patersongroup remedial action plan

consulting engineers

to:	10869279 Canada Inc. - **Mr. Martin Chénier** - chenierm@live.ca
re:	Environmental Remedial Action Plan **Proposed Residential Development - 1649 Montreal Road & 741 Blair Road, Ottawa, Ontario**
date:	January 24, 2022
file:	PE5061-RAP.01
from:	Nick Sullivan

Further to your request and authorization, Paterson Group (Paterson) has prepared a remedial action plan for the proposed residential development at the aforementioned property (the subject site). The subject site is located on the north side of Montreal Road, east of Blair Road, in the City of Ottawa, Ontario.

The subject site is currently occupied with a one storey auto service garage (1649 Montreal Road), as well as a vacant two storey residential dwelling (741 Blair Road), and is situated within a municipal urban setting consisting of mixed residential and commercial land uses.

Environmental Site Conditions

In October 2020, Paterson completed a Phase I - Environmental Site Assessment (Phase I ESA) for the subject site. According to the historical research, the subject site was initially developed with a residential dwelling (741 Blair Road), sometime prior to 1928. An auto service garage and retail fuel outlet were later constructed on the subject site (1649 Montreal Road) sometime in the early 1960's.

According to previous environmental reports conducted for the subject site, two (2) underground waste oil storage tanks and two (2) in-ground hydraulic hoists were formerly present on the subject site. These were decommissioned and removed from the subject site sometime in the late 1990's/early 2000's. A site remediation program was also carried out in conjunction with the decommissioning of the retail fuel outlet.

During the inspection of the auto service garage, one (1) aboveground motor oil storage tank and two (2) aboveground waste oil tanks were observed on-site. These tanks were noted to be in good condition, with no signs of leaks or staining in their vicinity. The floor drains within the maintenance bays of the auto service garage reportedly feed into two (2) oil/water separators before ultimately draining into the City of Ottawa sanitary sewer system.

The neighbouring properties have historically consisted of residential and commercial lands. No environmental concerns were identified with respect to the neighbouring properties.

In October 2020, a Phase II ESA was conducted for the subject site to address the aforementioned APECs identified on the subject site. The subsurface investigation consisted of drilling seven (7) boreholes throughout the subject site, of which five (5) were instrumented with groundwater monitoring wells.

Nine (9) soil samples, recovered from the boreholes, were submitted for laboratory analysis of BTEX, PHCs (F1-F4), metals, and/or pH parameters. Based on the analytical test results, some petroleum hydrocarbon contamination was identified in the shallow layer of fill material (extending from ground surface to a depth of approximately 1.5 m) located at the rear of the auto service garage building.

Groundwater samples were also recovered from the monitoring wells installed on-site and submitted for laboratory analysis of BTEX, VOCs, and/or PHCs (F1-F4) parameters. No contaminated groundwater was identified on the subject site.

Based on the findings of the Phase II ESA, PHC contaminated soil/fill material was identified on-site, requiring some remedial work. Please refer to the following section for further details on the recommended plan for site remediation.

Remedial Action Plan/Soil Quality Assessment

The suggested action plan consists of a generic approach, where the excavation and removal of site soils will be undertaken. The suggested action plan is as follows:

- ❏ It is our understanding that the majority of the on-site soils will be removed during site re-development, and that the excavation will extend into the bedrock.

- ❏ Paterson personnel will be present on-site to monitor the excavation and removal of any impacted soils.

- ❏ Excavated soils will be screened using visual and olfactory observations as well as a portable soil vapour analyser. Field observations will be used in combination with the collection and analytical testing of interim confirmatory base samples for PHC parameters in the area of contamination.

- ❏ Any impacted soils identified will be placed in trucks and hauled to an approved waste disposal facility. A toxicity characteristic leaching procedure (TCLP) sample will be obtained and submitted for laboratory analysis prior to the transportation of any impacted soils to a licensed waste disposal site.

- ❏ Based on the findings of the Phase II ESA, the groundwater beneath the Phase II property is not contaminated.

- Upon completion of the remedial program, a summary report will be prepared including our observations, findings, and analytical test results. This remediation report will be incorporated into our Phase II ESA for submission to the city.

We trust that this information satisfies your requirements.

Best Regards,

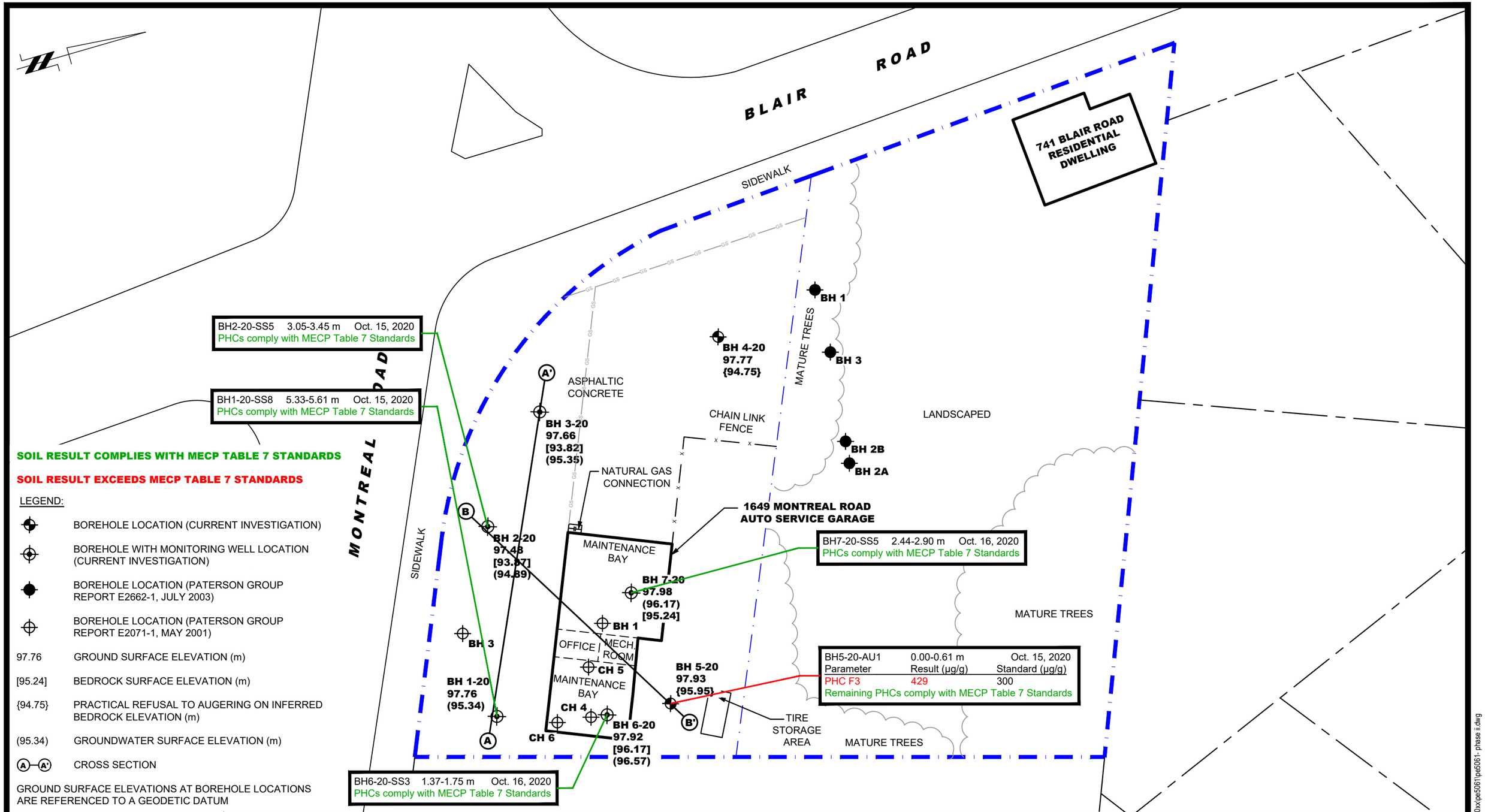
Paterson Group Inc

Nick Sullivan, B.Sc.

Mark D'Arcy, P.Eng.

Attachments

- Drawing PE5061-4 - Analytical Testing Plan - Soil (PHCs)
- Drawing PE5061-4B - Cross Section B-B' - Soil (PHCs)



SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

LEGEND:

- BOREHOLE LOCATION (CURRENT INVESTIGATION)
- BOREHOLE WITH MONITORING WELL LOCATION (CURRENT INVESTIGATION)
- BOREHOLE LOCATION (PATERSON GROUP REPORT E2662-1, JULY 2003)
- BOREHOLE LOCATION (PATERSON GROUP REPORT E2071-1, MAY 2001)
- 97.76 GROUND SURFACE ELEVATION (m)
- [95.24] BEDROCK SURFACE ELEVATION (m)
- {94.75} PRACTICAL REFUSAL TO AUGERING ON INFERRED BEDROCK ELEVATION (m)
- (95.34) GROUNDWATER SURFACE ELEVATION (m)
- A—A' CROSS SECTION

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM

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NO.	REVISIONS	DATE	INITIAL

10869279 CANADA INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1649 MONTREAL ROAD AND 741 BLAIR ROAD

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (PHCs)

Scale: 1:400	Date: 10/2020
Drawn by: YA	Report No.: PE5061-2
Checked by: NS	Dwg. No.: PE5061-4
Approved by: MSD	Revision No.:

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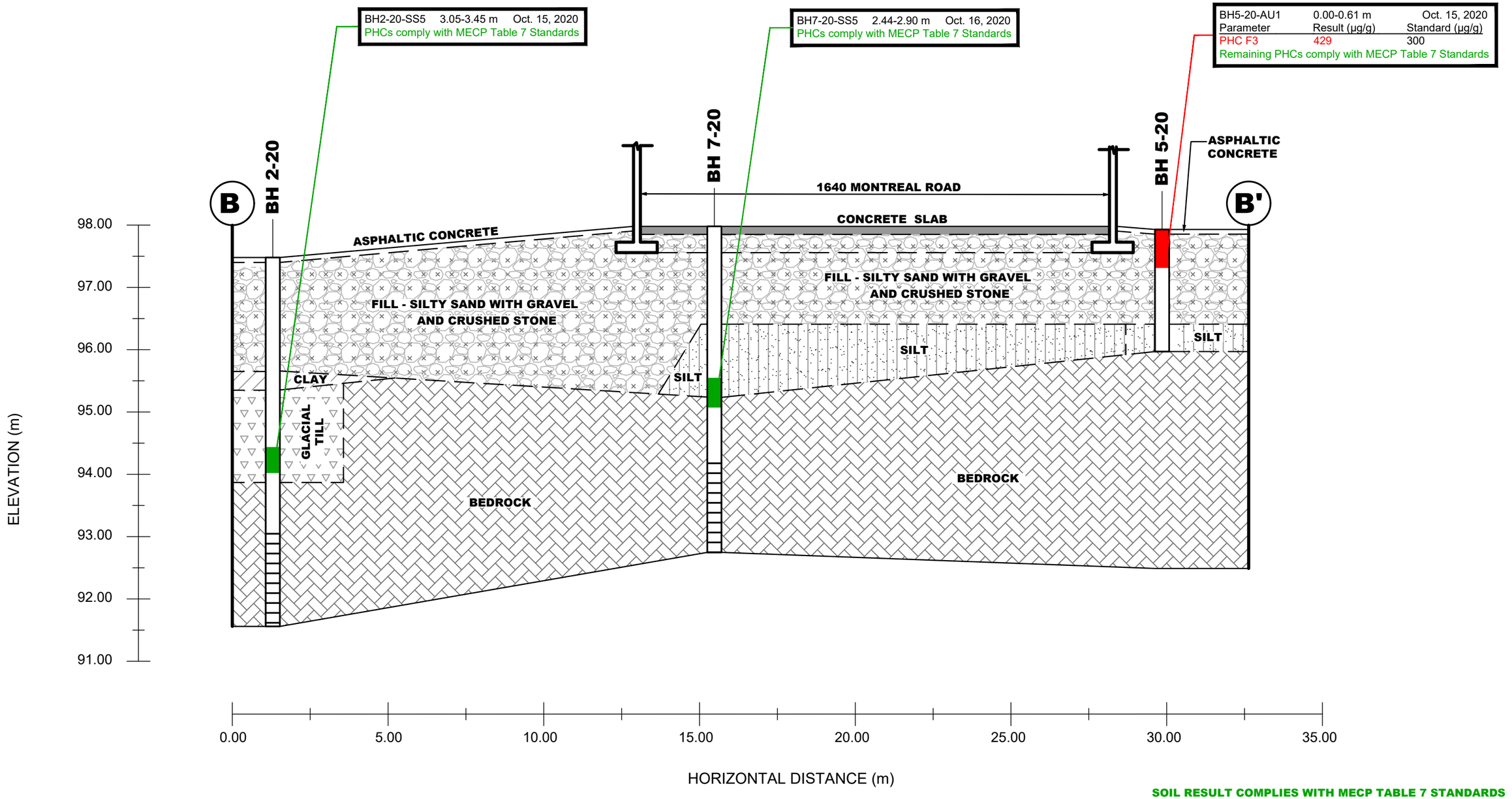
BH2-20-SS5 3.05-3.45 m Oct. 15, 2020
PHCs comply with MECP Table 7 Standards

BH7-20-SS5 2.44-2.90 m Oct. 16, 2020
PHCs comply with MECP Table 7 Standards

BH5-20-AU1	0.00-0.61 m	Oct. 15, 2020
Parameter	Result (µg/g)	Standard (µg/g)
PHC F3	429	300

Remaining PHCs comply with MECP Table 7 Standards



SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1649 MONTREAL ROAD AND 741 BLAIR ROAD

OTTAWA, ONTARIO

Title:

CROSS SECTION B-B' - SOIL (PHCs)

Scale: AS SHOWN	Date: 10/2020
Drawn by: YA	Report No.: PE5061-2
Checked by: NS	Dwg. No.: PE5061-4B
Approved by: MSD	Revision No.:

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