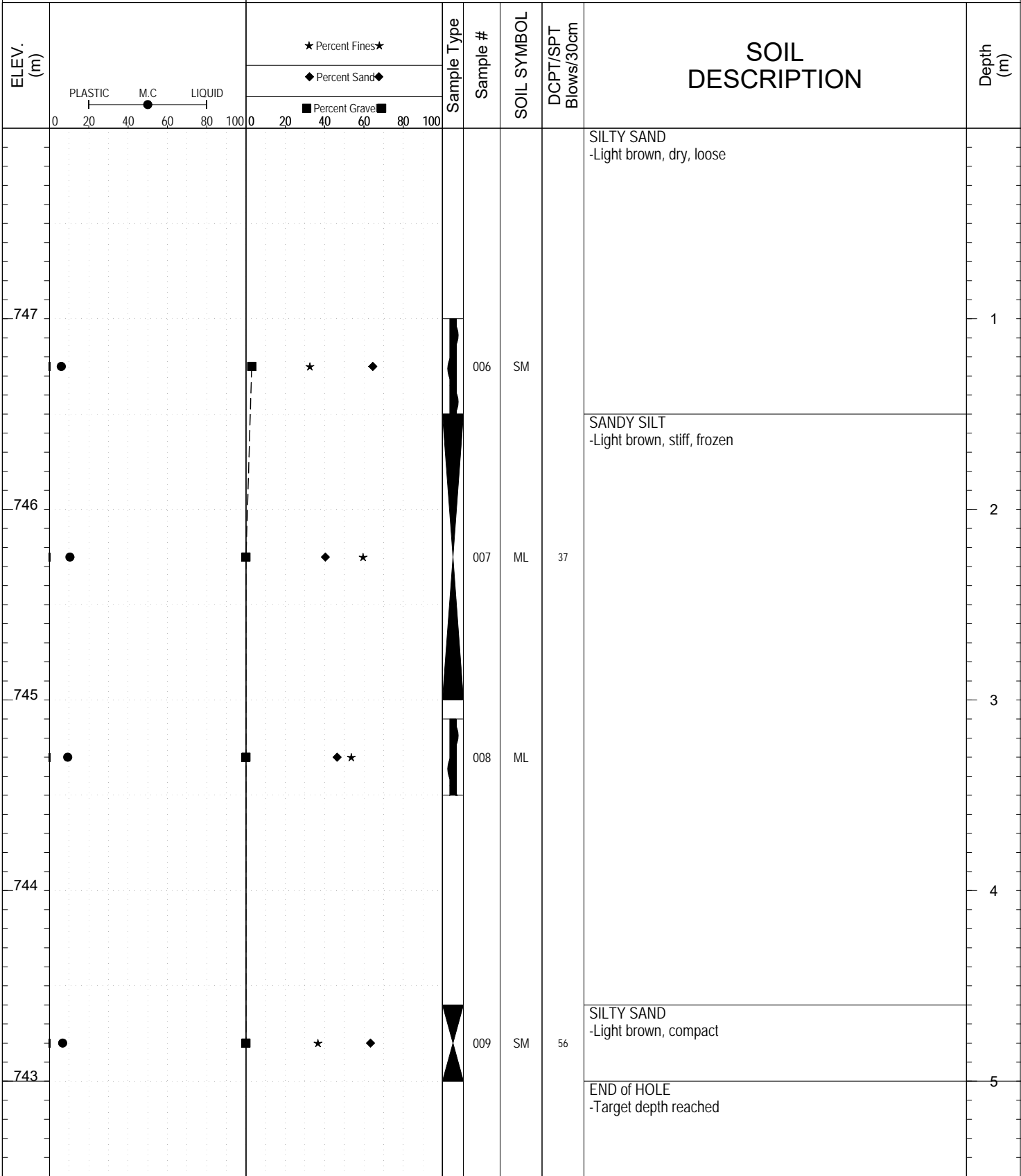


SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 905-5781				
Darkside Drilling		Alaska Highway Corridor,		PROJECT NO: 552-202101-0907-1-9				
Auger		Coordinates: Z08N N6718141m E506671m		ELEVATION: 748m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100							
747				001	SM		SILTY SAND with GRAVEL -Wet, easy penetration -Grinding in frost	1
747				002	SW-SM	83	WELL-GRADED SAND with SILT -Brown, dry -Easy drilling	2
747				003	SM		SILTY SAND -Brown, dry	2
746							-Unfrozen -Moist	2
745				004	ML	26	SANDY SILT -Brown, moist	3
744				005	ML	23	SILT -Brown, moist	4
743							END of HOLE -Target depth reached	5



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway	SOURCE/TP#: 905-5782
Darkside Drilling		Alaska Highway Corridor,	PROJECT NO: 552-202101-0907-1-9
Auger		Coordinates: Z08N N6718228m E506327m	ELEVATION: 748m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE



Highways and Public Works
Transportation Engineering Branch

LOGGED BY: KAE/GMK	Termination Depth: 5m
COMPILED BY: R.Stilwell	Complete: 2/10/2017 11:15:00 AM
REVIEWED BY: K.Elmer	Pit #: Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 905-5783				
Darkside Drilling		Alaska Highway Corridor,		PROJECT NO: 552-202101-0907-1-9				
Auger		Coordinates: Z08N N6718148m E506663m		ELEVATION: 744m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>PLASTIC M.C LIQUID</p> <p>0 20 40 60 80 100</p> </div> <div style="width: 45%;"> <p>★ Percent Fines★</p> <p>◆ Percent Sand◆</p> <p>■ Percent Gravel■</p> <p>0 20 40 60 80 100</p> </div> </div>		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
743			010	SM		SILTY SAND with GRAVEL -Light brown, loose, dry -Frozen	1	
742						POORLY GRADED SAND with SILT -Light brown, loose, dry -Easier drilling	2	
741						POORLY GRADED SAND with SILT -Light brown, dry	3	
740							4	
739							5	
						END of HOLE -Target depth reached		



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 905-5784				
Darkside Drilling		Alaska Highway Corridor,		PROJECT NO: 552-202101-0907-1-9				
Auger		Coordinates: Z08N N6718228m E506409m		ELEVATION: 746m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100 0 20 40 60 80 100							
745				013	SM		SILTY SAND with GRAVEL -Light greyish brown, dry, frozen -Tan	1
744				014	SP-SM		-Light brown, loose, dry	2
743				015	SP-SM	15		3
742				016	SP-SM	14		4
741							END of HOLE -Target depth reached	5

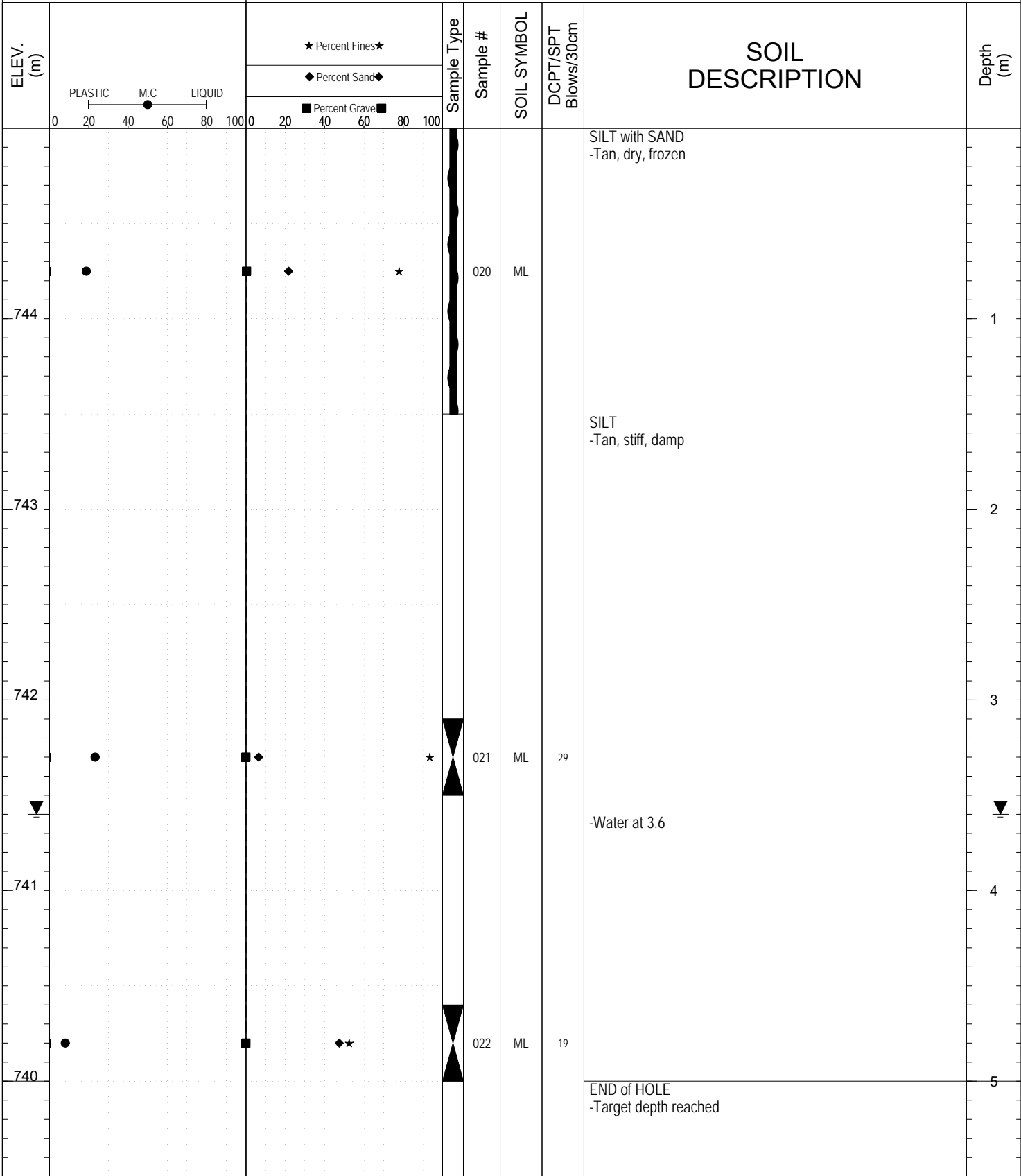


SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 905-5785				
Darkside Drilling		Alaska Highway Corridor,		PROJECT NO: 552-202101-0907-1-9				
Auger		Coordinates: Z08N N6718230m E506328m		ELEVATION: 745m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>PLASTIC M.C LIQUID</p> <p>0 20 40 60 80 100</p> </div> <div style="width: 45%;"> <p>★ Percent Fines★</p> <p>◆ Percent Sand◆</p> <p>■ Percent Gravel■</p> <p>0 20 40 60 80 100</p> </div> </div>		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
744			017	SM		SILTY SAND -Tan, dry, loose -Frozen	1	
743						POORLY GRADED SAND with SILT -Tan, unfrozen	2	
742							3	
741							4	
740							5	
						END of HOLE -Target depth reached		



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway	SOURCE/TP#: 905-5786
Darkside Drilling		Alaska Highway Corridor,	PROJECT NO: 552-202101-0907-1-9
Auger		Coordinates: Z08N N6718067m E506718m	ELEVATION: 745m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE



Highways and Public Works
 Transportation Engineering Branch

LOGGED BY: KAE/GMK	Termination Depth: 5m
COMPILED BY: R.Stilwell	Complete: 2/10/2017 4:40:00 PM
REVIEWED BY: K.Elmer	Pit #: Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 905-5787				
Darkside Drilling		Alaska Highway Corridor,		PROJECT NO: 552-202101-0907-1-9				
Auger		Coordinates: Z08N N6718172m E506872m		ELEVATION: 752m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC M.C LIQUID 0 20 40 60 80 100							
751			023	SM			SILTY SAND -Brown, dry, frozen -Tan	1
750								2
749								3
748			024A	SM	15		SANDY SILT -Light brown	4
			024B	ML			-Tan, liquifiable	
747			025	GW-GM	44		WELL-GRADED GRAVEL with SILT and SAND	5
							END of HOLE -Target depth reached	



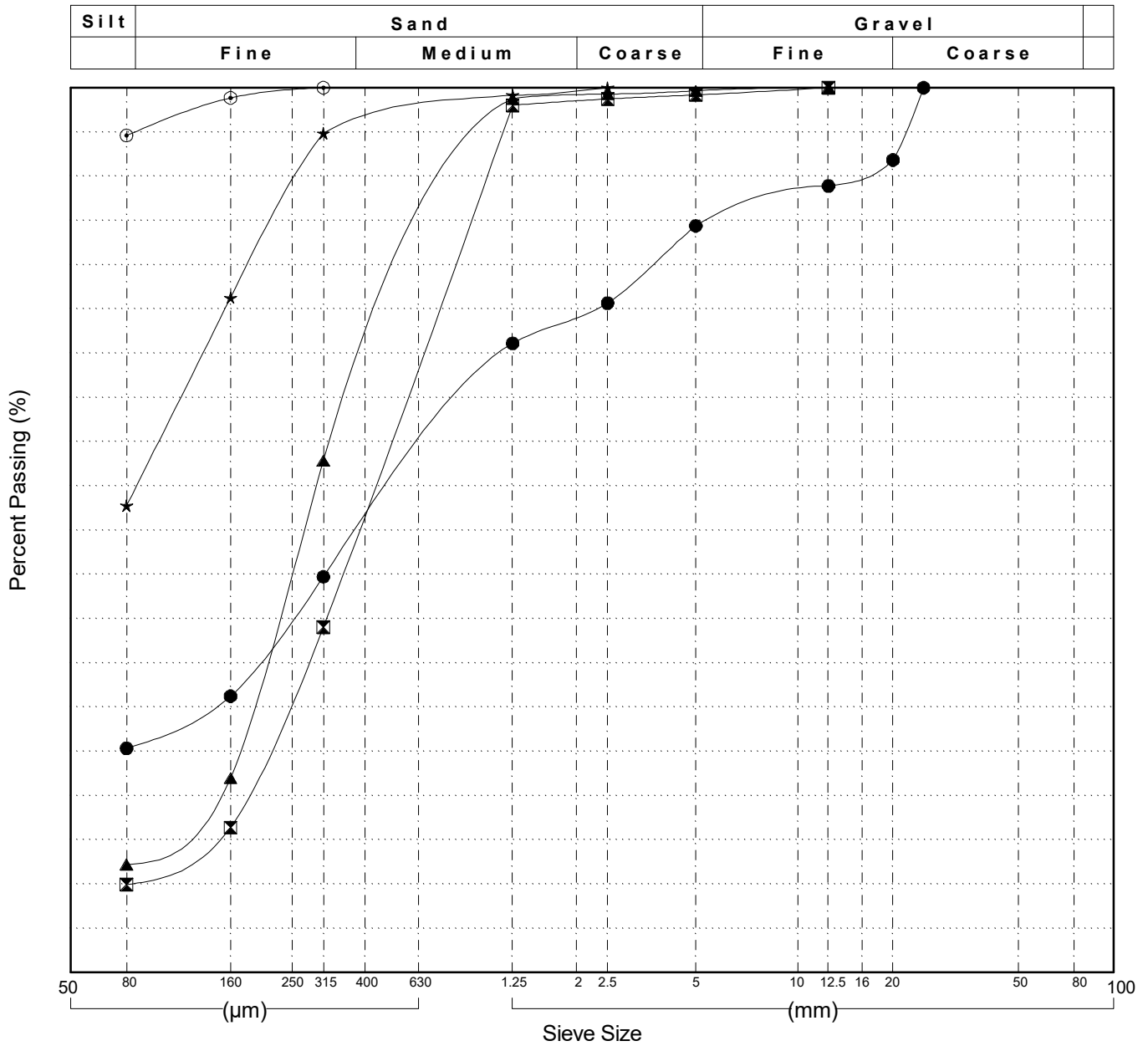
SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 905-5788					
Darkside Drilling		Alaska Highway Corridor,		PROJECT NO: 552-202101-0907-1-9					
Auger		Coordinates: Z08N N6741665m E488690m		ELEVATION: 694m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input checked="" type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE		
ELEV. (m)		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
693					026	SM		SILTY SAND with GRAVEL -Dry, frozen -Tight drilling	1
692					027	SM		SILTY SAND -Brown, damp to moist	2
691								END of HOLE -Target depth reached	3
690									4
689									5
		Highways and Public Works Transportation Engineering Branch			LOGGED BY: KAE/GMK	Termination Depth: 5m			
					COMPILED BY: R.Stilwell	Complete: 2/13/2017			
					REVIEWED BY: K.Elmer	Pit #:		Page 1 of 1	

GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5781
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718141m E506671m	ELEVATION: 748m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 001	001	0.5 to 1.0	SILTY SAND with GRAVEL(SM)	11.9	NP	NP	NP		
☒ 002	002	1.0 to 1.4	WELL-GRADED SAND with SILT(SW-SM)	3.0	NP	NP	NP	1.5	6.8
▲ 003	003	1.2 to 1.5	SILTY SAND(SM)	3.3	NP	NP	NP	1.6	5.4
★ 004	004	3.0 to 3.3	SANDY SILT(ML)	11.5	NP	NP	NP		
⊙ 005	005	4.0 to 4.5	SILT(ML)	27.1	NP	NP	NP		

Field#	Lab#	% PASSING															% Breakdown			
		100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay	
● 001	001	100.0	100.0	100.0	100.0	91.8	88.9	87.9	84.4	75.7	71.1	58.0	44.7	31.2	25.3	15.6	59.0	25.3		
☒ 002	002	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.2	98.7	98.0	68.7	39.0	16.4	10.0	0.8	89.2	10.0		
▲ 003	003	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.6	99.3	98.7	78.4	57.9	22.0	12.2	0.4	87.4	12.2		
★ 004	004	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	97.0	94.8	76.3	52.8	0.0	47.2	52.8		
⊙ 005	005	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.8	94.6	0.0	5.4	94.6		



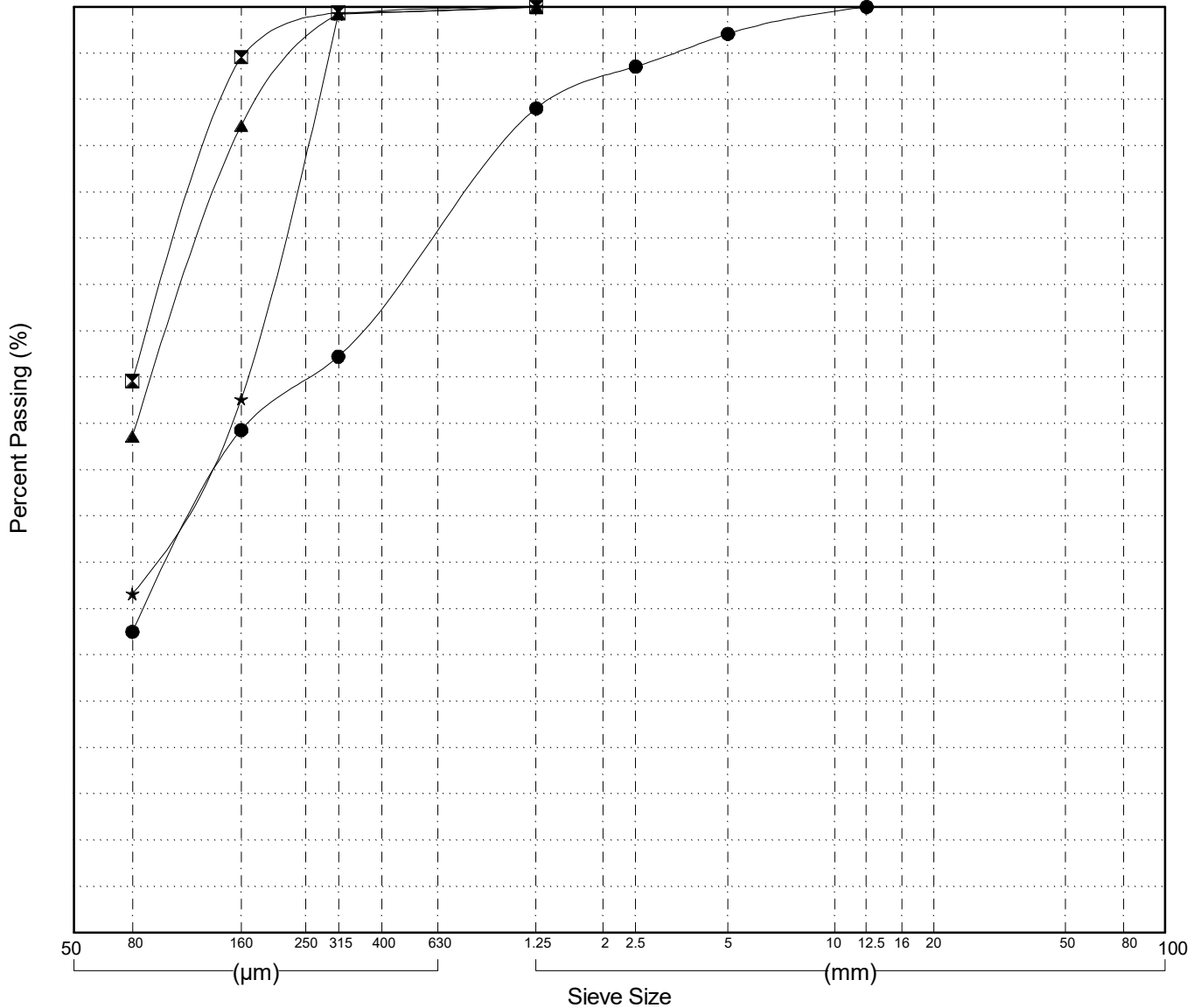
GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5782
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718228m E506327m	ELEVATION: 748m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 006	006	1.0 to 1.5	SILTY SAND(SM)	6.0	NP	NP	NP		
☒ 007	007	1.5 to 3.0	SANDY SILT(ML)	10.4	NP	NP	NP		
▲ 008	008	3.1 to 3.5	SANDY SILT(ML)	9.3	NP	NP	NP		
★ 009	009	4.6 to 5.0	SILTY SAND(SM)	6.7	NP	NP	NP		

Field#	Lab#	% PASSING	Sieve Size (mm)														% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
● 006	006	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.3	97.1	93.6	89.0	75.7	62.2	54.3	32.5	2.9	64.6	32.5	
☒ 007	007	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.4	94.6	59.6	0.0	40.4	59.6	
▲ 008	008	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.2	87.2	53.6	0.0	46.4	53.6	
★ 009	009	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.2	57.6	36.6	0.0	63.4	36.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



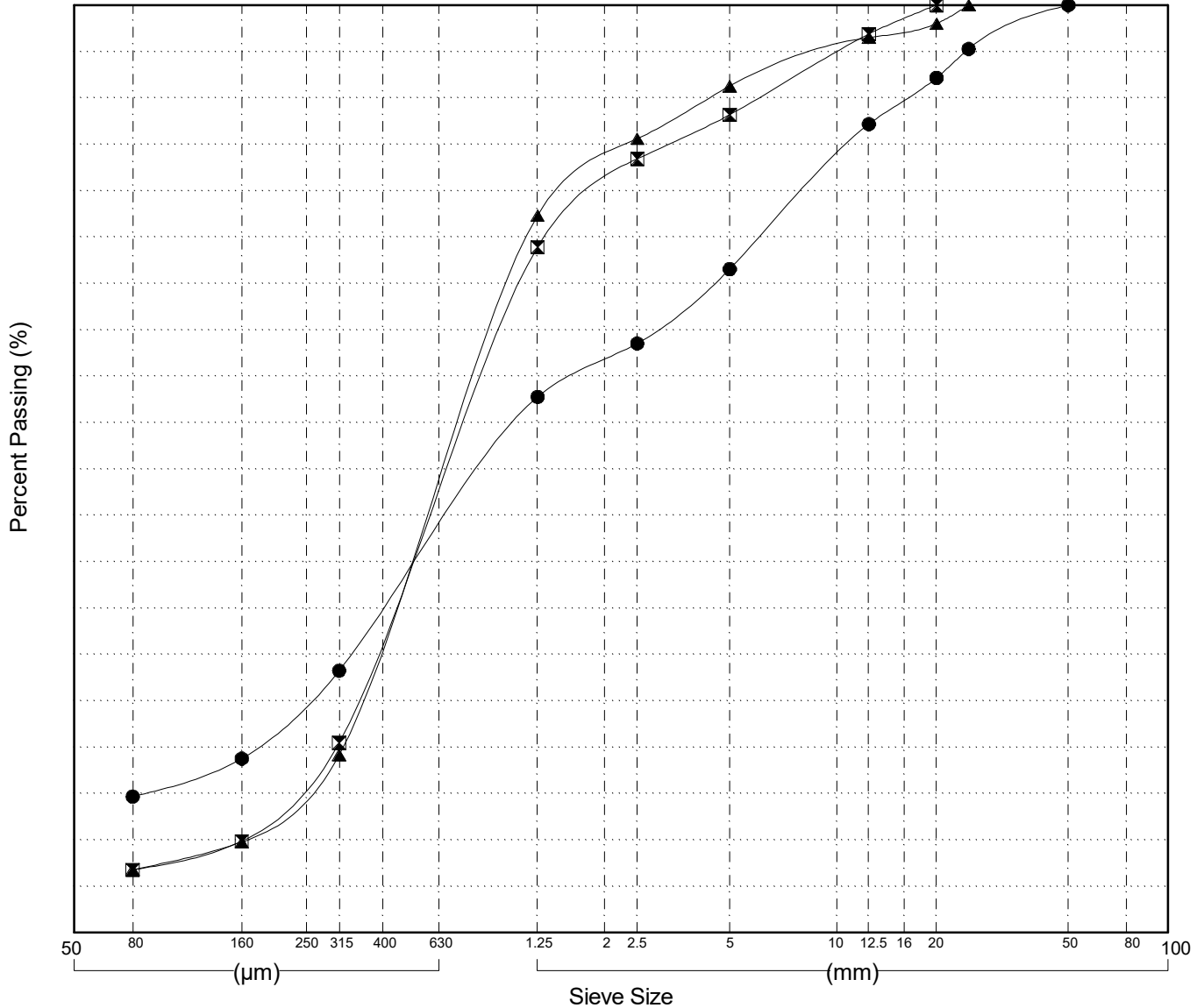
GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5783
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718148m E506663m	ELEVATION: 744m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 010	010	0.2 to 1.5	SILTY SAND with GRAVEL(SM)	5.0	NP	NP	NP		
☒ 011	011	3.1 to 3.5	POORLY GRADED SAND with SILT(SP-SM)	2.7	NP	NP	NP	1.2	5.4
▲ 012	012	4.6 to 5.0	POORLY GRADED SAND with SILT(SP-SM)	3.3	NP	NP	NP	1.2	5.1

Field#	Lab#	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown			
																Gravel	Sand	Silt	Clay
● 010	010	100.0	100.0	100.0	95.3	92.2	87.2	83.6	71.5	63.5	57.8	43.1	28.2	18.8	14.7	28.5	56.9	14.7	
☒ 011	011	100.0	100.0	100.0	100.0	100.0	96.9	94.9	88.2	83.4	73.9	47.3	20.5	9.9	6.8	11.8	81.4	6.8	
▲ 012	012	100.0	100.0	100.0	100.0	98.0	96.5	95.3	91.3	85.6	77.3	48.4	19.2	9.8	6.8	8.7	84.5	6.8	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



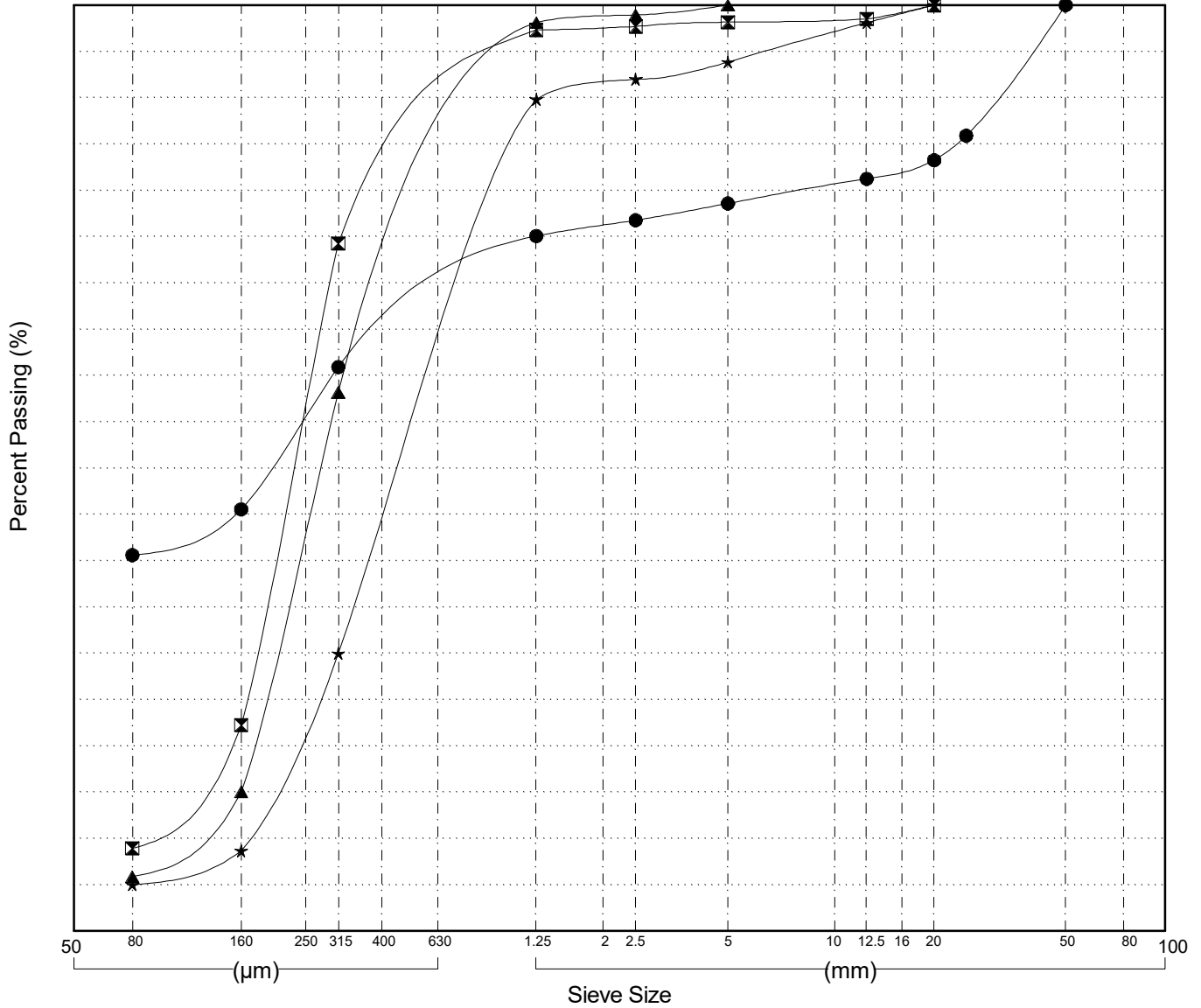
GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5784
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718228m E506409m	ELEVATION: 746m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 013	013	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	9.7	NP	NP	NP		
☒ 014	014	1.5 to 3.0	POORLY GRADED SAND with SILT(SP-SM)	2.7	NP	NP	NP	1.5	3.3
▲ 015	015	3.1 to 3.5	POORLY GRADED SAND with SILT(SP-SM)	2.0	NP	NP	NP	1.2	3.2
★ 016	016	4.6 to 5.0	POORLY GRADED SAND with SILT(SP-SM)	2.1	NP	NP	NP	0.9	3.8

Field#	Lab#	% PASSING														% Breakdown			
		100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
● 013	013	100.0	100.0	100.0	85.9	83.3	81.2	80.6	78.6	76.8	75.1	68.0	60.9	45.5	40.6	21.4	38.0	40.6	
☒ 014	014	100.0	100.0	100.0	100.0	100.0	98.5	98.4	98.2	97.7	97.3	85.9	74.3	22.2	8.9	1.8	89.2	8.9	
▲ 015	015	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.0	98.1	78.3	58.2	15.0	5.9	0.0	94.1	5.9	
★ 016	016	100.0	100.0	100.0	100.0	100.0	98.1	97.1	93.8	92.0	89.8	60.1	30.0	8.7	5.0	6.2	88.8	5.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



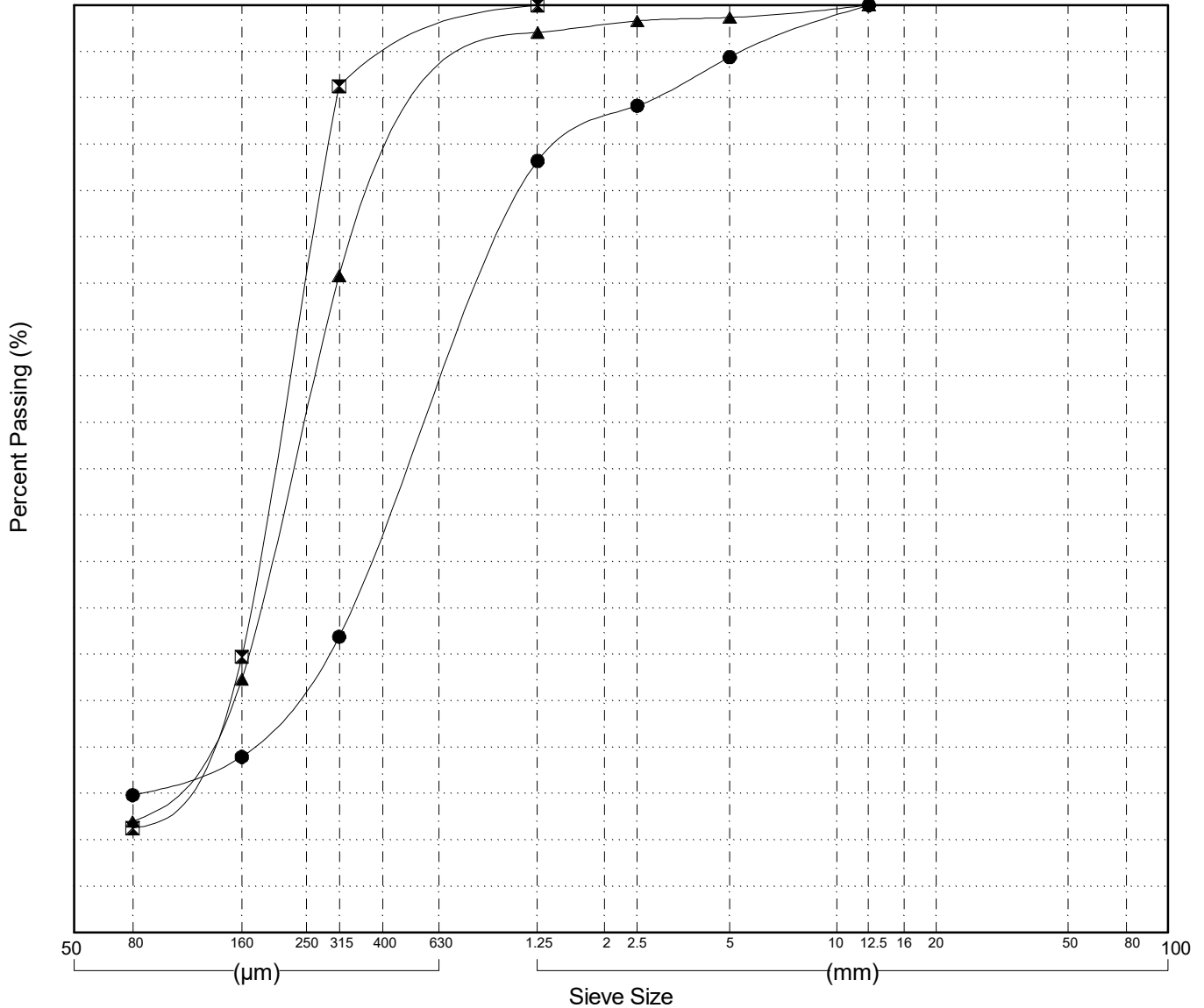
GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5785
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718230m E506328m	ELEVATION: 745m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 017	017	0.1 to 1.5	SILTY SAND(SM)	3.4	NP	NP	NP		
☒ 018	018	3.1 to 3.6	POORLY GRADED SAND with SILT(SP-SM)	3.5	NP	NP	NP	1.6	3.1
▲ 019	019	4.6 to 5.0	POORLY GRADED SAND with SILT(SP-SM)	4.7	NP	NP	NP	1.5	3.9

Field#	Lab#	% PASSING	Sieve Size (mm)														% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
● 017	017	100.0	100.0	100.0	100.0	100.0	100.0	98.7	94.4	89.2	83.2	57.7	31.9	19.0	14.8	5.6	79.6	14.8		
☒ 018	018	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.7	91.3	29.7	11.3	0.0	88.7	11.3		
▲ 019	019	100.0	100.0	100.0	100.0	100.0	100.0	99.7	98.7	98.3	97.1	84.0	70.8	27.3	12.0	1.3	86.7	12.0		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



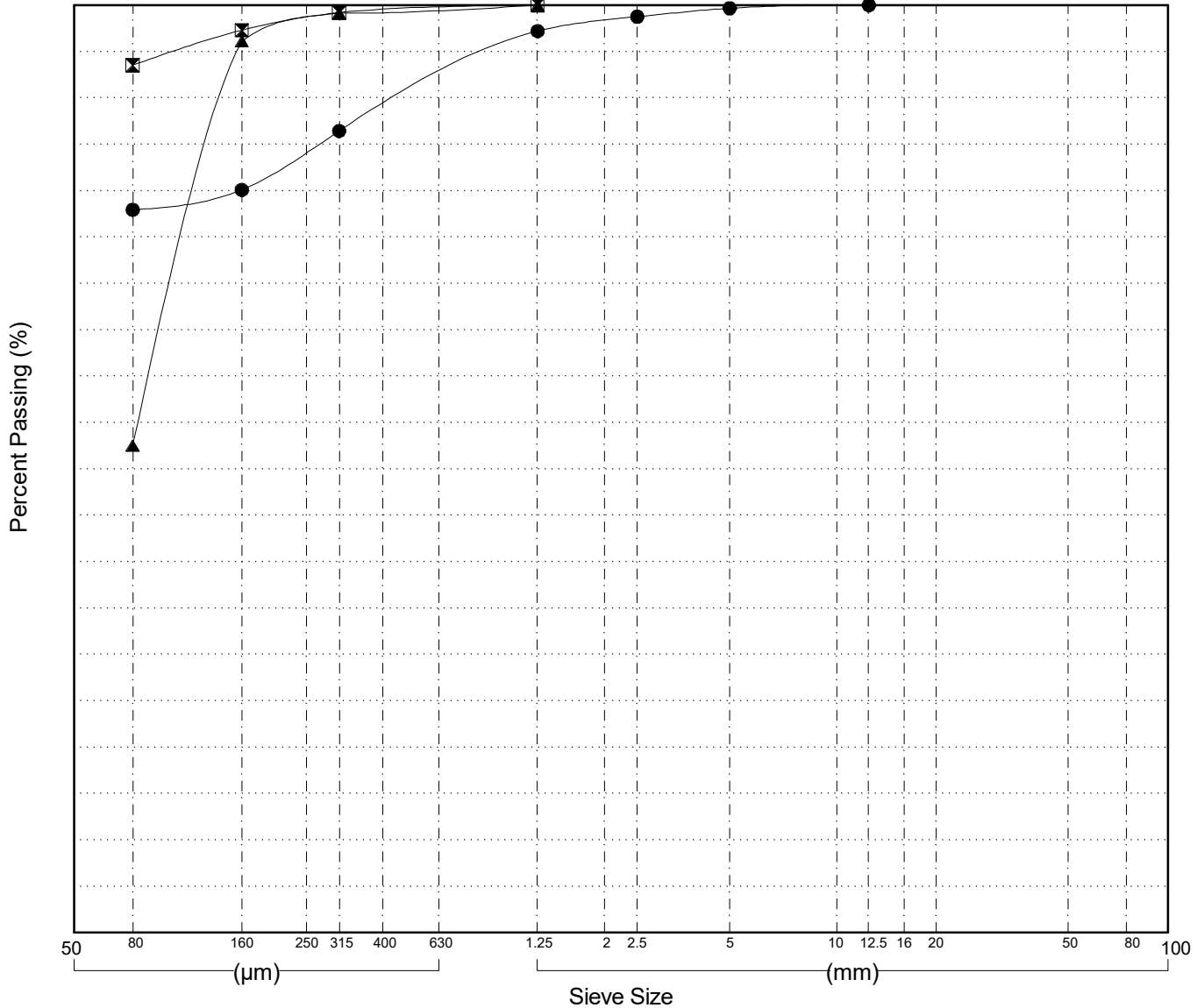
GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5786
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718067m E506718m	ELEVATION: 745m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 020	020	0.0 to 1.5	SILT with SAND(ML)	18.7	NP	NP	NP		
☒ 021	021	3.1 to 3.5	SILT(ML)	23.2	NP	NP	NP		
▲ 022	022	4.6 to 5.0	SANDY SILT(ML)	8.0	NP	NP	NP		

Field#	Lab#	% PASSING	Sieve Size													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt
● 020	020	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.7	98.8	97.2	91.9	86.4	80.1	77.9	0.3	21.7	77.9	
☒ 021	021	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.2	97.3	93.5	0.0	6.5	93.5	
▲ 022	022	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.1	96.1	52.5	0.0	47.5	52.5	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
Transportation Engineering Branch

LOGGED BY: KAE/GMK
COMPILED BY: R.Stilwell
REVIEWED BY: K.Elmer

Pit #
Complete: 2/10/2017 4:40:00 PM

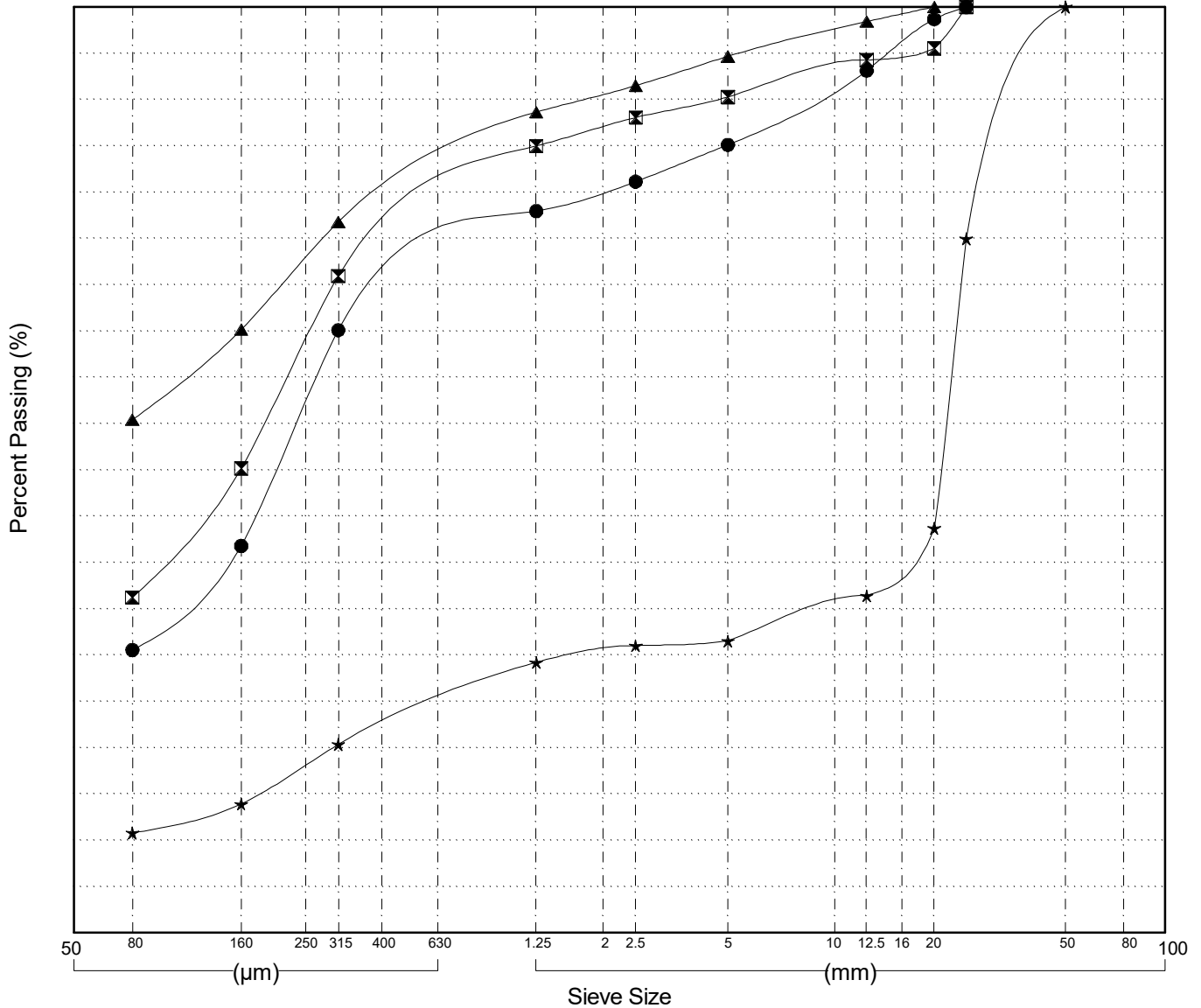
GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5787
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6718172m E506872m	ELEVATION: 752m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 023	023	0.0 to 1.5	SILTY SAND(SM)	5.9	NP	NP	NP		
☒ 024A	024A	3.1 to 3.5	SILTY SAND(SM)	7.5	NP	NP	NP		
▲ 024B	024B	3.4 to 3.5	SANDY SILT(ML)	12.2	NP	NP	NP		
★ 025	025	4.6 to 5.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	5.1	NP	NP	NP	2.1	363.7

Field#	Lab#	% PASSING	Sieve Size (mm)													% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
● 023	023	100.0	100.0	100.0	100.0	100.0	98.7	93.1	91.3	85.1	81.1	77.9	71.6	65.1	41.8	30.5	14.9	54.6	30.5	
☒ 024A	024A	100.0	100.0	100.0	100.0	95.5	94.2	93.3	90.3	88.1	85.0	78.0	70.9	50.1	36.2	9.7	54.0	36.2		
▲ 024B	024B	100.0	100.0	100.0	100.0	100.0	98.4	97.5	94.7	91.5	88.6	82.7	76.8	65.2	55.4	5.3	39.2	55.4		
★ 025	025	100.0	100.0	100.0	75.0	43.7	36.4	35.3	31.5	31.0	29.2	24.8	20.3	13.9	10.8	68.5	20.7	10.8		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
Transportation Engineering Branch

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COMPILED BY: R.Stilwell
REVIEWED BY: K.Elmer

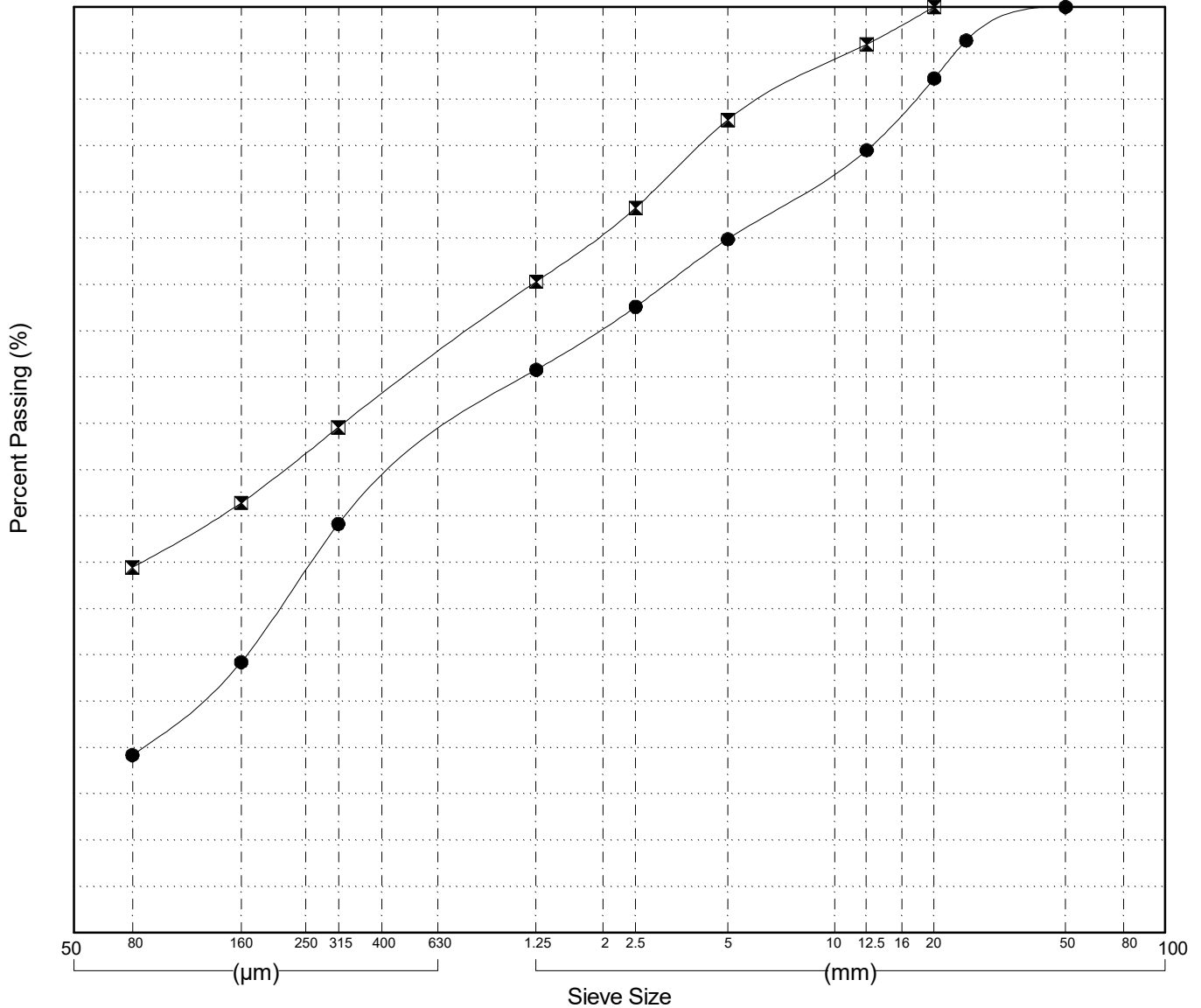
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GRAIN SIZE ANALYSIS	Alaska Highway Corridor	SOURCE/TP#: 905-5788
Darkside Drilling		PROJECT NO: 552-202101-0907-1-9
Auger	Coordinates: Z08N N6741665m E488690m	ELEVATION: 694m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 026	026	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	3.5	NP	NP	NP													
☒ 027	027	1.5 to 3.0	SILTY SAND(SM)	7.4	NP	NP	NP													
Field#	Lab#	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown				
● 026	026	100.0	100.0	100.0	96.4	92.3	84.5	82.3	74.9	67.6	60.8	52.5	44.2	29.2	19.2	Gravel	Sand	Silt	Clay	
☒ 027	027	100.0	100.0	100.0	100.0	100.0	96.0	94.1	87.8	78.3	70.3	62.5	54.6	46.4	39.5	12.2	48.3	39.5		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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