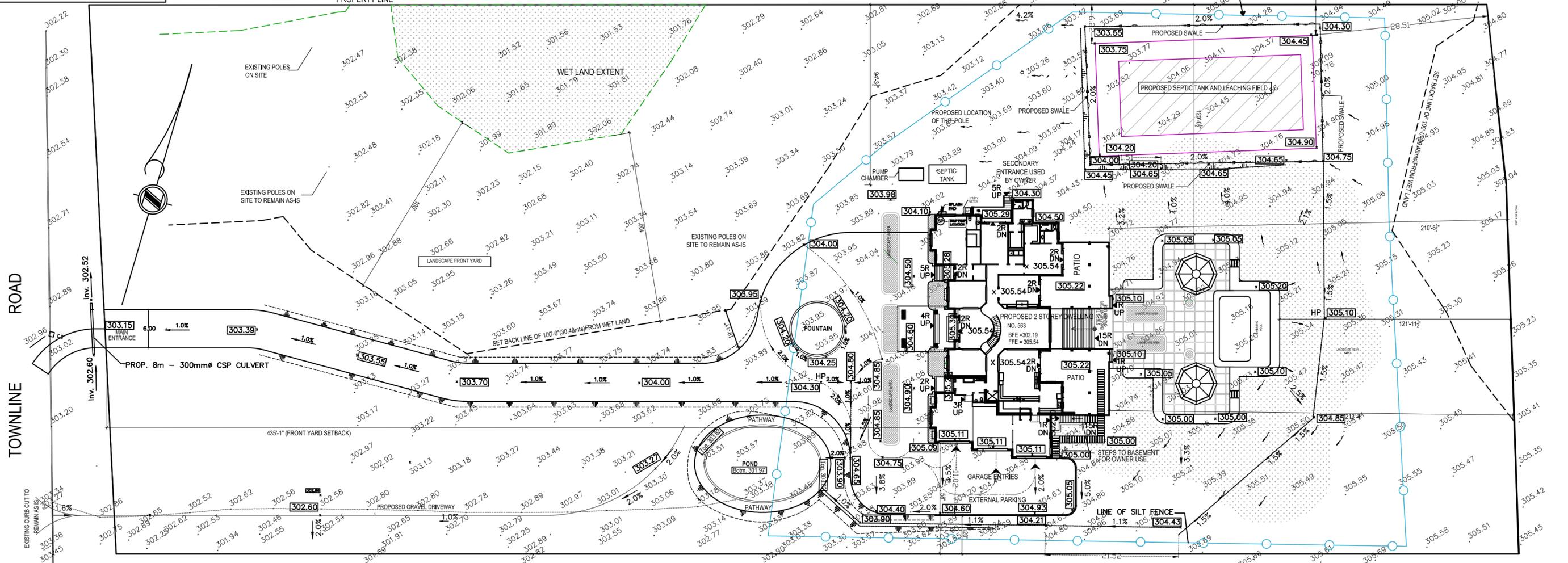


SURVEY INFORMATION TAKEN FROM
 P.C. SURVEYING LTD.
 ONTARIO LAND SURVEYORS
 27 CHOPIN AVENUE
 SCARBOROUGH
 ONTARIO



- GRADING CRITERIA**
- 1.) THE INTENT OF THE EXISTING DRAINAGE PATTERN IN THE AREA OF THE SITE SHOULD BE MAINTAINED.
 - 2.) SIDE YARDS SHOULD BE DRAINED AT SURFACE SLOPES NOT LESS THAN 2% TO ONE OR MORE EXISTING POSITIVE DRAINAGE OUTLETS CONNECTED TO PUBLIC DRAINAGE SYSTEMS, OR IF NECESSARY TO PROPOSED POSITIVE DRAINAGE.
 - 3.) DRAINAGE SWALE LONGITUDINAL SLOPES SHOULD NOT BE LESS THAN 2.0%.
 - 4.) TERRACE AND DRAINAGE SWALE SIDE SLOPES SHOULD NOT EXCEED 33%.
 - 5.) ELEVATIONS AT THE PROPERTY LINE FRONTING THE STREET SHOULD BE SUCH THAT THE AVERAGE SLOPE DOWN TO THE TOP OF ROADWAY CURB SHOULD BE BETWEEN 2% AND 6%.
 - 6.) REAR YARD SLOPE SHOULD NOT EXCEED 5% EXCEPT WHERE EXISTING GRADES ARE NOT BEING ALTERED.
 - 7.) DURING CONSTRUCTION, SILTATION CONTROL METHODS SHOULD BE USED AROUND THE LOT PERIMETER IN ORDER TO PREVENT EROSION OR SILTATION ON ADJACENT PROPERTIES.
 - 8.) IN COMPLIANCE WITH SUBSECTION 9.14.6.1. OF THE ONTARIO BUILDING CODE, WHERE STORM SEWER IS NOT AVAILABLE TO WHICH DOWN SPOUTS MAY BE CONNECTED, PROVISIONS SHALL BE MADE TO PREVENT SOIL EROSION.
 - 9.) IN COMPLIANCE WITH SUBSECTION 9.26.18.2. OF THE ONTARIO BUILDING CODE, WHERE STORM SEWER IS NOT AVAILABLE TO WHICH DOWN SPOUTS MAY BE CONNECTED, PROVISIONS SHALL BE MADE TO PREVENT SOIL EROSION.
 - 10.) COVERED SUMP WITH AN AUTOMATIC PUMP SHALL BE INSTALLED TO DISCHARGE WATER FROM FOUNDATION DRAINAGE OVERLAND TO CATCH BASIN CONNECTED TO A STORM SEWER LOCATED WITHIN PUBLIC RIGHT OF WAY OR TO A DRAINAGE DITCH OR DRYWELL AS PER ARTICLE 9.14.5.2-3 OF THE ONTARIO BUILDING CODE.
- NOTE: TOP OF FOUNDATION WALL ELEVATION MINIMUM 0.15 METRES ABOVE HIGHEST GRADE. REFER TO ARCHITECTURAL PLANS FOR FOUNDATION WALL DESIGN.

BENCHMARK NOTE

ELEVATIONS SHOWN HERE BASE ON GPS OBSERVATIONS FROM PERMANENT REFERENCE STATIONS IN THE MADRYL (CGRS-2010) COORDINATE SYSTEM, WITH HEIGHT CONVERTED TO ORTHOMETRIC ELEVATIONS ON THE CONZ88 DATUM (1978 ADJUSTMENT WITH GEOID MODEL HTG42, AS SUPPLIED BY NATURAL RESOURCES CANADA.

THE FIELD OBSERVATIONS REPRESENTED ON THIS PLAN WERE COMPLETED ON THE 23RD DAY OF NOVEMBER, 2024

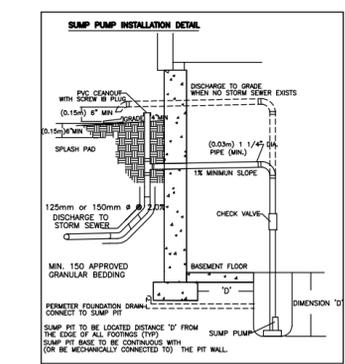
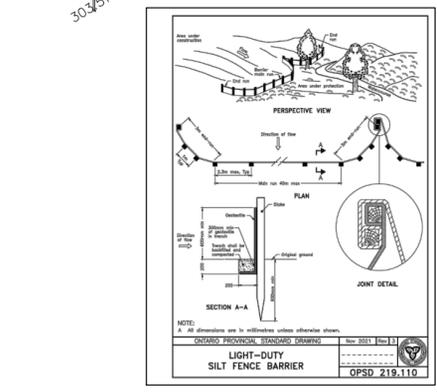
GRADING CONSULTANT APPROVAL

I HAVE REVIEWED THE PLANS FOR THE CONSTRUCTION OF A PROPOSED TWO STOREY DWELLING LOCATED AT 563 TOWNLINE ROAD, TOWNSHIP OF PUSLINC, AND HAVE PREPARED THIS PLAN TO INDICATE THE COMPATIBILITY OF THE PROPOSAL WITH ALL ADJACENT PROPERTIES. IT IS MY BELIEF THAT ADHERENCE TO THE PROPOSED ELEVATIONS AND GRADIENTS AS SHOWN WILL PRODUCE ADEQUATE SURFACE DRAINAGE WITHOUT DETRIMENTAL EFFECT TO THE EXISTING DRAINAGE PATTERNS OF ADJACENT PROPERTIES.

DRAWING TITLE:
 PROPOSE GRADING PLAN

PROJECT NAME:
 563 TOWNLINE ROAD
 TOWNSHIP OF PUSLINC, ONTARIO.

JEY CONSULTING INC.
 93 EASTVALE DRIVE
 MARKHAM, ONTARIO, L3S 4S9
 PHONE: 416-508-0062 Email: jey_eng@hotmail.com
 DRAWN BY: BJ SCALE: 1:500 CHECKED BY: CAJ CAD NUMBER: JOB NUMBER: 25-000 DRAWING NO.: PS 25-000P



- EROSION AND SEDIMENT CONTROL NOTES:**
1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED EITHER BY PLANTING OR RESTORATION OF VEGETATIVE COVER.
 2. ALL SILT FENCING TO BE INSTALLED PRIOR TO ANY AREA GRADING, EXCAVATING OR DEMOLITION COMMENCING.
 3. ALL SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE GRADING WORKS. SEDIMENT CONTROLS MUST BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY RAINFALL EVENT, REPAIRS MUST BE DONE IN A TIMELY MANNER TO PREVENT SEDIMENT FROM ENTERING THE WATER.
 4. ALL AREAS WHICH WILL REMAIN DISTURBED FOR MORE THAN 30 DAYS BE STABILIZED.
 5. EROSION CONTROL FENCING TO BE INSTALLED AROUND BASE OF ALL STOCKPILES IF APPLICABLE. ALL STOCKPILES TO BE KEPT 2.5 METERS MINIMUM FROM PROPERTY LINE.
 6. EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM AND SANITARY MANHOLES AND CATCH BASINS.
 7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURAL.
 8. EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED.
 9. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER AND TOWN'S DEVELOPMENT AND TECHNICAL SERVICES DEPARTMENT.
 10. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH DAY.
 11. CONTRACTOR TO MAINTAIN FABRIC FENCE UNTIL VEGETATION HAS BEEN ESTABLISHED ON ALL EXPOSED SOILS WITHIN CATCHMENTS AREA.
 12. ANY SEDIMENT THAT IS TRACKED ONTO THE ROADWAY OR NEIGHBORING PROPERTIES DURING THE COURSE OF CONSTRUCTION WILL BE CLEANED BY THE CONTRACTOR.
 13. ALL STORM DRAINAGE IS TO BE SELF-CONTAINED ON THE OWNER'S LAND.
 14. INSTALL SILT FENCE AROUND PROPERTY LINE. SEE DETAILS ON DRAWING OPSD 219.110 (TYPICAL).

- MAINTENANCE RECOMMENDATIONS**
1. REMOVE SEDIMENT AND CONTAMINANTS ANNUALLY AND RESTORE STORM WATER MANAGEMENT FACILITY ACCORDING TO THE DESIGN OUTLINED ON THIS PLAN.
 2. EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE FENCE.
 3. OWNER'S REPRESENTATIVE TO MONITOR EROSION CONTROL STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO TOWN'S REQUIREMENTS.

LEGEND

F.F.E	DENOTES FINISHED FLOOR ELEVATION
T.O.W	DENOTES TOP OF FOUNDATION ELEVATION
B.F.E	DENOTES BASEMENT SLAB ELEVATION
U.S.F	DENOTES UNDERSIDE OF FOOTING ELEVATION
INV.	DENOTES INVERT ELEVATION
H.P.	DENOTES HIGH POINT ELEVATION
R.	DENOTES RISER
DN	DENOTES DOWN
UP	DENOTES UP
W.O.B.	DENOTES WALKOUT BASEMENT
AC	DENOTES TOP OF RETAINING WALL
BF	DENOTES BOTTOM OF RETAINING WALL
STW	DENOTES TOP OF RETAINING WALL
STW	DENOTES STORM SEWER
SAW	DENOTES SANITARY SEWER
CONC	CONCRETE
CT	CONCRETE TREE
DT	DECIDUOUS TREE
INV	INVERT
ICV	IRRIGATION CONTROL VALVE
LS	LIGHT STANDARD
MH	MANHOLE
ORV	OVERHEAD RISER VALVE
STW	STONE RETAINING WALL
OH	OVERHEAD HYDRO
DA	DENOTES DRAIN AREA

NOTE: -

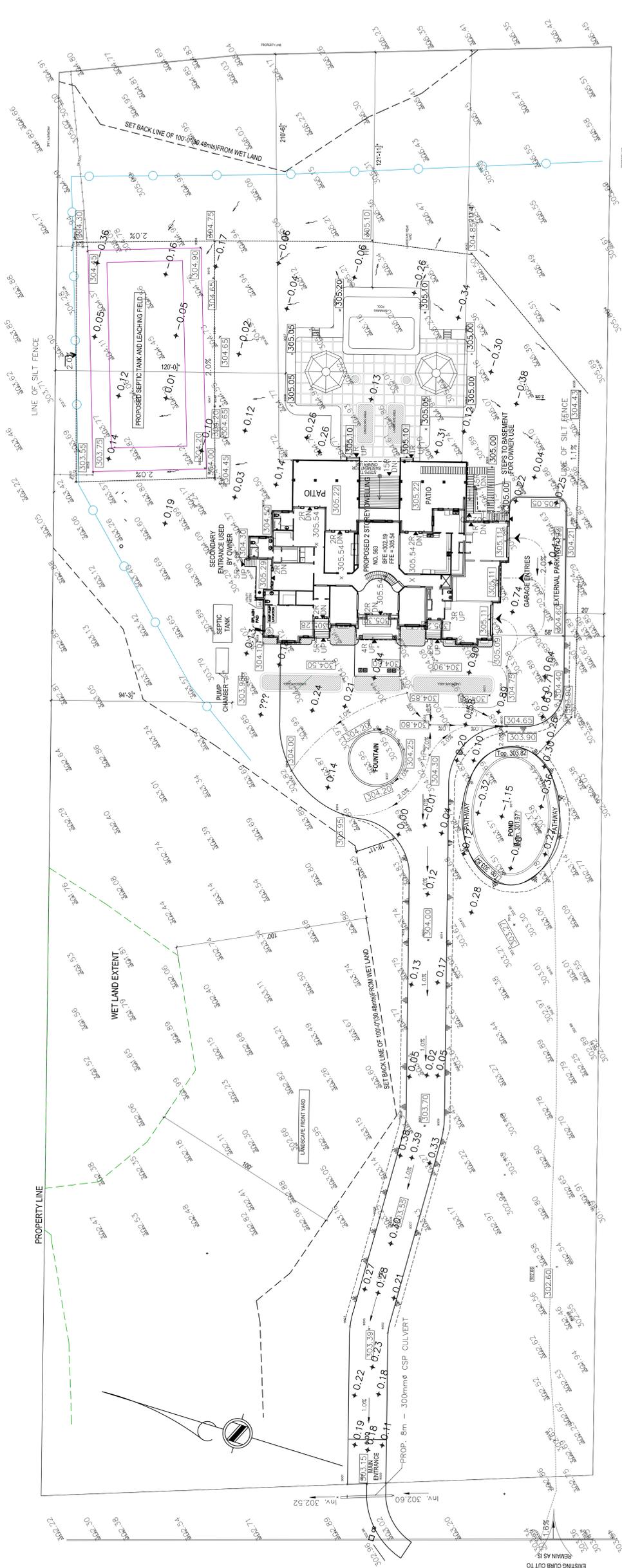
CONTRACTOR/BUILDER IS RESPONSIBLE FOR CONFIRMING ALL EXISTING GRADES AND ELEVATIONS. THE LOCATION OF ALL EXISTING SERVICES AND UTILITIES, AND THE INVERT ELEVATIONS OF ALL SERVICE CONNECTIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCY SHOULD BE REPORTED IMMEDIATELY TO THE UNDERSIGNED.

CAUTION

1. THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED FOR MORTGAGE OR TRANSACTION PURPOSES.
2. EXISTING SANITARY AND STORM INVERT TO BE CONFIRMED PRIOR TO CONSTRUCTION.
3. ARCHITECT TO CHECK THE ZONING AND SETBACKS AND ELEVATIONS.
4. ARCHITECT TO CONFIRM DESIGN CONFORMS WITH ARCHITECTURAL PLANS.
5. THE EXISTING STORM AND SANITARY SERVICE LATERAL MUST BE INSPECTED AT THE PROPERTY LINE BY THE BUILDER AND THE INVERT ELEVATION MUST BE VERIFIED BEFORE DO ANY EXCAVATION MINIMUM 2.0M FALL REQUIRED. OTHERWISE SUMP PUMP AND SEWER FACTOR TO BE INSTALLED BY THE BUILDER.



JEY CONSULTING INC. ©
 METRIC
 DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048



General
 Revision number 0
 Number of points 1177
 Minimum X coordinate 558940.745m
 Minimum Y coordinate 4804881.749m
 Maximum X coordinate 559134.100m
 Maximum Y coordinate 4804978.981m
 Minimum elevation -1.593m
 Maximum elevation 1.034m
 Mean elevation 0.090m

TIN
 Number of triangles 1983
 Maximum triangle area 35.54sq.m
 Minimum triangle area 0.00sq.m
 Minimum triangle length 0.003m
 Maximum triangle length 24.988m

Volume
 Base Surface existing
 Comparison Surface Proposed surface
 Cut Factor 1.000
 Fill Factor 1.000
 Cut volume (adjusted) 449.15 Cu. M.
 Fill volume (adjusted) 956.45 Cu. M.
 Net volume (adjusted) 507.31 Cu. M.
 M.<Fill>
 Cut volume (unadjusted) 449.15 Cu. M.
 Fill volume (unadjusted) 956.45 Cu. M.
 Net volume (unadjusted) 507.31 Cu. M.
 M.<Fill>

REQUIRED FILL VOLUME 507.31 CUBIC METRES

LEGEND:

- 303.90 EXISTING GRADE
- 304.90 PROPOSED GRADE
- + -0.23 PROPOSED CUT DEPTH
- + +0.23 PROPOSED FILL DEPTH

TOWNLIN ROAD

TECHNICAL MEMORANDUM

DATE July 18, 2025 **Project No.** 25-1137-02
TO Mr. Hassan Ali – GeoStructures and Infrastructure Management Inc
FROM Andrea Saltos, Sajjad Din, Abid Sahi – PNJ Engineering Inc **EMAIL** asahi@pnjeng.com

Re: Environmental Sampling Results – 563 Townline Rd, Puslinch, ON N0B 2J0

1. PURPOSE

PNJ Engineering Inc. (PNJ) was retained by GeoStructures and Infrastructure Management Inc. (GIM) to conduct analytical testing as part of the proposed work plan prepared by PNJ and submitted on May 16, 2025, in response to the large site alteration permit application for the property located at 563 Townline Road, Puslinch, Ontario (the Site).

The purpose of the sampling and chemical testing is to assess the quality of the fill material that has been placed across the site.

2. BACKGROUND

Based on supplement information provided regarding the fill location, thickness and approximate volume, it was determined that 591 m³ of fill material was imported and placed across the Site. Therefore, the total number of samples that were deemed to be required are 3 samples plus one duplicate and 3 mSPLP samples to be in compliance with Ontario Regulation 406/19.

It should be noted that the previous Fortis Environmental reported dated December 12, 2024, includes two soil samples that meet the applicable Table 2.1 Excess Soil Quality Standards as per O. Reg. 406/19 (Table 2.1 Standards). Therefore, 2 additional samples plus a duplicate were proposed to be collected at the Site. Apart from the 2 samples, an additional sample was collected from the location where exceedances were previously identified, and a second sample was collected from within the regulated area.

It should be noted here that information has been provided regarding the origin and history of the source material (Nelson Waynco Ltd. in Cambridge, Ontario). Therefore, an extensive background study of the source site was not required.

3. METHODOLOGY

3.1 Sampling Location

On June 25, 2025, PNJ visited 563 Towline Road to collect soil samples from the fill material that has been spread on Site as mentioned in the earlier section of this letter. Based on the information provided, approximate 591 m³ of fill material was imported and placed across the Site, as per the guideline of Soil Rules as per O. Reg. 406/19, a total of three (3) soil samples is required to be collected. However, two soil samples were collected in 2024 that meet the applicable Table 2.1 Excess Soil Quality Standards as per O. Reg. 406/19 (Table 2.1 Standards). Therefore, 2 additional samples plus a duplicate were proposed to be collected at the Site. Apart from the 2 samples, an additional sample was collected from the location where exceedances were previously identified, and a second sample was collected from within the regulated area.

During the sampling event, the soil exhibited a moist consistency. The fill material consisted of a heterogeneous mixture of brown, light brown, and grey sand and gravel with trace amounts of silt and rootlets. Fill material was encountered at depths ranging from approximately 1 to 3 feet below ground surface (bgs), underlain by native soil consisting of sandy silt, brown material. Detailed test pit logs are provided in Appendix III.

The sampling process involved excavating selected locations using an excavator provided by the Client. To ensure accuracy and prevent potential cross-contamination between sampling events, appropriate precautions were taken, and unique soil sampling tools were used for each collected sample during fieldwork.

3.2 Sampling and Analysis Plan

The sampling locations were determined based on the field screening results during the sampling event. Eight (8) shallow test pits were advanced within the Site for field screening/QA-QC purposes. Screening included a visual inspection of the soils till the top of the native material, collection of soil vapour readings (using a PID or RKI Eagle or similar equipment) and making note of any olfactory or visual signs of impacts. The selected soil samples for laboratory analysis were based on the field screening results of the highest reading as the worst-case scenario.

3.3 Sampling Selection

Based on the field screening results, most soil samples exhibited vapour readings of 0 for Hexane and 1 for Isobutane. One exception was Test Pit 2 (TP2), which showed a higher vapour reading

of 15/1. However, elevated vapour readings were not considered reliable in this case due to the presence of high moisture content within the sampling bags, likely influenced by elevated ambient temperatures on the day of sampling. As such, all samples were interpreted as having low vapour concentrations. Sample locations were selected randomly to ensure representative spatial coverage across the entire Site.

- Two (2) samples were submitted for all parameters, including PHCs, VOCs, PAHs, Metals, EC, SAR, pH.
 - TP-4 SA-1 at depth 0 - 0.30 m.
 - TP-6 SA-1 at depth 0 - 0.36 m.
- One (1) duplicate sample, DUP – from TP4 SA-1, was submitted for all parameters, including PHCs, VOCs, PAHs, Metals, EC, SAR, pH.
- One (1) additional sample was collected in the location and depth where previous exceedances were identified. The sample was submitted for analysis for PHCs only.
 - TP-1 SA-1 at depth 0 - 0.30 m.
- One (1) additional sample was selected and submitted for all parameters. The selected sample was located within the Grand River Conservation Authority Regulated Area.
 - TP-8 SA-1 at depth 0 – 0.15 m.

The selected soil samples were placed into laboratory-supplied vials and jars, then placed into a cooler packed with ice. The soil samples were delivered to Eurofins, a CALA-accredited laboratory located in North York, Ontario.

Additionally, three (3) samples, TP-4 SA-1, TP-6 SA-1, and TP-8 SA-1, were submitted for modified Synthetic Precipitation Leaching Procedure (mSPLP) for Metals and VOCs.

4. APPLICABLE REGULATORY STANDARDS

The collected samples were compared to Appendix 1 Generic Excess Soil Quality Standards for Excess Soil Reuse of the Soil Rules as follows:

- Table 2.1: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential, Parkland, Institutional (RPI) Property Uses (Table 2.1 ESQS)

As published in the document titled “Rules for Soil Management and Excess Soil Quality Standards”, by reference in O. Reg. 406/19 (On-Site and Excess Soil Management) made under the Environmental Protection Act, R.S.O. 1990, c. E.19 (EPA).

Additionally, the collected sample within the regulated area were compared as follows:

- Table 1: Full Depth Background Site Condition Standard in an Agricultural or Other Property Use (Table 1 SCS).

For the leachate analysis, the laboratory analytical results will be compared to Appendix 2 Generic Leachate Screening Levels for Excess Soil Reuse of the Soil Rules as follows:

- Table 2.1: Leachate Screening Levels for Full Depth Excess Soil in a Potable Ground Water Condition for Residential, Parkland, Institutional Property Uses (Table 2.1 LSL)

5. RESULTS

The laboratory Certificates of Analysis are presented in Appendix III.

- No exceedances were identified in the collected soil samples when compared to Table 1 Agri and Table 2.1 RPI for bulk analysis and the leachate criteria.

6. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the current soil characterization program, the following conclusions are made:

- A sampling and analysis program was conducted in accordance with Ontario Regulation 406/19 to characterize the fill material that has been placed across the site. The objective was to determine the environmental quality of the soil.
- Analytical results indicated that all tested parameters were below the applicable Table 2.1 Excess Soil Quality Standards, as outlined in the MECP document “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act” (dated April 15, 2011).
- The sample collected from the location and depth where previous exceedances were identified now meets the applicable criteria outlined in Table 2.1 of the Excess Soil Quality Standards (ESQS).

- The sample collected within the Regulated Area meets the criteria in accordance with Table 1 Site Condition Standards for Agricultural or Other Property Use.
- As no exceedances were identified, the fill material is considered to meet the definition of “excess soil of acceptable quality” under O. Reg. 406/19 and can remain on site without triggering further regulatory requirements, provided that site-specific reuse conditions and exemptions apply.

This report should be read in conjunction with the Limitations of the Report provided in Appendix I.

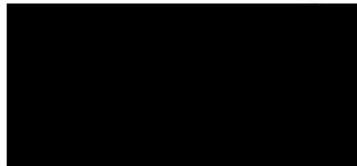
We trust this letter meets your current requirements. However, should you have any questions or require clarification, please do not hesitate to contact the undersigned.

Sincerely,

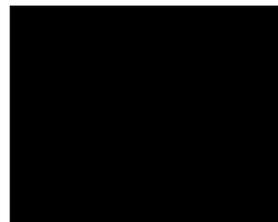
PNJ ENGINEERING INC.



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Principal
Director - Civil Infrastructure & Geo-Environmental Engineering
T: 905.597.8383 x 105
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ATTACHEMENTS

- Appendix I Limitation of Report
- Appendix II Soil Sample Location Plan & Photos
- Appendix III Test pit Logs
- Appendix IV Laboratory Certificates of Analysis

APPENDICES

APPENDIX I

LIMITATIONS OF THE REPORT

LIMITATIONS OF REPORT

This report is intended solely for the GeoStructures and Infrastructure Management Inc and their designers and is prohibited for use by others without PNJ's prior written consent. This report is considered PNJ's professional work product and shall remain the sole property of PNJ. Any unauthorized reuse, redistribution of or reliance on the report shall be at the Client and recipient's sole risk, without liability to PNJ. No portion of this report may be used as a separate entity; it is to be read in its entirety and shall include all supporting drawings and appendices.

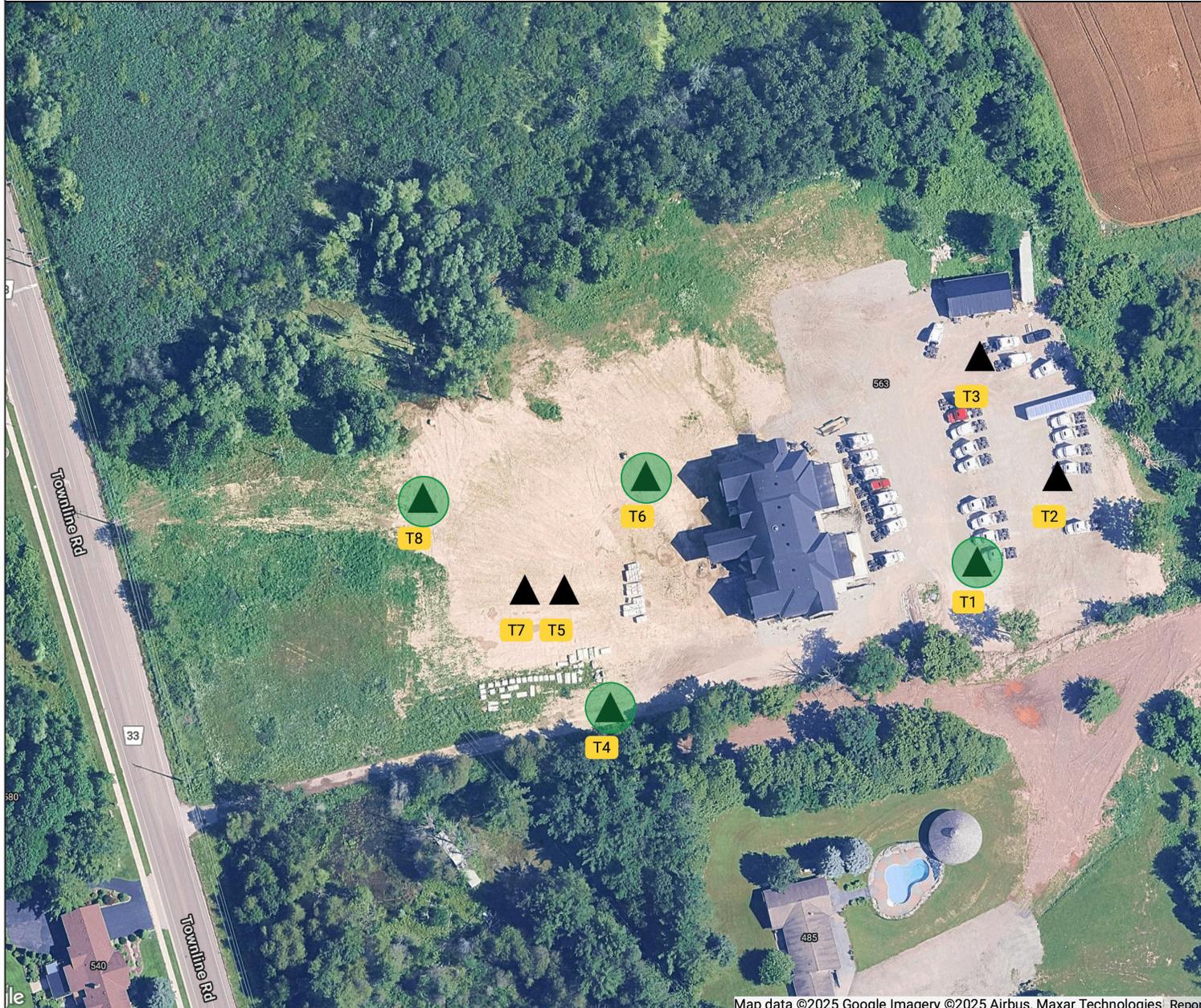
The recommendations made in this report are based on our present understanding of the project, the current site use, ground surface elevation and conditions, and are based on the work scope approved by the Client and described in the report. The services were performed in a manner consistent with the level of care and skill ordinarily exercised by members of geotechnical engineering professions currently practicing under similar conditions. No other representations, and no warranties or representations of any kind, either expressed or implied, are made. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.

All details of design and construction are rarely known at the time of completion of the slope stability analysis study. The recommendations and comments made in the study report are based on our completed analysis and resulting understanding of the project, as defined at the time of the study. We should be retained to review our recommendations if there is any change in the development details. Without this review, PNJ will not be liable for any misunderstanding of our recommendations or their application and adaptation into the final design.

It is important to emphasize that a soil investigation is, in fact, a random sampling of a site and the comments included in this report are based on the completed review for the proposed site only. The subsurface conditions confirmed at the site may vary at other locations. The subsurface conditions can also be significantly modified by the construction activities on site (e.g., excavation, dewatering and drainage, blasting, pile driving, etc.). These conditions can also be modified by exposure of soils or bedrock to humidity, dry periods, or frost. Soil and groundwater conditions between and beyond the site may differ both horizontally and vertically from those encountered at the site and conditions may become apparent during construction which could not be detected or anticipated at the time of completing this study. Should any conditions on the site be encountered which differ from those presented in the report, we request that we be notified immediately for a reassessment of our recommendations. If changed conditions are identified during construction, no matter how minor, the recommendations in this report shall be considered invalid until sufficient review and written assessment of these conditions is completed by PNJ.

APPENDIX II

SOIL SAMPLE LOCATION



Map data ©2025 Google Imagery ©2025 Airbus, Maxar Technologies Report

LEGEND

- ▲ Approximate Test Pit Location
- Sampling Locations

NOTES

-

REFERENCES

- Google Earth

TITLE

Sampling Location Plan

PROJECT

563 Towline Road, Sampling

ADDRESS

563 Towline Road, Puslinch, Ontario

CLIENT

GeoStructures and Infrastructure Management Inc

DRAWING NO.

1

DATE

JULY 8 2025

PREPARED BY

AFS

REVIEWED BY

AS



70 Galaxy Blvd Suite 100, Toronto, ON M9W 4Y6
Tel: 905.597.8383 Fax: 905.597.0825
www.pnjeng.com

PROJECT NO. 25-1137-01

REV. 0



Test Pit 1 – TP1



Test Pit 2 – TP2



Test Pit 3 – TP3



Test Pit 4 – TP4



Test Pit 5 – TP5



Test Pit 6 – TP6



Test Pit 7 – TP7



Test Pit 8 – TP8

APPENDIX III

TEST PIT LOGS

DRAFT

TEST PIT: T1

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 305 m AMSL
559126 E, 4804915 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.05 m (0.16 ft)			Elev. 305 m
0.05 m (0.16 ft)			0.05 m (0.16 ft) bgs; Elev. 304.95 m
1	Fill Gravelly sand, trace silt, trace rootlets, light brown	HEX/IBL 0/0 PHCs	
0.9 m (2.95 ft)			0.9 m (2.95 ft) bgs; Elev. 304.1 m
1	Native Silty sand, brown		
1.2 m (3.94 ft)			1.2 m (3.94 ft) bgs; Elev. 303.8 m

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env
Project Eng.: Sajjad Din		Project No.: 25-1137-02

DRAFT

TEST PIT:T2

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 305 m AMSL
559145 E, 4804935 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.05 m (0.17 ft)			Elev. 305 m
0.05 m (0.17 ft)			Elev. 304.95 m
Fill			HEX/IBL 15/1
	Gravelly sand, trace silt, trace rootlets, light brown		
0.46 m (1.5 ft)			Elev. 304.54 m
Native			
	Silty sand, brown		
0.49 m (1.6 ft)			Elev. 304.51 m

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...	
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env	
Project Eng.: Sajjad Din		Project No.: 25-1137-02	Page 1/1

DRAFT

TEST PIT: T3

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 304 m AMSL
559126.34 E, 4804963.01 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.05 m (0.16 ft)	Fill Sand and gravel, trace silt, light brown		HEX/IBL 0/0
0.61 m (2 ft)	Native Sandy silt, brown		
0.67 m (2.2 ft)			

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env
Project Eng.: Sajjad Din		Project No.: 25-1137-02
		Page 1/1

DRAFT

TEST PIT: T4

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 303 m AMSL
559039.85 E, 4804880.02 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.05 m (0.16 ft)			Elev. 303 m
0.05 m (0.16 ft)			0.05 m (0.16 ft) bqs; Elev. 302.95 m
1	Fill Gravelly sand, trace silt, trace rootlets, light brown		PHCs, VOCs, PAHs, Metals, EC, SAR, pH + DUP HEX/IBL 0/1
0.3 m (1 ft)			0.3 m (1 ft) bqs; Elev. 302.7 m
3	Native Sandy silt, brown		
0.37 m (1.2 ft)			0.37 m (1.2 ft) bqs; Elev. 302.63 m
4			
5			
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11			
12			
13			
14			
15			

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...	
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env	
Project Eng.: Sajjad Din		Project No.: 25-1137-02	Page 1/1

DRAFT

TEST PIT: T5

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 302 m AMSL
559028.91 E, 4804907.51 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.05 m (0.16 ft)			Elev. 302 m
0.05 m (0.16 ft)			0.05 m (0.16 ft) bqs; Elev. 301.95 m
1	Fill Sand and gravel, some silt, trace rootlets		HEX/IBL 0/1
0.61 m (2 ft)			0.61 m (2 ft) bqs; Elev. 301.39 m
2	Native Sandy silt, brown		
0.64 m (2.1 ft)			0.64 m (2.1 ft) bqs; Elev. 301.36 m

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env
Project Eng.: Sajjad Din		Project No.: 25-1137-02

DRAFT

TEST PIT: T6

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 302 m AMSL
559047.78 E, 4804934.16 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		PHCs, VOCs, PAHs, Metals, EC, SAR, pH HEX/IBL 0/1
0.05 m (0.16 ft)	Fill Gravelly sand, trace silt, trace rootlets, light brown		
0.37 m (1.2 ft)	Native Sandy silt, brown		
0.46 m (1.5 ft)			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env
Project Eng.: Sajjad Din		Project No.: 25-1137-02
		Page 1/1

DRAFT

TEST PIT: T7

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 302 m AMSL
559019.47 E, 4804907.36 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.05 m (0.16 ft)			Elev. 302 m
0.05 m (0.16 ft)			0.05 m (0.16 ft) bqs; Elev. 301.95 m
1	Fill Sand and gravel, trace silt, brown/grey	HEX/IBL 0/1	
0.61 m (2 ft)			0.61 m (2 ft) bqs; Elev. 301.39 m
1	Native Sandy silt, brown		
0.64 m (2.1 ft)			0.64 m (2.1 ft) bqs; Elev. 301.36 m
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env
Project Eng.: Sajjad Din		Project No.: 25-1137-02
		Page 1/1

DRAFT

TEST PIT: T8

563 Townline Road, Puslinch, Ontario

Start Date: 2025-JUN-25
End Date: 2025-JUN-25

Elevation: 303 m AMSL
558995.17 E, 4804928.79 N (NAD83 - 17)

Depth	Description	Soil Symbol	Comments / Notes
0	Gravel		
0.03 m (0.1 ft)			Elev. 303 m
0.03 m (0.1 ft)			0.03 m (0.1 ft) bqs; Elev. 302.97 m
1	Fill Sand and gravel, trace silt, brown/grey		PHCs, VOCs, PAHs, Metals, EC, SAR, pH HEX/IBL 0/3
0.15 m (0.5 ft)			0.15 m (0.5 ft) bqs; Elev. 302.85 m
3	Native Sandy silt, brown		
0.21 m (0.7 ft)			0.21 m (0.7 ft) bqs; Elev. 302.79 m
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Notes:



Logged By: SD	Contractor: Provided by Client	Client: GeoStructures and Infrastructure Management...
Approved By: AS	Excav. Details: Excavator	Project Title: 563 Townline Large Site - Geo & Env
Project Eng.: Sajjad Din		Project No.: 25-1137-02
		Page 1/1

APPENDIX IV

LABORATORY CERTIFICATES OF ANALYSIS

Client: PNJ Engineering Inc.
70 Galaxy Blvd Suite 100,
Toronto, Ontario
M9W 4Y6
Attention: Andrea Saltos
Invoice to: PNJ Engineering Inc.
PO#:

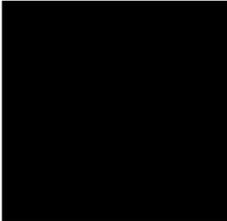
Report Number: 3017564
Date Submitted: 2025-06-25
Date Reported: 2025-07-03
Project: 25-1137-02
COC #: 233133
Temperature (C): 8
Custody Seal:

Page 1 of 7

Dear Andrea Saltos:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:



Patrick Jacques
2025.07.03
4:51:35
04'00'

Patrick Jacques, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

EETC Reg 153 Version 21.rpt

Client: PNJ Engineering Inc.
 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017564
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1137-02
 COC #: 233133

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Results relate only to the parameters tested on the samples submitted.
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: PNJ Engineering Inc.
 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017564
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1137-02
 COC #: 233133

Guideline = Excess Soil-T2.1-Res/Park/Ind

Hydrocarbons

Lab I.D. 1772259
 Sample Matrix Soil153
 Sample Type
 Sample Date 2025-06-25
 Sampling Time
 Sample I.D. TP-1 SA-1

Analyte	Batch No	MRL	Units	Guideline	
PHC's F1	477863	10	ug/g	STD 25	<10
PHC's F2	477843	2	ug/g	STD 10	<2
PHC's F3	477843	20	ug/g	STD 240	<20
PHC's F4	477843	20	ug/g	STD 2800	<20

Moisture

Lab I.D. 1772259
 Sample Matrix Soil153
 Sample Type
 Sample Date 2025-06-25
 Sampling Time
 Sample I.D. TP-1 SA-1

Analyte	Batch No	MRL	Units	Guideline	
Moisture-Humidite	477843	0.1	%		4.9

Results relate only to the parameters tested on the samples submitted.
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 Project: 25-1137-02
 COC #: 233133

Guideline = Excess Soil-T2.1-Res/Park/Ind

PHC Surrogate

Lab I.D. 1772259
 Sample Matrix Soil153
 Sample Type
 Sample Date 2025-06-25
 Sampling Time
 Sample I.D. TP-1 SA-1

Analyte	Batch No	MRL	Units	Guideline
Alpha-androstrane	477843	0	%	67

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Report Number: 3017564
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1137-02
 COC #: 233133

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
477843	PHC's F2	<2 ug/g	107	80-120	84	60-140	0	0-30
477843	PHC's F3	<20 ug/g	107	80-120	84	60-140	0	0-30
477843	PHC's F4	<20 ug/g	107	80-120	84	60-140	0	0-30
477843	Moisture-Humidite	<0.1 %	100	80-120			0	
477863	PHC's F1	<10 ug/g	96	80-120	106	60-140	0	0-30

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Client: PNJ Engineering Inc.
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 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017564
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1137-02
 COC #: 233133

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
477843	PHC's F2	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477843	PHC's F3	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477843	PHC's F4	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477843	Moisture-Humidite	Oven	2025-06-30	2025-07-02	D_T	ASTM 2216
477863	PHC's F1	GC/FID	2025-07-02	2025-07-02	AtJ	CCME

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Client: PNJ Engineering Inc.
70 Galaxy Blvd Suite 100,
Toronto, Ontario
M9W 4Y6
Attention: Andrea Saltos
PO#:
Invoice to: PNJ Engineering Inc.

Report Number: 3017564
Date Submitted: 2025-06-25
Date Reported: 2025-07-03
Project: 25-1137-02
COC #: 233133

CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

Client: PNJ Engineering Inc.
70 Galaxy Blvd Suite 100,
Toronto, Ontario
M9W 4Y6
Attention: Andrea Saltos
Invoice to: PNJ Engineering Inc.
PO#:

Report Number: 3017561
Date Submitted: 2025-06-25
Date Reported: 2025-07-03
Project: 25-1139-02
COC #: 233131
Temperature (C): 8
Custody Seal:

Page 1 of 16

Dear Andrea Saltos:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1772251 TP-4 SA-1 For all samples on this report, the metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

Report Comments:

Patrick Jacques
2025.07.03
15:35:59 -04'00'

Patrick Jacques, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

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EETC Reg 153 Version 21.rpt

Client: PNJ Engineering Inc.
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 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017561
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1139-02
 COC #: 233131

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Results relate only to the parameters tested on the samples submitted.
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: PNJ Engineering Inc.
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 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017561
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1139-02
 COC #: 233131

Guideline = Excess Soil-T2.1-Res/Park/Ind

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1772251	1772252	1772253	1772254
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type	2025-06-25	2025-06-25	2025-06-25	2025-06-25
					Sample Date				
					Sampling Time				
					Sample I.D.	TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1
PHC's F1	477863	10	ug/g	STD 25		<10	<10	<10	<10
PHC's F1-BTEX	477875	10	ug/g			<10	<10	<10	<10
PHC's F2	477843	2	ug/g	STD 10		<2	<2		
	477845	2	ug/g	STD 10				<2	<2
PHC's F2-Naph	477938	2	ug/g			<2	<2	<2	<2
PHC's F3	477843	20	ug/g	STD 240		<20	<20		
	477845	20	ug/g	STD 240				<20	<20
PHC's F3-PAH	477939	20	ug/g			<20	<20	<20	<20
PHC's F4	477843	20	ug/g	STD 2800		20	<20		
	477845	20	ug/g	STD 2800				60	<20

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1772251	1772252	1772253	1772254
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type	2025-06-25	2025-06-25	2025-06-25	2025-06-25
					Sample Date				
					Sampling Time				
					Sample I.D.	TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1
Antimony	477814	1	ug/g	STD 7.5		<1	<1	<1	<1
Arsenic	477814	1	ug/g	STD 18		3	3	3	3
Barium	477814	1	ug/g	STD 390		38	36	34	43
Beryllium	477814	1	ug/g	STD 4		<1	<1	<1	<1
Boron (total)	477814	5	ug/g	STD 120		6	6	6	7
Cadmium	477814	0.4	ug/g	STD 1.2		<0.4	<0.4	<0.4	<0.4
Chromium Total	477814	1	ug/g	STD 160		16	12	14	14
Cobalt	477814	1	ug/g	STD 22		4	4	4	5
Copper	477814	1	ug/g	STD 140		15	14	12	13

Results relate only to the parameters tested on the samples submitted.
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Client: PNJ Engineering Inc.
 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017561
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1139-02
 COC #: 233131

Guideline = Excess Soil-T2.1-Res/Park/Ind

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1772251	1772252	1772253	1772254
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2025-06-25	2025-06-25	2025-06-25	2025-06-25
					Sampling Time				
					Sample I.D.	TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1
Lead	477814	1	ug/g	STD 120		14	16	14	13
Molybdenum	477814	1	ug/g	STD 6.9		<1	<1	<1	<1
Nickel	477814	1	ug/g	STD 100		10	9	9	11
Selenium	477814	0.5	ug/g	STD 2.4		<0.5	<0.5	<0.5	<0.5
Silver	477814	0.2	ug/g	STD 20		<0.2	<0.2	<0.2	<0.2
Thallium	477814	1	ug/g	STD 1		<1	<1	<1	<1
Uranium	477814	0.5	ug/g	STD 23		<0.5	<0.5	<0.5	<0.5
Vanadium	477814	2	ug/g	STD 86		22	21	22	22
Zinc	477814	2	ug/g	STD 340		86	102	82	76

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1772251	1772252	1772253	1772254
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2025-06-25	2025-06-25	2025-06-25	2025-06-25
					Sampling Time				
					Sample I.D.	TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1
1+2-methylnaphthalene	477866	0.05	ug/g	STD 0.59		<0.05	<0.05	<0.05	<0.05
Acenaphthene	477865	0.05	ug/g	STD 2.5		<0.05	<0.05	<0.05	<0.05
Acenaphthylene	477865	0.05	ug/g	STD 0.093		<0.05	<0.05	<0.05	<0.05
Anthracene	477865	0.05	ug/g	STD 0.16		<0.05	<0.05	<0.05	<0.05
Benz[a]anthracene	477865	0.05	ug/g	STD 0.5		<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	477865	0.05	ug/g	STD 0.31		<0.05	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	477865	0.05	ug/g	STD 3.2		<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	477865	0.05	ug/g	STD 6.6		<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	477865	0.05	ug/g	STD 3.1		<0.05	<0.05	<0.05	<0.05
Chrysene	477865	0.05	ug/g	STD 7		<0.05	<0.05	<0.05	<0.05

Results relate only to the parameters tested on the samples submitted.
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Client: PNJ Engineering Inc.
 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017561
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1139-02
 COC #: 233131

Guideline = Excess Soil-T2.1-Res/Park/Ind

PAH

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153
2025-06-25	2025-06-25	2025-06-25	2025-06-25
TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1

Analyte Batch No MRL Units Guideline

Dibenz[a h]anthracene	477865	0.05	ug/g	STD 0.57	<0.05	<0.05	<0.05	<0.05
Fluoranthene	477865	0.05	ug/g	STD 0.69	<0.05	<0.05	<0.05	<0.05
Fluorene	477865	0.05	ug/g	STD 6.8	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	477865	0.05	ug/g	STD 0.38	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 1-	477865	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 2-	477865	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Naphthalene	477865	0.013	ug/g	STD 0.2	<0.013	<0.013	<0.013	<0.013
Phenanthrene	477865	0.05	ug/g	STD 6.2	<0.05	<0.05	<0.05	<0.05
Pyrene	477865	0.05	ug/g	STD 28	<0.05	<0.05	<0.05	<0.05

Volatiles

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153
2025-06-25	2025-06-25	2025-06-25	2025-06-25
TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1

Analyte Batch No MRL Units Guideline

Acetone	477864	0.50	ug/g	STD 0.5	<0.50	<0.50	<0.50	<0.50
Benzene	477864	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	477864	0.05	ug/g	STD 0.083	<0.05	<0.05	<0.05	<0.05
Chloroform	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	477864	0.05	ug/g	STD 3.4	<0.05	<0.05	<0.05	<0.05

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 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017561
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1139-02
 COC #: 233131

Guideline = Excess Soil-T2.1-Res/Park/Ind

Volatiles

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153
2025-06-25	2025-06-25	2025-06-25	2025-06-25
TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1

Analyte	Batch No	MRL	Units	Guideline	1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153
Dichlorobenzene, 1,3-	477864	0.05	ug/g	STD 0.26	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	477864	0.05	ug/g	STD 1.5	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,2-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,1-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-	477876	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	477864	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-trans-	477864	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Ethylbenzene	477864	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018
Ethylene dibromide	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	477864	0.05	ug/g	STD 2.5	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	477864	0.50	ug/g	STD 0.5	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	477864	0.50	ug/g	STD 0.5	<0.50	<0.50	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Styrene	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	477864	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05

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 Project: 25-1139-02
 COC #: 233131

Guideline = Excess Soil-T2.1-Res/Park/Ind

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1772251	1772252	1772253	1772254
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2025-06-25	2025-06-25	2025-06-25	2025-06-25
					Sampling Time				
					Sample I.D.	TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1
Toluene	477864	0.08	ug/g	STD 0.2		<0.08	<0.08	<0.08	<0.08
Trichloroethane, 1,1,1-	477864	0.05	ug/g	STD 0.11		<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	477864	0.05	ug/g	STD 0.05		<0.05	<0.05	<0.05	<0.05
Trichloroethylene	477864	0.01	ug/g	STD 0.05		<0.01	<0.01	<0.01	<0.01
Trichlorofluoromethane	477864	0.05	ug/g	STD 0.25		<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	477864	0.02	ug/g	STD 0.02		<0.02	<0.02	<0.02	<0.02
Xylene Mixture	477870	0.05	ug/g	STD 0.091		<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	477864	0.05	ug/g			<0.05	<0.05	<0.05	<0.05
Xylene, o-	477864	0.05	ug/g			<0.05	<0.05	<0.05	<0.05

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1772251	1772252	1772253	1772254
					Sample Matrix	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date	2025-06-25	2025-06-25	2025-06-25	2025-06-25
					Sampling Time				
					Sample I.D.	TP-4 SA-1	TP-6 SA-1	DUP	TP-8 SA-1
Electrical Conductivity	477804	0.05	mS/cm	STD 0.7		0.14	0.12	0.13	0.12
pH - CaCl2	477708	2.00				8.05	7.87	7.96	7.86
Sodium Adsorption Ratio	477879	0.01		STD 5		0.54	0.39	0.83	0.38

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Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.	
					1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153	2025-06-25	2025-06-25	2025-06-25
Moisture-Humidite	477843	0.1	%		8.4	5.8					
	477845	0.1	%				5.3	10.0			

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.	
					1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153	2025-06-25	2025-06-25	2025-06-25
Alpha-androstrane	477843	0	%		68	69					
	477845	0	%				67	61			

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Guideline = Excess Soil-T2.1-Res/Park/Ind

VOCs Surrogates

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

Analyte	Batch No	MRL	Units	Guideline	1772251 Soil153	1772252 Soil153	1772253 Soil153	1772254 Soil153
1,2-dichloroethane-d4	477864	0	%		107	103	120	108
4-bromofluorobenzene	477864	0	%		89	108	76	78
Toluene-d8	477864	0	%		125	117	122	123

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
477708	pH - CaCl2	6.21	101	90-110			0	
477804	Electrical Conductivity	<0.05	99	90-110			4	0-10
477814	Silver	<0.2 ug/g	99	70-130	115	70-130	0	0-30
477814	Arsenic	<1 ug/g	97	70-130	111	70-130	0	0-30
477814	Boron (total)	<5 ug/g	94	70-130	142	70-130	0	0-30
477814	Barium	<1 ug/g	98	70-130	151	70-130	23	0-30
477814	Beryllium	<1 ug/g	96	70-130	107	70-130	0	0-30
477814	Cadmium	<0.4 ug/g	102	70-130	114	70-130	0	0-30
477814	Cobalt	<1 ug/g	100	70-130	108	70-130	0	0-30
477814	Chromium Total	<1 ug/g	104	70-130	126	70-130	10	0-30
477814	Copper	<1 ug/g	107	70-130	133	70-130	17	0-30
477814	Molybdenum	<1 ug/g	112	70-130	110	70-130	0	0-30
477814	Nickel	<1 ug/g	107	70-130	108	70-130	16	0-30
477814	Lead	<1 ug/g	103	70-130	123	70-130	18	0-30
477814	Antimony	<1 ug/g	102	70-130	104	70-130	0	0-30
477814	Selenium	<0.5 ug/g	105	70-130	120	70-130	0	0-30
477814	Thallium	<1 ug/g	104	70-130	102	70-130	0	0-30
477814	Uranium	<0.5 ug/g	92	70-130	106	70-130	0	0-30
477814	Vanadium	<2 ug/g	100	70-130	151	70-130	1	0-30
477814	Zinc	<2 ug/g	106	70-130	134	70-130	19	0-30
477843	PHC's F2	<2 ug/g	107	80-120	84	60-140	0	0-30
477843	PHC's F3	<20 ug/g	107	80-120	84	60-140	0	0-30
477843	PHC's F4	<20 ug/g	107	80-120	84	60-140	0	0-30
477843	Moisture-Humidite	<0.1 %	100	80-120			0	
477845	PHC's F2	<2 ug/g	95	80-120	101	60-140	0	0-30
477845	PHC's F3	<20 ug/g	95	80-120	101	60-140	14	0-30
477845	PHC's F4	<20 ug/g	95	80-120	101	60-140	10	0-30
477845	Moisture-Humidite	<0.1 %	100	80-120			22	
477863	PHC's F1	<10 ug/g	96	80-120	106	60-140	0	0-30
477864	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	98	60-130	81	50-140	0	0-50
477864	Trichloroethane, 1,1,1-	<0.05 ug/g	106	60-130	86	50-140	0	0-50
477864	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	85	60-130	108	50-140	0	0-30

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
477864	Trichloroethane, 1,1,2-	<0.05 ug/g	93	60-130	88	50-140	0	0-50
477864	Dichloroethane, 1,1-	<0.05 ug/g	122	60-130	84	50-140	0	0-50
477864	Dichloroethylene, 1,1-	<0.05 ug/g	98	60-130	86	50-140	0	0-50
477864	Dichlorobenzene, 1,2-	<0.05 ug/g	96	60-130	128	50-140	0	0-50
477864	Dichloroethane, 1,2-	<0.05 ug/g	104	60-130	83	50-140	0	0-50
477864	Dichloropropane, 1,2-	<0.05 ug/g	91	60-130	92	50-140	0	0-50
477864	Dichlorobenzene, 1,3-	<0.05 ug/g	100	60-130	78	50-140	0	0-50
477864	Dichlorobenzene, 1,4-	<0.05 ug/g	98	60-130	85	50-140	0	0-50
477864	Acetone	<0.50 ug/g	87	60-130	92	50-140	0	0-50
477864	Benzene	<0.0068	110	60-130	82	50-140	0	0-50
477864	Bromodichloromethane	<0.05 ug/g	105	60-130	79	50-140	0	0-50
477864	Bromoform	<0.05 ug/g	99	60-130	98	50-140	0	0-50
477864	Bromomethane	<0.05 ug/g	107	60-130	87	50-140	0	0-50
477864	Dichloroethylene, 1,2-cis-	<0.05 ug/g	116	60-130	83	50-140	0	0-50
477864	Dichloropropene, 1,3-cis-	<0.05 ug/g	91	60-130	112	50-140	0	0-50
477864	Carbon Tetrachloride	<0.05 ug/g	102	60-130	88	50-140	0	0-50
477864	Chloroform	<0.05 ug/g	116	60-130	84	50-140	0	0-50
477864	Dibromochloromethane	<0.05 ug/g	95	60-130	118	50-140	0	0-50
477864	Dichlorodifluoromethane	<0.05 ug/g	113	60-130	111	50-140	0	0-50
477864	Methylene Chloride	<0.05 ug/g	77	60-130	101	50-140	0	0-50
477864	Ethylbenzene	<0.018 ug/g	101	60-130	84	50-140	0	0-50
477864	Ethylene dibromide	<0.05 ug/g	96	60-130	121	50-140	0	0-50
477864	Hexane (n)	<0.05 ug/g	103	60-130	75	50-140	0	0-50
477864	Xylene, m/p-	<0.05 ug/g	104	60-130	97	50-140	0	0-50
477864	Methyl Ethyl Ketone	<0.50 ug/g	83	60-130	105	50-140	0	0-50
477864	Methyl Isobutyl Ketone	<0.50 ug/g	88	60-130	91	50-140	0	0-50
477864	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	93	60-130	76	50-140	0	0-50
477864	Chlorobenzene	<0.05 ug/g	102	60-130	83	50-140	0	0-50
477864	Xylene, o-	<0.05 ug/g	102	60-130	122	50-140	0	0-50
477864	Styrene	<0.05 ug/g	100	60-130	118	50-140	0	0-50
477864	Dichloroethylene, 1,2-trans-	<0.05 ug/g	113	60-130	80	50-140	0	0-50
477864	Dichloropropene, 1,3-trans-	<0.05 ug/g	92	60-130	81	50-140	0	0-50
477864	Tetrachloroethylene	<0.05 ug/g	102	60-130	86	50-140	0	0-50

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
477864	Toluene	<0.08 ug/g	99	60-130	90	50-140	0	0-50
477864	Trichloroethylene	<0.01 ug/g	96	60-130	81	50-140	0	0-50
477864	Trichlorofluoromethane	<0.05 ug/g	105	60-130	88	50-140	0	0-50
477864	Vinyl Chloride	<0.02 ug/g	107	60-130	88	50-140	0	0-50
477865	Methylnaphthalene, 1-	<0.05 ug/g	84	50-140	64	50-140	0	0-40
477865	Methylnaphthalene, 2-	<0.05 ug/g	90	50-140	70	50-140	0	0-40
477865	Acenaphthene	<0.05 ug/g	71	50-140	55	50-140	0	0-40
477865	Acenaphthylene	<0.05 ug/g	65	50-140	53	50-140	0	0-40
477865	Anthracene	<0.05 ug/g	77	50-140	60	50-140	0	0-40
477865	Benz[a]anthracene	<0.05 ug/g	86	50-140	58	50-140	0	0-40
477865	Benzo[a]pyrene	<0.05 ug/g	78	50-140	52	50-140	0	0-40
477865	Benzo[b]fluoranthene	<0.05 ug/g	83	50-140	55	50-140	0	0-40
477865	Benzo[ghi]perylene	<0.05 ug/g	74	50-140	54	50-140	0	0-40
477865	Benzo[k]fluoranthene	<0.05 ug/g	84	50-140	56	50-140	0	0-40
477865	Chrysene	<0.05 ug/g	87	50-140	60	50-140	0	0-40
477865	Dibenz[a h]anthracene	<0.05 ug/g	80	50-140	50	50-140	0	0-40
477865	Fluoranthene	<0.05 ug/g	90	50-140	64	50-140	0	0-40
477865	Fluorene	<0.05 ug/g	65	50-140	53	50-140	0	0-40
477865	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	83	50-140	50	50-140	0	0-40
477865	Naphthalene	<0.013 ug/g	72	50-140	55	50-140	0	0-40
477865	Phenanthrene	<0.05 ug/g	77	50-140	59	50-140	0	0-40
477865	Pyrene	<0.05 ug/g	90	50-140	63	50-140	0	0-40
477866	1+2-methylnaphthalene							
477870	Xylene Mixture							
477875	PHC's F1-BTEX							
477876	Dichloropropene, 1,3-							
477879	Sodium Adsorption Ratio	<0.01					1	
477938	PHC's F2-Naphth							
477939	PHC's F3-PAH							

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 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017561
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1139-02
 COC #: 233131

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
477708	pH - CaCl2	pH Meter	2025-06-27	2025-06-27	NaR	AG Soil
477804	Electrical Conductivity	Electrical Conductivity Mete	2025-06-30	2025-06-30	Z_S	Cond-Soil
477814	Silver	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Arsenic	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Boron (total)	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Barium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Beryllium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Cadmium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Cobalt	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Chromium Total	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Copper	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Molybdenum	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Nickel	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Lead	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Antimony	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Selenium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Thallium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Uranium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Vanadium	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477814	Zinc	ICAPQ-MS	2025-06-30	2025-06-30	AsA	EPA 200.8/6020
477843	PHC's F2	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477843	PHC's F3	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477843	PHC's F4	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477843	Moisture-Humidite	Oven	2025-06-30	2025-07-02	D_T	ASTM 2216
477845	PHC's F2	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477845	PHC's F3	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477845	PHC's F4	GC/FID	2025-06-30	2025-07-02	D_T	CCME
477845	Moisture-Humidite	Oven	2025-06-30	2025-07-02	D_T	ASTM 2216
477863	PHC's F1	GC/FID	2025-07-02	2025-07-02	AtJ	CCME
477864	Tetrachloroethane, 1,1,1,2-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Trichloroethane, 1,1,1-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Tetrachloroethane, 1,1,2,2-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B

Results relate only to the parameters tested on the samples submitted.
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: PNJ Engineering Inc.
 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

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 Date Submitted: 2025-06-25
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 Project: 25-1139-02
 COC #: 233131

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
477864	Trichloroethane, 1,1,2-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloroethane, 1,1-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloroethylene, 1,1-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichlorobenzene, 1,2-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloroethane, 1,2-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloropropane, 1,2-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichlorobenzene, 1,3-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichlorobenzene, 1,4-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Acetone	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Benzene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Bromodichloromethane	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Bromoform	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Bromomethane	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloroethylene, 1,2-cis-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloropropene, 1,3-cis-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Carbon Tetrachloride	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Chloroform	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dibromochloromethane	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichlorodifluoromethane	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Methylene Chloride	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Ethylbenzene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Ethylene dibromide	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Hexane (n)	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Xylene, m/p-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Methyl Ethyl Ketone	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Methyl Isobutyl Ketone	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Methyl tert-Butyl Ether (MTBE)	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Chlorobenzene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Xylene, o-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Styrene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloroethylene, 1,2-trans-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Dichloropropene, 1,3-trans-	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Tetrachloroethylene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B

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 COC #: 233131

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
477864	Toluene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Trichloroethylene	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Trichlorofluoromethane	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477864	Vinyl Chloride	GC-MS	2025-06-29	2025-06-30	AtJ	V 8260B
477865	Methylnaphthalene, 1-	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Methylnaphthalene, 2-	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Acenaphthene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Acenaphthylene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Anthracene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Benz[a]anthracene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Benzo[a]pyrene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Benzo[b]fluoranthene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Benzo[ghi]perylene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Benzo[k]fluoranthene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Chrysene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Dibenz[a h]anthracene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Fluoranthene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Fluorene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Indeno[1 2 3-cd]pyrene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Naphthalene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Phenanthrene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477865	Pyrene	GC-MS	2025-06-26	2025-06-30	C_M	P 8270
477866	1+2-methylnaphthalene	GC-MS	2025-07-02	2025-07-02	C_M	P 8270
477870	Xylene Mixture	GC-MS	2025-07-02	2025-07-02	AtJ	V 8260B
477875	PHC's F1-BTEX	GC/FID	2025-07-02	2025-07-02	AtJ	CCME
477876	Dichloropropene, 1,3-	GC-MS	2025-07-02	2025-07-02	AtJ	V 8260B
477879	Sodium Adsorption Ratio	iCAP OES	2025-07-02	2025-07-02	IP	Ag Soil
477938	PHC's F2-Naph	GC/FID	2025-07-03	2025-07-03	H_S	CCME
477939	PHC's F3-PAH	GC/FID	2025-07-03	2025-07-03	H_S	CCME

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70 Galaxy Blvd Suite 100,
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CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

3017561

CLIENT INFORMATION				INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>															
Company: PNJ ENGINEERING INC.				Company:				Contact: Jane				Email: #1: [REDACTED]							
Contact: ANDREA SALTOS				Address:				Address:				Email: #2: [REDACTED]							
Address: 70 GALAXY BULD				Telephone:				Telephone:				PO #:							
Telephone:				Cell:				REGULATION/GUIDELINE REQUIRED											
Email: #1: [REDACTED]				Email: #2: [REDACTED]															
Project: 25-1137-02				Quote #:				<input type="checkbox"/> Sanitary Sewer, City: _____ <input type="checkbox"/> Storm Sewer, City: _____ <input type="checkbox"/> ODWSOG (Use DW COC if samples are for human consumption) <input type="checkbox"/> PWQO <input type="checkbox"/> O.Reg. 347 (TCLP) <input type="checkbox"/> Other: _____				<input type="checkbox"/> O. Reg. 153/04 The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04. Analysis of full parameter list only Yes <input type="checkbox"/> No <input type="checkbox"/>							
TURN-AROUND TIME (Business Days)																			
<input type="checkbox"/> 1 Day* (100%) <input type="checkbox"/> 2 Day** (50%) <input type="checkbox"/> 3-5 Days (25%) <input checked="" type="checkbox"/> 5-7 Days (Standard)																			
Please contact Lab in advance to determine rush availability. *For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%. **For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%. TCLP, SPLP, PFAS, and NP/NPE the rush surcharges are 100% (3 day) and 50% (4 day). For farm soils the rush surcharge is 100% (3-5 days). Regular TAT is 10 days.																			
The optimal temperature conditions during transport is 4 - 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. This COC must not be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a \$25 surcharge if required information is missing (required fields are shaded in grey).				Sample Details															
Occasionally, situations arise in which Eurofins Environment Testing Canada (Ottawa) is unable to process a sample after receipt. By signing this chain-of-custody form, the client agrees that Eurofins Environment Testing Canada (Ottawa) may subcontract samples to a laboratory that is similarly accredited. This subcontracted laboratory will perform the same analysis using the same or similar methodology. Agreements made in advance to subcontract to a specific laboratory will be honored.				Field Filtered -->															
				O.Reg.153/04 parameters															
Sample ID		Date/Time Collected		Sample Matrix	# of Containers	PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	EC	SAR	PH	mSPLP metals/lorc	RN# (Lab Use Only)		
JP-4 SA-1		June 25, 2025		Soil	4	✓	✓	✓	✓			✓	✓	✓	✓		1772251		
JP-6 SA-1		↓		↓	4	✓	✓	✓	✓			✓	✓	✓	✓		52		
Dup.		↓		↓	4	✓	✓	✓	✓			✓	✓	✓	✓		53		
JP-8 SA-1		↓		↓	4	✓	✓	✓	✓			✓	✓	✓	✓		54		
JP-4 SA-1 mSPLP		↓		Soil	1											X			
JP-6 SA-1 mSPLP		↓		↓	1											X			
JP-8 SA-1 mSPLP		↓		↓	1											X			
PRINT NAME		LOCATION		SIGN				DATE/TIME				TEMP (°C)							
Sampled By:		[REDACTED]		[Signature]				June 25, 2025											
Relinquished By:		[REDACTED]		[Signature]				[Signature]											
Received By:		[REDACTED]		[Signature]				25/June/25 3pm				8.4							
Received By:		[REDACTED]		[Signature]				[Signature]											
COMMENTS:																			
FOR INTERNAL LAB USE ONLY																			
CUSTODY SEAL: <input type="checkbox"/> YES <input type="checkbox"/> NO Ice packs submit <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																			

Client: PNJ Engineering Inc.
70 Galaxy Blvd Suite 100,
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M9W 4Y6
Attention: Andrea Saltos
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COC #: 233131
Temperature (C): 8
Custody Seal:

Page 1 of 11

Dear Andrea Saltos:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Patrick Jacques
2025.07.03
14:50:02 -04'00'

Patrick Jacques, Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

EETC Reg 153 Version 21.rpt

Client: PNJ Engineering Inc.
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Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

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Guideline = Excess Soil-Leach T2.1-Res/Park/Inst

Metals

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

	1772255 SPLP	1772256 SPLP	1772257 SPLP
	2025-06-25	2025-06-25	2025-06-25
	TP-4 SA-1 mSPLP	TP-6 SA-1 mSPLP	TP-8 SA-1 mSPLP

Analyte	Batch No	MRL	Units	Guideline	1772255 mSPLP	1772256 mSPLP	1772257 mSPLP
Antimony	477905	0.5	ug/L	STD 6	<0.5	<0.5	<0.5
Barium	477905	10	ug/L	STD 1000	<10	<10	<10
Beryllium	477905	0.5	ug/L	STD 4	<0.5	<0.5	<0.5
Boron (total)	477905	10	ug/L	STD 5000	<10	<10	<10
Cadmium	477905	0.1	ug/L		<0.1	<0.1	<0.1
Chromium Total	477905	1	ug/L	STD 50	1	<1	<1
Cobalt	477905	0.2	ug/L	STD 3.8	<0.2	<0.2	<0.2
Copper	477905	1	ug/L	STD 14	3	2	2
Molybdenum	477905	5	ug/L	STD 23	<5	<5	<5
Nickel	477905	5	ug/L	STD 78	<5	<5	<5
Selenium	477905	1	ug/L	STD 10	<1	<1	<1
Silver	477905	0.1	ug/L	STD 0.3	<0.1	<0.1	<0.1
Thallium	477905	0.1	ug/L	STD 2	<0.1	<0.1	<0.1
Uranium	477905	1	ug/L	STD 20	<1	<1	<1
Zinc	477905	10	ug/L	STD 180	<10	<10	50

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational
 Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim
 Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial
 Water Quality Guideline, IPWQO = Interim Provincial Water Quality
 Objective, TDR = Typical Desired Range

Environment Testing

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SPLP

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1772255 SPLP	1772256 SPLP	1772257 SPLP	2025-06-25	2025-06-25	2025-06-25
SPLP Extraction	477772				y	y	y			
Zero Headspace Extraction	477772				y	y	y			

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1772255 SPLP	1772256 SPLP	1772257 SPLP	2025-06-25	2025-06-25	2025-06-25
Bromomethane	477867	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5			
Carbon Tetrachloride	477867	0.2	ug/L	STD 0.2	<0.2	<0.2	<0.2			
Chloroform	477867	0.5	ug/L		<0.5	<0.5	<0.5			
Dichlorobenzene, 1,2-	477867	0.4	ug/L	STD 0.55	<0.4	<0.4	<0.4			
Dichlorobenzene, 1,4-	477867	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4			
Dichloroethane, 1,1-	477867	0.4	ug/L		<0.4	<0.4	<0.4			
Dichloroethane, 1,2-	477867	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5			
Dichloroethylene, 1,1-	477867	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5			
Dichloroethylene, 1,2-cis-	477867	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4			
Dichloroethylene, 1,2-trans-	477867	0.4	ug/L	STD 0.5	<0.4	<0.4	<0.4			
Dichloropropane, 1,2-	477867	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5			
Dichloropropene, 1,3-	477876	0.5	ug/L		<0.5	<0.5	<0.5			
Dichloropropene, 1,3-cis-	477867	0.5	ug/L		<0.5	<0.5	<0.5			

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: PNJ Engineering Inc.
 70 Galaxy Blvd Suite 100,
 Toronto, Ontario
 M9W 4Y6
 Attention: Andrea Saltos
 PO#:
 Invoice to: PNJ Engineering Inc.

Report Number: 3017562
 Date Submitted: 2025-06-25
 Date Reported: 2025-07-03
 Project: 25-1137-02
 COC #: 233131

Guideline = Excess Soil-Leach T2.1-Res/Park/Inst

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.	
					1772255	SPLP	1772256	SPLP	1772257	SPLP	2025-06-25
					mSPLP	mSPLP	mSPLP				
Dichloropropene,1,3-trans-	477867	0.5	ug/L		<0.5	<0.5	<0.5				
Ethylene dibromide	477867	0.2	ug/L	STD 0.2	<0.2	<0.2	<0.2				
Tetrachloroethane, 1,1,1,2-	477867	0.5	ug/L		<0.5	<0.5	<0.5				
Tetrachloroethane, 1,1,2,2-	477867	0.5	ug/L	STD 0.5	<0.5	<0.5	<0.5				
Tetrachloroethylene	477867	0.3	ug/L	STD 0.5	<0.3	<0.3	<0.3				
Trichloroethane, 1,1,2,-	477867	0.4	ug/L		<0.4	<0.4	<0.4				
Trichloroethylene	477867	0.3	ug/L	STD 0.5	<0.3	<0.3	<0.3				

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.	
					1772255	SPLP	1772256	SPLP	1772257	SPLP	2025-06-25
					mSPLP	mSPLP	mSPLP				
Moisture-Humidite	477772	0.1	%		8.8	5.7	11.1				

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VOCs Surrogates

Lab I.D.
 Sample Matrix
 Sample Type
 Sample Date
 Sampling Time
 Sample I.D.

Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
1772255	SPLP		2025-06-25		TP-4 SA-1 mSPLP
1772256	SPLP		2025-06-25		TP-6 SA-1 mSPLP
1772257	SPLP		2025-06-25		TP-8 SA-1 mSPLP

Analyte	Batch No	MRL	Units	Guideline	1772255 SPLP	1772256 SPLP	1772257 SPLP
1,2-dichloroethane-d4	477867	0	%		104	106	106
4-bromofluorobenzene	477867	0	%		74	77	73
Toluene-d8	477867	0	%		91	98	112

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
477772	Moisture-Humidite			80-120				
477772	SPLP Extraction							
477772	Zero Headspace Extraction							
477867	Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	80	60-130	122	50-140	0	0-30
477867	Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	80	60-130	95	50-140	0	0-30
477867	Trichloroethane, 1,1,2-	<0.4 ug/L	73	60-130	116	50-140	0	0-30
477867	Dichloroethane, 1,1-	<0.4 ug/L	80	60-130	118	50-140	0	0-30
477867	Dichloroethylene, 1,1-	<0.5 ug/L	78	60-130	124	50-140	0	0-30
477867	Dichlorobenzene, 1,2-	<0.4 ug/L	85	60-130	103	50-140	0	0-30
477867	Dichloroethane, 1,2-	<0.5 ug/L	88	60-130	116	50-140	0	0-30
477867	Dichloropropane, 1,2-	<0.5 ug/L	75	60-130	101	50-140	0	0-30
477867	Dichlorobenzene, 1,4-	<0.4 ug/L	85	60-130	101	50-140	0	0-30
477867	Bromomethane	<0.5 ug/L	93	60-130	122	50-140	0	0-30
477867	Dichloroethylene, 1,2-cis-	<0.4 ug/L	76	60-130	95	50-140	0	0-30
477867	Dichloropropene, 1,3-cis-	<0.5 ug/L	90	60-130	123	50-140	0	0-30
477867	Carbon Tetrachloride	<0.2 ug/L	86	60-130	121	50-140	0	0-30
477867	Chloroform	<0.5 ug/L	83	60-130	118	50-140	0	0-30
477867	Ethylene dibromide	<0.2 ug/L	71	60-130	92	50-140	0	0-30
477867	Dichloroethylene, 1,2-trans-	<0.4 ug/L	80	60-130	115	50-140	0	0-30
477867	Dichloropropene, 1,3-trans-	<0.5 ug/L	71	60-130	75	50-140	0	0-30
477867	Tetrachloroethylene	<0.3 ug/L	71	60-130	108	50-140	0	0-30
477867	Trichloroethylene	<0.3 ug/L	76	60-130	93	50-140	0	0-30
477876	Dichloropropene, 1,3-							
477905	Silver	<0.1 ug/L	111	80-120		70-130		0-20
477905	Boron (total)	<10 ug/L	100	80-120		70-130		0-20
477905	Barium	<10 ug/L	97	80-120		70-130		0-20
477905	Beryllium	<0.5 ug/L	104	80-120		70-130		0-20
477905	Cadmium	<0.1 ug/L	104	80-120		70-130		0-20
477905	Cobalt	<0.2 ug/L	108	80-120		70-130		0-20
477905	Chromium Total	<1 ug/L	112	80-120		70-130		0-20
477905	Copper	<1 ug/L	111	80-120		70-130		0-20
477905	Molybdenum	<5 ug/L	94	80-120		70-130		0-20

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Report Number: 3017562
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 Date Reported: 2025-07-03
 Project: 25-1137-02
 COC #: 233131

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
477905	Nickel	<5 ug/L	109	80-120		70-130		0-20
477905	Antimony	<0.5 ug/L	84	80-120		70-130		0-20
477905	Selenium	<1 ug/L	100	80-120		70-130		0-20
477905	Thallium	<0.1 ug/L	107	80-120		70-130		0-20
477905	Uranium	<1 ug/L	100	80-120		70-130		0-20
477905	Zinc	<10 ug/L	110	80-120		70-130		0-20

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 Methods references and/or additional QA/QC information available on request.

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
477772	Moisture-Humidite	Oven	2025-06-29	2025-06-30	AsN	ASTM 2216
477772	SPLP Extraction		2025-06-29	2025-06-30	AsN	mSPLP E9003/EPA 1312
477772	Zero Headspace Extraction		2025-06-29	2025-06-30	AsN	mSPLP E9003/EPA 1312
477867	Tetrachloroethane, 1,1,1,2-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Tetrachloroethane, 1,1,2,2-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Trichloroethane, 1,1,2-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloroethane, 1,1-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloroethylene, 1,1-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichlorobenzene, 1,2-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloroethane, 1,2-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloropropane, 1,2-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichlorobenzene, 1,4-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Bromomethane	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloroethylene, 1,2-cis-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloropropene, 1,3-cis-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Carbon Tetrachloride	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Chloroform	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Ethylene dibromide	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloroethylene, 1,2-trans-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Dichloropropene, 1,3-trans-	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Tetrachloroethylene	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477867	Trichloroethylene	GC-MS	2025-06-29	2025-07-01	AtJ	EPA 8260
477876	Dichloropropene, 1,3-	GC-MS	2025-07-02	2025-07-02	AtJ	EPA 8260
477905	Silver	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Boron (total)	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Barium	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Beryllium	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Cadmium	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Cobalt	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Chromium Total	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Copper	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Molybdenum	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8

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 Project: 25-1137-02
 COC #: 233131

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
477905	Nickel	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Antimony	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Selenium	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Thallium	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Uranium	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8
477905	Zinc	ICAPQ-MS	2025-07-02	2025-07-02	AaN	EPA 200.8

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CWS for Petroleum Hydrocarbons in Soil - Tier 1

Notes:

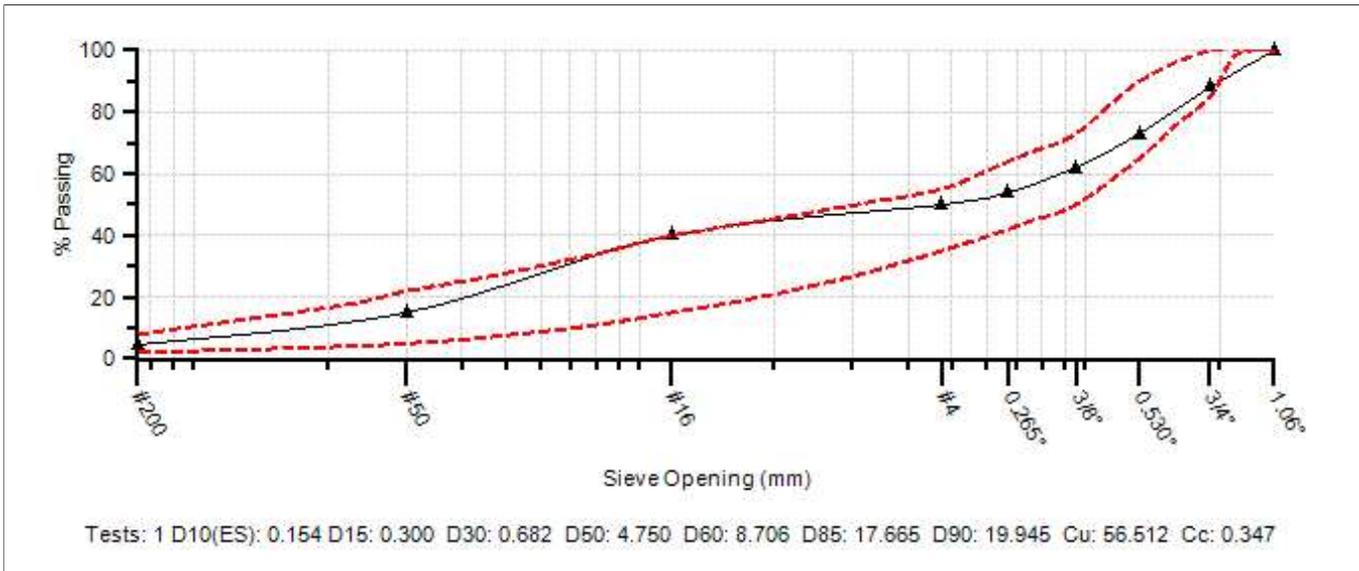
1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.



Basic Quality Statistical Summary Report

Plant 30-Waynco Sand & Gravel
Product GRAVA-Granular A
Specification Granular A
Period 01/27/2025 - 05/01/2025

Sieve/Test	Tests	Average	St Dev	Target	Specification
1.06" (26.5mm)	4	100	0.0		100-100
3/4" (19mm)	4	88	1.4		85-100
0.530" (13.2mm)	4	73	4.3		65-90
3/8" (9.5mm)	4	62	3.1	≤68	50-73
0.265" (6.7mm)	4	54	3.0		
#4 (4.75mm)	4	50	3.0		35-55
#16 (1.18mm)	4	40	2.2		15-40
#50 (.3mm)	4	15	1.0		5-22
#200 (75µm)	4	4.6	0.37		2-8
Pan	4	0.0	0.00		

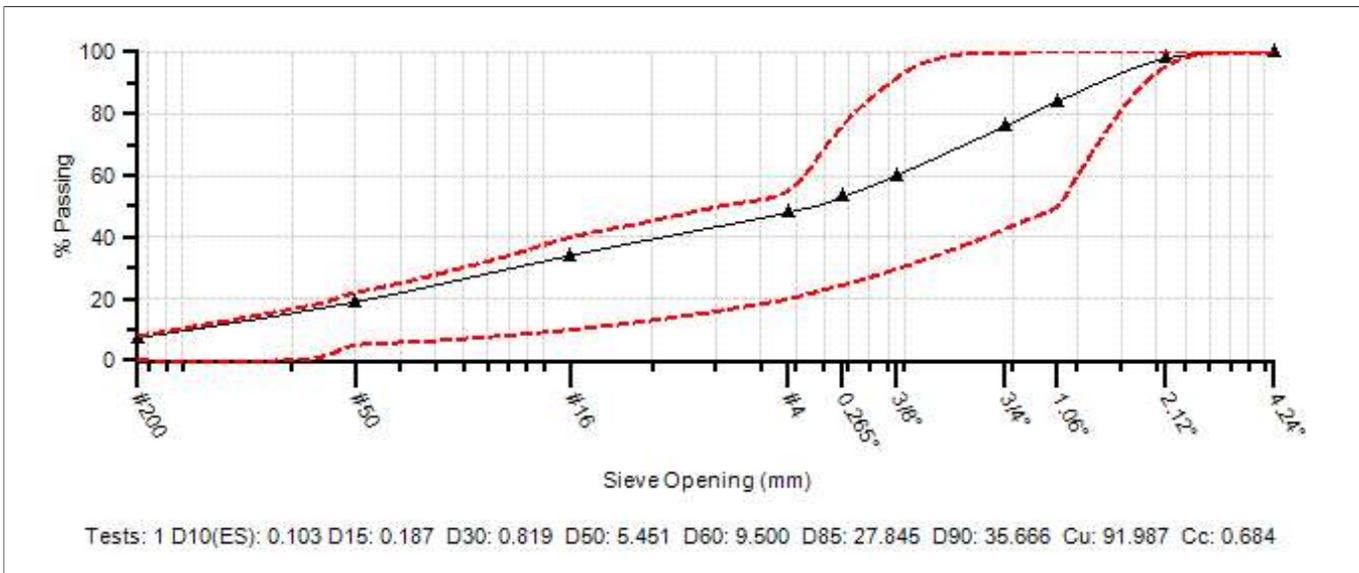




Basic Quality Statistical Summary Report

Plant 30-Waynco Sand & Gravel
Product GRAVB2-Granular B II (Modified)
Specification Granular B II (Modified)
Period 01/27/2025 - 05/01/2025

Sieve/Test	Tests	Average	St Dev	Target	Specification
4.24" (106mm)	8	100	0.0		100-100
2.12" (53mm)	8	98	4.5		
1.06" (26.5mm)	8	84	6.1		50-100
3/4" (19mm)	8	76	5.1		
3/8" (9.5mm)	8	60	4.0		
0.265" (6.7mm)	8	53	4.0		
#4 (4.75mm)	8	48	4.5		20-55
#16 (1.18mm)	8	34	8.1		10-40
#50 (.3mm)	8	19	3.2		5-22
#200 (75µm)	8	7.3	2.06		0-8
Pan	8	0.0	0.00		



Query

Query Selections
Date Created 05/01/2025
Date Range 01/27/2025 - 05/01/2025
Plant Waynco Sand & Gravel
Sample Type Shipping



August 7, 2025

Andrew Hartholt
Chief Building Official
Township of Puslinch
7404 Wellington Rd 34
Puslinch, ON N0B 2J0

Subject: Fire Flow Calculation Summary – 563 Townline Road, Puslinch

Dear Mr. Andrew,

Please find attached the Fire Flow Calculation Summary prepared in support of the proposed residential development at 563 Townline Road, Puslinch. This report has been prepared in accordance with the Fire Underwriters Survey (FUS) methodology and in alignment with the City of Hamilton Design Criteria and the Ontario Fire Code requirements.

The analysis concludes that the **minimum required fire flow** for this residence is **9,100 litres per minute (L/min)**. The report includes a detailed breakdown of building characteristics, assumptions, and the full step-by-step calculation supporting this value.

As the Professional Engineer responsible for this submission, I confirm that the information presented is accurate and consistent with accepted industry standards. Should you require additional details or clarification, please do not hesitate to contact me directly.


Prasanna Mohan, P.Eng, PMP
Senior Civil Engineer
PVS Engineering Inc.

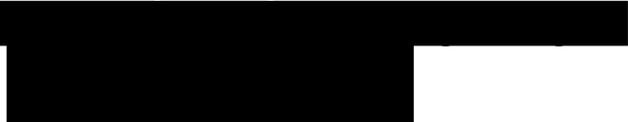

Encl: Fire Flow Calculation Summary



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Fire Flow Calculation Summary

Property Address: 563 Townline Road, Puslinch, ON

Applicant: 2515320 Ontario Ltd.

Date: August 7, 2025

1 Purpose and Methodology

This fire flow calculation has been prepared in support of the proposed residential development located at 563 Townline Road, Puslinch. The objective of this report is to determine the minimum required fire flow in accordance with the City of Hamilton Design Criteria, the Fire Underwriters Survey (FUS) guidelines, and applicable provincial regulations.

The methodology is based on the *Fire Protection Water Supply Guidelines* (2015) and the *Ontario Fire Code* O. Reg. 213/07, under the *Fire Protection and Prevention Act* (FPPA).

The FUS-based approach determines fire flow requirements by evaluating:

- The total gross floor area of the building,
- The construction type and associated fire resistance rating,
- The distance to adjacent structures (exposure risk), and
- The presence (or absence) of active fire protection systems such as automatic sprinklers.

This report also considers the minimum on-site water storage volume required in rural areas without direct municipal hydrant service, based on accepted practices for tanker shuttle support.

2. Building Characteristics

The following summarizes the key building parameters used in the fire flow calculation:

- **Building Type:** Proposed two-storey custom detached residential dwelling

- **Total Gross Floor Area:** 1,054.24 m² (combined first and second floors)
- **Basement:** Unfinished; excluded from fire flow calculation in accordance with FUS guidelines
- **Construction Type:** Wood-frame construction (classified as ordinary combustible); coefficient C = 1.5
- **Fire Protection:** No sprinkler system or standpipe provided
- **Exposure Distances:** Setbacks of 9.0 metres or greater on all sides; qualifies for 15% exposure reduction

3. FUS Fire Flow Calculation

Formula:

$$F = 220 \times C \times \sqrt{A}$$

Where:

F = Required fire flow (L/min)

C = Construction type coefficient (1.5 for ordinary combustible construction)

A = Total floor area (1,054.24 m²)

Step 1 – Base Fire Flow Calculation

$$\sqrt{1,054.24} = 32.47$$

$$F = 220 \times 1.5 \times 32.47$$

$$F \approx 10,715 \text{ L/min}$$

Step 2 – Exposure Adjustment

The building is set back ≥ 9 m on all sides, allowing a 15% reduction:

$$F = 10,715 \times 0.85 = 9,107.75 \text{ L/min} \approx \mathbf{9,100 \text{ L/min}}$$

Step 3 – Sprinkler Credit

No automatic sprinkler system is provided.

No reduction applied.

Step 4 – On-Site Water Storage Requirement

For rural developments without hydrant access and no tanker shuttle support, the Fire Protection Water Supply Guidelines recommend on-site storage equal to the required fire flow sustained over a 30-minute period.

$$\text{Volume} = 9,100 \text{ L/min} \times 30 \text{ min} = \mathbf{273,000 \text{ litres}}$$

Therefore, the minimum recommended on-site storage volume is **273,000 litres**.

4. Summary and Conclusion

Based on the preceding calculations, the minimum required fire flow for the proposed residential structure at 563 Townline Road, Puslinch is:

9,100 litres per minute (L/min)

This value reflects:

- The total gross floor area of 1,054.24 m²
- Ordinary combustible (wood-frame) construction
- A 15% reduction for exposure distances (≥ 9.0 m on all sides)
- The absence of an automatic sprinkler system

It is recommended that the available water supply be verified with the local fire department or water authority to confirm adequacy in meeting this calculated demand.

As part of the site's fire protection strategy, partial on-site water storage will be provided through an ornamental fountain located at the front of the property, as shown on the site plan. The fountain, with a diameter of **15.2 metres** and a water depth of **1.55 metres**, will provide approximately **281,260 litres** of usable water storage.

To satisfy the total storage requirement of **273,000 litres**, the fountain alone provides sufficient volume; however, to ensure redundancy and operational reliability under all conditions, a supplemental underground cistern will also be installed on-site. The cistern will be designed in accordance with applicable municipal standards and Ontario Fire Code requirements and will include a dry hydrant or draft connection to allow fire department access in the event of an emergency. This combined approach ensures full compliance with rural fire protection storage criteria in areas without municipal hydrant or tanker shuttle support.

5. References

- Fire Underwriters Survey – Fire Flow Requirements (1999)
- Ontario Building Code – O. Reg. 332/12

- Fire Code – O. Reg. 213/07
- City of Hamilton Design Criteria Manual – Section on Fire Protection
- Fire Protection Water Supply Guidelines (OFM, 2015)

6. Cold Weather Protection – Open Water Source (Fountain)

To ensure year-round operability and compliance with municipal and fire code requirements, the ornamental fountain at 563 Townline Road will incorporate the following cold weather protection and operational measures:

Ice Management Equipment

- **Type:** Submersible aerator, surface bubbler, or electric de-icing heater.
- **Materials:**
 - Housing – Corrosion-resistant marine-grade aluminum or stainless steel.
 - Electrical Components – CSA-approved, submersible-rated (IP68), suitable for continuous winter operation.
 - Mooring Cables/Chains – Stainless steel or UV-resistant marine rope.
- **Performance:** Maintain a minimum 3 m radius ice-free zone at the dry hydrant intake location at ambient temperatures as low as -20°C.
- **Power Supply:** Dedicated weatherproof electrical circuit with ground-fault protection (GFCI) and provision for portable generator connection in case of power outage.

Dry Hydrant Frost Protection

- **Suction Pipe:** Schedule 40 or Schedule 80 PVC or HDPE, minimum diameter 150 mm, CSA-certified for buried water service.
- **Screen:** Stainless steel (Type 304 or 316), anti-vortex design, positioned below frost penetration depth (≥ 1.5 m in Puslinch).
- **Drainage:** Piping sloped minimum 50 mm/m toward the fountain basin; automatic drain-back after use to prevent freezing.

- **Flow Performance:** Hydrant intake and piping to provide a minimum sustained flow of 9,100 L/min at the pumper connection, in compliance with NFPA 1142.

Debris and Sediment Control

- Removable intake screen or cleaning hatch to allow back-flushing and removal of sediment, vegetation, or algae buildup.
- Intake location to be kept free of floating debris and obstructions year-round.

Winter Access and Signage

- **Access Route:** All-weather gravel or asphalt surface, minimum width 3.0 m, designed to support fire apparatus loads (minimum GVW 35,000 kg), kept snow- and ice-free during winter months.
- **Turnaround Space:** Provided in accordance with Ontario Building Code fire route requirements.
- **Hydrant Connection:** NFPA-compliant Storz or threaded connection, brass or stainless steel, with protective cap.
- **Signage:** Reflective aluminum plate (minimum 450 × 450 mm), UV-stable graphics, visible at night and in snow conditions.

Inspection, Testing, and Maintenance

- **Pre-Winter Inspection:** Verify aeration equipment, hydrant piping, fittings, and intake depth; remove any sediment or vegetation.
- **Annual Flow Test:** Conducted with the fire department to confirm hydrant suction performance and ice-management effectiveness.
- **Maintenance Log:** Keep records of inspections, tests, and corrective actions.
- **Operational Depth:** Ensure sediment, vegetation, or ice buildup does not reduce the minimum operational depth at the intake below pumper truck suction requirements.

Safety Provisions

- Install safety grates or protective covers over intake openings to prevent accidental entry.

- Maintain clear sightlines to the hydrant connection point from the driveway or roadway.

Operational Note:

The ornamental fountain and dry hydrant assembly are designed for direct drafting by fire department pumper apparatus in accordance with NFPA 1142. No on-site booster pump is provided. The system will be tested and confirmed to meet operational drafting requirements during commissioning.

These provisions will be finalized in coordination with the City of Hamilton and the applicable fire authority to confirm full compliance with year-round operational and emergency response requirements.

7. Limitations and Review Requirements

This fire flow calculation and cistern/fountain storage report has been prepared based on preliminary site and building design information available at the time of submission. It reflects industry-standard methods and applicable municipal and provincial guidelines.

Final design, installation, and connection details for the proposed underground cistern and ornamental fountain, including the dry hydrant/draft connection, will be subject to review and approval by the City of Hamilton and the applicable fire authority prior to construction.

The specifications and locations shown herein are conceptual in nature and intended to demonstrate conformance with minimum water storage and emergency access requirements. Detailed engineering drawings and shop submissions will be provided during the permit or construction phase, as required.

Cold weather and winterization requirements for the ornamental fountain, including ice management, frost protection, and year-round access provisions, are detailed in Section 6 of this report and will be finalized in coordination with the City of Hamilton and the applicable fire authority to confirm compliance with all operational requirements in winter conditions.

Source Site Confirmation

July 23, 2025

Project Address: 563 Townline Road, Puslinch, ON N0B 2J0

This is to confirm that for the remaining 248 cubic meter fill the source site will be as mentioned below:

Waynco Sand and Gravel

1417 Waynco Road

Cambridge, Ontario N1R 5S6

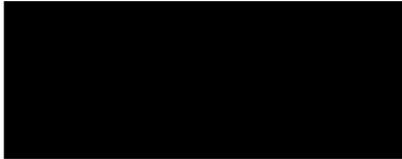


We will be sourcing 'Granular A' and this will be filled at the rear side of the house and in the driveway, in order to achieve the grades given in the grading plan. Lab reports and sieve analysis of the Granular A is enclosed in the application.

Ranjodh Singh (Project Manager)

Reyton Building Contractors.

X



Date: 20-07-2025

To: Township of Puslinch
Address: 7404 Wellington Road 34
Puslinch, ON, N0B 2J0

Subject: Confirmation of Compliance with Environmental Protection Standards

Project Site Address: 563 Townline Road, Puslinch, ON N0B 2J0

Sir/Madam,

This letter confirms that the site alteration at the above address, which involved filling with imported soil and gravel to match the proposed residential building grade, has been and will be completed in compliance with all applicable regulations under the Environmental Protection Act, R.S.O. 1990, c. E.19.

We ensure that the work performed shall not cause any adverse effects as defined in the Act. Specifically:

1. All imported soil and gravel will be tested to confirm compliance with environmental standards, ensuring no contamination or degradation of the natural environment.
2. Proper procedures shall be followed during the grading and infilling process to prevent any disruption to surrounding ecosystems, properties, or wildlife.
3. The grading and infilling process shall adhere to strict safety protocols, including the use of approved equipment and qualified personnel, ensuring public and worker safety.
4. Adjacent properties remain fully usable, with no interference in their normal enjoyment or operations.
5. The site alteration activities are planned and executed to avoid disruption to local businesses and traffic patterns.

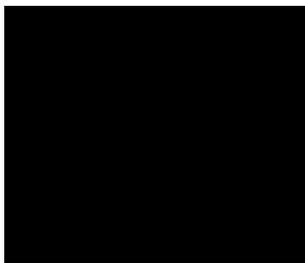
If you require further details or documentation, please do not hesitate to contact us.

Sincerely,

Authorized Agent

Ranjodh Singh
Revton Building Contractors Inc.

Owner



Signature _____

Quality Control and Assurance Program

Project Address: 563 Townline Road, Puslinch, ON N0B 2J0

Objective:

To ensure the site alteration, including infilling with soil and gravel, meets regulatory standards, environmental safety, and project specifications.

Program Overview

1. Material Testing and Certification:

- All soil and gravel shall be certified by accredited labs as clean, non-contaminated, and suitable for use.

2. Site Preparation and Monitoring:

- The site shall be leveled and prepared, with daily inspections ensuring proper material placement and grading accuracy.

3. Environmental Protection:

- Erosion control, dust suppression, and noise mitigation measures shall minimize impacts on the environment and neighbors.

4. Documentation:

- Daily logs and a final report confirm compliance with all standards and site readiness for residential development.
-

This program shall ensure that all work shall be conducted safely, responsibly, and in compliance with environmental and regulatory requirements. Supporting documents will be available upon request.

GeoStructures and Infrastructure Management Inc.



Signature _____

Date:15-01-2025

To:

Township of Puslinch
7404 Wellington Road 34
Puslinch, ON N0B 2J0

Subject: Special request for Site Alteration Activities

Sir/Madam,

We, Ravinder Singh Sidhu and Sukhpal Kaur Sidhu, owners of the property at 563 Townline Road, Puslinch, ON N0B 2J0 would like to request you to wave us from the requirement of Engineer full time during the filling process. We have approached many Engineer's and most of them are not agreeing to be present full time at the site and some has given very hefty prices which will be extremely difficult for us to bear.

We have our Agent who is certified Project management professional and have got around 10 years of experience in the construction. He will supervise the filling process as he is well versed with all the quality assurance, safety guidelines and other technical requirements to complied during the process. So, we request you to allow us to proceed with the filling and provide us the permit for the same.

Please feel free to contact us for any additional information.

Sincerely,

Owner

Ravinder Singh Sidhu

Signature _____

Agent:

Ranjodh Singh

Signature _____

Date- 20-07-2025

To

Township of Puslinch
7404 Wellington Road 34
Puslinch, ON N0B 2J0

Subject: Justification for Fill Volume – 563 Townline Road, Puslinch, ON

Sir/Madam

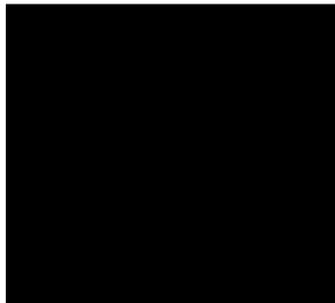
This letter serves to justify the volume of fill which will be imported to the site at 563 Townline Road. A topographic survey of the property indicates that the existing ground levels are uneven and below the elevation required for the proposed residential development. To achieve the necessary grades, approximately **[507]** cubic meters of fill material shall be imported. This volume is calculated based on precise site measurements and verified by qualified professionals. The fill is essential to ensure a stable construction base, proper drainage, and prevention of water-related issues such as pooling or runoff. All imported materials shall be tested to confirm they are clean, uncontaminated, and environmentally safe.

The proposed fill quantity shall be consistent with the approved development plans and shall adhere to all applicable site alteration and grading regulations.

Thank you for your attention to this matter.

Sincerely,

GeoStructures and Infrastructure Management Inc.



Signature _____