Grand Ledge Area Emergency Services Authority

Special Meeting Agenda

February 2, 2026
6:00 pm
Meeting will be at
500 N. Clinton St. Grand Ledge MI, 48837
Training Room, Grand Ledge Fire Department

I. **Roll Call of Authority Board** – Chairperson Don Willems, Vice Chairperson Keith Mulder, Treasurer Janet Schultz, Secretary Rick Lantz, Trustee Robert Stahelin II

II. **Pledge of Allegiance**

III. **Audience Participation** – Any person (s) attending may comment on any subject. All presentations before the Authority Board shall be limited to five minutes per individual presentation.

IV. **Approval of Consent Agenda** – The Authority Board approves items listed on the consent agenda by a single roll call vote without debate. If the Authority Board desires to debate any item listed on the consent agenda, it may remove the item and place it on the regular agenda for consideration in due order.

V. **Approval of Special Meeting agenda** – The Authority Board may remove any item or add any item to the regular agenda.

A. Motion – To approve the February 2, 2026, Special Authority Board Meeting Agenda

VI. **Committee and Board Reports** – Fire Authority Board members and staff may report on discussions and actions of committees and boards.

A. **Building Committee –** Veridus – Katie Jacobs
B. **Finance Committee –**
C. **Truck/Equipment Replacement Committee -**
D. **Public Education Committee –**
E. **Personnel Committee –**

VII. **Fire Chief/Staff Reports** – The Authority board may receive reports from the Chief, staff members, or contractors.

A. Paramedic Grant

VIII. **Old Business** – The Authority board discusses any business unfinished from a previous meeting

IX. **New Business** – The Authority Board may bring up for discussion any business not previously debated and may act or not act on the item(s) indicated.

1.Resolution 01-2026 – Option 1
2.Resolution 02-2026 – Option 2
3.Resolution 03-2026 – Option 3

X. **Audience Participation** – any person (s) attending may comment on any subject. All presentations before the Authority board shall be limited to five minutes per individual presentation.

XI. Communications from Authority Board members.

XII. **Closed session** – the Open Meetings Act allows the Authority board to discuss certain subjects without the presence of the public. The Authority Board may request a staff member or any other person the Authority Board determines to be necessary to attend the closed session. Once the closed session has ended, the Authority Board will resume the regular meeting.

XIII. **Adjournment** – when the Fire Authority Board has completed all items listed on the approved agenda, it may not take any further action until its next regular meeting or a special meeting. If the time is significantly late and items remain on the approved agenda, the presiding officer may ask for a motion to adjourn the meeting to another specific date, time, and place at which to resume and complete the approved agenda.

Option 1

- 23,200 s.f. Main Station on Hartel Road:

  $11.5 MM Direct Trade Cost

  $500,000 Extension of Municipal Utilities

  $4.1 MM Indirect Costs

  $16.1 MM Total Main Station Cost

- Renovations: $3.2 MM
- Fire Apparatus: $1.8 MM

$21.1 MM Total Project Cost

Option 2

- 23,200 s.f. Main Station on Hartel Road:
  - $11.5 MM Direct Trade Cost
  - $500,000 Extension of Municipal Utilities
  - $4.1 MM Indirect Costs
  - **$16.1 MM Total Main Station Cost**
- 10,600 s.f. Satellite Station north of the river
  - $4.8 MM Direct Trade Cost
  - $1.6 MM Indirect Costs
  - **$6.4 MM Total Satellite Cost**
- Fire Apparatus: $1.8 MM

$24.3 MM Total Project Cost

Option 3

- 23,200 s.f. Main Station on Hartel Road:

  $11.5 MM Direct Trade Cost

  $500,000 Extension of Municipal Utilities

  $4.1 MM Indirect Costs

  $16.1 MM Total Main Station Cost

- 10,600 s.f. Satellite Station north of the river

  $4.8 MM Direct Trade Cost

  $1.6 MM Indirect Costs

  $6.4 MM Total Satellite Cost

- Fire Apparatus

$22.5 MM Total Project Cost

Baker Tilly Municipal Advisors, LLC
1000 Town Center, 27th Floor
Southfield, MI 48075
(517) 321-0110
bakertilly.com

January 30, 2026

Grand Ledge Area Emergency Services Authority
500 North Clinton Street
Grand Ledge, MI 48837

Re: Estimated Voted Bond Analysis

The attached schedules (listed below) present unaudited and limited information for the purpose of discussion and consideration in the planning stage of a proposed capital improvement plan by the appropriate officers, officials and advisors of Grand Ledge Area Emergency Services Authority. The use of the schedules should be restricted to this purpose, for internal use only as the information is subject to future revision and final report.

Page(s)

PRO FORMA FINANCIAL DATA

We would appreciate your questions or comments on this information and would provide additional information upon request.

BAKER TILLY MUNICIPAL ADVISORS, LLC

Jesse R. Nelson, CPA, Partner

GRAND LEDGE AREA EMERGENCY SERVICES AUTHORITY
COUNTY OF EATON, STATE OF MICHIGAN

TAXABLE VALUE HISTORY AND GROWTH ASSUMPTIONS

Year	Taxable Value	Total Value	
2025	528,381,315	528,381,315	2.89%
2024	513,528,271	513,528,271	6.82%
2023	480,733,475	480,733,475	6.70%
2022	450,555,713	450,555,713	6.87%
2021	421,605,811	421,605,811	5.23%
2020	400,659,777	400,659,777	2.42%
2019	391,197,747	391,197,747	5.01%
2018	372,520,955	372,520,955	1.98%
2017	365,284,245	365,284,245	2.62%
2016	355,948,203	355,948,203	
5-Year History Average			5.70%
10-Year History Average			4.50%

(Subject to the attached letter dated January 30, 2026)
(Preliminary - Subject to Change)
(Internal Use Only)

GRAND LEDGE AREA EMERGENCY SERVICES AUTHORITY
COUNTY OF EATON, STATE OF MICHIGAN

CAPITAL IMPROVEMENT PLAN

I. Debt Service Millage Rate

	$21,195,000 20-Year Option 1	$24,385,000 20-Year Option 2	$22,590,000 20-Year Option 3
Estimated 12/1/2026 tax bill	2.90	3.30	3.04
Estimated 12/1/2025 tax bill	-	-	-
Difference	2.90	3.30	3.04
Annual difference $100,000 market value $50,000 taxable value property	$145.00	$165.00	$152.00
Per Month	$12.08	$13.75	$12.67

II. Proposal Summary

2026 Bonds	2026	2026	2026
Construction	**$21,100,000**	**$24,300,000**	**$22,500,000**
Underwriting allowance	211,950	243,850	225,900
Bond issuance costs	182,064	185,512	182,954
Less interest income [1]	(299,014)	(344,362)	(318,854)
Par amount of bonds	$21,195,000	$24,385,000	$22,590,000

[1] Assumes 24 month draw schedule at an assumed interest rate of 1.50%

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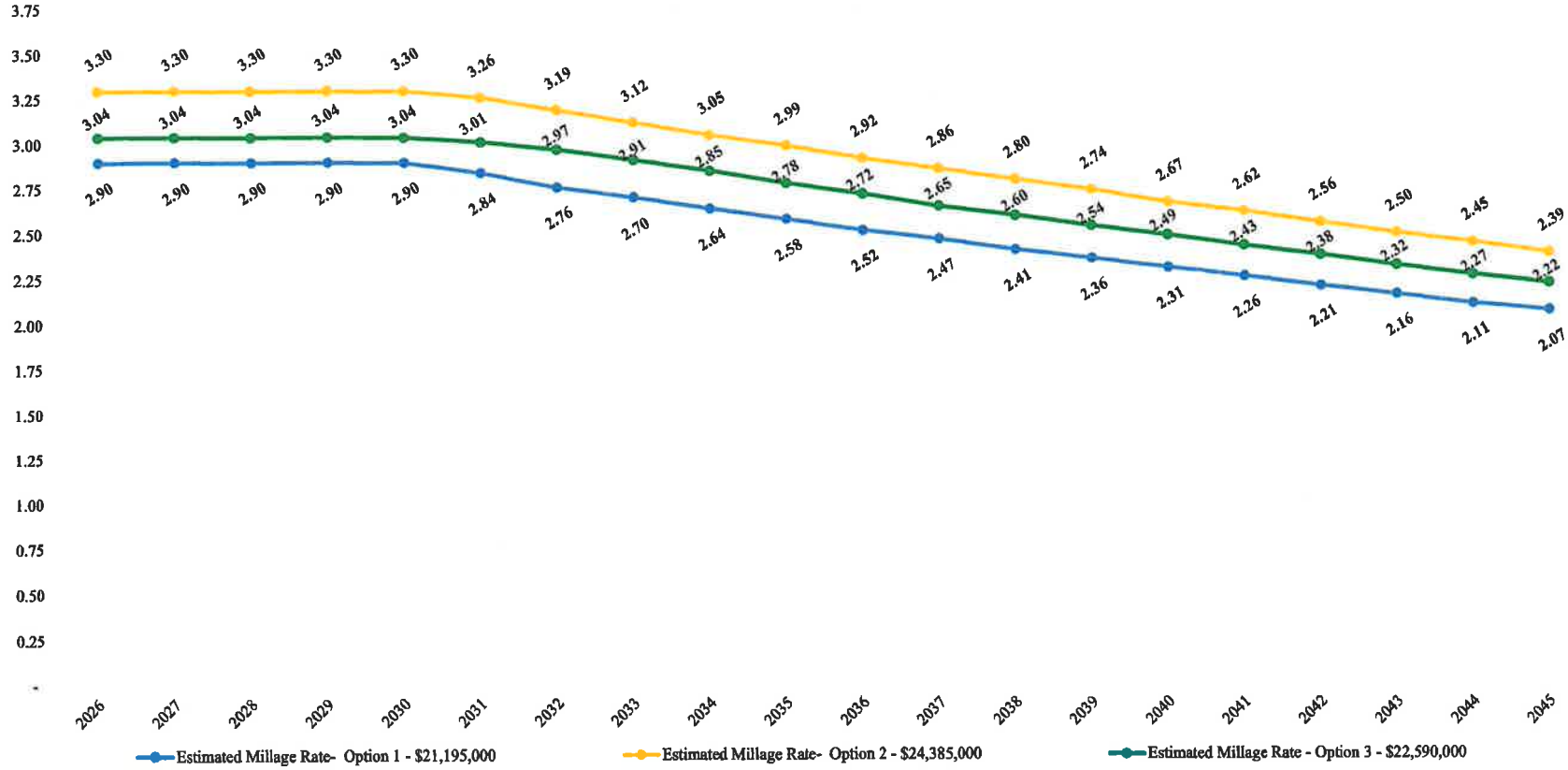
GRAND LEDGE AREA EMERGENCY SERVICES AUTHORITY
COUNTY OF EATON, STATE OF MICHIGAN

COMPARISON OF ESTIMATED DEBT SERVICE MILLAGE RATES - CHART FORMAT
(Assumes taxable value growth of 2.25%)



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GRAND LEDGE AREA EMERGENCY SERVICES AUTHORITY
COUNTY OF EATON, STATE OF MICHIGAN

ESTIMATED PROPOSED TOTAL MILLAGE STUDY - $21,195,000 - 20 YEARS

Winter Tax Levy

Tax Collection Fact 100%

***Significant assumptions.**

		Revenues								Bond Payments			Debt Retirement Fund	
Taxable Value Year	Debt Service Year Ending	Growth %	Taxable Value	Existing Bonds Millage Rate	Proposed Bonds Millage Rate	Total Millage Rate	Tax Collections	PPT Reimbursements	Total Revenues	Existing Bonds Payments	Proposed Bonds 2026 Bonds	Total Annual Payments	Increase/ (Decrease)	Dec. 1st Balance
											$21,195,000			$0
2025	2026	2.89%	528,381,315	-	-	-	$0	$0	$0	$0	$0	$0	$0	-
2026	2027	2.25%	540,269,895	-	2.90	2.90	1,566,783	-	1,566,783	-	1,433,985	1,433,985	132,798	132,798
2027	2028	2.25%	552,425,968	-	2.90	2.90	1,602,035	-	1,602,035	-	1,600,945	1,600,945	1,090	133,888
2028	2029	2.25%	564,855,552	-	2.90	2.90	1,638,081	-	1,638,081	-	1,636,475	1,636,475	1,606	135,494
2029	2030	2.25%	577,564,802	-	2.90	2.90	1,674,938	-	1,674,938	-	1,673,990	1,673,990	948	136,442
2030	2031	2.25%	590,560,010	-	2.90	2.90	1,712,624	-	1,712,624	-	1,713,173	1,713,173	(549)	135,893
2031	2032	2.25%	603,847,610	-	2.84	2.84	1,714,927	-	1,714,927	-	1,714,490	1,714,490	437	136,330
2032	2033	2.25%	617,434,181	-	2.76	2.76	1,704,118	-	1,704,118	-	1,703,743	1,703,743	375	136,705
2033	2034	2.25%	631,326,450	-	2.70	2.70	1,704,581	-	1,704,581	-	1,705,760	1,705,760	(1,179)	135,526
2034	2035	2.25%	645,531,295	-	2.64	2.64	1,704,203	-	1,704,203	-	1,705,163	1,705,163	(960)	134,566
2035	2036	2.25%	660,055,749	-	2.58	2.58	1,702,944	-	1,702,944	-	1,701,870	1,701,870	1,074	135,640
2036	2037	2.25%	674,907,003	-	2.52	2.52	1,700,766	-	1,700,766	-	1,700,690	1,700,690	76	135,716
2037	2038	2.25%	690,092,411	-	2.47	2.47	1,704,528	-	1,704,528	-	1,701,310	1,701,310	3,218	138,934
2038	2039	2.25%	705,619,490	-	2.41	2.41	1,700,543	-	1,700,543	-	1,703,403	1,703,403	(2,860)	136,074
2039	2040	2.25%	721,495,929	-	2.36	2.36	1,702,730	-	1,702,730	-	1,701,745	1,701,745	985	137,059
2040	2041	2.25%	737,729,587	-	2.31	2.31	1,704,155	-	1,704,155	-	1,701,105	1,701,105	3,050	140,109
2041	2042	2.25%	754,328,503	-	2.26	2.26	1,704,782	-	1,704,782	-	1,701,120	1,701,120	3,662	143,771
2042	2043	2.25%	771,300,894	-	2.21	2.21	1,704,575	-	1,704,575	-	1,701,413	1,701,413	3,162	146,933
2043	2044	2.25%	788,655,164	-	2.16	2.16	1,703,495	-	1,703,495	-	1,701,590	1,701,590	1,905	148,838
2044	2045	2.25%	806,399,905	-	2.11	2.11	1,701,504	-	1,701,504	-	1,701,245	1,701,245	259	149,097
2045	2046	2.25%	824,543,903	-	2.07	2.07	1,706,806	-	1,706,806	-	1,704,820	1,704,820	1,986	151,083
Totals				-	50.90	50.90	$33,759,118	$0	$33,759,118	$0	$33,608,035	$33,608,035		
											$21,195,000	$21,195,000		
											$12,413,035	$12,413,035		
											3.50% - 5.40%			

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GRAND LEDGE AREA EMERGENCY SERVICES AUTHORITY
COUNTY OF EATON, STATE OF MICHIGAN

ESTIMATED PROPOSED TOTAL MILLAGE STUDY - $24,385,000 - 20 YEARS

Winter Tax Levy

Tax Collection Factor 100%

***Significant assumptions.**

		Revenues								Bond Payments			Debt Retirement Fund	
Taxable Value Year	Debt Service Year Ending	Growth %	Taxable Value	Existing Bonds Millage Rate	Proposed Bonds Millage Rate	Total Millage Rate	Tax Collections	PPT Reimbursements	Total Revenues	Existing Bonds Payments	Proposed Bonds 2026 Bonds $24,385,000	Total Annual Payments	Increase/ (Decrease)	Dec. 1st Balance $0
2025	2026	2.89%	528,381,315	-	-	-	$0	$0	$0	$0	$0	$0	$0	-
2026	2027	2.25%	540,269,895	-	3.30	3.30	1,782,891	-	1,782,891	-	1,619,687	1,619,687	163,204	163,204
2027	2028	2.25%	552,425,968	-	3.30	3.30	1,823,006	-	1,823,006	-	1,823,695	1,823,695	(689)	162,515
2028	2029	2.25%	564,855,552	-	3.30	3.30	1,864,023	-	1,864,023	-	1,866,303	1,866,303	(2,280)	160,235
2029	2030	2.25%	577,564,802	-	3.30	3.30	1,905,964	-	1,905,964	-	1,905,535	1,905,535	429	160,664
2030	2031	2.25%	590,560,010	-	3.30	3.30	1,948,848	-	1,948,848	-	1,951,058	1,951,058	(2,210)	158,454
2031	2032	2.25%	603,847,610	-	3.26	3.26	1,968,543	-	1,968,543	-	1,968,025	1,968,025	518	158,972
2032	2033	2.25%	617,434,181	-	3.19	3.19	1,969,615	-	1,969,615	-	1,972,008	1,972,008	(2,393)	156,579
2033	2034	2.25%	631,326,450	-	3.12	3.12	1,969,739	-	1,969,739	-	1,968,215	1,968,215	1,524	158,103
2034	2035	2.25%	645,531,295	-	3.05	3.05	1,968,870	-	1,968,870	-	1,971,453	1,971,453	(2,583)	155,520
2035	2036	2.25%	660,055,749	-	2.99	2.99	1,973,567	-	1,973,567	-	1,971,415	1,971,415	2,152	157,672
2036	2037	2.25%	674,907,003	-	2.92	2.92	1,970,728	-	1,970,728	-	1,972,890	1,972,890	(2,162)	155,510
2037	2038	2.25%	690,092,411	-	2.86	2.86	1,973,664	-	1,973,664	-	1,975,545	1,975,545	(1,881)	153,629
2038	2039	2.25%	705,619,490	-	2.80	2.80	1,975,735	-	1,975,735	-	1,974,150	1,974,150	1,585	155,214
2039	2040	2.25%	721,495,929	-	2.74	2.74	1,976,899	-	1,976,899	-	1,973,465	1,973,465	3,434	158,648
2040	2041	2.25%	737,729,587	-	2.67	2.67	1,969,738	-	1,969,738	-	1,973,123	1,973,123	(3,385)	155,263
2041	2042	2.25%	754,328,503	-	2.62	2.62	1,976,341	-	1,976,341	-	1,972,740	1,972,740	3,601	158,864
2042	2043	2.25%	771,300,894	-	2.56	2.56	1,974,530	-	1,974,530	-	1,971,920	1,971,920	2,610	161,474
2043	2044	2.25%	788,655,164	-	2.50	2.50	1,971,638	-	1,971,638	-	1,975,120	1,975,120	(3,482)	157,992
2044	2045	2.25%	806,399,905	-	2.45	2.45	1,975,680	-	1,975,680	-	1,971,910	1,971,910	3,770	161,762
2045	2046	2.25%	824,543,903	-	2.39	2.39	1,970,660	-	1,970,660	-	1,971,840	1,971,840	(1,180)	160,582
Totals				-	58.62	58.62	$38,910,679	$0	$38,910,679	$0	$38,750,097	$38,750,097		
											$24,385,000	$24,385,000		
											$14,365,097	$14,365,097		
											3.50% - 5.40%			

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GRAND LEDGE AREA EMERGENCY SERVICES AUTHORITY
COUNTY OF EATON, STATE OF MICHIGAN

ESTIMATED PROPOSED TOTAL MILLAGE STUDY - $22,590,000 - 20 YEARS

Winter Tax Levy **Tax Collection Factor 100%** ***Significant assumptions.**

		Revenues								Bond Payments			Debt Retirement Fund	
Taxable Value Year	Debt Service Year Ending	Growth %	Taxable Value	Existing Bonds Millage Rate	Proposed Bonds Millage Rate	Total Millage Rate	Tax Collections	PPT Reimbursements	Total Revenues	Existing Bonds Payments	Proposed Bonds 2026 Bonds	Total Annual Payments	Increase/ (Decrease)	Dec. 1st Balance
											$22,590,000			$0
2025	2026	2.89%	528,381,315	-	-	-	$0	$0	$0	$0	$0	$0	$0	-
2026	2027	2.25%	540,269,895	-	3.04	3.04	1,642,420	-	1,642,420	-	1,490,234	1,490,234	152,186	152,186
2027	2028	2.25%	552,425,968	-	3.04	3.04	1,679,375	-	1,679,375	-	1,678,365	1,678,365	1,010	153,196
2028	2029	2.25%	564,855,552	-	3.04	3.04	1,717,161	-	1,717,161	-	1,718,438	1,718,438	(1,277)	151,919
2029	2030	2.25%	577,564,802	-	3.04	3.04	1,755,797	-	1,755,797	-	1,755,390	1,755,390	407	152,326
2030	2031	2.25%	590,560,010	-	3.04	3.04	1,795,302	-	1,795,302	-	1,793,995	1,793,995	1,307	153,633
2031	2032	2.25%	603,847,610	-	3.01	3.01	1,817,581	-	1,817,581	-	1,819,220	1,819,220	(1,639)	151,994
2032	2033	2.25%	617,434,181	-	2.97	2.97	1,833,780	-	1,833,780	-	1,836,238	1,836,238	(2,458)	149,536
2033	2034	2.25%	631,326,450	-	2.91	2.91	1,837,160	-	1,837,160	-	1,835,350	1,835,350	1,810	151,346
2034	2035	2.25%	645,531,295	-	2.85	2.85	1,839,764	-	1,839,764	-	1,836,670	1,836,670	3,094	154,440
2035	2036	2.25%	660,055,749	-	2.78	2.78	1,834,955	-	1,834,955	-	1,835,005	1,835,005	(50)	154,390
2036	2037	2.25%	674,907,003	-	2.72	2.72	1,835,747	-	1,835,747	-	1,835,153	1,835,153	594	154,984
2037	2038	2.25%	690,092,411	-	2.65	2.65	1,828,745	-	1,828,745	-	1,831,905	1,831,905	(3,160)	151,824
2038	2039	2.25%	705,619,490	-	2.60	2.60	1,834,611	-	1,834,611	-	1,834,928	1,834,928	(317)	151,507
2039	2040	2.25%	721,495,929	-	2.54	2.54	1,832,600	-	1,832,600	-	1,833,875	1,833,875	(1,275)	150,232
2040	2041	2.25%	737,729,587	-	2.49	2.49	1,836,947	-	1,836,947	-	1,833,505	1,833,505	3,442	153,674
2041	2042	2.25%	754,328,503	-	2.43	2.43	1,833,018	-	1,833,018	-	1,833,445	1,833,445	(427)	153,247
2042	2043	2.25%	771,300,894	-	2.38	2.38	1,835,696	-	1,835,696	-	1,833,308	1,833,308	2,388	155,635
2043	2044	2.25%	788,655,164	-	2.32	2.32	1,829,680	-	1,829,680	-	1,832,690	1,832,690	(3,010)	152,625
2044	2045	2.25%	806,399,905	-	2.27	2.27	1,830,528	-	1,830,528	-	1,831,175	1,831,175	(647)	151,978
2045	2046	2.25%	824,543,903	-	2.22	2.22	1,830,487	-	1,830,487	-	1,833,195	1,833,195	(2,708)	149,270
Totals				-	54.34	54.34	$36,081,354	$0	$36,081,354	$0	$35,932,084	$35,932,084		
											$22,590,000	$22,590,000		
											$13,342,084	$13,342,084		
											3.50% - 5.40%			

(Subject to the attached letter dated January 30, 2026)
(Preliminary - Subject to Change)
(Internal Use Only)

Phase II Environmental Site Assessment

11485 Hartel Road
Grand Ledge, MI 48837

Prepared for
Grand Ledge Area Emergency Services Authority

January 30, 2026

2250896

Prein&Newhof
Engineers▪Surveyors▪Environmental▪Laboratory

Contents

Tables

Tables embedded in text:

Tables Attached:

Figures

Appendices

EXECUTIVE SUMMARY

This Phase II Environmental Site Assessment (ESA) has been prepared on 11485 Hartel Road, Grand Ledge, Eaton County, Michigan (hereinafter, the "Property") for the benefit of Grand Ledge Area Emergency Services Authority (GLAESA). The Property contains an approximately four acre parcel with a residential two stall garage building. Two residences previously occupied the Property.

A Phase 1 ESA prepared by Prein&Newhof on December 23, 2025 concluded the following in connection with the Property: Residential Demolition by Controlled Burn for Firefighter Training, a *recognized environmental condition* (REC); and Fuel oil storage shown on the Property a *significant data gap.* Burning of building materials can release hazardous substances into the soil on the Property. In the course of document review and interviews, no documentation of closure for this fuel oil storage was located or identified; therefore, this missing information about how the fuel oil was stored and removed represents a *significant data gap* in relation to the Property. The REC and the *significant data gap* were investigated with Phase II sampling.

The past fires at each residence were investigated by collecting four soil samples per residence. The confirmation samples were laboratory tested for polynuclear aromatic (PNA) compounds, and the Michigan 10 Metals which are likely to be associated with the remnants of waste and fires of residential materials. Two soil borings at the locations in the vicinity of the fuel oil storage. Soil samples were collected for laboratory testing of petroleum volatile organic compounds (VOCs) and PNA compounds, as indicator compounds for heating oil.

The eight samples collected from the residential controlled burn areas detected heavy metals, and two samples detected low levels of PNA compounds at concentrations below Part 201 Generic Residential Criteria; therefore, the REC associated with the residential controlled burn areas on the Property has been resolved. The two soil samples at SB-9 and SB-10 collected from the fuel oil storage area had no detectable levels of VOCs or PNA compounds in the samples; therefore, the REC associated with the fuel oil storage area has been resolved. Based on these results presented in this Phase II ESA, we do not recommend any further environmental investigations at the Property.

1 INTRODUCTION

This Phase II Environmental Site Assessment (ESA) has been prepared on an approximatley four acre parcel at 11485 Hartel Road, Grand Ledge, Eaton County, Michigan (hereinafter, the "Property") for the benefit of Grand Ledge Area Emergency Services Authority (GLAESA). The Property's location is shown in Figure 1. The only structure on the Property is a residential two stall garage building.

A Phase 1 ESA revealed that the two residences were burned during firefighter training prior to demolition, and fuel oil storage was near the former garage of the south residence. ASTs or USTs used for fuel oil with the fuel consumed at the property are exempt from registration under the Part 211 rules. This Phase II Environmental investigation was designed to evaluate these two areas to determine the potential environmental impact on the Property.

2 PREVIOUS ENVIRONMENTAL REPORT

A Phase 1 ESA on the Property was prepared by Prein&Newhof on December 23, 2025. The site visit on November 25, 2025 included a walkthrough of the garage building interior and walking around the exterior of the Property. A remnant driveway was observed on the south side of the Property. As noted in the historical research, the south driveway was for a former residence on the Property.

The history review showed the Property was likely farmland back to 1910, based on how it appeared in USGS topographic maps back to 1910 and aerial photographs back to 1938. The first known building developments on the Property were in 1950± when two ranch style residences were constructed on concrete slab floors. According to the Phase 1 ESA the south residence at 11461 Hartel Road had 862 square feet of living space, and the north residence at 11485 Hartel Road covered approximately 1,511 square feet. Both residences were constructed on concrete slab floors, and had natural gas forced air heating, water wells and septic systems. A June 1995 permit showed fuel oil storage near the garage at 11461 Hartel Road. According to the Phase 1 ESA, no documentation of closure for this fuel oil storage was available, so the fuel oil storage area was considered a *significant data gap*.

On January 13, 2006, GLAESA purchased the Property and then conducted a controlled firefighting training burn prior to demolishing the structures. The training burn was conducted in November 2011. The garage building associated with the north residence at 11485 Hartel Road was spared from the training burn. Certain potential contaminants do not burn, such as metals, and they can become more

concentrated as the substrate such as wood is consumed by fire. As such, the potential for elevated contaminants like metals and other potential hydrocarbons may be left at the Property. Therefore, the Phase 1 ESA listed the demolition by controlled burn for firefighter training as a *recognized environmental condition* on the Property.

As stated, the Phase 1 ESA concluded the following in connection with the Property:

- Residential Demolition by Controlled Burn for Firefighter Training, a *recognized environmental condition*
- Fuel oil storage shown on the Property, a *significant data gap*

Burning of building materials can result in hazardous substances released into the soil. As such, soil sampling in the vicinity of each residence was recommended to evaluate the REC. The fuel oil storage area also had recommended sampling and testing to evaluate the *significant data gap*.

3 INVESTIGATION AND SAMPLING COMPLETED

3.1 Purpose

The purpose of this Phase II is to investigate the REC and the *significant data gap* identified in the Phase 1 ESA. The purpose of the soil borings was to collect soil samples from the Property. The soil samples were tested to determine if the past controlled burn of the residential structures and/or the past fuel oil storage have left contaminants at the Property at levels that exceed their Part 201 Generic Residential Criteria as promulgated in Part 201 Environmental Remediation under Michigan's Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994, as amended.

3.2 Soil Borings

The soil boring locations were determined using GIS methods to be within the footprint of the former residences based on the topographic surveys in the Phase 1 ESA. The number of soil samples for each residence was determined from the Sampling Strategies and Statistics Training Materials for part 201 Cleanup Criteria, 2002 prepared by Michigan's Department of Environmental Quality, which is now known as EGLE. The training materials indicate that four samples should be taken to evaluate an area up to 1,500 square feet or the appropriate square footage of the residences.

On January 13, 2026, hand auger borings designated as SB-1 through SB-4, were advanced at the location of the former residence at 11485 Hartel Road, and hand auger borings SB-5 through SB-8 were

advanced at the former residence at 11461 Hartel Road. During this time, the weather in the area experienced a thaw so that the soil borings could be advanced by hand methods. These soil borings were advanced in the areas of the residences to evaluate the soil near the surface where the former residents had been burned associated with the REC of the former residences

The locations of SB-9 and SB-10 were placed just west of the former attached garage at residence at 11461 Hartel Road in the area that appeared to be associated with the *significant data gap*. Several attempts were made to determine the soil type in this area. Soil in this area appeared similar to the other soil borings indicating that the oil storage was likely in an above ground container. This location was at the *significant data gap*.

The soil boring locations are shown in Figure 2. All soil borings were logged in the field by the geologist overseeing the field investigation. The subsurface conditions observed in each soil boring were recorded in the field on soil boring logs, which have been typed and included in Appendix A.

The soil at the Property generally consists of topsoil underlain by varying grades of brown clay with little sand. The soil did not have olfactory or visual evidence of contamination, such as petroleum or solvent odors, or staining of the soil. Additionally, the soil did not have evidence of fill materials, such as discolored or stained soil, evidence of brick, concrete, asphalt, metal, slag, glass, wood, etc. SB-1 through SB-8 were advanced to a depth of 5 feet below the ground surface (BGS) to inspect for fill or burned materials. As no evidence of burned or filling materials was encountered within the 5-foot depth, the soil samples were collected from a shallower depth that had the highest potential to have been impacted by the residential fire.

At the completion of the soil borings, the borings were backfilled with the soil cuttings into the borings where they came.

3.3 Soil Sampling

The soil samples collected from SB-1 through SB-10 were collected into laboratory prepared glass jars, labelled, and placed into a cooler with ice packs for transportation to the laboratory. A chain-of-custody was completed for each sample collected. These samples were submitted to the laboratory for testing polynuclear aromatic (PNA) compounds following Methods 8310 and Michigan 10 Metals, which were selected as the indicator parameters for burning construction materials. The Michigan 10 Metals include arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc.

The soil samples from SB-9 and SB-10 were collected for testing volatile organic compounds (VOCs) 8260+, and PNA compounds, as the indicator parameters for the potential contamination for fuel oil storage at the *significant data gap*.

The soil samples for VOC testing were collected with a methanol preservative in the field at the time of collection following EPA Method 5035 procedures for VOC analysis. The samples were placed in a cooler with ice with completed chain-of-custodies and transported to Prein&Newhof's laboratory and submitted for testing of the presence of VOCs and PNA compounds.

3.4 Equipment Decontamination

The sampling equipment, including the auger in contact with the soil and the shovels were decontaminated in between individual soil borings by washing with soapy water and deionized water rinsing in buckets. The deionized water used in the wash and rinse was obtained from the laboratory and brought to the Property in containers for hauling water. A brush was used to clean the tooling.

4 DEFAULT BACKGROUND EVALUATION

When evaluating the presence of metals in soil and comparing the laboratory results to the State of Michigan Generic Cleanup Criteria, the State of Michigan allows for "background" levels to be substituted for the cleanup criteria if the background level is higher than the calculated cleanup criterion.

The State of Michigan defines the background concentration of a metal in soil in the following ways:

1. Statewide Default Background Levels, as published in Part 201 Rules. These Default Background Levels are shown in Table 4-1.
2. EGLE 2005 Michigan Background Soil Survey (2005 MBSS) Resource Materials, revised January 2023, provides specific soil background concentrations from within the glacial lobes that deposited soil in Michigan. Background concentrations are published for three toil types that include topsoil, sand, and clay for soils deposited from the glacier. In this Phase II investigation samples were collected from the clay in each sample. The clay appears to be natural fill. The Property is in the Saginaw Glacial Lobe, according to the 2005 MBSS. Accordingly, the following background from the 2005 MBSS background levels are shown in Table 4-1.
3. The third option is the development of a site-specific background concentration approved by EGLE.

Any of these three methods can be used, and more than one method can be used for metals at a site.

Table 4-1 - Summary of Background Concentrations

Units, µg/Kg	Statewide Default Background	2005 MBSS Background – Saginaw Lobe	Selected Background Level used for Site
Arsenic	5,800	17,900	17,900
Barium	75,000	110,000	110,000
Cadmium	1,200	2,000	2,000
Chromium	18,000 (total)	43,500	43,500
Copper	32,000	32,200	32,200
Lead	21,000	38,900	38,900
Mercury	130	500	500
Selenium	410	1,100	1,100
Silver	1,000	1,000	1,000
Zinc	47,000	91,900	91,900

For the purposes of this evaluation, Prein&Newhof determined the following:

1. The soil from residence burn areas was clay with little sand and trace gravel that did not appear to be impacted by waste materials – it did not contain any types of building demolition debris, or cinders, coal, slag, cement kiln dusk, foundry sand or cinders, etc. Therefore, the soil is considered to be natural so that the 2005 MBSS Background concentrations apply.
2. The 2005 MBSS arsenic level of 17,900 µg/kg in clay will be substituted for 4,600 µg/kg as the generic Drinking Water Protection Criterion (DWPC) and as the generic Groundwater Surface Water Interface Protection Criterion (GSIPC) (also 4,600 µg/kg), and for 7,600 µg/Kg the Direct Contact Criterion.

3. Background Levels for barium, cadmium, copper, lead and zinc are below the published Part 201 Generic Residential Criteria, so the background levels for the listed metals barium, cadmium, copper, lead and zinc will not be substituted or used.
4. 2005 MBSS chromium Level of 43,500 µg/kg for clay will be substituted for GSIPC listed as 18,000 µg/Kg.
5. 2005 MBSS mercury Levels of 500 µg/kg for clay will be substituted for the GSIPC (50 µg/kg) .
6. 2005 MBSS Selenium Levels of 1,100 µg/kg for clay will be substituted for the GSIPC (400 µg/kg).
7. 2005 MBSS Silver Levels of 1,000 µg/kg for clay will be substituted for the GSIPC (100 µg/kg).

5 LABORATORY ANALYTICAL RESULTS

The laboratory analytical reports are provided in Appendix B. The results are discussed below and compared to their Part 201 Generic Residential Criteria (GRC).

5.1 Sample Results from Residential Controlled Burn Areas

The analytical results from soil samples collected by Prein&Newhof are summarized and compared to their respective Part 201 GRC in Table 1. The soil samples from the former house at 11485 Hartel Road were collected from SB-1 through SB-4, and the samples from former house at 11461 Hartel Road were collected from SB-5 through SB-8. Several metals were detected in these soil samples; however, none of the metals were detected at concentrations exceeding their Part 201 GRC. These concentrations appear to represent the normal background levels found in clay.

Three PNA compounds Benzo(a)pyrene, Fluoranthene and Pyrene were detected in one soil sample from the residence at 11485 Hartel Road from the sample collected from SB-2; however, the detected PNA compounds do not exceed their Part 201 GRC.

In the soil samples collected from 11461 Hartel Road, the sample from SB-6 had four PNA compounds benzo(a)pyrene, chrysene, fluoranthene and pyrene were detected in one soil sample; however, the detected PNA compounds do not exceed their Part 201 GRC.

Based on these testing results, the REC associated with the residential controlled burn areas has been resolved.

5.2 Former Fuel Oil Storage Area

Table 2 provides a summary of the analytical results for the two soil samples from SB-9 and SB-10. The samples from SB-9 and SB-10 had no detectable levels of VOCs or PNA compounds in the samples. The samples did not detect a release. Based on these results, the *significant data gap* associated with the former fuel storage area has been resolved.

6 CONCLUSIONS

In the eight samples collected from SB-1 through SB-8 from the residential controlled burn areas none of the samples detected Michigan 10 Metals, or PNA compounds at concentrations above Part 201 Generic Residential Criteria; therefore, the REC associated with the residential controlled burn areas on the Property has been resolved. The two soil samples from SB-9 and SB-10 from the fuel oil storage area had no detectable levels of VOCs or PNA compounds in the samples; therefore, the REC associated with the fuel oil storage area has been resolved.

Based on these results presented in this Phase II ESA, we do not recommend any further environmental investigations at the Property.

Respectfully Submitted,

Prein&Newhof

Timothy B. Woodburne, CPG

Christopher J. Cruickshank, P.E.

Table 1 –Summary of Soil Analytical Results for House Fire Areas

Table 2- Summary of Soil Analytical Results for Fuel Oil Storage

TABLE 1 - Summary of Soil Analytical Results for House Fire Areas

	11485 Hartel Road				11461 Hartel Road			
Sample Location	**SB-1**	**SB-2**	**SB-3**	**SB-4**	**SB-5**	**SB-6**	**SB-7**	**SB-8**
Sample Depth, ft. bgl [1]	1-2'	1-2'	1-2'	1-2'	1-2'	1-2'	1.5-2.5'	1-2'
Collection Date	01/13/26	01/13/26	01/13/26	01/13/26	01/13/26	01/13/26	01/13/26	01/13/26
MI 10 METALS, total, µg/Kg								
Arsenic (B)	**5,850**	**3,810**	**3,540**	**4,490**	**2,940**	**3,870**	**3,150**	**6,360**
Barium (B)	**58,600**	**68,800**	**49,100**	**59,300**	**44,100**	**58,400**	**58,400**	**82,400**
Cadmium (B)	**53.3**	**190**	**130**	**150**	**142**	**248**	**137**	**781**
Chromium (Total) (B,H)	**26,400**	**19,700**	**16,000**	**17,600**	**12,400**	**13,800**	**12,500**	**17,100**
Copper (B)	**11,900**	**10,300**	**7,420**	**11,400**	**6,580**	**10,200**	**7,600**	**12,700**
Lead (B) - Total	**6,660**	**10,700**	**7,020**	**8,860**	**7,950**	**15,700**	**9,780**	**15,000**
Mercury (total) (B,Z)	**23.0**	**28.3**	**24.3**	**33.4**	**23.7**	**54.7**	**25.6**	**37.5**
Selenium (B)	**238**	<172	**351**	**160**	**331**	**212**	**205**	<140
Silver (B)	<24.8	**39.5**	**27.5**	**32.9**	**25.4**	**38.6**	**32.0**	**56.6**
Zinc (B)	**43,400**	**47,000**	**37,300**	**43,000**	**35,600**	**62,200**	**46,200**	**151,000**
PNA's - Polynuclear Aromatics, µg/Kg [2]								
Benzo(a)pyrene	<94.2	**123**	<93.2	<92.8	<92.4	**163**	<97.5	<94.4
Chrysene	<94.2	<93.1	<93.2	<92.8	<92.4	**108**	<97.5	<94.4
Fluoranthene	<94.2	**164**	<93.2	<92.8	<92.4	**221**	<97.5	<94.4
Pyrene	<94.2	**102**	<93.2	<92.8	<92.4	**102**	<97.5	<94.4
Remaining PNAs tested:	<94.2	<93.1	<93.2	<92.8	<92.4	<97.3	<97.5	<94.4

			Part 201 Generic Residential Criteria, µg/Kg						
	Background		GROUNDWATER PROTECTION		INHALATION	AMBIENT AIR		CONTACT	Csat
Chemical Abstract Service Number	Statewide Default Background Levels	2005 MBSS Saginaw Lobe (clay)	Drinking Water Protection Criteria (DWPC)	Groundwater Surface Water Protection Criteria (GSIPC)	Soil Volatilization to Indoor Air (SVIIC)	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
7440-38-2	5,800	17,900	4,600	4,600	NLV	NLV	720,000	7,600	NA
7440-39-3	75,000	110,000	1,300,000	440,000 (G)	NLV	NLV	330,000,000	37,000,000	NA
7440-43-9	1,200	2,000	6,000	3,000 (G,X)	NLV	NLV	1,700,000	550,000	NA
18540-29-9	18,000 (total)	43,500	30,000	18,000 (total)	NLV	NLV	260,000	2,500,000	NA
7440-50-8	32,000	32,200	5,800,000	75,000 (G)	NLV	NLV	130,000,000	20,000,000	NA
7439-92-1	21,000	38,900	700,000	2,500,000 (G,X)	NLV	NLV	NA	400,000	NA
Varies	130	500	1,700	50 (M)	48,000	52,000	20,000,000	160,000	NA
7782-49-2	410	1,100	4,000	400	NLV	NLV	130,000,000	2,600,000	NA
7440-22-4	1,000	1,000	4,500	100 (M)	NLV	NLV	6,700,000	2,500,000	NA
7440-66-6	47,000	91,900	2,400,000	170,000 (G)	NLV	NLV	ID	170,000,000	NA
50-32-8	NA	NA	NLL	NLL	NLV	NLV	1,500,000	2,000	NA
218-01-9	NA	NA	NLL	NLL	ID	ID	ID	2,000,000	NA
206440	NA	NA	730,000	5,500	(D)	740,000,000	9,300,000,000	46,000,000	NA
129-00-0	NA	NA	480,000	ID	1,000,000,000 (D)	650,000,000	6,700,000,000	29,000,000	NA
Varies	The remaining PNAs are below their MDLs; the MDLs do not exceed the Part 201 GRC.								

Footnotes

Bold indicates detected.

1. Depth is below ground level (bgl) referenced to the ground surface.
2. Regarding the PNA's, see laboratory reports for full list of chemicals tested.

1. See laboratory reports for full list of chemicals tested.

B - Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background values were substituted for arsenic, chromium, mercury, selenium, and silver.
D - Calculated criterion exceeds 100 percent; hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb)
G - GSIPC criterion calculated using hardness of 150 mg/L for surface water.
M - Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
X - The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.
"ID" Insufficient Data to develop criterion.
"NA" means Not Analyzed, or a criterion or value is not available or, in the case of background and CAS numbers, not applicable.
"NLL" means hazardous substance is not likely to leach under most soil conditions.
"NLV" hazardous substance is Not Likely to Volatilize under most conditions.
2005 MBSS Background levels are for "clay" in the Saginaw Lobe, according to the Soil Background and Use of the 2005 Michigan Background Soil Survey (MBSS) published by EGLE, September 2019.
The Part 201 Generic groundwater and soil cleanup criteria and screening levels, criteria footnotes and the toxicological and chemical-physical properties of the hazardous substances, obtained from Michigan Department of Environment, Great Lakes, and Energy -Remediation Division's Part 201 Rules 299.44 to 299.50, December 30, 2013, updated October 12, 2023.

TABLE 2 - Summary of Soil Analytical Results for Fuel Oil Storage

	11461 Hartel Road		Part 201 Generic Residential Criteria, µg/Kg						
			GROUNDWATER PROTECTION		INDOOR AIR	AMBIENT AIR		Contact	Csat
Sample Location	**SB-9**	**SB-10**							
Sample Depth, ft. bgl [1]	0.5-1.5'	0.5-1.5'							
Collection Date	01/13/26	01/13/26							
Chemical Abstract Service Number			Drinking Water Protection Criteria	Groundwater Surface Water Protection Criteria (GSIPC)	Soil Volatilization to Indoor Air (SVIIC)	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
VOCs - Volatile Organic Compounds, µg/Kg [2]									
Each VOC tested:	<MDL	<MDL	Varies	The VOCs are below their MDLs; the MDLs do not exceed the Part 201 GRCC.					
PNA's - Polynuclear Aromatics, µg/Kg [2]									
Each PNA tested:	<94.1	<92.9	Varies	The PNAs are below their MDLs; the MDLs do not exceed the Part 201 GRCC.					

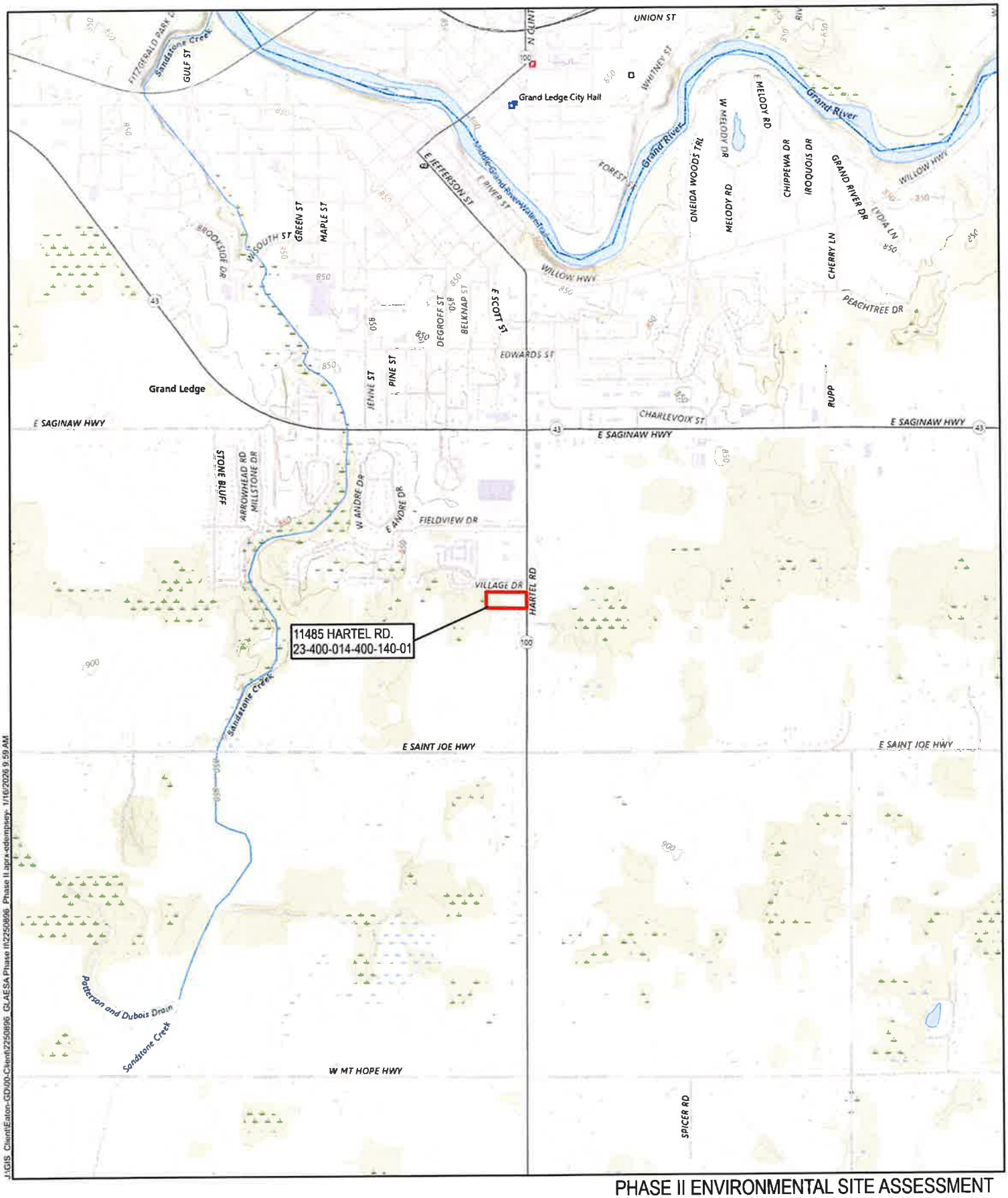
Footnotes

1. Depth is below ground level (bgl) referenced to the ground surface.
2. Regarding the VOC's and PNA's, see laboratory reports for full list of chemicals tested.

"MDL" means the method detection limit for the analysis.

The Part 201 Generic groundwater and soil cleanup criteria and screening levels, criteria footnotes and the toxicological and chemical-physical properties of the hazardous substances, obtained from Michigan Department of Environment, Great Lakes, and Energy -Remediation Division's Part 201 Rules 299.44 to 299.50, December 30, 2013, updated October 12, 2023.

Figure 1 – Property Location Map
Figure 2 – Site Plan showing Soil Borings



J:\GIS_Client\Eaton-GD\00-Client\2250896_GLAESA Phase II\2250896 Phase II.aprx-cdumpsey, 1/16/2026 9:59 AM

SCALE: 1" = 2,000 '

PHASE II ENVIRONMENTAL SITE ASSESSMENT

11485 HARTEL ROAD, GRAND LEDGE, EATON COUNTY, MICHIGAN

PROPERTY LOCATION MAP

FIGURE 1

Prein&Newhof

2250896

SCALE: 1" = 50 '

LEGEND

Hand Auger Soil Boring by Prein&Newhof on January 13, 2026

PHASE II ENVIRONMENTAL SITE ASSESSMENT
11485 HARTEL ROAD, GRAND LEDGE, EATON COUNTY, MICHIGAN

SITE PLAN SHOWING SOIL BORINGS

FIGURE 2

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225386

Appendix A: Soil Boring Logs

Prein&Newhof
Engineers • Surveyors • Environmental • Laboratory
3355 Evergreen Drive NE Grand Rapids, Michigan 49525
Telephone : (616) 364-8491 Fax : (616) 364-6955

LOG OF SB-1

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-1 (1-2')	865
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-2

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
							0		DARK BROWN TOPSOIL	
							0.5'		BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
							5.0'		END OF BORING SOIL SAMPLE COLLECTED SB-2 (1-2')	
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-3

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
							0		DARK BROWN TOPSOIL	
							0.5'		BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
							5.0'		END OF BORING SOIL SAMPLE COLLECTED SB-3 (1-2')	
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Telephone : (616) 364-8491
Fax : (616) 364-6955

LOG OF SB-4

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-4 (1-2')	865
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-5

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-5 (1-2')	865
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-6

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
							0		DARK BROWN TOPSOIL	
							0.5'		BROWN TO DARK BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
							5.0'		END OF BORING SOIL SAMPLE COLLECTED SB-6 (1-2')	
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-7

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
									1.5' DARK BROWN FINE TO COARSE SAND WITH TRACE TO LITTLE SILT, TRACE GRAVEL (SW)	
							2			868
							3		3.0' BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-7 (1-2')	865
							6			864

NOTES :

Prein&Newhof
Engineers · Surveyors · Environmental · Laboratory
3355 Evergreen Drive NE Grand Rapids, Michigan 49525
Telephone : (616) 364-8491 Fax : (616) 364-6955

LOG OF SB-8

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-8 (1-2')	865
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-9

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-9 (0.5-1.5')	865
							6			864

NOTES :

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Grand Rapids, Michigan 49525
Fax : (616) 364-6955

LOG OF SB-10

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	TBW

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN SILTY CLAY WITH LITTLE SAND, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-10 (0.5-1.5')	865
							6			864

NOTES :

Appendix B: Laboratory Analytical Reports

Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

January 29, 2026

Prein & Newhof
3355 Evergreen Dr. NE
Grand Rapids, MI 49525

RE: 11485 Hartel Road

Order No.: 2601855

Dear Mr. Tim Woodburne:

Guide to Reading Lab Result

Prein&Newhof Laboratory received 10 sample(s) on 1/13/2026 on your behalf. Your test results are provided in your Prein&Newhof Laboratory analytical report. Please carefully review your analytical report, noting the following.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Any analyte that exceeds the client provided permit level are noted on the report with an "*" in the Qual field. Quality control data is within laboratory defined or method specified acceptance limits except if noted.

When testing for PFHxS, PFOA, PFOS, MeFOSAA, and EtFOSAA results include both branched and linear isotopes. We extract a Method Blank and analyze it with the preparation batch. Method Blank analytes are within the Reporting Limit (RL).

To learn more about interpreting your Lab Report, follow the link above to view our "Guide to Reading Lab Results". If you have any concerns about your test results or need additional help, please call: 616-364-7600 or email me: sbylsma@preinnewhof.com.

We use EPA Approved Methods for all regulated parameters. EPA Lab #: MI000014

Thank you for trusting Prein&Newhof with your testing needs.

Sincerely,

Steve Bylsma
Laboratory Manager

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 11:35:00 AM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-01	**Matrix:**	SOIL
Client Sample ID:	SB-1 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 94.2	94.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID			**SW 7471A**			Analyst: **SB**
Mercury	23.0	22.3		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID			**SW 6020B**			Analyst: **AS**
Arsenic	5850	124		µg/Kg-dry	1	1/19/2026 12:59:21 PM
Barium	58600	124		µg/Kg-dry	1	1/19/2026 4:27:31 PM
Cadmium	53.3	24.8		µg/Kg-dry	1	1/19/2026 12:59:21 PM
Chromium	26400	105		µg/Kg-dry	1	1/28/2026 3:52:48 PM
Copper	11900	124		µg/Kg-dry	1	1/19/2026 12:59:21 PM
Lead	6660	124		µg/Kg-dry	1	1/19/2026 12:59:21 PM
Selenium	238	124		µg/Kg-dry	1	1/19/2026 12:59:21 PM
Silver	< 24.8	24.8		µg/Kg-dry	1	1/19/2026 12:59:21 PM
Zinc	43400	124		µg/Kg-dry	1	1/19/2026 4:27:31 PM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	83.3	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 12:02:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-02	**Matrix:**	SOIL
Client Sample ID:	SB-2 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	123	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	164	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 93.1	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	102	93.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID			**SW 7471A**			Analyst: **SB**
Mercury	28.3	22.8		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID			**SW 6020B**			Analyst: **AS**
Arsenic	3810	172		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Barium	68800	172		µg/Kg-dry	1	1/19/2026 4:44:10 PM
Cadmium	190	34.3		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Chromium	19700	172		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Copper	10300	172		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Lead	10700	172		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Selenium	< 172	172		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Silver	39.5	34.3		µg/Kg-dry	1	1/19/2026 1:05:09 PM
Zinc	47000	172		µg/Kg-dry	1	1/19/2026 4:44:10 PM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	85.2	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 12:18:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-03	**Matrix:**	SOIL
Client Sample ID:	SB-3 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC				**SW 8310**		Analyst: **JS**
2-Methylnaphthalene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 93.2	93.2		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID				**SW 7471A**		Analyst: **SB**
Mercury	24.3	20.1		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID				**SW 6020B**		Analyst: **AS**
Arsenic	3540	121		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Barium	49100	121		µg/Kg-dry	1	1/19/2026 4:49:43 PM
Cadmium	130	24.1		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Chromium	16000	121		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Copper	7420	121		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Lead	7020	121		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Selenium	351	121		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Silver	27.5	24.1		µg/Kg-dry	1	1/19/2026 1:21:59 PM
Zinc	37300	121		µg/Kg-dry	1	1/19/2026 4:49:43 PM
PERCENT MOISTURE				**D2216**		Analyst: **AB**
Total Solids	85.2	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 12:36:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-04	**Matrix:**	SOIL
Client Sample ID:	SB-4 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 92.8	92.8		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID			**SW 7471A**			Analyst: **SB**
Mercury	33.4	21.6		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID			**SW 6020B**			Analyst: **AS**
Arsenic	4490	129		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Barium	59300	129		µg/Kg-dry	1	1/19/2026 4:55:17 PM
Cadmium	150	25.8		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Chromium	17600	129		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Copper	11400	129		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Lead	8860	129		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Selenium	160	129		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Silver	32.9	25.8		µg/Kg-dry	1	1/19/2026 1:27:45 PM
Zinc	43000	129		µg/Kg-dry	1	1/19/2026 4:55:17 PM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	84.2	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 1:04:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-05	**Matrix:**	SOIL
Client Sample ID:	SB-5 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC				**SW 8310**		Analyst: **JS**
2-Methylnaphthalene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 92.4	92.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID				**SW 7471A**		Analyst: **SB**
Mercury	23.7	22.5		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID				**SW 6020B**		Analyst: **AS**
Arsenic	2940	115		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Barium	44100	115		µg/Kg-dry	1	1/19/2026 5:00:51 PM
Cadmium	142	22.9		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Chromium	12400	115		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Copper	6580	115		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Lead	7950	115		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Selenium	331	115		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Silver	25.4	22.9		µg/Kg-dry	1	1/19/2026 1:33:33 PM
Zinc	35600	115		µg/Kg-dry	1	1/19/2026 5:00:51 PM
PERCENT MOISTURE				**D2216**		Analyst: **AB**
Total Solids	85.7	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

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Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 1:26:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-06	**Matrix:**	SOIL
Client Sample ID:	SB-6 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	163	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	108	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	221	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 97.3	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	102	97.3		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID			**SW 7471A**			Analyst: **SB**
Mercury	54.7	21.4		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID			**SW 6020B**			Analyst: **AS**
Arsenic	3870	150		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Barium	58400	150		µg/Kg-dry	1	1/19/2026 5:06:24 PM
Cadmium	248	29.9		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Chromium	13800	150		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Copper	10200	150		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Lead	15700	150		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Selenium	212	150		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Silver	38.6	29.9		µg/Kg-dry	1	1/19/2026 1:39:20 PM
Zinc	62200	150		µg/Kg-dry	1	1/19/2026 5:06:24 PM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	81.8	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 1:41:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-07	**Matrix:**	SOIL
Client Sample ID:	SB-7 (1.5-2.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 97.5	97.5		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID			**SW 7471A**			Analyst: **SB**
Mercury	25.6	17.2		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID			**SW 6020B**			Analyst: **AS**
Arsenic	3150	123		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Barium	58400	123		µg/Kg-dry	1	1/19/2026 5:11:57 PM
Cadmium	137	24.6		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Chromium	12500	123		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Copper	7600	123		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Lead	9780	123		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Selenium	205	123		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Silver	32.0	24.6		µg/Kg-dry	1	1/19/2026 1:45:11 PM
Zinc	46200	123		µg/Kg-dry	1	1/19/2026 5:11:57 PM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	81.6	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 1:58:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-08	**Matrix:**	SOIL
Client Sample ID:	SB-8 (1-2')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 94.4	94.4		µg/Kg-dry	1	1/22/2026 8:40:00 AM
MERCURY, TOTAL SOLID			**SW 7471A**			Analyst: **SB**
Mercury	37.5	15.2		µg/Kg-dry	1	1/15/2026 4:17:54 PM
METALS, SOLID			**SW 6020B**			Analyst: **AS**
Arsenic	6360	140		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Barium	82400	140		µg/Kg-dry	1	1/19/2026 5:17:31 PM
Cadmium	781	28.0		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Chromium	17100	140		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Copper	12700	140		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Lead	15000	140		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Selenium	< 140	140		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Silver	56.6	28.0		µg/Kg-dry	1	1/19/2026 1:50:58 PM
Zinc	151000	140		µg/Kg-dry	1	1/19/2026 5:17:31 PM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	84.4	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 2:20:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-09	**Matrix:**	SOIL
Client Sample ID:	SB-9 (0.5-1.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**SW 8260B**		Analyst: **JS**
1,1,1,2-Tetrachloroethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,1,1-Trichloroethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,1,2,2-Tetrachloroethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,1,2-Trichloroethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,1-Dichloroethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,1-Dichloroethene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,1-Dichloropropene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2,3-Trichlorobenzene	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2,3-Trichloropropane	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2,3-Trimethylbenzene	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2,4-Trichlorobenzene	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2,4-Trimethylbenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2-Dibromo-3-chloropropane	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2-Dibromoethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2-Dichlorobenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2-Dichloroethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,2-Dichloropropane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,3,5-Trimethylbenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,3-Dichlorobenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,3-Dichloropropane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
1,4-Dichlorobenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
2,2-Dichloropropane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
2-Butanone	< 891	891		µg/Kg-dry	1	1/20/2026 11:10:00 PM
2-Chloroethyl vinyl ether	< 5940	5940		µg/Kg-dry	1	1/20/2026 11:10:00 PM
2-Chlorotoluene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
2-Hexanone	< 2970	2970		µg/Kg-dry	1	1/20/2026 11:10:00 PM
4-Chlorotoluene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
4-Isopropyltoluene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
4-Methyl-2-pentanone	< 2970	2970		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Acetone	< 5940	5940		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Acrylonitrile	< 2970	2970		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Benzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Bromobenzene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Bromochloromethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Bromodichloromethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Bromoform	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 2:20:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-09	**Matrix:**	SOIL
Client Sample ID:	SB-9 (0.5-1.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**SW 8260B**		Analyst: **JS**
Bromomethane	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Carbon disulfide	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Carbon tetrachloride	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Chlorobenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Chloroethane	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Chloroform	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Chloromethane	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
cis-1,2-Dichloroethene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
cis-1,3-Dichloropropene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Dibromochloromethane	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Dibromomethane	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Dichlorodifluoromethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Diethyl ether	< 2970	2970		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Ethylbenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Hexachlorobutadiene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Hexachloroethane	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Iodomethane	< 2970	2970		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Isopropylbenzene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
m,p-Xylene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Methyl tert-butyl ether	< 297	297		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Methylene chloride	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
n-Butylbenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
n-Propylbenzene	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
o-Xylene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
sec-Butylbenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Styrene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
tert-Butylbenzene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Tetrachloroethene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Tetrahydrofuran	< 1190	1190		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Toluene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
trans-1,2-Dichloroethene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
trans-1,3-Dichloropropene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
trans-1,4-Dichloro-2-butene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Trichloroethene	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Trichlorofluoromethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:10:00 PM
Vinyl chloride	< 59.4	59.4		µg/Kg-dry	1	1/20/2026 11:10:00 PM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 2:20:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-09	**Matrix:**	SOIL
Client Sample ID:	SB-9 (0.5-1.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW 8260B**			Analyst: **JS**
Xylenes, Total	< 178	178		µg/Kg-dry	1	1/20/2026 11:10:00 PM
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC			**SW 8310**			Analyst: **JS**
2-Methylnaphthalene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 94.1	94.1		µg/Kg-dry	1	1/22/2026 8:40:00 AM
PERCENT MOISTURE			**D2216**			Analyst: **AB**
Total Solids	84.2	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 2:38:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-10	**Matrix:**	SOIL
Client Sample ID:	SB-10 (0.5-1.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**SW 8260B**		Analyst: **JS**
1,1,1,2-Tetrachloroethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,1,1-Trichloroethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,1,2,2-Tetrachloroethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,1,2-Trichloroethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,1-Dichloroethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,1-Dichloroethene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,1-Dichloropropene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2,3-Trichlorobenzene	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2,3-Trichloropropane	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2,3-Trimethylbenzene	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2,4-Trichlorobenzene	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2,4-Trimethylbenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2-Dibromo-3-chloropropane	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2-Dibromoethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2-Dichlorobenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2-Dichloroethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,2-Dichloropropane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,3,5-Trimethylbenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,3-Dichlorobenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,3-Dichloropropane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
1,4-Dichlorobenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
2,2-Dichloropropane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
2-Butanone	< 895	895		µg/Kg-dry	1	1/20/2026 11:37:00 PM
2-Chloroethyl vinyl ether	< 5970	5970		µg/Kg-dry	1	1/20/2026 11:37:00 PM
2-Chlorotoluene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
2-Hexanone	< 2980	2980		µg/Kg-dry	1	1/20/2026 11:37:00 PM
4-Chlorotoluene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
4-Isopropyltoluene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
4-Methyl-2-pentanone	< 2980	2980		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Acetone	< 5970	5970		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Acrylonitrile	< 2980	2980		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Benzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Bromobenzene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Bromochloromethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Bromodichloromethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Bromoform	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM

Qualifiers:

<	Not Detected at the Reporting Limit	H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 2:38:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-10	**Matrix:**	SOIL
Client Sample ID:	SB-10 (0.5-1.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**SW 8260B**		Analyst: **JS**
Bromomethane	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Carbon disulfide	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Carbon tetrachloride	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Chlorobenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Chloroethane	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Chloroform	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Chloromethane	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
cis-1,2-Dichloroethene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
cis-1,3-Dichloropropene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Dibromochloromethane	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Dibromomethane	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Dichlorodifluoromethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Diethyl ether	< 2980	2980		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Ethylbenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Hexachlorobutadiene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Hexachloroethane	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Iodomethane	< 2980	2980		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Isopropylbenzene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
m,p-Xylene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Methyl tert-butyl ether	< 298	298		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Methylene chloride	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
n-Butylbenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
n-Propylbenzene	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
o-Xylene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
sec-Butylbenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Styrene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
tert-Butylbenzene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Tetrachloroethene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Tetrahydrofuran	< 1190	1190		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Toluene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
trans-1,2-Dichloroethene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
trans-1,3-Dichloropropene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
trans-1,4-Dichloro-2-butene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Trichloroethene	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Trichlorofluoromethane	< 119	119		µg/Kg-dry	1	1/20/2026 11:37:00 PM
Vinyl chloride	< 59.7	59.7		µg/Kg-dry	1	1/20/2026 11:37:00 PM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Analytical Report

(consolidated)

WO#: **2601855**

Date Reported: **1/29/2026**

CLIENT:	Prein & Newhof	**Collection Date:**	1/13/2026 2:38:00 PM
Project:	11485 Hartel Road	**Received Date:**	1/13/2026 4:45:00 PM
Lab ID:	2601855-10	**Matrix:**	SOIL
Client Sample ID:	SB-10 (0.5-1.5')	**Sampled By:**	S. Cathey (P&N)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS				**SW 8260B**		Analyst: **JS**
Xylenes, Total	< 179	179		µg/Kg-dry	1	1/20/2026 11:37:00 PM
POLYNUCLEAR AROMATIC HYDROCARBONS, HPLC				**SW 8310**		Analyst: **JS**
2-Methylnaphthalene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Acenaphthylene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Anthracene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benz(a)anthracene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(a)pyrene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(b)fluoranthene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(g,h,i)perylene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Benzo(k)fluoranthene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Chrysene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Dibenz(a,h)anthracene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluoranthene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Fluorene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Indeno(1,2,3-cd)pyrene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Naphthalene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Phenanthrene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
Pyrene	< 92.9	92.9		µg/Kg-dry	1	1/22/2026 8:40:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **AB**
Total Solids	83.8	0.0100		%	1	1/16/2026 9:51:00 AM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit
H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Revision v1

3350 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 www.preinnewhof.com

Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

3350 Evergreen Drive, NE
Grand Rapids, MI 49525
t. 616-364-7600
f. 616-364-6955

Client Name:
Billing Address:
Phone Number:
Email Report to: Tim Woodburne
Email Invoice to:
Project Name: 11485 Hartel Road
Project Number: 2250896
Sampling Personnel: Scott Cathey

CHAIN OF CUSTODY

Matrix	Code
Wastewater	W
Drinking Water	D
Groundwater	G
Soil	S
Sludge	L
Other	X

No. 59716

LAB USE	Sample Information				Preservative						Analysis Requested		
Lab Sample ID #	Date Collected	Time Collected	Sample Description and Location (e.g. MW-1)	MATRIX	None	H2SO4	HNO3	HCL	NaOH	Other	8310 PNAs	MI 10	8260+ VOCs
1855-1	1/13/26	1135	SB-1 (1-2')	S	X						X		
2	↓	1202	SB-2 (1-2')	↓	↓						↓	↓	
3	↓	1218	SB-3 (1-2')	↓	↓						↓	↓	
4	↓	1236	SB-4 (1-2')	↓	↓						↓	↓	
5	↓	1304	SB-5 (1-2')	↓	↓						↓	↓	
6	↓	1326	SB-6 (1-2')	↓	↓						↓	↓	
7	↓	1341	SB-7 (1.5-2.5')	↓	↓						↓	↓	
8	↓	1358	SB-8 (1-2')	↓	↓						↓	↓	
9	↓	1420	SB-9 (0.5-1.5')	↓						X	↓		X
10	↓	1436	SB-10 (0.5-1.5')	↓						X	↓		X

Comments: 10 °C

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time
[signature]	1/13/26	1635			
Relinquished By: (Signature)	**Date**	**Time**	**Received for Laboratory By: (Signature)**	**Date**	**Time**
			[signature]	1/13/26	1645

Geotechnical Exploration Report

Proposed Grand Ledge Police and Fire Station
11485 Hartel Road; Grand Ledge, Michigan

Prepared for
Grand Ledge Area Emergency Services Authority

January 30, 2026

225896

Prein&Newhof

Contents

Appendix

1 INTRODUCTION

Prein&Newhof has performed a geotechnical exploration for proposed fire hall to be located at11485 Hartel Road (M-100), Lake Odessa, MI. The purpose of this study was to determine and evaluate subsurface conditions within the area of the proposed developments and to provide recommendations relative to the support of building foundations, floor slabs, pavements and other related site preparation activities.

2 PROPOSED CONSTRUCTION

The general configuration of the site is shown on the appended Soil Boring Location Plan. We understand that the proposed construction will consist of a single-story building featuring administrative offices, living area and a vehicle bay. Although no detailed structural information is currently available, we anticipated wall loads on the order of 5 kips per lineal foot and column loads of approximately 100 kips. We understand that the finished floor level of the proposed fire hall will be slightly above existing grades. Paved driveways and parking lots are planned about the perimeter of the building. A storm water pond is also proposed for the northwest corner of the site.

3 SITE CONDITIONS

The project site is located just south of the extended Grand Ledge business/commercial district on Hartel Road, approximately ½-mile south of Saginaw Highway (M-43). A senior citizen housing development borders the site to the north. Properties to the south are mostly rural in nature, generally consisting of large-acreage parcels.

An existing residential garage building is present in the eastern part of the site, near Hartel Road. A short, asphalt-paved driveway leads up to the building. Dated air-photos indicate that several other buildings and out-buildings, as well as a former underground storage tank, were once present in areas north and south of the garage. These structures have since been demolished and/or removed. Existing environmental conditions relating to the former buildings and storage tank were the focus of an environmental assessment study performed by Prein&Newhof, the results of which are presented in a separate report. Existing vegetation in this portion of the site consists mainly of weeds and tall grasses.

With the exception of proposed access pavements, all currently proposed structures will be located in areas west of the existing garage building. Although the site was blanketed by snow-cover at the time of our investigation, our field reconnaissance indicates that this portion of the site is more thickly vegetated, with small to medium-sized saplings and prickly under-bush becoming more dense approaching the western site boundary. The site surface is relatively flat, with ground surface elevations ranging between approximately USGS elevations 869 to 867 feet.

4 CURRENT FIELD INVESTIGATION

We investigated subsurface conditions within the area of the proposed developments by drilling six soil borings, designated SB-101 through SB-106. The locations of the borings are shown on the attached plan. These locations and the esurface elevations at the borings were determined with a handheld GPS unit.

The soil borings were drilled by Rosendall Well Drilling under the full-time observation of a geotechnical engineer with our firm. Within each boring, soil samples were taken at regular depth intervals of 2.5 feet within the upper 10 feet, and at 5-foot intervals below that depth. Samples were obtained by the Standard Penetration Test (SPT) method, ASTM D1586, whereby a 2-inch outside diameter split-spoon sampler is driven three successive 6-inch increments, with the number of blows for each increment being recorded. The number of blows required to drive the sampler the second and third 6-inch Increments is defined as the Standard Penetration Resistance (N).

All soil samples obtained were classified in the field by our representative, then sealed in containers and transported to our laboratory for further classification and testing. We will retain these soil samples for a period of 60 days after the date of this report, at which time we will dispose of the samples, unless we are otherwise instructed. At the completion of drilling operations, the boreholes were backfilled with excavated soil.

5 PREVIOUS FIELD INVESTIGATION

Subsurface conditions were previously investigated as part of an earlier environmental study that P&N performed at the site. During that study ten hand auger borings, designated SB-1 through SB-10 were drilled at the locations shown on the attached plan. The conditions encountered in the hand auger borings are shown the boring logs included I the appendix of this report. The hand auger

borings were performed to investigate the area of previous structures at the site and to obtain soil samples for analytical testing.

6 SUBSURFACE CONDITIONS

The conditions encountered in the borings are presented on the attached Soil Boring Logs in the Appendix. Definitions of the descriptions used on the boring logs are presented on the attached Soil Nomenclature and Terminology sheet. The stratification shown on the logs represents our interpretation of the soil conditions at specific boring locations. Variations in subsoil conditions may occur away from the actual borings and between samples in any boring. Additionally, the stratigraphic lines represent the approximate boundaries between the soil types; however, the transition may be more gradual than what is shown.

The results of this investigation indicate that subsurface conditions at the site exhibit some variations, but generally consist of topsoil and other organic soils underlain by a predominantly cohesive (clayey) soils. The site is generally blanketed with a layer of topsoil that varies in thickness from approximately 9 to 18 inches. However, due to its past agricultural use, some areas of the site do not have a distinct topsoil layer, but the surficial soils contain traces of roots and topsoil that have been tilled to depths as great as 2 to 3 feet.

The topsoil and surficial organic soils are underlain by layers of silty clay with varying sand and gravel content. These cohesive soils vary in consistency from medium to very stiff but are generally in the stiff to very stiff range. Pocket penetrometer tests on samples from these layers indicate unconfined compressive strengths ranging from 1,000 to 7,500 pounds per square foot (psf). These silty clay soils extend to depths of 8.7 to 12 feet.

The stiff to very stiff clay is underlain by deposits of medium dense silt and medium to soft silty clay, with pocket penetrometer readings indicating unconfined compressive strengths ranging from 500 to 1,000 psf. The medium to soft clay extends to depths of 17 to 22 feet in the areas of SB-101 and SB-105 and to the full depth of exploration of the remaining borings.

Within the areas of SB-101 and SB-105 the soft to medium silty clay is underlain by stiff silty clay that extended to the full depth of these borings.

7 GROUNDWATER CONDITIONS

Groundwater level observations were made during and at completion of drilling. Groundwater was only encountered within SB-102 at a depth of 9 feet. The remaining borings were dry. The observed water appears to be perched within isolated seams and pockets of sandy soil embedded within the predominantly clayey soils. At the completion of drilling the boreholes typically caved above the depth at which water had been encountered or continued to be dry. It should be recognized that groundwater levels can fluctuate as a result of seasonal variations and following periods of heavy precipitation or drought.

8 EVALUATIONS AND RECOMMENDATIONS

8.1 Evaluation of Soil Conditions

The topsoil and the tilled soils containing more than 10 % organic matter are not considered suitable for the support of buildings or pavements. These soils can be used for landscaping and for fill in non-structural areas of the site.

We consider the non-organic upper stiff to very stiff silty clay to be suitable for the support of building foundations, floor slabs and pavements. However, subgrade areas consisting of medium silty clay will require aeration, drying and recompaction, or removal and replacement to adequately support structures.

The on-site silty clay soils can also be used as engineered fill. However, these soils will require significant aeration and drying before they can be properly compacted.

8.2 Evaluation of Groundwater Conditions and Groundwater Control

Based on the groundwater conditions encountered during this investigation and the anticipated depth of construction excavations, we do not anticipate significant groundwater-related construction difficulties. We anticipate that accumulations of groundwater or surface water runoff within excavations can be handled by pumping from sumps formed at the base of the excavations.

8.3 Site Preparation, Earthwork and Backfill

We recommend that all earthwork operations be performed under adequate specifications and properly monitored and tested in the field. To prepare the site for development, the vegetation,

topsoil, and previously till soils containing more than 10% organic matter should be removed from the development area and the area cut to design grade. This will require additional testing of the tilled soils to determine the depth of removal that is required.

We anticipate that the subgrade resulting from the recommended site clearing and removal of unsuitable organic soils will consist of primarily stiff to very stiff silty clay with localized areas of medium silty clay. This subgrade should be proof-rolled with a heavy rubber-tired vehicle such as a loaded dump truck or front-end loader. Areas that pump or rut excessively should be aerated, dried and recompacted, or removed and replaced with dry granular soils.

It should also be noted that the on-site clayey soils are sensitive to softening when disturbed by construction traffic. Therefore, depending on weather conditions and the type of equipment and construction procedures used, surface instability may develop in some areas of the site. If this occurs, the in-place stabilization and/or undercutting procedures outlined in the preceding paragraphs would again become necessary. Furthermore, if site conditioning and earthwork operations are to be performed during wet or cold weather (typically between mid-October and June), significant difficulty should be anticipated in drying and stabilizing the on-site clayey soils. If site balancing operations are performed during these periods of wet or cold weather or if the project schedule does not allow for the time required to aerate and dry the clayey on-site soils, it will become necessary to use imported dry granular fill for grading operations in lieu of on-site clay material, or possibly consider the use of cement stabilization.

Material for engineered fill required to achieve design grades should preferably consist of free-draining and well-graded non-organic granular soils, such as MDOT Class II material. It may be possible to use the on-site clayey for engineered fill. However, the on-site silty clay will be slow to dry should it become wet, thus, these materials will require aeration and drying before they can be adequately compacted. As discussed above, during periods of wet or cold weather, when drying time is minimal, consideration should be given to importing Class II sand for fill material.

The fill should be placed in uniform horizontal layers that are not more than 12 inches in loose thickness and compacted to achieve a density of at least 95 percent of the maximum dry density as determined by the Modified Proctor Compaction Test (ASTM D1557). All fill material should be placed and compacted at or near the optimum moisture content. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade.

8.4 Foundation Recommendations

Following the implementation of the earthwork operations recommended above, we recommend that the proposed building be supported on conventional spread or strip footings that extend through any encountered zones of medium silty clay and bear on undisturbed native stiff to very stiff silty clays, or on newly placed engineered fill.

All exterior footings should be extended to a minimum depth of 3.5 feet below the exposed finished grade for protection against frost penetration. Interior footings not exposed to freezing temperatures during or after construction can be placed at shallower depths, provided that suitable foundation soils are present. If foundations are to be constructed during periods with freezing temperatures, they should be insulated for protection against freezing temperatures. Furthermore, care will be required during winter construction to verify that foundations are not constructed on frozen soil.

If footings are to be founded at different levels, they should be designed and constructed so that the least lateral distance between them is equal to or greater than the difference in their bearing levels. To achieve a change in the level of a strip footing, the footing should be gradually stepped at a grade no steeper than two units horizontal to one unit vertical.

We recommend that foundations be designed on the basis of a net allowable soil bearing pressure of 2,500 psf. All strip footings should be at least 18-inches in width and all isolated spreading footings should be at least 24-inches in their least dimension regardless of the resulting bearing pressure.

We recommend that foundation excavations be checked and tested in the field by a qualified professional to verify that adequate soil bearing conditions, compatible with the recommendations outlined in this report, are achieved.

If the recommendations outlined in this report are adhered to, total and differential settlements for the completed structure should not exceed 1-inch and ½-inch, respectively. We understand that settlements of these magnitudes are within the tolerable limits for the type of building proposed.

8.5 Seismic Considerations

Site-specific seismic design criteria were estimated using criteria from the ASCE 7-10 Standard and the 2018 International Building Code. In the absence of deep borings, we recommend that

this site be classified as Class D (SPT N-value > 15 or shear strengths > 1,000 psf) based on the conditions encountered in the borings down to depths of 20 feet and assumed for depths between 20 feet and 100 feet. Table 1 provides a summary of the seismic coefficients for the project site.

Table 1

	Seismic Site Coefficient*		Period
Maximum considered earthquake spectral response acceleration	S_{MS}	0.124	0.2 second
	S_{M1}	0.108	1 second

* Multiply coefficient by gravitational acceleration (g)

8.6 Floor Slab Recommendations

The subgrade resulting from the proper completion of site preparation operations outlined in a preceding section of this report is considered suitable for the direct support of concrete floor slabs. If the subgrade is properly conditioned as recommended above, the slabs may be designed on the basis of a modulus of subgrade reaction (k) of 110 pounds per square inch per inch. We recommend that concrete floor slabs be suitably reinforced, and appropriate control joints be provided to control shrinkage cracking and to accommodate normal settlement.

We recommend that floor slabs be separated from the footings to allow for independent movement. Additionally, we recommend that a minimum of 12 inches of class II MDOT material b provided beneath floor slabs. We also recommend the placement of a vapor barrier beneath the floor slab to minimize the migration of moisture into the building.

8.7 Pavement Recommendations

The subgrade resulting from the satisfactory completion of site preparation operations should be suitable for the support of pavements. We anticipate that the pavement subgrade will consist of silty clay and clayey sand. These subgrade materials are expected to exhibit poor drainage characteristics and will be susceptible to frost penetration. Assuming proper subgrade preparation and considering the effects of seasonal moisture and temperature variations, an effective California Bearing Ratio (CBR) on the order of 4 to 6 should be achieved.

Due consideration should also be given to design for drainage. This will help minimize detrimental groundwater effects that may shorten the service life of the pavement. The pavement and underlying subgrade should be adequately crowned or sloped to promote effective surface

drainage and prevent water ponding. We recommend that a minimum pavement slope of 1 percent and preferably 1.5 per cent be provided to achieve these drainage measures.

We also recommend the installation of radial subdrains at catch basin locations to prevent the building up of water within the clayey sand and silty sand. The subdrains should be protected with coarse aggregates and wrapped with a filter grade geotextile to minimize the migration of fine soil particles. We further recommend that free-draining granular soils be used for backfilling the subdrain trenches to promote drainage.

It should also be noted that pavements in front of garage doors, within truck unloading zones and trash dumpster pick-up areas will be subjected to heavy concentrated wheel loads. This type of loading can result in rutting of asphalt pavements and, ultimately, in pavement failure. Therefore, we recommend that an air entrained concrete pavement be provided in these areas.

8.8 Stability of Excavations

Construction excavations may proceed with sloped banks, vertical banks with lateral bracing, or a combination of these methods. In all cases, all applicable regulations prescribed by OSHA should be followed and adequate protection for workers and existing pavements, structures and utilities must be provided.

Construction traffic and excavated material should be kept away from an excavation at a minimum lateral distance equal to the full depth of the excavation unless the resulting surcharge loads are accounted for in the design of the lateral bracing system.

9 Closing Remarks and Limitations

The recommendations submitted in this report are based on the available soil information and data regarding the proposed construction provided by the client, plus any assumptions stated herein. The geotechnical engineer should be kept apprised of the progress of the design of this project and any items that deviate from the stated understanding and/or assumptions indicated in this report should be brought to our attention for review and evaluation.

Experience indicates that soil conditions at a site could vary from those generalized on the basis of soil borings made at specific locations. Therefore, it is recommended that a geotechnical engineer be involved in construction monitoring and testing services during the earthwork and foundation

installation phases of the proposed project. This is to observe compliance with the design concepts, specifications and recommendations. Also, field monitoring allows design changes to be made in a timely manner in the event that subsurface conditions differ from those anticipated prior to the start of construction.

This report is intended for specific use in the design and construction of the proposed building and related site improvements, as described in this report. This geotechnical study has been conducted in a manner consistent with the level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations, and opinions contained herein have been developed in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology. No other representations expressed or implied, and no warranty or guarantee is included or intended in this report.

The scope or purpose of this geotechnical evaluation does not specifically or by implication provide an environmental assessment of the proposed site.

Respectfully Submitted,

Prein&Newhof

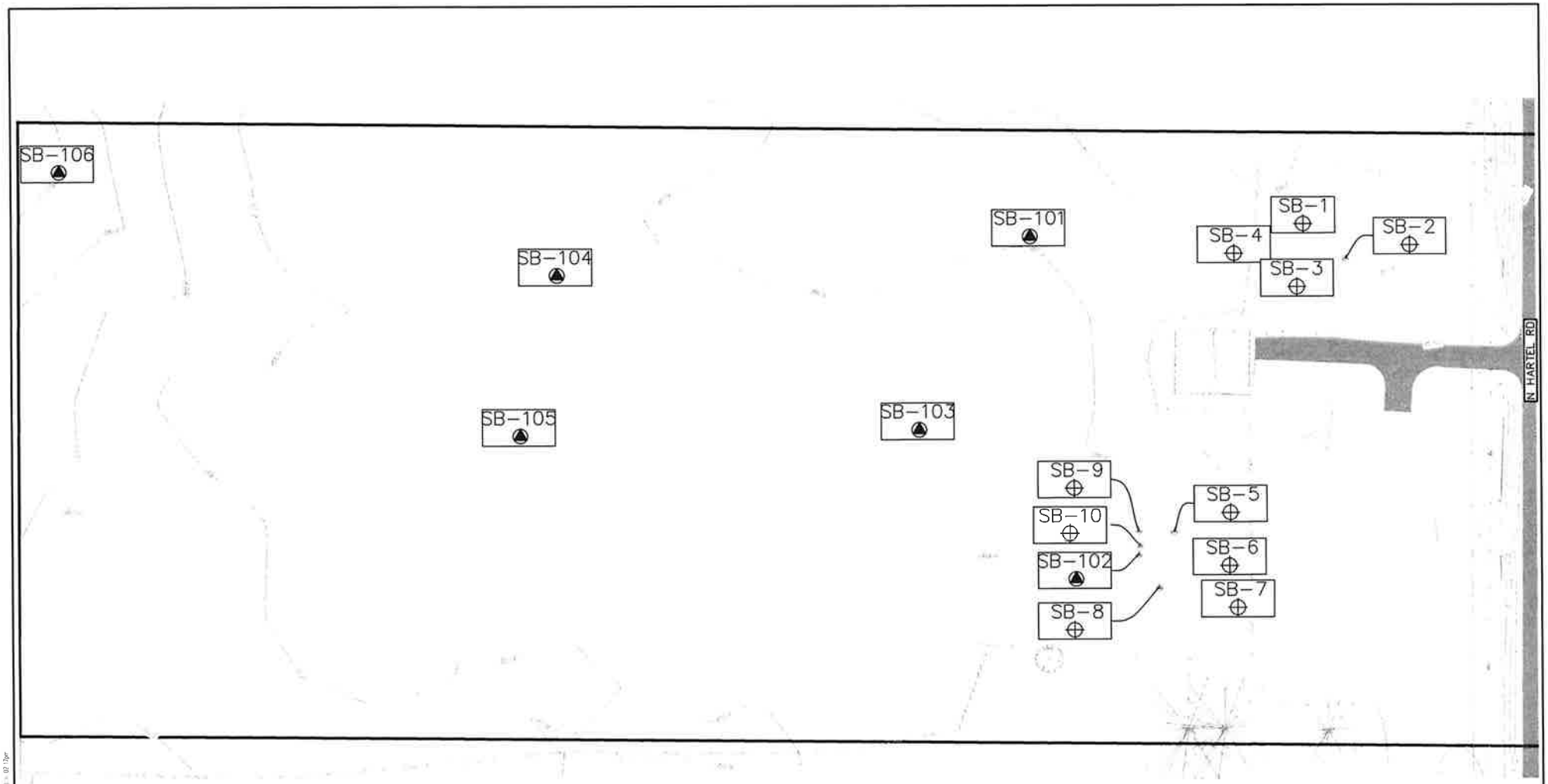
Christopher J. Cruickshank, P.E

Appendix

Boring Location Plan

Soil Nomenclature

Soil Boring Logs



EXISTING SITE

SCALE : 1" = 40'

0 40' 80'

North

SOIL BORING BY ROSENDALL WELL DRILLING ON 01/22/2026 UNDER THE OBSERVATION OF PREIN & NEWHOF

HAND AUGER BORING BY PREIN & NEWHOF ON 01/13/2026

PROPOSED GRAND LEDGE POLICE AND FIRE STATION

SOIL BORING LOCATION PLAN

Prein&Newhof
Engineers • Surveyors • Environmental • Laboratory

11485 N HARTEL RD, GRAND LEDGE, MI 48837

Date : 01/30/2026

Project No. 2250896

Sheet 1 OF 1

Prein&Newhof
Engineers ▪ Surveyors ▪ Environmental ▪ Laboratory

SOIL NOMENCLATURE AND TERMINOLOGY

DRILLING & SAMPLING DESIGNATIONS:

SS	:	Split Spoon Sample (per ASTM D 1586)
LS	:	Split Spoon Sample with 3" Liner Insert
ST	:	Shelby Tube Sample - 3" O.D., unless otherwise noted
AS	:	Auger Sample
BS	:	Bulk Sample

HSA	:	Hollow Stem Auger
SSA	:	Solid Stem Auger
RB	:	Rock Bit (NX; BX; AX)
PP	:	Pocket Penetrometer Value
VS	:	Vane Shear Value
PM	:	Pressuremeter test - in situ

STANDARD PENETRATION TEST (ASTM D-1586): A 2-inch OD, 1⅜-inch ID split barrel sampler is driven into undisturbed soil by means of repeating blows from a 140-pound hammer falling 30 inches. The sampler is driven three successive 6-inch increments; the total number of blows required for the final 12 inches of penetration is termed the Standard Penetration Resistance (N).

GRADATION DESCRIPTION & TERMINOLOGY:

Granular Soils (coarse-grained) have more than 50% of their dry weight retained on a #200 sieve; they are described as: *Boulders*, *Cobbles*, *Gravel* or *Sand*. Fine-Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are described as: *Clays* or *Clayey Silts* if they are cohesive, and *Silts* if they are non-cohesive. In addition to gradation, granular soils are defined based on their *in-situ density*; fine grained soils are further defined based on their strength or *consistency*, and on their *plasticity*.

Major Soil Component		Gradation Range
Boulders		Over 12 inches (305mm)
Cobbles		12 inches to 3 inches (305mm to 76mm)
Gravel	Coarse	3 inches to ¾ inches (76mm to 19mm)
	Fine	¾ inches to #4 sieve (19mm to 4.75mm)
Sand	Coarse	#4 sieve to #10 sieve (4.75mm to 2.00mm)
	Medium	#10 sieve to #40 sieve (2.00mm to 0.425mm)
	Fine	#40 sieve to #200 sieve (0.425mm to 0.074mm)
Silt		Passing #200 sieve (0.074mm) to 0.005mm
Clay		Smaller than 0.005mm

Descriptive Term(s) (Of Minor Soil Constituents)	Percent of Dry Weight
Trace	1 - 10
Little	10 - 20
Some	20 - 35
And	35 - 50

CONSISTENCY OF COHESIVE SOILS:

Unconfined Comp Strength, Qu (tsf)	Consistency
<0.25	Very Soft
0.25 – 0.50	Soft
0.50 – 1.00	Medium (firm)
1.00 – 2.00	Stiff
2.00 – 4.00	Very Stiff
4.00 – 8.00	Hard
>8.00	Very Hard

IN-SITU DENSITY OF GRANULAR SOILS:

N - Blows/ft.	In-Situ Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
50 +	Very Dense

WATER LEVEL MEASUREMENT:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. It should be noted that groundwater levels observed during drilling in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the relatively low permeability of clay soils and the tendency of drilling operations to temporarily seal off natural paths of groundwater migration into the borehole. Additionally, fluctuations in groundwater levels should be anticipated with seasonal variations and following periods of heavy or prolonged precipitation.

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LOG OF SB-101

DESCRIPTION :	GLAESA Fire Station		
LOCATION :	11485 North Hartel, Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	K. Heindlmeyer
DRILLING CONTRACTOR:	Rosendall Well Drilling	DRILLER :	C. Huizenga
DRILL RIG :	Geoprobe	BORING METHOD :	3.25" HSA w/ SPT
SURFACE ELEVATION :	869 +/-	TOTAL DEPTH :	25'
WATER ENCOUNTERED AT :	Dry Hole		
WATER AFTER COMPLETION :	NA		
START DATE :	1/22/2026	CHECKED BY :	KJH

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									0.0' TOPSOIL: MEDIUM DARK BROWN SILTY CLAY, TRACE SAND, TRACE ROOTS, TRACE ORGANICS (CL-O)	
SS-1	3 3 3	6			1000*				1.1' MEDIUM BROWN SILTY CLAY, TRACE SAND, TRACE ROOTS (CL)	
									3.0' VERY STIFF BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND, OCCASIONAL LENSES OF SAND (CL)	865
SS-2	3 4 7	11			5000*		5			
SS-3	4 4 7	11			6000*					
									8.7' MEDIUM DENSE GRAY CLAYEY SILT (ML)	860
SS-4	3 4 8	12			4500*		10		9.3' MEDIUM DENSE BROWN SILT, TRACE TO LITTLE CLAY, TRACE GRAVEL, TRACE SAND, FREQUENT SEAMS OF CLAY (ML)	
									12.0' SOFT BROWN SILTY CLAY, TRACE GRAVEL, TRACE SILT (CL)	
SS-5	3 2 3	5			500*		15		13.0' SOFT GRAY SILTY CLAY, TRACE GRAVEL, TRACE SILT (CL)	855
									17.0' STIFF GRAY SILTY CLAY, TRACE GRAVEL, TRACE SILT (CL)	
SS-6	3 3 5	8			3000*		20			850
SS-7	4 6 7	13			3000*		25			845
									25.0' END OF BORING	
							30			840
										835

NOTES : *Pocket Penetrometer Value

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LOG OF SB-102

DESCRIPTION : GLAESA Fire Station
LOCATION : 11485 North Hartel, Grand Ledge, MI
PROJECT NO. : 2250896 INSPECTOR : K. Heindlmeyer
DRILLING CONTRACTOR: Rosendall Well Drilling DRILLER : C. Huizenga
DRILL RIG : Geoprobe BORING METHOD : 3.25" HSA w/ SPT
SURFACE ELEVATION : 869 +/- TOTAL DEPTH : 15'

WATER ENCOUNTERED AT : 9'
WATER AFTER COMPLETION : Dry Cave-in at 10.4'
START DATE : 1/22/2026 CHECKED BY : KJH

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									STIFF MOTTLED BROWN AND GRAY SILTY CLAY, TRACE GRAVEL, TRACE SAND, TRACE ROOTS (CL)	
SS-1	3 4 3	7			2500*					
									3.0' STIFF BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	865
SS-2	4 6 9	15			3000*		5			
SS-3	5 5 8	13			2000*					
										860
SS-4	13 22 14	36			1000*		10		9.0' MEDIUM BROWN/REDDISH-BROWN SILTY CLAY, TRACE SAND, OCCASIONAL SEAMS OF GRAVEL (SEAM OF SANDY SILT AT 9') (CL)	
										855
SS-5	2 2 3	5			500*		15		13.8' SOFT GRAY SILTY CLAY, TRACE SAND (CL)	
									15.0' END OF BORING	
							20			850
							25			845
							30			840
										835

NOTES : *Pocket Penetrometer Value

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LOG OF SB-103

DESCRIPTION :	GLAESA Fire Station		
LOCATION :	11485 North Hartel, Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	K. Heindlmeyer
DRILLING CONTRACTOR:	Rosendall Well Drilling	DRILLER :	C. Huizenga
DRILL RIG :	Geoprobe	BORING METHOD :	3.25" HSA w/ SPT
SURFACE ELEVATION :	869 +/-	TOTAL DEPTH :	25'
WATER ENCOUNTERED AT :	Dry Hole		
WATER AFTER COMPLETION :	Dry Cave-in at 12.4'		
START DATE :	1/22/2026	CHECKED BY :	KJH

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									TOPSOIL: STIFF DARK BROWN SILTY CLAY, TRACE ROOTS (CL)	
									1.7' STIFF TO VERY STIFF MOTTLED BROWN AND GRAY SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-1	2 2 3	5			2000*					
SS-2	4 3 4	7			4000*		5			865
SS-3	2 3 5	8			3000*					
									8.0' STIFF BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-4	3 3 3	6			3000*		10			860
									12.0' SOFT BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-5	3 2 2	4			500*		15			855
									14.7' SOFT GRAY SILTY CLAY, TRACE SAND (CL)	
SS-6	3 4 4	8			500*		20			850
									20.0' END OF BORING	
							25			845
							30			840
										835

NOTES : *Pocket Penetrometer Value

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LOG OF SB-104

DESCRIPTION :	GLAESA Fire Station		
LOCATION :	11485 North Hartel, Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	K. Heindlmeyer
DRILLING CONTRACTOR:	Rosendall Well Drilling	DRILLER :	C. Huizenga
DRILL RIG :	Geoprobe	BORING METHOD :	3.25" HSA w/ SPT
SURFACE ELEVATION :	869 +/-	TOTAL DEPTH :	15'
WATER ENCOUNTERED AT :	Dry Hole		
WATER AFTER COMPLETION :	Dry Cave-in at 12.4'		
START DATE :	1/22/2026	CHECKED BY :	KJH

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									0.8' TOPSOIL: STIFF DARK BROWN SILTY CLAY, TRACE SAND, TRACE ROOTS, TRACE ORGANICS (CL-O)	
SS-1	3 4 6	10			3500*				STIFF TO VERY STIFF BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-2	2 3 5	8			3500*		5			865
SS-3	3 4 5	9			4500*					
									8.0' LOOSE BROWN SILT, TRACE TO LITTLE CLAY, TRACE SAND, OCCASIONAL SEAMS OF SAND (ML)	860
SS-4	4 5 5	10					10			
									12.0' MEDIUM GRAY SILTY CLAY, TRACE SAND (SEAM OF GRAY FINE TO COARSE SAND AT 14.9') (CL)	855
SS-5	2 2 4	6			1000*		15		15.0' END OF BORING	
							20			850
							25			845
							30			840
										835

NOTES : *Pocket Penetrometer Value

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LOG OF SB-105

DESCRIPTION : GLAESA Fire Station
LOCATION : 11485 North Hartel, Grand Ledge, MI
PROJECT NO. : 2250896 INSPECTOR : K. Heindlmeyer
DRILLING CONTRACTOR: Rosendall Well Drilling DRILLER : C. Huizenga
DRILL RIG : Geoprobe BORING METHOD : 3.25" HSA w/ SPT
SURFACE ELEVATION : 870 +/- TOTAL DEPTH : 25'

WATER ENCOUNTERED AT : Dry Hole
WATER AFTER COMPLETION : Dry Cave-in at 19.9'
START DATE : 1/22/2026 CHECKED BY : KJH

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									1.0' TOPSOIL: STIFF DARK BROWN SILTY CLAY, TRACE SAND, TRACE ROOTS, TRACE ORGANICS (CL-O)	
SS-1	2 2 3	5			2000*				STIFF MOTTLED BROWN AND GRAY SILTY CLAY, TRACE SAND (SEAM OF CLAYEY SAND AT 1.6')(CL)	
									3.0' STIFF TO VERY STIFF BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-2	4 3 6	9			5500*		5			865
SS-3	2 3 5	8			2500*					
SS-4	2 6 10	16			7500*		10		9.6' MEDIUM DENSE BROWN SILT, TRACE TO LITTLE CLAY (ML)	860
									12.0' MEDIUM BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-5	1 1 2	3			1000*		15		13.7' MEDIUM TO SOFT GRAY SILTY CLAY, TRACE GRAVEL, TRACE SILT (CL)	855
SS-6	2 3 3	6			500*		20			850
									22.0' STIFF GRAY SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
SS-7	2 2 5	7			2500*		25			845
									25.0' END OF BORING	
							30			840

NOTES : *Pocket Penetrometer Value

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LOG OF SB-106

DESCRIPTION :	GLAESA Fire Station		
LOCATION :	11485 North Hartel, Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	K. Heindlmeyer
WATER ENCOUNTERED AT :	Dry Hole		
WATER AFTER COMPLETION :	Dry Cave-in at 12.6'		
DRILLING CONTRACTOR:	Rosendall Well Drilling	DRILLER :	C. Huizenga
START DATE :	1/22/2026	CHECKED BY :	KJH
DRILL RIG :	Geoprobe	BORING METHOD :	3.25" HSA w/ SPT
SURFACE ELEVATION :	867 +/-	TOTAL DEPTH :	25'

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
SS-1	2 2 2	4			2500*		0		STIFF TO VERY STIFF MOTTLED DARK GRAY AND BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND, TRACE ROOTS (CL)	865
SS-2	3 4 4	8			6500*		5			
									5.5' STIFF BROWN SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	860
SS-3	4 4 6	10			3500*					
									8.0' VERY STIFF GRAY SILTY CLAY, TRACE GRAVEL (CL)	
SS-4	3 4 5	9			5000*		10			
										855
									12.0' INTERBEDDED LAYERS OF LOOSE BROWN FINE SAND, LOOSE GRAY SANDY SILT, AND SOFT TO MEDIUM GRAY SILTY CLAY (SP/ML/CL)	
SS-5	4 3 4	7			1000*		15		14.6' SOFT TO MEDIUM GRAY SILTY CLAY, TRACE GRAVEL, TRACE SAND (CL)	
									15.9' END OF BORING	850
							20			
										845
							25			
										840
							30			
										835

NOTES : *Pocket Penetrometer Value

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LOG OF SB-1

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN SILTY CLAY, TRACE GRAVEL (SC)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-1 (1-2')	865
							6			864

NOTES :

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LOG OF SB-2

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN SILTY CLAY, TRACE GRAVEL (SC)	
							1			869
							2			868
							3			867
							4			866
							5			865
									5.0' END OF BORING	
									SOIL SAMPLE COLLECTED SB-2 (1-2')	
							6			864

NOTES :

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LOG OF SB-3

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
							0.5'		BROWN SILTY CLAY, TRACE GRAVEL (SC)	
							1			869
							2			868
							3			867
							4			866
							5			865
							5.0'		END OF BORING SOIL SAMPLE COLLECTED SB-3 (1-2')	
							6			864

NOTES :

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LOG OF SB-4

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
									5.0' END OF BORING	
									SOIL SAMPLE COLLECTED SB-4 (1-2')	
							6			864

NOTES :

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LOG OF SB-5

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR :	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
							0.5'		BROWN TO DARK BROWN SILTY CLAY, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
							5.0'		END OF BORING SOIL SAMPLE COLLECTED SB-5 (1-2')	
							6			864

NOTES :

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LOG OF SB-6

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
									5.0' END OF BORING	
									SOIL SAMPLE COLLECTED SB-6 (1-2')	
							6			864

NOTES :

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LOG OF SB-7

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY, TRACE GRAVEL (CL)	
							1			869
									1.5' DARK BROWN FINE TO COARSE SAND WITH TRACE TO LITTLE SILT, TRACE GRAVEL (SW)	
							2			868
							3			867
									3.0' BROWN SILTY CLAY, TRACE GRAVEL (SC)	
							4			866
							5			865
									5.0' END OF BORING	
									SOIL SAMPLE COLLECTED SB-7 (1-2')	
							6			864

NOTES :

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LOG OF SB-8

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN TO DARK BROWN SILTY CLAY, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING SOIL SAMPLE COLLECTED SB-8 (1-2')	865
							6			864

NOTES :

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LOG OF SB-9

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
									DARK BROWN TOPSOIL	
									0.5' BROWN SILTY CLAY, TRACE GRAVEL (SC)	
							1			869
							2			868
							3			867
							4			866
							5		5.0' END OF BORING	865
							6			864

SOIL SAMPLE COLLECTED
SB-9 (0.5-1.5')

NOTES :

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LOG OF SB-10

DESCRIPTION :	11485 Hartel Road		
LOCATION :	Grand Ledge, MI		
PROJECT NO. :	2250896	INSPECTOR :	Scott Cathey
DRILLING CONTRACTOR:	NA	DRILLER :	NA
DRILL RIG :	NA	BORING METHOD :	Hand Auger
SURFACE ELEVATION :	870 +/-	TOTAL DEPTH :	5'
WATER ENCOUNTERED AT :	NA		
WATER AFTER COMPLETION :	NA		
START DATE :	1/13/2026	CHECKED BY :	CJC

SAMPLE	PENETRATION (BLOWS/6")	STD. PEN. N-VALUE	MOISTURE (%)	DRY DENSITY (PCF)	UNCONF. COMP. STRENGTH (PSF)	PID READING (PPM)	DEPTH (FT.)	SYMBOL	SUBSURFACE PROFILE	ELEVATION (FT.)
							0		DARK BROWN TOPSOIL	
							0.5'		BROWN SILTY CLAY, TRACE GRAVEL (CL)	
							1			869
							2			868
							3			867
							4			866
							5			865
							5.0'		END OF BORING SOIL SAMPLE COLLECTED SB-10 (0.5-1.5')	
							6			864

NOTES :