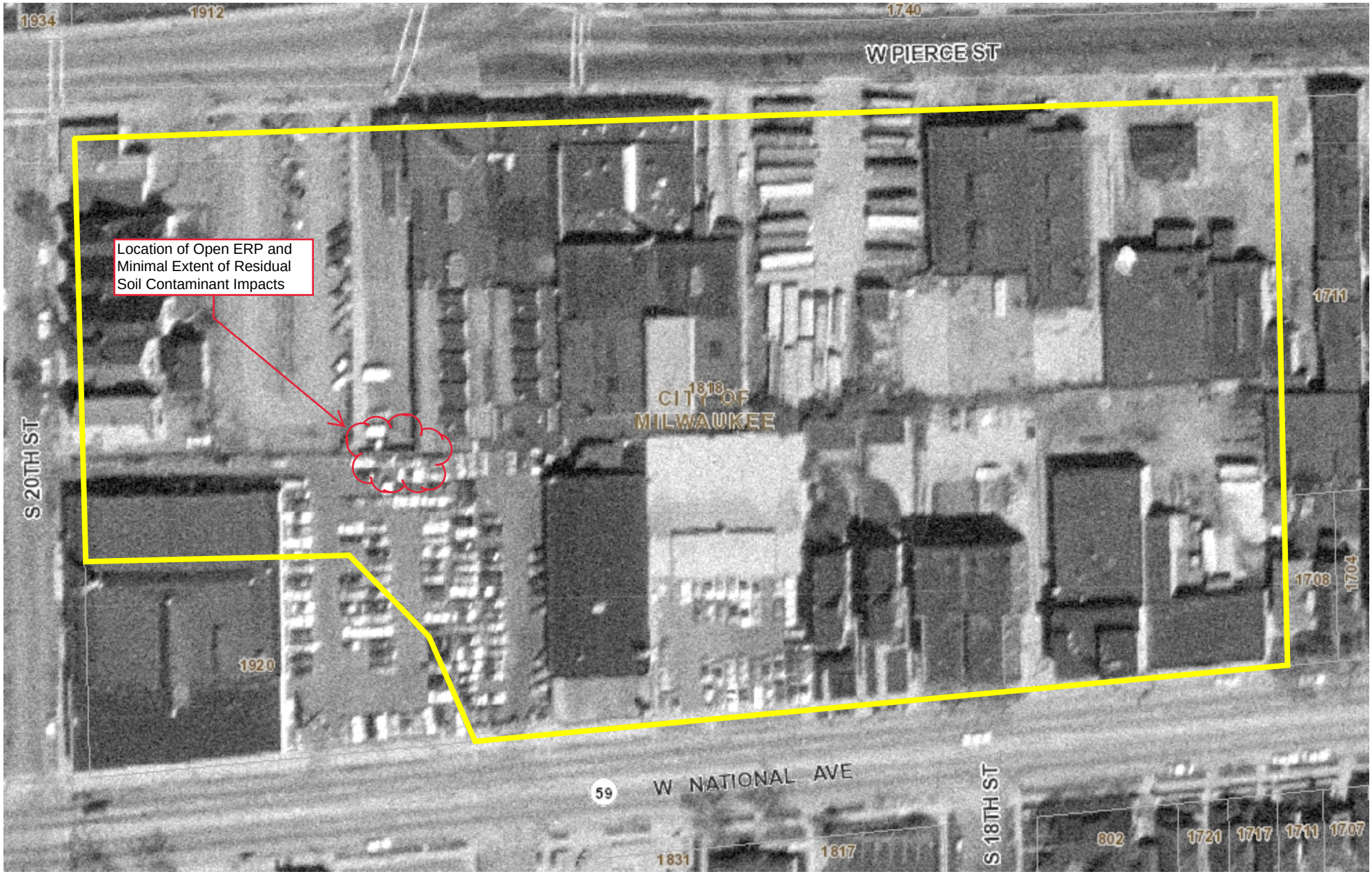

188 0 94 188 Feet

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1970

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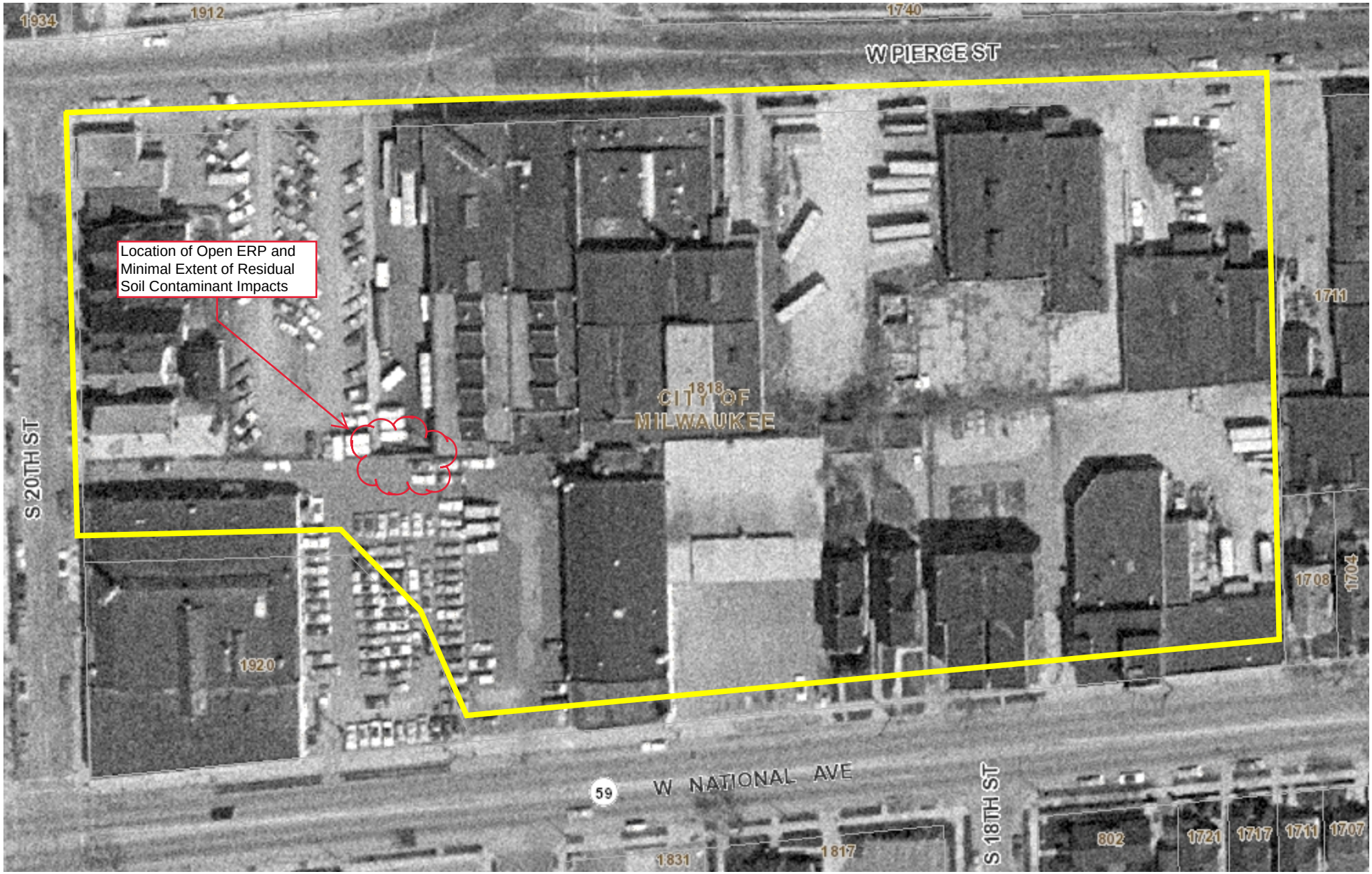

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

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1975

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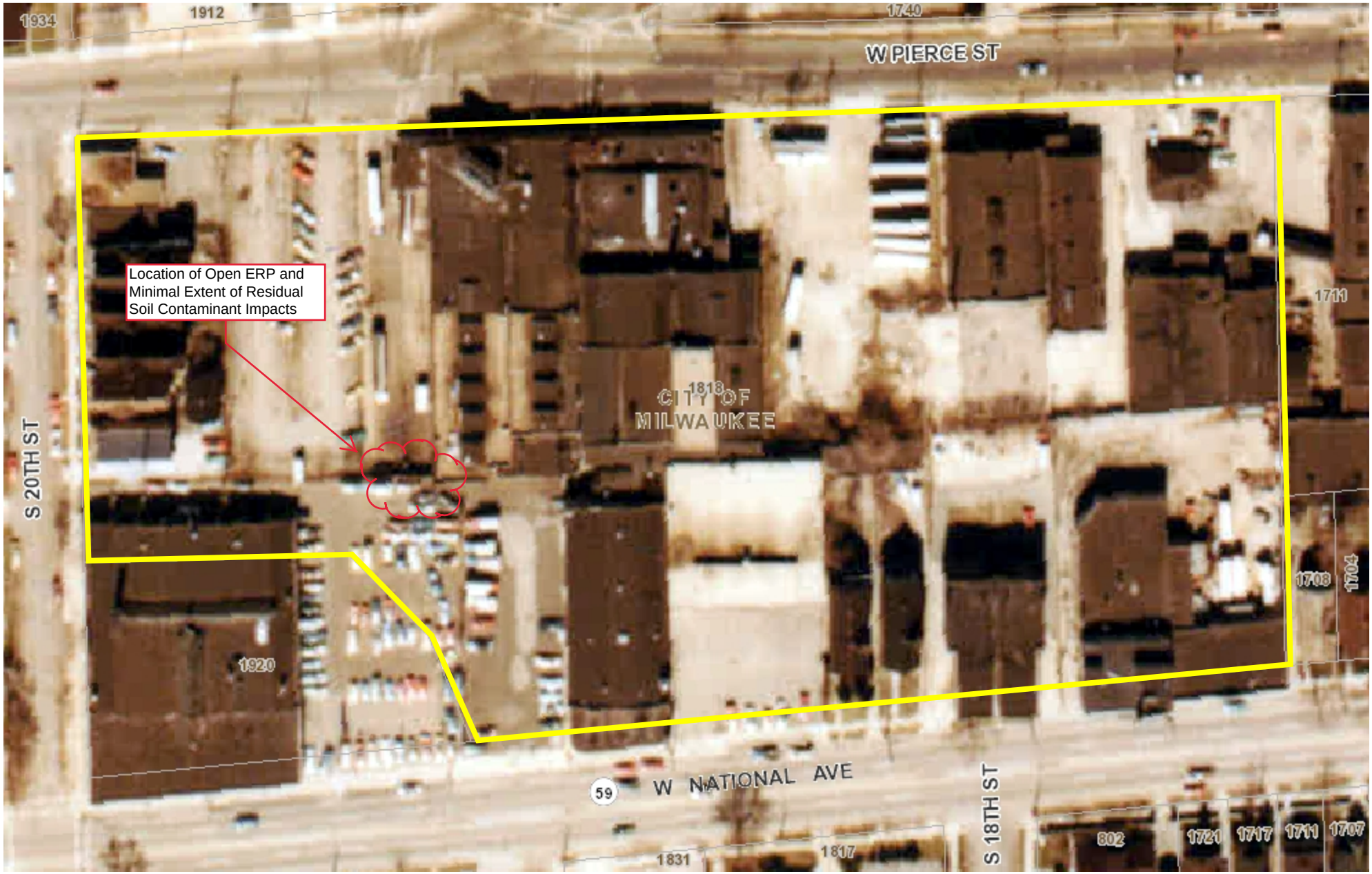

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1976

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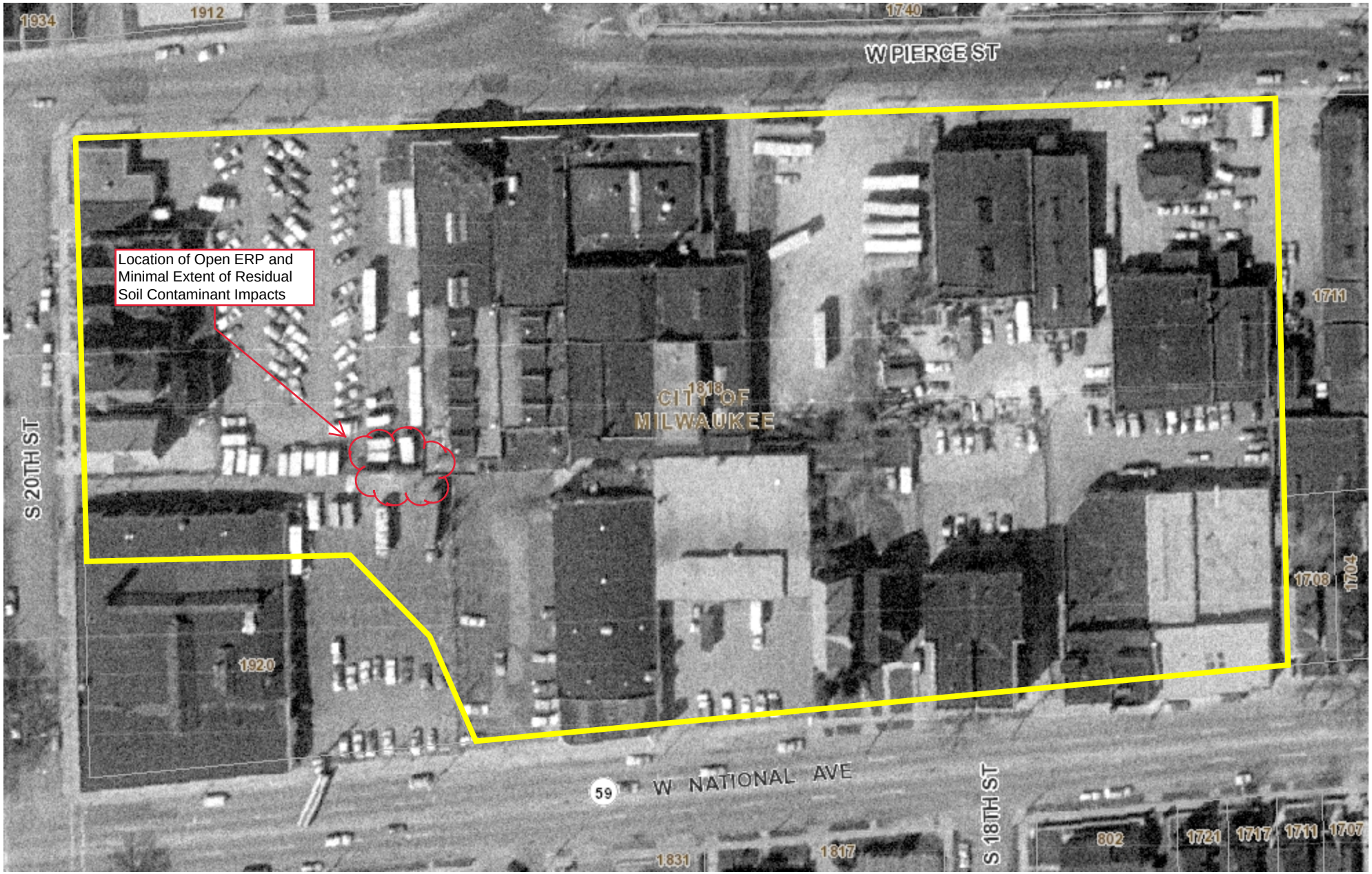

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1980

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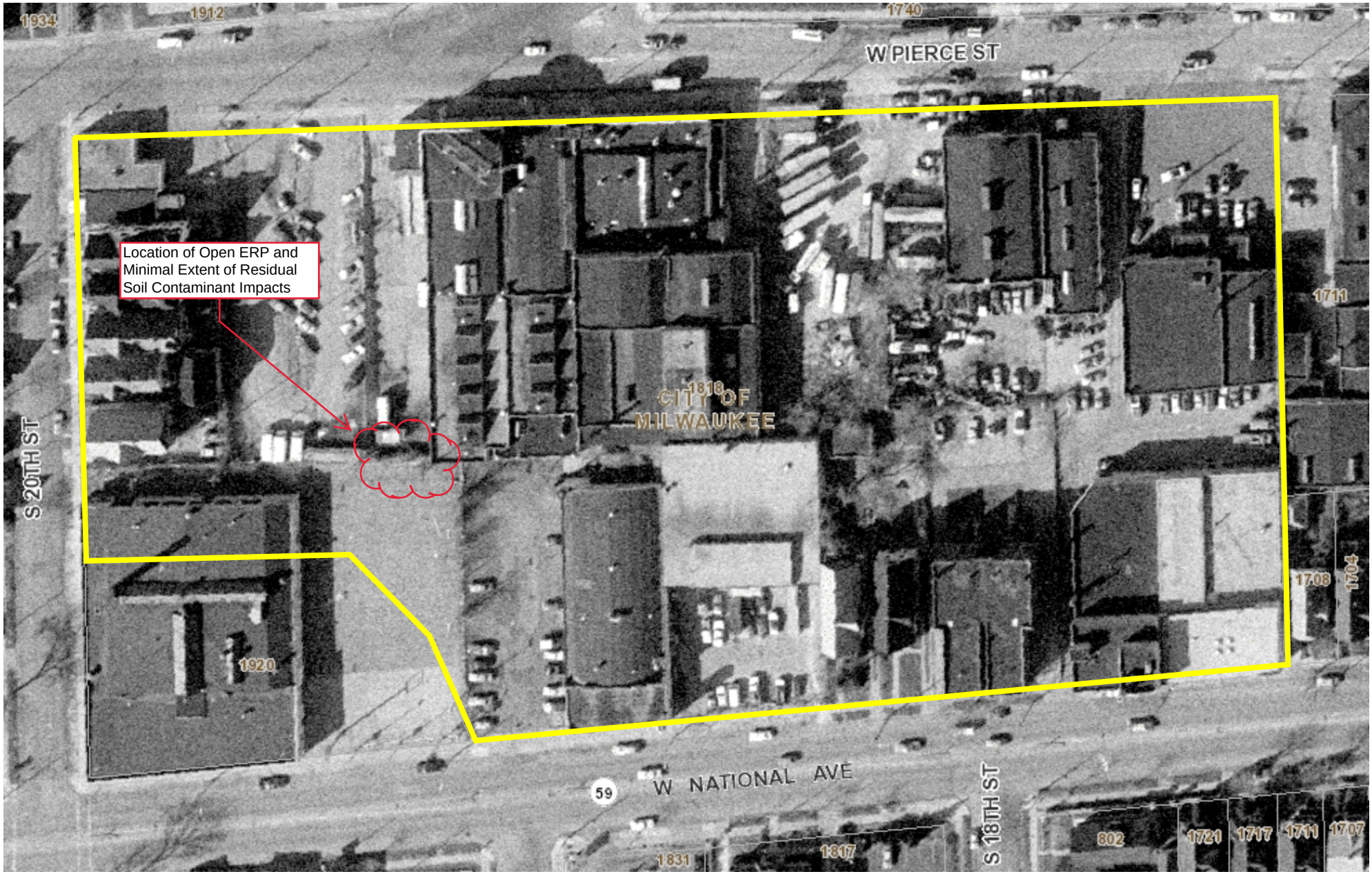

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1985

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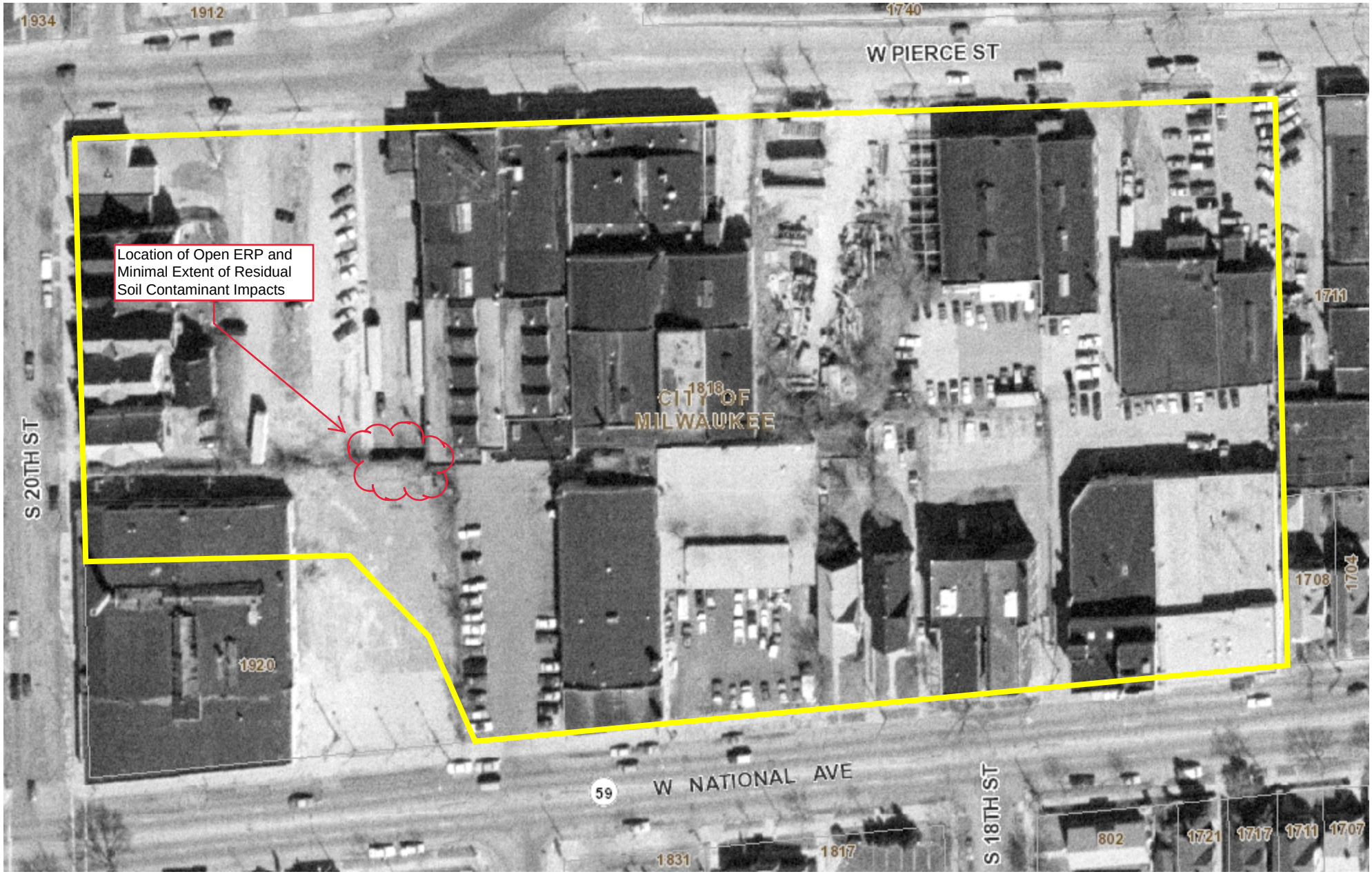

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1990

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1995

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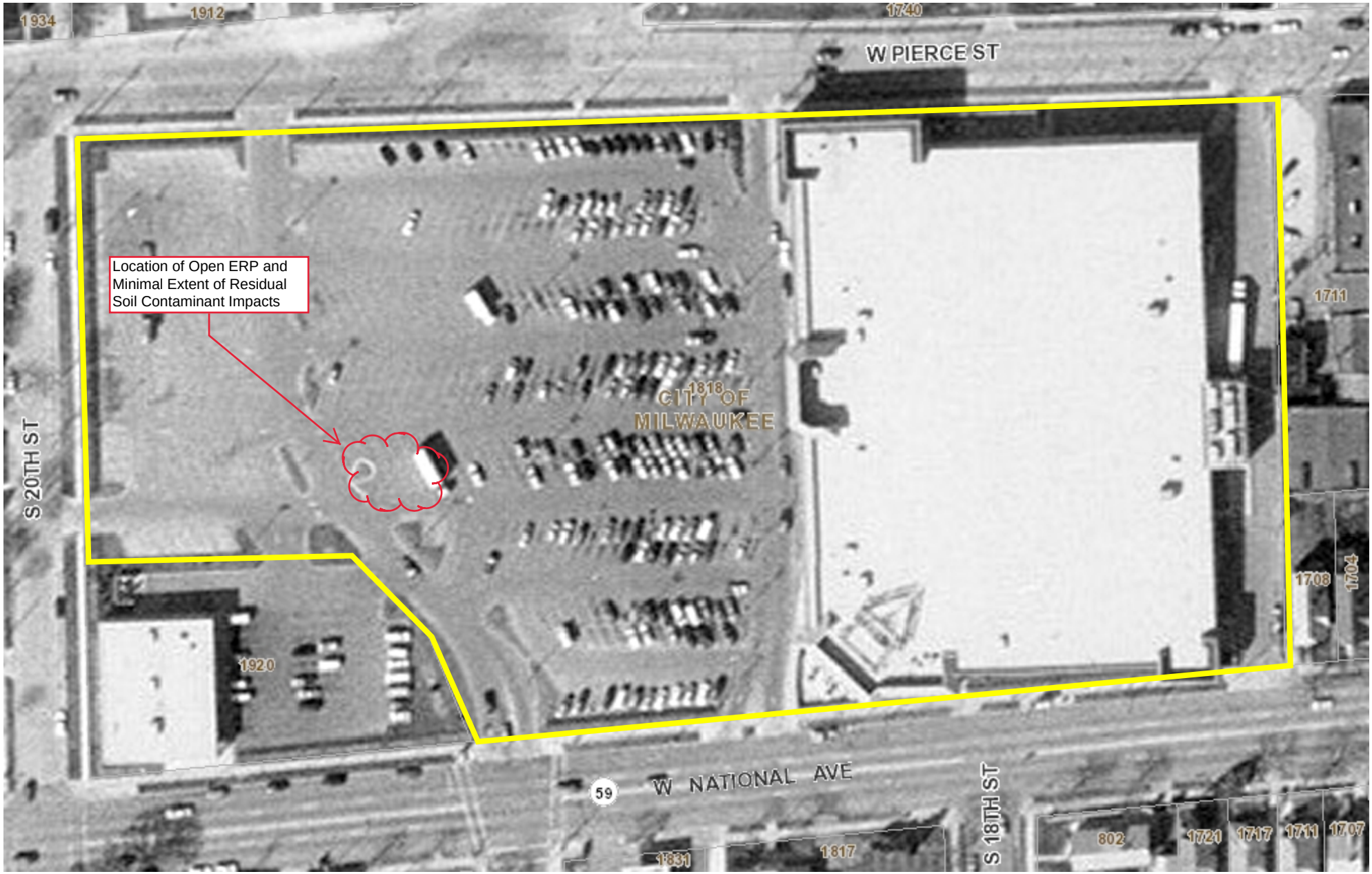

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

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2000

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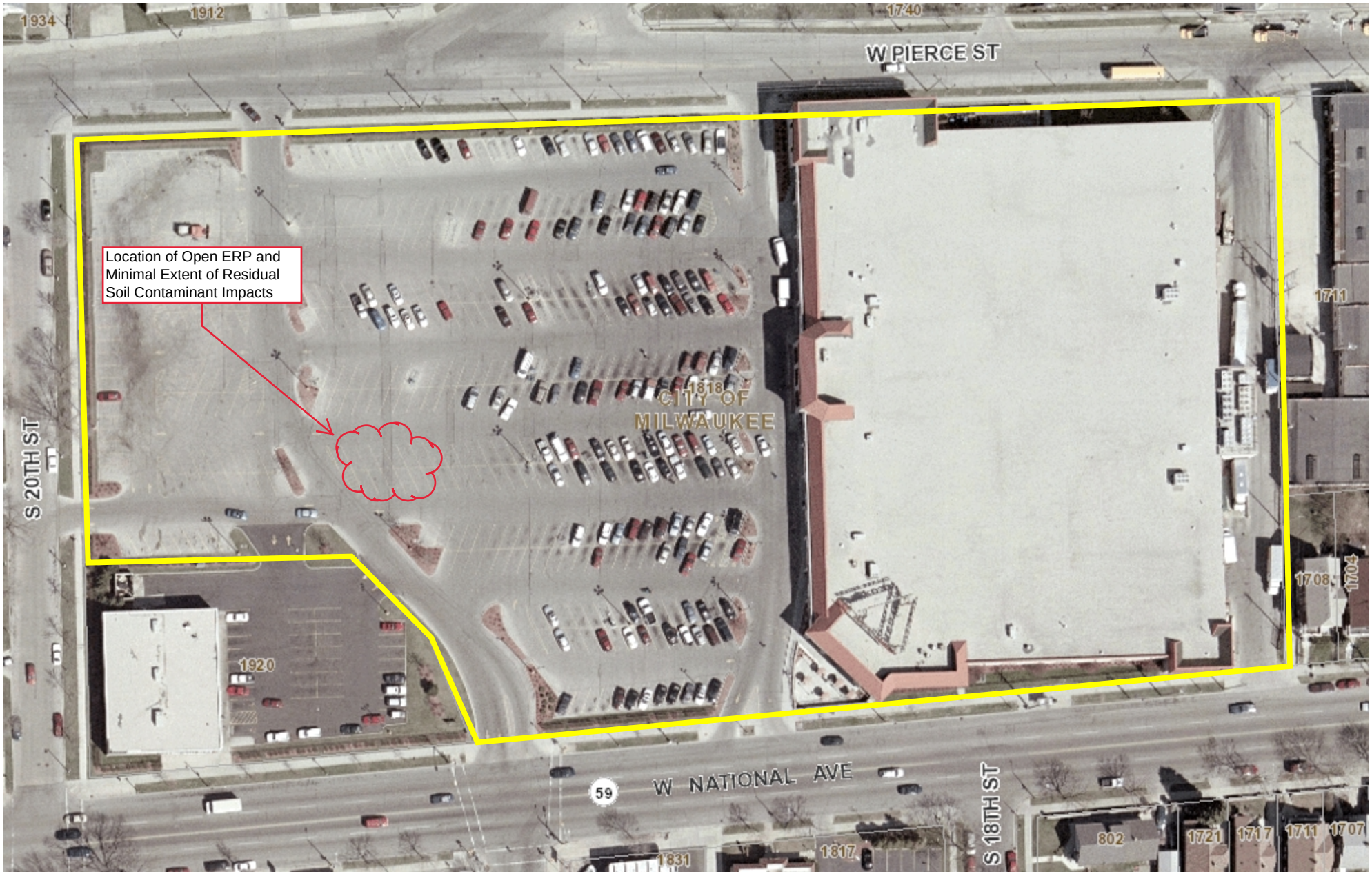

188 0 94 188 Feet

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2005

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Notes

2010

MILWAUKEE COUNTY INTERACTIVE MAPPING SERVICE

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Notes

2013

MILWAUKEE COUNTY INTERACTIVE MAPPING SERVICE

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

1: 1,129

Notes

2015

MILWAUKEE COUNTY INTERACTIVE MAPPING SERVICE

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2018

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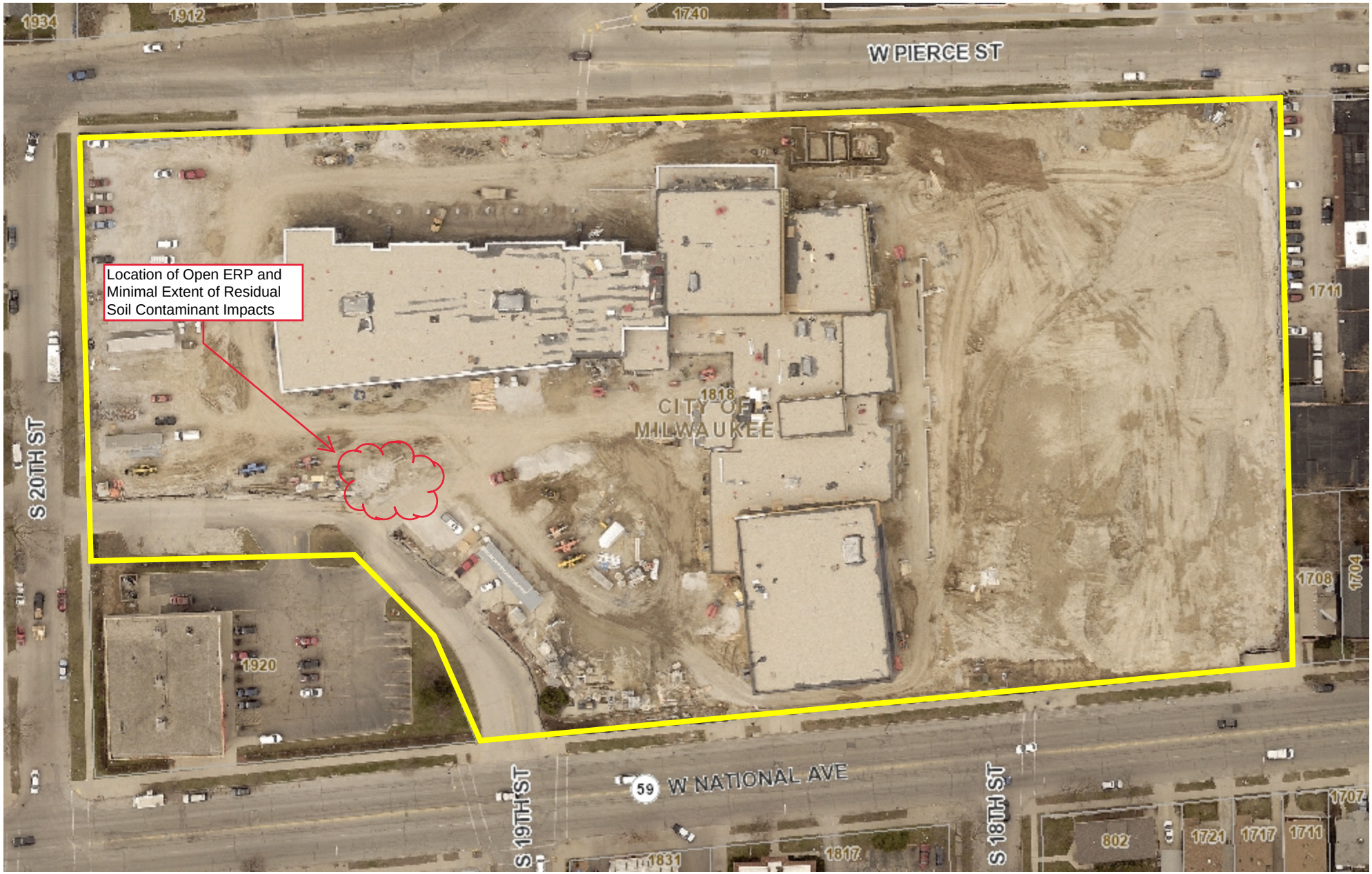

188 0 94 188 Feet

NAD_1983_2011_StatePlane_Wisconsin_South_FIPS_4803_Ft_US

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Notes

ATTACHMENT B

TABLES

Parameter	Units	ch. NR 720 Direct Contact Industrial RCLs	ch. NR 720 Direct Contact Non-Industrial RCLs	ch. NR 720 Soil to Groundwater Pathway RCLs	EPA TCLP Limits	Background Threshold Value	Sample Date: 09/18/2018											
							B-1	B-2	B-4	B-12	B-12 TCLP	B-12	B-16	B-17	B-18	B-18	B-19	B-20
						Soil Type:	GW	SW-SM	ML	ML	ML	GW	SW-SM	GW/CL	CL-ML	GW	ML	ML
						Saturated/Unsaturated:	U	U	U	U	U	U	U	U	U	U	U	U
						Sample Depth:	(2-3.5)	(2-3.5)	(2-3.5)	(2-3.5)	(2-3.5)	(9.5-11)	(2-3.5)	(.5-2.5)	(.5-2)	(9.5-11)	(.5-3.5)	(.5-3.5)
Polynuclear Aromatic Hydrocarbons (PAHs)																		
1-Methylnaphthalene	mg/kg	72.7	17.6				<0.0048	<0.0043	<0.0048	0.0149 J		<0.0048	<0.0048	<0.0045	<0.0043	<0.0045	0.0137 J	<0.0043
2-Methylnaphthalene	mg/kg	3,010	239.0				<0.0060	<0.0053	<0.0060	0.0215		<0.0059	<0.0059	<0.0055	<0.0053	<0.0056	0.0209	<0.0053
Acenaphthene	mg/kg	45,200	3,590				<0.0046	<0.0041	<0.0047	0.0045 J		<0.0046	<0.0046	<0.0043	<0.0041	0.0053 J	0.0127 J	<0.0041
Acenaphthylene	mg/kg						<0.0039	<0.0035	<0.0040	0.0048 J		<0.0039	<0.0039	<0.0037	<0.0035	<0.0037	0.0054 J	<0.0035
Anthracene	mg/kg	100,000	17,900	**196.9492**			<0.0068	<0.0061	<0.0069	0.0192 J		<0.0068	<0.0067	<0.0063	<0.0060	0.0121 J	0.0449	0.0079 J
Benzo(a)anthracene	mg/kg	20.8	1.14				<0.0038	<0.0034	<0.0038	0.0827		<0.0037	<0.0037	0.0204	0.0198	0.0198	0.136	0.0261
Benzo(a)pyrene	mg/kg	2.11	0.115	**0.47**			<0.0030	<0.0027	<0.0030	0.0846		<0.0030	<0.0030	0.0225	0.0225	0.0151	0.142	0.0265
Benzo(b)fluoranthene	mg/kg	21.1	1.15	**0.4793**			<0.0034	<0.0030	<0.0034	0.166		<0.0033	<0.0033	0.0336	0.0301	0.0248	0.234	0.0414
Benzo(g,h,i)perylene	mg/kg						<0.0024	<0.0022	<0.0024	0.0577		<0.0024	<0.0024	0.0129	0.0134	0.0070 J	0.0612	0.0105
Benzo(k)fluoranthene	mg/kg	211	11.5				<0.0030	<0.0027	<0.0030	0.0462		<0.0030	<0.0030	0.0140	0.0138	0.0098	0.0774	0.0146
Chrysene	mg/kg	2,110	115	**0.1446**			<0.0040	<0.0036	<0.0040	0.133		<0.0040	<0.0040	0.0277	0.0202	0.0269	**[0.173]**	0.0341
Dibenz(a,h)anthracene	mg/kg	2.11	0.115				<0.0027	<0.0024	<0.0027	0.0208		<0.0026	<0.0026	0.0037 J	0.0033 J	<0.0025	0.0159	0.0028 J
Fluoranthene	mg/kg	30,100	2,390	**88.8778**			<0.0062	<0.0055	<0.0063	0.171		<0.0062	<0.0062	0.0535	0.0376	0.0781	0.360	0.0609
Fluorene	mg/kg	30,100	2,390	**14.8299**			<0.0049	<0.0044	<0.0050	<0.0047		<0.0049	<0.0049	<0.0046	<0.0044	0.0054 J	0.0113 J	<0.0044
Indeno(1,2,3-cd)pyrene	mg/kg	21.1	1.15				<0.0026	<0.0023	<0.0026	0.0443		<0.0026	<0.0026	0.0102	0.0102	0.0059 J	0.0412	0.0074 J
Naphthalene	mg/kg	26	5.2	**0.66**			<0.0100	<0.0090	0.0111 J	0.0297 J		<0.0100	<0.0099	<0.0093	<0.0089	<0.0094	<0.0096	<0.0090
Phenanthrene	mg/kg						<0.0139	<0.0124	<0.0140	0.0799		<0.0138	<0.0138	<0.0129	<0.0123	0.0508	0.212	0.0326 J
Pyrene	mg/kg	22,600	1,790	**54.5455**			<0.0054	<0.0048	<0.0054	0.122		<0.0053	<0.0053	0.0433	0.0318	0.0519	0.271	0.0469
RCRA Metals																		
Arsenic	mg/kg	3.0	0.677	**0.5484**	5	**8**	**[8.0]**	**[2.4 J]***	**[4.3 J]***	**[7.7]***		**[6.4]***	**[5.4]***	**[4.0 J]***	**[4.1 J]***	**[4.9 J]***	**[5.3 J]***	**[5.9 J]***
Barium	mg/kg	100,000	15,300	**164.8**	100	**364**	72.1	8.2	46.6	**[180]***		57.6	52.3	11.7	14.7	45.2	12.9	8.9
Cadmium	mg/kg	985	71.1	**0.752**	1	**1**	0.27 J	<0.14	0.17 J	0.65		0.20 J	0.20 J	<0.14	<0.27	<0.27	<0.29	<0.28
Chromium	mg/kg			**360,000**	5	**44**	20.5	7.7	18.7	12.2		14.7	15.9	8.4	6.9	9.0	7.6	4.5
Lead	mg/kg	800	400	**27**	5	**52**	10.3	3.4	9.1	[429]	2.9	8.0	7.9	3.8	4.1	5.2	1.9 J	7.0
Mercury	mg/kg	3.13	3.13	**0.208**	0.2		<0.037	<0.036	<0.038	0.040 J		<0.037	<0.038	<0.035	<0.034	<0.039	<0.039	<0.034
Selenium	mg/kg	5,840	391	**0.52**	1		<1.6	<1.4	<1.5	<1.5		<1.5	<1.4	<1.4	<2.7	<2.7	<2.8	<2.7
Silver	mg/kg	391	5,110	**0.85**	5		<0.41	<0.36	<0.40	<0.39		<0.38	<0.37	<0.37	<0.70	<0.71	<0.74	<0.72
Volatile Organic Compounds (VOCs)																		
1,2,4-Trichlorobenzene	mg/kg	113	24	**0.41**			<0.0476	<0.0476	<0.0476	<0.0476		<0.0476	<0.0476	<0.0476	<0.0476	<0.0476	<0.0476	<0.0476
1,2,4-Trimethylbenzene	mg/kg	219	219	**1.382**			<0.0250	<0.0250	<0.0250	0.0354 J		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
1,2-Dichlorobenzene	mg/kg	376	376	**1.2**			<0.0250	<0.0250	<0.0250	0.332		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
1,2-Dichloroethane	mg/kg	3	0.652	**0.0028**			<0.0250	<0.0250	<0.0250	**[0.0396]**		**[0.174]**	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
1,3,5-Trimethylbenzene	mg/kg	182	182	**1.382**			<0.0250	<0.0250	<0.0250	<0.0250		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
1,3-Dichlorobenzene	mg/kg	297	297	**1.2**			<0.0250	<0.0250	<0.0250	<0.0250		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
1,4-Dichlorobenzene	mg/kg	16.4	3.7	**0.14**			<0.0250	<0.0250	<0.0250	**[0.306]**		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Chlorobenzene	mg/kg	761	370	**0.14**			<0.0250	<0.0250	<0.0250	**[0.243]**		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Ethylbenzene	mg/kg	35.4	8.02	**1.57**			<0.0250	<0.0250	<0.0250	<0.0250		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
m&p-Xylene	mg/kg	260	260	**3.96**			<0.0500	<0.0500	<0.0500	0.0910 J		<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Methylene Chloride*	mg/kg	1,070	61	**0.0026**			**[0.0703]**	**[0.0664]**	**[0.0658]**	**[0.0568]**		**[0.0660]**	**[0.0563]**	**[0.0675]**	**[0.0516]**	**[0.0638]**	**[0.0573]**	**[0.0440]**
Naphthalene	mg/kg	24.1	5.52	**0.6582**			<0.0400	<0.0400	<0.0400	0.430		<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400
n-Butylbenzene	mg/kg	108	108				<0.0250	<0.0250	<0.0250	<0.0250		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
o-Xylene	mg/kg	260	260	**3.96**			<0.0250	<0.0250	<0.0250	0.0571 J		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Toluene	mg/kg	818	818	**1.1072**			<0.0250	<0.0250	<0.0250	<0.0250		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250
Percent Moisture	%						16.2	6.1	16.7	12.1		15.5	15.3	9.9	5.5	10.3	12.5	6.1
PID	ppmv						0.5	0.7	0.6	0.9		1	0.7	0.8	0.4	0.8	1.2	0.7

Notes:

Only analytes with a detection in at least one sample are shown
(2-3) = sample depth in feet below ground surface
RCL = Residual Contaminant Level
PID - Photoionization Detector
ppmv = parts per million by volume in air
NR = Not Reported/Below Detection Limits
NA = Not Analyzed

Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are **bold red**
Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are **bold blue**
Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[Brackets]**
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
mg/kg = milligrams per kilogram
* = Above industrial standard but below background threshold value

Soil Classification:
GW = Well graded gravel, fine to coarse
SW = Well graded sand, fine to coarse
SM = Silty sand
ML = Silt
CL = Clay of low plasticity

kapur

Table A.2: Soil Analytical Results
1818 West National Ave
Milwaukee, Wisconsin

Parameter	Units	ch. NR 720 Direct Contact Industrial RCLs	ch. NR 720 Direct Contact Non-Industrial RCLs	ch. NR 720 Soil to Groundwater Pathway RCLs	EPA TCLP Limits	Background Threshold Value	Sample Date: 09/18/2018					Sample Date: 12/05/2018						
							B-21	B-21 TCLP	B-21	B-23	B-23	GP-13	GP-14	GP-14	GP-15	GP-16	GP-16	GP-17
						Soil Type:	GW	GW	SW	GW/SW	GW	SW	ML	ML	CL	CL	CL	SW
						Saturated/Unsaturated:	U	U	U	U	U	U	U	U	U	U	U	U
						Sample Depth:	(2-3.5)	(2-3.5)	(14.5-16)	(.5-2)	(12-13.5)	(1-3)	(1-3)	(6-8)	(1-3)	(1-3)	(6-8)	(1-3)
Polynuclear Aromatic Hydrocarbons (PAHs)																		
1-Methylnaphthalene	mg/kg	72.7	17.6				0.323		9.27	0.0377 J	<0.0049	<0.0049	0.058	<0.0048	<0.0048	<0.0047	<0.0049	<0.0046
2-Methylnaphthalene	mg/kg	3,010	239.0				0.564		16.9	<0.0223	<0.0061	<0.0061	0.12	<0.0060	<0.0060	<0.0059	<0.0061	<0.0057
Acenaphthene	mg/kg	45,200	3,590				0.538		0.884	0.185	<0.0047	<0.0047	0.025	0.017	<0.0046	<0.0046	<0.0047	<0.0044
Acenaphthylene	mg/kg						0.0908 J		0.207 J	0.0340 J	<0.0040	<0.0040	0.0091 J	<0.0039	<0.0039	<0.0039	<0.0040	<0.0038
Anthracene	mg/kg	100,000	17,900	**196.9492**			1.40		0.384 J	0.322	<0.0069	<0.0070	0.067	0.037	<0.0068	<0.0067	<0.0069	<0.0065
Benzo(a)anthracene	mg/kg	20.8	1.14				2.09		<0.0939	0.729	0.0056 J	<0.0039	0.25	0.074	<0.0038	<0.0037	<0.0039	<0.0036
Benzo(a)pyrene	mg/kg	2.11	0.115	**0.47**			**[2.19]**		<0.0744	**[0.744]**	<0.0030	<0.0031	0.3	0.087	<0.0030	<0.0030	<0.0031	0.0042 J
Benzo(b)fluoranthene	mg/kg	21.1	1.15	**0.4793**			2.74		<0.0836	**[0.905]**	<0.0034	<0.0035	0.38	0.082	<0.0034	<0.0033	<0.0034	0.0045 J
Benzo(g,h,i)perylene	mg/kg						1.56		<0.0602	0.420	<0.0025	<0.0025	0.22	0.059	<0.0024	<0.0024	<0.0025	0.0045 J
Benzo(k)fluoranthene	mg/kg	211	11.5				1.23		<0.0743	0.425	<0.0030	<0.0031	0.27	0.073	<0.0030	<0.0030	<0.0030	0.0049 J
Chrysene	mg/kg	2,110	115	**0.1446**			**[2.41]**		<0.0999	**[0.827]**	<0.0041	<0.0041	**[0.30]**	0.080	<0.0040	<0.0040	<0.0041	0.0067 J
Dibenz(a,h)anthracene	mg/kg	2.11	0.115				0.306		<0.0662	0.111	<0.0027	<0.0027	0.062	0.016	<0.0027	<0.0026	<0.0027	<0.0025
Fluoranthene	mg/kg	30,100	2,390	**88.8778**			6.77		<0.154	1.63	0.0066 J	<0.0064	0.65	0.22	<0.0062	<0.0061	<0.0063	0.0071 J
Fluorene	mg/kg	30,100	2,390	**14.8299**			0.756		0.996	0.0262 J	<0.0050	<0.0051	0.016	0.013 J	<0.0049	<0.0049	<0.0050	<0.0047
Indeno(1,2,3-cd)pyrene	mg/kg	21.1	1.15				1.19		<0.0651	0.369	<0.0027	<0.0027	0.19	0.048	<0.0026	<0.0026	<0.0027	<0.0025
Naphthalene	mg/kg	26	5.2	**0.66**			**[1.09]**		**[3.51]**	<0.0376	<0.0102	<0.010	0.060	<0.010	<0.010	<0.0099	<0.010	<0.0096
Phenanthrene	mg/kg						4.11		3.26	0.576	<0.0141	<0.014	0.24	0.089	<0.014	<0.014	<0.014	<0.013
Pyrene	mg/kg	22,600	1,790	**54.5455**			5.08		0.175 J	1.22	0.0058 J	<0.0055	0.41	0.17	<0.0054	<0.0053	<0.0055	0.0064 J
RCRA Metals																		
Arsenic	mg/kg	3.0	0.677	**0.5484**	5	**8**	**[9.1]**		**[6.4]** *	**[5.2]** *	**[4.8]** *	**[4.0]** *	**[4.7]** *	**[6.1]** *	**[4.2]** *	**[4.4]** *	**[4.4]** *	**[3.1]** *
Barium	mg/kg	100,000	15,300	**164.8**	100	**364**	**[660]**		61.9	66.8	75.2	38.3	41.3	64.6	60.6	44.0	63.2	18.9
Cadmium	mg/kg	985	71.1	**0.752**	1	**1**	**[104]**	0.28	0.39 J	0.36 J	0.25 J	<0.16	<0.15	<0.15	<0.15	<0.15	<0.16	<0.15
Chromium	mg/kg			**360,000**	5	**44**	214		16.6	18.2	20.7	13.5	12.7	14.7	20.4	13.7	17.7	8.9
Lead	mg/kg	800	400	**27**	5	**52**	**[8,250]**	4.1	17.9	**[50.3]**	11.7	6.4	13.8	7.3	9.0	6.6	8.0	4.3
Mercury	mg/kg	3.13	3.13	**0.208**	0.2		**[0.22]**		<0.036	0.069 J	<0.037	0.014 J	0.016 J	0.020 J	0.017 J	0.013 J	0.016 J	<0.011
Selenium	mg/kg	5,840	391	**0.52**	1		**[3.9]**		<1.5	<1.4	<1.4	<1.6	<1.5	<1.5	<1.5	<1.5	<1.6	<1.5
Silver	mg/kg	391	5,110	**0.85**	5		**[1.1]**		<0.40	<0.37	<0.38	<0.41	<0.38	<0.39	<0.38	<0.39	<0.41	<0.39
Volatile Organic Compounds (VOCs)																		
1,2,4-Trichlorobenzene	mg/kg	113	24	**0.41**			0.102 J		<0.0476	<0.0476	<0.0476	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trimethylbenzene	mg/kg	219	219	**1.382**			0.0773		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	mg/kg	376	376	**1.2**			**[1.29]**		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichloroethane	mg/kg	3	0.652	**0.0028**			<0.0250		<0.0250	<0.0250	**[0.115]**	<0.025	<0.025	<0.025	<0.025	<0.025	0.0022	<0.025
1,3,5-Trimethylbenzene	mg/kg	182	182	**1.382**			0.0444 J		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	mg/kg	297	297	**1.2**			0.0884		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	mg/kg	16.4	3.7	**0.14**			**[1.17]**		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	mg/kg	761	370	**0.14**			**[1.43]**		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	mg/kg	35.4	8.02	**1.57**			0.130		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	mg/kg	260	260	**3.96**			0.254		<0.0500	<0.0500	<0.0500	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylene Chloride*	mg/kg	1,070	61	**0.0026**			**[0.0601]**		**[0.0498]**	**[0.0641]**	**[0.0597]**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Naphthalene	mg/kg	24.1	5.52	**0.6582**			**[1.14]**		0.106 J	<0.0400	<0.0400	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
n-Butylbenzene	mg/kg	108	108				0.0406 J		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	mg/kg	260	260	**3.96**			0.134		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	mg/kg	818	818	**1.1072**			0.136		<0.0250	<0.0250	<0.0250	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Percent Moisture	%						13.3		15.5	10.4	17.4	18.1	11.4	16.4	16.4	15.1	17.8	12.4
PID	ppmv						9.4		51.4	1	0.6	0.5	0.5	0.3	0.5	0.4	0.4	0.4

Notes:

Only analytes with a detection in at least one sample are shown
(2-3) = sample depth in feet below ground surface
RCL = Residual Contaminant Level
PID - Photoionization Detector
ppmv = parts per million by volume in air
NR = Not Reported/Below Detection Limits
NA = Not Analyzed

Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are **bold red**
Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are **bold blue**
Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[Brackets]**
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
mg/kg = milligrams per kilogram
* = Above industrial standard but below background threshold value

Soil Classification:
GW = Well graded gravel, fine to coarse
SW = Well graded sand, fine to coarse
SM = Silty sand
ML = Silt
CL = Clay of low plasticity

ATTACHMENT C

SOIL BORING LOGS

BORING NO. & LOCATION: 1	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 55.3 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 5" Asphalt Concrete		55								
± 12" Aggregate Base Course			1-SS	4						
Brown and Gray Mottled lean Clay, trace to little fine Sand-Moist (contains Silty fine Sand lenses)			2-SS	7	2.1	1.5		21		
	5	50	3-SS	8	1.2	0.5		22		
Gray lean Clay, trace fine Sand-Moist			4-SS	6		1.0		20		
Gray Sandy Silt-Moist	10	45	5-SS	9		1.2		20		

+/- 2ft

Boring Terminated at about 11 feet (EL. 44.3')

	Water Observation Data
▽	Water Encountered During Drilling: 5 ft.
▼	Water Level At End of Drilling:
	Cave Depth At End of Drilling: 9 ft.
▼	Water Level After Drilling:
	Cave Depth After Drilling:

Remarks:

+/- ft

Suitable soil-bearing depth confirmed by Giles on 11/1/18

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 2	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 54.3 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 5" Asphalt Concrete		+/- 1ft								
± 3" Aggregate Base Course			1-SS	12						
Gray-Brown fine Sand, trace Silt-Moist			2-SS	12						
Gray fine Sand, trace Silt-Moist to Wet	5	50	3-SS	14						
			4-SS	25						
	10	45	5-SS	8						
Boring Terminated at about 11 feet (EL. 43.3')										

	Water Observation Data	Remarks:
▽	Water Encountered During Drilling: 7.5 ft.	
▼	Water Level At End of Drilling:	+/- ft
	Cave Depth At End of Drilling: 8 ft.	Suitable soil-bearing depth confirmed by Giles on 11/1/18
▼	Water Level After Drilling:	
	Cave Depth After Drilling:	

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 4	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 53.1 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 5" Asphalt Concrete										
± 6" Aggregate Base Course			1-SS	6						
Fill: Brown Silty Clay, some Sand and Gravel-Moist	+/- 2ft		2-SS	7	2.6	1.2		22		
Gray lean Clay-Moist (contains Silt lenses)		50								
	5		3-SS	7				18		(a)
			4-SS	6	1.7	1.2		20		
	▽	45								
	10		5-SS	6				19		(b)
Boring Terminated at about 11 feet (EL. 42.1')										

	Water Observation Data
▽	Water Encountered During Drilling: 8 ft.
▽	Water Level At End of Drilling:
	Cave Depth At End of Drilling: 8.5 ft.
▼	Water Level After Drilling:
	Cave Depth After Drilling:

Remarks:

(a) No split-spoon recovery-Auger sample taken
(b) Poor sample recovery

+/- ft

Suitable soil-bearing depth confirmed by Giles on 11/1/18

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 12	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 51.5 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 4 1/2" Asphalt Concrete										
± 7" Aggregate Base Course										
Fill: Gray-Brown fine Sand and Gravel-Damp		50	1-SS	12						
			2-SS	14						
+/- 4ft										
Gray-Brown lean Clay, trace Sand-Very Mo (contains Silty fine Sand lenses)	5		3-SS	9				21		
		45								
Gray lean Clay-Very Moist to Wet (contains Silty fine Sand lenses)			4-SS	7				21		
	10		5-SS	7				20		
		40								
	15		6-SS	8				19		
		35								
	20		7-SS	11		1.3		20		
		30								
	25		8-SS	11						
Boring Terminated at about 26 feet (EL. 25.5')										

	Water Observation Data	Remarks:
▽	Water Encountered During Drilling: 5 ft.	
▼	Water Level At End of Drilling:	
	Cave Depth At End of Drilling: 7 ft.	+/- ft — Suitable Soil-Bearing Depth provided by Giles in original Geotech Report
▼	Water Level After Drilling:	
	Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

BORING NO. & LOCATION: 16	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 51.1 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 4" Asphalt Concrete										
± 7" Aggregate Base Course										
Fill: Brown Silty Clay, little to some Sand and Gravel-Moist (contains Asphalt Rubble and Cinders)		50	1-SS	7						
			2-SS	9		1.0		18		
Gray Sandy Silt-Moist										
Gray lean Clay-Very Moist to Wet (contains Silty fine Sand lenses)	5	45	3-SS	8				18		
			4-SS	8	2.6	1.5		20		
	10	40	5-SS	9	2.3	1.5		21		
	15	35	6-SS	13	1.8	1.2		19		
	20	30	7-SS	11		1.5		19		
Gray Silty fine Sand-Wet	25		8-SS	10				18		
Boring Terminated at about 26 feet (EL. 25.1')										

+/- 4ft

Water Observation Data	Remarks:
Water Encountered During Drilling: 3 ft.	+/- ft — Suitable Soil-Bearing Depth provided by Giles in original Geotech Report
Water Level At End of Drilling:	
Cave Depth At End of Drilling: 12 ft.	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

BORING NO. & LOCATION: 17	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 51.9 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 4" Asphalt Concrete										
± 6" Aggregate Base Course			1-SS	10		1.7		15		
Gray-Brown Sandy Silt-Moist		50	2-SS	7		1.7		16		(a)
+/- 3ft										
Gray Sandy Silt-Wet	5		3-SS	8				19		
		45								
Gray lean Clay-Moist to Wet (contains Silty fine Sand lenses)			4-SS	7		2.0		21		
	10		5-SS	6	1.9	1.5		19		
		40								
	15		6-SS	11		1.0		20		
		35								
	20		7-SS	11		1.5		18		
		30								
	25		8-SS	11		1.0		17		
Boring Terminated at about 26 feet (EL. 25.9')										

	Water Observation Data
▽	Water Encountered During Drilling: 6 ft.
▼	Water Level At End of Drilling:
	Cave Depth At End of Drilling: 13 ft.
▼	Water Level After Drilling:
	Cave Depth After Drilling:

Remarks:

(a) Poor sample recovery

+/- ft

Suitable Soil-Bearing Depth provided by Giles in original Geotech Report

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 18	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 45.2 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 3" Asphalt Concrete		45								
± 4" Aggregate Base Course			1-SS	32						
Fill: Light Brown Silty fine to medium Sand and Gravel-Damp			2-SS	34						
	5	40	3-SS	52						
			4-SS	50/5"						
Gray Silty fine Sand and Gravel-Wet (contains Concrete fragments)	10	35	5-SS	39						
Gray lean Clay-Very Moist			6-SS	4		0.6		19		
	15	30	7-SS	7						
Boring Terminated at about 16 feet (EL. 29.2')										

+/- 11ft

	Water Observation Data
▽	Water Encountered During Drilling: 9 ft.
▼	Water Level At End of Drilling: 5 ft.
	Cave Depth At End of Drilling: 7 ft.
▼	Water Level After Drilling:
	Cave Depth After Drilling:

Remarks:

+/- ft

Suitable soil-bearing depth confirmed by Giles on 11/1/18

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 19	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 51.8 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 6" Asphalt Concrete										
± 6" Aggregate Base Course			1-SS	6				17		(a)
Brown lean Clay, trace Sand-Moist			2-SS	10		2.3		17		
Gray lean Clay, trace Silt-Moist (contains Silty fine Sand lenses)	5		3-SS	9	1.1	2.0		19		
Gray-Brown Silty fine Sand-Moist		45	4-SS	15				17		
Gray Silty fine Sand-Moist	10		5-SS	13				22		
Gray Sandy Silt-Wet		40	6-SS	13				18		
	15		7-SS	12				16		
Boring Terminated at about 16 feet (EL. 35.8')										

+/- 2ft

Water Observation Data	Remarks:
▽ Water Encountered During Drilling: 12 ft.	(a) No split-spoon recovery-Auger sample taken
▼ Water Level At End of Drilling:	+/- ft
Cave Depth At End of Drilling: 12 ft.	Suitable soil-bearing depth confirmed by Giles on 11/1/18
▼ Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

BORING NO. & LOCATION: 20	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 53.1 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 5" Asphalt Concrete										
± 10" Aggregate Base Course			1-SS	17						
Fill: Gray-Brown Silty fine Sand and Gravel-Moist		50	2-SS	17						
	5		3-SS	17						
Gray-Brown Sandy Silt-Very Moist to Wet		45	4-SS	13				16		
Gray Sandy Silt-Wet	10		5-SS	13				16		
		40	6-SS	10				16		
	15		7-SS	9				18		
Boring Terminated at about 16 feet (EL. 37.1')										

+/- 6ft

Water Observation Data	Remarks:
▽ Water Encountered During Drilling: 7 ft.	+/- ft
▽ Water Level At End of Drilling:	Suitable soil-bearing depth confirmed by Giles on 11/1/18
Cave Depth At End of Drilling: 11 ft.	
▼ Water Level After Drilling:	
Cave Depth After Drilling:	

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 21	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 52.9 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 3" Asphalt Concrete										
± 8" Aggregate Base Course			1-SS	12						
Fill: Black Silty fine to coarse Sand and Gravel-Damp (contains Cinder and foundry Material)		50	2-SS	5				14		(a)
+/- 4ft										
Fill: Black Silty Clay, little Sand and Gravel-Moist (contains Organic Matter and Glass fragments)	5		3-SS	5		0.5		24		
Light Gray lean Clay-Very Moist to Wet										
Gray lean Clay-Moist		45	4-SS	8		2.5		19		
	10		5-SS	8				21		
		40								
Gray Sandy Silt-Wet **(contains Petroleum odor in sample 6-SS)**	15		6-SS	10	1.6	1.0		17		
Boring Terminated at about 16 feet (EL. 36.9')										

Water Observation Data	Remarks:
Water Encountered During Drilling:	(a) Poor sample recovery
Water Level At End of Drilling:	
Cave Depth At End of Drilling: 8 ft.	+/- ft
Water Level After Drilling:	**Suitable soil-bearing depth confirmed by Giles on 11/1/18**
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

BORING NO. & LOCATION: 22	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 51.7 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/17/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 3" Asphalt Concrete										
± 8" Aggregate Base Course										
Fill: Brown Silty Sandy Gravel-Damp			1-SS	20						
Gray Sandy Silt-Very Moist			2-SS	13				16		
	5	45	3-SS	6		0.9		19		
Gray lean Clay, little fine Sand-Moist			4-SS	4		1.7		18		
	10	40	5-SS	9		2.0		18		
	15		6-SS	11		2.0		20		

+/- 2ft

Boring Terminated at about 16 feet (EL. 35.7')

Water Observation Data	Remarks:
Water Encountered During Drilling: 5 ft.	+/- ft
Water Level At End of Drilling:	Suitable soil-bearing depth confirmed by Giles on 11/1/18
Cave Depth At End of Drilling: 11 ft.	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

BORING NO. & LOCATION: 23	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 50 feet	PROPOSED SCHOOL BUILDING	
COMPLETION DATE: 09/18/18	1818 W. NATIONAL AVENUE MILWAUKEE, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-1808025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
± 4" Asphalt Concrete										
± 4" Aggregate Base Course			1-SS	10		3.2		17		
Fill: Dark Gray Silty Clay, little Sand and Gravel-Moist			2-SS	50/3"						(a)
Concrete Rubble										
Fill: Gray Silty, Sandy Gravel-Damp to Wet	5	45	3-SS	13						(a)
			4-SS	7						
	10	40	5-SS	6						
Gray lean Clay-Moist to Very Moist (Contain Silty fine Sand lenses)			6-SS	7		1.5		21		
	15	35	7-SS	7		2.0		20		
Boring Terminated at about 16 feet (EL. 34')										

+/- 12ft

Water Observation Data	Remarks:
▽ Water Encountered During Drilling: 9 ft.	(a) Poor sample recovery
▽ Water Level At End of Drilling:	
Cave Depth At End of Drilling: 4 ft.	+/- ft — Suitable Soil-Bearing Depth provided by Giles in original Geotech Report
▼ Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

GILES LOG REPORT 1G1808025.GPJ GILES.GDT 10/10/18

State of Wisconsin
Department of Natural Resources

Soil Boring Log Information

Form 4400-122 Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

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Facility/Project Name	License/Permit/Monitoring Number	Boring Number
		GP-13

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name Matt Last Name Blakke Firm	Dec 5	Dec 5	Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat	Local Grid Location
State Plane _____ N. _____ E S☐ /C☐ /N☐		☐ N ☐ E
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____	Long _____	_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village

Sample									Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			1	Asphalt + Base 0-1										PID
			2	Fill sand										1-3=0.5
				Slightly Silty Sand		Moist @ 3'								3-5=0.5
			5	end of Boring										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm **Kapur & Associates, Inc.**
7711 N. Port Washington Road, Milwaukee, WI 53217
Phone: (414) 351-6668

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information,

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Department of Natural Resources

Soil Boring Log Information

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Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
		GP-14

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name Matt Last Name Blakke Firm	12/05	12/05	GeoProbe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐ /N☐ Lat _____
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____ Long _____

Local Grid Location
_____ Feet ☐ N _____ Feet ☐ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				0-1 Asphalt & base slightly silty sand gray										PID 1-3=0.5 3-5=0.3
				2' organics 3" gray slighty silty sand										6-8 0.3
				5' 3" organics mix w/sand			Moist @ 6'							8-10 0.4
				↓ gray s-silty sand										
				10' EOB										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

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Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
		GP-15

Boring Drilled By: Name of crew chief (first, last) and Firm First Name Last Name Firm	Date Drilling Started	Date Drilling Completed	Drilling Method

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E S☐/C☐/N☐ _____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____	Lat _____ Long _____	Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village

Sample: Number and Type	Sample: Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	RQD/ Comments
			0-1	Asphalt + Base										PID
			1-3	reddish brown sandy clay-clayey sand				moist @ 3'						1-3 = 0.5
			3-5	gray clayey sand										3-5 = 0.4
			5'	EOB										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

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7711 N. Port Washington Road, Milwaukee, WI 53217
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State of Wisconsin
Department of Natural Resources

Soil Boring Log Information

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Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

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Facility/Project Name	License/Permit/Monitoring Number	Boring Number
		GP-16

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name Last Name Firm			

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐/N☐
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____
Lat _____
Long _____

Local Grid Location
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				0-1 Asphalt + base reddish brown clayey sand w/iron mottles				Moist @ 2'						PID 1-3 = 0.4 3-5 = 0.4 6-8 = 0.4 8-10 = 0.4
				3.5' gray clayey sand w/iron mottles										
				6' ↓ gray clayey FS										
				10' EOB										

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Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
		GP-17

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name Last Name Firm	12/5/18	12/5/18	Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			_____ Feet	_____ Feet MSL	_____ inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S☐/C☐/N☐ | Lat _____
_____ 1/4 of _____ 1/4 of Section _____ ,T _____ N,R _____ | Long _____

Local Grid Location
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			0-1	Asphalt + base										PID
			1-2.5	reddish brown clayey sand				Moist @ 2.5						0-3 = 0.4
			2.5-5	grayish clayey sand										3-5 = 0.3
				EOB										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

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