INTERSTATE 405 Corridor Program
Congestion Relief & Bus Rapid Transit Projects

APPENDIX G5

Supplemental Boring Project

I-405, SR520 to SR522 Stage 1 (Kirkland Stage 1)

Request For Proposal
July 15, 2005
Revised, Addendum 2
August 5, 2005

Washington State Department of Transportation

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22746

HOLE No. KDB-1-05

Sheet 1 of 2

Job No. XL-2068 SR 405 Elevation 279.0 ft (85.0 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

Site Address Vic I-405 & NE 124th St. Inspector Gabriel Taylor

Start June 16, 2005 Completion June 20, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 40.0' Method Wet Rotary

Northing 253990 Easting 1308158 Latitude Longitude

County King Subsection SW/SW Section 33 Range 5 EWM Township 26 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
	1		>>	15 23 38 (61)		D-1		Well graded SAND with silt and gravel, subrounded, very dense, greyish brown, moist, Homogeneous, FeO stains encountered gravels at 3.5' Length Recovered 1.1 ft, Length Retained 1.0 ft		
5	2									
10	3			10 15 27 (42)		D-2	GS MC	SW-SM, M.C. = 14% Well graded SAND with silt, dense, greyish brown, moist, Homogeneous, gravel is subrounded. trace silt Length Recovered 1.2 ft, Length Retained 1.2 ft		
	4									
15	5			20 19 23 (42)		D-3	GS MC	SW-SM, M.C. = 11% Well graded SAND with silt and gravel, dense, greyish brown, moist, Homogeneous, trace silt, FeO stains Length Recovered 0.9 ft, Length Retained 0.9 ft	▽ 06/20/2005	
20	6			17 12		D-4		Well graded SAND with silt and gravel, dense, greyish brown, moist, Stratified, FeO stains 20.3' - 20.5'		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22746

HOLE No. KDB-1-05

Job No. XL-2068 SR 405 Elevation 279.0 ft (85.0 m)

Sheet 2 of 2

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				23 (35)				encountered silty sand at 21.0' Length Recovered 0.9 ft, Length Retained 0.9 ft		
	7									
25				11 17 19 (36)		D-5	GS MC	ML, M.C. = 25% Sandy SILT, dense, dark grey brown, wet, Homogeneous Length Recovered 1.2 ft, Length Retained 1.2 ft (Encountered gravels at 27.5')		
	8									
	9		>>	42 60/6 (60/6")		D-6		Well graded SAND with silt and gravel, subrounded, very dense, very dark greyish brown, moist, Homogeneous Length Recovered 0.7 ft, Length Retained 0.7 ft		
30										
	10									
35				21 22 20 (42)		D-7		Well graded SAND with silt, dense, brown, moist, Homogeneous Length Recovered 1.2 ft, Length Retained 1.2 ft		
	11									
	12					D-7.5		Wash out sample, blow count unreliable, sample discarded		
40			>>	35 30 60 (90)		D-8		Well graded SAND with silt and gravel, very dense, grey, moist, Stratified, top 0.5' = well graded sand with gravel bottom 0.5 = sandy silt Length Recovered 1.0 ft, Length Retained 1.0 ft		
	13							End of test hole boring at 41.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
45										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-2-05

Sheet 1 of 2

Job No. XL-2068 SR 405 Elevation 190.0 ft (57.9 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

Site Address Vic of I-405 & 116th St Inspector JoeJudd

Start June 15, 2005 Completion June 15, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 4.0 Method Wet Rotary

Northing 257523 Easting 1308692 Latitude Longitude

County King Subsection NW 1/4 SW1/4 Section 33 Range 5 EWM Township 26 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
5	1			5 8 12 (20)		D-1		Silty SAND with gravel, medium dense, dark grayish brown, moist, Stratified, wood debris & fe.o stains throughout sample Length Recovered 1.0 ft, Length Retained 1.0 ft		
10	2			5 9 13 9 (22)		D-2		Silty SAND with gravel, medium dense, gray, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft		
	3		>>	10 27 50 (77)		D-3	GS MC	SM, M.C.=10% Silty SAND with gravel, very dense, dark greenish gray, moist, Stratified Length Recovered 1.1 ft, Length Retained 1.1 ft		
15	4		>>	18 55/6 (55/6")		D-4		Silty SAND with gravel, very dense, dark grayish brown, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.5 ft		
	5		>>	52/6 (52/6")		D-5		Silty SAND with gravel, very dense, dark grayish brown, moist, Homogeneous Length Recovered 0.5 ft, Length Retained 0.5 ft		
20	6		>>	12 21		D-6		Sandy SILT, very dense, dark gray, moist, Homogeneous Length Recovered 2.0 ft, Length Retained 2.0 ft		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-2-05

Job No. XL-2068 SR 405 Elevation 190.0 ft (57.9 m)

Sheet 2 of 2

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				32 31 (53) 7 19 25 31 (44)		D-7		Sandy SILT, dense, dark gray, moist, Homogeneous Length Recovered 2.0 ft, Length Retained 2.0 ft		
	7									
25				14 14 22 26 (36)		D-8	GS MC AL	ML, M.C.=18%, PI=NP Sandy SILT, dense, dark gray, moist, Homogeneous Length Recovered 1.7 ft, Length Retained 1.7 ft		
	8			10 21 25 28 (46)		D-9		Sandy SILT, dense, dark gray, moist, Homogeneous Length Recovered 1.8 ft, Length Retained 1.6 ft		
30	9			8 18 31 (49)		D-10		Sandy SILT, dense, dark gray, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft		
	10									
35			>>	12 53/6 (53/6")		D-11		Sandy SILT, very dense, olive gray, moist, Homogeneous, Fe.O stains throughout sample encountered gravels at 38.2. Length Recovered 0.9 ft, Length Retained 0.9 ft		
	11									
	12		>>	52/6 (52/6")		D-12	GS MC	GM, M.C.=7% Silty GRAVEL with sand, subangular, very dense, strong brown, moist, Homogeneous, Fe.0 staining in sample. Length Recovered 0.5 ft, Length Retained 0.3 ft		
40								End of test hole boring at 39.5 ft below ground elevation.		
	13							This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Bailed hole to 39.0 1/2 hour later no recharge		
45										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22744

HOLE No. KDB-3-05

Sheet 1 of 2

Job No. XL-2068 SR 405 Elevation 182.0 ft (55.5 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

Site Address Vic of I-405 & 116th St Inspector Joe Judd

Start June 14, 2005 Completion June 14, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 4.0 Method Wet Rotary

Northing 258271 Easting 1308780 Latitude Longitude

County King Subsection SE 1/4 NW1/4 Section 33 Range 5 EWM Township 26 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
	1			10 14 15 (29)		D-1	GS MC	SM, M.C.=10% Silty SAND with gravel, dense, dark grayish brown, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
5	2			7 7 7 (14)		D-2		Silty SAND with gravel, medium dense, dark gray, moist, Stratified, wood debris throughout w/fe.o staining Length Recovered 1.1 ft, Length Retained 1.1 ft		
10	3									
	4			2 3 2 (5)		D-3		Silty SAND, medium stiff, grayish brown, wet, Stratified, attempted undi. at 15.0 no recovery Length Recovered 1.2 ft, Length Retained 1.2 ft		
15	5			4 7 8 (15)		D-4	GS MC	SM, M.C.=20% Silty SAND, medium dense, grayish brown, wet, Stratified, wet poorly graded sand w/silt stratified. w/fe.o stains in silt Length Recovered 1.3 ft, Length Retained 1.3 ft		
20	6									

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22744

HOLE No. KDB-3-05

Job No. XL-2068 SR 405 Elevation 182.0 ft (55.5 m)

Sheet 2 of 2

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
	7			6 12 16 (28)		D-5	GS MC AL	CH, M.C.=26%, PI=30 Fat CLAY, dense, dark gray, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft		
25	8		>>	22 27 44 (71)		D-6	GS MC	ML, M.C.=33% SILT with sand, very dense, dark gray, moist, Homogeneous, 29.2-29.5 wet Length Recovered 1.3 ft, Length Retained 1.3 ft		
30	9									
	10			20 50/6 (50/6")		D-7	GS MC	SM, M.C.=23% Silty SAND, very dense, dark gray, wet, Homogeneous Length Recovered 0.7 ft, Length Retained 0.7 ft		
35	11		>>	27 38 50 (88)		D-8		Silty SAND, very dense, dark gray, wet, Homogeneous Length Recovered 1.3 ft, Length Retained 1.3 ft		
	12									
40	13							End of test hole boring at 39.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Attempted bail test pulled sand inside casing. tripped drill rods water at 13.0 let stand over nite water at 9.0 next morning		
45										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-4-05

Sheet 1 of 2

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Robert Shepherd Lic# 2710T

Site Address Vic of I-405 & 116th St Inspector James Fetterly

Start June 20, 2005 Completion June 20, 2005 Well ID# Equipment CME 55 w/ autohammer

Station Offset Casing 4"x34' Method Wet Rotary

Northing 258520 Easting 1309024 Latitude Longitude

County King Subsection NE/NW Section 33 Range 5 EWM Township 26 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
5	1			3 12 17 (29)		D-1	GS MC	SP-SM, M.C. = 9% Poorly graded SAND with silt and gravel, dense, light greyish brown, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
10	2, 3		>>	20 31 36 (67)		D-2	GS MC	SM, M.C. = 10% Silty SAND, very dense, grey, moist, Homogeneous, Harder drilling @ 6.0' Length Recovered 1.5 ft, Length Retained 1.3 ft		
15	4, 5		>>	16 26 40 (66)		D-3		Silty SAND, rounded, very dense, grey, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.5 ft		
20	6		>>	27 31		D-4		Silty SAND, subrounded, very dense, grey, moist, Homogeneous		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-4-05

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Sheet 2 of 2

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Robert Shepherd Lic# 2710T

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				40 (71)				Length Recovered 1.5 ft, Length Retained 1.3 ft		
	7									
25			>>	22 38 50/5' (88/11")		D-5	GS MC AL	SM, M.C. = 16%, LL= 22 Silty SAND, subrounded, very dense, grey, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft 06/20/2005	▽	
	8									
30	9		>>	30 36 50/3' (86/9")		D-6		Silty SAND, with trace sand and gravel, very dense, grey, moist, Homogeneous Length Recovered 1.3 ft, Length Retained 1.3 ft		
	10							End of test hole boring at 30.3 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Bailed hole to 17.5' twice and hole recharged to 24.9'		
35	11									
40	12									
	13									
45										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-5-05

Sheet 1 of 3

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

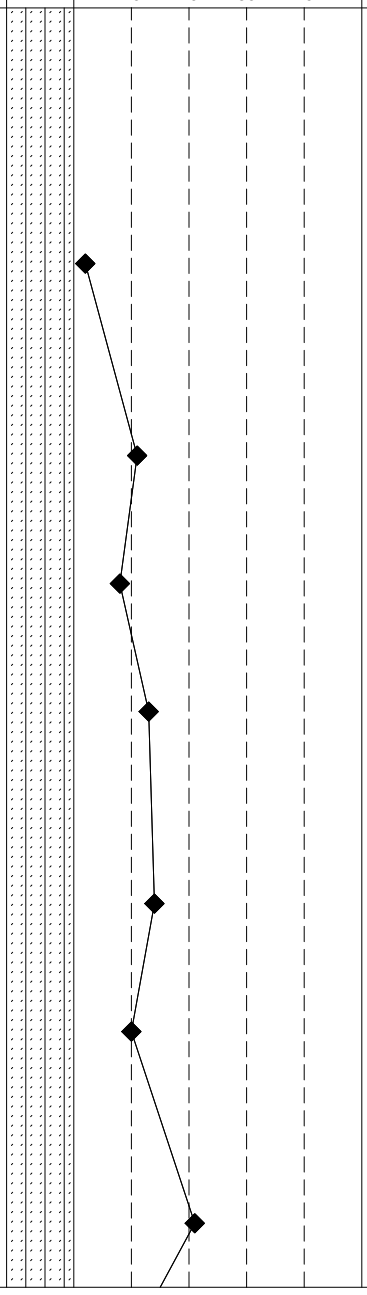
Site Address Vic. I-405 & NE 116th st. Inspector Gabriel Taylor

Start June 23, 2005 Completion June 23, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 59.0 Method Wet Rotary

Northing 259609 Easting 1308886 Latitude Longitude

County King Subsection NE/NW Section 33 Range 5 EWM Township 26 N



Depth (ft)	Meters (m)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
	1							
5		1 1 1 (2)		D-1		Silty SAND with gravel, very loose, yellowish brown, moist, Homogeneous, contains organic material gravel is subrounded Length Recovered 0.7 ft, Length Retained 0.7 ft		
	2	6 5 6 (11)		U-2 A thu C D-3		Silty SAND with gravel, medium dense, brown, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft Silty SAND with gravel, medium dense, light grey, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.5 ft		
10	3	2 3 5 5 (8)		D-4	GS MC	SM, M.C. = 13% Silty SAND with gravel and wood fragments, loose, light grey, moist, Homogeneous Length Recovered 0.7 ft, Length Retained 0.7 ft		
		4 6 7 11 (13)		D-5		Silty SAND with gravel, medium dense, light grey, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft		
	4							
15		4 5 9 12 (14)		D-6	GS MC	SM, M.C. = 12% Silty SAND with gravel, medium dense, light grey, moist, Homogeneous, contains wood debris Length Recovered 1.4 ft, Length Retained 1.4 ft		
	5	8 5 5 5 (10)		D-7		Silty SAND with gravel, loose, light grey, moist, Homogeneous Length Recovered 1.3 ft, Length Retained 1.3 ft		
	6	8 9		D-8		Silty SAND with gravel, medium dense, light grey, moist, Homogeneous	▽	
20								

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-5-05

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Sheet 2 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				12 12 (21)				Length Recovered 1.4 ft, Length Retained 1.4 ft 06/27/2005		
				3 4 5 38 (9)		D-9	GS MC	SM, M.C. = 17% Silty SAND, dense, light grey, moist, Homogeneous Length Recovered 1.7 ft, Length Retained 1.7 ft		
	7									
			>>	17 37 (37/6")		D-10		Silty SAND, very dense, grey, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
25										
	8									
			>>	22 43 (43/3")		D-11	GS MC	SM, M.C. = 20% Silty SAND, very dense, dark grey, moist, Homogeneous Length Recovered 0.8 ft, Length Retained 0.8 ft		
	9									
30										
	10									
			>>	14 33 39 (72)		D-12		Silty SAND, very dense, dark grey, moist, Homogeneous Length Recovered 1.1 ft, Length Retained 1.1 ft		
35										
	11									
			>>	26 40 38 (78)		D-13		Silty SAND, very dense, dark grey, moist, Homogeneous Length Recovered 1.1 ft, Length Retained 1.1 ft		
	12									
40										
	13									
			>>	27 40		D-14		Silty SAND, very dense, dark grey, moist, Homogeneous, moisture tin retained		
45										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-5-05

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Sheet 3 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				40 (80)				Length Recovered 0.9 ft, Length Retained 0.9 ft		
	14									
	15		>>	26 53 (53/6")		D-15	GS MC AL	ML, M.C. = 20%, PI = 10 SILT with sand, very dense, dark grey, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
50										
	16									
			>>	40 60 (60/5")		D-16		SILT with sand, very dense, dark grey, moist, Homogeneous Length Recovered 0.9 ft, Length Retained 0.9 ft		
55	17									
	18		>>	24 60 (60/6")		D-17		Silty SAND, very dense, dark grey, wet, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
60								End of test hole boring at 60 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
	19									
65	20									
	21									
70										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-6-05

Sheet 1 of 3

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

Site Address Vic. I-405 & NE 116th st. Inspector Gabriel Taylor

Start June 28, 2005 Completion June 28, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 59.0 Method Wet Rotary

Northing 259792 Easting 1308862 Latitude Longitude

County King Subsection SE/SW Section 28 Range 5 EWM Township 26 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
	1			20 17 17 15 (34)		D-1		Silty SAND, dense, olive brown, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.5 ft		
5	2			11 14 15 (29)		D-2	GS MC	Sandy SILT with gravel, dense, olive, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.5 ft		
10	3			15 26 23 (49)		D-3	GS MC	Silty SAND with gravel, dense, olive, moist, Homogeneous Length Recovered 1.2 ft, Length Retained 1.2 ft		
	4			15 14 10 9 (24)		D-4		Silty SAND with gravel, medium dense, olive, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
15	5			19 22 23 (45)		D-5		SM, M.C.=10% Silty SAND, dense, brown, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		
				3 7 19 15 (26)		D-6		Silty SAND, dense, brown, moist, Homogeneous Length Recovered 0.7 ft, Length Retained 0.7 ft		
20	6		>>	30 50		D-7	GS MC	Silty SAND, very dense, brown, moist, Homogeneous Length Recovered 1.0 ft, Length Retained 1.0 ft		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-6-05

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Sheet 2 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				(50/6")						
			>>	60 (60/5")		D-8		Silty SAND, very dense, brown, moist, Homogeneous Length Recovered 0.4 ft, Length Retained 0.4 ft		
									▽ 06/29/2005	
	7									
			>>	21 31 46 (77)		D-9		Silty SAND, very dense, brown, moist, Stratified, 24.0'-24.5' = silty SAND with gravel 24.5'-25.5' = silty SAND Length Recovered 1.4 ft, Length Retained 1.4 ft		
25										
	8		>>	34 60 (60/4")		D-10		Silty SAND, very dense, brown, moist, Stratified, contains a 0.3' bed of silty SAND with heavy FeO stains dipping at 45 degrees. Length Recovered 0.9 ft, Length Retained 0.9 ft		
			>>	36 60 (60/2")		D-11	GS MC AL	ML, M.C.=20% Sandy SILT, very dense, grey, moist, Stratified, 29.0'-29.7' = SILT 29.7'-30.0' = silty SAND Length Recovered 0.7 ft, Length Retained 0.7 ft		
30	9									
	10									
			>>	23 39 50 (89)		D-12		M.C.=21%Sandy SILT, very dense, grey, moist, Homogeneous, moisture tin retained Length Recovered 1.4 ft, Length Retained 1.4 ft		
35	11									
	12		>>	9 21 60 (81)		D-13		Silty SAND, very dense, grey, moist, Homogeneous, sample contains wood. Length Recovered 1.4 ft, Length Retained 1.4 ft		
40										
	13									
			>>	25 60		D-14		Silty SAND, very dense, grey, moist, Laminated, contains laminae of poorly graded sand and silty sand with gravel.		
45										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-6-05

Job No. XL-2068 SR 405 Elevation 191.0 ft (58.2 m)

Sheet 3 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				(60/3")				Length Recovered 0.8 ft, Length Retained 0.8 ft		
	14									
	15		>>	30 60 (60/3")		D-15		M.C.=67% Sandy SILT, very dense, grey, moist, Homogeneous, moisture tin retained Length Recovered 0.8 ft, Length Retained 0.8 ft		
50										
	16									
			>>	30 50 (50/4")		D-16		Sandy SILT, very dense, grey, moist, Homogeneous Length Recovered 0.8 ft, Length Retained 0.8 ft		
55										
	17									
	18		>>	25 50 (50/3")		D-17		Sandy SILT, very dense, grey, moist, Homogeneous Length Recovered 0.8 ft, Length Retained 0.8 ft		
60										
								End of test hole boring at 60 ft below ground elevation.		
	19							This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
65										
	20									
	21									
70										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-7-05

Sheet 1 of 3

Job No. XL-2068 SR 405 Elevation 195.0 ft (59.4 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

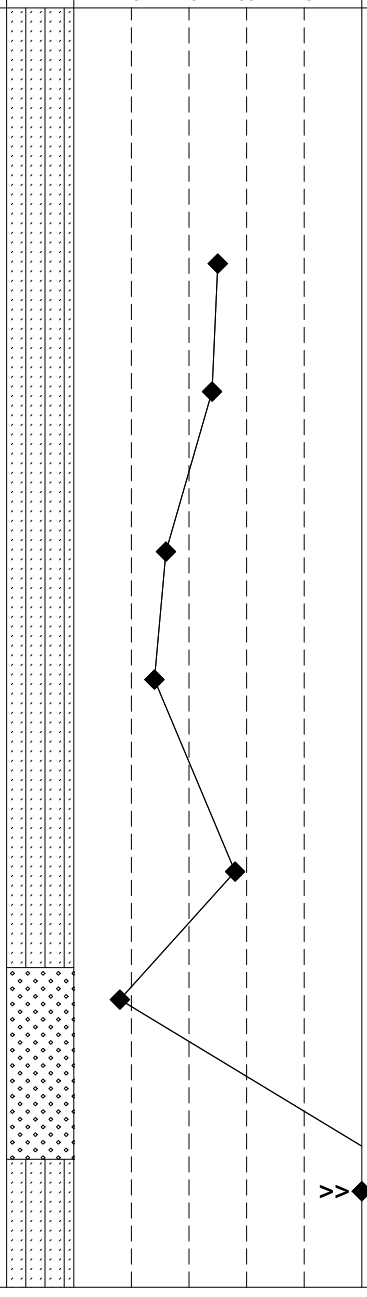
Site Address Vic. I-405 & NE 116th St. Inspector Gabriel Taylor

Start June 21, 2005 Completion June 21, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 58.5 Method Wet Rotary

Northing 259597 Easting 1309036 Latitude Longitude

County King Subsection NE/NW Section 33 Range 5 EWM Township 26 N



Depth (ft)	Meters (m)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
	1	4 11 14 (25)		D-1		Silty SAND, dense, yellowish brown, moist, Homogeneous, gravel is subrounded Length Recovered 1.0 ft, Length Retained 1.0 ft		
5	2	9 12 12 (24)		D-2		Silty SAND, medium dense, yellowish brown, moist, Homogeneous, gravel is subrounded Length Recovered 0.9 ft, Length Retained 0.9 ft		
10	3	9 9 7 (16)		D-3	GS MC	SM, M.C. = 15% Silty SAND, medium dense, yellowish brown, moist, Stratified, color change to light grey at 10.0' Length Recovered 1.1 ft, Length Retained 1.1 ft		
		5 5 9 (14)		D-4		Silty SAND, medium dense, light grey, moist, Stratified, color change to yellowish brown at 11.5' Length Recovered 1.2 ft, Length Retained 1.2 ft		
	4	12 14 14 (28)		D-5		Silty SAND, dense, yellowish brown, moist, Homogeneous, gravel is subrounded moisture tin retained Length Recovered 1.5 ft, Length Retained 1.5 ft		
15	5	10 4 4 7 (8)		D-6		Well graded SAND with gravel, loose, yellowish brown, moist, Stratified, top 0.8' = well graded yellowish brown sand bottom 0.6' = poorly graded light grey sand gravel is subrounded <10% gravel contains wood debris at bottom of sample Length Recovered 1.5 ft, Length Retained 1.5 ft		
	6	>>2 3 60 (63)		D-7	GS MC	SM, M.C. = 15% Silty SAND, very dense, light grey, moist, Homogeneous, contains wood debris Length Recovered 1.5 ft, Length Retained 1.5 ft		
20								

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-7-05

Job No. XL-2068 SR 405 Elevation 195.0 ft (59.4 m)

Sheet 2 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			>>	100/4 (100/4")		D-8		Silty SAND, very dense, light grey, moist, Homogeneous Length Recovered 0.3 ft, Length Retained 0.3 ft		
	7		>>	13 36 54 (90)		D-9		SILT with sand, very dense, light grey, moist, Homogeneous Length Recovered 0.9 ft, Length Retained 0.9 ft		
25	8			10 16 21 22 (37)		D-10	GS MC AL	ML, M.C. = 18%, PI = NP SILT with sand, dense, grey, moist, Homogeneous Length Recovered 2.0 ft, Length Retained 2.0 ft		
30	9			16 16 20 35 (36)		D-11		Sandy SILT, dense, grey, moist, Homogeneous Length Recovered 2.0 ft, Length Retained 1.7 ft		
35	10 11			8 12 16 31 (28)		D-12		Sandy SILT, medium dense, grey, moist, Homogeneous Length Recovered 2.0 ft, Length Retained 1.7 ft		
40	12 13		>>	9 15 50 (65)		D-13		Sandy SILT, very dense, grey, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.5 ft		
45			>>	12 16 37 50		D-14	GS MC AL	ML, M.C. = 19%, PI = NP Sandy SILT, very dense, grey, moist, Homogeneous Length Recovered 2.0 ft, Length Retained 1.7 ft		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22742

HOLE No. KDB-7-05

Job No. XL-2068 SR 405 Elevation 195.0 ft (59.4 m)

Sheet 3 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				(53)						
	14									
			>>	14 20 35 (55)		D-15		Sandy SILT, very dense, grey, moist, Homogeneous, contains trace gravel Length Recovered 1.5 ft, Length Retained 1.3 ft		
	15									
50										
	16									
			>>	9 19 34 (53)		D-16		Sandy SILT, very dense, grey, moist, Homogeneous Length Recovered 1.5 ft, Length Retained 1.2 ft		
55										
	17									
			>>	16 26 50 (76)		D-17		Sandy SILT, very dense, grey, moist, Homogeneous Length Recovered 1.2 ft, Length Retained 0.8 ft		
	18									
60										
								End of test hole boring at 60 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
	19									
65										
	20									
	21									
70										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-8-05

Sheet 1 of 3

Job No. XL-2068 SR 405 Elevation 172.0 ft (52.4 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Sean Verlo Lic# 2615

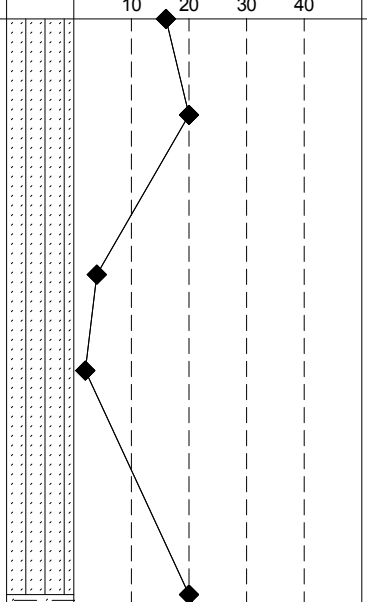
Site Address Vic. I-405 & NE 116th st. Inspector Gabriel Taylor

Start July 19, 2005 Completion July 19, 2005 Well ID# Equipment CME 45 w/ autohammer

Station Offset Casing 59.0 Method Wet Rotary

Northing 259731 Easting 1309035 Latitude Longitude

County King Subsection SE/SW Section 28 Range 5 EWM Township 26 N



Depth (ft)	Meters (m)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
		5 6 10 (16)		D-1		Silty SAND with gravel, medium dense, lt. brown, dry, Homogeneous, HCl reaction not tested, contains roots Length Recovered 1.5 ft, Length Retained 1.5 ft		
		11 10 10 (20)		D-2	GS MC	SM, M.C.=7% Silty SAND with gravel, medium dense, lt. brown, dry, Homogeneous, HCl reaction not tested Length Recovered 1.2 ft, Length Retained 1.2 ft		
5	1	3 2 2 (4)		D-3		Silty SAND with gravel, very loose, brown, wet, Homogeneous, HCl reaction not tested, very little sample rec. Length Recovered 0.1 ft, Length Retained 0.1 ft		
		2 1 1 (2)		D-4	GS MC	SM, M.C.=146%, PI=NP Silty SAND with gravel, very loose, dk. brown, wet, Stratified, HCl reaction not tested, gravel confined to a single strata within sample. Length Recovered 1.4 ft, Length Retained 1.4 ft	▽ 07/19/2005	
10	3	3 6 14 (20)		D-5		Sandy lean CLAY, very stiff, dk. bluish grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.4 ft, Length Retained 1.4 ft		
	4	9 9 21 (30)		D-6	GS MC AL	CL, M.C.=18%, PI=18 Sandy lean CLAY, very stiff, bluish grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.5 ft, Length Retained 1.5 ft		
15		>> 18 33 30 (63)		D-7		Sandy lean CLAY, very hard, bluish grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.3 ft, Length Retained 1.3 ft		
	5	>> 18 26 27 (53)		D-8		M.C.=14% Sandy SILT with gravel, very dense, bluish grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.5 ft, Length Retained 1.0 ft		
20	6	>> 27 34		D-9	MC	Sandy SILT with gravel, very dense, bluish grey, moist, Homogeneous, HCl reaction not tested, moisture tin		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-8-05

Job No. XL-2068 SR 405 Elevation 172.0 ft (52.4 m)

Sheet 2 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				(61)				retained Length Recovered 1.0 ft, Length Retained 1.0 ft		
			>>	20 31 (51)		D-10		Sandy SILT with gravel, very dense, bluish grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
	7									
25				14 21 26 (47)		D-11	GS MC	ML, M.C.=18% Sandy SILT, dense, grey, moist, Homogeneous, HCl reaction not tested, moisture tin retained Length Recovered 1.4 ft, Length Retained 1.4 ft		
	8			15 23 24 (47)		D-12	MC	M.C.=18% Sandy SILT, dense, grey, moist, Homogeneous, HCl reaction not tested, moisture tin retained Length Recovered 1.4 ft, Length Retained 1.4 ft		
30	9			12 21 24 (45)		D-13		Sandy SILT, dense, grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.5 ft, Length Retained 1.5 ft		
	10									
35			>>	21 38 (59)		D-14		Sandy SILT, very dense, grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
	11									
40	12		>>	18 35 (53)		D-15		Sandy SILT, very dense, grey, moist, Homogeneous, HCl reaction not tested, contains trace amounts of gravel Length Recovered 1.0 ft, Length Retained 1.0 ft		
	13									
45			>>	22 38		D-16		Sandy SILT, very dense, grey, moist, Homogeneous, HCl reaction not tested		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22743

HOLE No. KDB-8-05

Job No. XL-2068 SR 405 Elevation 172.0 ft (52.4 m)

Sheet 3 of 3

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Sean Verlo Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				(60)				Length Recovered 1.0 ft, Length Retained 1.0 ft		
	14									
	15		>>	20 32 (52)		D-17		SILT, very dense, grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
50										
	16									
				13 34 (47)		D-18	GS MC AL	CH, M.C.=18%, PI=27 Fat CLAY with sand, dense, grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
55										
	17									
	18		>>	18 35 (53)		D-19	MC	M.C.=23% SILT, very dense, grey, moist, Homogeneous, HCl reaction not tested, moisture tin retained Length Recovered 1.0 ft, Length Retained 1.0 ft		
60								End of test hole boring at 60 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
	19									
65										
	20									
	21									
70										

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card R-65991

HOLE No. KDB-9-05

Sheet 1 of 2

Job No. XL-2068 SR 405 Elevation 156.0 ft (47.5 m)

Project KIRKLAND DESIGN BUILD STAGE 1 Driller Joe Judd Lic# 2524

Site Address Vic. I-405 and NE 124th Street Inspector Dave Nelson

Start July 18, 2005 Completion July 18, 2005 Well ID# AKK 310 Equipment CME 850 w/ autohammer

Station Offset Casing 4" Method Wet Rotary

Northing 261386 Easting 1308637 Latitude Longitude

County King Subsection NW/SW Section 28 Range 5EWM Township 26N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
								Top soil FILL 0 to 2 ft.		
5	1			2 4 8 (12)		D-1	GS MC	SM, M.C.=39% Silty SAND with gravel, medium dense, black, wet, Homogeneous Length Recovered 0.1 ft, Length Retained 0.4 ft		
10	2 3		>>	20 37 44 (81)		D-2	GS MC	SM, M.C.=10% Silty SAND with gravel, very dense, dark greyish brown, moist, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft (TILL)		
	4		>>	14 22 44 (66)		D-3		Silty SAND with gravel, very dense, dark grey, moist, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
15	5		>>	17 25 33 (58)		D-4		SILT, very dense, dark grey, wet, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
			>>	22 31 41 (72)		D-5	GS MC	ML,M.C.=25% SILT, very dense, dark grey, wet, Homogeneous, HCl reaction not tested Length Recovered 1.0 ft, Length Retained 1.0 ft		
20	6		>>	15 22		D-6		SILT, very dense, dark grey, wet, Homogeneous, HCl reaction not tested		

Washington State
Department of Transportation

LOG OF TEST BORING

Start Card R-65991

HOLE No. KDB-9-05

Job No. XL-2068 SR 405 Elevation 156.0 ft (47.5 m)

Sheet 2 of 2

Project KIRKLAND DESIGN BUILD STAGE 1

Driller Joe Judd Lic# 2524

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft (10 20 30 40)	SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
				30 (52)				Length Recovered 1.0 ft, Length Retained 1.0 ft		
	7			27 50/.4" (50/.4")		D-7	GS MC	SP, M.C.=20% Poorly graded SAND, very dense, dark grey, wet, Homogeneous, HCl reaction not tested Length Recovered 0.9 ft, Length Retained 0.9 ft		
25	8							End of test hole boring at 24.9 ft below ground elevation.		
30	9							This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: Soil change at 21.5 ft. to Poorly graded SAND. Bailed from 0.0 ft. Bailed to 14.0 ft. Recharged 5.2		
35	10									
40	11									
45	12									
	13									

Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-1-05**	Sheet	**1** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

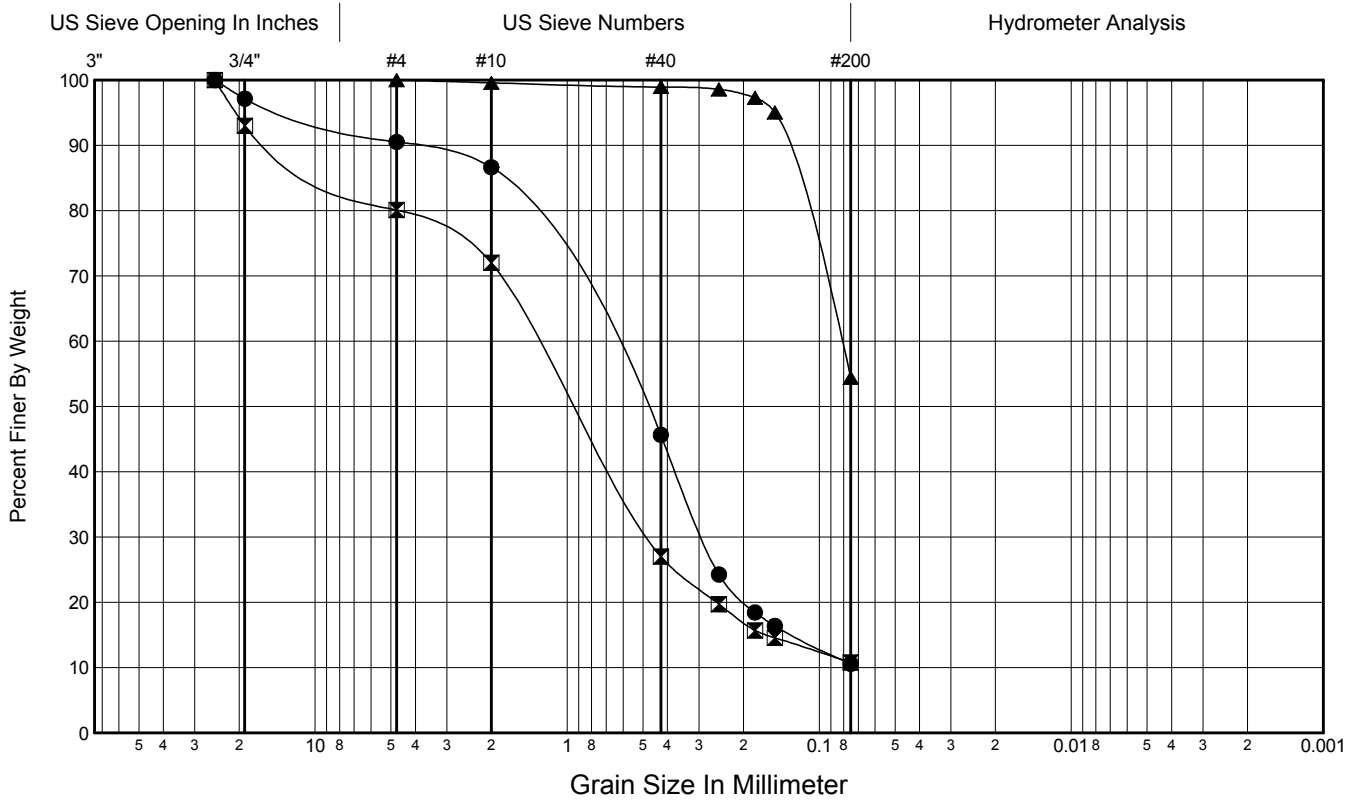
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**9.0**	**2.74**	**D-2**	**SW-SM**	**See Boring Log**	**WELL-GRADED SAND with SILT**	**14**			
⧗	**14.0**	**4.27**	**D-3**	**SW-SM**	**See Boring Log**	**WELL-GRADED SAND with SILT and GRAVEL**	**11**			
▲	**24.0**	**7.32**	**D-5**	**ML**	**See Boring Log**	**SANDY SILT**	**25**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**9.5**	**79.9**	**10.6**	**1.6**	**10.4**
⧗	**19.9**	**69.3**	**10.8**	**2.6**	**20.3**
▲	**0.0**	**45.6**	**54.4**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.731**	**0.50**	**0.29**	**0.20**	
⧗	**1.323**	**0.94**	**0.47**	**0.26**	
▲	**0.083**				



Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-2-05**	Sheet	**2** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

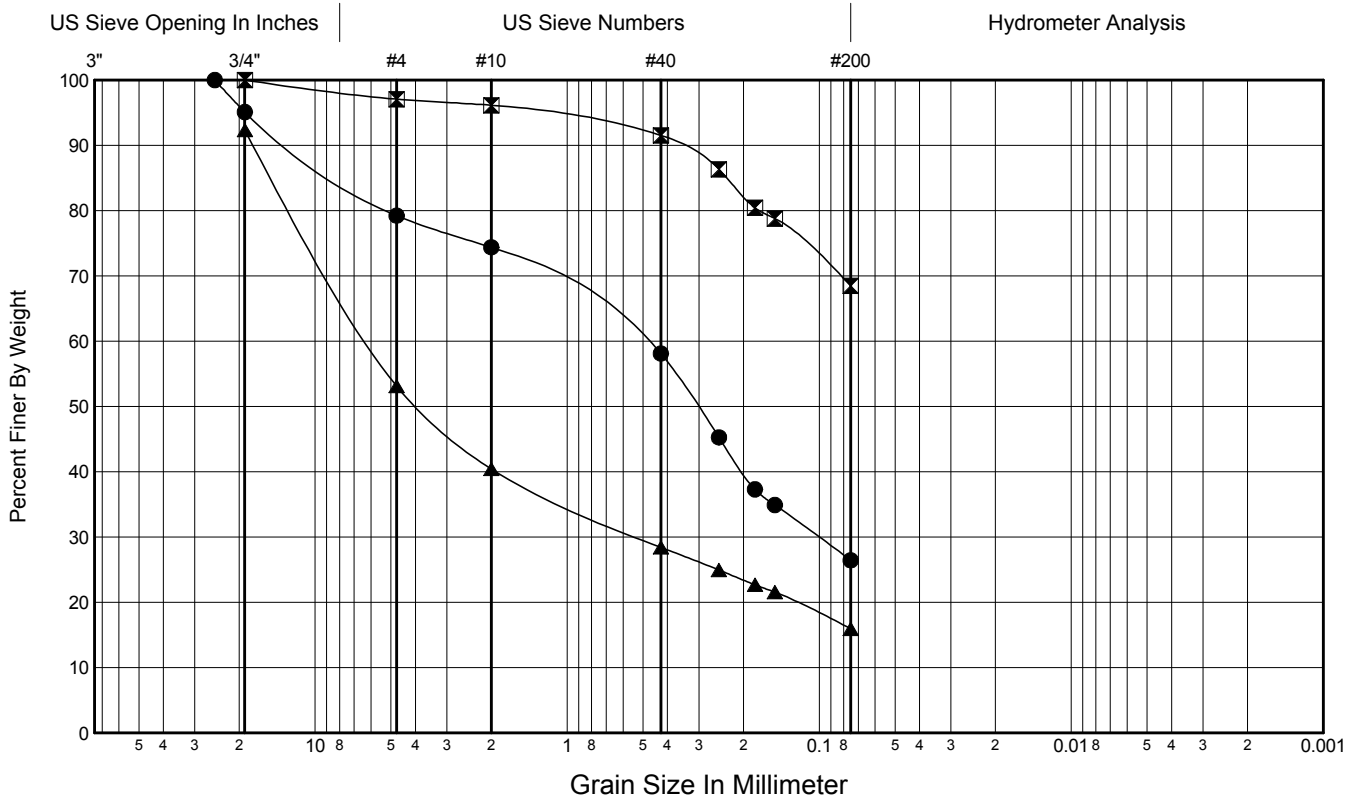
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**11.0**	**3.35**	**D-3**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**10**			
⧗	**24.0**	**7.32**	**D-8**	**ML**	**See Boring Log**	**SANDY SILT**	**18**			
▲	**39.0**	**11.89**	**D-12**	**GM**	**See Boring Log**	**SILTY GRAVEL with SAND**	**7**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**20.8**	**52.8**	**26.4**		
⧗	**2.9**	**28.6**	**68.5**		
▲	**39.2**	**37.2**	**15.9**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.509**	**0.30**	**0.10**		
⧗					
▲	**6.058**	**3.84**	**0.52**	**0.12**	



Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-3-05**	Sheet	**3** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

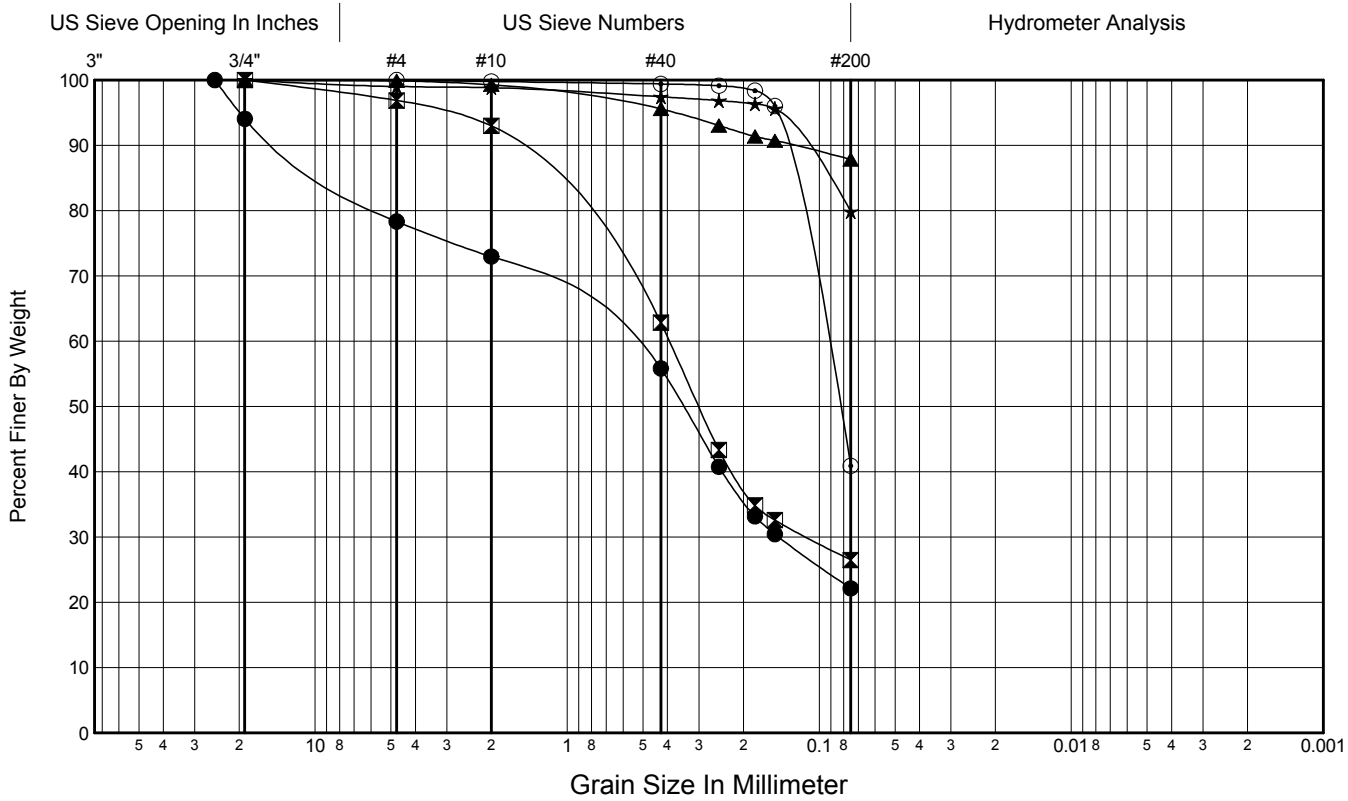
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**3.0**	**0.91**	**D-1**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**10**			
⧗	**18.0**	**5.49**	**D-4**	**SM**	**See Boring Log**	**SILTY SAND**	**20**			
▲	**23.0**	**7.01**	**D-5**	**CH**	**See Boring Log**	**FAT CLAY**	**26**	**56**	**26**	**30**
★	**28.0**	**8.53**	**D-6**	**ML**	**See Boring Log**	**SILT with SAND**	**26**			
⊙	**33.0**	**10.06**	**D-7**	**SM**	**See Boring Log**	**SILTY SAND**	**23**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**21.7**	**56.2**	**22.1**		
⧗	**3.1**	**70.4**	**26.5**		
▲	**0.1**	**12.1**	**87.8**		
★	**1.0**	**19.1**	**79.9**		
⊙	**0.0**	**59.1**	**40.9**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.620**	**0.35**	**0.14**		
⧗	**0.393**	**0.30**	**0.11**		
▲					
★					
⊙	**0.095**	**0.08**			



Gravel	Sand			Silt and Clay
	Coarse	Medium	Fine	

Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-4-05**	Sheet	**4** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

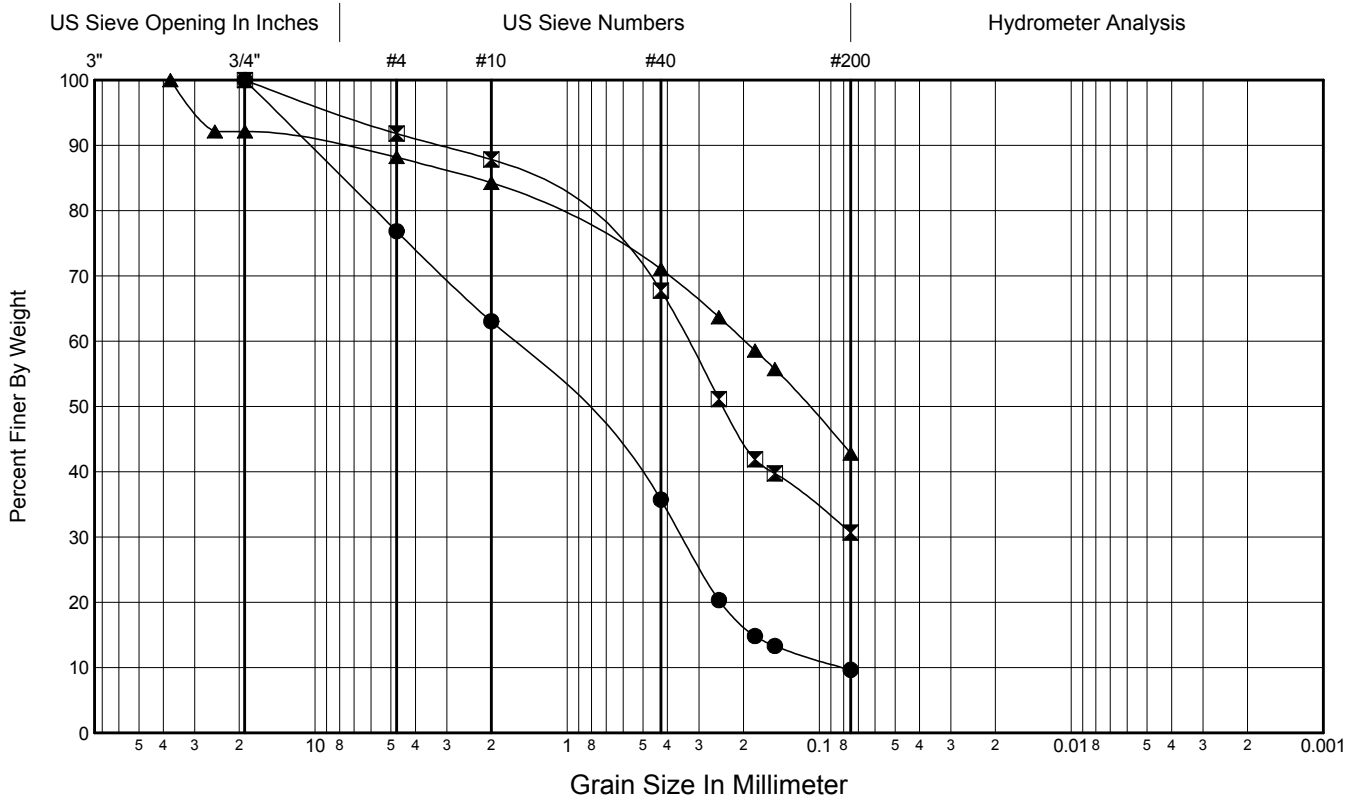
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**4.0**	**1.22**	**D-1**	**SP-SM**	**See Boring Log**	**POORLY GRADED SAND with SILT and GRAVEL**	**9**			
⧗	**9.0**	**2.74**	**D-2**	**SM**	**See Boring Log**	**SILTY SAND**	**10**			
▲	**24.0**	**7.32**	**D-5**	**SM**	**See Boring Log**	**SILTY SAND**	**16**	**22**		**NP**

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**23.1**	**67.2**	**9.7**	**0.9**	**21.0**
⧗	**8.2**	**61.1**	**30.7**		
▲	**11.8**	**45.4**	**42.8**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**1.683**	**0.95**	**0.35**	**0.25**	**0.080**
⧗	**0.332**	**0.24**			
▲	**0.197**	**0.11**			



Gravel	Sand			Silt and Clay
	Coarse	Medium	Fine	

Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-5-05**	Sheet	**5** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

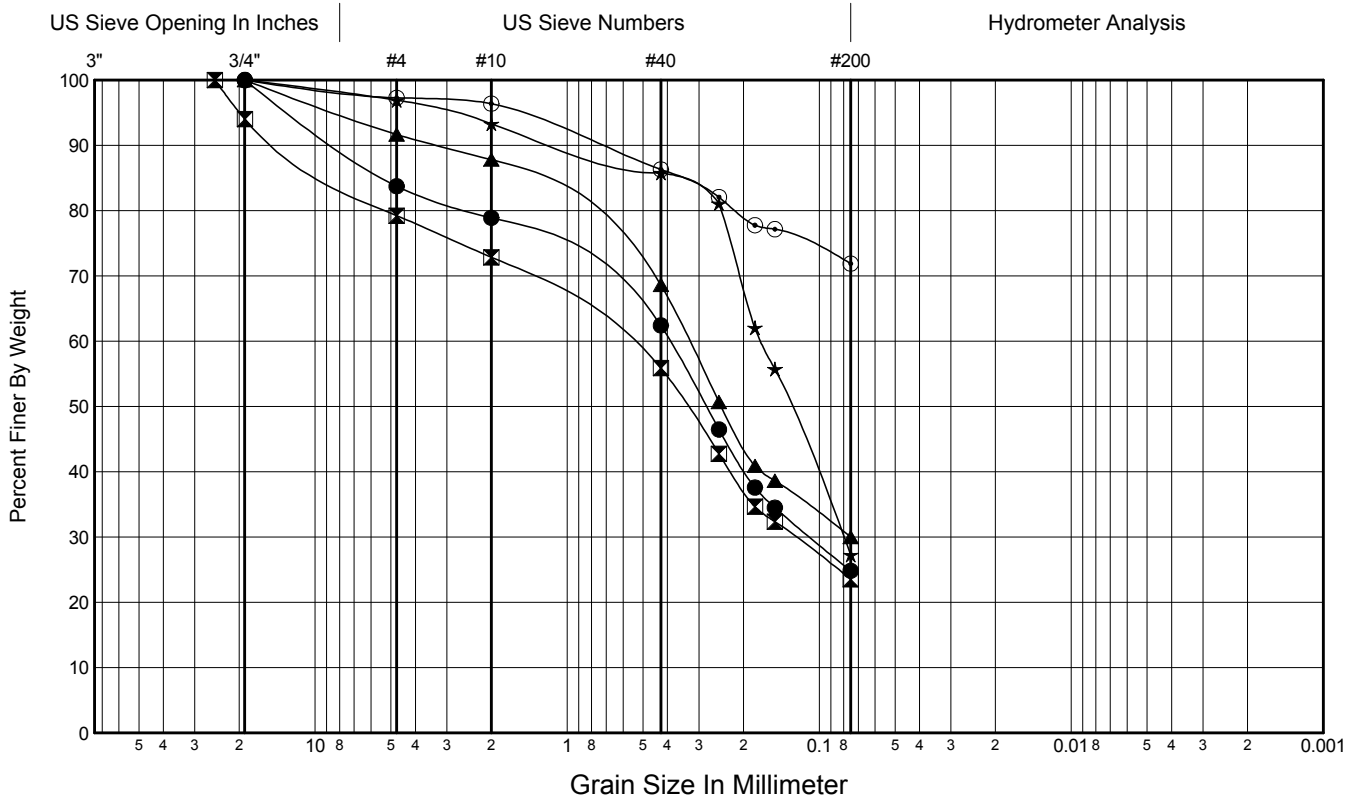
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**9.0**	**2.74**	**D-4**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL with wood fragments**	**13**			
⧗	**14.0**	**4.27**	**D-6**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**12**			
▲	**21.0**	**6.40**	**D-9**	**SM**	**See Boring Log**	**SILTY SAND**	**17**			
★	**29.0**	**8.84**	**D-11**	**SM**	**See Boring Log**	**SILTY SAND**	**20**			
⊙	**49.0**	**14.94**	**D-15**	**ML**	**See Boring Log**	**SILT with SAND**	**20**	**35**	**25**	**10**

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**16.3**	**58.9**	**24.8**		
⧗	**20.8**	**55.7**	**23.5**		
▲	**8.3**	**61.7**	**30.0**		
★	**3.1**	**69.7**	**27.3**		
⊙	**2.7**	**25.4**	**71.9**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.392**	**0.28**	**0.11**		
⧗	**0.619**	**0.34**	**0.12**		
▲	**0.329**	**0.24**	**0.08**		
★	**0.170**	**0.13**	**0.08**		
⊙					



Gravel	Sand			Silt and Clay
	Coarse	Medium	Fine	

Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-6-05**	Sheet	**6** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

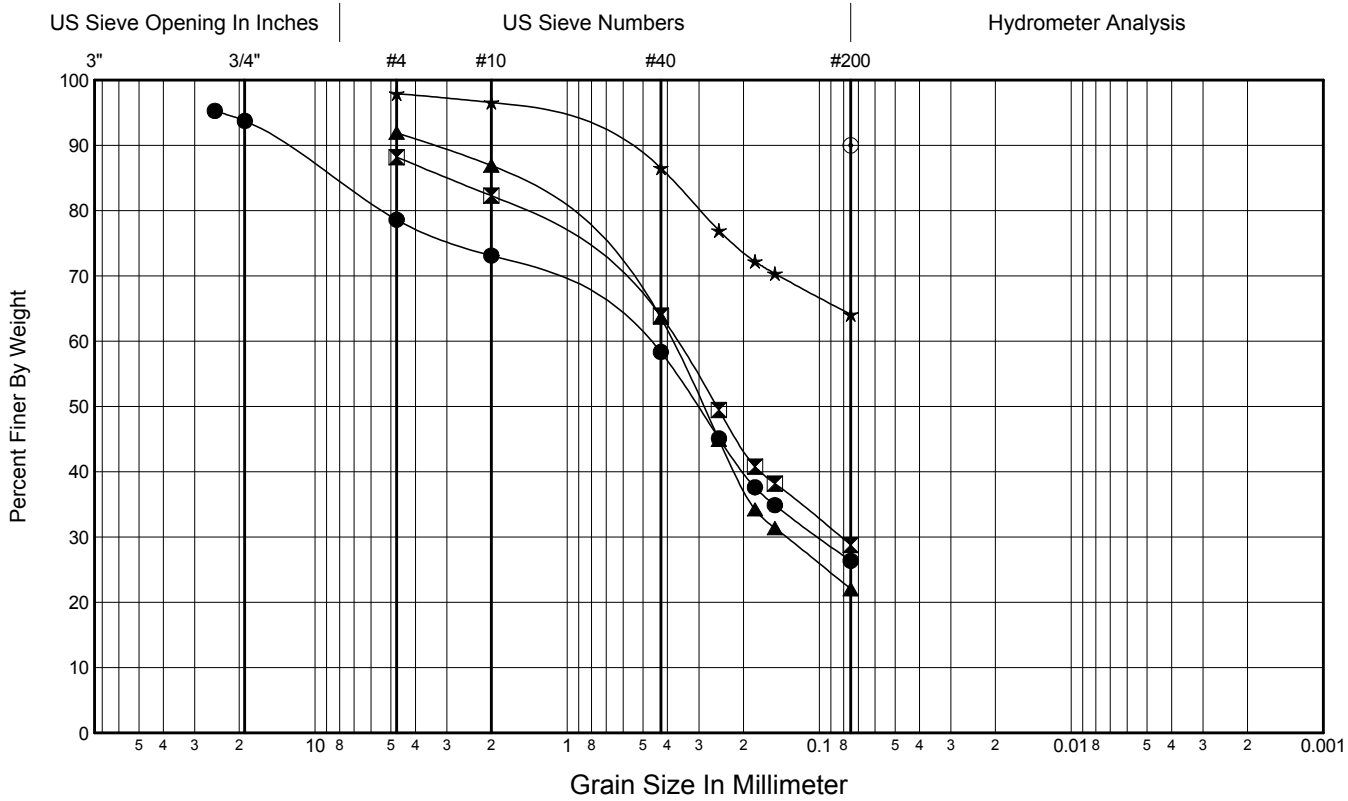
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**6.0**	**1.83**	**D-2**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**12**			
⧗	**9.0**	**2.74**	**D-3**	**SM**	**See Boring Log**	**SILTY SAND**	**13**			
▲	**19.0**	**5.79**	**D-7**	**SM**	**See Boring Log**	**SILTY SAND**	**10**			
★	**29.0**	**8.84**	**D-11**	**ML**	**See Boring Log**	**SANDY SILT**	**20**			
⊙	**34.0**	**10.36**	**D-12**		**See Boring Log**	**moisture content only**	**21**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**16.7**	**52.2**	**26.4**		
⧗	**0.0**	**59.5**	**28.8**		
▲	**0.0**	**69.9**	**22.0**		
★	**0.0**	**33.8**	**64.1**		
⊙	**0.0**	**0.0**	**90.0**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.505**	**0.30**	**0.10**		
⧗	**0.368**	**0.26**	**0.08**		
▲	**0.384**	**0.29**	**0.14**		
★					
⊙					



Gravel	Sand			Silt and Clay
	Coarse	Medium	Fine	

Job No. **XL-2068** Date **August 5, 2005**

Hole No. **KDB-6-05** Sheet **7** of **10**

Project **KIRKLAND DESIGN BUILD STAGE 1**

Laboratory Summary

Washington State Department of Transportation

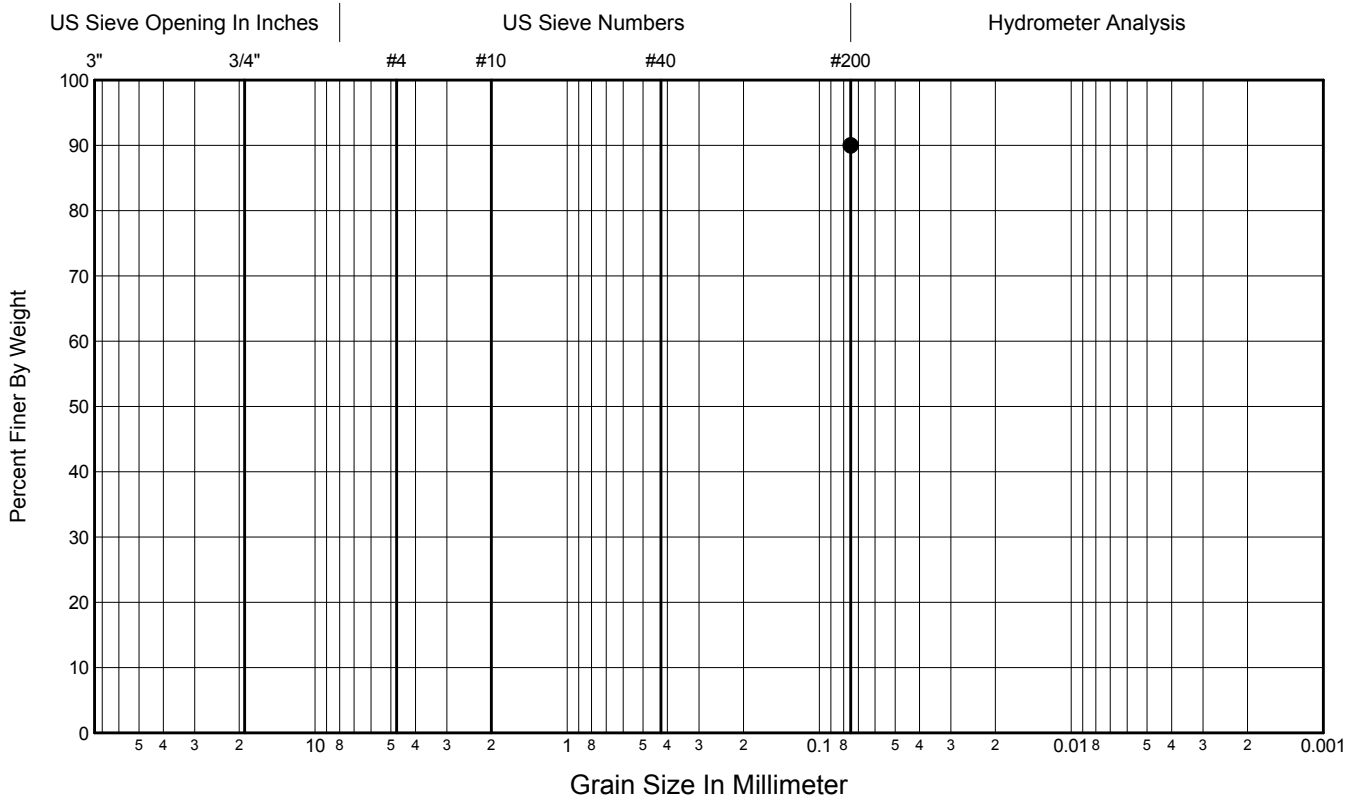
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**49.0**	**14.94**	**D-15**		**See Boring Log**	**moisture content only**	**67**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**0.0**	**0.0**	**90.0**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●					



Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-7-05**	Sheet	**8** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

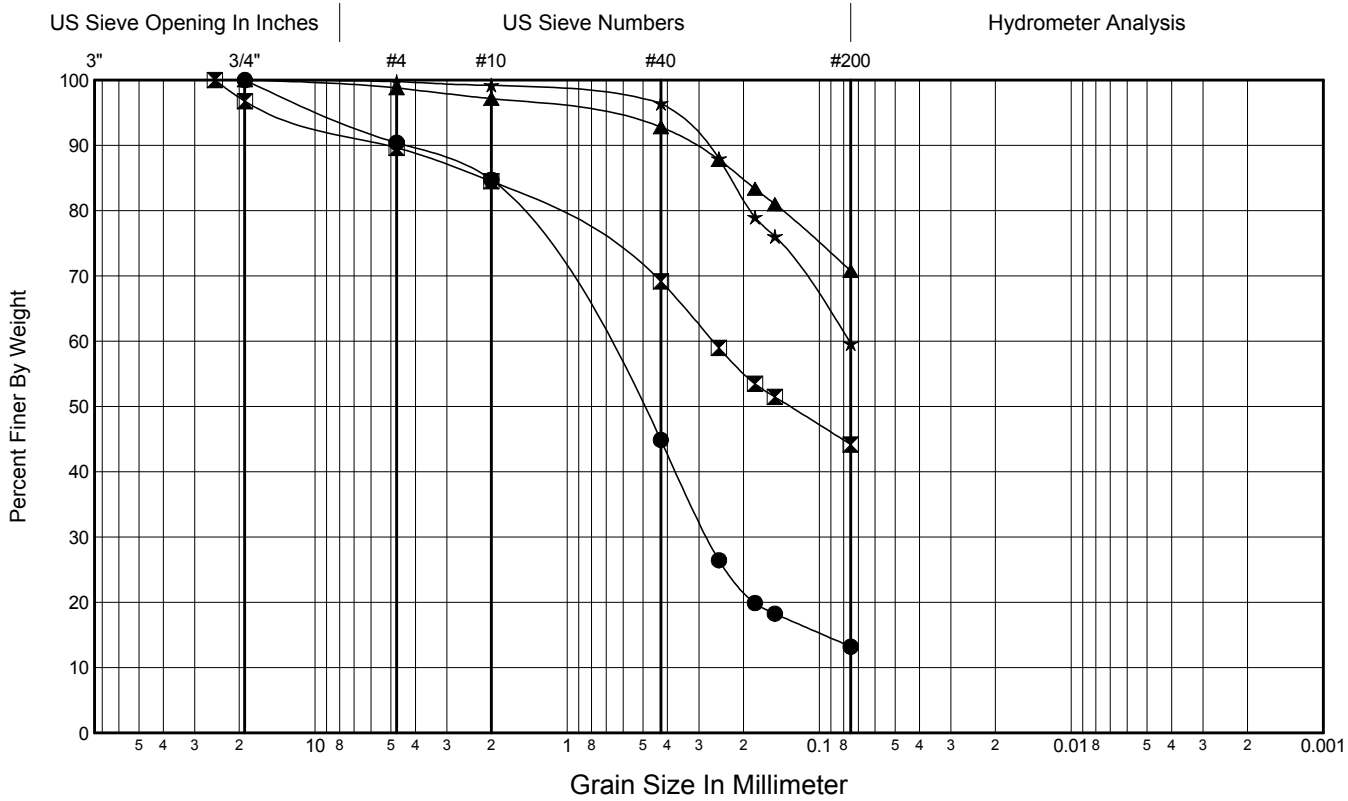
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**8.5**	**2.59**	**D-3**	**SM**	**See Boring Log**	**SILTY SAND**	**15**			
⧗	**18.5**	**5.64**	**D-7**	**SM**	**See Boring Log**	**SILTY SAND**	**20**			
▲	**25.5**	**7.77**	**D-10**	**ML**	**See Boring Log**	**SILT with SAND**	**18**			
★	**43.5**	**13.26**	**D-14**	**ML**	**See Boring Log**	**SANDY SILT**	**19**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**9.6**	**77.2**	**13.2**		
⧗	**10.4**	**45.5**	**44.2**		
▲	**1.2**	**28.0**	**70.8**		
★	**0.2**	**40.1**	**59.6**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.765**	**0.52**	**0.28**	**0.18**	
⧗	**0.264**	**0.13**			
▲					
★	**0.076**				



Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-8-05**	Sheet	**9** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

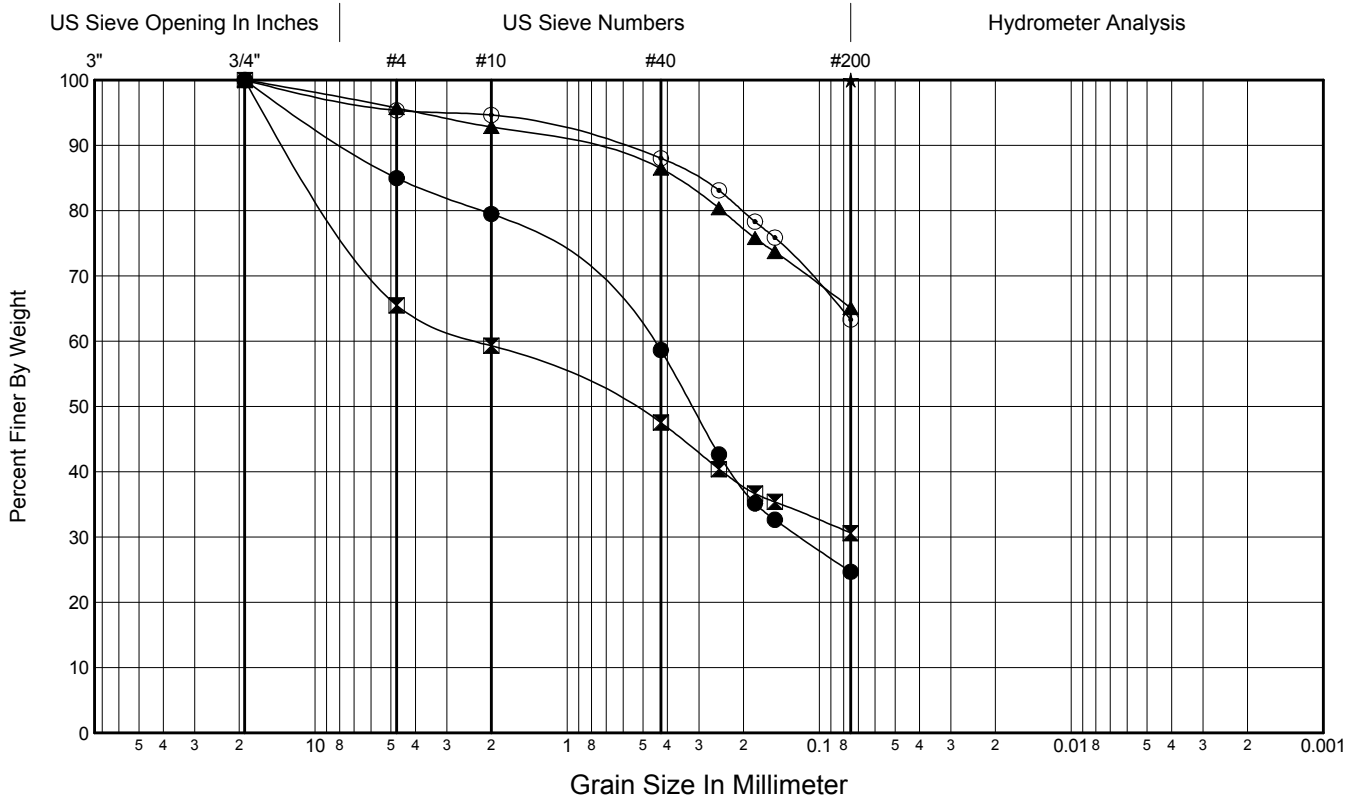
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**1.5**	**0.46**	**D-2**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**7**			
⧗	**5.5**	**1.68**	**D-4**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**146**	**57**		**NP**
▲	**11.0**	**3.35**	**D-6**	**CL**	**See Boring Log**	**SANDY LEAN CLAY**	**18**	**29**	**17**	**12**
★	**19.0**	**5.79**	**D-9**		**See Boring Log**	**Moisture content only**	**14**			
⊙	**24.0**	**7.32**	**D-11**	**ML**	**See Boring Log**	**SANDY SILT**	**18**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**15.0**	**60.3**	**24.7**		
⧗	**34.5**	**34.9**	**30.6**		
▲	**4.3**	**30.6**	**65.1**		
★	**0.0**	**0.0**	**100.0**		
⊙	**4.7**	**32.0**	**63.3**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.470**	**0.32**	**0.12**		
⧗	**2.207**	**0.59**			
▲					
★					
⊙					



Gravel	Sand			Silt and Clay
	Coarse	Medium	Fine	

Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-8-05**	Sheet	**10** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

Laboratory Summary

Washington State Department of Transportation

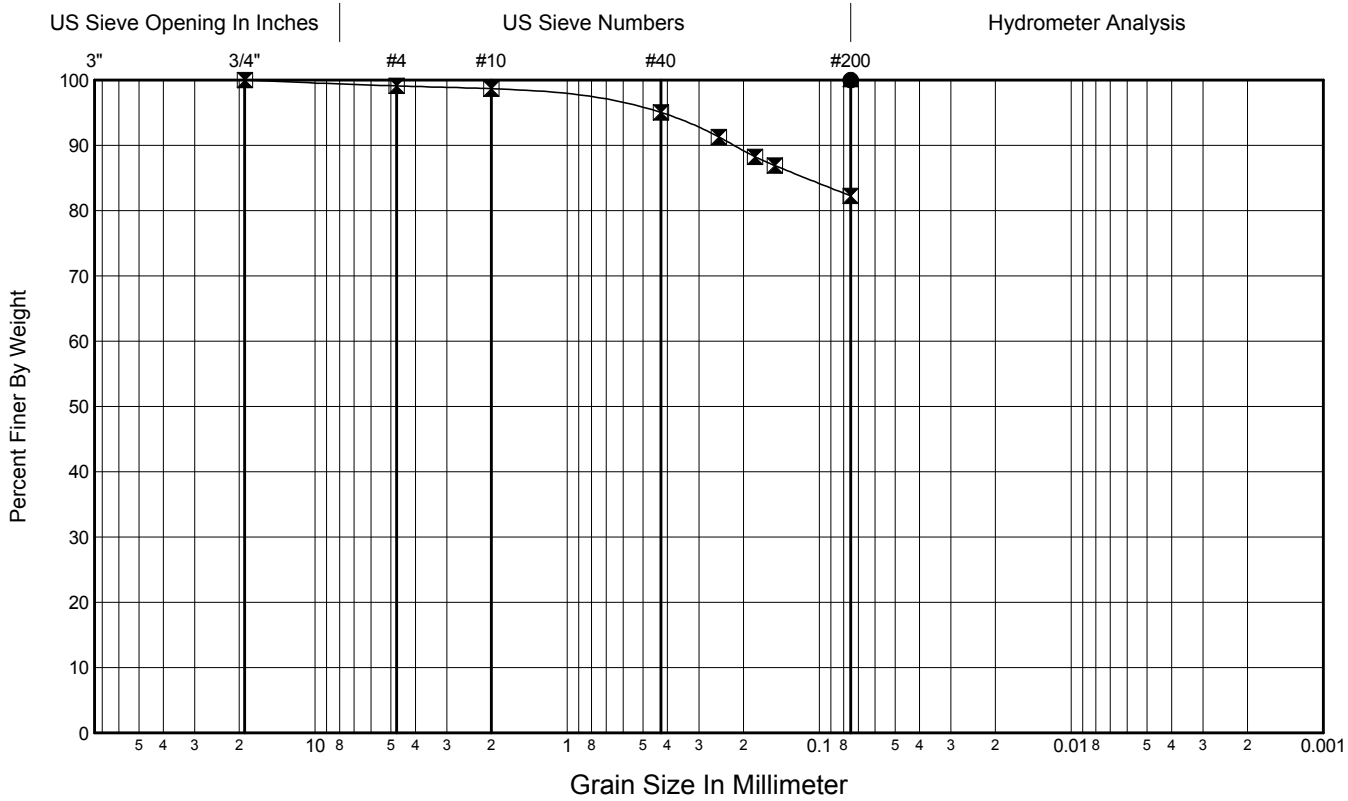
	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**26.0**	**7.92**	**D-12**		**See Boring Log**	**Moisture content only**	**18**			
⧗	**54.0**	**16.46**	**D-18**	**CH**	**See Boring Log**	**FAT CLAY with SAND**	**18**	**54**	**27**	**27**
▲	**59.0**	**17.98**	**D-19**		**See Boring Log**	**Moisture content only**	**23**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**0.0**	**0.0**	**100.0**		
⧗	**0.9**	**16.8**	**82.3**		
▲	**0.0**	**0.0**	**100.0**		

GRADATION VALUES

	D60	D50	D30	D20	D10
●					
⧗					
▲					



Job No.	**XL-2068**	Date	**August 5, 2005**
Hole No.	**KDB-9-05**	Sheet	**11** of **10**
Project	**KIRKLAND DESIGN BUILD STAGE 1**		

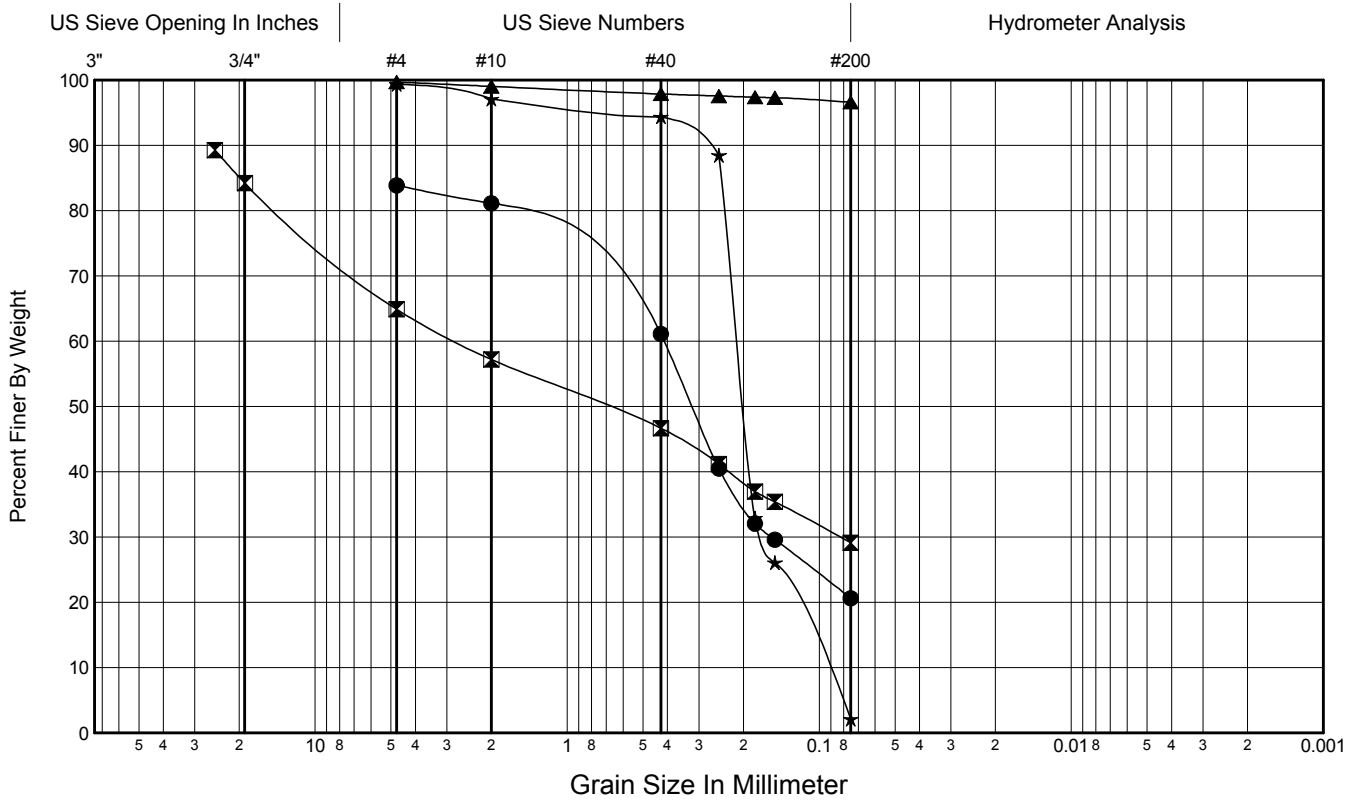
Laboratory Summary

Washington State Department of Transportation

	Depth (ft)	Depth (m)	Sample No.	USCS	Color	Description	MC%	LL	PL	PI
●	**4.0**	**1.22**	**D-1**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**39**			
⧗	**9.0**	**2.74**	**D-2**	**SM**	**See Boring Log**	**SILTY SAND with GRAVEL**	**10**			
▲	**16.5**	**5.03**	**D-5**	**ML**	**See Boring Log**	**SILT**	**25**			
★	**24.0**	**7.32**	**D-9**	**SP**	**See Boring Log**	**POORLY GRADED SAND**	**20**			

GRADATION FRACTIONS

	%Gravel	%Sand	%Fines	Cc	Cu
●	**0.0**	**63.3**	**20.6**		
⧗	**24.4**	**35.8**	**29.1**		
▲	**0.0**	**3.1**	**96.6**		
★	**0.0**	**97.3**	**2.1**	**1.4**	**2.2**

GRADATION VALUES

	D60	D50	D30	D20	D10
●	**0.413**	**0.32**	**0.15**		
⧗	**2.741**	**0.69**	**0.08**		
▲					
★	**0.211**	**0.20**	**0.17**	**0.13**	**0.094**