

## b. Soils Sieve Report



## ANALYTICAL REPORT

Lab Number:	L2047819
Client:	Lombardo Associates, Inc. 188 Church Street Newton, MA 02458
ATTN:	Pio Lombardo
Phone:	(617) 964-2924
Project Name:	OLD POUND ROAD-SCOTTS CORNER
Project Number:	Not Specified
Report Date:	11/11/20

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2047819-01	SITE#4@7 FEET	SOIL	POUND RIDGE, NY	10/28/20 10:00	11/02/20
L2047819-02	SITE#7@2 FEET	SOIL	POUND RIDGE, NY	10/28/20 10:30	11/02/20
L2047819-03	SITE#7@8 FEET	SOIL	POUND RIDGE, NY	10/28/20 10:30	11/02/20
L2047819-04	SITE#7@12 FEET	SOIL	POUND RIDGE, NY	10/28/20 10:30	11/02/20
L2047819-05	SITE#13@3 FEET	SOIL	POUND RIDGE, NY	10/28/20 13:30	11/02/20
L2047819-06	SITE#13@9 FEET	SOIL	POUND RIDGE, NY	10/28/20 13:30	11/02/20
L2047819-07	SITE#13@12 FEET	SOIL	POUND RIDGE, NY	10/28/20 13:30	11/02/20
L2047819-08	SITE#21@3 FEET	SOIL	POUND RIDGE, NY	10/28/20 14:30	11/02/20
L2047819-09	SITE#21@9 FEET	SOIL	POUND RIDGE, NY	10/28/20 14:30	11/02/20
L2047819-12	SITE#21@13 FEET	SOIL	POUND RIDGE, NY	10/28/20 14:30	11/02/20
L2047819-13	SITE#4@4 FEET	SOIL	POUND RIDGE, NY	10/28/20 10:00	11/02/20

**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

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### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

L2047819-10: A sample identified as "SITE#21@9 FEET" was listed on the Chain of Custody, but not received. This was verified by the client.

L2047819-12: A sample identified as "SITE#21@13 FEET" was received, but not listed on the Chain of Custody. At the client's request, this sample was analyzed.


L2047819-13: A sample identified as "SITE#4@4 FEET" was received, but not listed on the Chain of Custody. At the client's request, this sample was analyzed.

#### Grain Size Analysis

The WG1431353-1 Laboratory Duplicate RPD for % coarse sand (23%), % silt fine (31%), % clay fine (32%) and total fines (31%), performed on L2047819-05, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 11/11/20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-01  
**Client ID:** SITE#4@7 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 10:00  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	33.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	33.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	7.00		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	11.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	22.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	40.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	22.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	2.80		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	25.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-02  
**Client ID:** SITE#7@2 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 10:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	5.80		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	5.80		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	3.70		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	18.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	33.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	55.3		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	34.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	4.00		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	38.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM





**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-03  
**Client ID:** SITE#7@8 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 10:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	27.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	27.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	13.0		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	16.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	25.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	55.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	14.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	2.20		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	16.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-04  
**Client ID:** SITE#7@12 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 10:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	35.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	35.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	15.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	16.0		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	19.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	51.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	11.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	1.70		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	13.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-05  
**Client ID:** SITE#13@3 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 13:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	43.3		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	43.3		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	10.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	12.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	20.3		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	43.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	11.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	1.60		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	12.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
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**Lab Number:** L2047819  
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**SAMPLE RESULTS**

**Lab ID:** L2047819-06  
**Client ID:** SITE#13@9 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 13:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	19.0		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	19.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	38.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	13.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	12.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	22.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	48.0		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	12.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	1.20		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	13.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



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**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-07  
**Client ID:** SITE#13@12 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 13:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	17.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	17.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	11.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	15.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	34.0		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	61.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	19.7		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	1.80		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	21.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM

**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-08  
**Client ID:** SITE#21@3 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 14:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	14.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	15.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	30.0		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	6.50		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	14.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	26.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	47.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	20.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	2.30		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	22.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-09  
**Client ID:** SITE#21@9 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 14:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	50.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	50.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	8.00		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	9.20		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	18.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	36.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	11.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	1.50		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	13.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-12  
**Client ID:** SITE#21@13 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 14:30  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	18.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	18.6		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	5.90		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	14.8		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	32.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	52.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	25.3		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	3.20		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	28.5		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM





**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

**SAMPLE RESULTS**

**Lab ID:** L2047819-13  
**Client ID:** SITE#4@4 FEET  
**Sample Location:** POUND RIDGE, NY

**Date Collected:** 10/28/20 10:00  
**Date Received:** 11/02/20  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>Grain Size Analysis - Mansfield Lab</b>										
Cobbles	ND		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Gravel	26.2		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Gravel	33.9		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Gravel	60.1		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Coarse Sand	7.90		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Medium Sand	8.10		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Fine Sand	14.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Sand	30.4		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Silt Fine	8.40		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Clay Fine	1.10		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM
% Total Fines	9.50		%	0.100	NA	1	-	11/06/20 12:30	12,D6913/D7928	SM



## Lab Duplicate Analysis

*Batch Quality Control*

**Project Name:** OLD POUND ROAD-SCOTTS CORNER

**Project Number:** Not Specified

**Lab Number:** L2047819

**Report Date:** 11/11/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size Analysis - Mansfield Lab Associated sample(s): 01-09,12-13 QC Batch ID: WG1431353-1 QC Sample: L2047819-05 Client ID: SITE#13@3 FEET						
Cobbles	ND	ND	%	NC		20
% Coarse Gravel	ND	ND	%	NC		20
% Fine Gravel	43.3	37.5	%	14		20
% Total Gravel	43.3	37.5	%	14		20
% Coarse Sand	10.7	8.50	%	23	Q	20
% Medium Sand	12.9	12.8	%	1		20
% Fine Sand	20.3	23.7	%	15		20
% Total Sand	43.9	45.0	%	2		20
% Silt Fine	11.2	15.3	%	31	Q	20
% Clay Fine	1.60	2.20	%	32	Q	20
% Total Fines	12.8	17.5	%	31	Q	20

**Project Name:** OLD POUND ROAD-SCOTTS CORNER

**Project Number:** Not Specified

Serial\_No:11112017:49

**Lab Number:** L2047819

**Report Date:** 11/11/20

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2047819-01A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()
L2047819-02A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()
L2047819-03A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()
L2047819-04A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CFINE(),A2-HYDRO-FSAND(),A2-HYDRO-CGRAVEL(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()
L2047819-05A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-CGRAVEL(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-FGRAVEL(),A2-HYDRO-COBBLER()
L2047819-06A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-FGRAVEL(),A2-HYDRO-COBBLER()

\*Values in parentheses indicate holding time in days



**Project Name:** OLD POUND ROAD-SCOTTS CORNER

**Project Number:** Not Specified

Serial\_No:11112017:49

**Lab Number:** L2047819

**Report Date:** 11/11/20

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2047819-07A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-CGRAVEL(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()
L2047819-08A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()
L2047819-09A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-FGRAVEL(),A2-HYDRO-COBBLER()
L2047819-12A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-FGRAVEL(),A2-HYDRO-COBBLER()
L2047819-13A	Bag	A	NA		2.8	Y	Absent		A2-HYDRO-TFINE(),A2-HYDRO-FSAND(),A2-HYDRO-CFINE(),A2-HYDRO-CGRAVEL(),A2-HYDRO-MSAND(),A2-HYDRO-TGRAVEL(),A2-HYDRO-CSAND(),A2-HYDRO-SFINE(),A2-HYDRO-TSAND(),A2-HYDRO-COBBLER(),A2-HYDRO-FGRAVEL()

**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
**Report Date:** 11/11/20

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

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#### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

#### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: DU Report with 'J' Qualifiers



**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
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**Data Qualifiers**

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

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**Project Name:** OLD POUND ROAD-SCOTTS CORNER  
**Project Number:** Not Specified

**Lab Number:** L2047819  
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## REFERENCES

- 12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

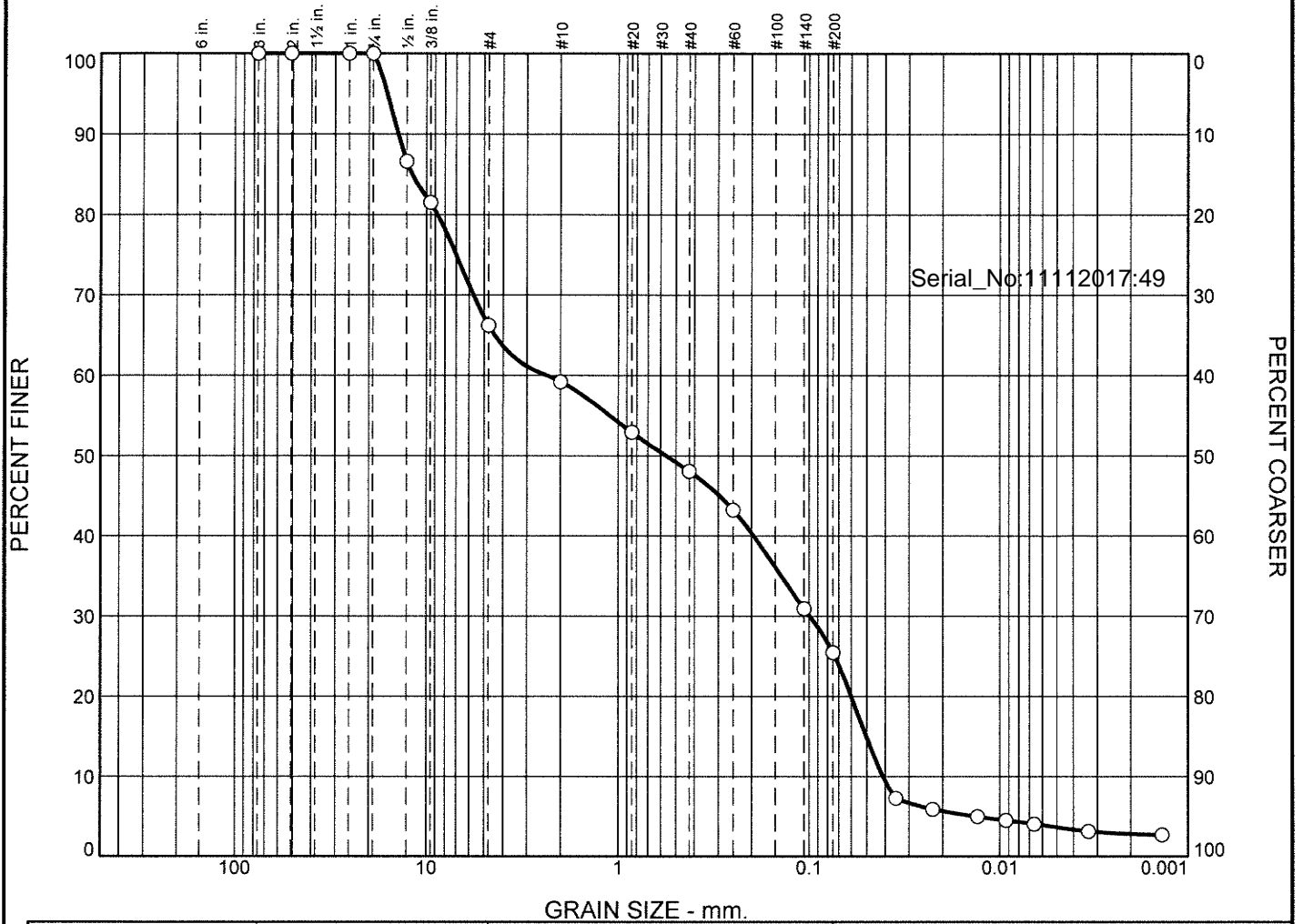




Serial\_No:11112017:49

**ASTM D6913/D7928**  
**GRAIN SIZE ANALYSIS**

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines			
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay		
0.0	0.0	33.8	7.0	11.1	22.6	22.7	2.8		
LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		11.8839	2.3705	0.5611	0.0991	0.0503	0.0412	0.10	57.56

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

Project No.	Client:	Remarks:
Project:		
Source of Sample: SITE4@7 FEET	Sample Number: L2047819-01	
Alpha Analytical		Figure
Mansfield, MA		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE4@7 FEET

Sample Number: L2047819-01

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 103.85  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
103.85	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	13.91	0.00	86.6	13.4	
		3/8"	5.30	0.00	81.5	18.5	
		#4	15.86	0.00	66.2	33.8	
		#10	7.29	0.00	59.2	40.8	
		#20	6.53	0.00	52.9	47.1	
		#40	5.05	0.00	48.1	51.9	
		#60	4.99	0.00	43.3	56.7	
		#140	12.80	0.00	30.9	69.1	
		#200	5.68	0.00	25.5	74.5	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 25.5  
 Weight of hydrometer sample = 44.68  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0075	1.0079	0.0131	7.5	14.3	0.0351	7.3	92.7
5.00	23.1	1.0060	1.0064	0.0131	6.0	14.7	0.0225	5.9	94.1
15.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0131	5.0	95.0
30.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0093	4.5	95.5
60.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0066	4.1	95.9
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	3.1	96.9
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	2.7	97.3

**Fractional Components**

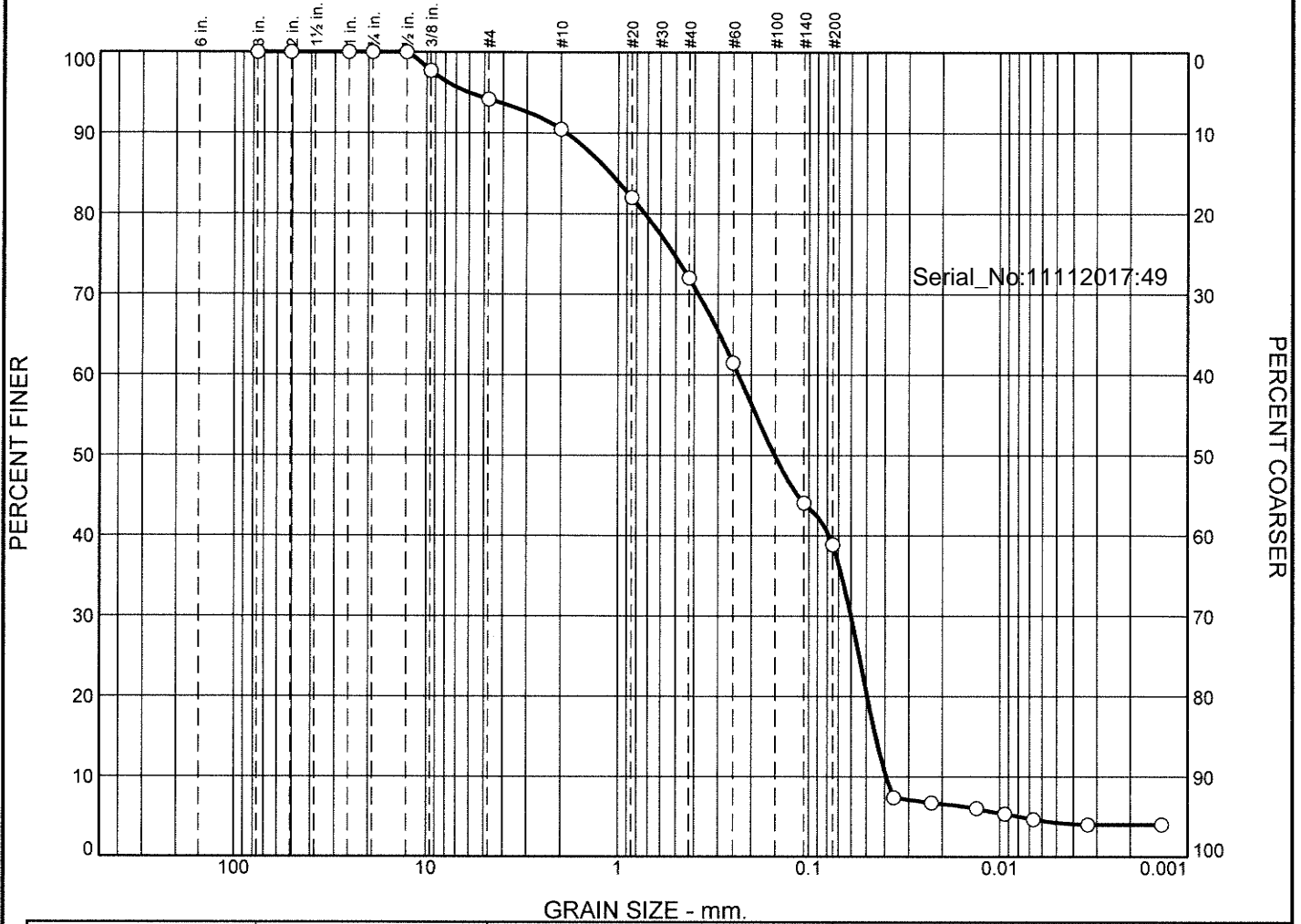
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	33.8	33.8	7.0	11.1	22.6	40.7	22.7	2.8	25.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0134	0.0412	0.0503	0.0602	0.0991	0.1950	0.5611	2.3705	8.7493	11.8839	14.0606	16.0174

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
3.05	57.56	0.10

Serial\_No:11112017:49

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	5.8	3.7	18.5	33.1	34.9	4.0

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		1.0969	0.2341	0.1511	0.0601	0.0446	0.0394	0.39	5.94

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

Project No.	Client:	Remarks:
Project:		
Source of Sample: SITE7@2 FEET	Sample Number: L2047819-02	
<b>Alpha Analytical</b>		Figure
Mansfield, MA		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE7@2 FEET

Sample Number: L2047819-02

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 70.96  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
70.96	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	0.00	0.00	100.0	0.0	
		3/8"	1.61	0.00	97.7	2.3	
		#4	2.52	0.00	94.2	5.8	
		#10	2.63	0.00	90.5	9.5	
		#20	6.01	0.00	82.0	18.0	
		#40	7.08	0.00	72.0	28.0	
		#60	7.47	0.00	61.5	38.5	
		#140	12.36	0.00	44.1	55.9	
		#200	3.69	0.00	38.9	61.1	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 38.9  
 Weight of hydrometer sample = 45.89  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0359	7.4	92.6
5.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0228	6.7	93.3
15.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0132	6.0	94.0
30.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0094	5.3	94.7
60.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0067	4.7	95.3
240.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0034	4.0	96.0
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	4.0	96.0

**Fractional Components**

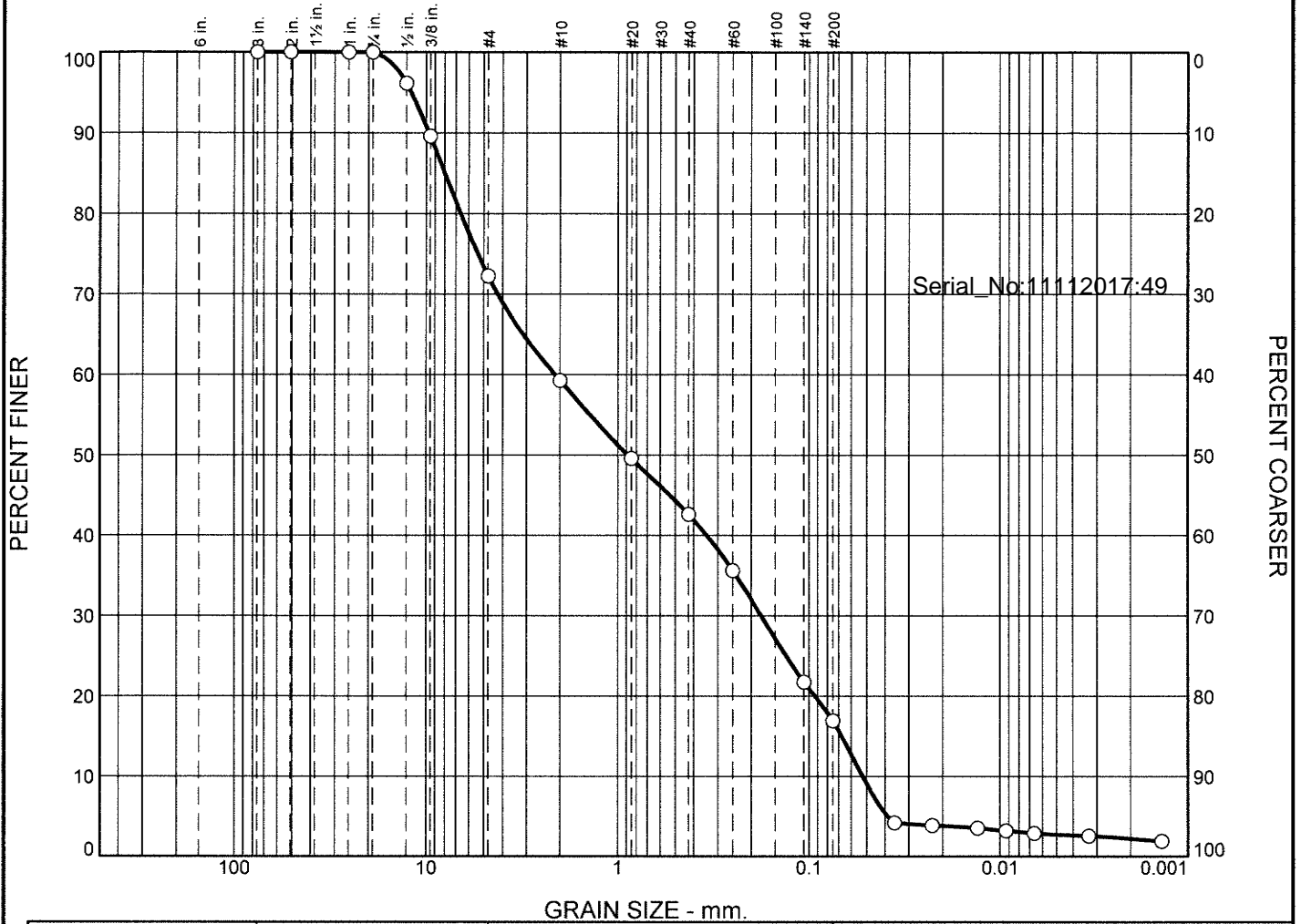
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	5.8	5.8	3.7	18.5	33.1	55.3	34.9	4.0	38.9

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0079	0.0394	0.0446	0.0494	0.0601	0.0783	0.1511	0.2341	0.7257	1.0969	1.8701	5.9922

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
1.38	5.94	0.39

Serial\_No:11112017:49

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	27.7	13.0	16.7	25.7	14.7	2.2

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
0		7.9853	2.1248	0.8864	0.1776	0.0674	0.0524	0.28	40.52

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

<b>Project No.</b>	<b>Client:</b>	<b>Remarks:</b>
<b>Project:</b>		
○ <b>Source of Sample:</b> SITE7@8 FEET	<b>Sample Number:</b> L2047819-03	
<b>Alpha Analytical</b>		<b>Figure</b>
<b>Mansfield, MA</b>		



**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE7@8 FEET

Sample Number: L2047819-03

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 94.31  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
94.31	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	3.61	0.00	96.2	3.8	
		3/8"	6.19	0.00	89.6	10.4	
		#4	16.35	0.00	72.3	27.7	
		#10	12.26	0.00	59.3	40.7	
		#20	9.15	0.00	49.6	50.4	
		#40	6.56	0.00	42.6	57.4	
		#60	6.58	0.00	35.6	64.4	
		#140	13.11	0.00	21.7	78.3	
		#200	4.56	0.00	16.9	83.1	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 16.9  
 Weight of hydrometer sample = 41.77  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0060	1.0064	0.0131	6.0	14.7	0.0356	4.2	95.8
5.00	23.1	1.0055	1.0059	0.0131	5.5	14.8	0.0226	3.9	96.1
15.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0131	3.5	96.5
30.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0093	3.2	96.8
60.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0066	2.9	97.1
240.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0033	2.6	97.4
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	1.9	98.1

**Fractional Components**

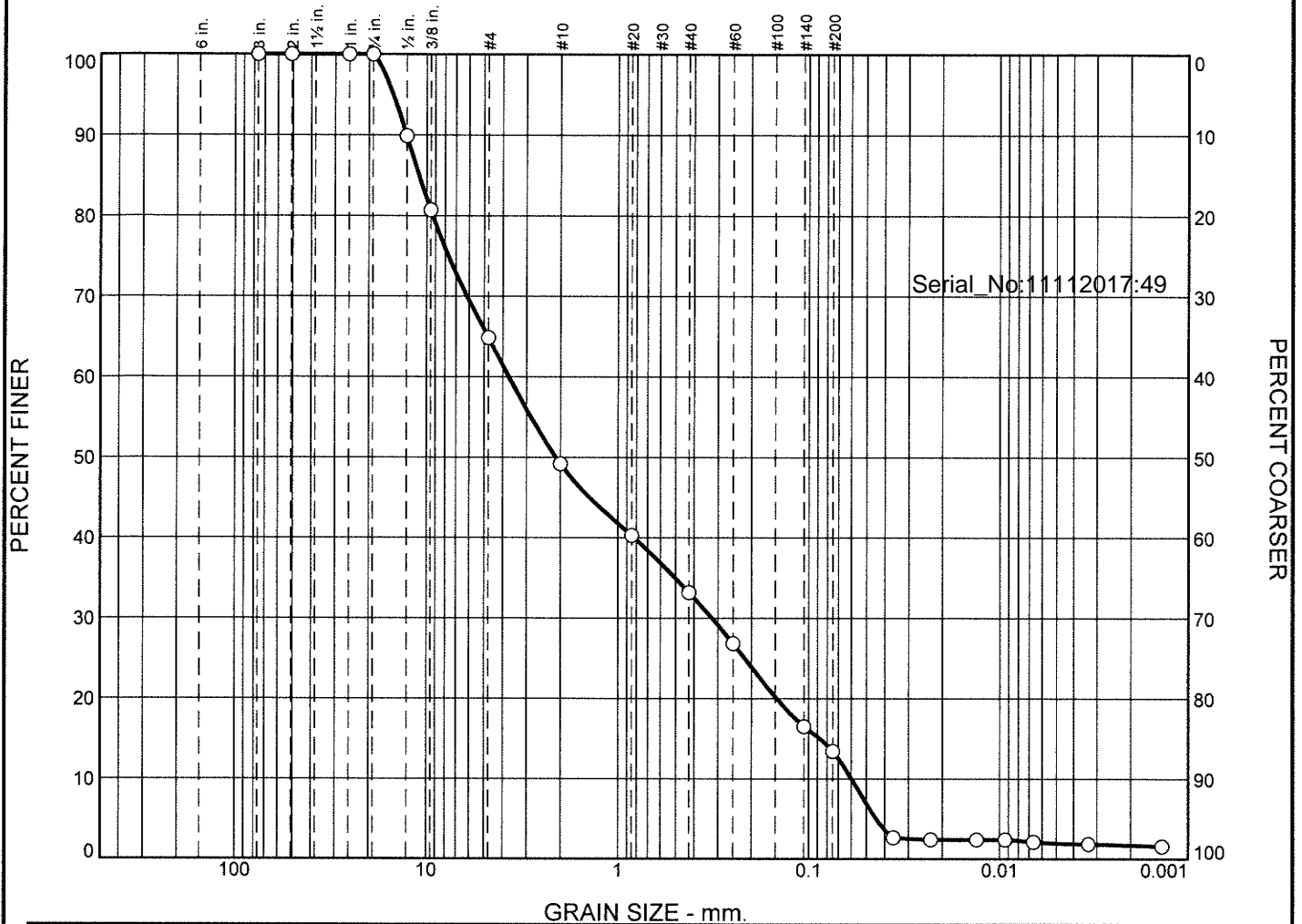
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	27.7	27.7	13.0	16.7	25.7	55.4	14.7	2.2	16.9

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0388	0.0524	0.0674	0.0930	0.1776	0.3412	0.8864	2.1248	6.5908	7.9853	9.6711	11.9494

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
3.12	40.52	0.28

Serial\_No:11112017:49

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	35.1	15.7	16.0	19.8	11.7	1.7

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		10.9418	3.7150	2.1131	0.3223	0.0877	0.0598	0.47	62.17

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

<b>Project No.</b>	<b>Client:</b>	<b>Remarks:</b>
<b>Project:</b>		
○ <b>Source of Sample:</b> SITE7@12 FEET	<b>Sample Number:</b> L2047819-04	
<b>Alpha Analytical</b>		<b>Figure</b>
<b>Mansfield, MA</b>		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE7@12 FEET  
 Sample Number: L2047819-04

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 62.74  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
62.74	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	6.34	0.00	89.9	10.1	
		3/8"	5.77	0.00	80.7	19.3	
		#4	9.94	0.00	64.9	35.1	
		#10	9.82	0.00	49.2	50.8	
		#20	5.58	0.00	40.3	59.7	
		#40	4.47	0.00	33.2	66.8	
		#60	3.97	0.00	26.9	73.1	
		#140	6.48	0.00	16.5	83.5	
		#200	1.94	0.00	13.4	86.6	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 13.4  
 Weight of hydrometer sample = 39.95  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0361	2.7	97.3
5.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0229	2.4	97.6
15.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0132	2.4	97.6
30.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0094	2.4	97.6
60.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0066	2.1	97.9
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	1.9	98.1
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	1.6	98.4

**Fractional Components**

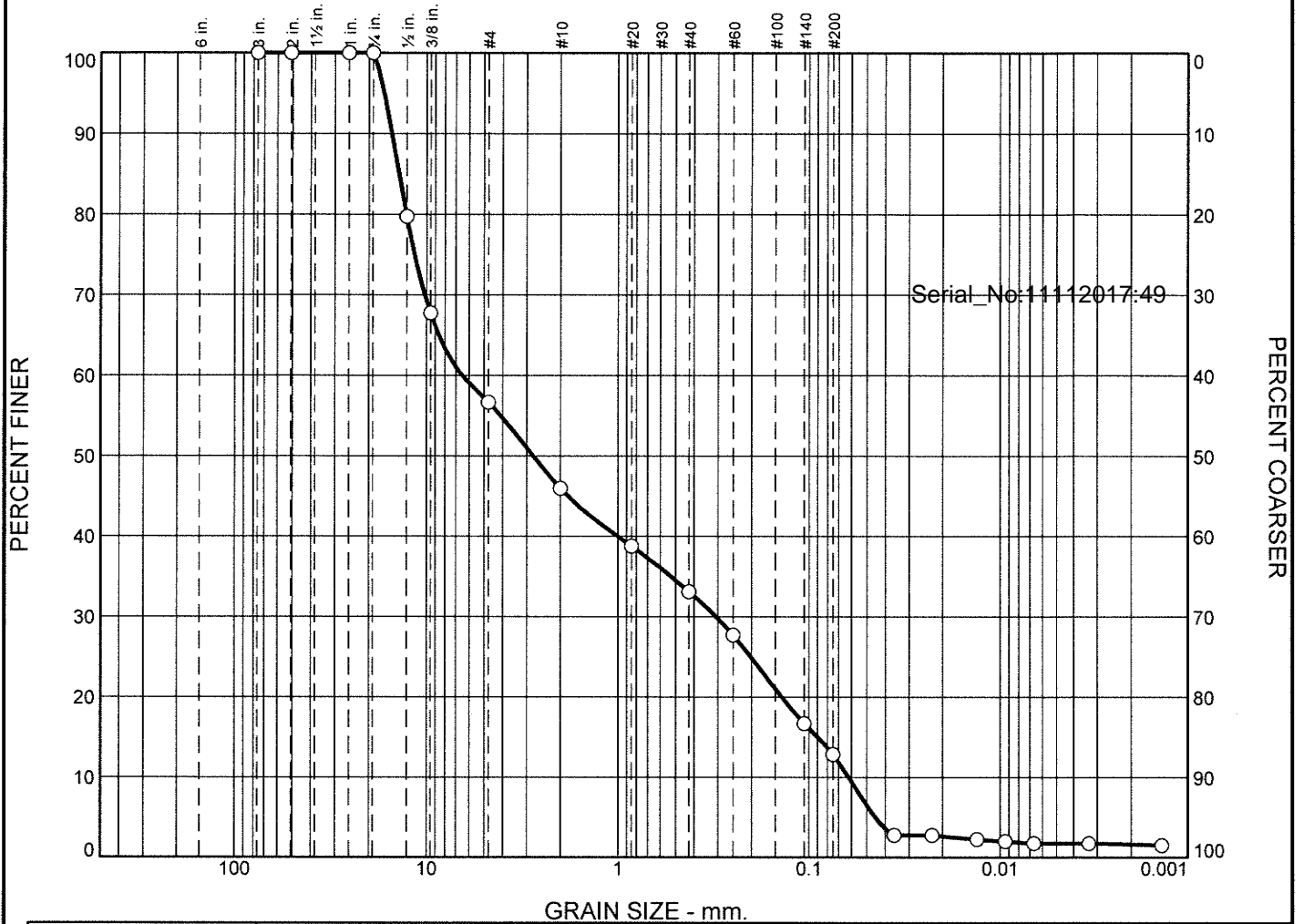
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	35.1	35.1	15.7	16.0	19.8	51.5	11.7	1.7	13.4

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0444	0.0598	0.0877	0.1474	0.3223	0.8222	2.1131	3.7150	9.2986	10.9418	12.7406	14.9371

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
3.73	62.17	0.47

Serial\_No:11112017:49

# Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines			
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay		
○	0.0	0.0	43.3	10.7	12.9	20.3	11.2	1.6		
⊗	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○			13.9265	6.4796	2.7788	0.3071	0.0903	0.0621	0.23	104.36

MATERIAL DESCRIPTION	TEST DATE	USCS	NM
○			

Project No.	Client:	Remarks:
Project:		
○ Source of Sample: SITE13@3 FEET	Sample Number: L2047819-05	
<b>Alpha Analytical</b>		
<b>Mansfield, MA</b>		<b>Figure</b>

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE13@3 FEET  
 Sample Number: L2047819-05

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 39.88  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
39.88	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	8.09	0.00	79.7	20.3	
		3/8"	4.77	0.00	67.8	32.2	
		#4	4.42	0.00	56.7	43.3	
		#10	4.27	0.00	46.0	54.0	
		#20	2.86	0.00	38.8	61.2	
		#40	2.26	0.00	33.1	66.9	
		#60	2.16	0.00	27.7	72.3	
		#140	4.39	0.00	16.7	83.3	
		#200	1.54	0.00	12.8	87.2	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 12.8  
 Weight of hydrometer sample = 40.68  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0359	2.8	97.2
5.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0227	2.8	97.2
15.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0132	2.2	97.8
30.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0094	2.0	98.0
60.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0067	1.7	98.3
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	1.7	98.3
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	1.5	98.5

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	43.3	43.3	10.7	12.9	20.3	43.9	11.2	1.6	12.8

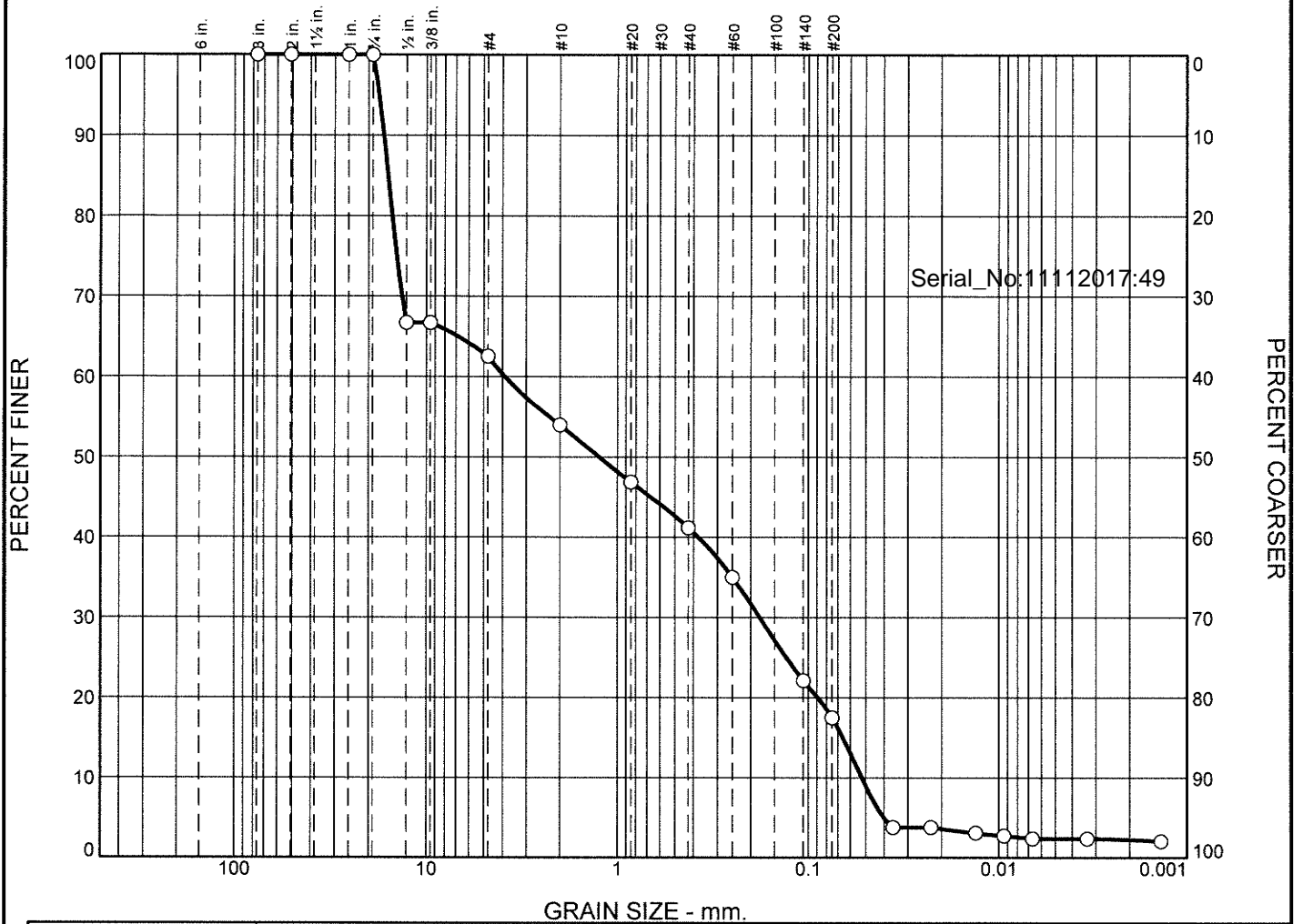
D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0451	0.0621	0.0903	0.1390	0.3071	1.0017	2.7788	6.4796	12.7670	13.9265	15.1576	16.6328

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
4.00	104.36	0.23

Serial\_No:11112017:49



# Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	37.5	8.5	12.8	23.7	15.3	2.2

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		15.8175	3.8908	1.2434	0.1797	0.0658	0.0524	0.16	74.29

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

Project No.	Client:	Remarks:
Project:		
○ Source of Sample: SITE13@3 FEET	Sample Number: WG1431353-1	
Alpha Analytical		Figure
Mansfield, MA		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE13@3 FEET  
 Sample Number: WG1431353-1

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 40.23  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
40.23	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	13.40	0.00	66.7	33.3	
		3/8"	0.00	0.00	66.7	33.3	
		#4	1.67	0.00	62.5	37.5	
		#10	3.45	0.00	54.0	46.0	
		#20	2.85	0.00	46.9	53.1	
		#40	2.29	0.00	41.2	58.8	
		#60	2.48	0.00	35.0	65.0	
		#140	5.19	0.00	22.1	77.9	
		#200	1.86	0.00	17.5	82.5	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 17.5  
 Weight of hydrometer sample = 40.42  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0359	3.8	96.2
5.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0227	3.8	96.2
15.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0132	3.1	96.9
30.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0094	2.7	97.3
60.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0067	2.4	97.6
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	2.4	97.6
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	2.0	98.0

**Fractional Components**

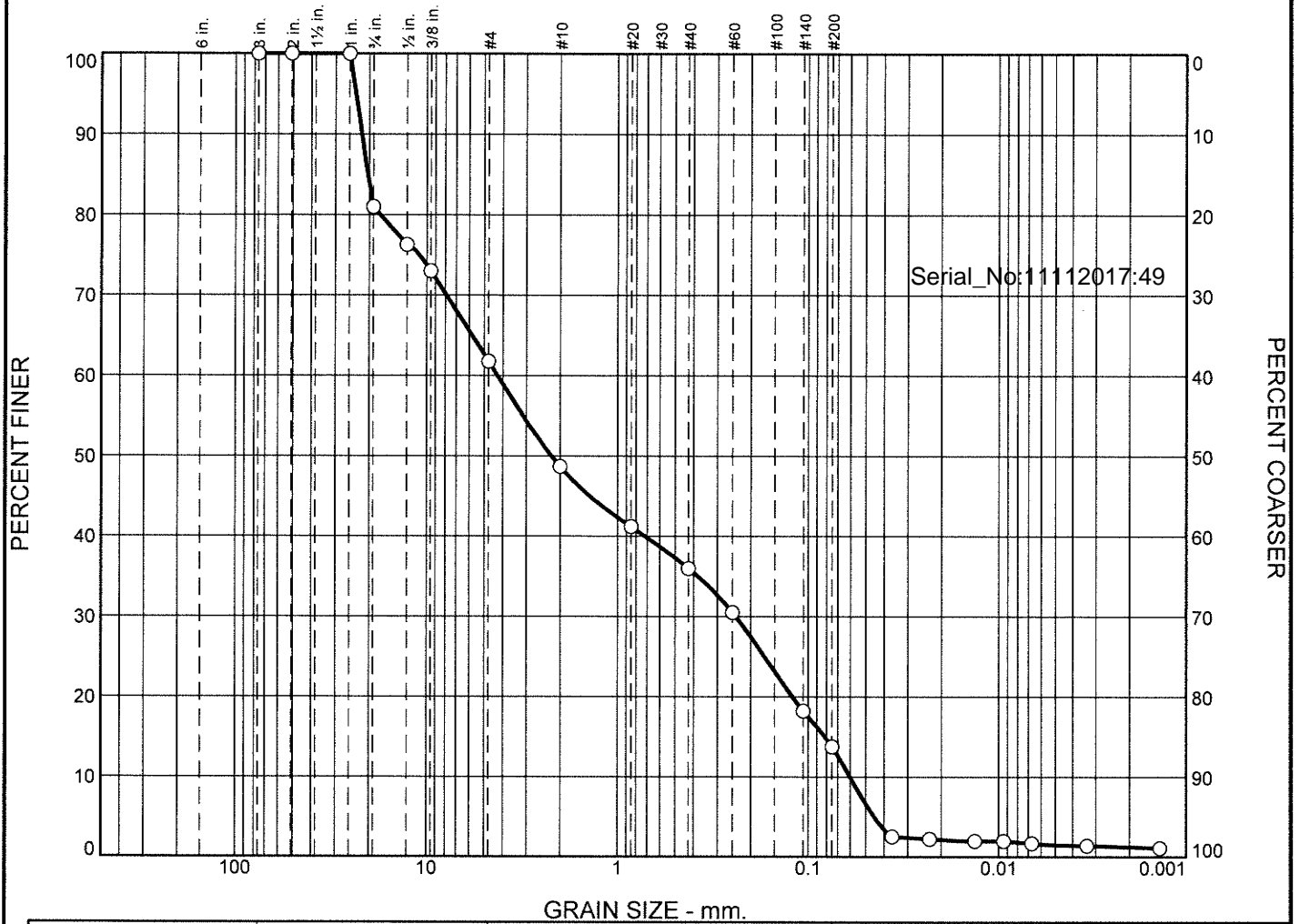
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	37.5	37.5	8.5	12.8	23.7	45.0	15.3	2.2	17.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0401	0.0524	0.0658	0.0892	0.1797	0.3771	1.2434	3.8908	15.0437	15.8175	16.6501	17.6279

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
3.57	74.29	0.16

Serial\_No:11112017:49

# Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	19.0	19.2	13.1	12.7	22.2	12.6	1.2

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		20.4052	4.2629	2.2211	0.2402	0.0819	0.0602	0.22	70.78

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

Project No.	Client:	Remarks:
Project:		
Source of Sample: SITE13@9 FEET	Sample Number: L2047819-06	
Alpha Analytical		Figure
Mansfield, MA		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

**Location:** SITE13@9 FEET  
**Sample Number:** L2047819-06

**Sieve Test Data**

**Post #200 Wash Test Weights (grams):** Dry Sample and Tare = 81.72  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
81.72	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	15.52	0.00	81.0	19.0	
		0.5"	3.86	0.00	76.3	23.7	
		3/8"	2.68	0.00	73.0	27.0	
		#4	9.17	0.00	61.8	38.2	
		#10	10.71	0.00	48.7	51.3	
		#20	6.11	0.00	41.2	58.8	
		#40	4.25	0.00	36.0	64.0	
		#60	4.48	0.00	30.5	69.5	
		#140	10.05	0.00	18.2	81.8	
		#200	3.65	0.00	13.8	86.2	

**Hydrometer Test Data**

**Hydrometer test uses material passing #200**  
**Percent passing #200 based upon complete sample = 13.8**  
**Weight of hydrometer sample = 38.77**  
**Automatic temperature correction**  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0363	2.5	97.5
5.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0230	2.2	97.8
15.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0134	2.0	98.0
30.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0094	2.0	98.0
60.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0067	1.7	98.3
240.00	23.1	1.0020	1.0024	0.0131	2.0	15.8	0.0034	1.4	98.6
1440.00	23.1	1.0015	1.0019	0.0131	1.5	15.9	0.0014	1.1	98.9

**Fractional Components**

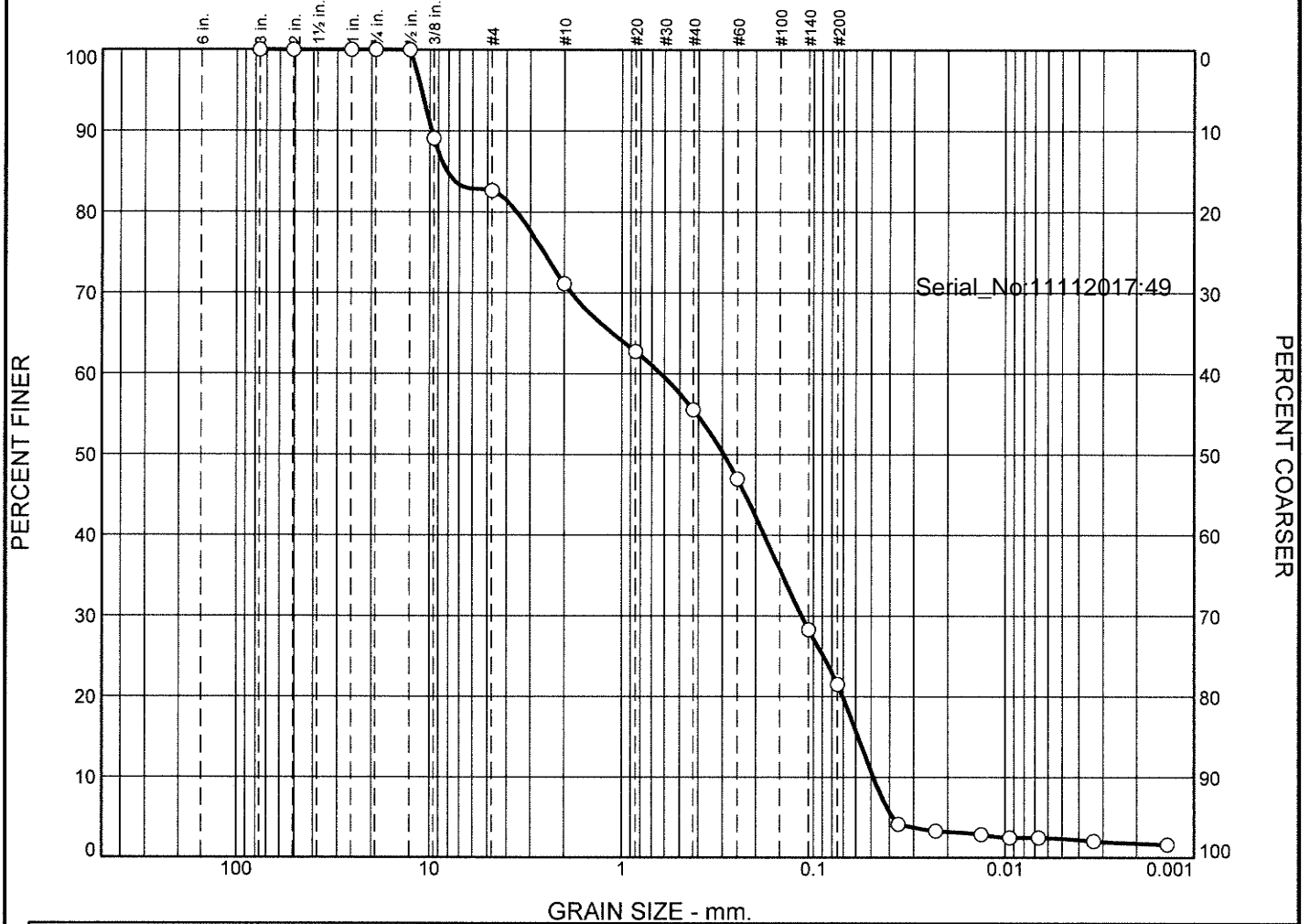
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	19.0	19.2	38.2	13.1	12.7	22.2	48.0	12.6	1.2	13.8

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0451	0.0602	0.0819	0.1210	0.2402	0.7167	2.2211	4.2629	17.4853	20.4052	21.9084	23.4738

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
3.95	70.78	0.22

Serial\_No:11112017:49

# Particle Size Distribution Report



GRAIN SIZE - mm.									
% +3"	% Gravel		% Sand			% Fines			
	Coarse	Fine	Coarse	Medium	Fine	Silt		Clay	
0.0	0.0	17.4	11.5	15.6	34.0	19.7		1.8	
LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
0	0	8.1249	0.6276	0.2943	0.1155	0.0585	0.0487	0.44	12.89

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

<b>Project No.</b> <b>Project:</b>	<b>Client:</b>  <b>Source of Sample:</b> SITE13@12 FEET <b>Sample Number:</b> L2047819-07	<b>Remarks:</b>  <div style="text-align: right;"><b>Figure</b></div>
<b>Alpha Analytical</b>  <b>Mansfield, MA</b>		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE13@12 FEET

Sample Number: L2047819-07

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 43.08  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
43.08	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	0.00	0.00	100.0	0.0	
		3/8"	4.70	0.00	89.1	10.9	
		#4	2.78	0.00	82.6	17.4	
		#10	4.95	0.00	71.1	28.9	
		#20	3.61	0.00	62.8	37.2	
		#40	3.11	0.00	55.5	44.5	
		#60	3.69	0.00	47.0	53.0	
		#140	8.05	0.00	28.3	71.7	
		#200	2.92	0.00	21.5	78.5	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 21.5  
 Weight of hydrometer sample = 41.17  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0361	4.1	95.9
5.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0230	3.3	96.7
15.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0134	2.9	97.1
30.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0095	2.5	97.5
60.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0067	2.5	97.5
240.00	23.1	1.0020	1.0024	0.0131	2.0	15.8	0.0034	2.0	98.0
1440.00	23.1	1.0015	1.0019	0.0131	1.5	15.9	0.0014	1.6	98.4



**Fractional Components**

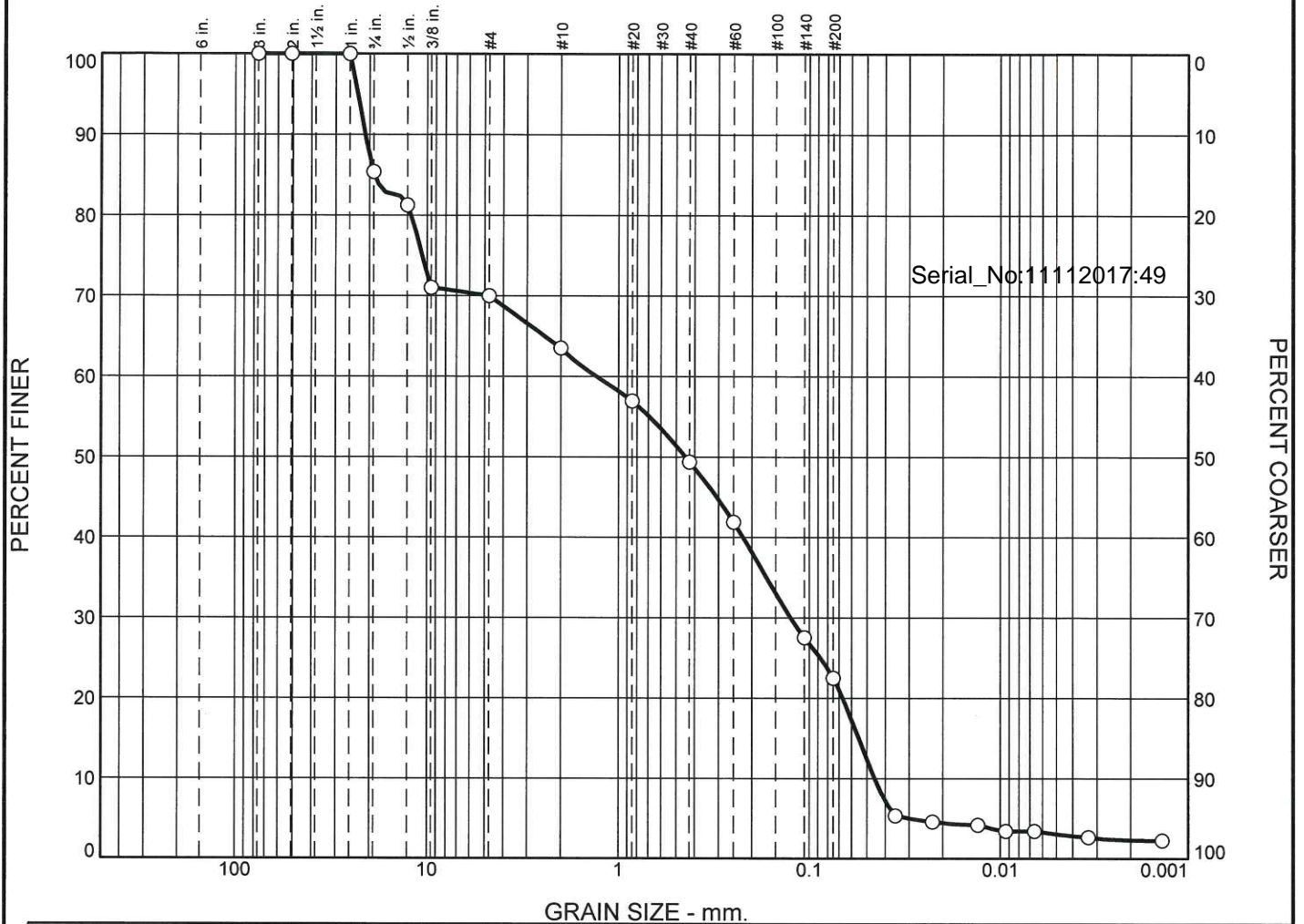
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	17.4	17.4	11.5	15.6	34.0	61.1	19.7	1.8	21.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0385	0.0487	0.0585	0.0704	0.1155	0.1808	0.2943	0.6276	3.5314	8.1249	9.7636	11.0130

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
2.44	12.89	0.44

Serial\_No:11112017:49

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	14.6	15.4	6.5	14.1	26.9	20.2	2.3

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		18.8297	1.3049	0.4464	0.1253	0.0552	0.0455	0.26	28.66

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

<b>Project No.</b>	<b>Client:</b>	<b>Remarks:</b>
<b>Project:</b>		
○ <b>Source of Sample:</b> SITE21@3 FEET	<b>Sample Number:</b> L2047819-08	
<b>Alpha Analytical</b>		<b>Figure</b>
<b>Mansfield, MA</b>		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE21@3 FEET  
 Sample Number: L2047819-08

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 68.65  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
68.65	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	10.04	0.00	85.4	14.6	
		0.5"	2.84	0.00	81.2	18.8	
		3/8"	7.00	0.00	71.0	29.0	
		#4	0.70	0.00	70.0	30.0	
		#10	4.47	0.00	63.5	36.5	
		#20	4.51	0.00	56.9	43.1	
		#40	5.19	0.00	49.4	50.6	
		#60	5.13	0.00	41.9	58.1	
		#140	9.87	0.00	27.5	72.5	
		#200	3.45	0.00	22.5	77.5	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 22.5  
 Weight of hydrometer sample = 46.8  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0065	1.0069	0.0131	6.5	14.6	0.0355	5.4	94.6
5.00	23.1	1.0055	1.0059	0.0131	5.5	14.8	0.0226	4.6	95.4
15.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0131	4.2	95.8
30.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0094	3.4	96.6
60.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0066	3.4	96.6
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	2.6	97.4
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	2.3	97.7

**Fractional Components**

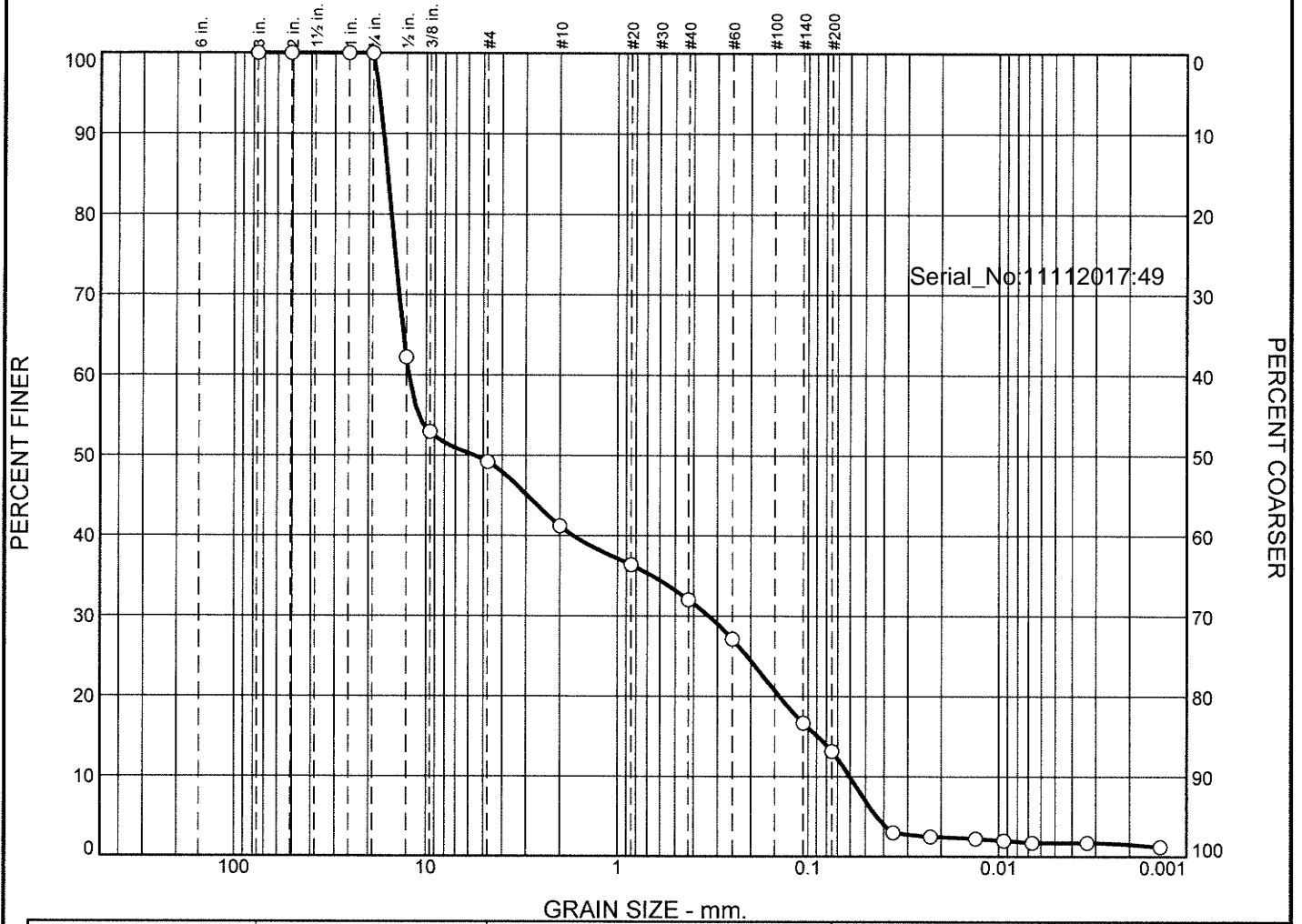
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	14.6	15.4	30.0	6.5	14.1	26.9	47.5	20.2	2.3	22.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0298	0.0455	0.0552	0.0669	0.1253	0.2230	0.4464	1.3049	12.1111	18.8297	21.0894	23.0428

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
3.18	28.66	0.26

Serial\_No:11112017:49

# Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	50.8	8.0	9.2	18.9	11.6	1.5

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		15.9307	12.2883	5.5814	0.3321	0.0891	0.0604	0.15	203.41

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

Project No.	Client:	Remarks:
Project:		
Source of Sample: SITE21@9 FEET	Sample Number: L2047819-09	
Alpha Analytical		Figure
Mansfield, MA		

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE21@9 FEET  
 Sample Number: L2047819-09

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 92.74  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
92.74	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	35.05	0.00	62.2	37.8	
		3/8"	8.61	0.00	52.9	47.1	
		#4	3.46	0.00	49.2	50.8	
		#10	7.40	0.00	41.2	58.8	
		#20	4.48	0.00	36.4	63.6	
		#40	4.02	0.00	32.0	68.0	
		#60	4.56	0.00	27.1	72.9	
		#140	9.71	0.00	16.7	83.3	
		#200	3.26	0.00	13.1	86.9	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 13.1  
 Weight of hydrometer sample = 41.93  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0055	1.0059	0.0131	5.5	14.8	0.0358	3.0	97.0
5.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0228	2.5	97.5
15.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0132	2.2	97.8
30.00	23.1	1.0035	1.0039	0.0131	3.5	15.4	0.0094	2.0	98.0
60.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0067	1.7	98.3
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	1.7	98.3
1440.00	23.1	1.0020	1.0024	0.0131	2.0	15.8	0.0014	1.2	98.8

**Fractional Components**

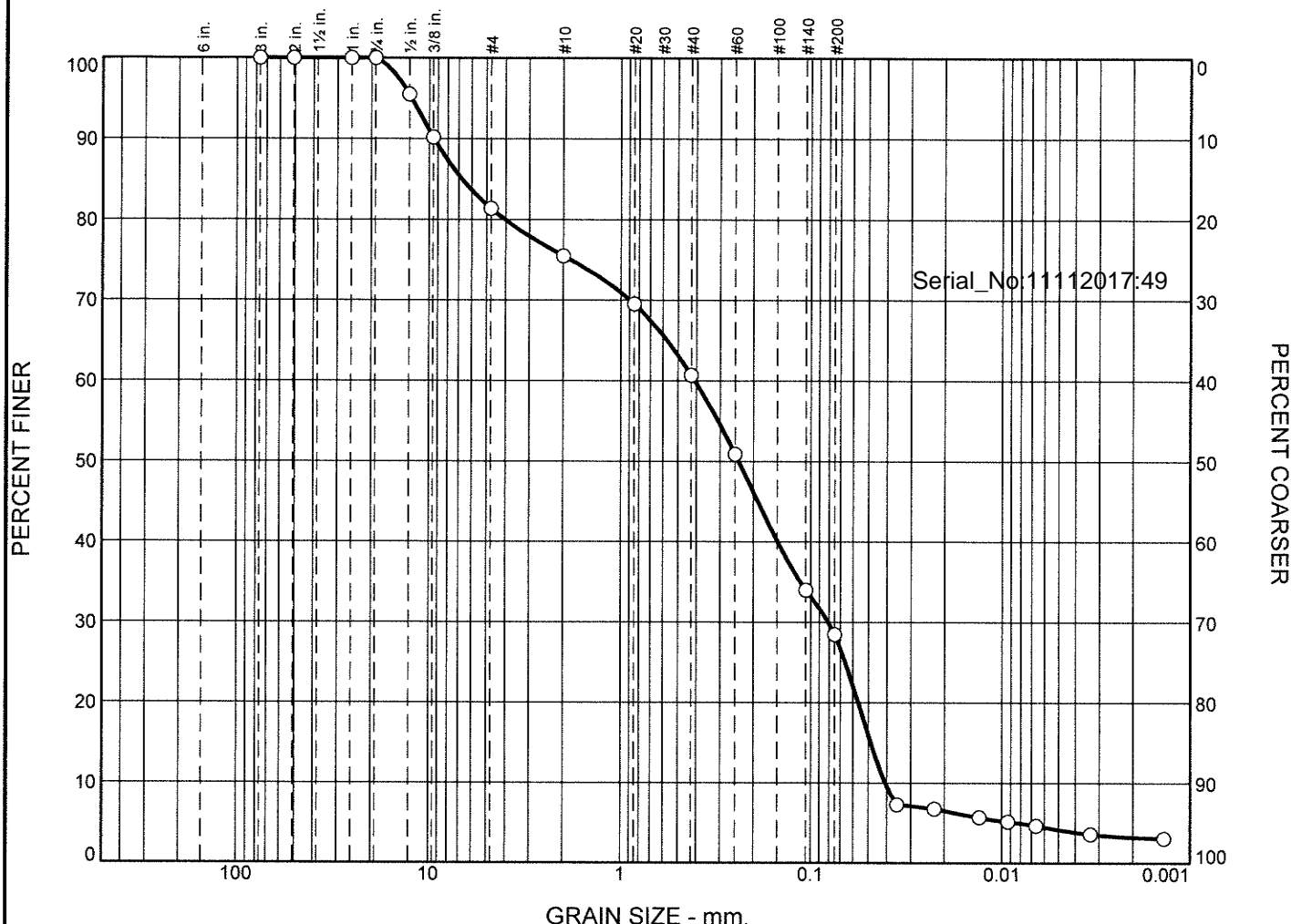
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	50.8	50.8	8.0	9.2	18.9	36.1	11.6	1.5	13.1

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0436	0.0604	0.0891	0.1418	0.3321	1.7033	5.5814	12.2883	15.2176	15.9307	16.7197	17.6636

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
4.33	203.41	0.15

Serial\_No:11112017:49

# Particle Size Distribution Report



GRAIN SIZE - mm.

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	18.6	5.9	14.8	32.2	25.3	3.2

LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
		6.7353	0.4073	0.2393	0.0809	0.0485	0.0408	0.39	9.97

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

Project No.	Client:	Remarks:
Project:		
Source of Sample: SITE21@13 FEET	Sample Number: L2047819-12	
Alpha Analytical		Figure
Mansfield, MA		



**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE21@13 FEET  
 Sample Number: L2047819-12

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 65.33  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
65.33	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	0.00	0.00	100.0	0.0	
		0.5"	2.93	0.00	95.5	4.5	
		3/8"	3.49	0.00	90.2	9.8	
		#4	5.75	0.00	81.4	18.6	
		#10	3.84	0.00	75.5	24.5	
		#20	3.90	0.00	69.5	30.5	
		#40	5.77	0.00	60.7	39.3	
		#60	6.39	0.00	50.9	49.1	
		#140	11.06	0.00	34.0	66.0	
		#200	3.60	0.00	28.5	71.5	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 28.5  
 Weight of hydrometer sample = 43.57  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0065	1.0069	0.0131	6.5	14.6	0.0355	7.3	92.7
5.00	23.1	1.0060	1.0064	0.0131	6.0	14.7	0.0225	6.7	93.3
15.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0131	5.7	94.3
30.00	23.1	1.0045	1.0049	0.0131	4.5	15.1	0.0093	5.2	94.8
60.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0066	4.6	95.4
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	3.6	96.4
1440.00	23.1	1.0025	1.0029	0.0131	2.5	15.6	0.0014	3.1	96.9

**Fractional Components**

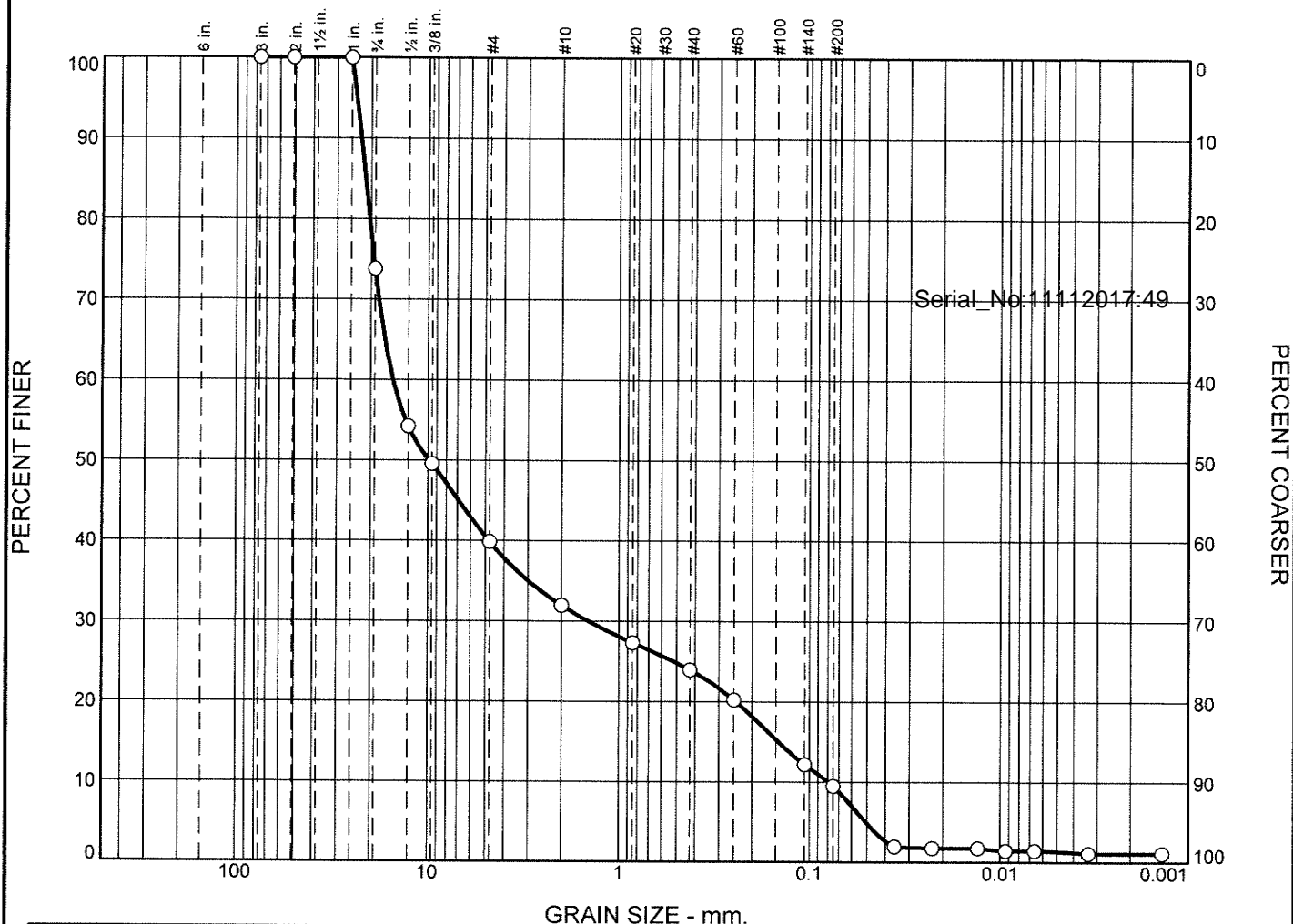
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	18.6	18.6	5.9	14.8	32.2	52.9	25.3	3.2	28.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0082	0.0408	0.0485	0.0564	0.0809	0.1492	0.2393	0.4073	4.0253	6.7353	9.4329	12.3318

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
2.19	9.97	0.39

Serial\_No:11112017:49

# Particle Size Distribution Report



GRAIN SIZE - mm.										
% +3"	% Gravel		% Sand			% Fines				
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay			
0.0	26.2	33.9	7.9	8.1	14.4	8.4	1.1			
LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>	
		21.4434	15.2552	9.8415	1.4479	0.1458	0.0795	1.73	191.79	

MATERIAL DESCRIPTION	TEST DATE	USCS	NM

<p><b>Project No.</b>                      <b>Client:</b></p> <p><b>Project:</b></p> <p>○ <b>Source of Sample:</b> SITE4@4 FEET                      <b>Sample Number:</b> L2047819-13</p>	<p><b>Remarks:</b></p>
<p><b>Alpha Analytical</b></p> <p><b>Mansfield, MA</b></p>	<p><b>Figure</b></p>

**GRAIN SIZE DISTRIBUTION TEST DATA**

11/11/2020

Location: SITE4@4 FEET

Sample Number: L2047819-13

**Sieve Test Data**

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 119.02  
 Tare Wt. = 0.00  
 Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained	Serial_No:11112017:49
119.02	0.00	3"	0.00	0.00	100.0	0.0	
		2"	0.00	0.00	100.0	0.0	
		1"	0.00	0.00	100.0	0.0	
		0.75"	31.15	0.00	73.8	26.2	
		0.5"	23.34	0.00	54.2	45.8	
		3/8"	5.54	0.00	49.6	50.4	
		#4	11.56	0.00	39.9	60.1	
		#10	9.39	0.00	32.0	68.0	
		#20	5.52	0.00	27.3	72.7	
		#40	4.02	0.00	23.9	76.1	
		#60	4.43	0.00	20.2	79.8	
		#140	9.60	0.00	12.2	87.8	
		#200	3.19	0.00	9.5	90.5	

**Hydrometer Test Data**

Hydrometer test uses material passing #200  
 Percent passing #200 based upon complete sample = 9.5  
 Weight of hydrometer sample = 46.94  
 Automatic temperature correction  
 Composite correction (fluid density and meniscus height) at 20 deg. C = 0  
 Meniscus correction only = 0.0  
 Specific gravity of solids = 2.65  
 Hydrometer type = 151H  
 Hydrometer effective depth equation:  $L = 16.294964 - 0.2645 \times R_m$

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	23.1	1.0055	1.0059	0.0131	5.5	14.8	0.0358	1.9	98.1
5.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0227	1.8	98.2
15.00	23.1	1.0050	1.0054	0.0131	5.0	15.0	0.0131	1.8	98.2
30.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0094	1.4	98.6
60.00	23.1	1.0040	1.0044	0.0131	4.0	15.2	0.0066	1.4	98.6
240.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0033	1.1	98.9
1440.00	23.1	1.0030	1.0034	0.0131	3.0	15.5	0.0014	1.1	98.9

**Fractional Components**

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	26.2	33.9	60.1	7.9	8.1	14.4	30.4	8.4	1.1	9.5

D <sub>5</sub>	D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>40</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.0506	0.0795	0.1458	0.2437	1.4479	4.8069	9.8415	15.2552	20.3779	21.4434	22.5681	23.8305

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
5.12	191.79	1.73

Serial\_No:11112017:49

## Certification Information

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The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

**SM 2540D:** TSS

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**EPA TO-12** Non-methane organics

**EPA 3C** Fixed gases

**Biological Tissue Matrix:** EPA 3050B

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The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

**EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

**EPA 522.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

**EPA 245.1** Hg.

**SM2340B**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.



# CHAIN OF CUSTODY

PAGE 1 OF 2

Westborough, MA Mansfield, MA  
TEL: 508-898-9220 TEL: 508-822-9300  
FAX: 508-898-9193 FAX: 508-822-3268

### Client Information

Client: Lombardo Associates, Inc.  
Address: 188 Church Street  
Newton, MA 02458  
Phone:  
Fax: 617-332-5477  
Email: pio@LombardoAssociates.com

### Project Information

Project Name: Old Pound Road - Scotts Corner  
Project Location: Pound Ridge, NY  
Project #:  
Project Manager: Pio Lombardo  
ALPHA Quote #:

### Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)  
Due Date: Time:

Date Rec'd in Lab: 11/2/20 ALPHA Job #: L2047819

**Report Information Data Deliverables**  
 FAX  EMAIL  
 ADEx  Add'l Deliverables

**Billing Information**  
 Same as Client info PO #:

**Regulatory Requirements/Report Limits**  
State/Fed Program Criteria

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

### ANALYSIS

Sieve with Hydrometer Analysis																				

**TOTAL # BOTTLES**  
SAMPLE HANDLING  
Filtration  
 Done  
 Not Needed  
 Lab to do  
Preservation  
 Lab to do  
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials															
		Date	Time																	
47819-01	Site # 4 @ 7 feet	10-28-20	10:00	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02	Site # 4 @ 7 feet	10-28-20	10:00	Soil	Soil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
03	Site # 7 @ 2 feet	10-28-20	10:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
04	Site # 7 @ 8 feet	10-28-20	10:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
05	Site # 7 @ 12 feet	10-28-20	10:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06	Site # 13 @ 3 feet	10-28-20	13:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07	Site # 13 @ 9 feet	10-28-20	13:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
08	Site # 13 @ 12 feet	10-28-20	13:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09	Site # 21 @ 3 feet	10-28-20	14:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Site # 21 @ 9 feet	10-28-20	14:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Container Type - - - - -  
Preservative - - - - -

Relinquished By: <i>[Signature]</i>	Date/Time: 11-2-20	Received By: <i>[Signature]</i>	Date/Time: 11/2/20 1245
<i>[Signature]</i>	11/2/20 1520	<i>[Signature]</i>	11/2/20 2000
<i>[Signature]</i>	11/2/20 2043	<i>[Signature]</i>	11/2/20 2045

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



# CHAIN OF CUSTODY

PAGE 2 OF 2

## Project Information

Project Name: Old Pound Road - Scotts Corner

Project Location: Pound Ridge, NY

Project #:

Project Manager: Pio Lombardo

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA    Mansfield, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

## Client Information

Client: Lombardo Associates, Inc.

Address: 188 Church Street

Newton, MA 02458

Phone:

Fax: 617-332-5477

Email: pio@LombardoAssociates.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 11/2/20

ALPHA Job #: L2047819

## Report Information Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

## Billing Information

Same as Client info    PO #:

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria

## ANALYSIS

Sieve with Hydrometer Analysis

**SAMPLE HANDLING**  
**Filtration**  
 Done  
 Not Needed  
 Lab to do  
**Preservation**  
 Lab to do  
 (Please specify below)

**TOTAL # BOTTLES**

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Analysis Columns										Comments				
		Date	Time			1	2	3	4	5	6	7	8	9	10					
11	Site # 21 @ 12 feet	10-28-20	14:30	Soil	PSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Container Type	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-

Relinquished By: *[Signature]* Date/Time: 11-2-20 11:00 AM  
 Received By: *[Signature]* Date/Time: 11/2/20 12:40 PM  
*[Signature]* Date/Time: 11/2/20 2:00 PM  
*[Signature]* Date/Time: 11/2/20 3:47 PM

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## Pio Lombardo

---

**To:** Dave Sanford  
**Subject:** RE: FW: Laboratory Results for L2047819 Project No: NA Project Name: OLD POUND ROAD-SCOTTS CORNER

Hi Pio,

The sample on page 40 is the laboratory batch duplicate which is a duplicate of your #13-3 sample. You will notice that it has very similar results.

Thanks  
Dave

On Mon, Nov 16, 2020 at 3:14 PM Dave Sanford <[dsanford@alphalab.com](mailto:dsanford@alphalab.com)> wrote:

Hi Pio,

I am checking with the lab on this and will get back to you as soon as I hear back from them

Thanks  
Dave

On Fri, Nov 13, 2020 at 3:55 PM Pio Lombardo <[pio@lombardoassociates.com](mailto:pio@lombardoassociates.com)> wrote:

Look at pages 37 & 40

Pio

---

**From:** Dave Sanford <[dsanford@alphalab.com](mailto:dsanford@alphalab.com)>  
**Sent:** Friday, November 13, 2020 3:19 PM  
**To:** Pio Lombardo <[pio@lombardoassociates.com](mailto:pio@lombardoassociates.com)>  
**Subject:** Re: FW: Laboratory Results for L2047819 Project No: NA Project Name: OLD POUND ROAD-SCOTTS CORNER

Hi Pio,

The only #13 at 3' that I see is sample -05.

Thanks

Dave

On Fri, Nov 13, 2020 at 3:14 PM Pio Lombardo <[pio@lombardoassociates.com](mailto:pio@lombardoassociates.com)> wrote:

Dave

There are 2 sieves for Boring # 13 at 3 feet

Which one is the correct one?

Regards,

Pio

**LOMBARDO ASSOCIATES, INC.**

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