Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Studies

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patersongroup

Phase I Environmental Site Assessment

Vacant Property
Tanger Outlet Mall – 8555 Campeau Drive
Ottawa, Ontario

Prepared For

RioCan REIT

January 30, 2018

Report: PE4225-1

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EXECUTIVE SUMMARY

Assessment

A Phase I – Environmental Site Assessment was carried out for part of the property addressed 8555 Campeau Drive (Tanger Outlet Mall) in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to impact the subject property.

Based on a review of historical sources, the subject property appears to have never been developed. No historical potentially contaminating activities (PCAs) were identified on the Phase I property. Surrounding properties have historically been used for agricultural purposes, until Campeau Drive was built in the 1990s and an outlet mall in 2014. In a review of the historical sources, no Potentially Contaminating Activities were identified.

Following the historical review, a site visit was conducted. The subject property currently exists as a vacant, grass covered lot of land on the west side, while the northeast part is paved with asphaltic concrete, as part of a larger parking lot. The southwestern and southeastern boundaries of the site are steeply sloped up to meet the adjacent Highway 417 ramp and Palladium Drive roadways. No environmental concerns were identified on the subject site at the time of the site visit.

The surrounding land use consisted of commercial and vacant properties. No PCAs were identified in the Phase I study area.

Conclusion

Based on the results of this Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is not required for the property.**

1.0 INTRODUCTION

At the request of RioCan REIT, Paterson Group (Paterson) conducted a Phase I - Environmental Site Assessment (Phase I ESA) of part of 8555 Campeau Drive, 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 and 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. Stuart Craig of RioCan REIT. Mr. Craig can be reached by telephone at (416) 409-4676.

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 the requirements of 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:	Part of 8555 Campeau Drive (Tanger Outlet Mall), Ottawa, Ontario.
Legal Description:	Concession 1, Part Lot 3, Geographic Township of Huntley, in the City of Ottawa, Ontario.
Property Identification Number (PIN):	04508-0127
Location:	The subject site is located on the southwest corner of 8555 Campeau Drive, at the intersection of Palladium Drive and the Highway 417 off-ramp.
Latitude and Longitude:	45° 17' 45" N, 75° 56' 21" W

Site Description:

Configuration:	Irregular
Site Area:	7,100 m^2 (approximate)
Zoning:	MC – Mixed Use Centre Zone
Current Use:	The west side of the subject site is vacant and grassed; the east side is paved with part of an existing asphaltic concrete parking lot of the adjacent land.
Services:	The subject site is situated 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 ESA 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 historically available information, the Phase I property appears to have always been vacant. Therefore, the property has never been developed.

National Archives

Fire insurance plans and city directories are not available for the Phase I study area.

Plan of Subdivision

A draft plan of subdivision was prepared by Stantec Geomatics Ltd. and dated 2012, was reviewed as a part of this assessment. The plan depicts the subject site in its current configuration, prior to the construction of the adjacent mall buildings.

Previous Engineering Reports

Paterson has conducted several environmental and geotechnical projects in the area of the subject site, including the adjacent Tanger Outlet Mall buildings. No environmental concerns with respect to the subject site were identified during the review of previous reports completed by Paterson.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on January 26, 2018. The subject site and Phase I study area were not listed in the NPRI database.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I study area.

Ontario Ministry of Environment and Climate Change (MOECC) Instruments

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

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified in the Phase I study area

MOECC Incident Reports

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

MOECC Waste Management Records

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

MOECC Submissions

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

MOECC Brownfields Environmental Site Registry

A search of the MOECC Brownfields Environmental Site Registry was conducted as part of this assessment for the site, neighbouring properties and the Phase I study area. No Records of Site Condition (RSCs) were filed for the subject site or properties within the Phase I study area.

MOECC Waste Disposal Site Inventory

The Ontario Ministry of Environment and Climate Change document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. No records were listed for the subject site or for properties within the Phase I study area.

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I study area was conducted on the web site of the Ontario Ministry of Natural Resources and Forestry (MNRF) on January 26, 2018. No areas of natural significance were identified on the subject site or within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on January 26, 2018 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. At the time of issuing this report, a response from the TSSA had not been received. Should the response contain pertinent information, RioCan REIT will be notified.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa”, was reviewed. No landfill sites were identified within the Phase I study area.

4.3 Physical Setting Sources

Aerial Photographs

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

1945 The subject site is a vacant agricultural field. Surrounding properties are also agricultural fields. No apparent roads are present in the Phase I study area.

1959 No changes have been made to the subject site or surrounding properties.

1976 No changes have been made to the subject site or surrounding properties.

1988 No changes have been made to the subject site or surrounding properties.

1999 No changes have been made to the subject site. Campeau Drive has been built to the north and west of the subject site.

2002 (City of Ottawa website) No changes have been made to the subject site or surrounding properties.

2011 (City of Ottawa website) No changes have been made to the subject site or surrounding properties.

2014 (City of Ottawa website) Tanger Outlets is under development on the adjacent lands to the north and east. The subject site is occupied by what appears to be a stockpile of topsoil related to the development of the mall.

2017 (City of Ottawa website) The subject site is mostly grass covered. The northeast corner of the site is occupied by part of a parking lot associated with the Tanger Outlet mall.

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

Topographic Maps

Topographic information was obtained from Natural Resources Canada – The Atlas of Canada website. The topographic maps indicate that the elevation of the subject site is approximately 105 m above sea level. The regional topography in the general area of the site slopes downward to the north and east. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada – The Atlas of Canada website, as a part of this assessment. According to the publication and mapping, the site is situated within the St. Lawrence Lowlands, Till Plains (Drumlinized) physiographic region. According to the mapping description provided: "The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets." The subject site is in the Central St. Lawrence Lowland, "where the land is rarely more than 150 m above sea level, except for the Monteregion Hills, which consist of intrusive igneous rocks.

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, bedrock in the area of the site consists of interbedded shale and limestone of the Verulam Formation. Overburden consists of offshore marine sediments, with a drift thickness of 5 to 10 m.

Water Well Records

A search of the MOECCs web site for all drilled well records within 250 m of the subject site was conducted on January 26, 2018. Based on the search results, no wells are present on the subject site, and two (2) water well abandonment records were identified in the Phase I study area. No active water supply wells are anticipated to be present in the Phase I study area.

Water Bodies and Areas of Natural Significance

A tributary of the Carp River is the closest water body, at approximately 110 m to the southeast of the subject site. No creeks, streams, lakes or other water bodies were identified in the Phase I study area. No areas of natural significance were identified within the Phase I study area.

5.0 SITE RECONNAISSANCE

5.1 General Requirements

The site assessment was conducted on January 27, 2018. Weather conditions were overcast, with a temperature of approximately 2℃. 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.

5.2 Specific Observations at Phase I Property

Buildings and Structures

The subject site is a vacant lot of land. No buildings or structures, with the exception of a parking lot, exist on the subject property. A depiction of the subject site is shown on Drawing PE4225-1 – Site Plan, in the Figures section of this report.

Site Features

The subject site is not developed with any buildings and exists as a vacant lot of grassed land with a small paved section in the northeast, which is part of a larger parking lot. The site was snow covered at the time of the site visit, with some snow piled from plowing the adjacent parking lots. No hazardous materials were observed on the subject site.

Underground Utilities

The subject site has no underground utilities.

Waste Materials

No waste materials were present on the subject site at the time of the site visit.

Storage Tanks

No storage tanks were present on the subject site at the time of the site visit.

Drains, Pits and Sumps

No drains, pits or sumps were present on the subject site at the time of the site visit.

Unidentified Substances

No unidentified substances were present on the subject site at the time of the site visit.

Hazardous Building Materials

No hazardous building materials were present on the subject site at the time of the site visit.

Phase I Study Area

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

- ❒ North - Parking lot, followed by Tanger Outlet Mall;
- ❒ South - Palladium Drive and Highway 417;
- ❒ East - Parking lot, followed by vacant land and Carp River tributary;
- ❒ West - Palladium Drive, followed by vacant land and Cabela's store.

No Potentially Contaminating Activities were identified on the neighbouring properties in the Phase I study area. Property use within the Phase I study area is presented on Drawing PE4225-2 – Surrounding Land Use Plan.

6.0 REVIEW AND EVALUATION OF INFORMATION

6.1 Land Use History

The subject site appears to have never been developed and currently exists as a grassed, vacant lot of land.

Potentially Contaminating Activities (PCAs)

Potentially Contaminating Activities (PCAs) were not identified on the subject site or in the Phase I study area.

Areas of Potential Environmental Concern (APECs)

No Areas of Potential Environmental Concern (APECs) were identified on the subject site.

Contaminants of Potential Concern (CPCs)

No contaminants of concern (CPCs) were identified on the Phase I property.

6.2 Conceptual Site Model

Existing Buildings and Structures

The subject site is a vacant lot of land. No buildings or structures exist on the subject property.

Geological and Hydrogeological Setting

The subject site is located in an area of shale and limestone bedrock with offshore marine sediment overburden of 5 to 10 m in depth. Groundwater flow is expected to flow to the east and southeast, towards the Carp River tributary creek.

Water Bodies

The closest water body is a tributary of the Carp River, located approximately 110 m to the south of the site. There are no water bodies on the subject site.

Areas of Natural Significance

No areas of natural significance were identified within the Phase I study area.

Water Wells

A search of the MOECC's web site for all drilled well records within 250 m of the subject site was conducted on January 26, 2018. Based on the search results, no wells are located on the subject site. Two well abandonment records were identified in the Phase I study area. New developments in the Phase I area receive full municipal services.

Neighbouring Land Use

Neighbouring land use in the Phase I study area is currently vacant or commercial. Neighbouring land use does not pose an environmental concern to the subject site.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, no PCAs were identified on the subject site or in the Phase I study area.

Contaminants of Potential Concern

No CPCs were identified on the subject site.

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 no APECs on the subject site. The absence of PCAs 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.

7.0 CONCLUSION

Assessment

A Phase I – Environmental Site Assessment was carried out for part of the property addressed 8555 Campeau Drive (Tanger Outlet Mall) in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current use of the subject site and adjacent properties and identify any environmental concerns with the potential to impact the subject property.

Based on a review of historical sources, the subject property appears to have never been developed. No historical potentially contaminating activities (PCAs) were identified on the Phase I property. Surrounding properties have historically been used for agricultural purposes, until Campeau Drive was built in the 1990s and an outlet mall in 2014. In a review of the historical sources, no Potentially Contaminating Activities were identified.

Following the historical review, a site visit was conducted. The subject property currently exists as a vacant, grass covered lot of land on the west side, while the northeast part is paved with asphaltic concrete, as part of a larger parking lot. The southwestern and southeastern boundaries of the site are steeply sloped up to meet the adjacent Highway 417 ramp and Palladium Drive roadways. No environmental concerns were identified on the subject site at the time of the site visit.

The surrounding land use consisted of commercial and vacant properties. No PCAs were identified in the Phase I study area.

Conclusion

Based on the results of this Phase I - Environmental Site Assessment, it is our opinion that **a Phase II - Environmental Site Assessment is not required for the property.**

8.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment 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 RioCan REIT. Permission and notification from RioCan REIT and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Anna Graham, M.E.S.

Mark S. D'Arcy, P.Eng., QP_{ESA}

Report Distribution:

- RioCan REIT
- Paterson Group Inc.

9.0 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).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records
MOECC Freedom of Information and Privacy Office.
MOECC Municipal Coal Gasification Plant Site Inventory, 1991.
MOECC document titled "Waste Disposal Site Inventory in Ontario".
MOECC Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MOECC Water Well Inventory.
Chapman, L.J., and Putnam, D.F., 1984: 'The Physiography of Southern Ontario, Third Edition', Ontario Geological Survey Special Volume 2.

Municipal Records
City of Ottawa Document "Old Landfill Management Strategy, Phase I - Identification of Sites", prepared by Golder Associates, 2004.
The City of Ottawa Historical Land Use Inventory.
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.
Plan of Subdivision, prepared by Stantec Geomatics Ltd., dated 2012.

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

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4225-1 – SITE PLAN

DRAWING PE4225-2 – SURROUNDING LAND USE PLAN

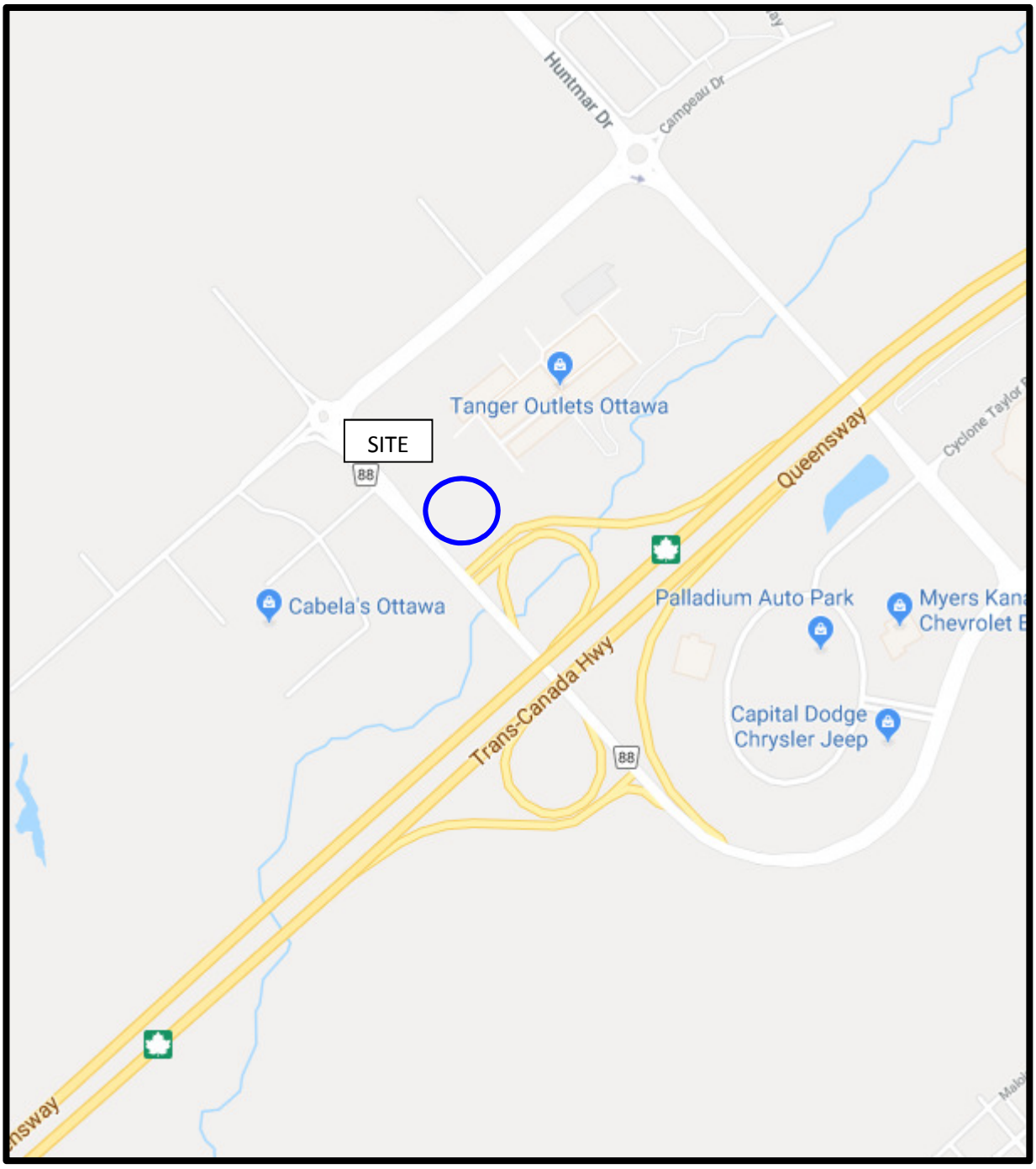


FIGURE 1

KEY PLAN

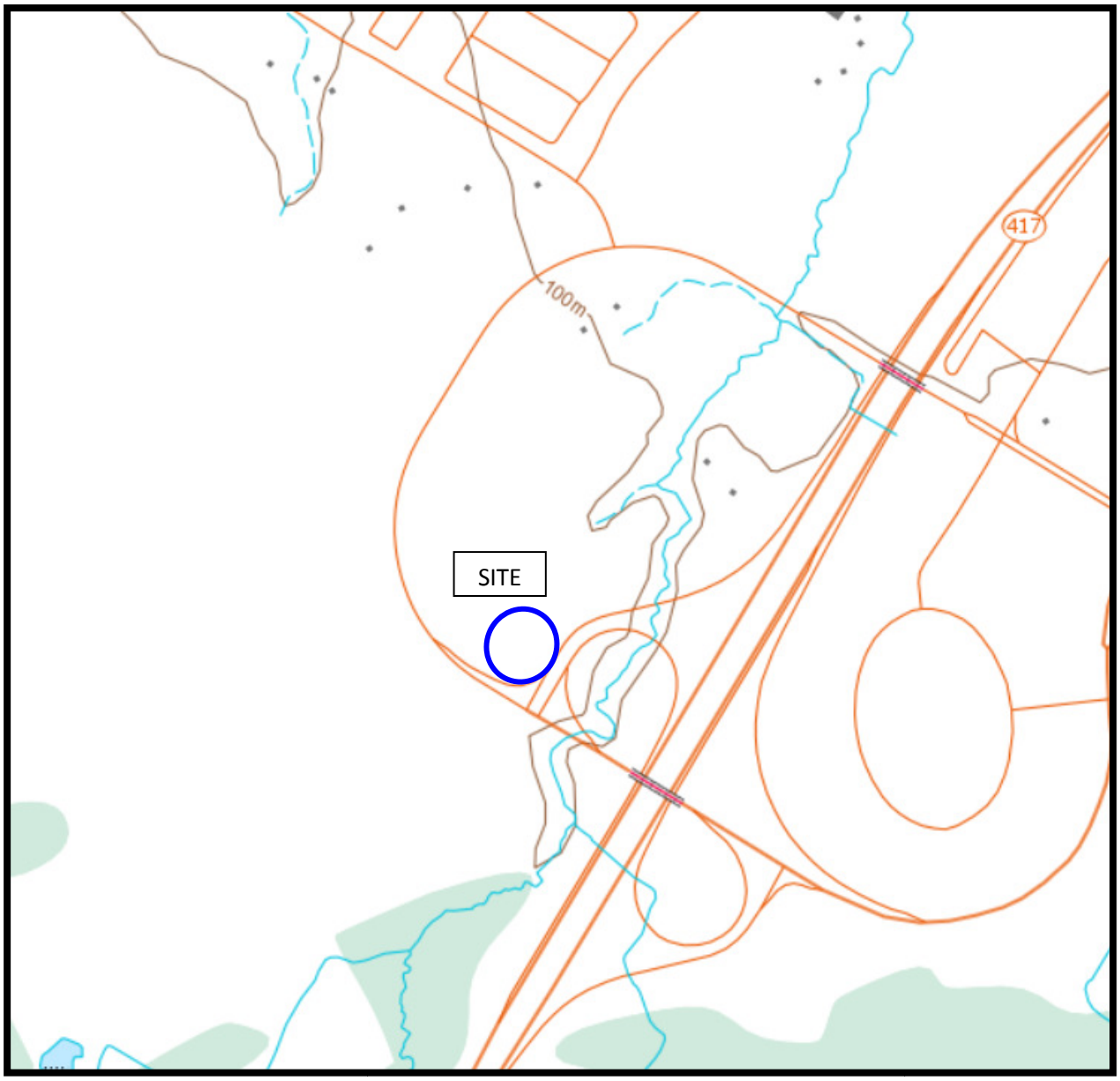
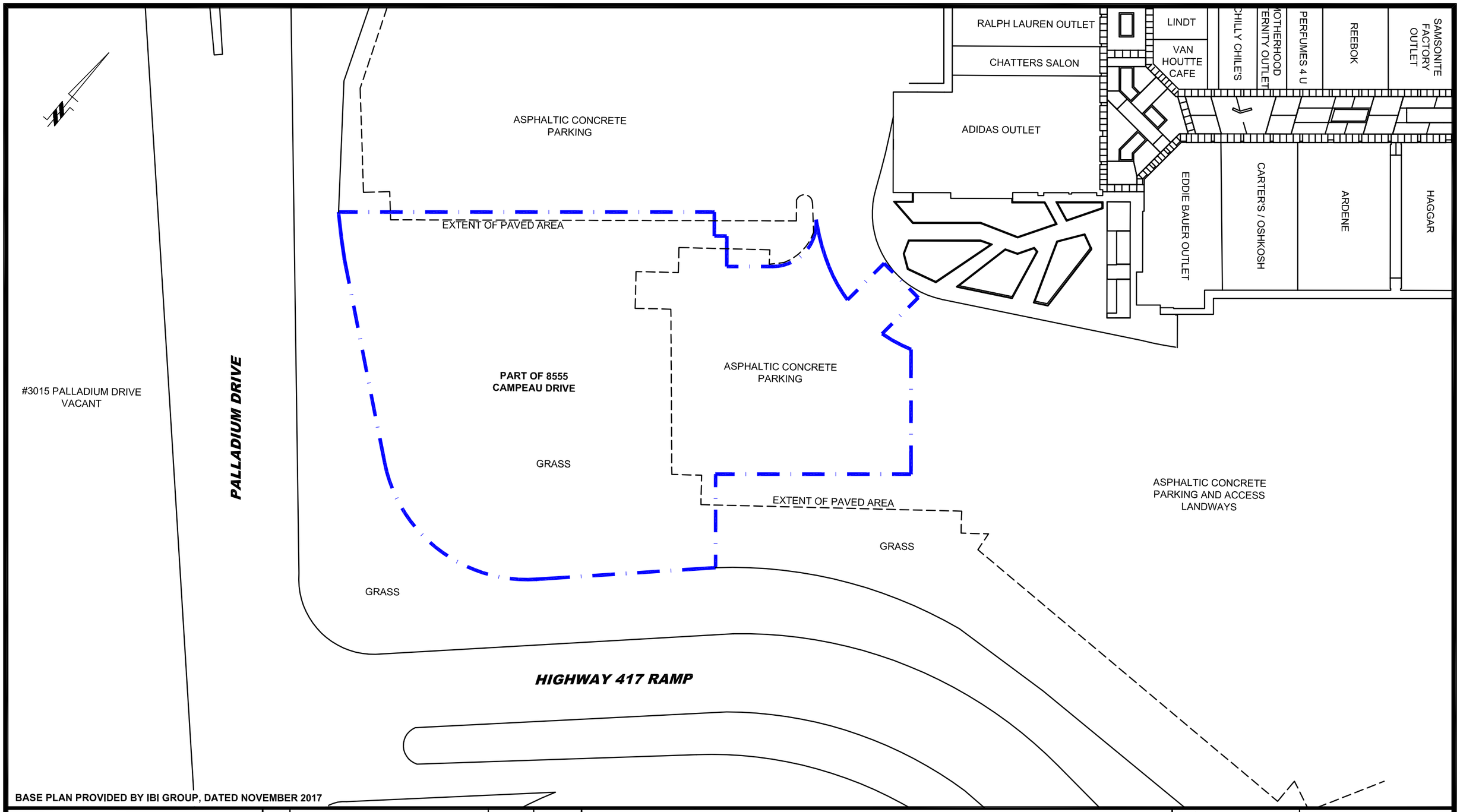


FIGURE 2

TOPOGRAPHIC MAP



BASE PLAN PROVIDED BY IBI GROUP, DATED NOVEMBER 2017

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consulting engineers

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

NO.	REVISIONS	DATE	INITIAL
0			

RIOCAN REIT

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
TANGER OUTLET MALL - 8555 CAMPEAU DRIVE

OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:750	Date: 01/2018
Drawn by: AG	Report No.: PE4225-1
Checked by: AG	Dwg. No.: PE4225-1
Approved by: MSD	Revision No.: 0

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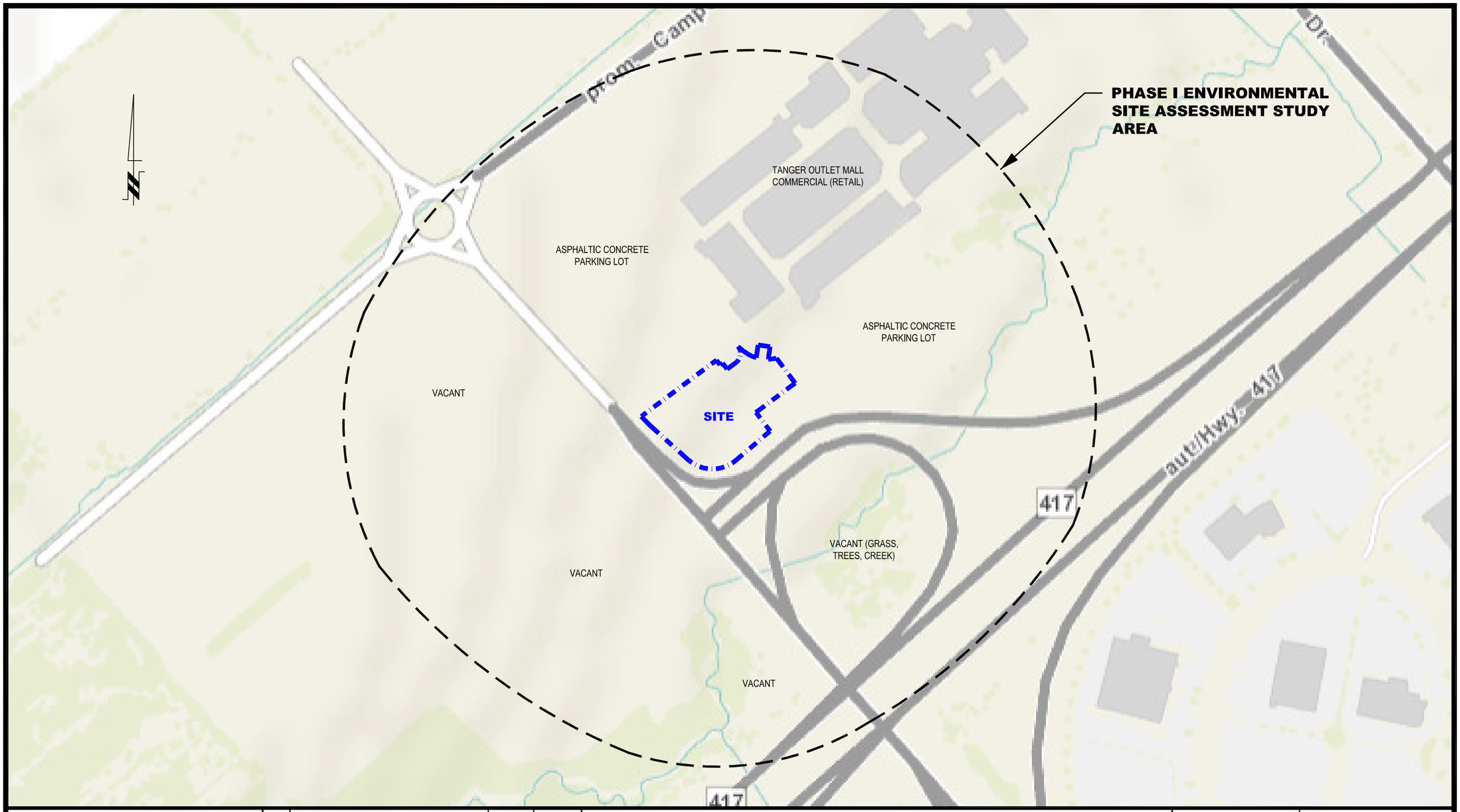

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NO.	REVISIONS	DATE	INITIAL
0			

RIOCAN REIT

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
TANGER OUTLET MALL - 8555 CAMPEAU DRIVE

OTTAWA, **ONTARIO**

Title:

SURROUNDING LAND USE PLAN

Scale: 1:3000	Date: 01/2018
Drawn by: AG	Report No.: PE4225-1
Checked by: MD	Dwg. No.: PE4225-2
Approved by: MSD	Revision No.: 0

p:\autocad drawings\environmental\pe42xx\pe4225-2 surrounding land.dwg

APPENDIX 1

PLAN OF SUBDIVISION

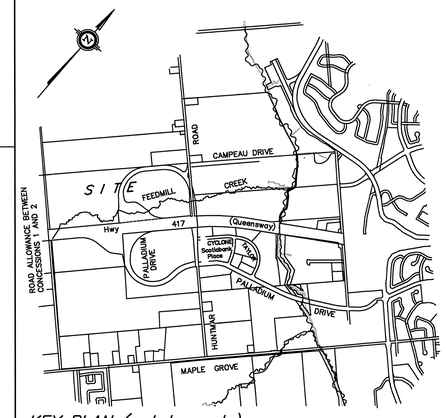
AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

SUBJECT TO THE CONDITIONS, IF ANY, SET FORTH IN OUR LETTER DATED _____ 20____

THIS DRAFT PLAN IS APPROVED BY THE CITY OF OTTAWA UNDER SECTION 51 OF THE PLANNING ACT. THIS____DAY OF _____ 20____

DERRICK MOODIE, MANAGER
DEVELOPMENT REVIEW, RURAL SERVICES BRANCH
PLANNING AND GROWTH MANAGEMENT DEPARTMENT
PLANNING AND INFRASTRUCTURE
CITY OF OTTAWA



KEY PLAN (not to scale)

DRAFT
PLAN OF SUBDIVISION OF

PART OF LOTS 3 AND 4
CONCESSION 1
Geographic Township of Huntley
CITY OF OTTAWA

STANTEC GEOMATICS LTD.

2012

SCALE 1:2000 METRIC

0 50 100 150 200 250

METRES

METRIC
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

NOTE:
H.W.M. DENOTES HIGH WATER MARK

SURVEYOR'S CERTIFICATE :

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE SUBJECT LANDS AND THEIR RELATIONSHIP TO ADJOINING LANDS HAVE BEEN ACCURATELY AND CORRECTLY SHOWN.

DATE : _____

_____
BRIAN J. WEBSTER
ONTARIO LAND SURVEYOR

OWNER'S CERTIFICATE :

I HEREBY AUTHORIZE THIS DRAFT PLAN OF SUBDIVISION TO BE SUBMITTED ON MY BEHALF.

DATE : _____ _____

ADDITIONAL INFORMATION :

d) INDUSTRIAL PARK
h) CITY WATER AVAILABLE
i) SEE SOIL REPORT
j) SEE TOPOGRAPHICAL INFORMATION
k) ALL CITY SERVICES AVAILABLE
l) NONE KNOWN

DATE	REVISIONS		BY
Sept 13/12	added Block 23 proposed intersection at Campeau Dr.	rev 21	cec
Sept 10/12	revised Pond on Block 21 per latest Engeneering plan	rev 20	cec
Aug 28/12	revised plan per per combined 30m and 15m offset	rev 19	cec
Aug 20/12	revised plan per email from Jeff Parkes	rev 18	cec
July 25/12	revised plan per email from Jeff Parkes	rev 17	cec
July 25/12	revised blocks 2 to 11 and street no. 2 per plan received	rev 16	cec
Dec 15/11	revised blocks 12 by adding block X from sketch (now named block 21)	rev 14	cec
Oct 31/11	revised street no. 1 to stop at east limit of block 1 and extended block 1 to north limit of property	rev 13	cec
May 30/11	revised blocks 12 and 14, and alignment of Palladium and Campeau drive	rev 12	cec
Dec 16/10	revised blocks 13 and 14	rev 10	cec
Dec 15/10	revised blocks 13, 21, 22 and 24	rev 9	cec
July 14/10	added blocks 37 to 39	rev 8	cec
July 8/10	added blocks 31 to 36	rev 7	cec
June 24/10	revised street alignment	rev 6	cec
April 17/09	revisions per JP/BW pdf mark-up, Street 2 & Blks 1 to 11, pdf/dwg to BW for review	REV3.DWG	CS
March 31/09	shift Street 2 north, maximize block size, update areas, pdf & dwg to BW for review	REV2.DWG	CS
March 27/09	revisions at Streets 2, 3 and Blks 7 & 8, pdf & dwg to BW for review	REV1.DWG	CS

FROM THE OFFICE OF

Stantec

STANTEC GEOMATICS LTD.

Ontario Land Surveyors
OTTAWA — ONTARIO
(613)724-3132 FAX (613)722-0769
"E"-Mail: brian.webster@stantec.com
Website: www.stantec.com

P.M.: BW | DRAWN: CEC/ME | FIELD: XX | CHECKED: XX | JOB No. : 161612756-111

NOTE:
THE PLAN DATA IS COMPILED FROM OFFICE RECORDS OF STANTEC GEOMATICS LTD. AND HAS NOT BEEN VERIFIED BY FIELD MEASUREMENTS. ALL DISTANCES ARE APPROXIMATE, TO BE VERIFIED BY FINAL REGISTERED PLAN(S).

NOTE:
ELEVATIONS ON BOREHOLES AND TEST PITS ARE GROUND ELEVATION.

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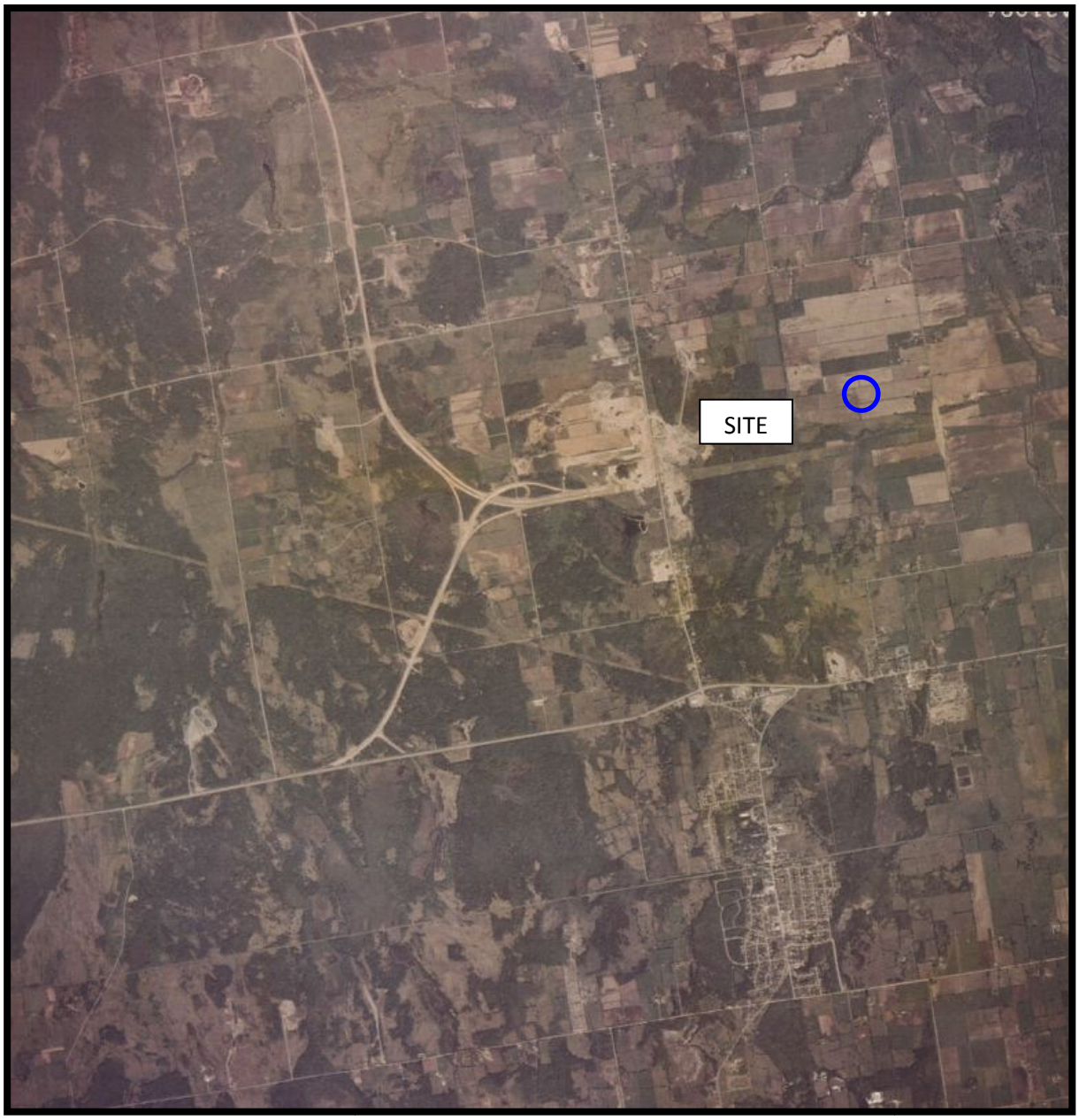
AERIAL PHOTOGRAPH
1945

AERIAL PHOTOGRAPH
1959



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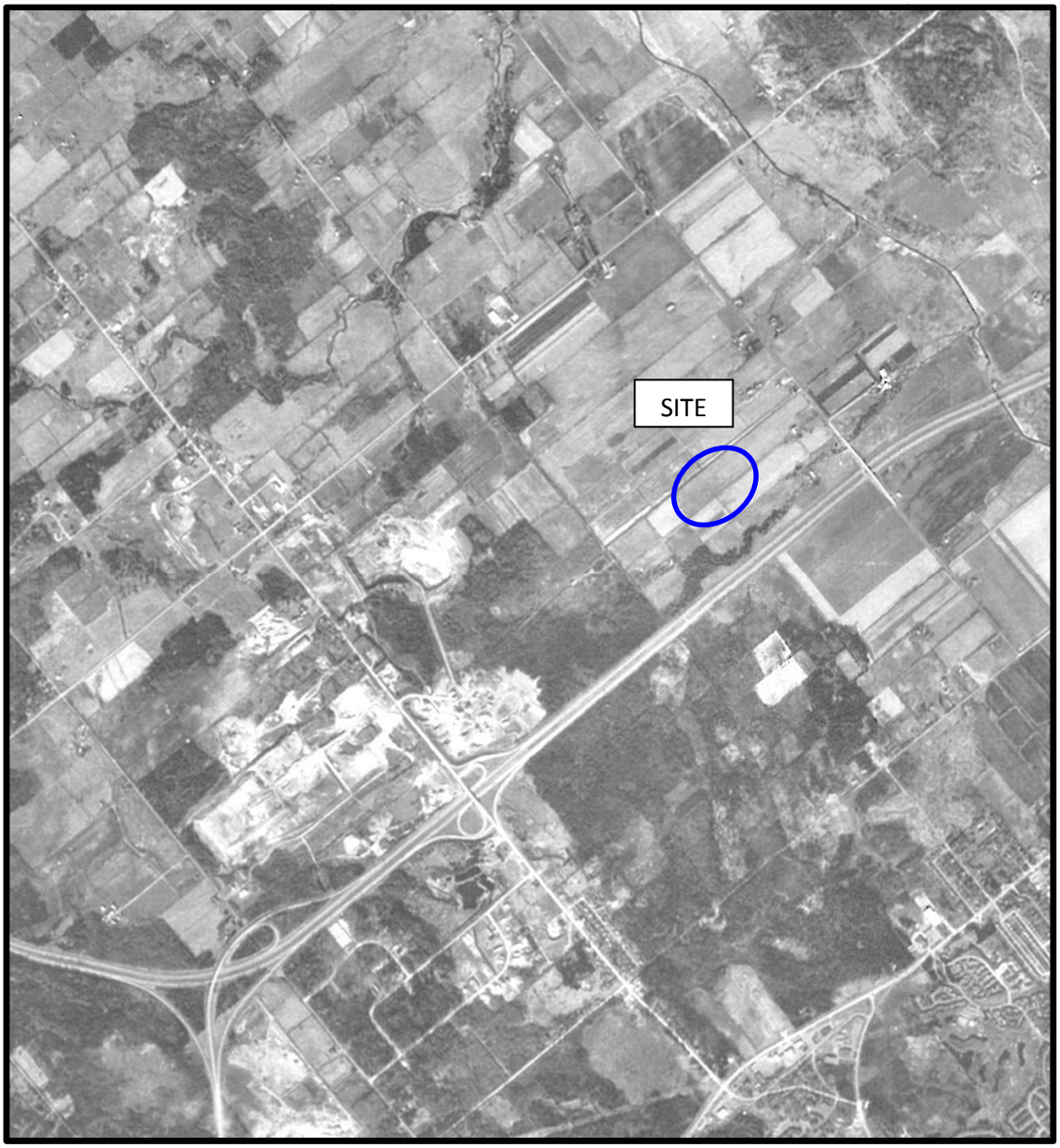
1976



AERIAL PHOTOGRAPH
1988

AERIAL PHOTOGRAPH
2002

AERIAL PHOTOGRAPH
2017

patersongroup

Site Photographs

PE4225 Tanger Outlet Mall - 8555 Campeau Drive, Ottawa, ON January 27, 2018

Photograph 1: View of the subject site, looking east.

Photograph 2: View of the subject site, looking south. The intersection of the Highway 417 ramp and Palladium Drive is visible at top right.

Site Photographs

PE4225 Tanger Outlet Mall - 8555 Campeau Drive, Ottawa, ON January 27, 2018

Photograph 3: View of the subject site, looking southwest.

Photograph 4: View of the subject site, looking west.

APPENDIX 2

MOECC FREEDOM OF INFORMATION SEARCH REQUEST

MOECC WATER WELL RECORDS

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 Paterson Group Inc. 154 Colonnade Road Ottawa, ON K2E 7J5 **Email address:** agraham@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. PE4225	Signature/Print /Name of Requester Anna Graham	☐ 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)**

8555 Campeau Drive, Ottawa (Kanata), Ontario

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

RioCan REIT -Vacant lot beside Tanger Outlet Mall

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

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.

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 (1 2) **1529619** Municipality (10 14) 15005 Con. (15 22 23 24) CON 02

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa Carleton	West Carleton - Huntley	2	2

Owner's surname (28-47)	First name	Address	Date completed (48-53)
Turpin Group Inc.		c/o Golders Ass. Ltd. 1796 Courtwood Cres. Ottawa, Ontario K2C 2B5	25 day 9 month 97 year

21 (1 2) Zone (U T M 10) Easting (12 17) Northing (18 24) RC (25 26) Elevation (RC 30) Basin Code (31 47) i ii iii iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
Brown	Clay		Packed	0	10
Gray	Clay		Sticky	10	38
Gray	Sandy Clay		Dry	38	41.6
Gray	Limestone		Medium HArd	41.6	150
Gray	Limestone		Medium Hard	150	200
	NOTE: No Water, Well was stopped at owners request				

31
32 (10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

Water found at – feet	Kind of water
(10-13)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (14)
(15-18)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (19)
(20-23)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (24)
(25-28)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (29)
(30-33)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (34) (60)

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
(10-11) 6 1/4	1 ☐ Steel 2 ☒ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (12)	.188	0	(13-16) 44.5
(17-18) 5 15/16	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic (19)		44.5	(20-23) 200
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (26)			(27-30)

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter inches (34-38)	Length feet (39-40)

Material and type	Depth at top of screen feet (41-44)	(30)

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at – feet From (10-13)	To (14-17)	Material and type (Cement grout, bentonite, etc.)
43 (18-21)	0 (22-25)	Grouted Cement (8)
(26-29)	(30-33) (80)	

71 PUMPING TEST

Pumping test method (10): 1 ☐ Pump 2 ☐ Bailer
Pumping rate (11-14): GPM
Duration of pumping (15-16) ..... Hours (17-18) ..... Mins

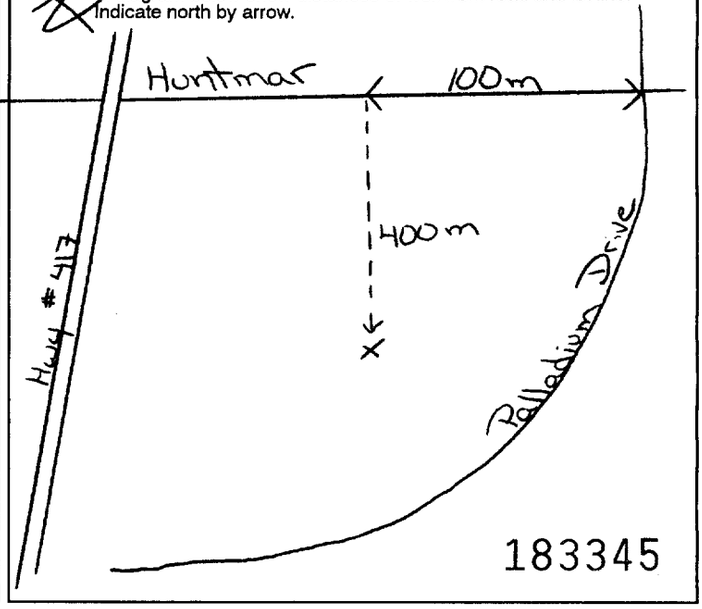
Static level feet (19-21)	Water level end of pumping feet (22-24)	Water levels during (25): 1 ☐ Pumping 2 ☐ Recovery			
		15 minutes feet (26-28)	30 minutes feet (29-31)	45 minutes feet (32-34)	60 minutes feet (35-37)

If flowing give rate GPM (38-41)	Pump intake set at feet	Water at end of test (42): ☐ Clear ☐ Cloudy
Recommended pump type: ☐ Shallow ☐ Deep	Recommended pump setting feet (43-45)	Recommended pump rate GPM (46-49)

(50-53)

LOCATION OF WELL

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



FINAL STATUS OF WELL (54)

1 ☐ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☒ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE (55-56)

1 ☐ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not used 10 ☐ Other .....

METHOD OF CONSTRUCTION (57)

1 ☐ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☐ Air percussion 6 ☒ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other .....

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: P.O. Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 29 mo 9 yr 97

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1558	OCT 17 1997
Date of inspection	Inspector	
Remarks		

2 - MINISTER OF ENVIRONMENT & ENERGY COPY

Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 (1 2) **1533405** Municipality (10 14) 15005 Con. (15 22 23 24) CON 01

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa Carleton	West Carleton - Huntley	1	3

[redacted]

Address: 8633 Purdy Rd R.R. #3 Richmond, Ontario

Date completed (46-53): 5 day 11 month 02 year

21 (1 2) UTM (10) Northing (12 17) (18 24) RC (25) Elevation (26) RC (30) Basin Code (31) ii iii iv (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To

31 (10 14 15 21) (32 43) (54 65 75 80)

32

41 WATER RECORD

Water found at - feet	Kind of water
10-13	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (14)
15-18	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (19)
20-23	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (24)
25-28	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (29)
30-33	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (34) (60)

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
10-11	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (12)			13-16
17-18	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (19)			20-23
24-25	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (26)			27-30

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38) inches	Length (39-40) feet

Material and type | Depth at top of screen (41-44) feet (30)

61 PLUGGING & SEALING RECORD

☐ Annular space ☒ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
50 (10-13)	0 (14-17)	Hole Plug
18-21	22-25	
26-29	30-33 (80)	

71 PUMPING TEST

Pumping test method (10): 1 ☐ Pump 2 ☐ Bailer

Pumping rate (11-14) GPM

Duration of pumping (15-16) Hours (17-18) Mins

Static level (19-21) feet	Water level end of pumping (22-24) feet	Water levels during (25): 1 ☐ Pumping 2 ☐ Recovery	15 minutes (26-28) feet	30 minutes (29-31) feet	45 minutes (32-34) feet	60 minutes (35-37) feet

If flowing give rate (38-41) GPM

Pump intake set at feet

Water at end of test (42): ☐ Clear ☐ Cloudy

Recommended pump type: ☐ Shallow ☐ Deep

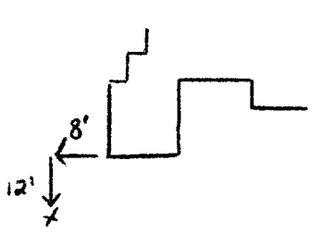
Recommended pump setting (43-45) feet

Recommended pump rate (46-49) GPM

(50-53)

LOCATION OF WELL

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



Purdy Road

250501

FINAL STATUS OF WELL (54)

1 ☐ Water supply
2 ☐ Observation well
3 ☐ Test hole
4 ☐ Recharge well
5 ☐ Abandoned, insufficient supply
6 ☐ Abandoned, poor quality
7 ☒ Abandoned (Other)
8 ☐ Dewatering
9 ☐ Unfinished
10 ☐ Replacement well

WATER USE (55-56)

1 ☐ Domestic
2 ☐ Stock
3 ☐ Irrigation
4 ☐ Industrial
5 ☐ Commercial
6 ☐ Municipal
7 ☐ Public supply
8 ☐ Cooling & air conditioning
9 ☐ Not use
10 ☐ Other

METHOD OF CONSTRUCTION (57)

1 ☐ Cable tool
2 ☐ Rotary (conventional)
3 ☐ Rotary (reverse)
4 ☐ Rotary (air)
5 ☐ Air percussion
6 ☐ Boring
7 ☐ Diamond
8 ☐ Jetting
9 ☐ Driving
10 ☐ Digging
11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: P.O. Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 21 mo 11 yr 02

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1558	DEC 17 2002
Date of inspection	Inspector	
Remarks: CSG.EQ2		

0506 (07/00) Front Form 9

2 - MINISTRY OF THE ENVIRONMENT COPY

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Anna Graham, M.E.S.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Environmental Assessor

EDUCATION

McGill University, B.Sc. 2010
Biology and English Literature

Queen`s University, M.E.S. 2012
Environmental Studies

EXPERIENCE

2014 to Present
Paterson Group Inc.
Consulting Engineers
Environmental Assessor

2013 to 2014
Civica Infrastructure Inc.
Municipal Water Resources Engineering - Vaughan
Project Support Coordinator, Project Proposal Writer

PROJECTS

Environmental Impact Statements – various, Ottawa
Phase I Environmental Site Assessments – various, Ottawa
Flood Mapping Project Coordination – Credit Valley Conservation Authority
Manhole Survey Tool Design and Data Processing – City of Markham
Proposal Preparation – Utilities Kingston Inflow and Infiltration Study, City of Peterborough Drainage Study

Mark S. D'Arcy, P. Eng.

patersongroup

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

POSITION

Associate and Supervisor of the Environmental Division
Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991
Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

1991 to Present
Paterson Group Inc.
Associate and Senior Environmental/Geotechnical Engineer
Environmental and Geotechnical Division
Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island
Agricultural Supply Facilities - Eastern Ontario
Laboratory Facility – Edmonton (Alberta)
Ottawa International Airport - Contaminant Migration Study - Ottawa
Richmond Road Reconstruction - Ottawa
Billings Hurdman Interconnect - Ottawa
Bank Street Reconstruction - Ottawa
Environmental Review – Various Laboratories across Canada - CFIA
Dwyer Hill Training Centre – Ottawa
Nortel Networks Environmental Monitoring - Carling Campus – Ottawa
Remediation Program - Block D Lands – Kingston
Investigation of former landfill sites – City of Ottawa
Record of Site Condition for Railway Lands – North Bay
Commercial Properties – Guelph and Brampton
Brownfields Remediation – Alcan Site - Kingston
Montreal Road Reconstruction - Ottawa
Appleford Street Residential Development - Ottawa
Remediation Program - Ottawa Train Yards
Remediation Program - Bayshore and Heron Gate
Gladstone Avenue Reconstruction – Ottawa
Somerset Avenue West Reconstruction - Ottawa