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Phase I-Environmental Site Assessment

200 Baribeau Street
Ottawa, Ontario

Prepared For

Boulet Construction
c/o Urban Logic Research and Advisory

July 2, 2019

Report: PE4597-1

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EXECUTIVE SUMMARY

Assessment

A Phase I-Environmental Site Assessment (ESA) was carried out for 200 Baribeau Street, Ottawa Ontario. The Phase I Property is comprised of an institutional property at the southwest corner of the Baribeau Street and Landry Street intersection. The purpose of the Phase I-ESA was to research the past and current use of the site and study area and to identify environmental concerns with the potential to have impacted the subject property.

Based on the available historical information sources, the Phase I Property was vacant and used for fill placement and landfilling by the Dominion Bridge Company until the initial development with a school in the 1950s. The subject has remained a school since that time. The fill placement and landfilling operations at the subject site are considered to pose an APEC on the Phase I ESA property.

Following the historical review, a site visit was conducted. The Phase I Property is still used as a school. During the site visit an AST, was identified in the basement of the building and a private automotive service garage with an exterior AST was identified to the south of the Phase I ESA property. These two activities identified during the Phase I ESA site visit are considered to represent APECs on the Phase I ESA property.

Based on the findings of the site visit and the available historical information sources, three PCAs resulting in APECs were identified on the subject site. Several other PCAs were identified during the historical research and the site visit that are not considered to pose an environmental concern to the site due to their separation distance and down/cross gradient locations related to the subject site.

Conclusion

Based on the findings of the Phase I-ESA, **it is our opinion that a Phase II-ESA is required for the Phase I Property.**

1.0 INTRODUCTION

At the request of Boulet Construction c/o Urban logic Research Advisory (ULRA), Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) for the institutional property at 200 Baribeau Street in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I-ESA by Mr. Kevin McMahon of ULRA. Mr. McMahon can be contacted by telephone at 613-900-0830.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I-ESA report has been prepared in general accordance with Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I-ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Address:	200 Baribeau Street, Ottawa, Ontario
Legal Description:	Ahlul-Bayt Centre, Plan M44, East Part of Block A, City of Ottawa.
Property Identification Number:	04236-0380
Location:	The Phase I Property is located on the southwest corner of the intersection of Landry Street and Baribeau Street, in the City of Ottawa. The subject site is shown on Figure 1 - Key Plan following the body of this report.
Latitude and Longitude:	45° 26' 17" N, 75° 40' 4" W

Site Description:

Configuration:	Rectangular
Site Area:	1.23 ha (approximate)
Zoning:	I1A – Minor Institutional Zone
Current Use:	The Phase I Property is occupied by the Ahlul-Bayt Islamic school with associated landscaped and parking areas.
Services:	The Phase I Property is located in a municipally serviced area.

3.0 SCOPE OF INVESTIGATION

The scope of work for this Phase I-Environmental Site Assessment was as follows:

- ❒ Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- ❒ Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- ❒ Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- ❒ Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- ❒ Provide a preliminary environmental site evaluation based on our findings;
- ❒ Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250 m was determined to be appropriate as a Phase I Study Area for this assignment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distance from the site.

First Developed Use Determination

Based on a review of historical data, city directories and aerial photographs, the subject property was first used for fill placement as early as the 1920s.

Fire Insurance Plans

The 1956 fire insurance plans (FIPs) were reviewed for the Phase I Study Area and surrounding properties within the Phase I sturdy area.

According to the FIPs, the subject site was developed with the institutional building present today. The adjacent and neighbouring properties within the Phase I Study Area were used for a combination of institutional and residential purposes with the exception of the adjacent property to the west. The adjacent property to the west was occupied by the Dominion Bridge Co. Ltd., a steel fabrication yard connected to the Canadian Pacific Railway. Based on the FIPs the following PCAs include:

- A railway line (Canadian Pacific Railway Main Line) located southwest of the subject property, approximately 130 meters from the subject property.
- A large steel fabrication yard (Dominion Bridge Co. Ltd.) with an associated railway spur line and small buildings located on the property now addressed as 40 Landry Avenue (approximately 80m to the west of the subject site).

City of Ottawa Street Directories

City directories were reviewed in approximate 10 year intervals from 1912 to 2011. The Phase I Property, 200 Baribeau Street, was listed in 1960 as a separate school until 2011 when the property was listed as the Ahlul-Bayt Centre. Adjacent and neighbouring properties within the Phase I Study Area

were first listed in the 1912's as residential, institutional and industrial (along Landry Avenue and Kipp Street). The city directory review did not identify any PCAs on the Phase I Property.

Several PCAs were identified on the adjacent and neighbouring properties within the Phase I Study Area. Potentially contaminating activities identified in the city directories are presented in Table 1 and depicted on Drawing PE4597-2 – Surrounding Land Use Plan.

Table 1: Potentially Contaminating Activities
City Directories Review Summary

Address	Listing	Years Listed	Potentially Contaminating Activity	Represents an Area of Potential Environmental Concern
Landry Avenue				
40	Dominion Bridge Co. Ltd.	1912-1969	- Steel fabrictaion - Rail yards, tracks and spurs	No
Kipp Street				
196	Clairson Lumber	1940-1953	-Wood storage of treated and preserved wood products	No
Carillon Street				
168	Eastview Dept. of Works Garage	1929-1969	-Garage maintenance and repairs	No

The PCAs listed in Table 1 are not considered to represent a concern to the Phase I Property, based on their separation distances and orientations down or cross-gradient with respect to the subject land.

Chain of Title

A chain of title was not requested at this time as sufficient information regarding the history of the property from its initial development in the 1950s was collected from other sources.

Previous Engineering Reports

The following reports were reviewed as part of the Phase I ESA:

- "Review of Historical Land Use in the Landry St./Baribeau St. Area City of Vanier", prepared by Raven Beck Environmental Ltd. in Association with Heritage Research Associates Inc., February 14, 1992.

A review of the historical land use of the area of Landry and Baribeau Streets was completed to provide explanations regarding the known shallow soil impacts in the area. According to the report, the Phase I ESA property was part of the Dominion Bridge Company Limited until 1955 when the company severed and transferred the easterly portion of the site to the Eastview Separate School Board. Based on aerial photos the report identifies landfilling (receiving municipal refuse and Dominion Bridge Company wastes including ash and metal wastes) starting in the 1920s and ending during the mid to late 1940s.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on June 26, 2019. The Phase I Property was not listed in the NPRI database. Properties within the Phase I Study Area were not listed in the NPRI.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites were identified on the subject property or within a 250 m radius.

Ontario Ministry of Environment, Conservation and Parks (MECP) Instruments

A request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. At the time of issuing this report, a response from the MECP had not been received.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. At the time of issuing this report, a response from the MECP had not been received.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. At the time of issuing this report, a response from the MECP had not been received.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions for the subject property that have been submitted to the MECP. At the time of issuing this report, a response from the MECP had not been received.

MECP Coal Gasification Plant Inventory

The MECP document entitled “Municipal Coal Gasification Plan Site Inventory, 1991” was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified on the Phase I Property or within the Phase I Study Area.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry (ESR) was conducted on June 26, 2019 as part of this assessment for the site, neighbouring properties and the general area of the site.

Two (2) Record of Site Conditions (RSC) were filed for properties within the Phase I study area. The property addressed 100 Landry Avenue, located approximately 200 meters west of the subject property, has an RSC (#44758) completed in May 2008 by Golder Associates Ltd. The remediation of the site included the removal of approximately 55,000 m^3 of impacted soil. The same property has a second RSC (#111133) completed in May 2008 by Golder Associates Ltd. The remediation of the site included the removal of approximately 1,400 m^3 of impacted soil.

The remediation programs on the two RSC properties is expected to be related to the former Dominion Bridge Company property and the associated landfill. This landfill is expected to extend onto the Phase I ESA property.

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. No former landfills were identified on the Phase I Property or within the Phase I Study Area.

Areas of Natural Heritage and Significance Interest (ANSIs)

A search for areas of natural significance and features within the Phase I Study area was conducted on the Ontario Ministry of Natural Resources and Forestry (MNRF) web site on June 26, 2019. The search did not identify any provincially significant life sciences or earth sciences ANSIs within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on April 15, 2019, to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. No records were found in the TSSA database for the Phase I Property. A copy of the TSSA correspondence is provided in Appendix 2.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I-Identification of Sites, City of Ottawa”, was reviewed. The subject site is within the footprint of one of the former landfills in the Vanier area known to have heavy metals in soils that exceed site condition standards set by the MECP. The location of the landfill identified as Ur-50, is not precisely defined but operated between 1932 and 1949, and accepted garbage, ashes and trade waste. The subject site is also adjacent to the footprint of the former landfill Ur-49 and operated in conjunction with Ur-50. These landfills are considered to be associated with the previously identified former Dominion Bridge Company landfill.

Based on the close proximity, the former landfills pose an environmental concern to the subject property.

City of Ottawa Historical Land Use Inventory (HLUI)

A requisition form was not submitted to the City of Ottawa for the request of information from the City’s Historical Land Use Inventory (HLUI 2005) database for the subject property. A previous report completed by Raven Beck

Environmental Ltd. dated 1992, thoroughly summarized the historical land use of the subject property and the surrounding areas.

Based on the review of the 1992 Raven Beck report, the former steel fabrication yard was attributed to elevated metal concentrations in the soil and the landfilling that occurred on the subject property and neighbouring areas. The extent of the landfilling is presumed to encompass the subject property.

Based on the information contained in the reviewed report and the historical research conducted for the Phase I Property, these activities are considered to represent an onsite PCA which is considered to be an APEC on the subject site.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate 10 year intervals. The review period dates back to the first available air photos for the site. Based on the review, the following observations have been made:

1928 The subject site appears to be low-lying undeveloped land, with possible fill placement occurring along the eastern limits of the property. The adjacent lands to the south and east are developed for residential use. The Dominion Bridge Company yard is visible to the west of the subject site along with the railway line.

1937 The subject site appears have significant fill placement occurring with the low lying areas filled in. The surrounding properties remain unchanged from the previous photograph with the exception of the former steel fabrication yard to the west. The activities appear to be intensifying on the Dominion Bridge Company property.

1944 No significant changes have been made to the subject site or surrounding properties.

1955 The subject site is under development with a portion of the current building. No significant changes have been made to the subject site or surrounding properties.

1968 The subject site has been developed with the institutional structure as it appears today. Residential development of the neighbouring properties continues.

1978 No significant changes have been made to the subject site. The Dominion Bridge Company property to the west of the subject site appears to be vacant.

1985 No significant changes have been made to the subject site or surrounding properties.

1993 No significant changes have been made to the subject site or surrounding properties.

2017 (City of Ottawa, geoOttawa) The former Dominion Bridge Company property is now developed with several residential buildings and a park. The subject site and surrounding properties are in their current state.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

A topographic map was obtained and reviewed form Natural Resources Canada – The Atlas of Canada website. The topographic maps indicate that the elevation of the Phase I Property is approximately 57m above sea level. The regional topography in the general area of the Phase I Property slopes downward to the southwest, towards the Rideau River. An illustration of the referenced topographic map is presented in Figure 2 – Topographic Map appended to this report.

Physiographic Maps

The Ontario Geological Survey publication 'The Physiography of Southern Ontario, Third Edition' was reviewed as a part of this assessment. According to the publication and attached mapping, the site is situated within the Ottawa Valley Clay Plains physiographic region, described as "clay plains interrupted by ridges of rock or sand". Mapping shows the subject site as situated in an area of limestone and till plains.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, the bedrock in the area of the subject site consists of shale of the Billings Formation. Overburden soils are shown as glacial till, with a drift thickness on the order of 2 to 3m.

Water Well Records

The MECP online interactive well record mapping system was accessed on August 23, 2018. No well records were identified on the Phase I Property.

One (1) non-potable well record was identified for the former steel fabrication yard within the study area. According to the well record, the well was installed for a cooling system in 1951. Based on the age of the well and the redevelopment of the Dominion Steel property the well is no longer considered to be present. Additionally, one (1) monitoring well record was identified within the Phase I Study Area northeast of the Phase I Property, associated with a geotechnical investigation. No concerns were identified in the well records.

Water Bodies and Areas of Natural Significance

No water bodies or areas of natural significance (ANSIs) are present on the Phase I Property or within the Phase I ESA study area.

5.0 INTERVIEWS

Paterson had submitted an email inquiry to Mr. Ali Hussein, the operator of the property, regarding any information pertaining to existing fuel tank, environmental reports, or any records of leaks or spills. Mr. Hussein confirmed the property has been owned by the Ahlul-Bayt Islamic School since 2002. Mr. Hussein was unaware of any spill or leaks associated with the above ground storage tank in the basement. The above ground storage tank has been present since the school took ownership in 2002. No major renovations to the building structure, besides the window replacement, have been conducted. The original structure was reportedly constructed in the early 1950's and the addition and gymnasium was constructed in the early 1960's.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visit was conducted on April 12, 2019. Personnel from the Environmental Department of Paterson Group conducted the site visit. In addition to the site, the uses of neighbouring properties within the Phase I Study Area were also assessed at the time of the site visit, from publicly accessible areas. The site was partially snow covered at the time of assessment. A follow up assessment was completed along with the Phase II ESA field programs to inspect the ground surfaces.

6.2 Specific Observations at Phase I Property

Buildings and Structures

A single storey school building with one basement level is present on the subject site. The building is finished on the exterior with brick and concrete block and was constructed in the mid-1950s. A small outbuilding used for storage is also present on the northwest corner of the property. No access was granted to the outbuilding.

Underground Utilities

The Phase I Property is situated in a municipally serviced area. Underground utilities on the Phase I Property include storm and sanitary water drainage, potable water electrical and natural gas.

Site Features

On the exterior of the school building there are landscaped areas facing Baribeau Street, and parking lots to the north, along Landry Street. The school yard is located in the south west corner and consists of both paved and grassed surfaces.

Drainage on site consists primarily of sheet drainage to catch basins located on the Phase I Property, with some possible surficial infiltration in landscaped and grassed areas. No standing water or evidence of surficial staining was observed on the exterior of the Phase I Property at the time of the site visit.

No signs of underground storage tanks (USTs) were observed on the Phase I Property at the time of the site visit. Evidence of an above ground storage tank (vent and fill pipes) was identified near the gas meter on the rear of the building.

No other underground structures were noted on the Phase I Property aside from utilities. No wells or private sewage systems were observed onsite, nor are any expected to be present, as the site is located in a municipally-serviced area. Waste is not currently generated on the Phase I Property, aside from storm water drainage.

No evidence of current or former railway or spur lines on the subject land as observed at the time of the site visit. There were no unidentified substances observed on the exterior of the Phase I Property. The above-noted site features are shown on Drawing PE4597-1 - Site Plan.

Phase I Study Area

An inspection of the neighbouring properties was conducted from publicly accessible roadways at the time of the site visit. Land use adjacent to the Phase I Property was as follows:

- North – Landry Street followed by residential development;
- South – Residential development and a private automotive service garage followed by Carillon Street;
- East – Baribeau Street followed by a residential development;
- West – Residential development.

The presence of a private automotive service garage to the south of the subject site is considered to pose a potential environmental concern to the subject site.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The Phase I Property was vacant, undeveloped land subject to landfilling as early as the 1920s by the neighbouring property until its redevelopment as a school during the 1950s.

Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs)

The following PCAs identified on the Phase I ESA property and within the Phase I ESA study area are considered to pose an area potential environmental concern (APEC) to the subject site;

- Existing Furnace Oil Tank, Item 28 – Gasoline and Associated Products Storage in Fixed Tanks – This APEC is related to the furnace oil AST located in the basement of the school building. The AST is no longer in use and the furnace has been converted to natural gas.
- Former Landfilling Operations, Item 30 – Importation of Fill Material of Unknown Quality – This APEC is related to the former landfills that operated in the area of the subject site between the 1920s and the 1950s. Based on air photos, fill placement has occurred throughout the subject site.
- Existing Automotive Service Garage, Item 52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems – This APEC is related to an observed private automotive service garage with an AST along the south property line of the subject site.

Based on the separation distances in combination with their cross-gradient orientations, any other PCAs identified within the Phase I ESA study area are not considered pose an APEC on the subject site.

The PCAs identified in the study area are illustrated on Drawing PE4597-2 – Surrounding Land Use Plan in the Figures section of this report, following the text.

Contaminants of Potential Concern (CPCs)

Based on the APECs, the following Contaminants of Potential Concern (CPCs) have been identified:

- Petroleum Hydrocarbons Fractions 1 through 4 (PHCs) – this suite of parameters encompasses gasoline (Fraction 1), diesel and fuel oil (Fraction 2), and heavy oils (Fractions 3 and 4). PHCs were selected as a CPC for the Phase I Property based on the presence of an above ground furnace oil tank and a private automotive service garage.
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) were selected as CPCs for the Phase I property based on the presence of a furnace oil tank and the private automotive service garage.
- Volatile Organic Compounds (VOCs) were selected as CPCs for the Phase I property based on the presence of the private automotive service garage to the south of the property.
- Metals (including CrVI and Hg) were selected as CPCs based on the former landfilling operations (fill material of unknown quality) surrounding the property.
- PAHs were selected as CPCs based on the former landfilling operations (fill material of unknown quality) surrounding the property.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, the bedrock in the area of the subject site consists of shale of the Billings Formation. Overburden soils are shown as glacial till, with a drift thickness on the order of 2 to 3 m.

The regional groundwater flow is expected to be towards the west, towards the Rideau River.

Buildings and Structures

A single storey school building with one basement level is present on the subject site. The building is finished on the exterior with brick and concrete block and was constructed in the mid-1950s. A small outbuilding used for storage is also present on the northwest corner of the property. No access was granted to the outbuilding.

Water Bodies

No water bodies are present on the Phase I Property. The closest water body is the Rideau River, located approximately 350m west of the subject site.

Areas of Natural Significance

No areas of natural significance were identified on the Phase I Property or within the Phase I Study Area.

Water Well Records

The MECP online interactive well record mapping system was accessed on June 15, 2019. No former well records were identified on the Phase I Property.

One (1) non-potable well record was identified for the former steel fabrication yard within the study area. According to the well record, the well was installed for a cooling system in 1951. Based on the age of the well and the redevelopment of the Dominion Steel property, the well is no longer considered to be present. Additionally, one (1) monitoring well record was identified within the Phase I Study Area northeast of the Phase I Property, associated with a geotechnical investigation. No concerns were identified in the well records.

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area consists of residential and commercial land use.

Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs)

The following PCAs identified on the Phase I ESA property and within the Phase I ESA study area are considered to pose an area potential environmental concern (APEC) to the subject site;

- Existing Furnace Oil Tank, Item 28 – Gasoline and Associated Products Storage in Fixed Tanks – This APEC is related to the furnace oil AST located in the basement of the school building. The AST is no longer in use and the furnace has been converted to natural gas.
- Former Landfilling Operations, Item 30 – Importation of Fill Material of Unknown Quality – This APEC is related to the former landfills that operated in the area of the subject site between the 1920s and the 1950s. Based on air photos, fill placement has occurred throughout the subject site.
- Existing Automotive Service Garage, Item 52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems – This APEC is related to an observed private automotive service garage with an AST along the south property line of the subject site.

Based on the separation distances in combination with their cross-gradient orientations any other PCAs identified within the Phase I ESA study area are not considered pose an APEC on the subject site.

Contaminants of Potential Concern (CPCs)

As per Section 7.1 of this report, identified CPCs on the subject site include BTEX, VOCs, PHCs, Metals (including Cr VI and Hg) and PAHs.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I-ESA is considered to be sufficient to conclude that there are APECs on the Phase I Property. The historical research was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSIONS

Assessment

A Phase I-Environmental Site Assessment (ESA) was carried out for 200 Baribeau Street, Ottawa Ontario. The Phase I Property is comprised of an institutional property at the southwest corner of the Baribeau Street and Landry Street intersection. The purpose of the Phase I-ESA was to research the past and current use of the site and study area and to identify environmental concerns with the potential to have impacted the subject property.

Based on the available historical information sources, the Phase I Property was vacant and used for fill placement and landfilling by the Dominion Bridge Company until the initial development with a school in the 1950s. The subject has remained a school since that time. The fill placement and landfilling operations at the subject site are considered to pose an APEC on the Phase I ESA property.

Following the historical review, a site visit was conducted. The Phase I Property is still used as a school. During the site visit an AST, was identified in the basement of the building and a private automotive service garage with an exterior AST was identified to the south of the Phase I ESA property. These two activities identified during the Phase I ESA site visit are considered to represent APECs on the Phase I ESA property.

Based on the findings of the site visit and the available historical information sources, three PCAs resulting in APECs were identified on the subject site. Several other PCAs were identified during the historical research and the site visit that are not considered to pose an environmental concern to the site due to their separation distance and down/cross gradient locations related to the subject site.

Conclusion

Based on the findings of the Phase I-ESA, **it is our opinion that a Phase II-ESA is required for the Phase I Property.**

9.0 STATEMENT OF LIMITATIONS

This Phase I-Environmental Site Assessment (ESA) report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I-ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject site and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Boulet Construction c/o Urban Logic Research and Advisory. Permission and notification from above noted parties and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Michael Beaudoin, P.Eng., QP$_{ESA}$

Mark D'Arcy, P.Eng., QP$_{ESA}$

Report Distribution:

- ❒ Urban Logic Research and Advisory
- ❒ Paterson Group

10.0 REFERENCES

Federal Records
Air photos at the Energy Mines and Resources Air Photo Library.
National Archives.
Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records
MECP Freedom of Information and Privacy Office.
MECP Municipal Coal Gasification Plant Site Inventory, 1991.
MECP document titled “Waste Disposal Site Inventory in Ontario”.
MECP Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MECP Water Well Inventory.

Municipal Records
City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites.”, prepared by Golder Associates, 2004.
Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.
The City of Ottawa eMap website.

Local Information Sources
Previous Engineering Reports.
Personal Interviews.

Public Information Sources
Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4597-1 – SITE PLAN

DRAWING PE4597-2 – SURROUNDING LAND USE PLAN

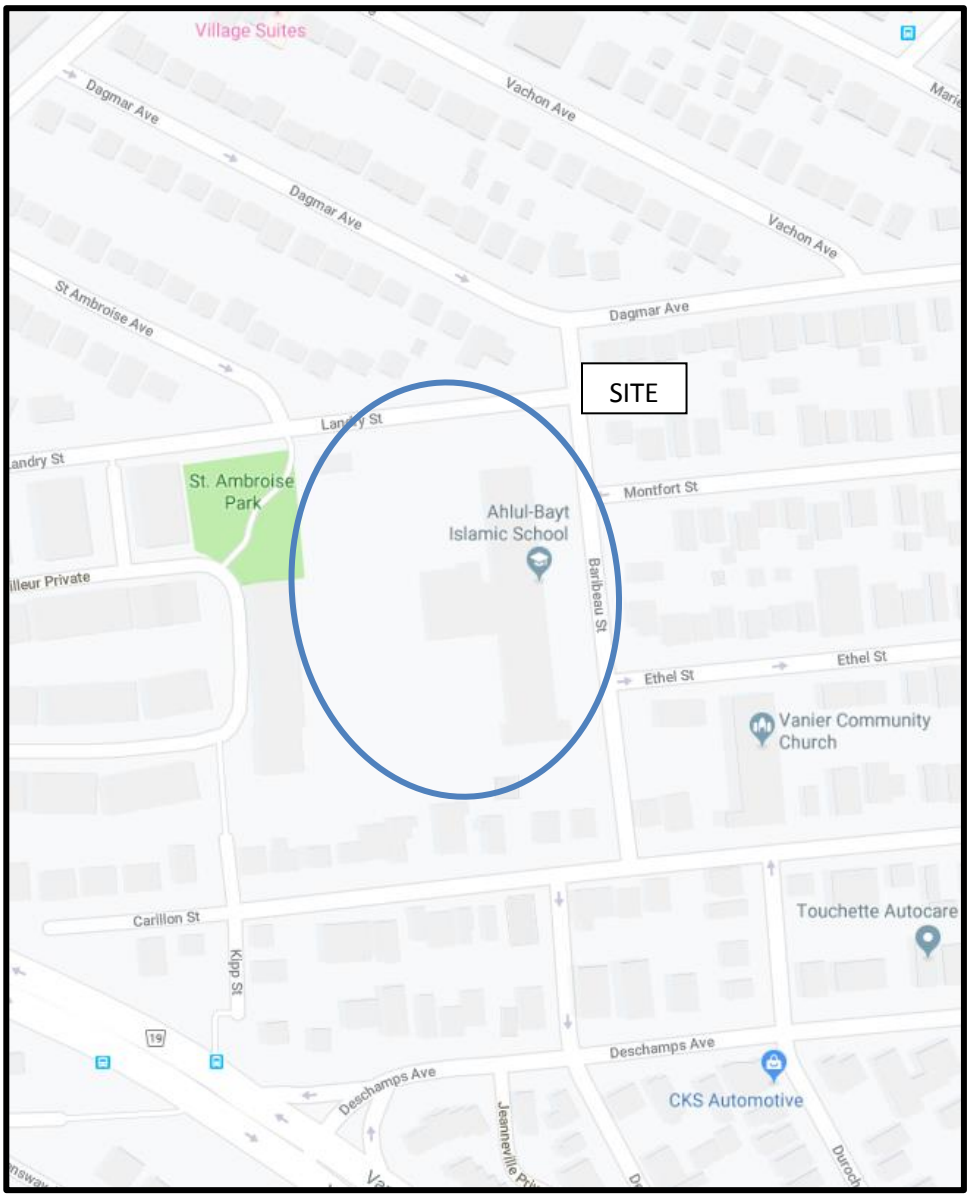


FIGURE 1

KEY PLAN

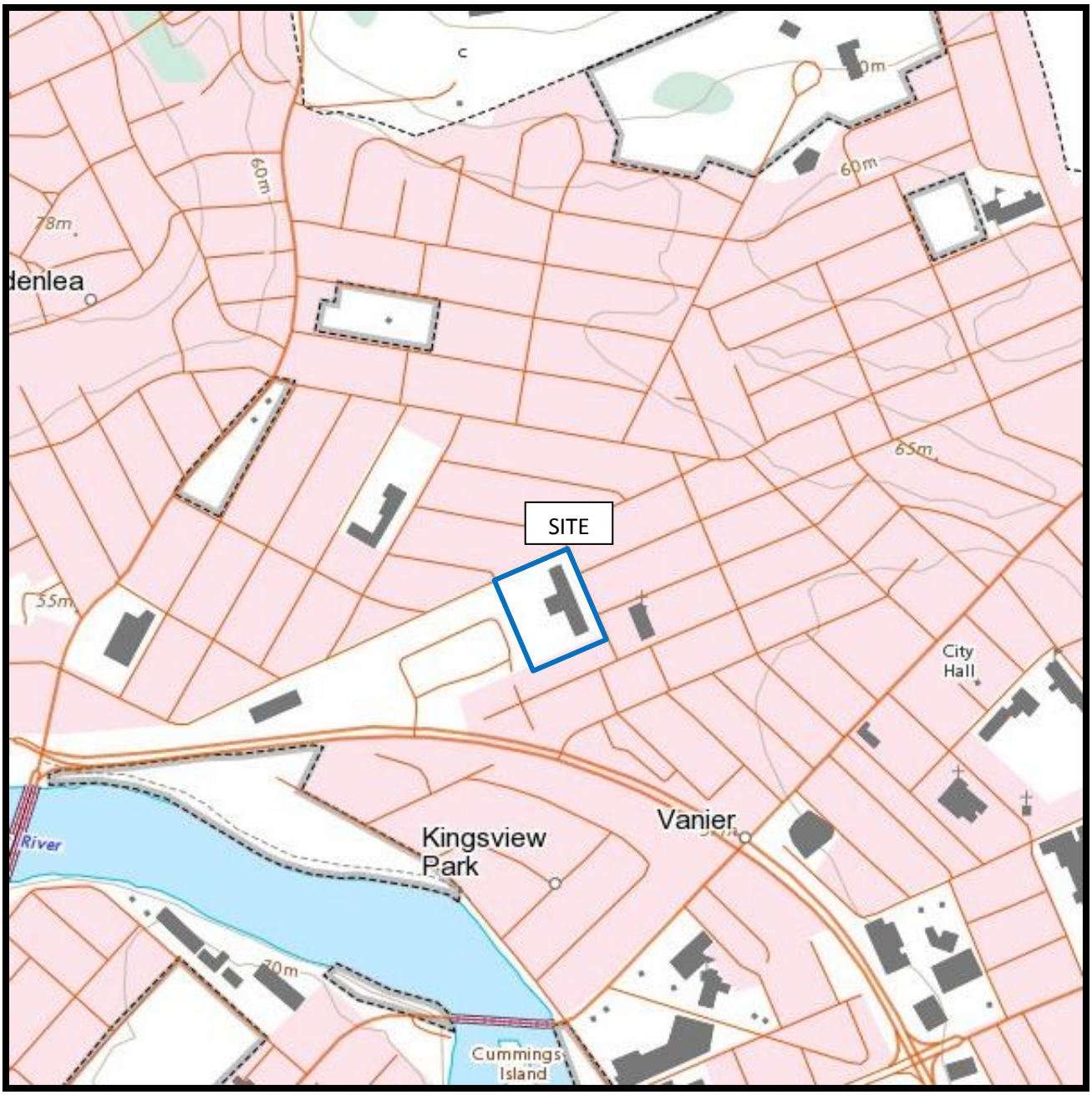
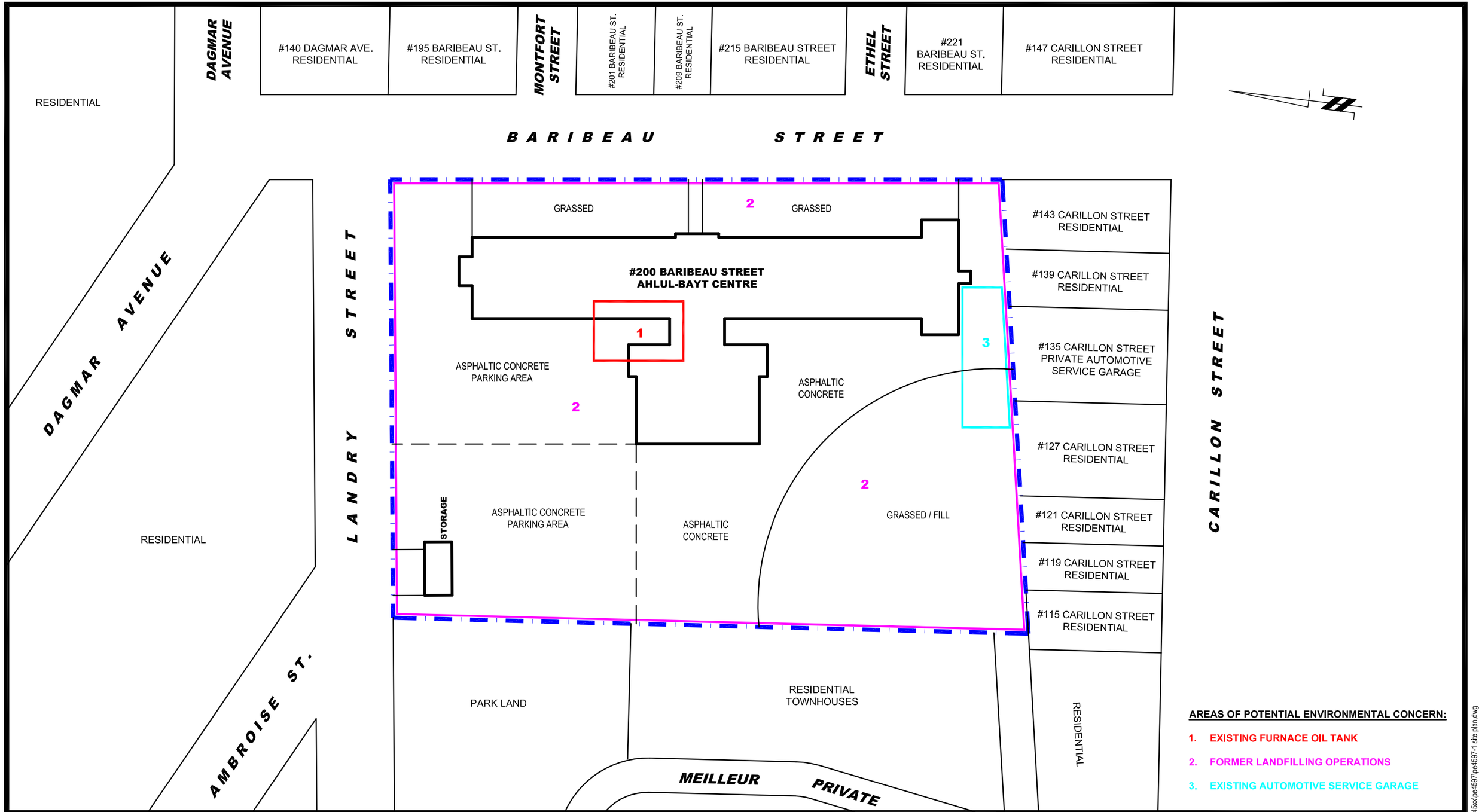


FIGURE 2

TOPOGRAPHIC MAP



AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:

1. EXISTING FURNACE OIL TANK
2. FORMER LANDFILLING OPERATIONS
3. EXISTING AUTOMOTIVE SERVICE GARAGE

patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL

BOULET CONSTRUCTION c/o URBAN LOGIC RESEARCH & ADVISORY

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
200 BARIBEAU STREET

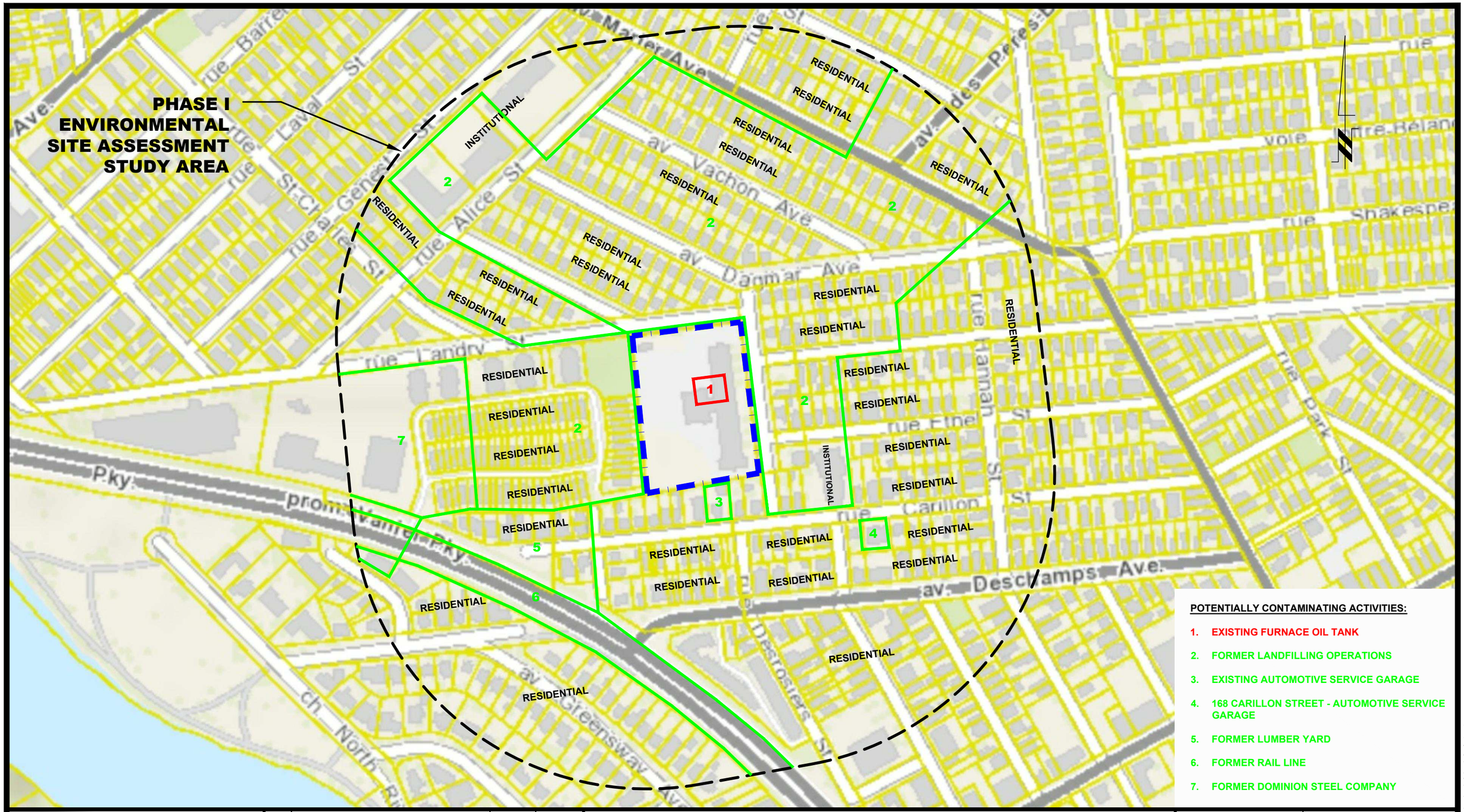
OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:750	Date: 04/2019
Drawn by: MPG	Report No.: PE4597-1
Checked by: MSP	PE4597-1
Approved by: MSD	Revision No.:

p:\autocad drawings\environmental\pe45xx\pe4597\pe4597-1 site plan.dwg



POTENTIALLY CONTAMINATING ACTIVITIES:

1. EXISTING FURNACE OIL TANK
2. FORMER LANDFILLING OPERATIONS
3. EXISTING AUTOMOTIVE SERVICE GARAGE
4. 168 CARILLON STREET - AUTOMOTIVE SERVICE GARAGE
5. FORMER LUMBER YARD
6. FORMER RAIL LINE
7. FORMER DOMINION STEEL COMPANY

patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
0			

BOULET CONSTRUCTION c/o URBAN LOGIC RESEARCH & ADVISORY

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
200 BARIBEAU STREET

OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

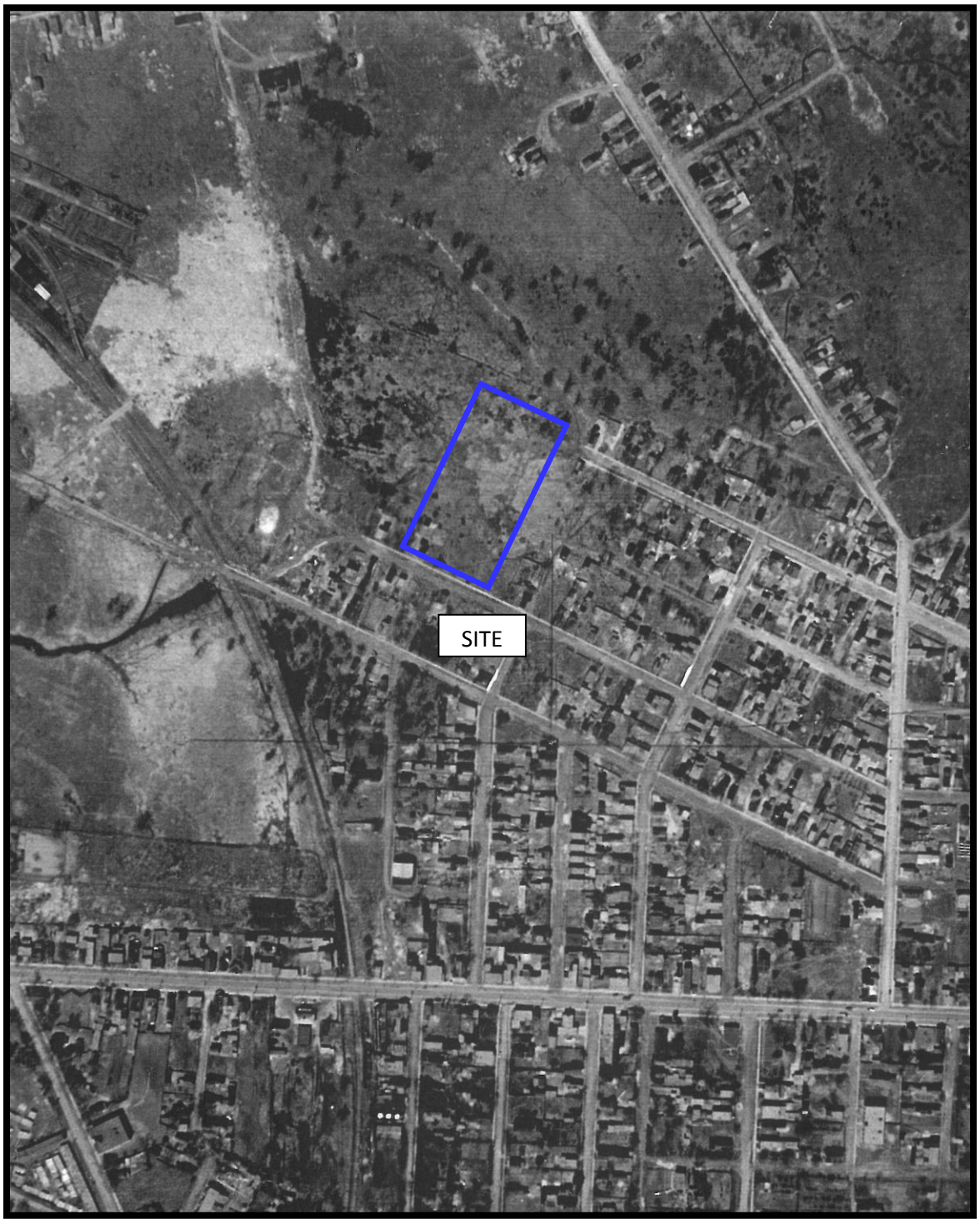
Scale: 1:3000	Date: 06/2019
Drawn by: MPG	Report No.: PE4597-1
Checked by: MSP	PE4597-2
Approved by: EJL	Revision No.:

p:\autocad drawings\environmental\pe45xx\pe4597\pe4597-2 slup.dwg

APPENDIX 1

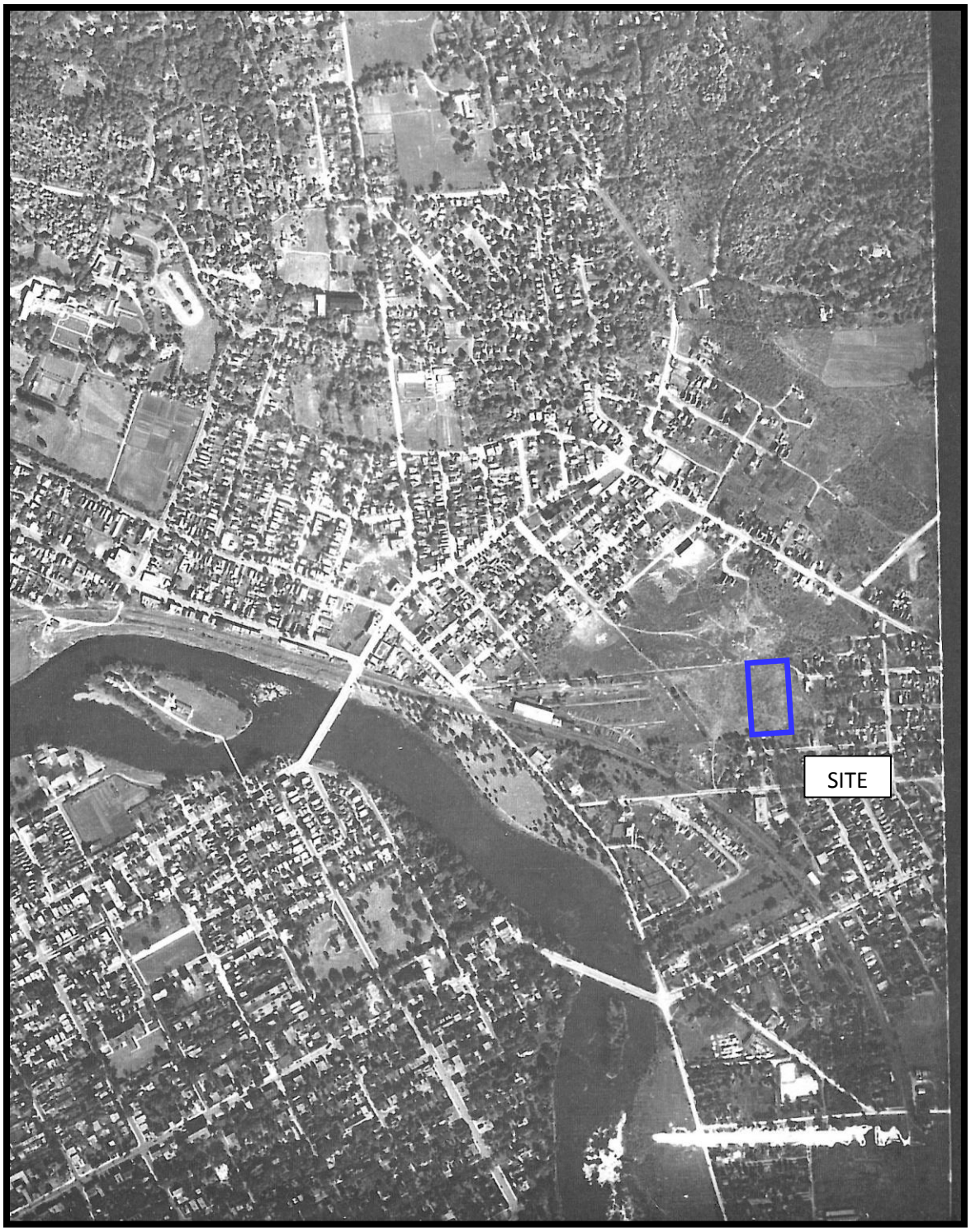
AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

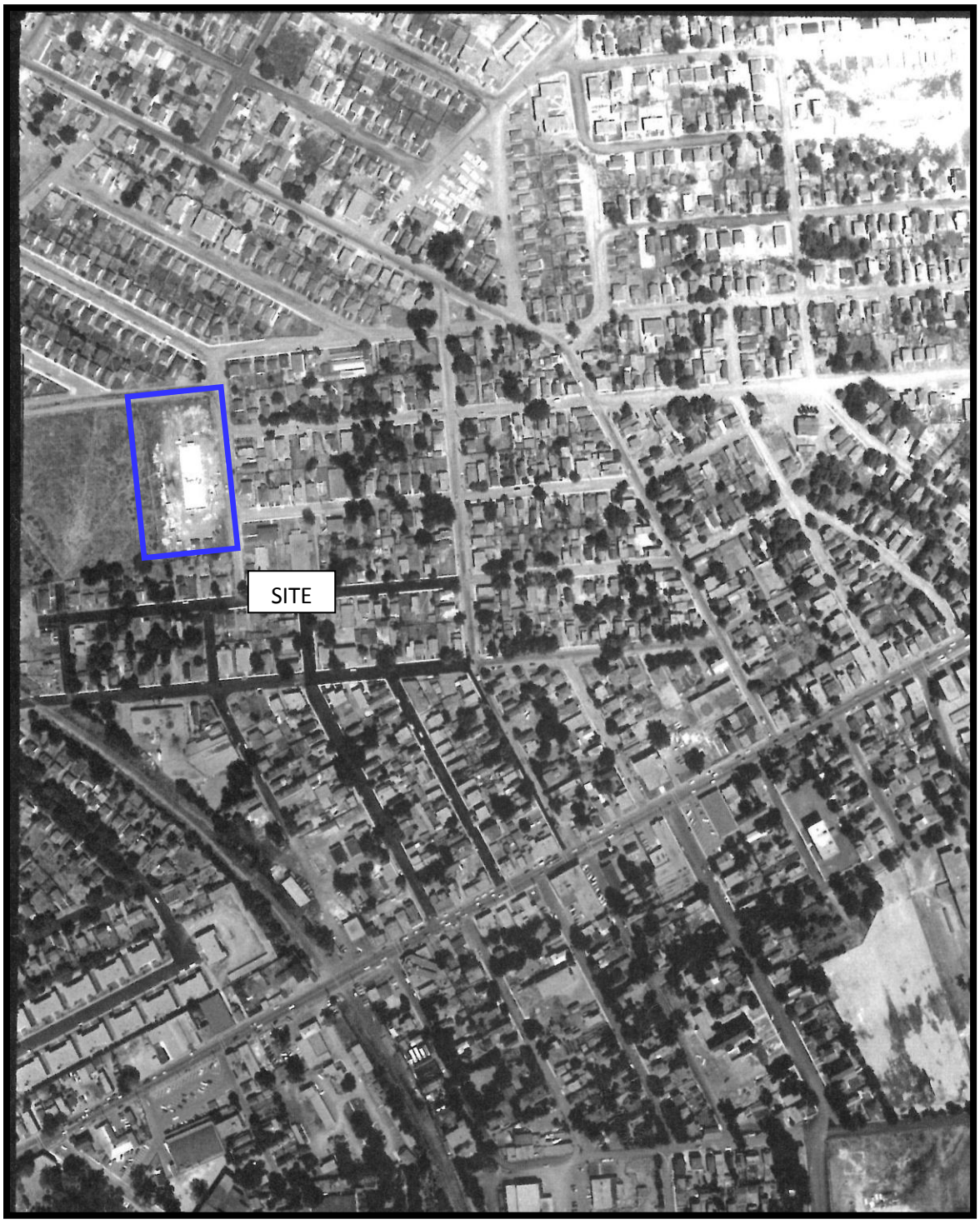


AERIAL PHOTOGRAPH
1928

AERIAL PHOTOGRAPH
1937



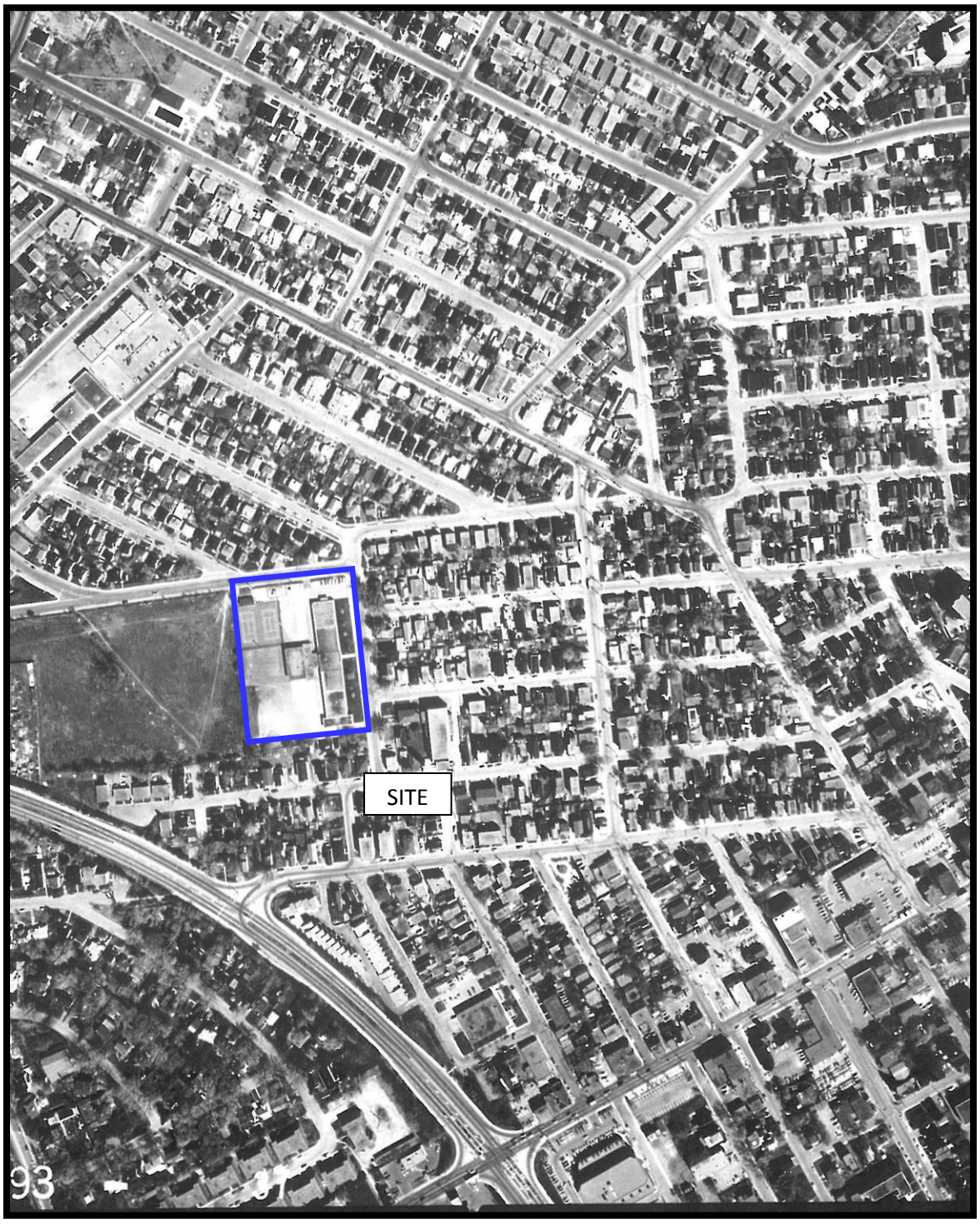
AERIAL PHOTOGRAPH
1944



AERIAL PHOTOGRAPH
1955

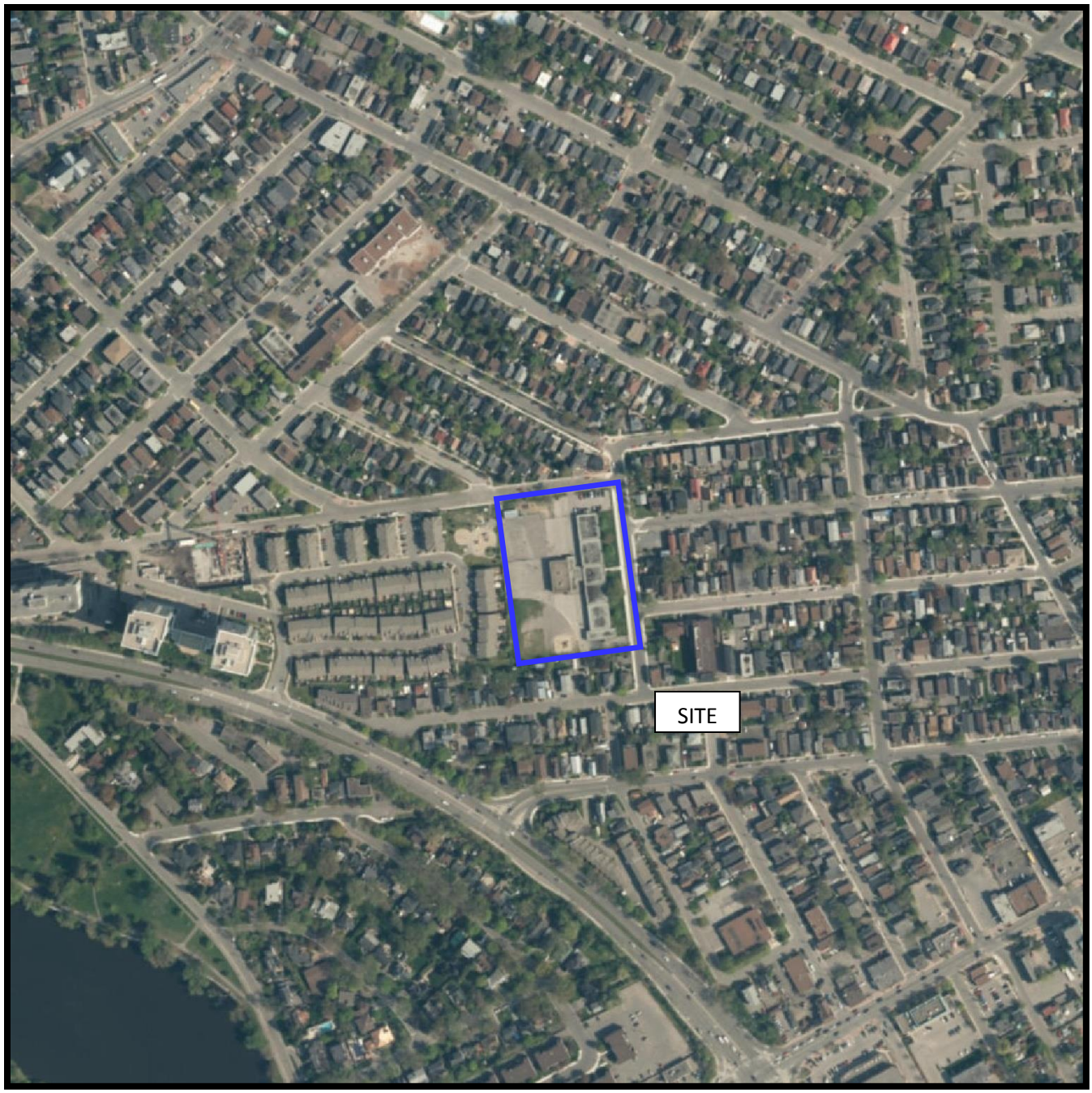
AERIAL PHOTOGRAPH
1968

AERIAL PHOTOGRAPH
1978



AERIAL PHOTOGRAPH
1985

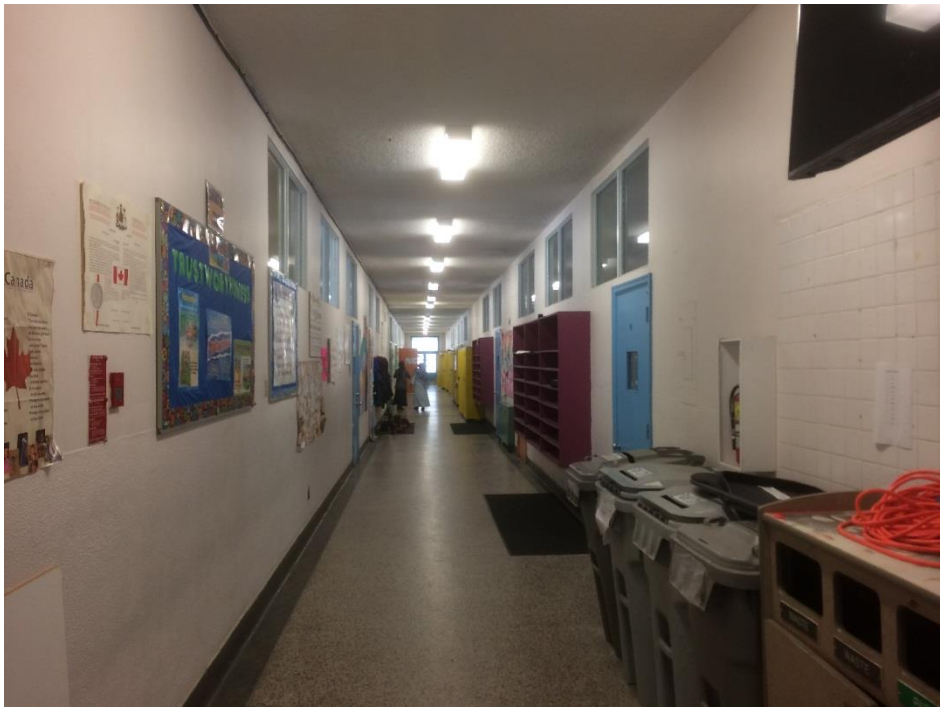
AERIAL PHOTOGRAPH
1993



AERIAL PHOTOGRAPH
2017 (geoOttawa)

Photograph 1: Adjacent private automotive service garage and exterior AST.

Photograph 2: Natural gas connection for the subject site and vent and fill pipes.



Photograph 3: View of interior of the school.

Photograph 4: Storage building near parking area. No access was provided to the interior of this building.

APPENDIX 2

MECP FREEDOM OF INFORMATION

MECP WELL RECORDS

TSSA CORRESPONDENCE

Ontario Ministry of Environment and Energy

Freedom of Information Request

This form is for requesting documents which are in the Ministry's files on environmental concerns related to properties. Please refer to the guide on completion and use of this form. Our fax no. is (416) 314-4285.

Requester Data			For Ministry Use Only	
Name, Company Name, Mailing Address and Email Address of Requester Mark St Pierre Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5 **Email address:** mstpierre@patersongroup.ca			FOI Request No.	Date Request Received
			Fee Paid ☐ ACCT ☐ CHQ ☐ VISA/MC ☐ CASH	
Telephone/Fax Nos. Tel. 613-226-7381 Fax 613-226-6344	Your Project/Reference No. PE4597	Signature/Print /Name of Requester Mark St Pierre	☐ CNR ☐ ER ☐ NOR ☐ SWR ☐ WCR ☐ SAC ☐ IEB ☐ EAA ☐ EMR ☐ SWA	

Request Parameters

Municipal Address / Lot, Concession, Geographic Township **(Municipal address essential for cities, towns or regions)**

200 Baribeau Street, Ottawa, Ontario (One site)
Plan M44 E , Part of Block A, City of Ottawa, Regional Municipality of Ottawa-Carleton
PIN - 042360380

Present Property Owner(s) and Date(s) of Ownership

Ahlul-Byat Islamic School

Previous Property Owner(s) and Date(s) of Ownership

Separate School

Present/Previous Tenant(s),(if applicable)

Search Parameters *Files older than 2 years may require $60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.*	**Specify Year(s) Requested**
Environmental concerns (General correspondence, occurrence reports, abatement)	all
Orders	all
Spills	all
Investigations/prosecutions ➤ Owner **AND** tenant information must be provided	all
Waste Generator number/classes	all

Certificates of Approval ➤ Proponent information must be provided

1985 and prior records are searched manually. **Search fees in excess of $300.00** could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number(s) (if known). **If supporting documents are also required, mark SD box** and specify type e.g. maps, plans, reports, etc.

	SD	**Specify Year(s) Requested**
air - *emissions*		1986-present
water - *mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)*		1986-present
sewage - *sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations*		1986-present
waste water - *industrial discharges*		1986-present
waste sites - *disposal, landfill sites, transfer stations, processing sites, incinerator* sites		1986-present
waste systems - *PCB destruction, mobile waste processing units, haulers: sewage, non-hazardous & hazardous waste*		1986-present
pesticides - *licenses*		1986-present

A $5.00 non-refundable application fee, payable to the Minister of Finance, is mandatory. The cost of locating on-site and/or preparing any record is $30.00/hour and 20 cents/page for photocopying and you will be contacted for approval for fees in excess of $30.00.

Also see Rural No. 2

700

UTM 18 Z 4417 6210 E

15 R 5031 14210 N

Elev. 4 R 01 18 5

Basin 215

ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario

RECEIVED
DEC - 8 1951
GEOLOGICAL BRANCH
DEPARTMENT OF MINES
(OTTAWA)

15 No 001

Water Well Record

Lot ... Town ~~Township, Village, Town or City~~ EASTVIEW

[redacted] ...own or City) ...

... Eastview

Date Completed July 12 1951 (day) (month) (year) ... Cost of Well (excluding pump) ...

Pipe and Casing Record

Casing diameter(s) 8

Length(s) of casing(s) 15

Type of screen ...

Length of screen ...

Distance from top of screen to ground level ...

Is well a gravel-wall type? ...

Pumping Test

Date ...

Static level 18

Pumping level 50

Pumping rate 400 g.p.h.

Duration of test 2 hr.

Distance from cylinder or bowls to ground level ...

Water Record

Kind (fresh or mineral) fresh

Quality (hard, soft, contains iron, sulphur, etc.) ...

Appearance (clear, cloudy, coloured) ...

For what purpose(s) is the water to be used? Domestic

How far is well from possible source of contamination? 160

What is the source of contamination? ...

Enclose a copy of any mineral analysis that has been made of water ...

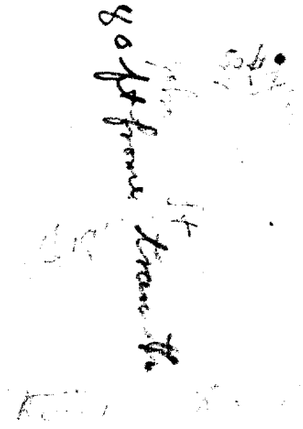
Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
90	hard	72
160		

Well Log

Overburden and Bedrock Record	From	To
	0 ft.	....ft.
sand	1	5
black limestone	5	145
white limestone	145	147

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside? ...

Drilling Firm ...

Address ...

Name of Driller ... Address 703 Gilmour St

Date ... Licence Number ...

Signature of Licensee

FORM 5

UTM 18 Z 447-7010 E
5 R 5031420 N
Elev. 4 R 0185
Basin 25

ONTARIO

The Well Drillers Act
Department of Mines, Province of Ontario

RECEIVED JAN 23 1952 GEOLOGICAL BRANCH DEPARTMENT OF MINES

Water Well Record

Owner [redacted] Village, Town or City (OTTAWA) VANIER EASTVIEW
Address 120 JOHN (Town or City) 120 JOHN ST. EASTVIEW
Date Completed 20 (day) 12 (month) 51 (year) Cost of Well (excluding pump) $ 824.21-75 (FOR 551 ft)

Pipe and Casing Record

Casing diameter(s) 8" - to 191'
Length(s) of casing(s) 4" - 191' to 742'
Type of screen
Length of screen
Distance from top of screen to ground level
Is well a gravel-wall type?

Pumping Test

Date DEC 20 1951
Static level 12'
Pumping level 166'
Pumping rate 3600 G.P.H. (600 gph continuous)
Duration of test 10 MINTS
Distance from cylinder or bowls to ground level 166'

Water Record

Kind (fresh or mineral) MINERAL
Quality (hard, soft, contains iron, sulphur, etc.) SALT
Appearance (clear, cloudy, coloured) CLEAR
For what purpose(s) is the water to be used? COOLING SYSTEM FOR PLANT
How far is well from possible source of contamination? 40'
What is the source of contamination? SURFACE DRAIN
Enclose a copy of any mineral analysis that has been made of water

Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
742 1/2	SALT	732

Well Log

Overburden and Bedrock Record	From	To
Overburden drilled (by G. McVigh)	0 ft.	ft.
GREY LIME STONE	191	700
SAND STONE	700	742 1/2
This Well was 191 feet deep when I started it. The company put a big pump out at a setting of 166 feet. Pumping at the rate of 3600 GPH Pumped it down to the end of the pumpen 10' min. It will stand 600 gallons an hour continuse pumping		

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.

Their was just as much water at 600 ft as there is at 742 1/2 ft

Situation: Is well on upland, in valley, or on hillside? Up lands
Drilling Firm THOS H ADAMS
Address HURDMANS BRIDGE
Name of Driller T.H.A. Address SAME
Date DEC 27 1951 Licence Number 42
Thos H Adams
Signature of Licensee

FORM 5

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)*

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Measurements recorded in: [X] Metric [ ] Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	[ ] Well Constructed by Well Owner
	CITY OF OTTAWA (C/O TREGAST CONSTRUCTION LTD)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
110 LAURIER AVE WEST	OTTAWA	ON	K1P 1J1	(613) 580-2400

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
Degmar, Bairbrau + Mariner	N/A	N/A	N/A.

County/District/Municipality	City/Town/Village	Province	Postal Code
—	OTTAWA (LAURIER)	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	X	See below X			

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

~~General Colour~~	Most Common Material	Other Materials	~~General Description~~		Depth (m/ft) From	To
Well #	Dia.	Waterlevel	GPS Northing	GPS Easting	Tag	Depth.
13-1	32mm	0	5032040N	18447624E	N/A.	0.00	4.35
13-6	32mm	4.25	5031999N	18447201E	"	0.00	4.34
13-8	32mm	1.97.	5031990N	18447195E	"	0.00	4.48
13-13	32mm	2.92	5031847N	18448156E	"	0.00	4.42
13-15	32mm	4.40	5031731N	18447833E	"	0.00	4.60.

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
-See above		Bentonite Holeplug grout.	0.07 cu.

Method of Construction

[ ] Cable Tool [ ] Diamond
[ ] Rotary (Conventional) [ ] Jetting
[ ] Rotary (Reverse) [ ] Driving
[ ] Boring [ ] Digging
[ ] Air percussion
[ ] Other, specify

Well Use

[ ] Public [ ] Commercial [ ] Not used
[ ] Domestic [ ] Municipal [ ] Dewatering
[ ] Livestock [ ] Test Hole [X] Monitoring
[ ] Irrigation [ ] Cooling & Air Conditioning
[ ] Industrial
[ ] Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
-See above (Pit)				

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To

Status of Well

[ ] Water Supply
[ ] Replacement Well
[ ] Test Hole
[ ] Recharge Well
[ ] Dewatering Well
[X] Observation and/or Monitoring Hole
[ ] Alteration (Construction)
[ ] Abandoned, Insufficient Supply
[ ] Abandoned, Poor Water Quality
[X] Abandoned, other, specify Construction
[ ] Other, specify 2015

Water Details

Water found at Depth (m/ft)	Kind of Water: [ ] Fresh [ ] Untested [ ] Gas [ ] Other, specify	Hole Diameter Depth (m/ft) From	To	Diameter (cm/in)
		-See above		

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
STANTEC DRILLING INC	4875

Business Address (Street Number/Name)	Municipality
BOX 29, 157 FILE ARCHIES SC	PAKENHAM

Province	Postal Code	Business E-mail Address
ON	K0A 2X0	Stantec.drilling@bell.net

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(613) 624-5262	PHILLIPS, REAK

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
0086		2015/04/30

Results of Well Yield Testing

After test of well yield, water was:
[ ] Clear and sand free
[ ] Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

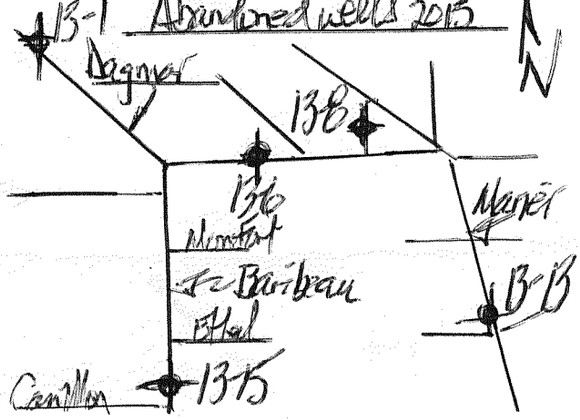
Well production (l/min / GPM)

Disinfected? [ ] Yes [ ] No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	X See above X			
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: Original borehole by Golder Associates (13-1121-0088)

Well owner's information package delivered	Date Package Delivered	Date Work Completed
[ ] Yes [X] No	N/A	2015/04/29

Ministry Use Only

Audit No. Z 190198

Received MAY 11 2015

Ministry's Copy

Mark St. Pierre

From: Public Information Services <publicinformationservices@tssa.org>
Sent: April 15, 2019 2:27 PM
To: Mark St. Pierre
Subject: RE: Records search request for 200 Baribeau Street, Ottawa Ontario.

Hello Mark,

Thank you for your request for confirmation of public information.

We confirm that there are no records in our database of any fuel storage tanks at the subject addresses.

For a further search in our archives please complete our release of public information form found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392 and email the completed form to publicinformationservices@tssa.org or through mail along with a fee of $56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Kind regards,

Yalini

Yalini Kanagendran | Public Information Agent
Facilities
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-416-734-3449 | Fax: +1-416-231-6183 | E-Mail: publicinformationservices@tssa.org
www.tssa.org

From: Mark St. Pierre <MStPierre@Patersongroup.ca>
Sent: April 15, 2019 12:01 PM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: Records search request for 200 Baribeau Street, Ottawa Ontario.

Good morning,

Could you please complete a search of your records for underground/aboveground storage tanks, historical spills or other incidents/infractions for the following addresses for properties located in the Ottawa, ON:

200 Baribeau Street
143 Carillon Street
135 Carillon Street
201 Baribeau Street
155 Carillon Street
170 Ethel Street

127 Carillon Street
169 Ethel Street
168 Montfort Street
80 Landry Street

Thank you,

Mark St Pierre, B.Eng.
patersongroup
solution oriented engineering

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext: 243
Cell: (613) 229-9822
Fax: (613) 226-6344
Email: mstpierre@patersongroup.ca

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

MICHAEL BEAUDOIN, P.ENG.

patersongroup

POSITION

Environmental Engineer

EDUCATION

Carleton University, B.Eng. 2010
Environmental Engineering

EXPERIENCE

2010-present
Paterson Group Inc.
Consulting Engineers
Geotechnical and Environmental Division
Environmental Engineer

Environmental Engineering

Geotechnical Engineering

Materials Testing Quality Control

Building Sciences

Hydrogeology

Archeological Services

SELECT LIST OF PROJECTS

Rideau Street Reconstruction - Ottawa
Main Street Reconstruction - Ottawa
Woodroffe Avenue Reconstruction – Ottawa
Westboro Connection Remediation - Ottawa
Former Alcan Plant Redevelopment - Kingston
Former Nordex Facility Redevelopment - Kingston
Jack Garland Airport Remediation – North Bay
Highway 17 Twinning Project – Arnprior
Watermain Construction – North Bay
Waste Audits – Various City of Ottawa Facilities
Parks Recycling Pilot Program – Various City of Ottawa parks
Special Events Recycling Pilot Program – Special Events with the City of Ottawa
Groundwater Remediation and Monitoring Program Supervision – Ottawa
Designated Substance Surveys – Residential and Commercial Sites – Ottawa
Asbestos Air Testing – Various Locations - Ottawa
Mould Testing – Various Locations - Ottawa
Phase I & II Environmental Site Assessments – Residential, Commercial and Industrial Sites – Ottawa (CSA Z768-01 and O.Reg 269/11)

paterson group
solution oriented engineering

Mark S. D'Arcy, P.Eng., QP_{ESA}
Senior Environmental/Geotechnical Engineer

After receiving his Bachelors of Applied Science from Queen's University in 1991 in Geological Engineering, Mark joined Paterson Group Inc. During the first 10 years of Mark's career, he was heavily involved in all aspects of field work, including drilling boreholes, excavating test pits, conducting phase I site inspections, environmental sampling and analysis and inspection of environmental remediations. During Mark's field experience, he gained invaluable field and office experience, which would prepare Mark to become the Environmental Division Manager. Mark's field experience ranges from Phase I Environmental Site Assessments (ESAs) to on-site soil and groundwater remediations, as well as, environmental/geotechnical borehole investigations. Mark's field experience has provided extensive knowledge of subsurface conditions, contractor relations and project management. These skills would provide Mark with the ability to understand a variety of situations, which has lead Paterson to an extremely successful Environmental Department. Mark became the Environmental Manager in 2006, which consisted of two engineers and two field technicians. Mark has been an integral part in growing the Environmental Division, which now consists of nine engineers and three field technicians. Mark is the Senior Project Manager for a wide variety of environmental projects within the Eastern Ontario area including Phase I ESAs, Phase II ESAs, remediations for filing Records of Site Condition in the Ontario Ministry of the Environment and Climate Change (MOECC) Environmental Site Registry, Brownfield Applications and Landfill Monitoring Programs. As the Senior Project Manager, Mark is responsible for directing project personnel, final report review and overall project success. Mark has proven leadership and ability to manage small to large scale projects within the allotted time and budget.

EDUCATION
B.A.Sc. 1991, Geological Engineering, Queen's University, Kingston, ON

LICENCE/ PROFESSIONAL AFFILIATIONS
Professional Engineers of Ontario

ESA Qualified Person with MOECC

Ottawa Geotechnical Group

Consulting Engineers of Ontario

YEARS OF EXPERIENCE
With Paterson: 28

OFFICE LOCATION
154 Colonnade Road South, Nepean, Ontario, K2E 7J5

SELECT LIST OF PROJECTS
- 222 Beechwood Avenue, Ottawa, Ontario (Senior Project Manager for Phase I ESA, Phase II ESA, Phase III ESA, Environmental Remediation)
- 409 MacKay Street, Ottawa, Ontario (Senior Project Manager for Phase I ESA, Phase II ESA, Phase III ESA, Environmental Remediation)
- Art's Court Redevelopment, Ottawa, Ontario (Senior Project Manager for Phase I ESA, Phase II ESA, Phase III ESA, Environmental Remediation)
- Visitor Welcome Centre, Phase II and Phase III, Parliament Hill, Ottawa, Ontario (Senior Project Manager for Environmental Remediation)
- Mattawa Landfill, Mattawa, Ontario (Senior Project Manager, Annual Water Quality Monitoring report)
- Multi-Phase Redevelopment of the Ottawa Train Yards, Ottawa, Ontario (Senior Project Manager)
- Rideau Centre Expansion, Ottawa, Ontario(Senior Project Manager for Phase I ESA, Phase II ESA, Phase III ESA, Environmental Remediation)
- 26 Stanley Avenue, Ottawa, Ontario, Phase I ESA, Phase II ESA (Senior Project Manager)
- Riverview Development – Kingston, Ontario, Phase I ESA, Phase II ESA, and filing of an RSC in the MOECC Environmental Site Registry (Senior Project Manager)
- Monitoring Landfills for River Valley, Kipling and Lavagine (Senior Project Manager)

PROFESSIONAL EXPERIENCE

May 2001 to present, **Manager of Environmental Division, Paterson Group Inc.,**
Ottawa, Ontario

- Manage all aspects of the environmental division (management of personnel, budgeting, invoicing, scheduling, business development, reporting, marketing, and fieldwork).
- Review day to day operations within the environmental division.
- Design, perform, and lead Phase I, II and Phase III ESAs, Remediation's, Brownfield Applications and Record of Site conditions, fieldwork surveys, excavation, monitoring, laboratory analysis, and interpretation.
- Write, present, and publish reports with methodology and laboratory analysis results, along with recommendations for environmental findings.
- Responsible for ensuring projects meet Ministry of Environment and Climate Change Standards and Guidelines.
- Building and fostering relationships with clients, stakeholders, and Ministry officials.
- Supervise and continuous training of staff in environmental methods (environmental sampling techniques, technical expertise and guidance).
- Applied due diligence in ensuring the health and safety of staff and the public in field locations.

1991 to 2001, **Geotechnical and Environmental Engineer, Paterson Group Inc.,** Ottawa, Ontario

- Provide on-site geotechnical and environmental expertise to various clients.
- Oversee geotechnical and environmental investigations for drilling and test pitting on numerous proposed utility installations, residential and commercial developments.
- Problem solving to help advance or maintain project schedules.
- Complete environmental reports with recommendations to meet environmental standards set by MOE and CCME standards.
- Conduct site inspections, bearing medium evaluations, bearing surface inspections, concrete testing and field density testing.
- Liaising with contractors, consultants and government officials.
- Provide cost estimates for geotechnical and environmental field programs and construction costs.
- Review RFI's, submittals, monthly progress reports and other various construction related work.