Appendix B

Test Pit Logs
Unified Soil Classification System

ALLWEST
MERIDIAN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 8/19/2022
DATE FINISHED: 8/19/2022
OPERATOR: Jonathan Prior
COMPANY: Dig Earth Exc.
LOGGER: Anish Pathak
WEATHER: Sunny

TP - 1

EXCAVATOR: Yanmar Mini-Ex.
EXCAVATION METHOD: 2-ft wide test pit

PROJECT: 522-404G
Cascade Medical Center Expansion

NOTES: See Figure A-2 in Appendix A for approximate test pit location.

LATITUDE (DEGREES): N 44°31'7.4172" (44.518727°)
LONGITUDE (DEGREES): W -116°2'54.0312" (-116.048342°)

TOTAL DEPTH: 11'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE	NOTES
0	SM	Silty SAND (Native); brown, medium dense, moist			Significant roots and organics observed to 12 inches.
5	SC	Clayey SAND; dark brown, medium dense, moist			
9	SC-SM	Silty-Clayey SAND; brown, medium dense, moist to wet			
11		Test pit terminated at 11 feet.			

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
MERIDIAN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 8/19/2022
DATE FINISHED: 8/19/2022
OPERATOR: Jonathan Prior
COMPANY: Dig Earth Exc.
LOGGER: Anish Pathak
WEATHER: Sunny

TP - 2

EXCAVATOR: Yanmar Mini-Ex.
EXCAVATION METHOD: 2-ft wide test pit

PROJECT: 522-404G
Cascade Medical Center Expansion

NOTES: See Figure A-2 in Appendix A for approximate test pit location.

LATITUDE (DEGREES): N 44°31'6.5568" (44.518488°)
LONGITUDE (DEGREES): W -116°2'53.412" (-116.04817°)

TOTAL DEPTH: 11'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE	NOTES
0	SM	Silty SAND (Native); brown, medium dense, moist			Significant roots and organics observed to 12 inches.
1				Bag 1' - 1.5'	Passing No. 200 sieve = 32% Moisture content = 6%
2					
3					
4					
5				Bag 5' - 5.5'	Passing No. 200 sieve = 22% Moisture content = 10%
6					
7	CL	Sandy Lean CLAY; brown, very stiff to stiff, moist to wet			
8					
9					
10					
11		Test pit terminated at 11 feet.			
12					
13					
14					
15					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
MERIDIAN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 8/19/2022
DATE FINISHED: 8/19/2022
OPERATOR: Jonathan Prior
COMPANY: Dig Earth Exc.
LOGGER: Anish Pathak
WEATHER: Sunny

TP - 3

EXCAVATOR: Yanmar Mini-Ex.
EXCAVATION METHOD: 2-ft wide test pit

PROJECT: 522-404G
Cascade Medical Center Expansion

NOTES: See Figure A-2 in Appendix A for approximate test pit location.

LATITUDE (DEGREES): N 44°31'6.2472" (44.518402°)
LONGITUDE (DEGREES): W -116°2'54.2688" (-116.048408°)

TOTAL DEPTH: 12'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE	NOTES
0	FILL	Poorly-Graded GRAVEL with Silt and Sand (Fill); light brown, medium dense, moist			Significant roots and organics observed to 12 inches.
1					
2	SM	Silty SAND (Native); dark brown, medium dense, moist			
3				Bag 3' - 3.5'	Sulfate = <10 ppm Chloride = 30 ppm pH = 6.58 Resistivity = 7692 Ohm-cm
4	SC-SM	Silty-Clayey SAND; brown, medium dense, moist			
5				Bag 4.5' - 5'	Passing No. 200 sieve = 34% Moisture content = 16% LL = 24, PL = 19, PI = 5 Field seepage test performed at 5 feet. Field seepage rate = 3 in/hr.
6					
7					
8	CL	Sandy Lean CLAY; brown, very stiff, wet			
9				Bag 8.5' - 9'	Passing No. 200 sieve = 55% Moisture content = 26% LL = 37, PL = 15, PI = 22
10					
11					
12		Test pit terminated at 12 feet. Slotted PVC pipe was installed.			
13					
14					
15					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
MERIDIAN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 8/19/2022
DATE FINISHED: 8/19/2022
OPERATOR: Jonathan Prior
COMPANY: Dig Earth Exc.
LOGGER: Anish Pathak
WEATHER: Sunny

TP - 4

EXCAVATOR: Yanmar Mini-Ex.
EXCAVATION METHOD: 2-ft wide test pit

PROJECT: 522-404G
Cascade Medical Center Expansion

NOTES: See Figure A-2 in Appendix A for approximate test pit location.

LATITUDE (DEGREES): N 44°31'6.4812" (44.518467°)
LONGITUDE (DEGREES): W -116°2'54.654" (-116.048515°)

TOTAL DEPTH: 12'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE	NOTES
0	FILL	Silty SAND (Fill); light brown to brown, medium dense, moist			Significant roots and organics observed to 6 inches.
6	SC	Clayey SAND (Native); dark brown, medium dense, moist		Bag 7.5' - 8'	Concrete and metal debris observed at 5 to 6 feet. Passing No. 200 sieve = 40% Moisture content = 21% LL = 28, PL = 13, PI = 15
10	SC-SM	Silty-Clayey SAND; brown, medium dense, moist			
12		Test pit terminated at 12 feet. Slotted PVC pipe was installed.			
15					

WATER LEVELS
▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

ALLWEST
MERIDIAN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 8/19/2022
DATE FINISHED: 8/19/2022
OPERATOR: Jonathan Prior
COMPANY: Dig Earth Exc.
LOGGER: Anish Pathak
WEATHER: Sunny

TP - 5

EXCAVATOR: Yanmar Mini-Ex.
EXCAVATION METHOD: 2-ft wide test pit

PROJECT: 522-404G
Cascade Medical Center Expansion

NOTES: See Figure A-2 in Appendix A for approximate test pit location.

LATITUDE (DEGREES): N 44°31'7.0284" (44.518619°)
LONGITUDE (DEGREES): W -116°2'54.9276" (-116.048591°)

TOTAL DEPTH: 10'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE	NOTES
0	SC-SM	Silty-Clayey SAND (Native); light brown, stiff, moist			Significant roots and organics observed to 9 inches.
1				Bulk 1' - 2'	Passing No. 200 sieve = 36% LL = 27, PL = 21, PI = 6 CBR = 13.0
2					
3					
4				Ring 4' - 4.5'	
5		...becomes dark gray from 4 feet		Bag 5' - 5.5'	
6	SM	Silty SAND; gray, medium dense, moist			
7				Bag 7' - 7.5'	▽
8		...becomes brown at 8 feet			
9					
10		Test pit terminated at 10 feet.			
11					
12					
13					
14					
15					

WATER LEVELS
7.5' ▽ WHILE EXCAVATING
▼ AT COMPLETION
▼ AFTER EXCAVATING

Unified Soil Classification System

MAJOR DIVISIONS			SYMBOL	TYPICAL NAMES
COARSE GRAINED SOILS	GRAVELS	CLEAN GRAVELS	GW	Well-Graded Gravel, Gravel-Sand Mixtures.
			GP	Poorly-Graded Gravel, Gravel-Sand Mixtures.
		GRAVELS WITH FINES	GM	Silty Gravel, Gravel-Sand-Silt Mixtures.
			GC	Clayey Gravel, Gravel-Sand-Clay Mixtures.
	SANDS	CLEAN SANDS	SW	Well-Graded Sand, Gravelly Sand.
			SP	Poorly-Graded Sand, Gravelly Sand.
		SANDS WITH FINES	SM	Silty Sand, Sand-Silt Mixtures.
			SC	Clayey Sand, Sand-Clay Mixtures.
FINE GRAINED SOILS	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50%		ML	Inorganic Silt, Silty or Clayey Fine Sand.
			CL	Inorganic Clay of Low to Medium Plasticity, Sandy or Silty Clay.
			OL	Organic Silt and Clay of Low Plasticity.
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH	Inorganic Silt, Elastic Silt, Micaceous Silt, Fine Sand or Silt.
			CH	Inorganic Clay of High Plasticity, Fat Clay.
			OH	Organic Clay of Medium to High Plasticity.
Highly Organic Soils			PT	Peat, Muck and Other Highly Organic Soils.

ALLWEST

Appendix C

Laboratory Test Results

Table C-1: Summary of Laboratory Test Results

Test Pit No.	Depth (Feet)	Moisture Content (%)	Gradation			Atterberg Limits			CBR (%)	Sulfate (ppm)	Chloride (ppm)	pH	Resistivity (Ohm-cm)	Sample Classification (USCS)
			Gravel (%)	Sand (%)	Silt/Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)						
TP-2	1 - 1.5	6			32									Silty SAND (SM)
TP-2	5 - 5.5	10			22									Silty SAND (SM)
TP-3	3 - 3.5									<10	30	6.58	7,692	Silty SAND (SM)
TP-3	4.5 - 5	16			34	24	19	5						Silty-Clayey SAND (SC-SM)
TP-3	8.5 - 9	26			55	37	15	22						Sandy Lean CLAY (CL)
TP-4	7.5 - 8	21			40	28	13	15						Clayey SAND (SC)
TP-5	1 - 2				36	27	21	6	13.0					Silty-Clayey SAND (SC-SM)

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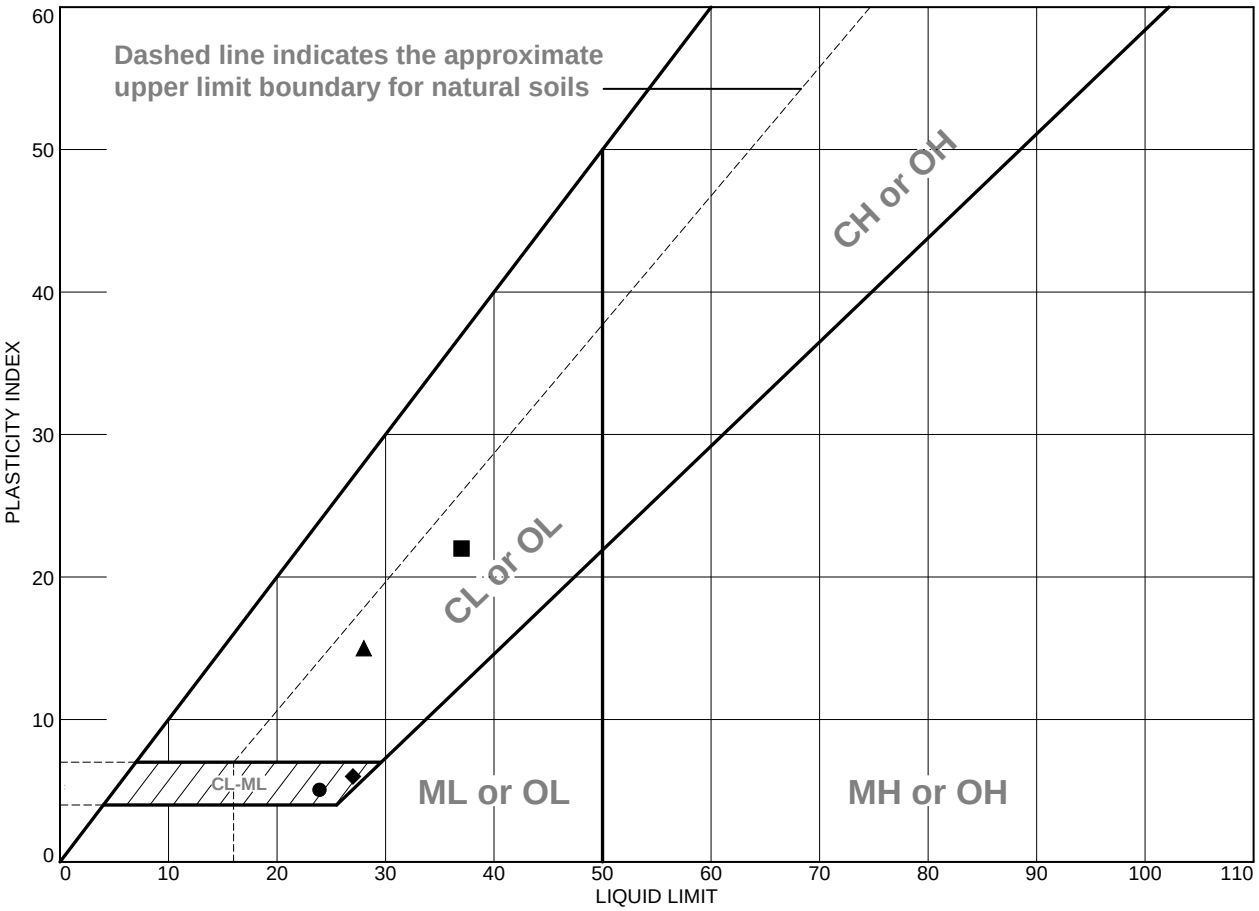
LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Silty-Clayey Sand	24	19	5	--	34%	SC
■	Sandy Lean Clay	37	15	22	--	55%	CL
▲	Clayey Sand	28	13	15	--	40%	SC
◆	Silty-Clayey Sand	27	21	6	--	36%	SC

Project No. 522-404 **Client:** Cascade Medical Center

Project: Cascade Medical Center Expansion

Remarks:

●**Location:** TP-3 **Depth:** 4.5'-.5'
■**Location:** TP-3 **Depth:** 8.5'-9'
▲**Location:** TP-4 **Depth:** 7.5'-8'
◆**Location:** TP-5 **Depth:** 1'-2'

ALLWEST

Figure C-1

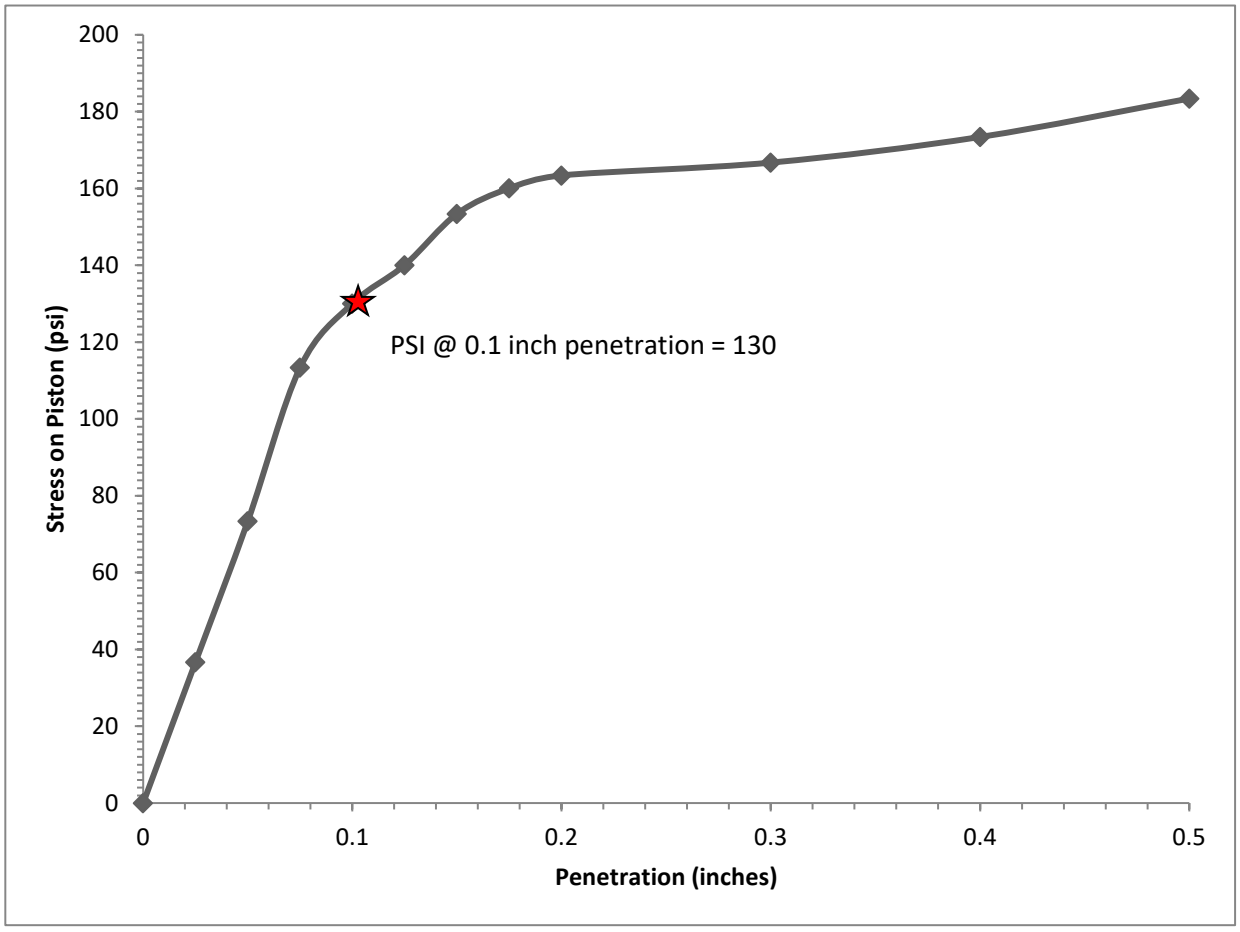
Tested By: C. Downes **Checked By:** J. Varozza

California Bearing Ratio

ASTM D1883

Project: Cascade Medical Center Expansion
Client: Cascade Medical Center
Date Tested: 9/14/22
Tested By: C. Downes

Project No.: 522-404G
Location: TP-5 @ 1 - 2 ft
Compaction Method: ASTM D1557
Classification: Silty-Clayey Sand (SC)



CBR @ 0.1 Inch Penetration:	13.0
Swell (%):	0.8
Dry Unit Weight Before Soak (pcf):	105.5
Water Content Before Soak (%):	13.5
Water Content After Soak, Top 1 Inch (%):	19.6
Surcharge (psf):	50
Immersion Period (hrs):	96

Maximum Dry Unit Weight (pcf):	117.1
Optimum Water Content (%):	11.5
Remold of Max. Dry Unt Wgt (%):	90

Reviewed By: James Varozza

Figure: C-2

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