



Septic System Feasibility Report

Victoria Sanderson

Project Name:

Proposed Lot Severance
2 Park Crescent
Poplar Hill, Ontario

Project Number:

LON-00018542-GE

Prepared By:

EXP Services Inc.
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Date Submitted:

August 17, 2022

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Victoria Sanderson

Type of Document:

Geotechnical Report

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Handwritten signature of Eric Buchanan in black ink.

Eric Buchanan, P.Eng.
Geotechnical Services

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Botel Chiu, M.Eng., P.Eng.
Vice President, Earth and Environment
Southwestern Ontario

Date Submitted:

August 17, 2022

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1. Introduction and Background

1.1 Introduction

EXP Services Inc. (EXP) was retained by **Victoria Sanderson** (Client) to carry out a Septic System Feasibility Report in conjunction with a proposed lot severance at 2 Park Crescent in Poplar Hill, Ontario. It is understood that the new lot will have an individual well and private septic system. This report summarizes the results of the assessment and provides discussion and recommendations to support the design and construction of the proposed residential septic system.

1.2 Terms of Reference

Authorization to proceed with the investigation was received from Mr. Rob Sanderson on behalf of the Client through email correspondence.

Based on an interpretation of the factual test hole data, a review of soil and groundwater information from test holes advanced at and near the site, EXP has provided geotechnical engineering guidelines to assist with the design and construction of the proposed septic systems for the subdivision development. More specifically, this report provides geotechnical comments and discussion pertaining to separation distances, percolation rates, Class 4 septic systems, and confirmation of lot sizing, as related to the Ontario Building Code.

This report is provided on the basis of the Terms of Reference presented above, and on the assumption that the design will be in accordance with applicable codes and standards. If there are any changes in the design features relevant to the hydrogeological analyses, or if any questions arise concerning hydrogeological aspects of the codes and standards, this office should be contacted to review the design.

The information in this report in no way reflects on the environmental aspects of the soil. Should specific information in this regard be needed, additional testing may be required.

Reference is made to **Appendix C** of this report, which contains further information necessary for the proper interpretation and use of this report.

2. Methodology

2.1 Background

EXP Services Inc. (EXP) was retained by **Victoria Sanderson** to prepare a Septic System Feasibility Report for the proposed new lot. The new lot is planned to be created by severing off 0.098 hectares (ha) of the existing lot at 2 Park Crescent and merging with the existing 0.098 ha lot south of the intersection of Park Crescent and Currie Court. The proposed severance sketch prepared by Callon Dietz Inc. is provided as **Drawing 2**, appended.

2.2 Field Procedures

The fieldwork for the investigation was carried out on December 18th, 2020 and February 3rd and 10th, 2022. In general, the site investigation consisted of the advancement of two (2) test pits and two (2) boreholes at the locations denoted on **Drawing 1** as TP1 to TP2 and BH1/MW to BH2/MW.

The 2 boreholes were advanced to depths ranging from between 9.6 to 11.1 metres below ground surface (bgs). Each of the boreholes was instrumented with groundwater monitoring wells for the purposes of determining static groundwater levels and for the collection of samples for laboratory analysis. The boreholes were advanced using continuous flight auger equipment operated by a specialist drilling subcontractor under the full-time supervision of EXP geotechnical staff.

During the drilling, the stratigraphy in the boreholes was examined and logged in the field by EXP geotechnical personnel. All samples recovered were transported to the London EXP laboratory for detailed examination.

The 2 test pits were excavated at each of the lots at the above mentioned location, using a back-hoe excavator. The test pits were terminated at depths of approximately 4.3 m below ground surface (bgs). Laboratory testing included one (1) grain size analysis on a grab sample recovered from the proposed new merged lot with results presented in **Appendix B**.

3. Site and Subsurface Conditions

3.1 Site Description

The subject area is currently occupied by a residential building with two out-buildings and occasional trees in the northwestern portion and generally grassed elsewhere with a occasional trees. The Site is generally bounded by agricultural fields and residential buildings along Ilderton Road. The following sections provide a summary of the soil and groundwater conditions.

3.2 Soil Stratigraphy

The detailed stratigraphy encountered in each test hole is shown on the borehole and test pit logs found in **Appendix A** and summarized in the following paragraphs. It must be noted that the boundaries of the soil indicated on the test hole logs are inferred from non-continuous sampling and observations during drilling. These boundaries are intended to reflect transition zones for geotechnical design and should not be interpreted as exact planes of geological change.

3.2.1 Topsoil

Each test hole was surfaced with a layer of topsoil ranging between 200 mm and 300 mm in thickness.

It should be noted that topsoil quantities should not be established from the information provided at the borehole locations only. If required, a more detailed analysis (involving shallow test pits) is recommended to accurately quantify the amount of topsoil to be removed for construction purposes.

3.2.2 Silty Sand

Beneath the topsoil and extending to 5.5 m to 5.8 m below ground surface (bgs) in the boreholes was a layer of silty sand. The test pits were terminated in the silty sand layer at 4.3 m bgs. The silty sand was typically brown in colour and moist to wet (tactile examination and *in situ* moisture content of 12 percent).

3.2.3 Clayey Silt

Underlying the silty sand in each borehole and extending to between 8.5 m and 9.8 m bgs was a layer of clayey silt. The clayey silt was grey in colour, contained trace sand, was stiff in consistency (SPT N Values of 8 to 11) and moist (tactile examination and *in situ* moisture contents of 18 to 20 percent).

3.2.4 Sand

Each borehole was terminated in a stratum of sand. The sand was generally brown in colour, fine grained, with trace silt, compact (SPT N Values of 13 to 24), and wet (tactile examination and *in situ* moisture content of 21 percent).

3.3 Groundwater Conditions

Two (2) monitoring wells were installed during the drilling on February 3rd and 10th, 2022 at the Site. The wells were installed to depths of approximately 9.1 m to 10.7 m bgs. The summary of well construction details and stabilized groundwater levels are presented in the tables below.

Table 1 – Monitoring Well Construction Details

Well ID	Completion Depth (m bgs)	Screen Length (m)
BH1/MW	10.67	1.52
BH2/MW	9.14	1.52

Table 2 – Stabilized Groundwater Levels

Well ID	Depth to Groundwater, m bgs		
	7-Mar-2022	29-Mar-2022	11-May-2022
BH1/MW	8.25	8.35	8.38
BH2/MW	8.33	8.27	8.29

The EXP monitoring wells have been registered with the Ministry of the Environment, Conservation and Parks (MECP), in accordance with Ontario Regulation 903, and remain intact for the purposes of ongoing monitoring of stabilized groundwater conditions, as required.

4. Septic System Design Strategy

The new enlarged lot proposed as part of the lot severance will be serviced with an individual on-site septic system. The following information is provided regarding the use of a new private septic system. A conventional Class IV Septic System can be considered for the new lot.

4.1 Separation Distances

Setbacks for any new septic system construction at the Site are summarized in the 2012 Ontario Building Code, Section 8.2.1.6. In general, the following minimum setback distances (based on OBC 2012 Table 8.2.1.6.A.) are required for septic treatment units.

- 15 m clearance for surface water bodies, including lakes, ponds, reservoir, spring, rivers, streams;
- 1.5 m clearance for existing (or proposed) structures;
- 3 m clearance from property lines;
- 15 m clearance for wells.

Additional clearances (in accordance with OBC 2012 Table 8.2.1.6.B.) are applicable to the distribution piping for new septic system. These setbacks are applicable for both in-ground and raised septic distribution systems.

No potable wells were noted within the proposed enhanced lot shown on the severance sketch (**Drawing 2**). The proposed lot size is sufficient to locate the potable well at 15 m distance from the septic system. No conflict is anticipated between private septic service and existing potable wells.

Lot grading plans will be prepared and reviewed by qualified engineering personnel to verify that adequate clearances are provided from lot lines and proposed residential dwelling.

4.2 Soil Type and Percolation Rate

The test hole information indicated that the upper overburden soil type at this site which is considered in the design of septic disposal system comprises silty sand, 'SM' soil type. The 'T' time was estimated based on visual examination and comparison of the grain size distribution results which were carried out by EXP (see Figure 1, **Appendix B**). The applicable soil percolation rate (design T-time) is summarized below:

- The upper silty sand found at the test pit locations can be expected to exhibit a percolation 'T' time of 8 to 20 min/cm based on the 'SM' classification and Table 2 of OBC 2012 Supplementary Standard SB-6. A value of 12 min/cm has been used in the calculations below.
- The shallow tile field is expected to be well above the high water level as measured on site.

4.3 Type of Septic System, in Accordance with OBC

The soil and groundwater conditions are generally considered suitable for installation of conventional in-ground Class IV Septic System, where subgrade soils comprise sandy soil.

A review of the sizing requirements for the lots at the proposed development area was carried out using the assumption that the subgrade soils comprise silty sand soils described previously.

4.4 Lot Sizing Confirmation

The proposed severance will result in a new lot with an approximate area of 1,960 m², with the expectation that a moderate home will be constructed on the new lot.

For the purposes of confirming that the proposed lot size is suitable to accommodate the expected residential dwelling, septic system, septic contingency area and required separation distances, EXP has reviewed the lot size and configuration shown on the proposed severance sketch prepared by Callon Dietz Inc. An assessment has been done for the new lot to determine whether the proposed lot area is suitable to accommodate the onsite septic system.

Assuming a typical house with a living area of approximately 200 m², (i.e. two floors of living area each with a footprint of 100 m²) and 3 bedrooms, there is sufficient room for each of the lots to be serviced with a conventional Class IV Septic bed distribution system, based on the following design parameters:

- Assume daily flow, Q is 1600 L/day as per Table 8.2.1.3.A of the 2012 OBC;
- 3,600 L septic tank holding capacity as per Section 8.2.2.3 of the 2012 OBC; and
- T-time of natural subgrade soils is 12 min/cm (silty sand soils found below the topsoil at the test hole locations).
- Incorporation of an in-ground Class IV System

Assuming that the site grading will not be changed substantially, an in-ground septic system can be considered. Based on the OBC, the length of absorption trench is given by the equation in the box below:

$L = QT / 200$ <p>Where Q = 1600 L / day T = 12 min / cm (assuming sand soils) $L = 96 \text{ m}$</p>
--

The 96 m length of absorption trench could be achieved through a configuration of 5 rows of 20 m length. Assuming the absorption trenches are centred at least 1.6 m apart, a bed size of approximately 128 m² could be utilized for design purposes. A 100 % contingency area should also be considered.

4.5 Contingency Planning

The available space for the proposed new lot is considered to be sufficient to construct a residential dwelling (with two floors of approximate living area of 100 m² each (200 m² combined), as noted previously), which is serviced with a conventional Class IV Septic System.

There is sufficient room to provide a second septic distribution field, in the unlikely event that an unforeseen failure of the initial septic distribution system occurs, as outlined in the table below:

Total Lot Area	1,960 m ²
Area of House, (assuming 100 m ² footprint and 2 storeys)	100 m ²
Area of Septic Field (assuming silty sand soils with T = 12 min/cm)	128 m ²
Contingency Septic Field Area	128 m ²
Remaining Available Space	1,604 m ²

The remaining available space, as noted in the above table allows sufficient room for required building and septic system setbacks which are applicable to the site, in accordance with the Ontario Building Code. **Drawing 3** provides a typical septic layout for the new lot.

The septic and house layout shown on **Drawing 3** is provided for assessment purposes. Other septic configurations and house sizes can be accommodated on the lot, as evidenced by the remaining available space and can be determined at the time of permit. The final approval should be subject to the chief building official as per the OBC.

4.6 Conclusions

Based on the above information, the proposed lot size is sufficient to be serviced by a private Class IV Sewage System (and replacement tile bed) in accordance with MECP and 2012 OBC standards. OBC 2012 Part 8 will apply to the installation and construction of the private septic systems.

The proposed lot layout and the proposed septic system have demonstrated sufficient design consideration to manage the private sewage systems.

5. General Comments

The information presented in this report is based on a limited investigation designed to provide information to support an assessment of the current geotechnical conditions within the subject property. The conclusions and recommendations presented in this report reflect site conditions existing at the time of the investigation. Consequently, during the future development of the property, conditions not observed during this investigation may become apparent. Should this occur, EXP Services Inc. should be contacted to assess the situation, and the need for additional testing and reporting. EXP has qualified personnel to provide assistance in regards to any future hydrogeological, geotechnical and environmental issues related to this property.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession.

The comments given in this report are intended only for the guidance of design engineers. The number of test holes required to determine the localized underground conditions between test holes affecting construction costs, techniques, sequencing, equipment, scheduling, etc. would be much greater than has been carried out for design purposes. Contractors bidding on or undertaking the works should in this light, decide on their own investigations, as well as their own interpretations of the factual test hole results, so that they may draw their own conclusions as to how the subsurface conditions may affect them.

EXP Services Inc. should be retained for a general review of the final design and specifications to verify that this report has been properly interpreted and implemented. If not afforded the privilege of making this review, EXP Services Inc. will assume no responsibility for interpretation of the recommendations in this report.

This report was prepared for the exclusive use of **Victoria Sanderson** and may not be reproduced in whole or in part, without the prior written consent of EXP, or used or relied upon in whole or in part by other parties for any purposes whatsoever. Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Drawings



-LEGEND-

- ◆ BH1/MW Approximate Borehole Location
- TP1 Approximate Test Pit Location

-NOTES-

1. The boundaries and soil types have been established only at test hole locations. Between test holes they are assumed and may be subject to considerable error.
2. Soil samples will be retained in storage for 3 months and then destroyed unless client advises that an extended time period is required.
3. Topsoil quantities should not be established from the information provided at the test hole locations.
4. The site plan was reproduced from Google Earth Pro and should be read in conjunction with EXP Septic System Feasibility Report LON-00018542-GE.

Septic System Feasibility Study

Proposed Lot Severance

2 Park Crescent, Poplar Hill, Ontario

CLIENT				Victoria Sanderson	
TITLE				Test Hole Location Plan	
Prepared By: E.B.			Reviewed By: B.C.		
		EXP Services Inc.			
		15701 Robin's Hill Road, London, ON, N5V 0A5			
DATE	APPROXIMATE SCALE	PROJECT NO.	DWG.		
AUGUST 2022	1:1,000	LON-00018542-GE	1		

METRIC

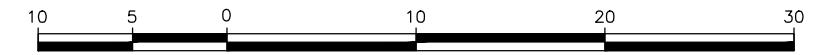
DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

SKETCH SHOWING PROPOSED SEVERANCE

OF PART OF
LOT 5, CONCESSION 8
GEOGRAPHIC TOWNSHIP OF LOBO

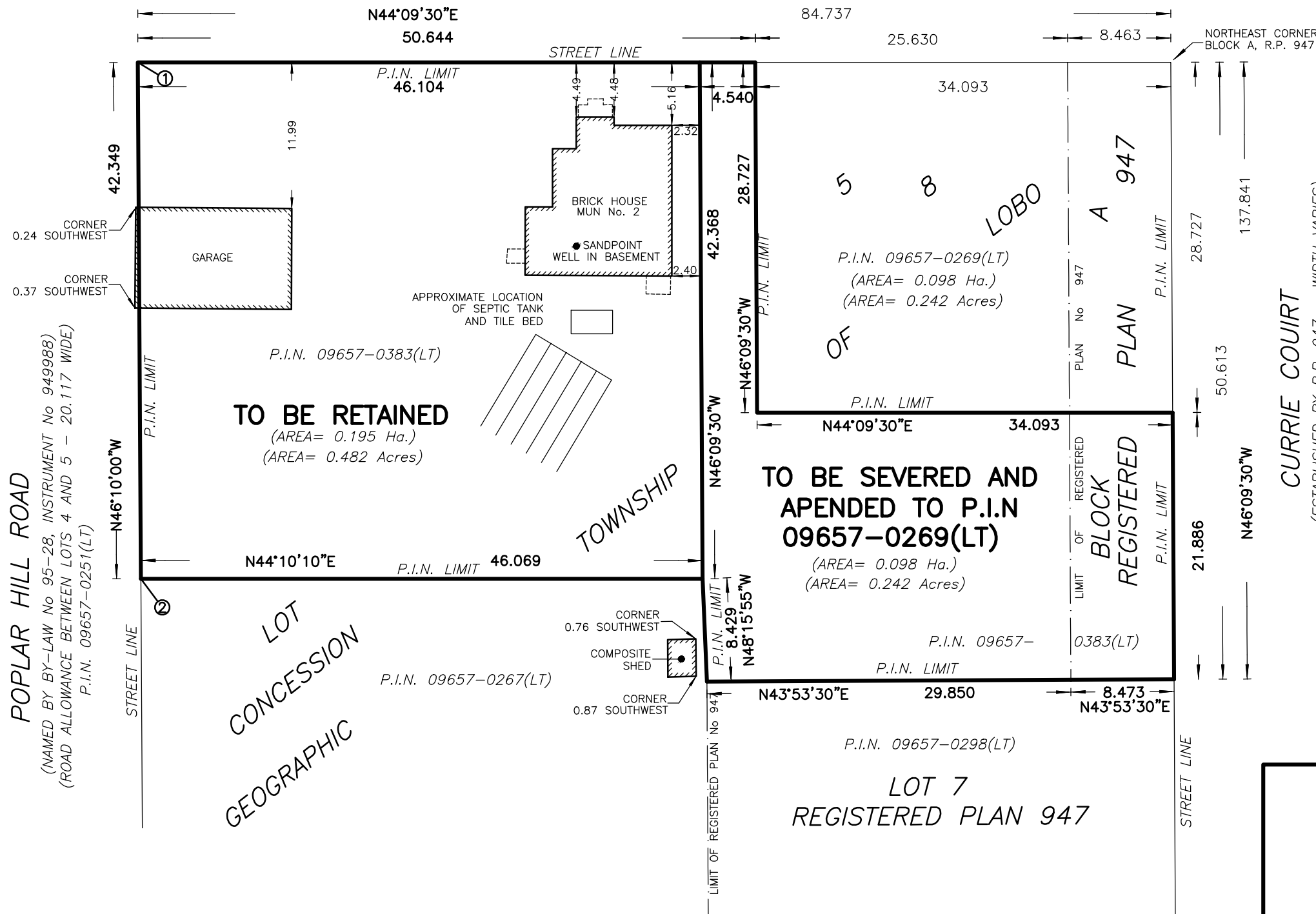
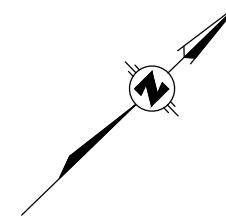
IN THE
MUNICIPALITY OF MIDDLESEX CENTRE
COUNTY OF MIDDLESEX

SCALE 1 : 400 (METRIC)



(SCALE IN METRES)

PARK CRESCENT
(NAMED BY BY-LAW No 95-28, INSTRUMENT No 949988)
(15.301 WIDE)
P.I.N. 09657-0382(LT) PART 1, PLAN 33R-13076



INTEGRATION DATA

BEARINGS ARE MTM GRID DERIVED FROM SPECIFIED CONTROL POINTS SCP 00820050112 AND SCP 00820058076, MTM-11 NAD-1983:CSRS:CBNv6-2010.0.

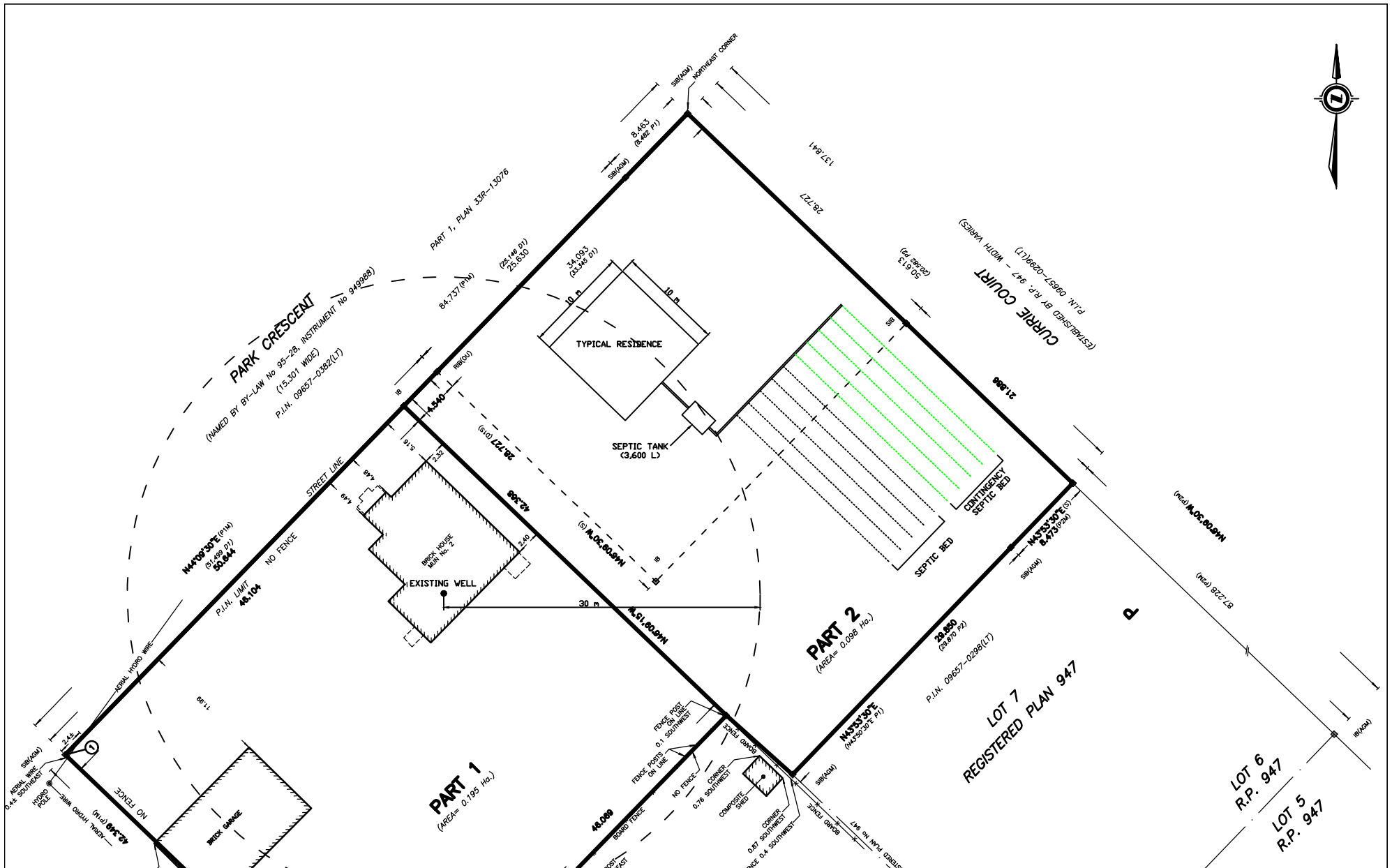
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99993865.

SPECIFIED CONTROL POINTS (SCP's): MTM-11, NAD83:CSRS:CBNv6-2010.0 COORDINATES TO URBAN ACCURACY PER SEC. 14 (2) OF O.REG. 216/10		
POINT ID	NORTHING	EASTING
SCP 00820050112	4760145.952	380727.461
SCP 00820058076	4759065.392	381697.507
PLAN COORDINATES, MTM ZONE 10, NAD83:CSRS:CBNv6-2010.0		
1	4763291.948	385266.726
2	4763262.623	385297.289
COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN		

Callon + Dietz INCORPORATED
ONTARIO LAND SURVEYORS
CARLETON PLACE LONDON NORTH BAY
info@callondietz.com callondietz.com

SURVEY BY: PK DRAWN BY: DY FILE No: 20-23699 PLAN No: L-8708


REGISTERED
ISO 9001



-NOTES-

1. The site plan was reproduced from drawing prepared by Callon Dietz Inc. and should be read in conjunction with EXP Septic System Feasibility Report LON-00018542-GE.

Septic System Feasibility Study
Proposed Lot Severance
 2 Park Crescent, Poplar Hill, Ontario

CLIENT Victoria Sanderson	
TITLE Typical Septic Layout	
Prepared By: E.B.	Reviewed By: B.C.
 EXP Services Inc. 15701 Robin's Hill Road, London, ON, N5V 0A5	
DATE AUGUST 2022	APPROXIMATE SCALE 1:500
PROJECT NO. LON-00018542-GE	DWG. 3

Appendix A – Borehole and Test Pit Logs



BOREHOLE LOG

BH1/MW

Sheet 1 of 1

CLIENT Victoria Sanderson PROJECT NO. LON-00018542-GE
 PROJECT Proposed Lot Severance DATUM _____
 LOCATION 2 Park Crescent, Poplar Hill, ON DATES: Boring February 3, 2022 Water Level May 11/22

DEPTH (m bgs)	ELEVATION (-m)	STRATA DESCRIPTION	STRATA PLOT	WELL LOG	SAMPLES			MOISTURE CONTENT (%)	SHEAR STRENGTH	
					TYPE	NUMBER	RECOVERY (mm)		N VALUE (blows)	◆ S Field Vane Test (#=Sensitivity)
0	0.3	TOPSOIL - 250 mm SILTY SAND - brown, moist to wet								
5	5.5	CLAYEY SILT - grey, trace sand, stiff, moist			AS	S1		12	◆	
6					SS	S2	400	8	● ○	
8					SS	S3	450	9	● ○	
9.8		SAND - brown, fine grained, trace silt, compact, wet								
11	11.1	End of Borehole at 11.1 m bgs.			SS	S4	450	13	● ○	

NOTES

- Borehole Log interpretation requires assistance by EXP before use by others and must be read in conjunction with EXP Report LON-00018542-GE.
- bgs denotes below ground surface.
- No significant methane gas concentration was detected upon completion.
- Water Level Readings:
 Mar 7, 2022 - 8.25 m bgs
 Mar 29, 2022 - 8.35 m bgs
 May 11, 2022 - 8.38 m bgs

SAMPLE LEGEND
 ☒ AS Auger Sample ☒ SS Split Spoon ■ ST Shelby Tube
 ☐ Rock Core (eg. BQ, NQ, etc.) ☐ VN Vane Sample

OTHER TESTS
 G Specific Gravity C Consolidation
 H Hydrometer CD Consolidated Drained Triaxial
 S Sieve Analysis CU Consolidated Undrained Triaxial
 γ Unit Weight UU Unconsolidated Undrained Triaxial
 P Field Permeability UC Unconfined Compression
 K Lab Permeability DS Direct Shear

WATER LEVELS
 ▽ Apparent ▼ Measured ▲ Artesian (see Notes)



BOREHOLE LOG

BH2/MW

Sheet 1 of 1

CLIENT Victoria Sanderson PROJECT NO. LON-00018542-GE
 PROJECT Proposed Lot Severance DATUM _____
 LOCATION 2 Park Crescent, Poplar Hill, ON DATES: Boring February 10, 2022 Water Level May 11/22

DEPTH (m bgs)	ELEVATION (-m)	STRATA DESCRIPTION	STRATA PLOT	WELL LOG	SAMPLES			MOISTURE CONTENT (%)	SHEAR STRENGTH	
					TYPE	NUMBER	RECOVERY (mm)		N VALUE (blows)	◆ S Field Vane Test (#=Sensitivity)
0	0.2	TOPSOIL - 200 mm SILTY SAND - brown, moist to wet								
5.8		CLAYEY SILT - grey, trace sand, stiff, moist								
8.5		SAND - brown, fine grained, trace silt, compact, wet - sandy silt lens encountered near 9.1 m bgs			SS	S1	450	11		
9.6		End of Borehole at 9.6 m bgs.			SS	S2	450	24		

NOTES

- Borehole Log interpretation requires assistance by EXP before use by others and must be read in conjunction with EXP Report LON-00018542-GE.
- bgs denotes below ground surface.
- No significant methane gas concentration was detected upon completion.
- Water Level Readings:
 Mar 7, 2022 - 8.33 m bgs
 Mar 29, 2022 - 8.27 m bgs
 May 11, 2022 - 8.29 m bgs

SAMPLE LEGEND
 ☒ AS Auger Sample ☒ SS Split Spoon ■ ST Shelby Tube
 ☐ Rock Core (eg. BQ, NQ, etc.) ☐ VN Vane Sample

OTHER TESTS
 G Specific Gravity C Consolidation
 H Hydrometer CD Consolidated Drained Triaxial
 S Sieve Analysis CU Consolidated Undrained Triaxial
 γ Unit Weight UU Unconsolidated Undrained Triaxial
 P Field Permeability UC Unconfined Compression
 K Lab Permeability DS Direct Shear

WATER LEVELS
 ∇ Apparent ▼ Measured ▲ Artesian (see Notes)

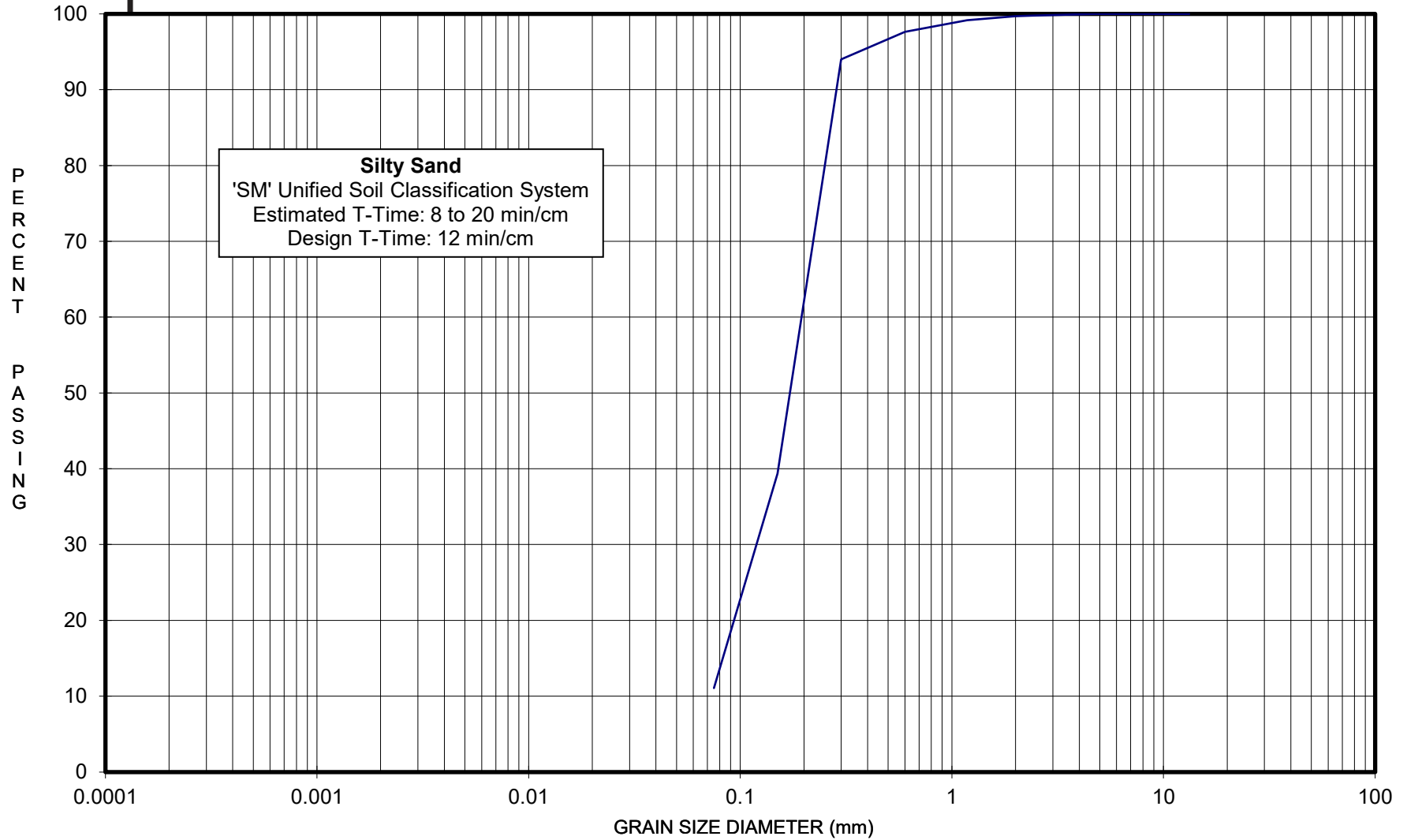
Depth (m below grade)	Soil Description
<u>TP1</u>	
0.00 – 0.30	TOPSOIL – 300 mm
0.30 – 4.3	SILTY SAND – brown, moist to wet
4.3	<i>Test pit terminated.</i>
	<i>Test pit sidewalls caving during excavation. Test pit base was wet upon completion of excavation.</i>
<u>TP2</u>	
0.00 – 0.30	TOPSOIL – 300 mm
0.30 – 4.3	SILTY SAND – brown, moist to wet
4.3	<i>Test pit terminated.</i>
	<i>Test pit sidewalls caving during excavation. Test pit base was wet upon completion of excavation.</i>

Notes: 1. Test pits were excavated on December 18, 2020.

Appendix B – Grain Size Analysis



MECHANICAL GRAIN SIZE ANALYSIS



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	
	SILT			SAND			GRAVEL			
MODIFIED M.I.T. CLASSIFICATION	Sample Description: Silty Sand (TP2, 1 m depth)						2 Park Crescent, Poplar Hill Project: LON-00018542-GE		Figure 1	

Appendix C – Limitations and Use of Report

LIMITATIONS AND USE OF REPORT

BASIS OF REPORT

This report (“Report”) is based on site conditions known or inferred by the hydrogeological investigation undertaken as of the date of the Report. Should changes occur which potentially impact the geotechnical condition of the site, or if construction is implemented more than one year following the date of the Report, the recommendations of EXP may require re-evaluation.

The Report is provided solely for the guidance of design engineers and on the assumption that the design will be in accordance with applicable codes and standards. Any changes in the design features which potentially impact the geotechnical analyses or issues concerning the hydrogeological aspects of applicable codes and standards will necessitate a review of the design by EXP. Additional field work and reporting may also be required.

Where applicable, recommended field services are the minimum necessary to ascertain that construction is being carried out in general conformity with building code guidelines, generally accepted practices and EXP’s recommendations. Any reduction in the level of services recommended will result in EXP providing qualified opinions regarding the adequacy of the work. EXP can assist design professionals or contractors retained by the Client to review applicable plans, drawings, and specifications as they relate to the Report or to conduct field reviews during construction.

Contractors contemplating work on the site are responsible for conducting an independent investigation and interpretation of the borehole results contained in the Report. The number of boreholes necessary to determine the localized underground conditions as they impact construction costs, techniques, sequencing, equipment and scheduling may be greater than those carried out for the purpose of the Report.

Classification and identification of soils, rocks, geological units, contaminant materials, building envelopment assessments, and engineering estimates are based on investigations performed in accordance with the standard of care set out below and require the exercise of judgment. As a result, even comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations or building envelope descriptions involve an inherent risk that some conditions will not be detected. All documents or records summarizing investigations are based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated. Some conditions are subject to change over time. The Report presents the conditions at the sampled points at the time of sampling. Where special concerns exist, or the Client has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

RELIANCE ON INFORMATION PROVIDED

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to EXP.

STANDARD OF CARE

The Report has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, expressed or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

COMPLETE REPORT

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