



Client: Menzel Lake Gravel
Address: P.O. Box 1494
Marysville, WA 98270
Attn: Rob Hild
Revised On: _____

Date: July 1, 2025
Project: Q.C. - Menzel Lake Gravel - 2025
Project #: 25B026
Sample #: B25-0398
Date sampled: June 27, 2025
Control No: 7012025

As requested and authorized by the Client, MTC has performed the following test(s) on the sample number referenced above. The testing was performed in accordance with current, applicable AASHTO, ASTM, and/or WSDOT standards, which are referenced on the correlating test report pages. The results obtained in our laboratory are as detailed below and/or on the following pages:

	Test(s) Performed:	Test Results	Test(s) Performed:	Test Results
X	Sieve Analysis	See Attached Report	Sulfate Soundness	
	Proctor		Bulk Density & Voids	
X	Sand Equivalent	See Attached Report	WSDOT Degradation	
	Fracture Count		LA Abrasion	
	Moisture Content		Cation Exchange Capacity	
	Specific Gravity, Coarse			
	Specific Gravity, Fine			
	Hydrometer Analysis			
	Atterberg Limits			

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call the number below and ask to speak with your Project Manager or the Laboratory Manager.

Alex Eifrig

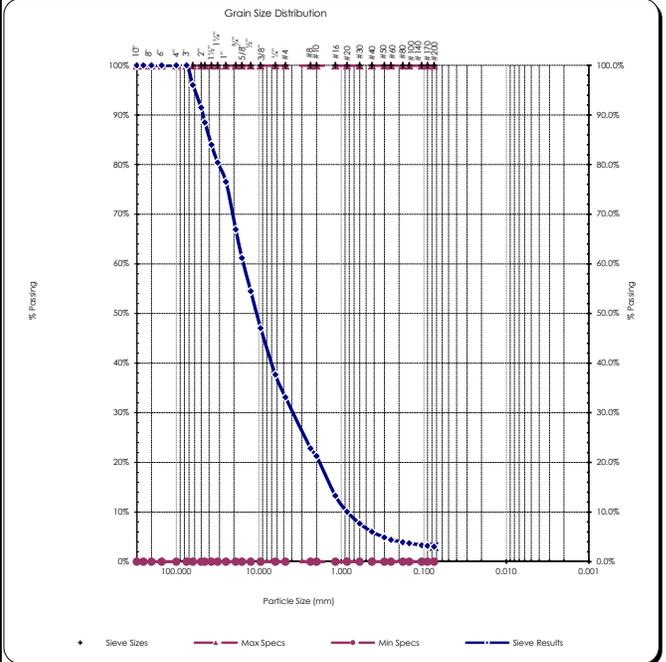
Respectfully Submitted,
 Alex Eifrig
 WABO Supervising Laboratory Technician

Sieve Report

Project: Q.C. - Menzel Lake Gravel - 2025 Project #: 25B026 Client: Menzel Lake Gravel Source: Menzel Lake Gravel Pit / 4" minus pit run material Sample#: B25-0398	Date Received: 27-Jun-25 Sampled By: Client Date Tested: 30-Jun-25 Tested By: Z. Romney Control No.: 7012025	Unified Soil Classification System, ASTM D-2487 GW, Well-graded Gravel with Sand Sample Color: Brown
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Method(s) ASTM D-2216, ASTM D-2419, ASTM D-4318, ASTM D-5281			
Specifications No Specs Sample Meets Specs ? <i>N/A</i>	$D_{15} = 0.312$ mm $D_{10} = 0.843$ mm $D_{15} = 1.355$ mm $D_{30} = 4.023$ mm $D_{50} = 10.682$ mm $D_{60} = 15.382$ mm $D_{90} = 47.541$ mm Dust Ratio = 34/67	% Gravel = 66.9% % Sand = 30.1% % Silt & Clay = 3.1% Liquid Limit = n/a Plasticity Index = n/a Sand Equivalent = 35 Fracture %, 1 Face = n/a Fracture %, 2+ Faces = n/a	Coeff. of Curvature, $C_c = 1.25$ Coeff. of Uniformity, $C_u = 18.25$ Fineness Modulus = 6.09 Plastic Limit = n/a Moisture %, as sampled = n/a Req'd Sand Equivalent = n/a Req'd Fracture %, 1 Face = n/a Req'd Fracture %, 2+ Faces = n/a

Method(s) ASTM C-136, ASTM D-6913, ASTM C-117					
Sieve Size		Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
US	Metric				
12.00"	300.00		100%	100.0%	0.0%
10.00"	250.00		100%	100.0%	0.0%
8.00"	200.00		100%	100.0%	0.0%
6.00"	150.00		100%	100.0%	0.0%
4.00"	100.00	100%	100%	100.0%	0.0%
3.00"	75.00	100%	100%	100.0%	0.0%
2.50"	63.00	96%	96%	100.0%	0.0%
2.00"	50.00	91%	91%	100.0%	0.0%
1.75"	45.00		88%	100.0%	0.0%
1.50"	37.50		84%	100.0%	0.0%
1.25"	31.50		80%	100.0%	0.0%
1.00"	25.00	77%	77%	100.0%	0.0%
3/4"	19.00	67%	67%	100.0%	0.0%
5/8"	16.00		61%	100.0%	0.0%
1/2"	12.50	54%	54%	100.0%	0.0%
3/8"	9.50	47%	47%	100.0%	0.0%
1/4"	6.30		38%	100.0%	0.0%
#4	4.75	33.1%	33%	100.0%	0.0%
#8	2.36		23%	100.0%	0.0%
#10	2.00	21.3%	21%	100.0%	0.0%
#16	1.18		13%	100.0%	0.0%
#20	0.850	10.1%	10%	100.0%	0.0%
#30	0.600		8%	100.0%	0.0%
#40	0.425	6.0%	6%	100.0%	0.0%
#50	0.300		5%	100.0%	0.0%
#60	0.250	4.4%	4%	100.0%	0.0%
#80	0.180		4%	100.0%	0.0%
#100	0.150	3.7%	4%	100.0%	0.0%
#140	0.106		3%	100.0%	0.0%
#170	0.090		3%	100.0%	0.0%
#200	0.075	3.1%	3.1%	100.0%	0.0%



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 All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Comments: _____

Reviewed by: Alex Eifrig
 Alex Eifrig
 WABO Supervising Laboratory Technician



Sand Equivalent Report

Project: Q.C. - Menzel Lake Gravel - 2025 Project #: 25B026 Client : Menzel Lake Gravel Source: Menzel Lake Gravel Pit / 4" minus pit run material Sample#: B25-0398	Date Received: 27-Jun-25 Sampled By: Client Date Tested: 30-Jun-25 Tested By: R. Bohler Control No.: 7012025	Unified Soils Classification System, ASTM D-2487 GW, Well-graded Gravel with Sand Sample Color Brown
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Sand Equivalent ASTM D-2419

Temperature of Solution: 71.8°F

$$\text{Sand Equivalent} = (\text{Sand Reading} / \text{Clay Reading}) \times 100$$

	#1	#2	#3
Clay Reading:	9.3	9.3	n/a
Sand Reading:	3.2	3.2	n/a
Time:	20 mins	20 mins	20 mins
Sand Equivalent:	35	35	n/a
Average Sand Equivalent:	35.0		
Adjusted Sand Equivalent:	35		
Required Sand Equivalent:	n/a		

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Comments: _____

Reviewed by: *Alex Eifrig*
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 WABO Supervising Laboratory Technician