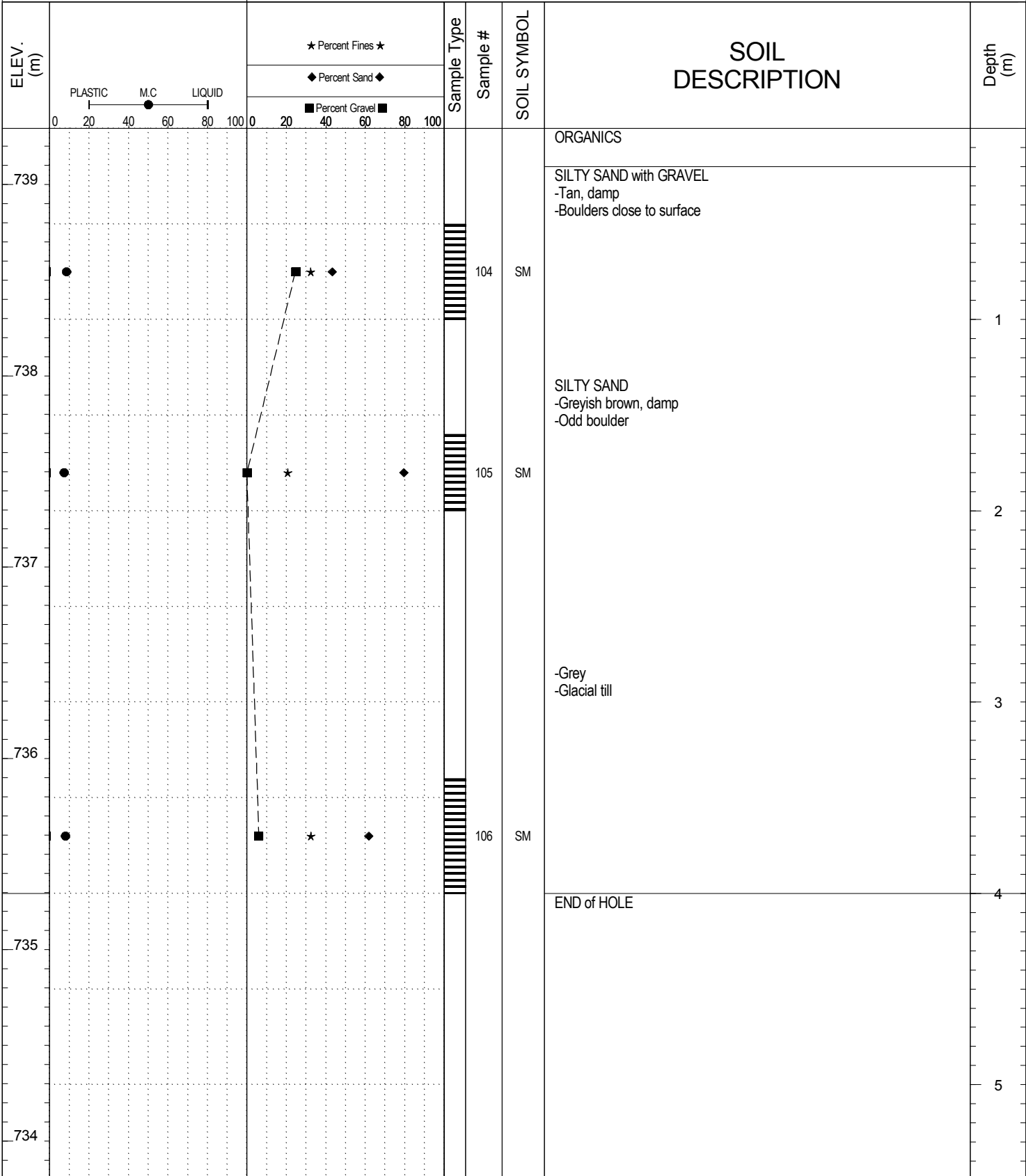


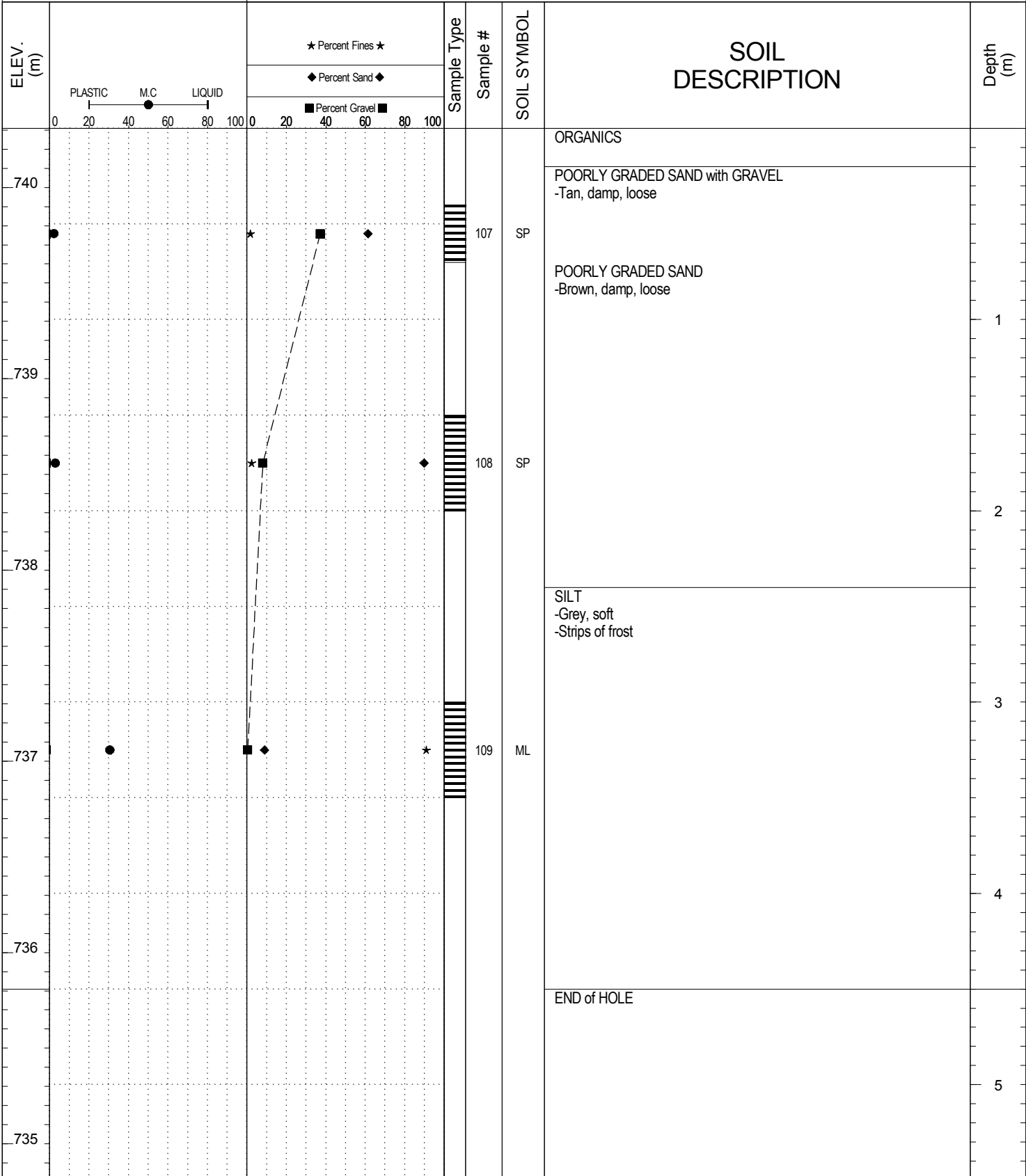
SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Hwy	SOURCE/TP#: 802-4445
Deadman		Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC		Coordinates: Z8V N644465.2541m E6664416.474m	ELEVATION: 739.294556m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



SUBSURFACE EXPLORATION AND TEST REPORT	Alaska Hwy	SOURCE/TP#: 802-4446
Deadman	Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644392.8471m E6664366.024m	ELEVATION: 740.309204m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE

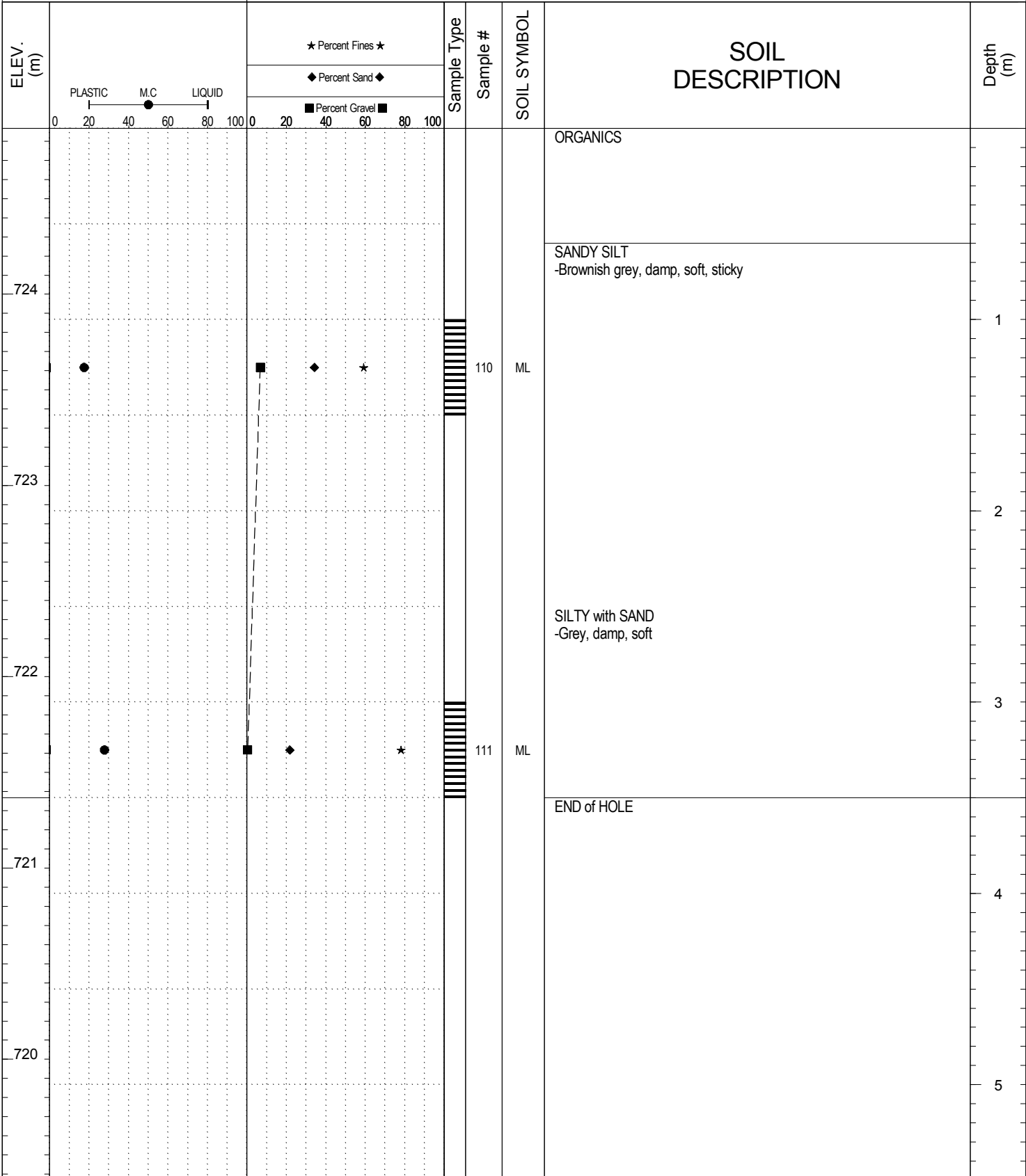


**Highways and Public Works  
Transportation Engineering Branch**

LOGGED BY: B.Tyhy	Termination Depth: 4.5m
REVIEWED BY: M. Idrees	Complete: 7/21/2014 10:20:00 AM
PROJECT ENGINEER: M. Idrees	Pit #: 105-C-03C Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT	Alaska Hwy	SOURCE/TP#: 802-4447
Deadman	Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644310.4901m E6664320.759m	ELEVATION: 724.867493m

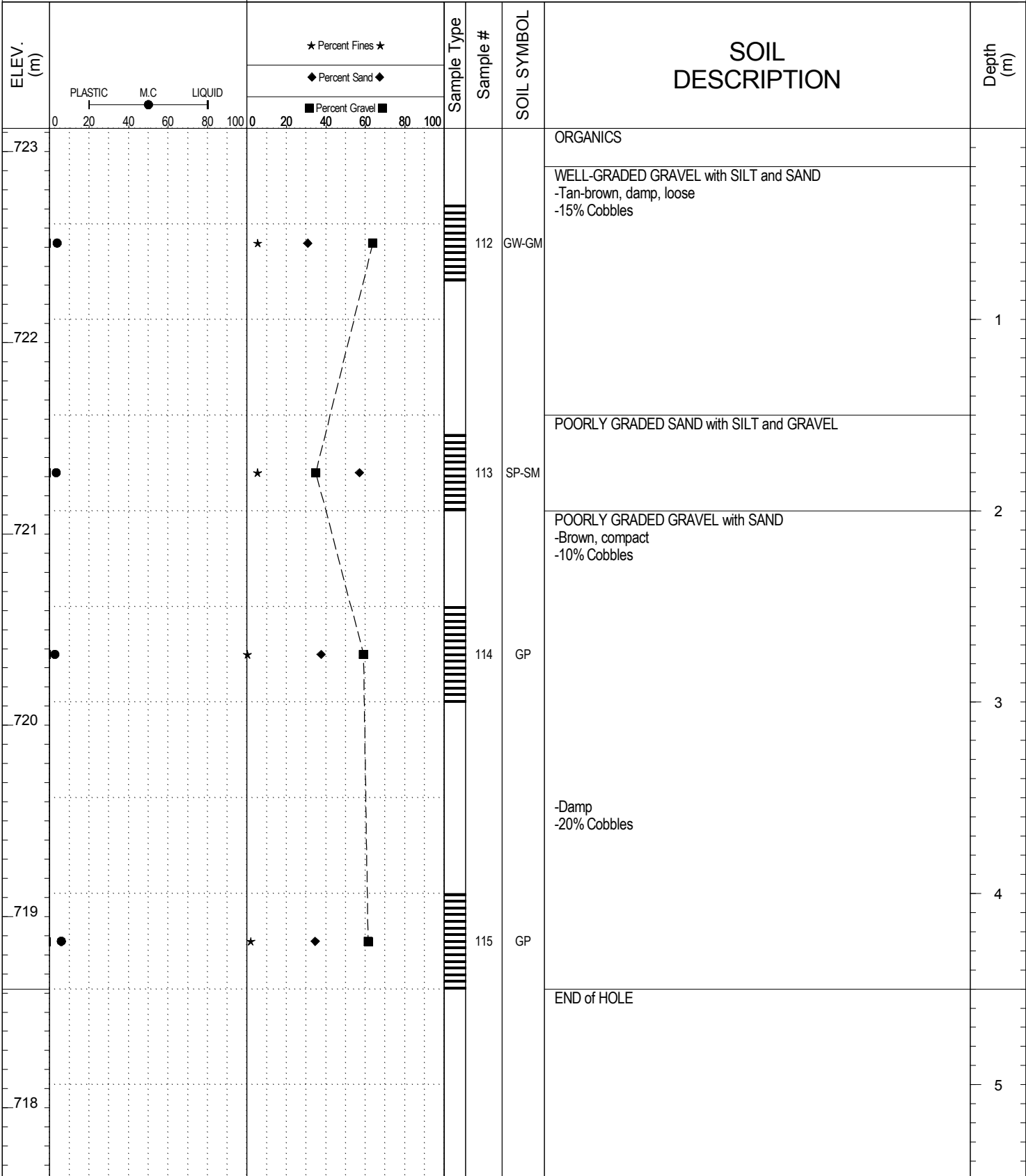
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**Highways and Public Works  
Transportation Engineering Branch**

LOGGED BY: B.Tyhy	Termination Depth: 3.5m
REVIEWED BY: M. Idrees	Complete: 7/21/2014 11:20:00 AM
PROJECT ENGINEER: M. Idrees	Pit #: 105-C-03C Page 1 of 1

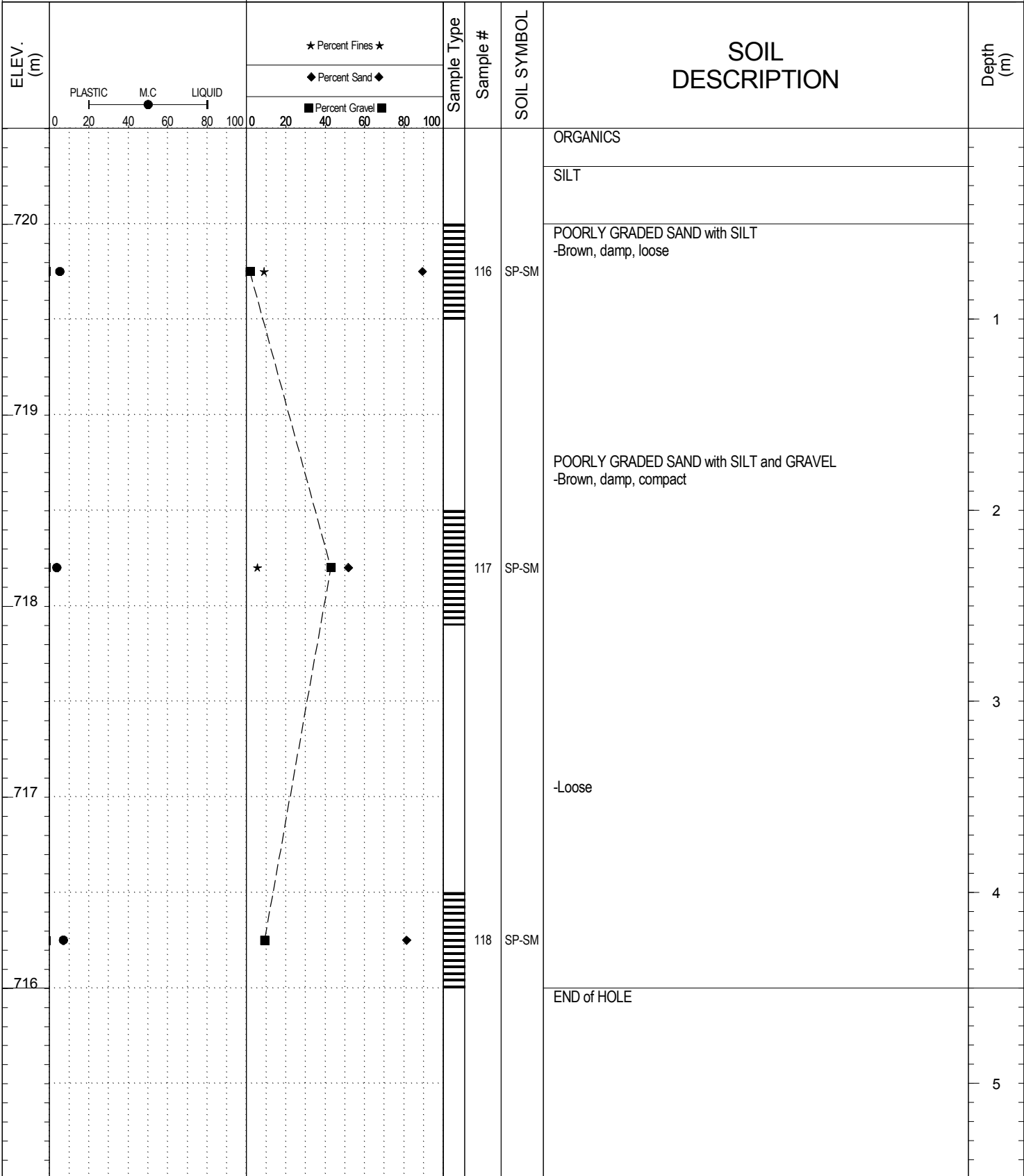
SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



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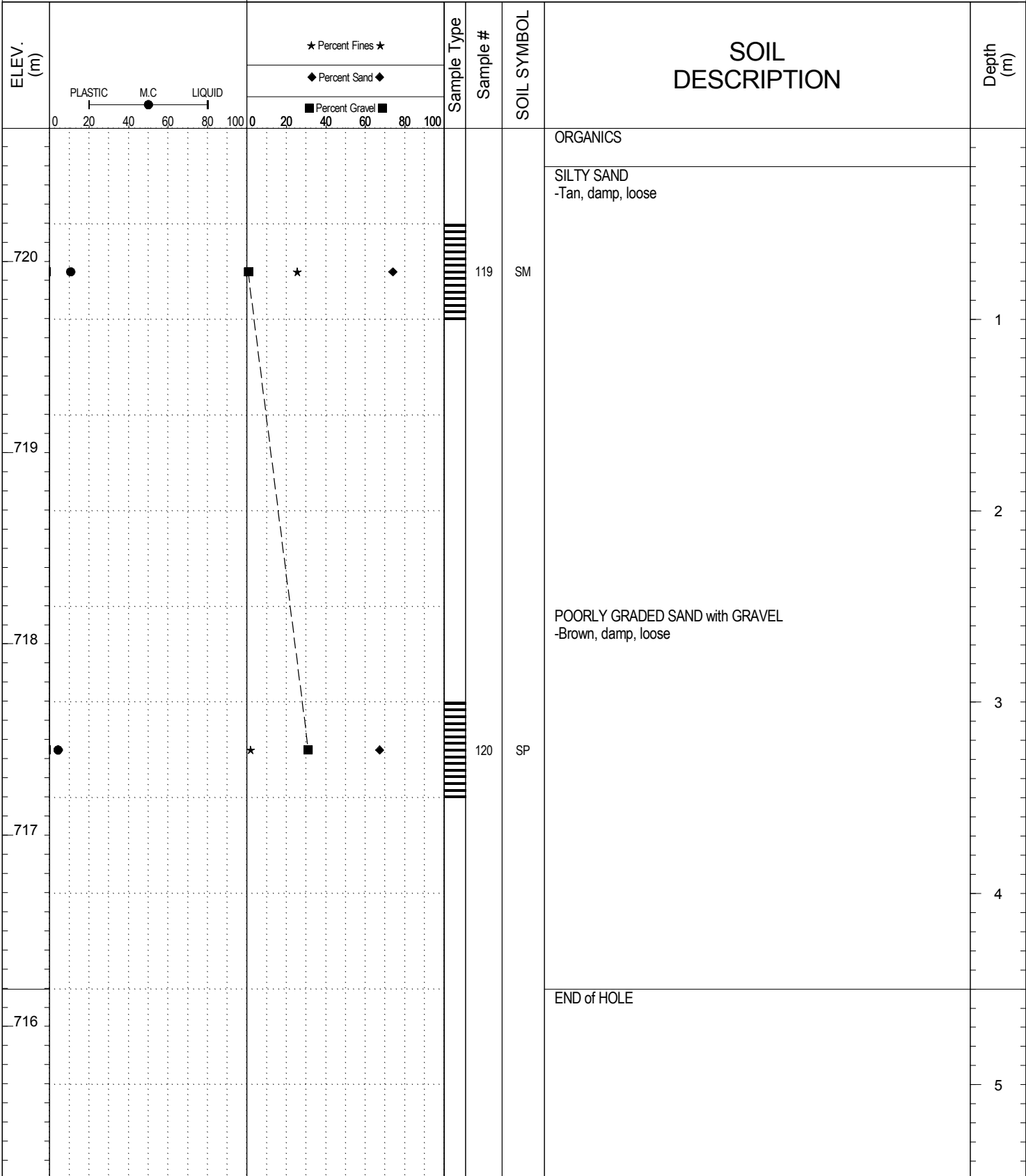
SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Hwy	SOURCE/TP#: 802-4449
Deadman		Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC		Coordinates: Z8V N644206.1004m E6664204.061m	ELEVATION: 720.50238m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE

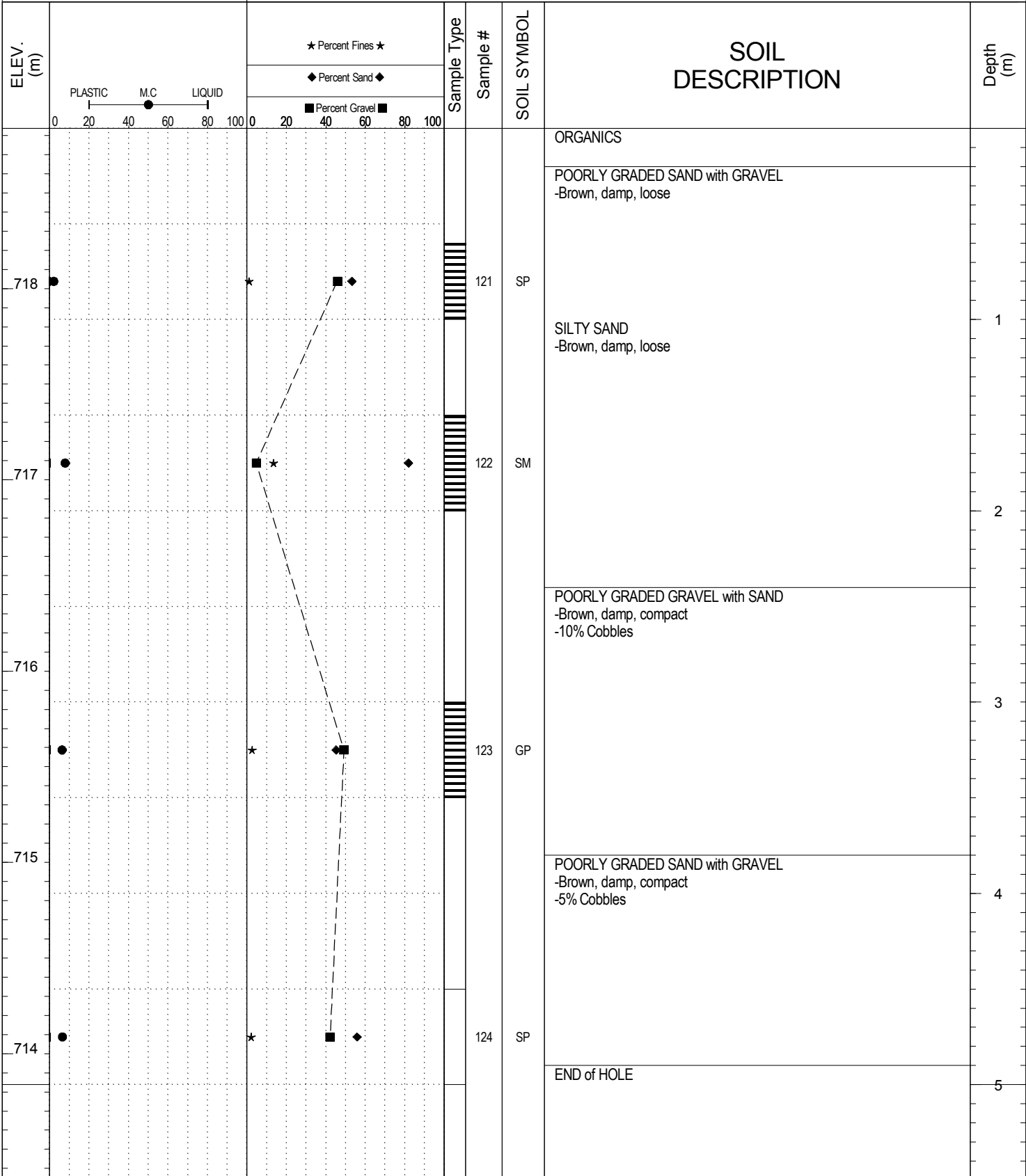


SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Hwy	SOURCE/TP#: 802-4450
Deadman		Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC		Coordinates: Z8V N644205.3591m E6664117.967m	ELEVATION: 720.695312m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



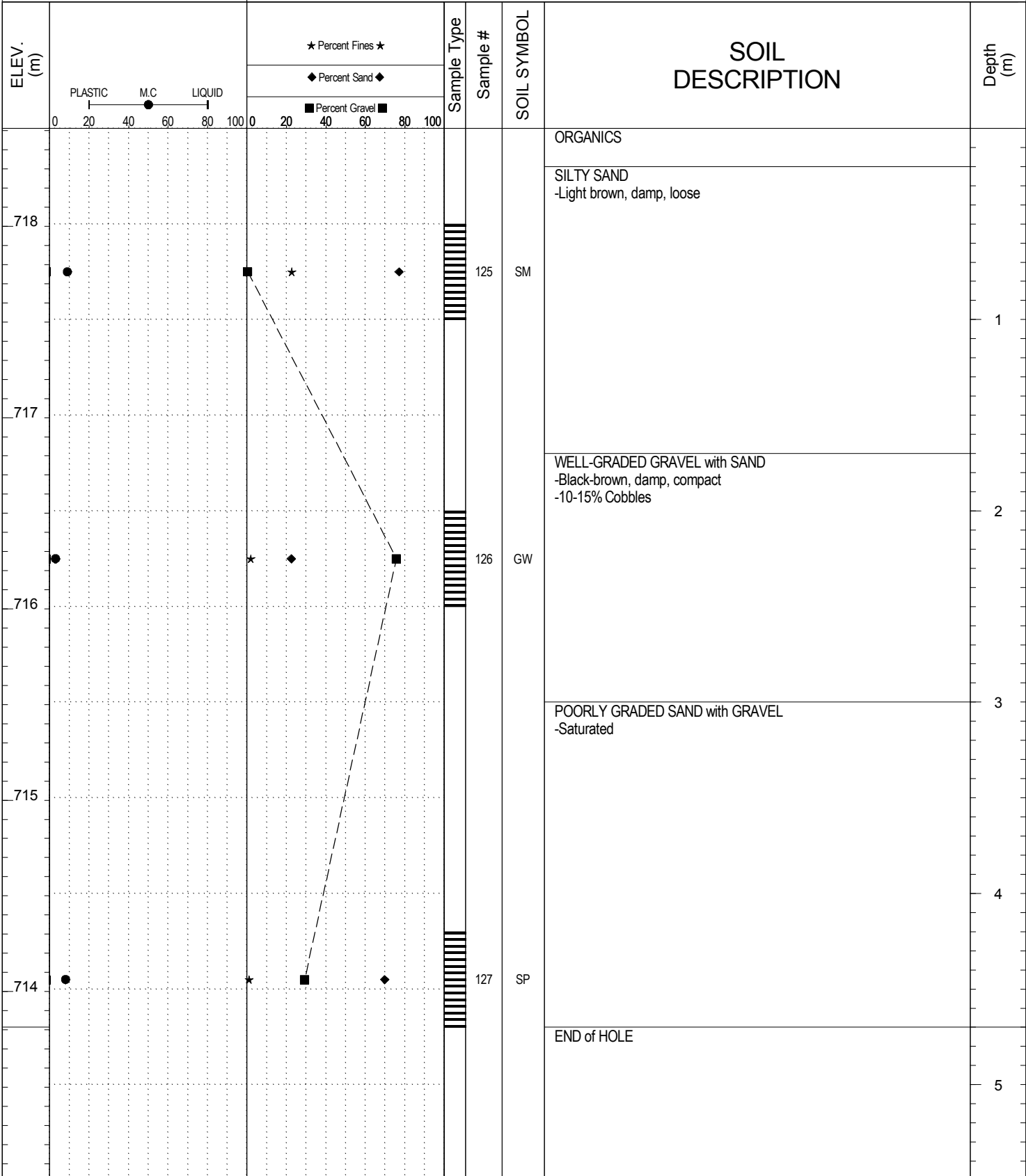
SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



**Highways and Public Works  
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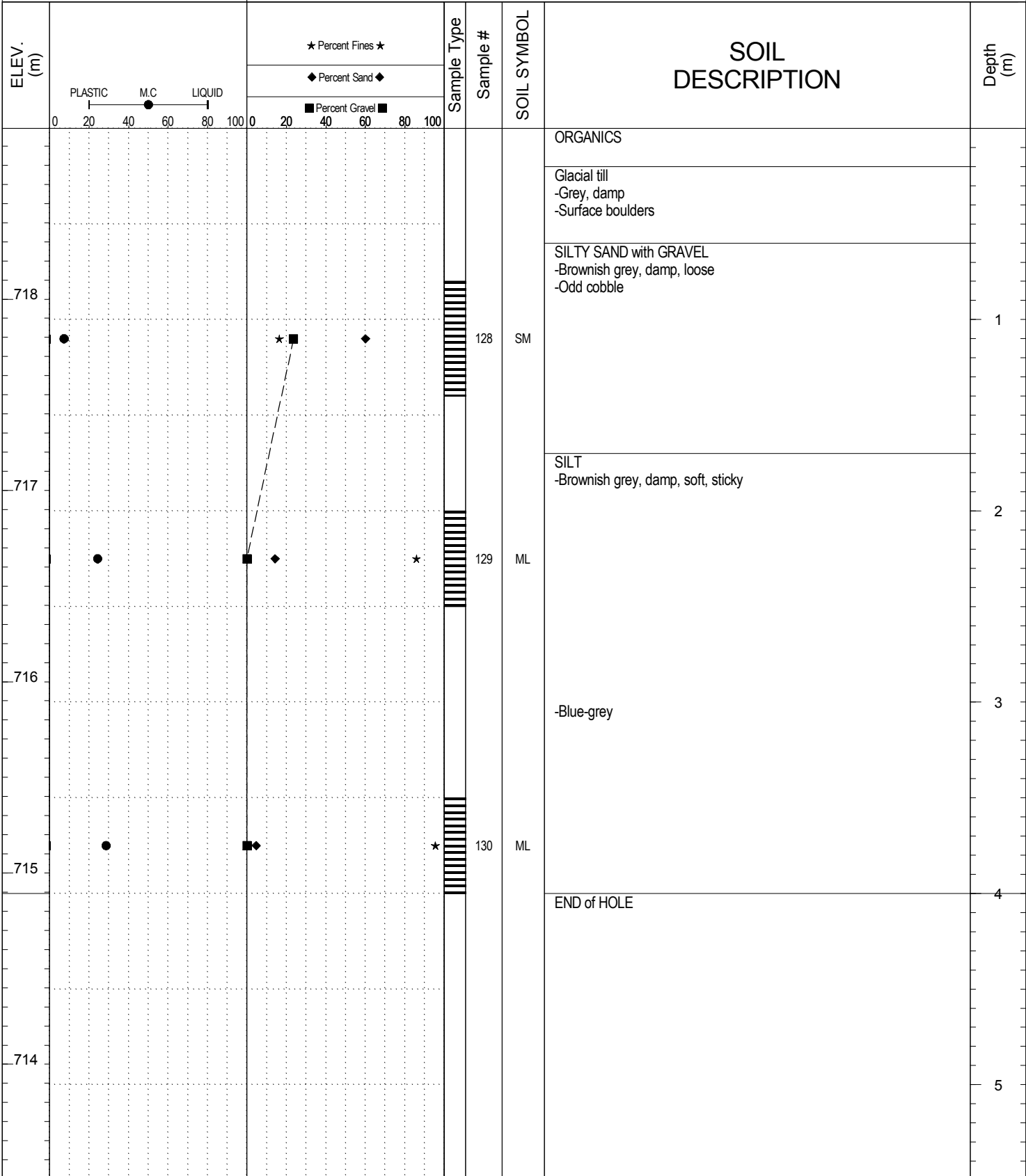
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Deadman	Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644314.2186m E6664227.259m	ELEVATION: 718.512756m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE

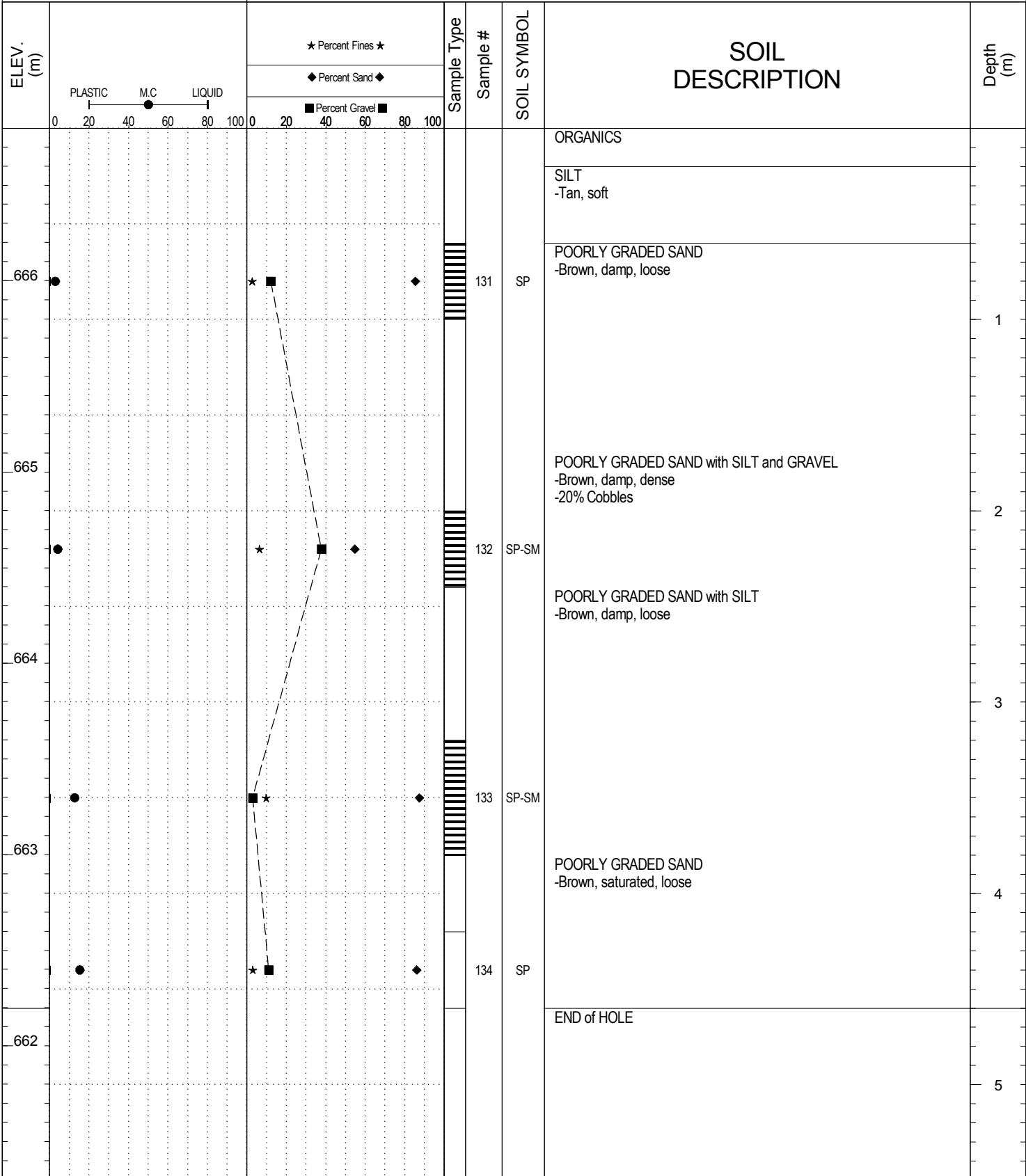


SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Hwy	SOURCE/TP#: 802-4453
Deadman		Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC		Coordinates: Z8V N644400.0028m E6664225.056m	ELEVATION: 718.89325m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE

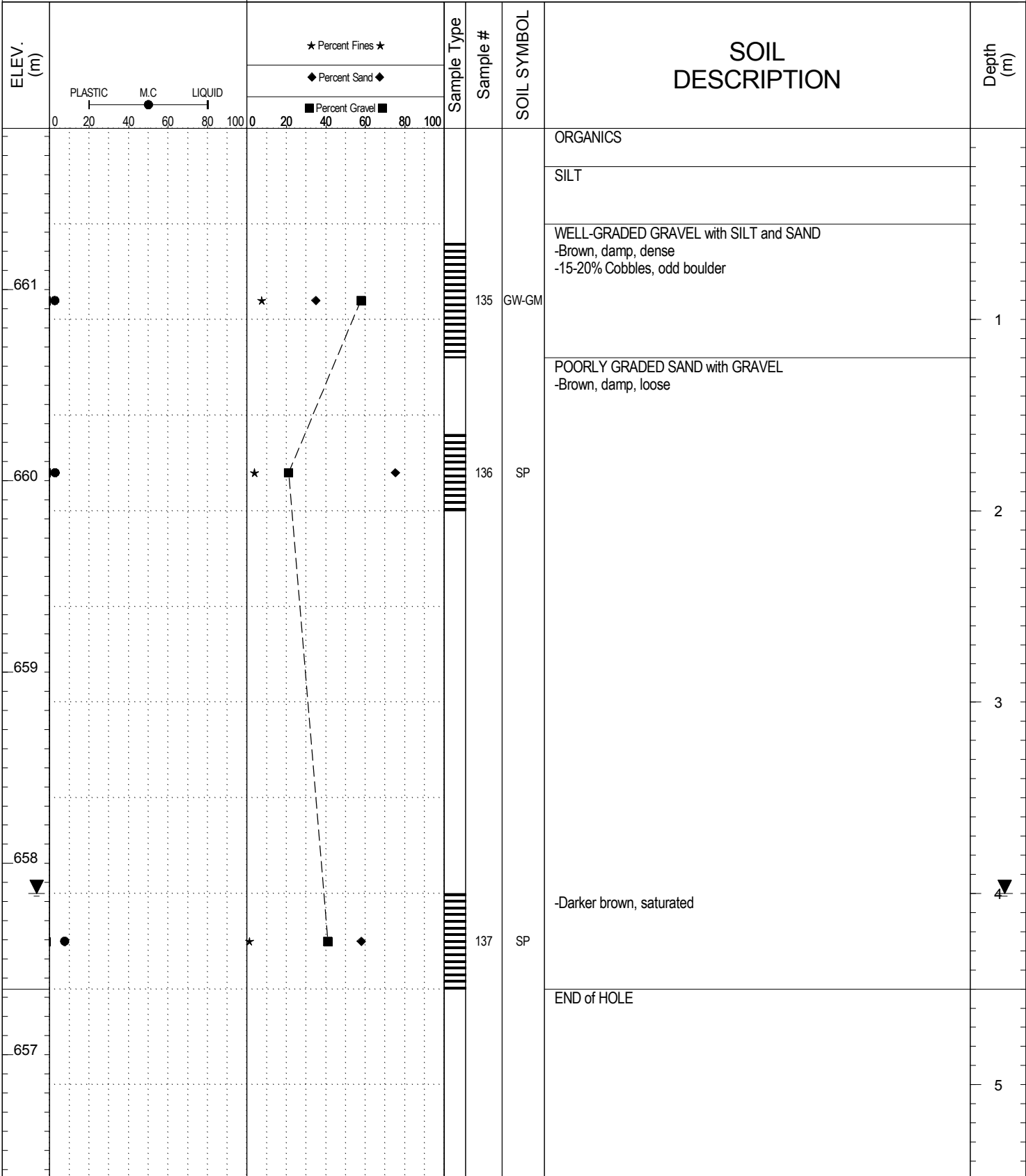


SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



SUBSURFACE EXPLORATION AND TEST REPORT	Alaska Hwy	SOURCE/TP#: 802-4455
Deadman	Hayes Crk LHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N643979.8568m E6664351.821m	ELEVATION: 661.842896m

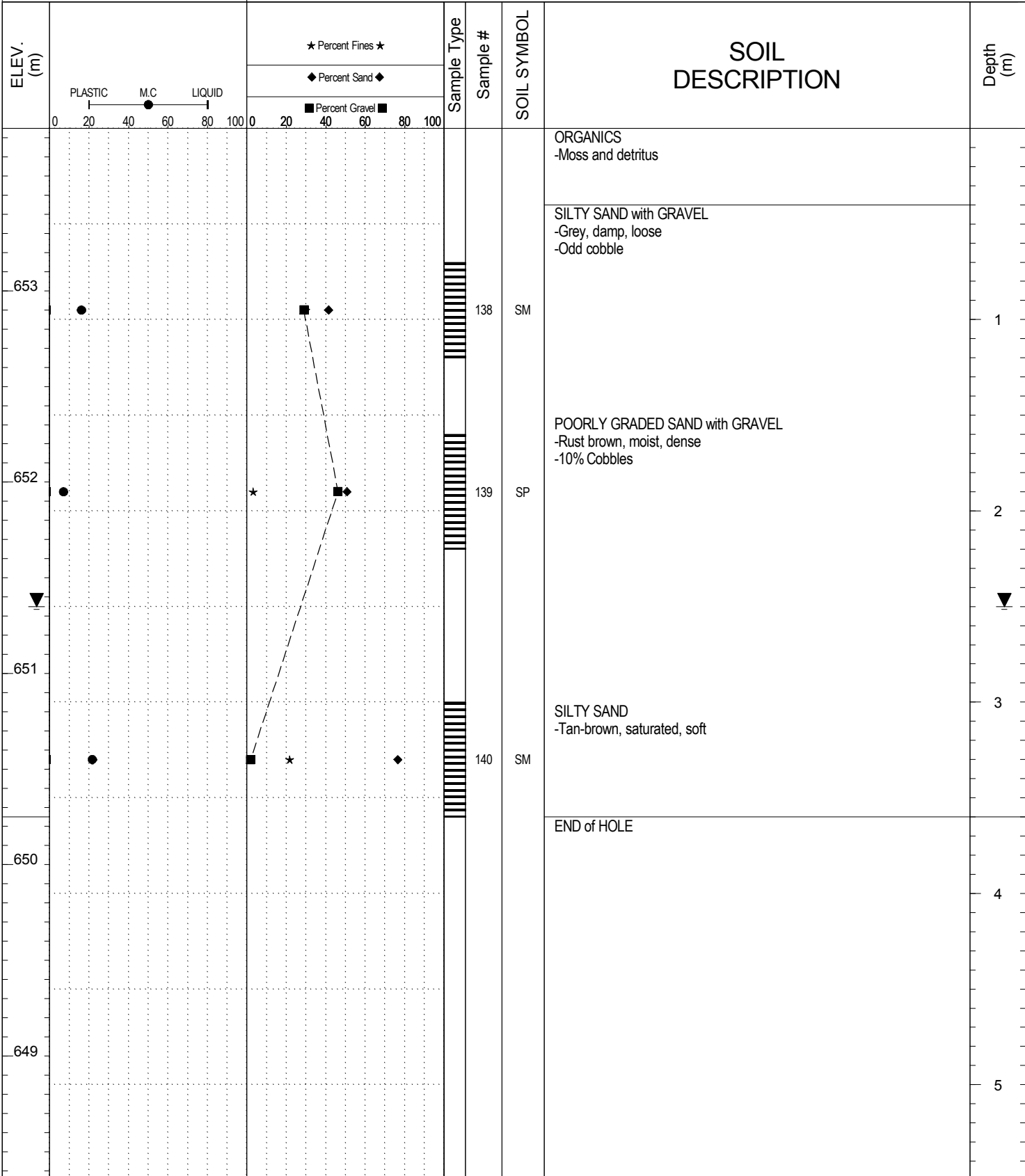
SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



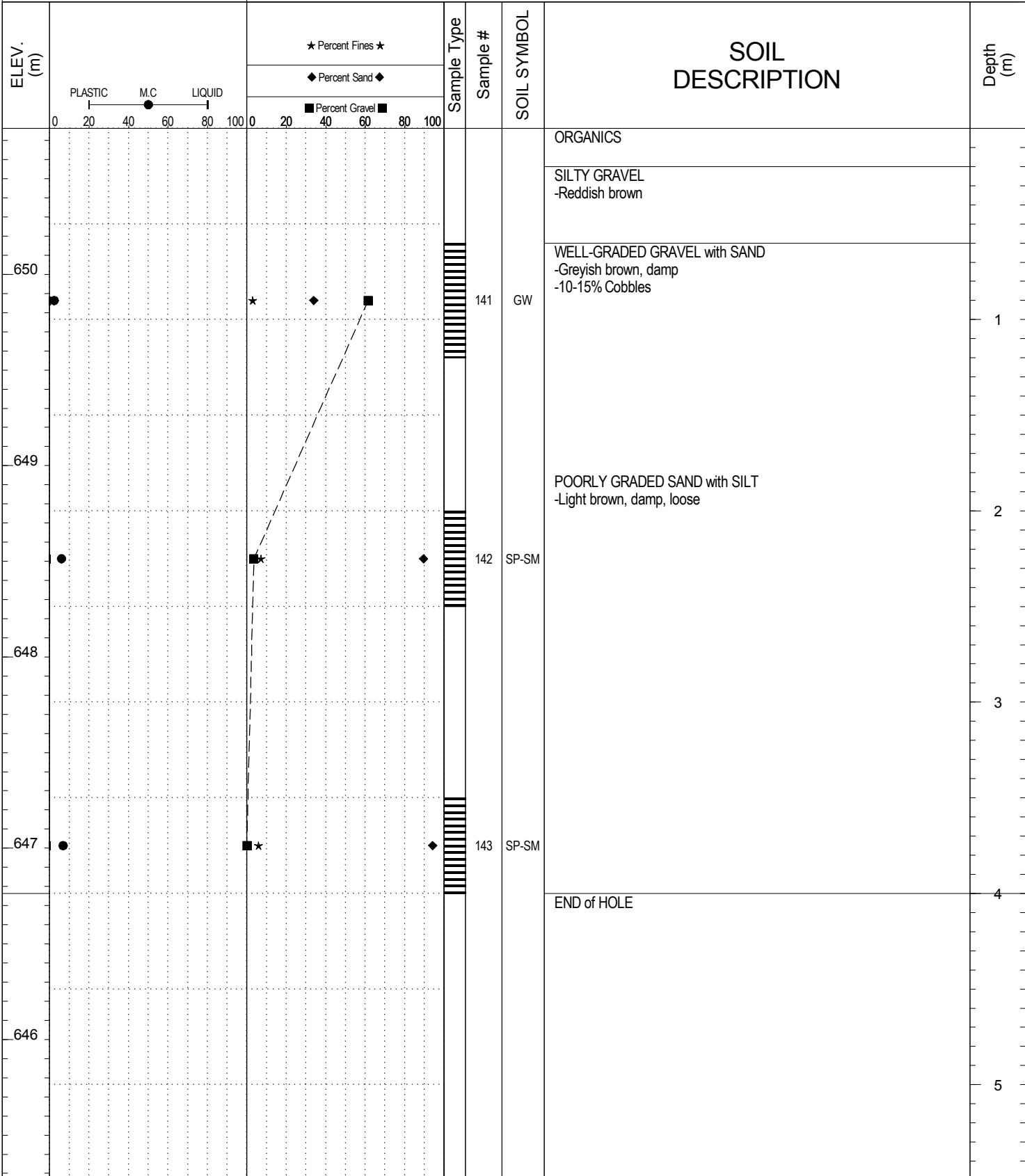
**Highways and Public Works  
Transportation Engineering Branch**

LOGGED BY: B.Tyhy	Termination Depth: 4.5m
REVIEWED BY: M. Idrees	Complete: 7/22/2013 12:10:00 PM
PROJECT ENGINEER: M. Idrees	Pit #: 105-C-03C    Page 1 of 1

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE

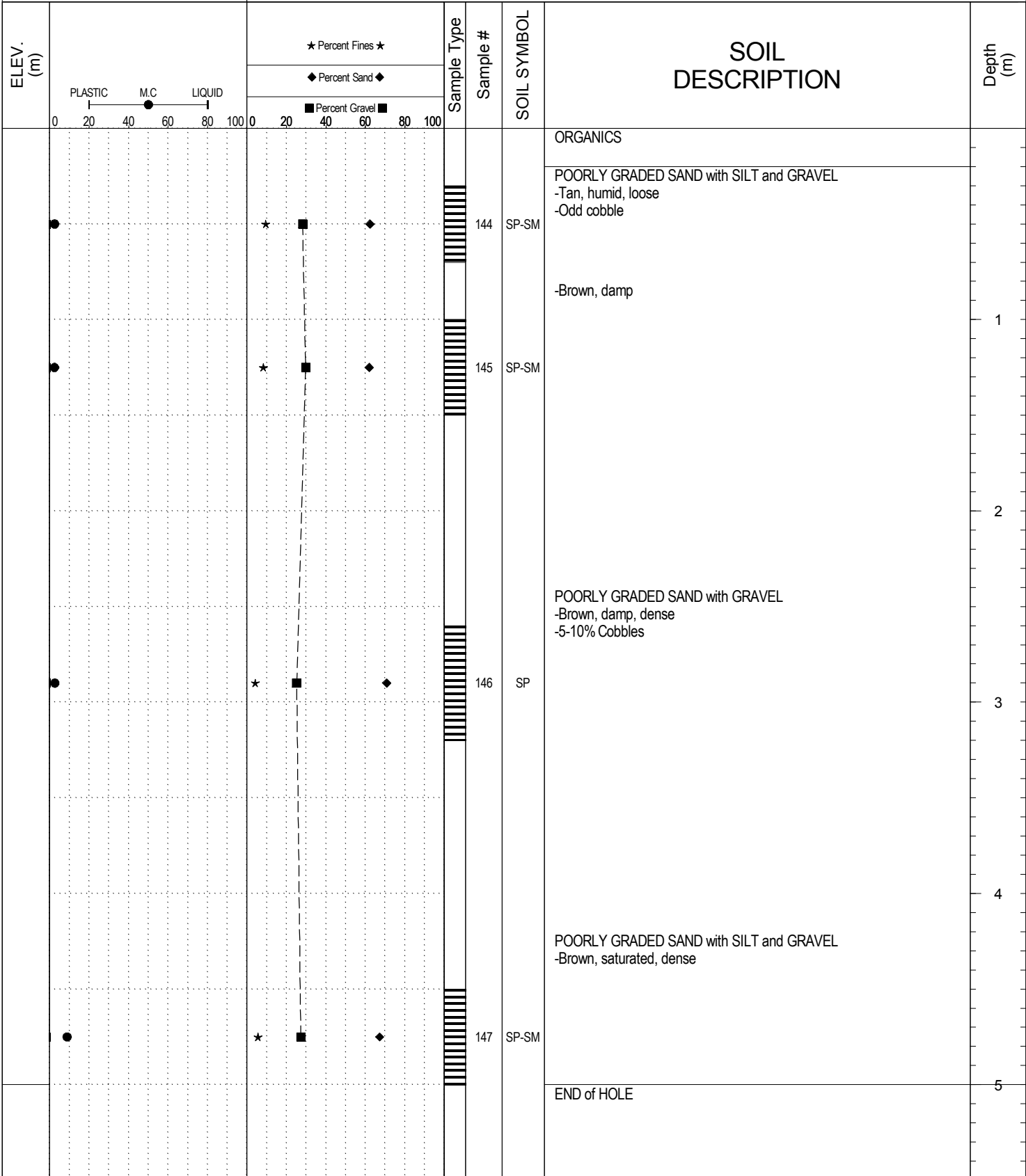


SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



SUBSURFACE EXPLORATION AND TEST REPORT	Alaska Hwy	SOURCE/TP#: 803-4458
Deadman	Hayes Crk RHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646113.47m E6665322.56m	ELEVATION: m

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



**Highways and Public Works  
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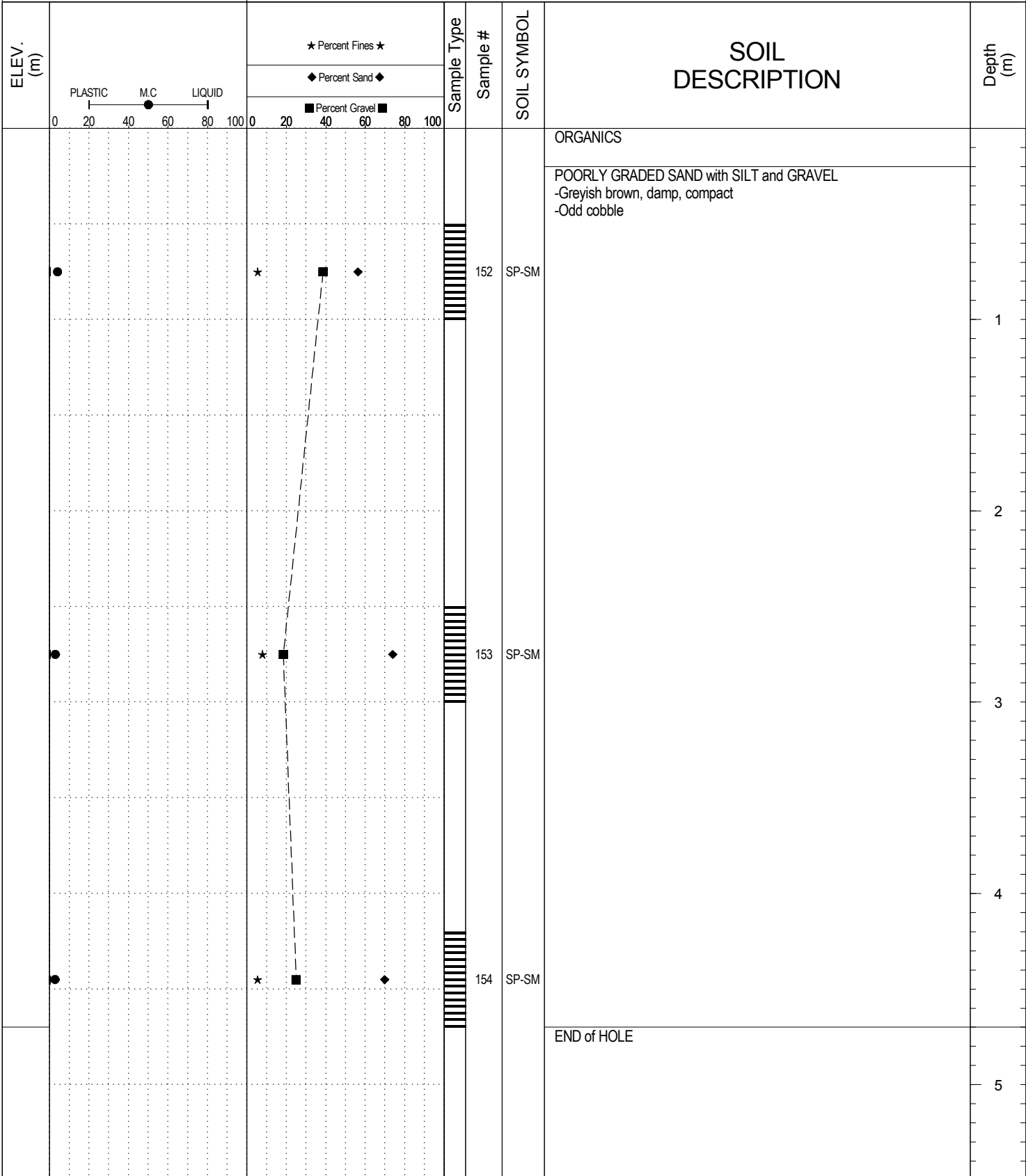
LOGGED BY: B.Tyhy	Termination Depth: 5m
REVIEWED BY: M. Idrees	Complete: 7/23/2013 10:00:00 AM
PROJECT ENGINEER: M. Idrees	Pit #: 105-C-03A    Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Hwy		SOURCE/TP#: 803-4459					
Deadman		Hayes Crk RHS, Km 1223 LHS,		PROJECT NO: 552-202101-1001-1-1					
Volvo Excavator 210BLC		Coordinates: Z8V N646264.45m E6665315.53m		ELEVATION: m					
SAMPLE TYPE		RETURN	UNDISTURBED	AUGER	BULK	TUBE	CORE		
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	SOIL DESCRIPTION	Depth (m)
	0      20      40      60      80      100		0      20      40      60      80      100						
								ORGANICS	
								WELL-GRADED GRAVEL with SILT and SAND -Brown-tan, damp -10% Cobbles	
						148	GW-GM		1
								POORLY GRADED SAND with GRAVEL -Greyish brown, damp, dense -15% Cobbles	
						149	SP		2
								POORLY GRADED GRAVEL with SILT and SAND -Brownish grey, damp, dense -20-25% Cobbles	
						150	GP-GM		3
								POORLY GRADED SAND with GRAVEL -Brownish grey, damp, dense -15-20% Cobbles	
						151	SP		4
								END of HOLE	5



SUBSURFACE EXPLORATION AND TEST REPORT	Alaska Hwy	SOURCE/TP#: 803-4460
Deadman	Hayes Crk RHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646243.9m E6665270.89m	ELEVATION: m

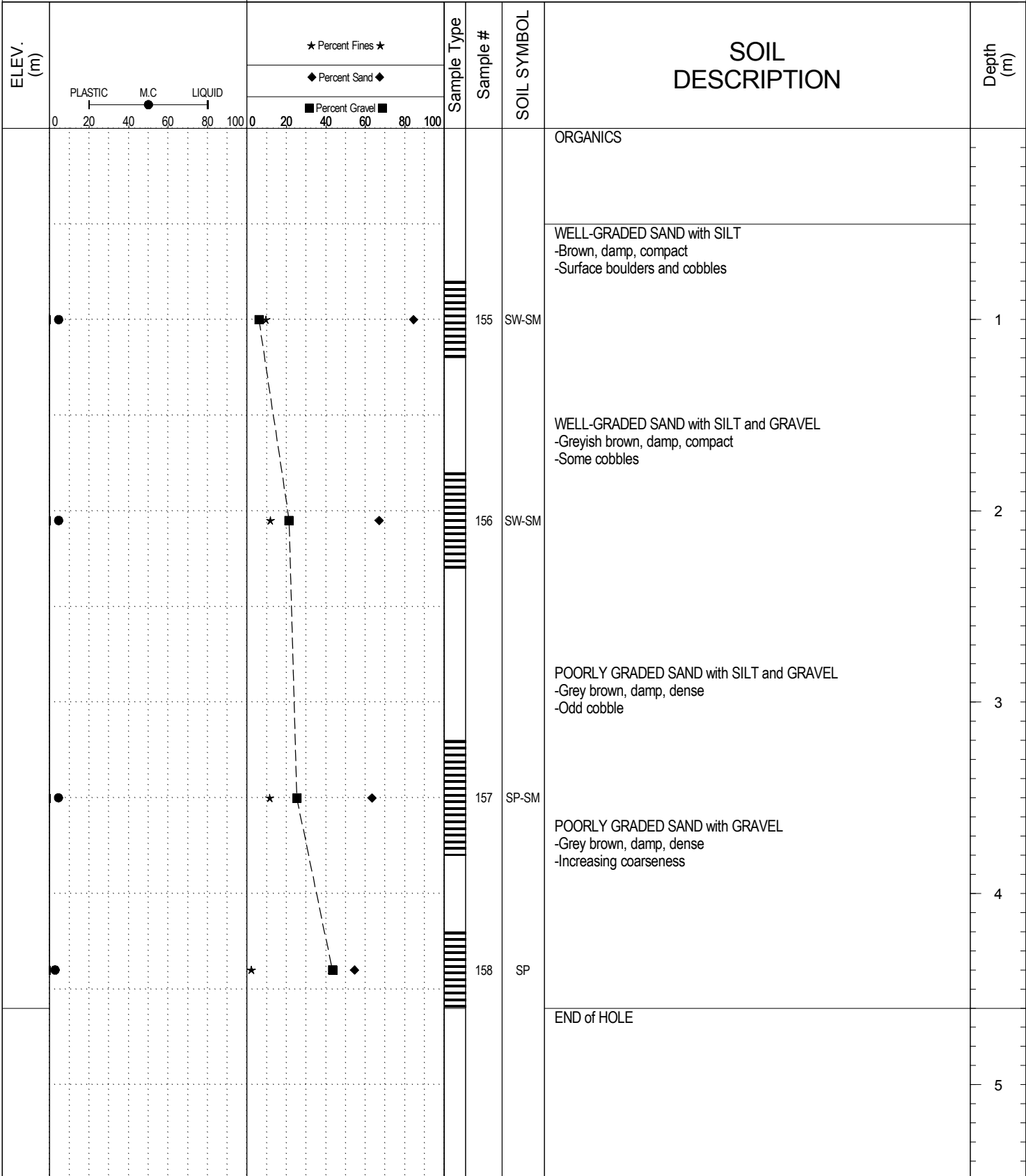
SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



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 Transportation Engineering Branch**

LOGGED BY: B.Tyhy	Termination Depth: 4.7m
REVIEWED BY: M. Idrees	Complete: 7/23/2013 11:35:00 AM
PROJECT ENGINEER: M. Idrees	Pit #: 105-C-03A Page 1 of 1

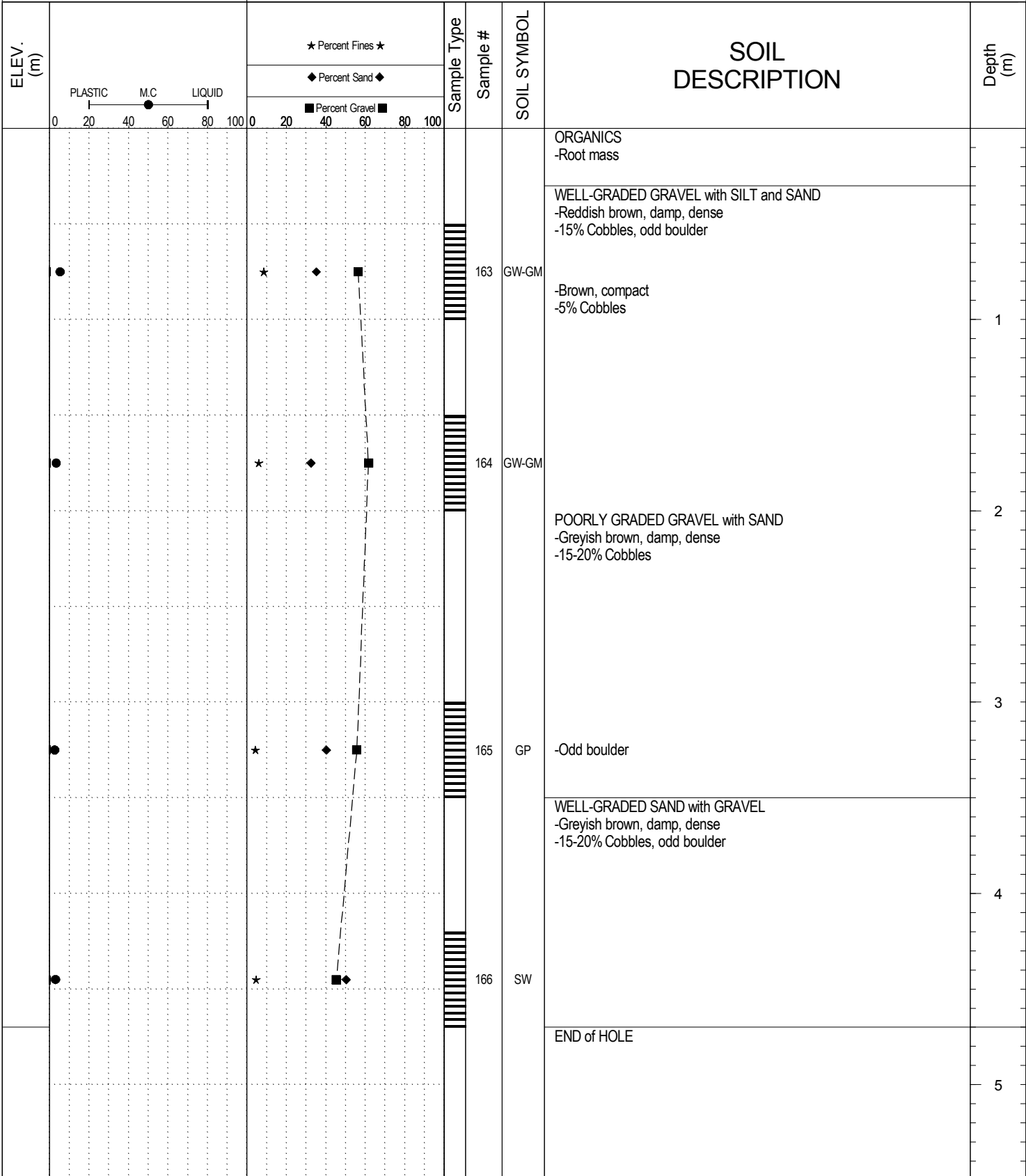
SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE





SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Hwy	SOURCE/TP#: 803-4463
Deadman		Hayes Crk RHS, Km 1223 LHS,	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC		Coordinates: Z8V N646303.34m E6665303.47m	ELEVATION: m

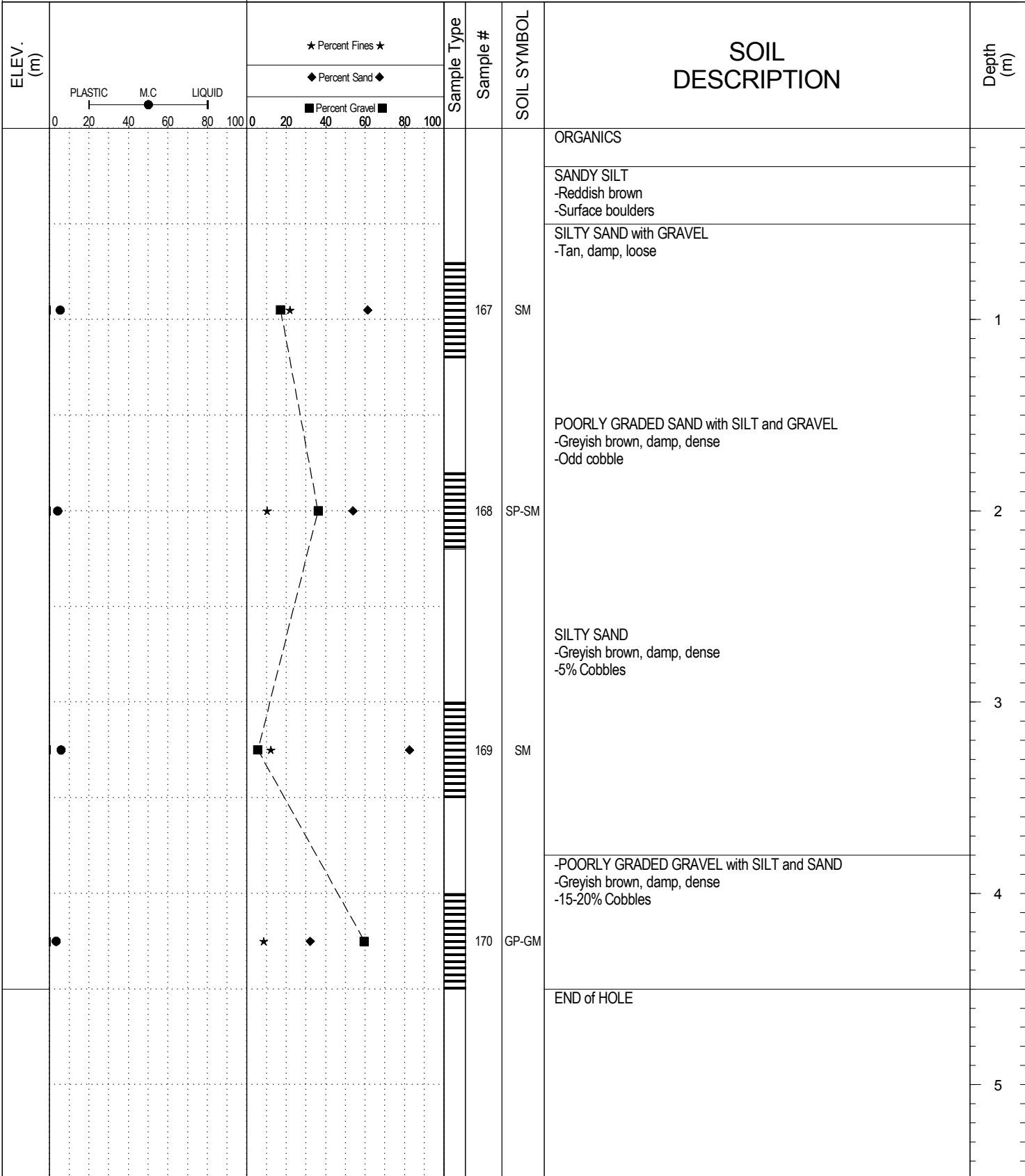
SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE



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Transportation Engineering Branch**

LOGGED BY: B.Tyhy	Termination Depth: 4.7m
REVIEWED BY: M. Idrees	Complete: 7/23/2013 3:15:00 PM
PROJECT ENGINEER: M. Idrees	Pit #: 105-C-03A Page 1 of 1

SAMPLE TYPE     RETURN     UNDISTURBED     AUGER     BULK     TUBE     CORE

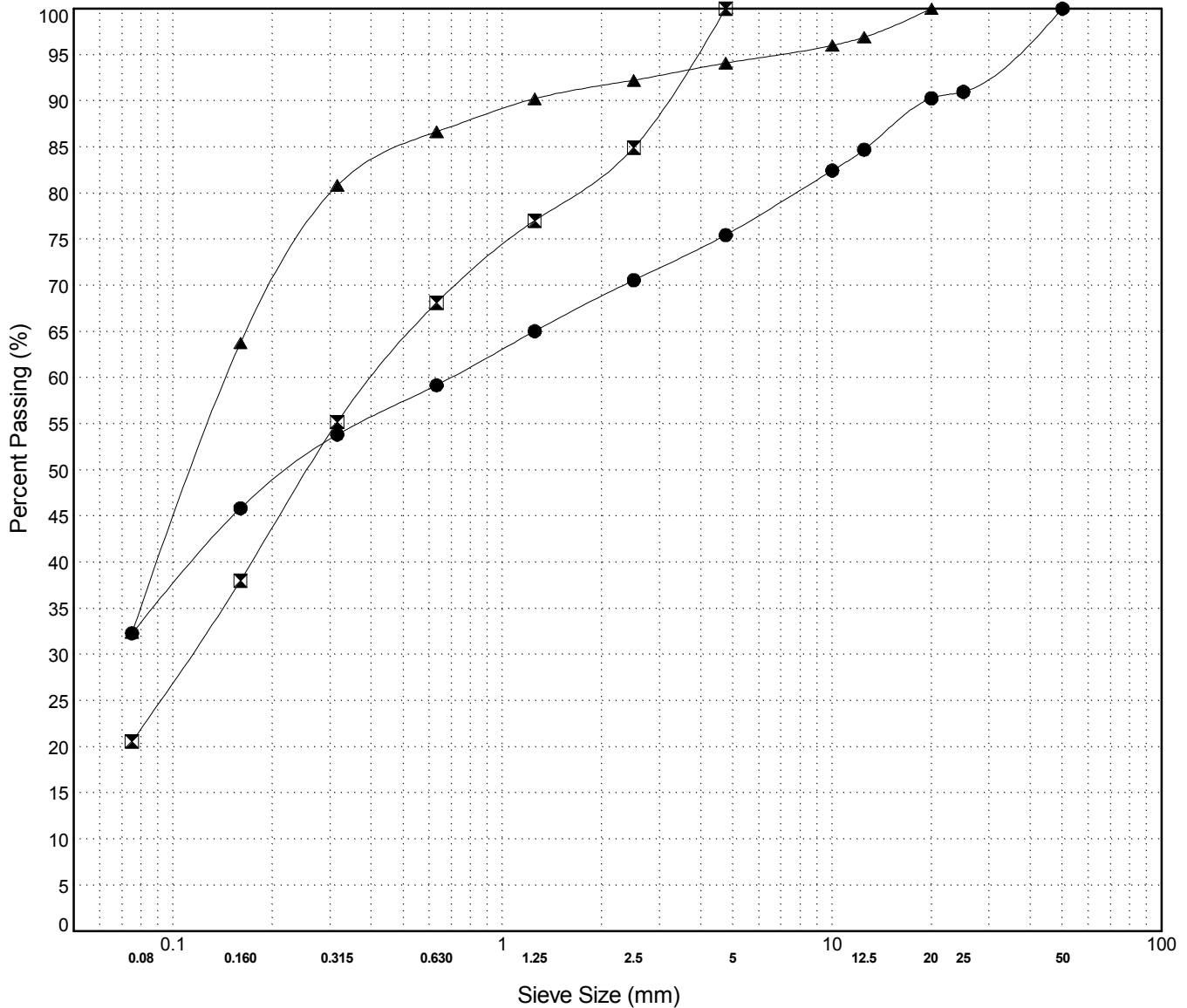


GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4445
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644465.2541m E6664416.474m	ELEVATION: 739.294556m

Master Revised July 2013

Field #	Lab #	Depth	Classification											%H2O	LL	PL	PI	Cc	Cu
● 104	2013-367	0.5	SILTY SAND with GRAVEL(SM)											8.5	NP	NP	NP		
☒ 105	2013-368	1.6	SILTY SAND(SM)											7.3	NP	NP	NP		
▲ 106	2013-369	3.4	SILTY SAND(SM)											8.0	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			
																Gravel	Sand	Silt	Clay
● 104	2013-367	100.0	100.0	100.0	91.0	90.3	84.7	82.5	75.5	70.6	65.0	59.2	53.8	45.8	32.3	24.5	43.2	32.3	
☒ 105	2013-368	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	84.9	77.0	68.1	55.2	38.0	20.6	0.0	79.4	20.6	
▲ 106	2013-369	100.0	100.0	100.0	100.0	100.0	96.9	96.0	94.1	92.2	90.2	86.6	80.8	63.8	32.4	5.9	61.7	32.4	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

LOGGED BY: B.Tyhy  
REVIEWED BY: M. Idrees  
PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03C  
Complete: 7/21/2013 9:40:00 AM

GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4446
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644392.8471m E6664366.024m	ELEVATION: 740.309204m

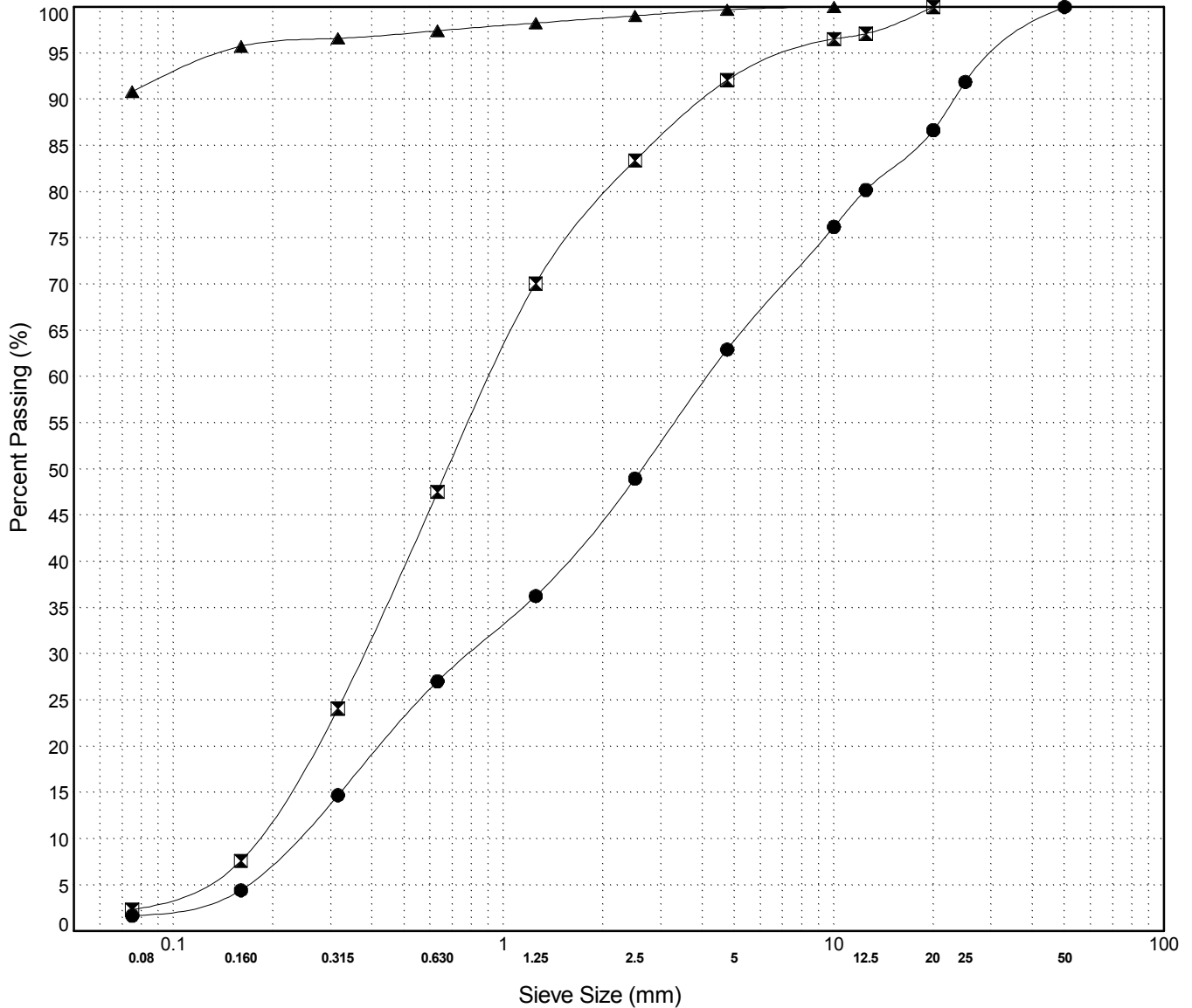
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 107	2013-370	0.4	POORLY GRADED SAND with GRAVEL(SP)	2.1	NP	NP	NP	0.6	18.0
☒ 108	2013-371	1.5	POORLY GRADED SAND(SP)	2.8	NP	NP	NP	0.9	5.2
▲ 109	2013-372	3.0	SILT(ML)	30.5	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			
		% PASSING														Gravel	Sand	Silt	Clay
● 107	2013-370	100.0	100.0	100.0	91.9	86.7	80.2	76.2	62.9	49.0	36.3	27.0	14.7	4.4	1.7	37.1	61.2	1.7	
☒ 108	2013-371	100.0	100.0	100.0	100.0	100.0	97.1	96.5	92.1	83.4	70.1	47.5	24.1	7.6	2.3	7.9	89.7	2.3	
▲ 109	2013-372	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.0	98.2	97.4	96.6	95.7	90.8	0.3	8.9	90.8	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

LOGGED BY: B.Tyhy  
REVIEWED BY: M. Idrees  
PROJECT ENGINEER: M. Idrees

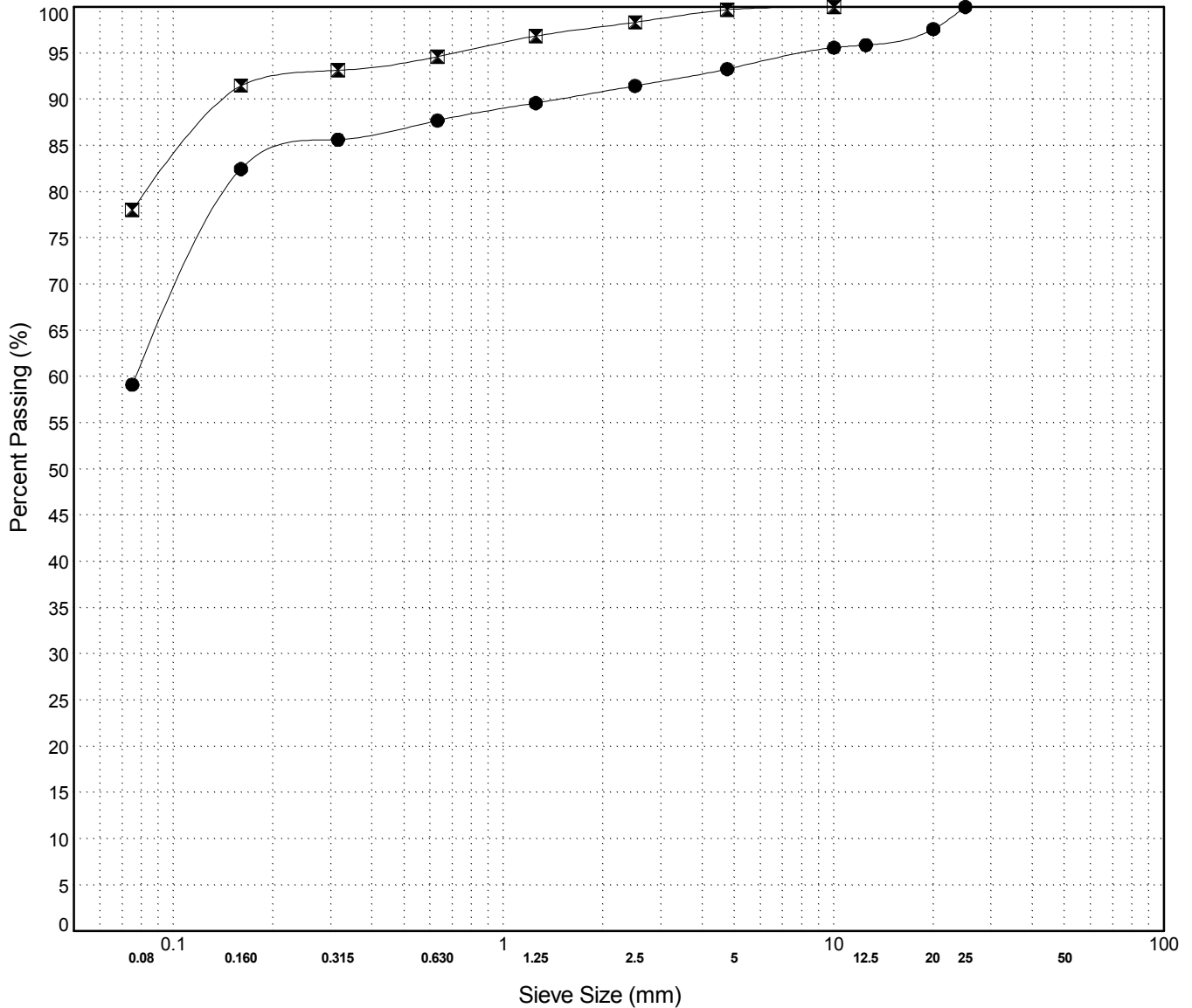
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Complete: 7/21/2014 10:20:00 AM

GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4447
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644310.4901m E6664320.759m	ELEVATION: 724.867493m

Master Revised July 2013

Field #	Lab #	Depth	Classification											%H2O	LL	PL	PI	Cc	Cu	
● 110	2013-373	1.0	SANDY SILT (ML)											17.4	NP	NP	NP			
☒ 111	2013-374	3.0	SILT with SAND (ML)											27.7	NP	NP	NP			
Field #	Lab #	% PASSING	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			
			100.0	100.0	100.0	100.0	97.6	95.9	95.6	93.3	91.5	89.6	87.7	85.6	82.5	59.1	6.7	34.1	59.1	
● 110	2013-373		100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	98.3	96.8	94.6	93.2	91.5	78.0	0.3	21.6	78.0	
☒ 111	2013-374		100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	98.3	96.8	94.6	93.2	91.5	78.0	0.3	21.6	78.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

LOGGED BY: B.Tyhy

REVIEWED BY: M. Idrees

PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03C

Complete: 7/21/2014 11:20:00 AM

GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4448
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644234.6104m E6664280.655m	ELEVATION: 723.120972m

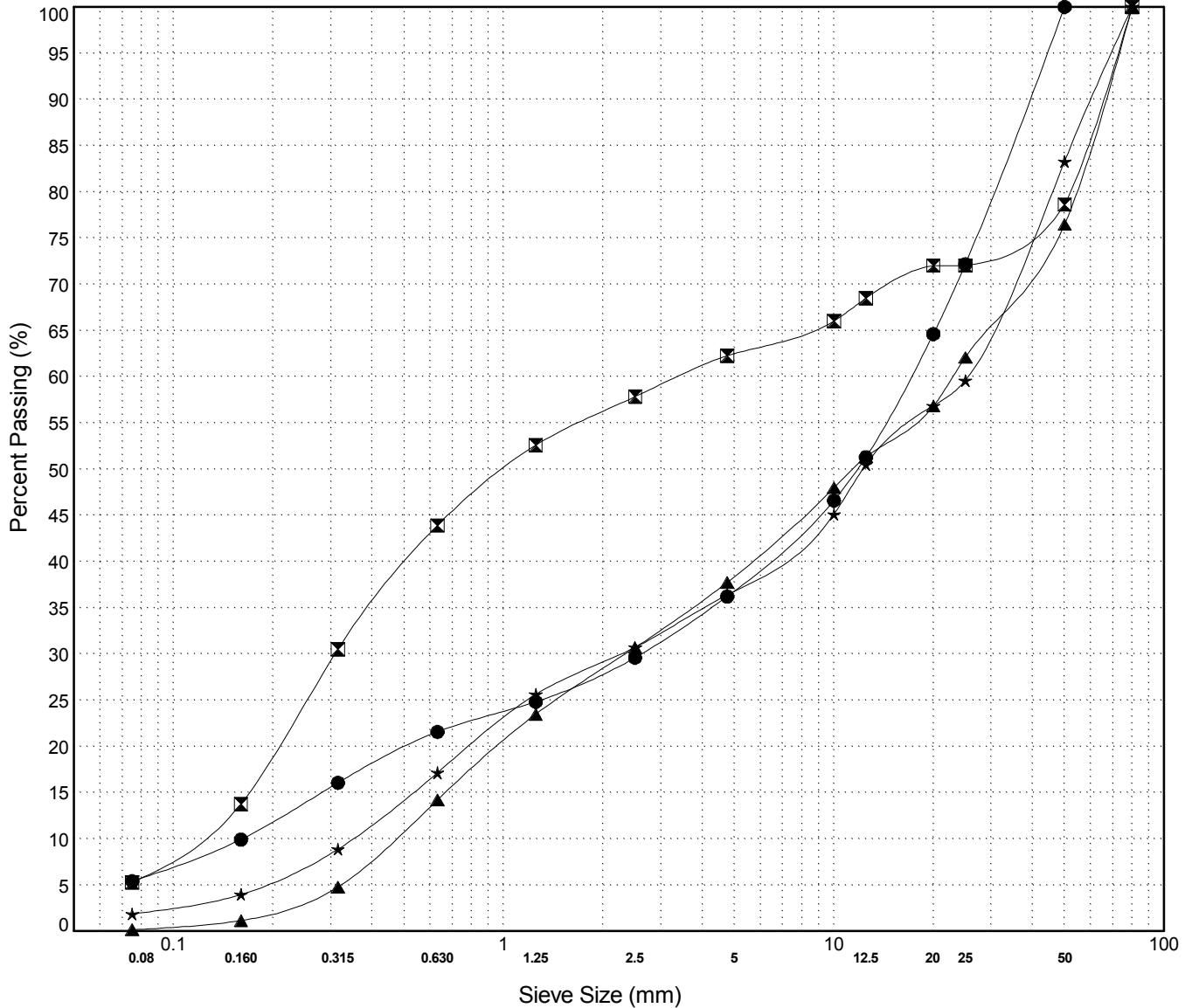
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 112	2013-375	0.4	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.7	NP	NP	NP	2.5	105.3
☒ 113	2013-376	1.6	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	3.3	NP	NP	NP	0.2	30.0
▲ 114	2013-377	2.5	POORLY GRADED GRAVEL with SAND(GP)	2.6	NP	NP	NP	0.5	49.5
★ 115	2013-378	4.0	POORLY GRADED GRAVEL with SAND(GP)	5.9	NP	NP	NP	0.6	73.1

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	Clay
● 112	2013-375	100.0	100.0	100.0	100.0	72.2	64.6	51.3	46.6	36.2	29.6	24.8	21.6	16.1	9.9	5.4	63.8	30.8	5.4
☒ 113	2013-376	100.0	97.1	78.6	72.0	72.0	68.5	66.0	62.3	57.8	52.6	43.9	30.5	13.8	5.3	34.8	56.9	5.3	
▲ 114	2013-377	100.0	96.8	76.5	62.1	56.8	51.3	48.0	37.7	30.7	23.5	14.2	4.8	1.2	0.2	59.0	37.6	0.2	
★ 115	2013-378	100.0	97.7	83.3	59.6	56.8	50.5	45.1	36.4	30.7	25.6	17.2	8.9	4.0	1.9	61.3	34.5	1.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

LOGGED BY: B.Tyhy

REVIEWED BY: M. Idrees

PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03C

Complete: 7/21/2013 12:15:00 PM

GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4449
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644206.1004m E6664204.061m	ELEVATION: 720.50238m

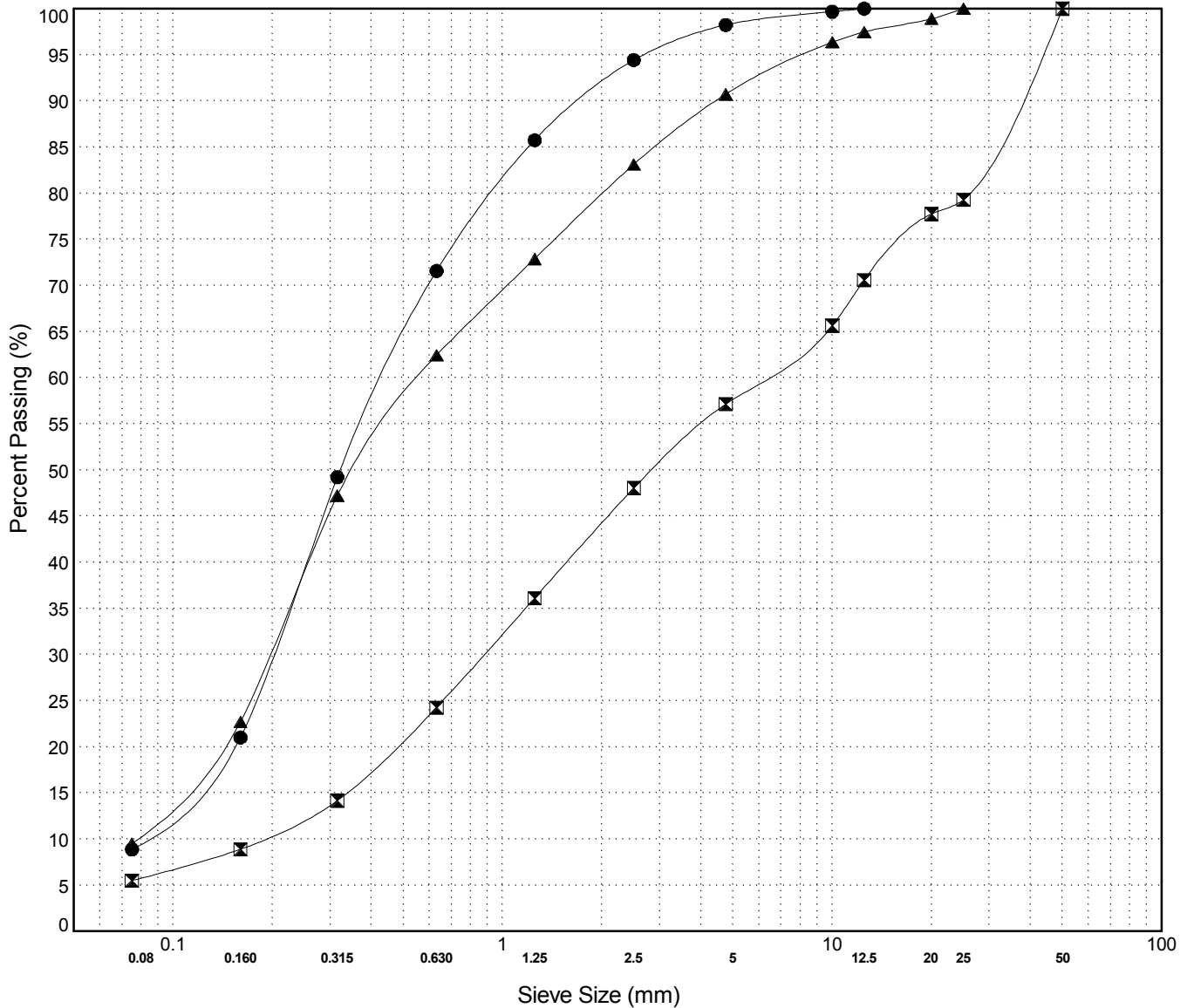
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 116	2013-379	0.5	POORLY GRADED SAND with SILT(SP-SM)	5.2	NP	NP	NP	1.1	5.5
☒ 117	2013-380	2.0	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	3.6	NP	NP	NP	0.7	33.1
▲ 118	2013-381	4.0	POORLY GRADED SAND with SILT(SP-SM)	7.0	NP	NP	NP	0.9	7.3

Field #	Lab #	% PASSING	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														
● 116	2013-379	100.0	100.0	100.0	100.0	100.0	100.0	99.7	98.2	94.4	85.7	71.6	49.2	21.0	8.9	1.8	89.3	8.9		
☒ 117	2013-380	100.0	100.0	100.0	79.3	77.7	70.6	65.6	57.1	48.0	36.1	24.3	14.2	8.9	5.5	42.9	51.6	5.5		
▲ 118	2013-381	100.0	100.0	100.0	100.0	98.9	97.5	96.4	90.7	83.1	72.9	62.4	47.2	22.7	9.5	9.3	81.2	9.5		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

LOGGED BY: B.Tyhy  
REVIEWED BY: M. Idrees  
PROJECT ENGINEER: M. Idrees

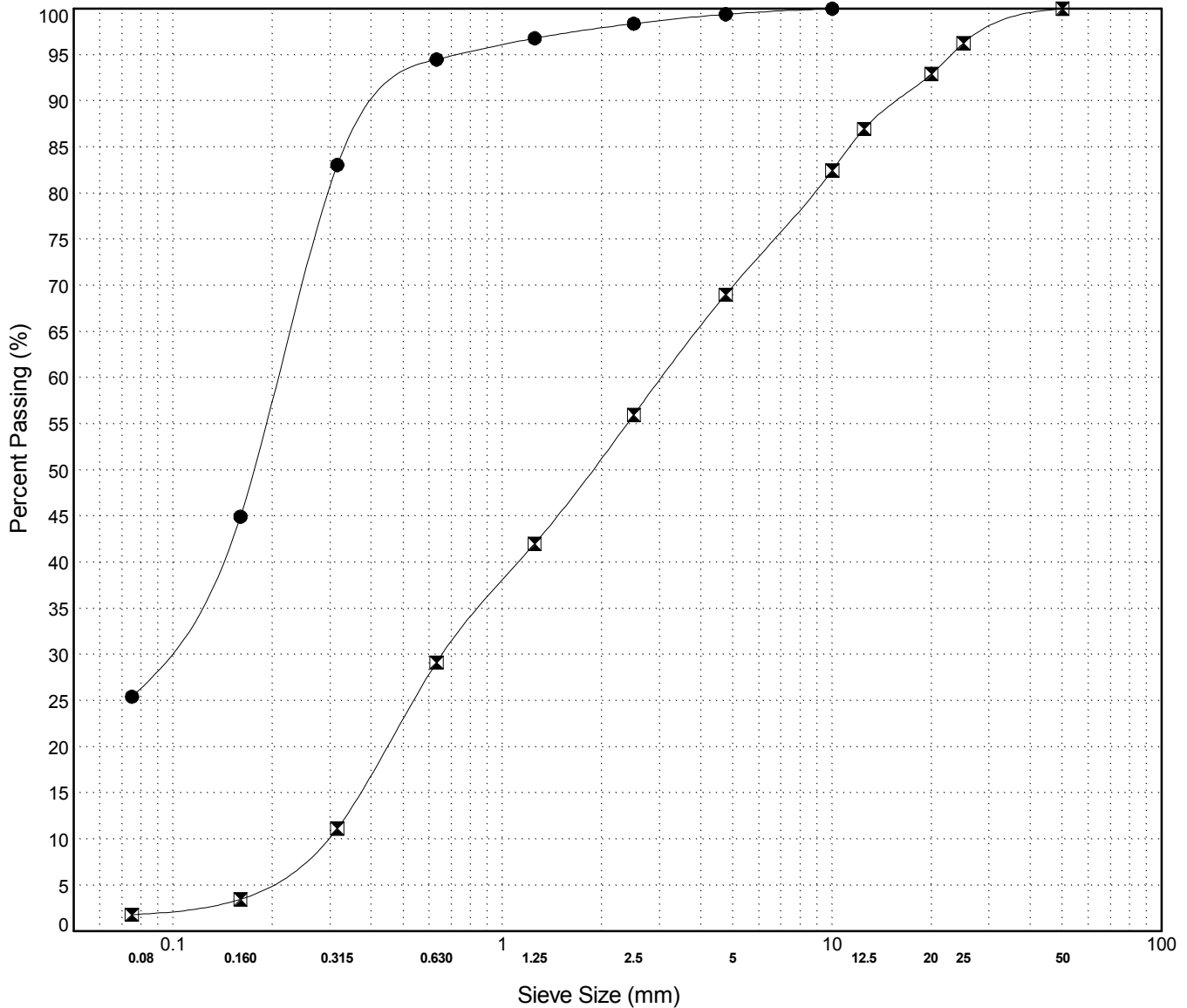
Pit #: 105-C-03C  
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GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4450
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644205.3591m E6664117.967m	ELEVATION: 720.695312m

Master Revised July 2013

Field #	Lab #	Depth	Classification										%H2O	LL	PL	PI	Cc	Cu		
● 119	2013-382	0.5	SILTY SAND(SM)										10.6	NP	NP	NP				
☒ 120	2013-383	3.0	POORLY GRADED SAND with GRAVEL(SP)										4.2	NP	NP	NP	0.5	10.7		
Field #	Lab #	% PASSING	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			
			100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.4	98.4	96.8	94.5	83.1	44.9	25.4	Gravel	Sand	Silt	Clay
● 119	2013-382	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.4	98.4	96.8	94.5	83.1	44.9	25.4	0.6	73.9	25.4	
☒ 120	2013-383	100.0	100.0	100.0	96.2	92.9	87.0	82.5	69.0	56.0	42.0	29.1	11.2	3.5	1.8		31.0	67.2	1.8	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



**Highways and Public Works  
Transportation Engineering Branch**

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PROJECT ENGINEER: M. Idrees

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GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4451
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644187.3866m E6664263.751m	ELEVATION: 718.837769m

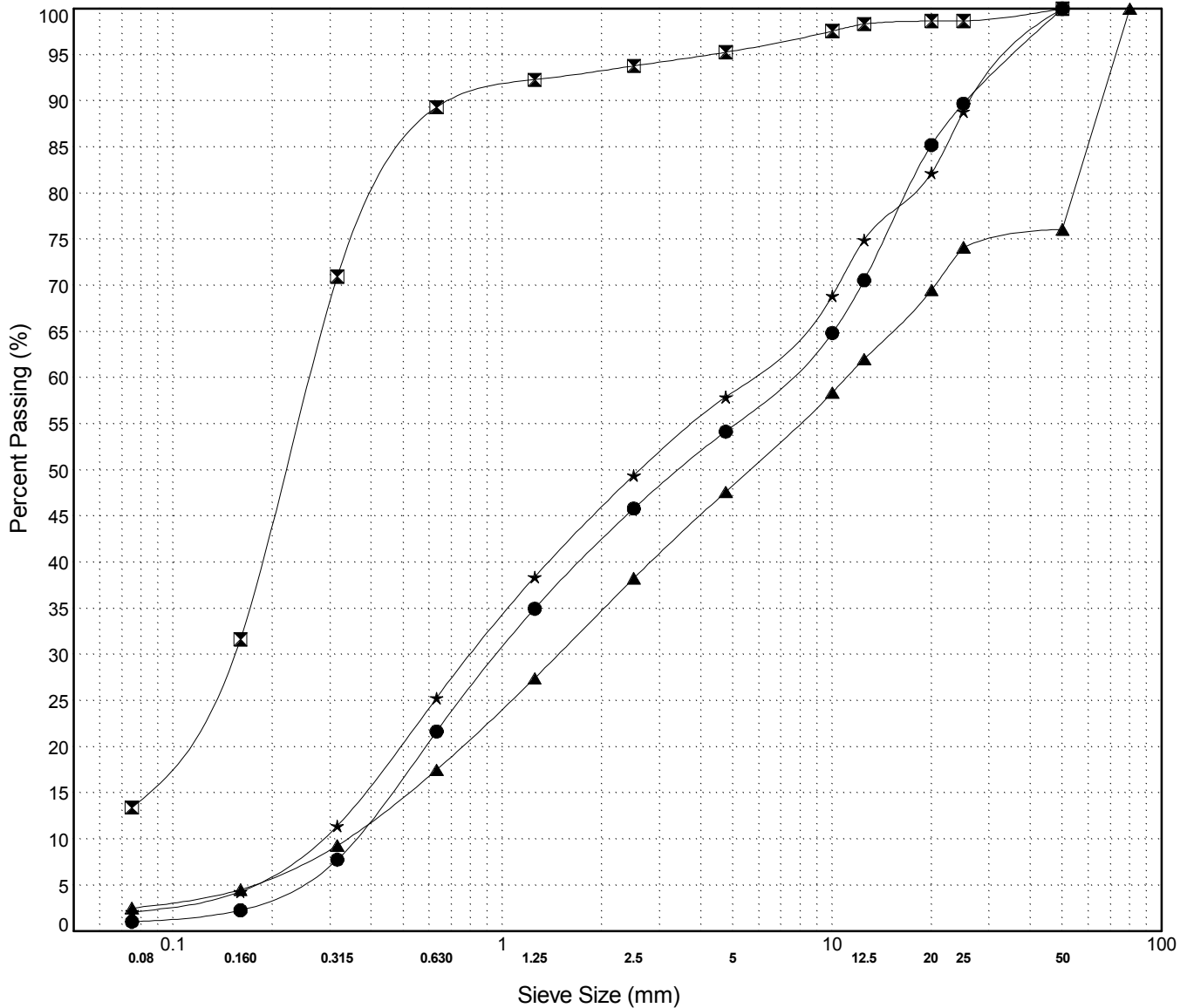
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 121	2013-384	0.6	POORLY GRADED SAND with GRAVEL(SP)	2.0	NP	NP	NP	0.4	20.3
☒ 122	2013-385	1.5	SILTY SAND(SM)	7.8	NP	NP	NP		
▲ 123	2013-386	3.0	POORLY GRADED GRAVEL with SAND(GP)	6.3	NP	NP	NP	0.6	33.0
★ 124	2013-387	4.5	POORLY GRADED SAND with GRAVEL(SP)	6.4	NP	NP	NP	0.4	19.9

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
● 121	2013-384	100.0	100.0	100.0	89.7	85.2	70.6	64.8	54.2	45.8	35.0	21.7	7.8	2.3	1.0	45.8	53.1	1.0	
☒ 122	2013-385	100.0	100.0	100.0	98.7	98.7	98.3	97.6	95.3	93.8	92.3	89.3	71.0	31.7	13.4	4.7	81.9	13.4	
▲ 123	2013-386	100.0	96.7	76.1	74.1	69.5	62.0	58.4	47.6	38.3	27.4	17.5	9.3	4.5	2.5	49.1	45.1	2.5	
★ 124	2013-387	100.0	100.0	100.0	88.9	82.2	74.9	68.9	57.9	49.4	38.4	25.3	11.4	4.3	2.1	42.1	55.8	2.1	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

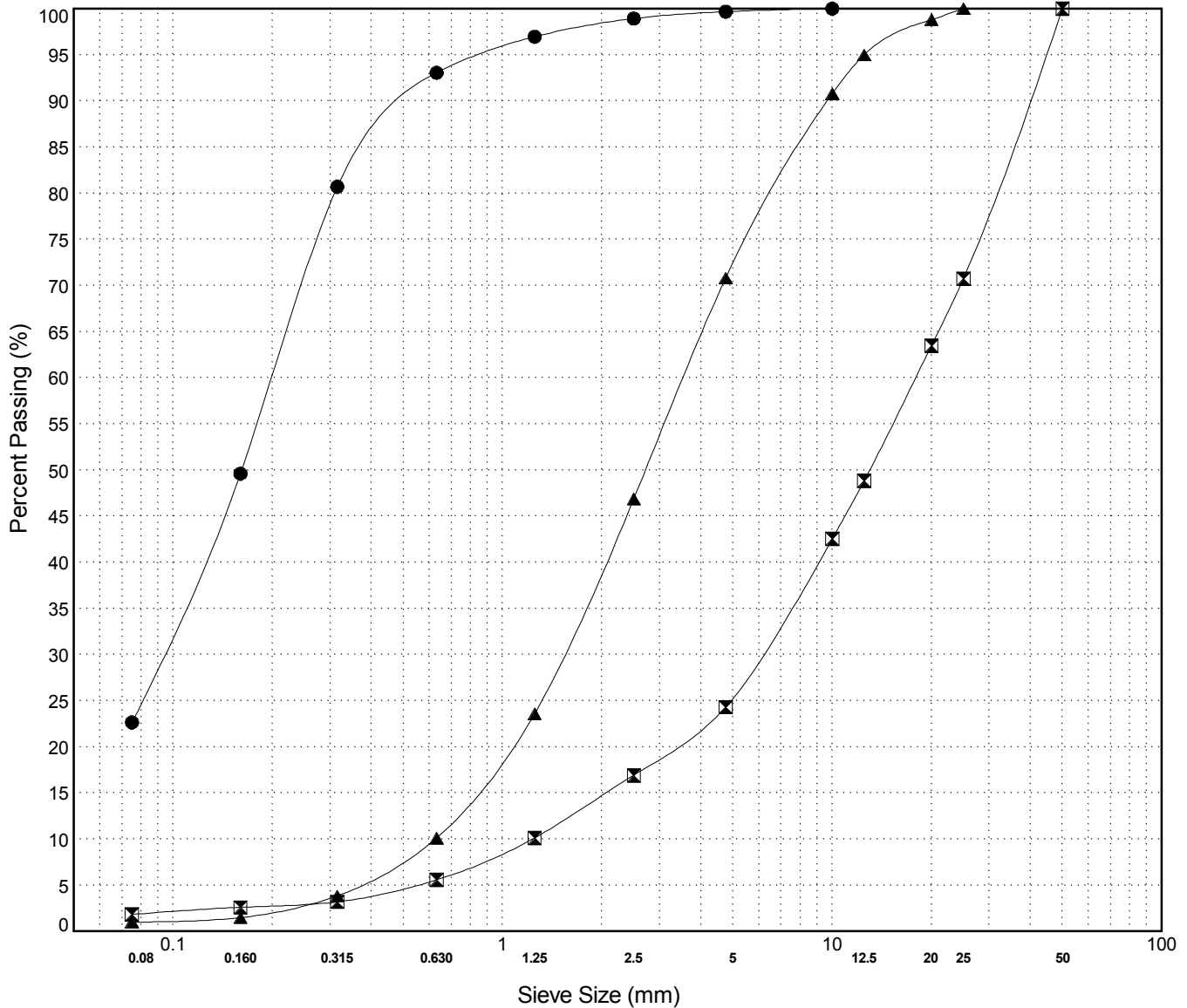


GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4452
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644314.2186m E6664227.259m	ELEVATION: 718.512756m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu										
● 125	2013-388	0.5	SILTY SAND(SM)	8.9	NP	NP	NP												
☒ 126	2013-389	2.0	WELL-GRADED GRAVEL with SAND(GW)	2.9	NP	NP	NP	1.6	14.5										
▲ 127	2013-390	4.2	POORLY GRADED SAND with GRAVEL(SP)	8.0	NP	NP	NP	1.0	5.7										
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
● 125	2013-388	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	98.9	96.9	93.1	80.7	49.6	22.7	0.3	77.0	22.7	
☒ 126	2013-389	100.0	100.0	100.0	70.7	63.5	48.8	42.6	24.3	16.9	10.1	5.6	3.2	2.6	1.8	75.7	22.5	1.8	
▲ 127	2013-390	100.0	100.0	100.0	100.0	98.8	95.0	90.8	70.8	46.9	23.6	10.1	3.9	1.5	1.0	29.2	69.8	1.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



**Highways and Public Works  
Transportation Engineering Branch**

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PROJECT ENGINEER: M. Idrees

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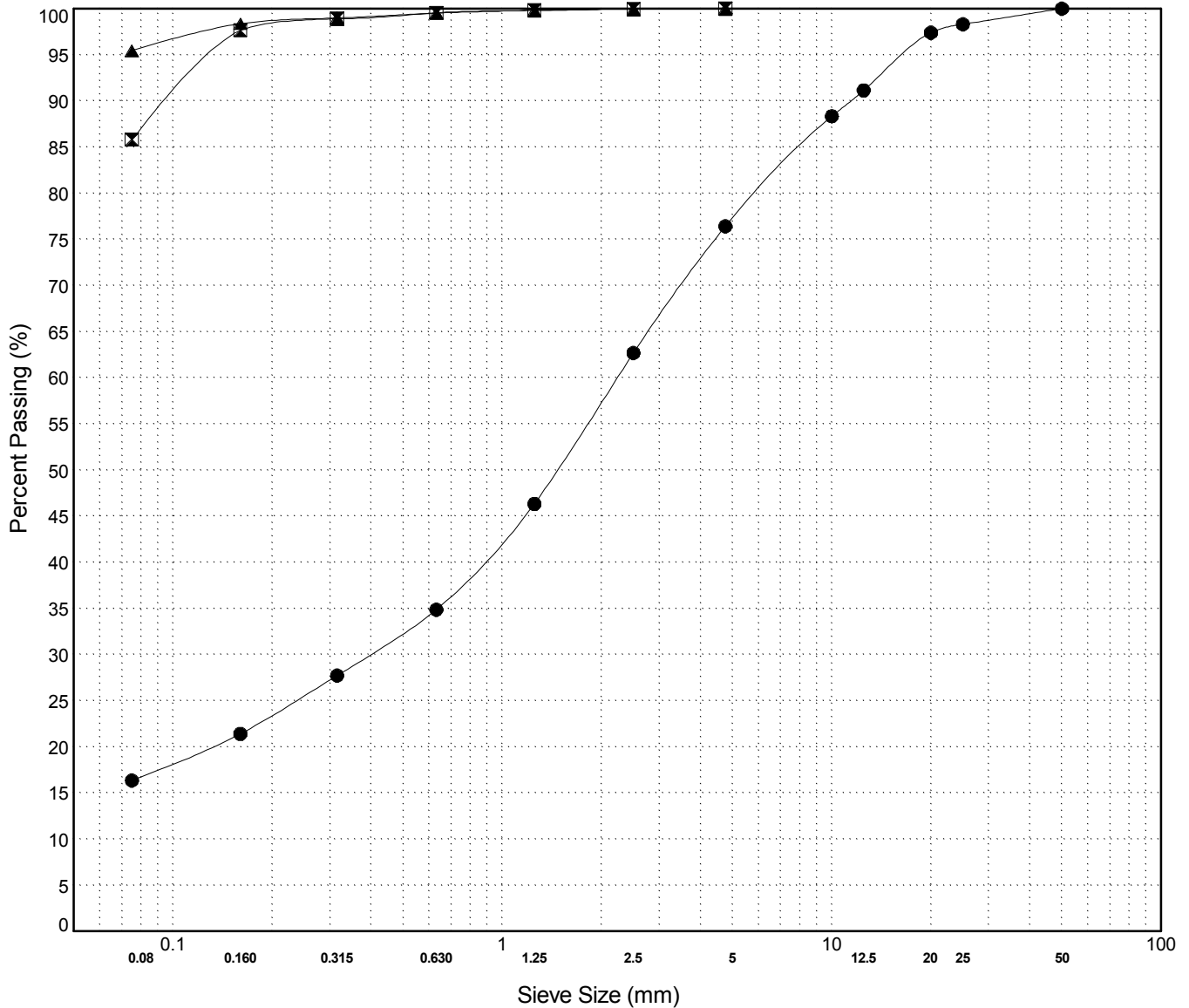
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GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4453
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644400.0028m E6664225.056m	ELEVATION: 718.89325m

Master Revised July 2013

Field #	Lab #	Depth	Classification											%H2O	LL	PL	PI	Cc	Cu	
● 128	2013-391	0.8	SILTY SAND with GRAVEL(SM)											7.3	NP	NP	NP			
☒ 129	2013-392	2.0	SILT(ML)											24.3	NP	NP	NP			
▲ 130	2013-393	3.5	SILT(ML)											28.6	NP	NP	NP			
Field #	Lab #	% PASSING	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			
● 128	2013-391		100.0	100.0	100.0	98.3	97.4	91.1	88.3	76.4	62.7	46.3	34.9	27.7	21.4	16.4	Gravel	Sand	Silt	Clay
☒ 129	2013-392		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.5	98.9	97.7	85.8	0.0	14.2	85.8	
▲ 130	2013-393		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.5	99.0	98.3	95.4	0.0	4.6	95.4	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4454
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N644018.621m E6664504.958m	ELEVATION: 666.797241m

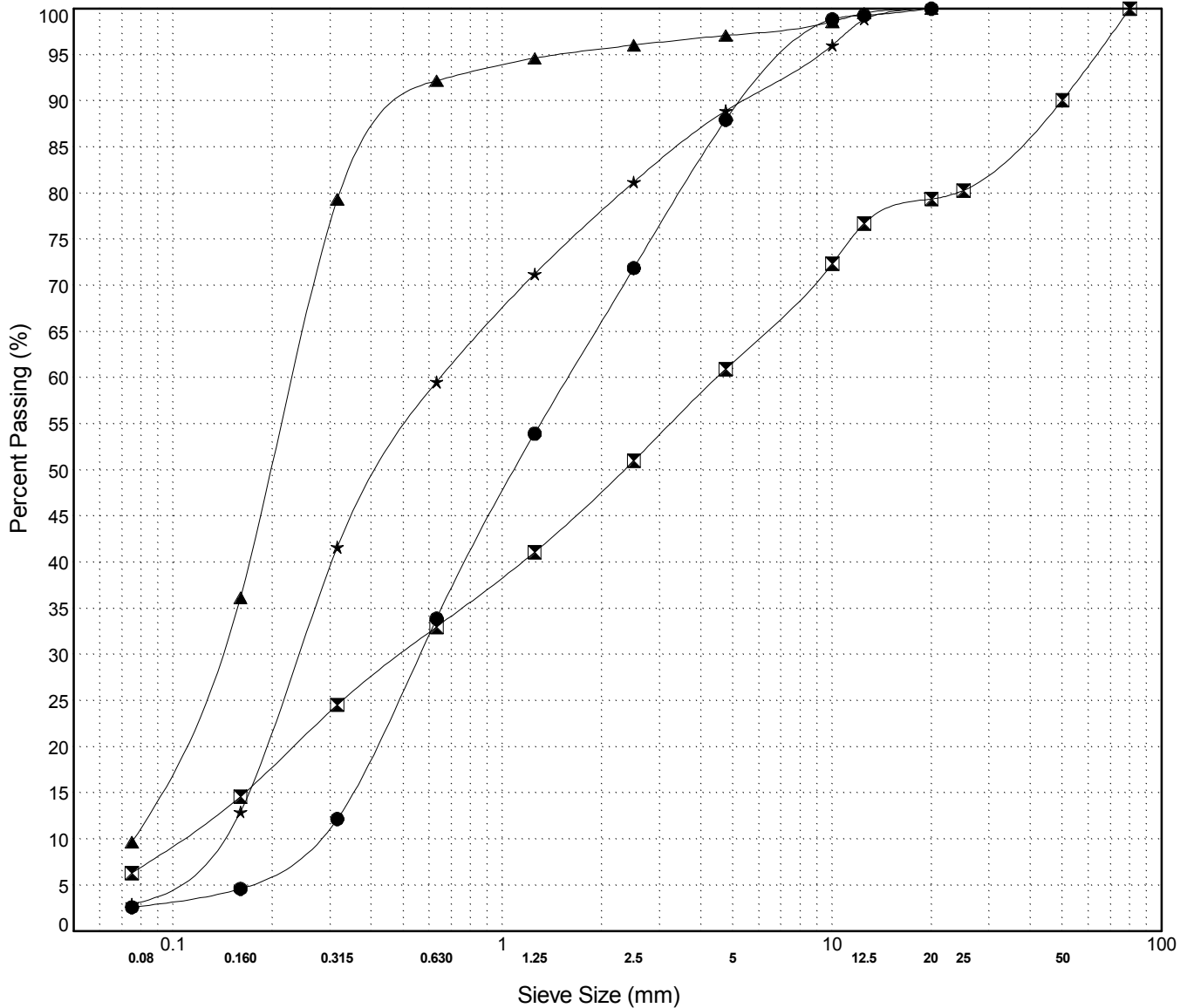
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 131	2013-394	0.6	POORLY GRADED SAND(SP)	2.8	NP	NP	NP	0.8	6.1
☒ 132	2013-395	2.0	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	4.1	NP	NP	NP	0.5	42.6
▲ 133	2013-396	3.2	POORLY GRADED SAND with SILT(SP-SM)	12.7	NP	NP	NP	1.0	3.1
★ 134	2013-397	4.2	POORLY GRADED SAND(SP)	15.3	NP	NP	NP	0.7	5.1

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	Clay
● 131	2013-394	100.0	100.0	100.0	100.0	100.0	100.0	99.3	98.9	88.0	71.9	53.9	33.9	12.2	4.6	2.6	12.0	85.3	2.6
☒ 132	2013-395	100.0	98.6	90.1	80.3	79.4	76.7	72.4	60.9	51.0	41.1	33.0	24.5	14.6	6.3	37.7	54.6	6.3	
▲ 133	2013-396	100.0	100.0	100.0	100.0	100.0	99.5	98.6	97.1	96.0	94.6	92.2	79.4	36.2	9.7	2.9	87.4	9.7	
★ 134	2013-397	100.0	100.0	100.0	100.0	100.0	98.9	96.0	88.9	81.2	71.2	59.5	41.6	12.9	2.9	11.1	86.0	2.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4455
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N643979.8568m E6664351.821m	ELEVATION: 661.842896m

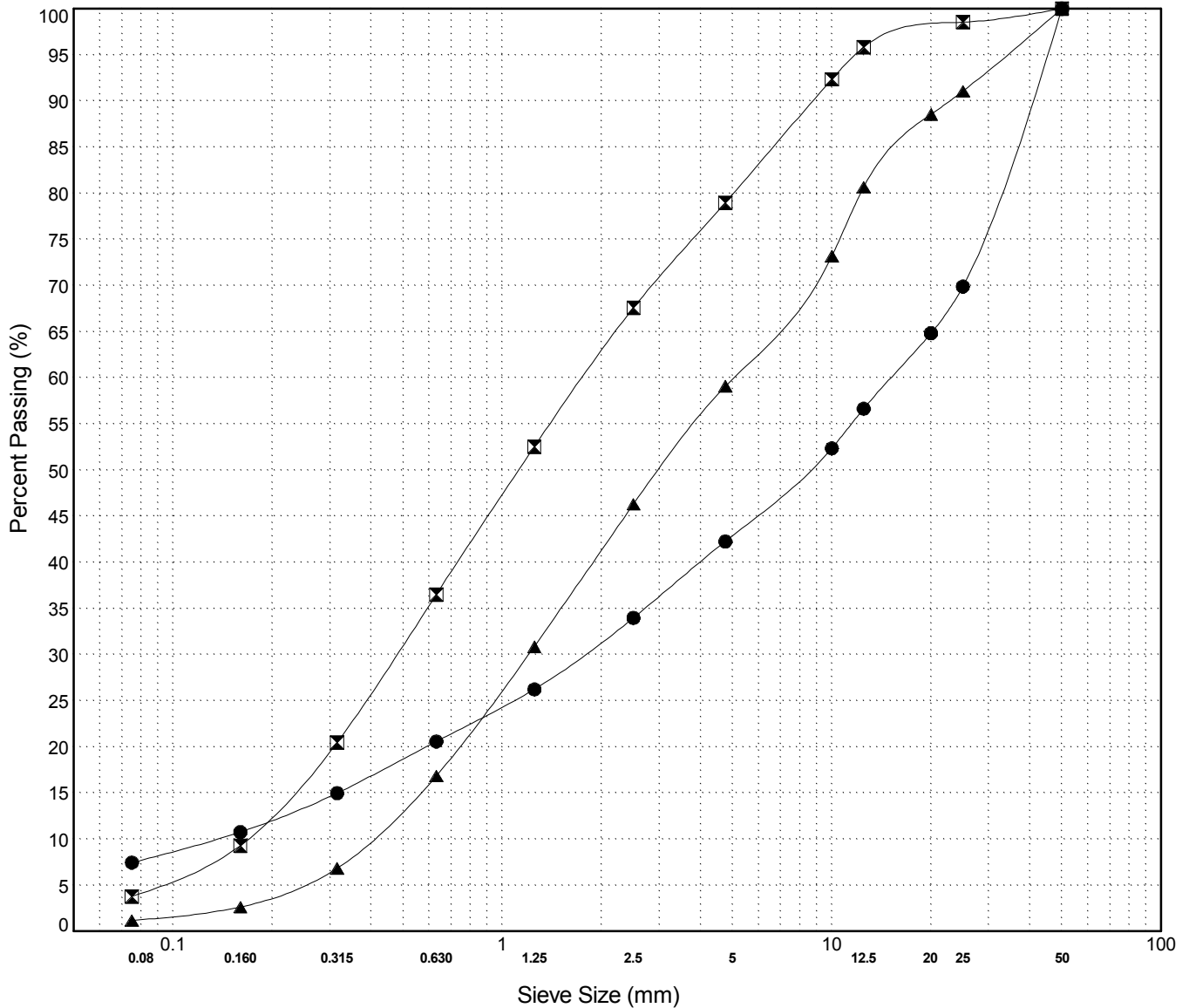
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 135	2013-398	0.6	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	2.6	NP	NP	NP	1.5	112.8
☒ 136	2013-399	1.6	POORLY GRADED SAND with GRAVEL(SP)	2.7	NP	NP	NP	0.8	10.6
▲ 137	2013-400	4.0	POORLY GRADED SAND with GRAVEL(SP)	7.5	NP	NP	NP	0.7	12.7

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
● 135	2013-398	100.0	100.0	100.0	100.0	69.9	64.8	56.6	52.4	42.3	34.0	26.2	20.6	15.0	10.8	7.5	57.7	34.8	7.5	
☒ 136	2013-399	100.0	100.0	100.0	98.5	97.7	95.8	92.4	79.0	67.6	52.5	36.5	20.5	9.3	3.8	21.0	75.2	3.8		
▲ 137	2013-400	100.0	100.0	100.0	91.1	88.5	80.6	73.2	59.1	46.3	30.9	16.8	6.8	2.6	1.2	40.9	57.9	1.2		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

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REVIEWED BY: M. Idrees

PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03C

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GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4456
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N643898.4643m E6664165.243m	ELEVATION: 653.849915m

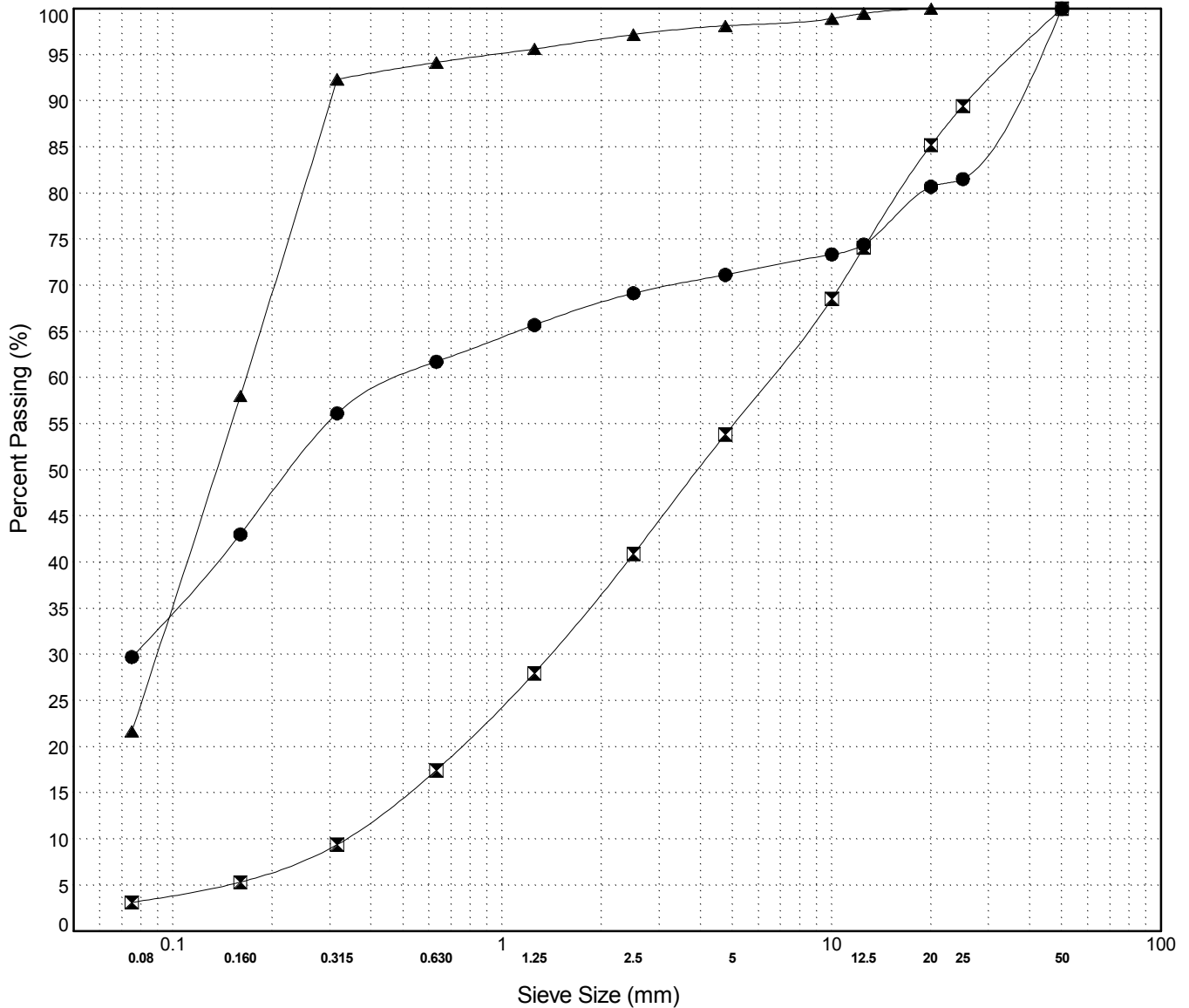
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 138	2013-401	0.7	SILTY SAND with GRAVEL(SM)	16.1	NP	NP	NP		
☒ 139	2013-402	1.6	POORLY GRADED SAND with GRAVEL(SP)	7.0	NP	NP	NP	0.9	19.5
▲ 140	2013-403	3.0	SILTY SAND(SM)	21.6	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
● 138	2013-401	100.0	100.0	100.0	100.0	81.5	80.7	74.4	73.4	71.1	69.2	65.7	61.7	56.1	43.0	29.7	28.9	41.4	29.7	
☒ 139	2013-402	100.0	100.0	100.0	89.4	85.2	74.1	68.6	53.9	40.9	28.0	17.4	9.4	5.3	3.1	46.1	50.7	3.1		
▲ 140	2013-403	100.0	100.0	100.0	100.0	100.0	99.5	98.9	98.1	97.2	95.6	94.2	92.4	58.0	21.7	1.9	76.5	21.7		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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Pit #: 105-C-03C

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GRAIN SIZE ANALYSIS	Hayes Crk LHS	SOURCE/TP#: 802-4457
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N643729.1664m E6664236.876m	ELEVATION: 650.763672m

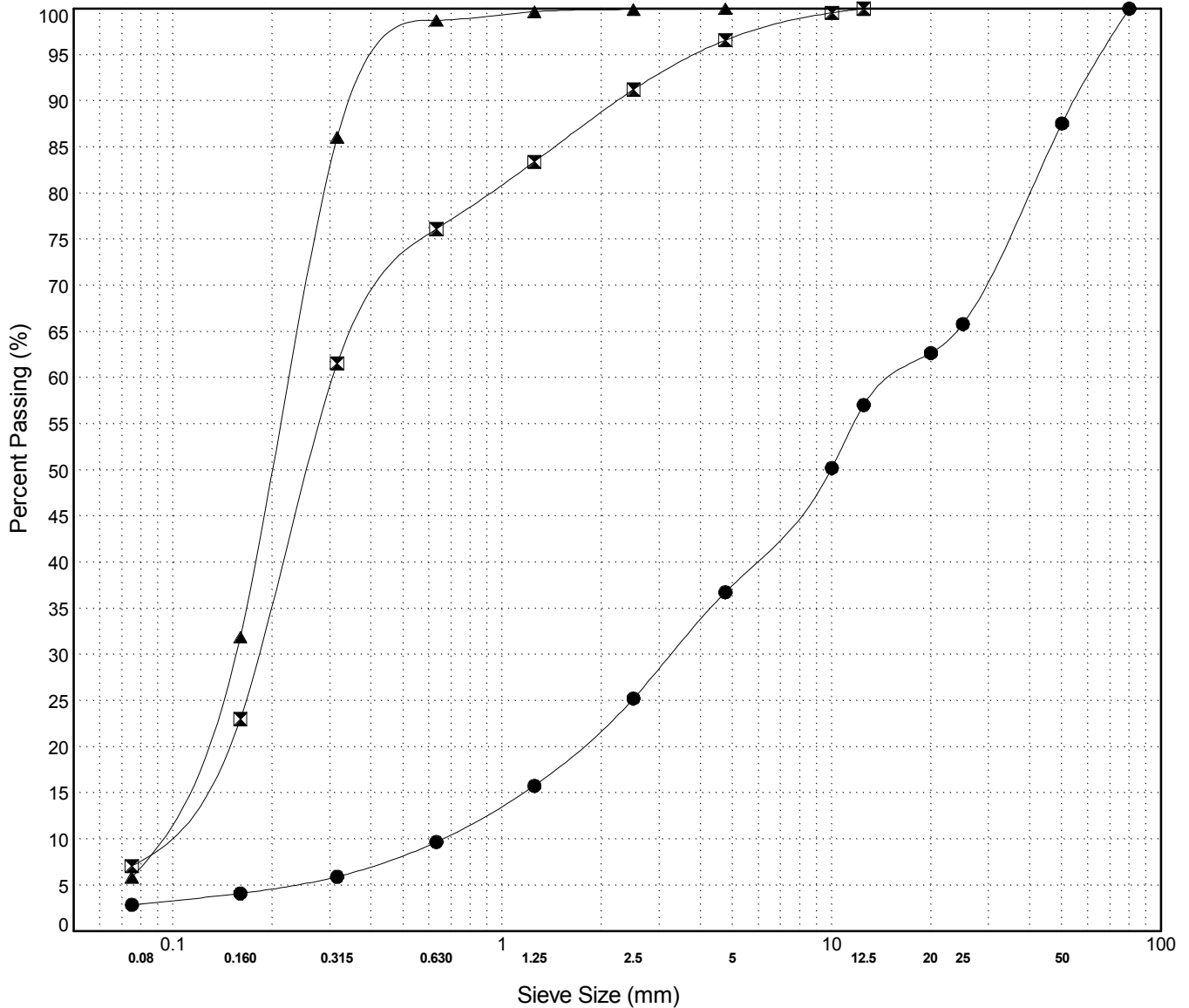
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 141	2013-404	0.6	WELL-GRADED GRAVEL with SAND(GW)	2.3	NP	NP	NP	1.0	24.5
☒ 142	2013-405	2.0	POORLY GRADED SAND with SILT(SP-SM)	5.9	NP	NP	NP	1.2	3.6
▲ 143	2013-406	3.5	POORLY GRADED SAND with SILT(SP-SM)	6.8	NP	NP	NP	1.2	2.7

Field #	Lab #	% PASSING	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														
● 141	2013-404	100.0	98.3	87.6	65.8	62.7	57.0	50.2	36.8	25.2	15.8	9.7	5.9	4.1	2.9	61.5	33.9	2.9		
☒ 142	2013-405	100.0	100.0	100.0	100.0	100.0	100.0	99.5	96.6	91.2	83.4	76.1	61.6	23.0	7.1	3.4	89.5	7.1		
▲ 143	2013-406	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.7	98.7	86.0	31.9	5.9	0.0	94.1	5.9		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

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PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03C

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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4458
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646113.47m E6665322.56m	ELEVATION: m

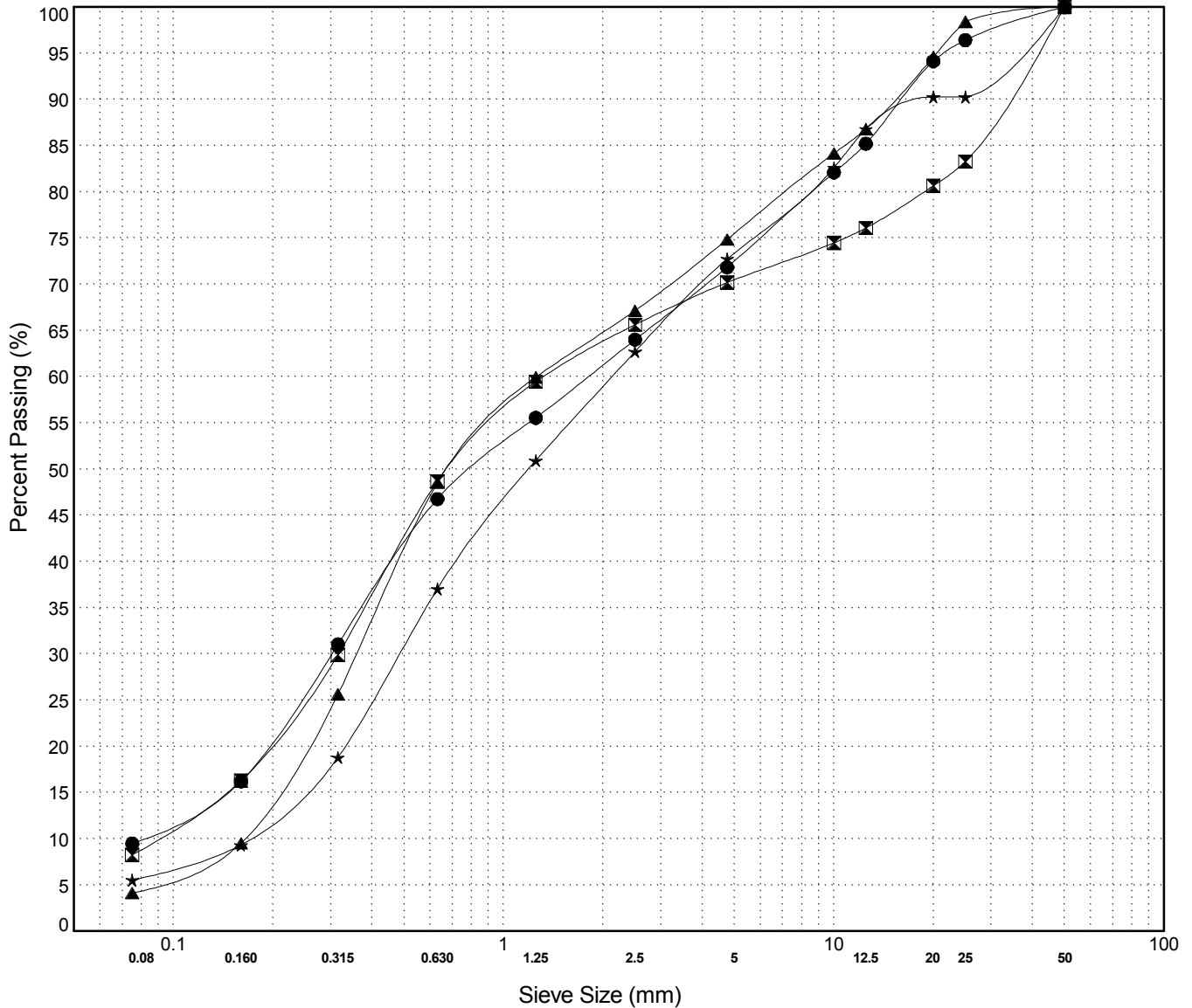
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 144	2013-407	0.3	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	2.5	NP	NP	NP	0.6	22.7
☒ 145	2013-408	1.0	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	2.4	NP	NP	NP	0.8	15.0
▲ 146	2013-409	2.6	POORLY GRADED SAND with GRAVEL(SP)	2.6	NP	NP	NP	0.6	7.7
★ 147	2013-410	4.5	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	8.8	NP	NP	NP	0.6	12.7

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
● 144	2013-407	100.0	100.0	100.0	96.4	94.1	85.2	82.1	71.8	64.0	55.6	46.8	31.0	16.2	9.5	28.2	62.3	9.5	
☒ 145	2013-408	100.0	100.0	100.0	83.3	80.6	76.1	74.5	70.2	65.6	59.5	48.7	29.9	16.3	8.3	29.8	61.9	8.3	
▲ 146	2013-409	100.0	100.0	100.0	98.4	94.6	86.8	84.2	74.8	67.1	59.9	48.5	25.7	9.5	4.1	25.2	70.7	4.1	
★ 147	2013-410	100.0	100.0	100.0	90.3	90.3	86.8	82.6	72.7	62.7	50.9	37.0	18.8	9.3	5.5	27.3	67.2	5.5	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

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PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03A

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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4459
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646264.45m E6665315.53m	ELEVATION: m

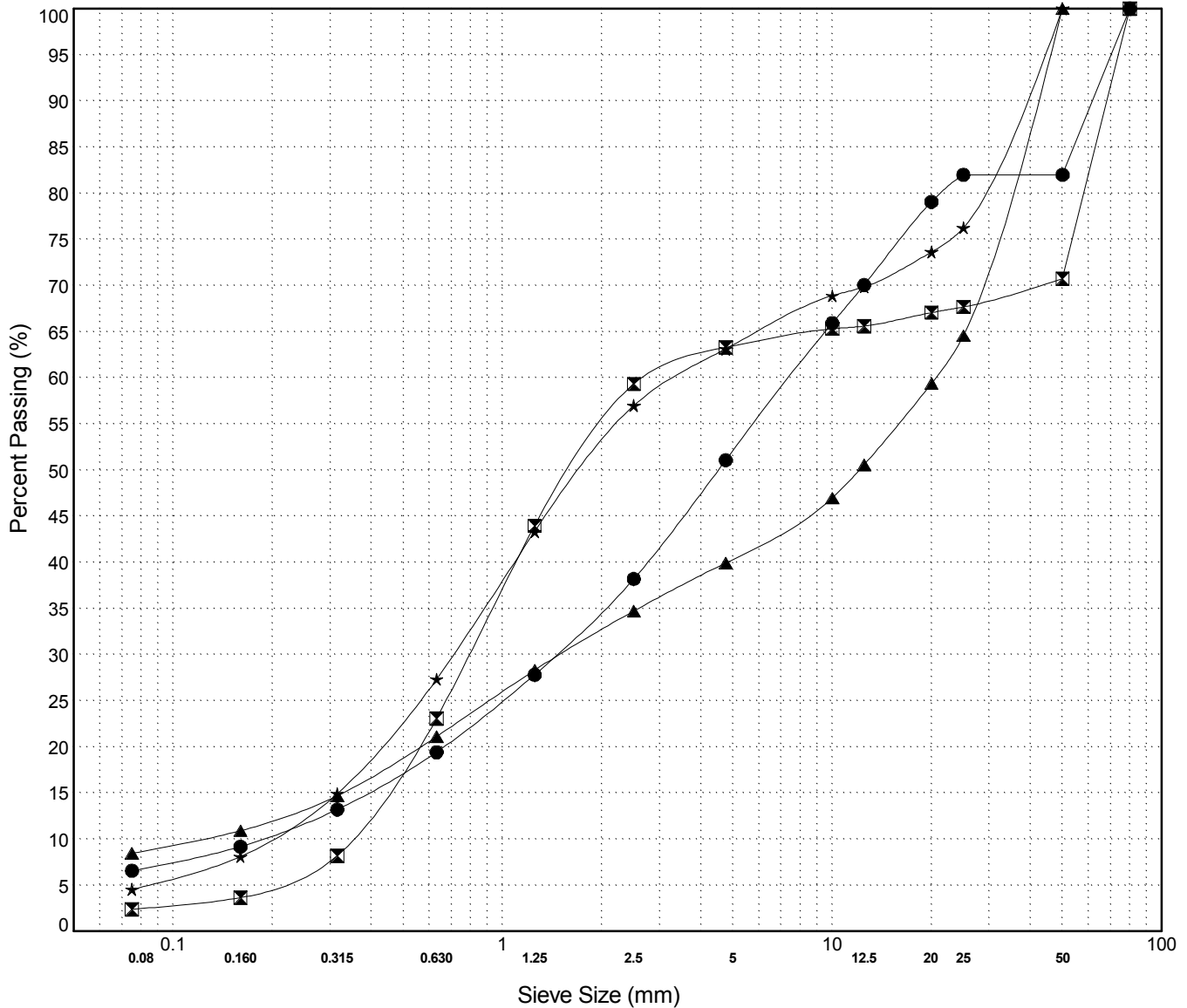
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 148	2013-411	0.5	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.7	NP	NP	NP	1.5	40.5
☒ 149	2013-412	1.4	POORLY GRADED SAND with GRAVEL(SP)	3.6	NP	NP	NP	0.7	8.1
▲ 150	2013-413	3.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	1.8	NP	NP	NP	0.9	170.2
★ 151	2013-414	4.5	POORLY GRADED SAND with GRAVEL(SP)	2.2	NP	NP	NP	0.8	17.7

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
● 148	2013-411	100.0	97.5	82.0	82.0	79.1	70.0	65.9	51.1	38.2	27.8	19.4	13.2	9.2	6.6	46.5	44.5	6.6	
☒ 149	2013-412	100.0	96.0	70.7	67.7	67.1	65.6	65.3	63.3	59.3	44.0	23.1	8.2	3.7	2.4	32.7	60.9	2.4	
▲ 150	2013-413	100.0	100.0	100.0	64.6	59.4	50.6	47.0	39.9	34.7	28.3	21.1	14.7	10.9	8.5	60.1	31.4	8.5	
★ 151	2013-414	100.0	100.0	100.0	76.2	73.6	69.8	68.9	63.1	57.0	43.3	27.3	14.9	8.1	4.6	36.9	58.6	4.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
Transportation Engineering Branch

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REVIEWED BY: M. Idrees

PROJECT ENGINEER: M. Idrees

Pit #: 105-C-03A

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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4460
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646243.9m E6665270.89m	ELEVATION: m

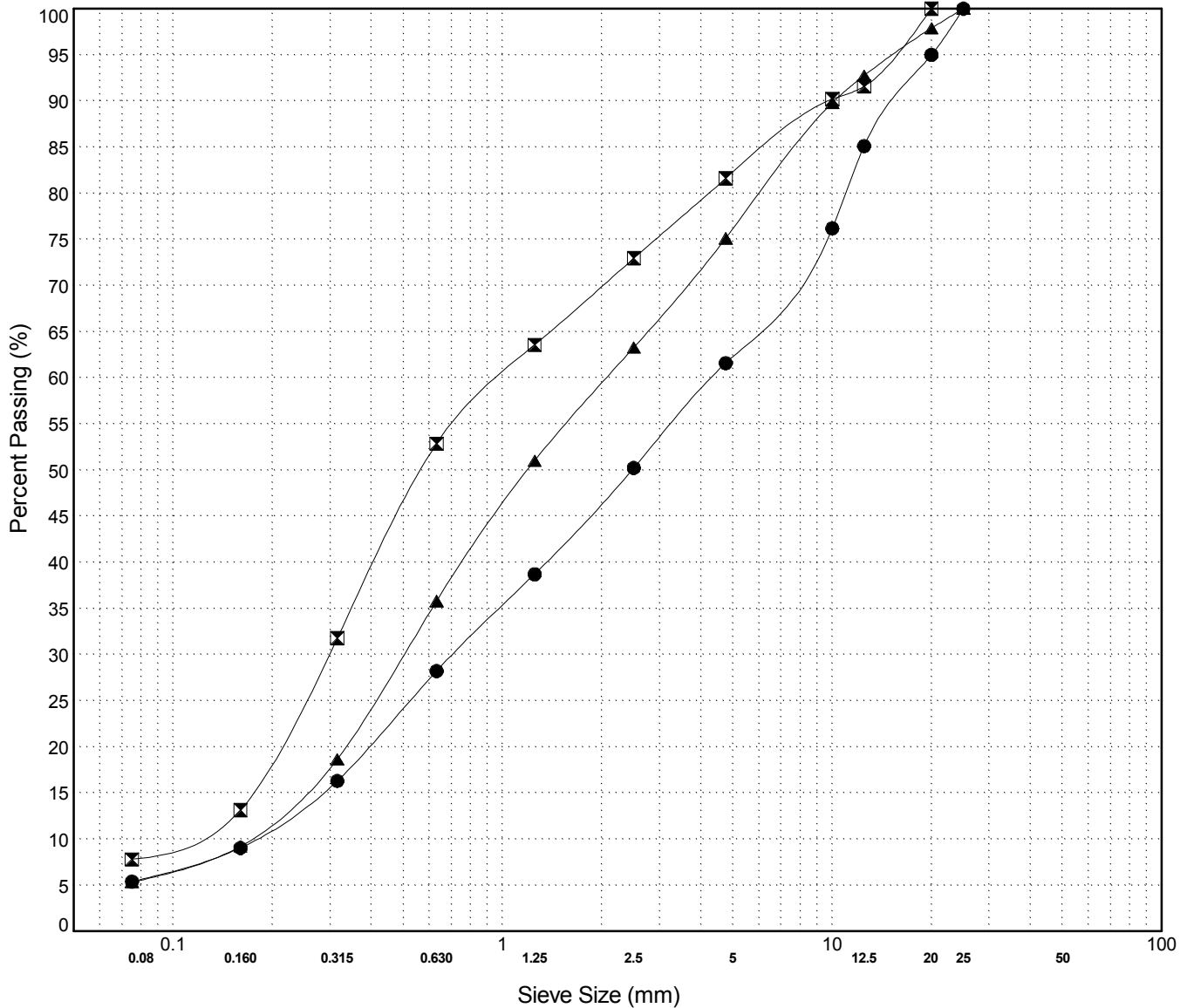
Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 152	2013-415	0.5	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	3.9	NP	NP	NP	0.7	24.8
☒ 153	2013-416	2.5	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	2.9	NP	NP	NP	0.9	9.7
▲ 154	2013-417	4.2	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	2.7	NP	NP	NP	0.7	12.3

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
● 152	2013-415	100.0	100.0	100.0	100.0	95.0	85.1	76.2	61.6	50.2	38.7	28.2	16.3	9.0	5.4	38.4	56.2	5.4	
☒ 153	2013-416	100.0	100.0	100.0	100.0	100.0	91.6	90.2	81.6	72.9	63.6	52.9	31.8	13.1	7.8	18.4	73.8	7.8	
▲ 154	2013-417	100.0	100.0	100.0	100.0	97.9	92.7	89.8	75.1	63.3	51.0	35.8	18.7	9.2	5.3	24.9	69.8	5.3	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works  
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PROJECT ENGINEER: M. Idrees

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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4461
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646254.05m E6665221.69m	ELEVATION: m

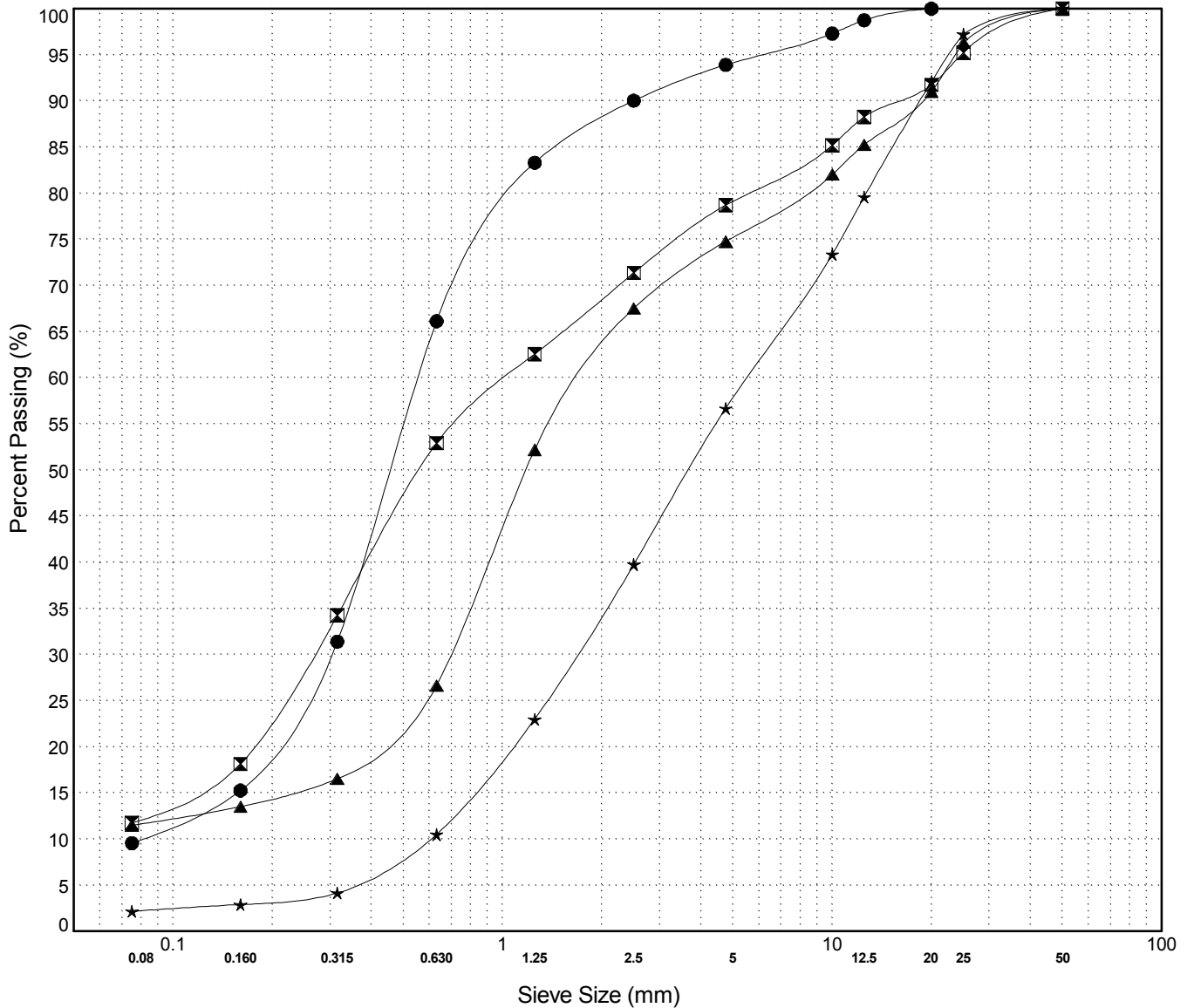
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 155	2013-418	0.8	WELL-GRADED SAND with SILT (SW-SM)	4.5	NP	NP	NP	2.0	7.0
☒ 156	2013-419	1.8	WELL-GRADED SAND with SILT and GRAVEL (SW-SM)	4.5	NP	NP	NP	1.1	17.2
▲ 157	2013-420	3.2	POORLY GRADED SAND with SILT and GRAVEL (SP-SM)	4.4	NP	NP	NP	6.3	41.7
★ 158	2013-421	4.2	POORLY GRADED SAND with GRAVEL (SP)	2.7	NP	NP	NP	0.8	9.2

Field #	Lab #	% PASSING	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
● 155	2013-418	100.0	100.0	100.0	100.0	100.0	98.7	97.3	93.9	90.0	83.3	66.1	31.4	15.3	9.6		6.1	84.3	9.6	
☒ 156	2013-419	100.0	100.0	100.0	95.2	91.8	88.3	85.2	78.7	71.4	62.6	52.9	34.3	18.1	11.8		21.3	66.9	11.8	
▲ 157	2013-420	100.0	100.0	100.0	96.3	91.0	85.2	82.0	74.8	67.5	52.2	26.6	16.5	13.5	11.5		25.2	63.3	11.5	
★ 158	2013-421	100.0	100.0	100.0	97.2	92.1	79.6	73.4	56.7	39.8	23.0	10.5	4.2	2.9	2.2		43.3	54.5	2.2	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4462
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646319.43m E6665230.76m	ELEVATION: m

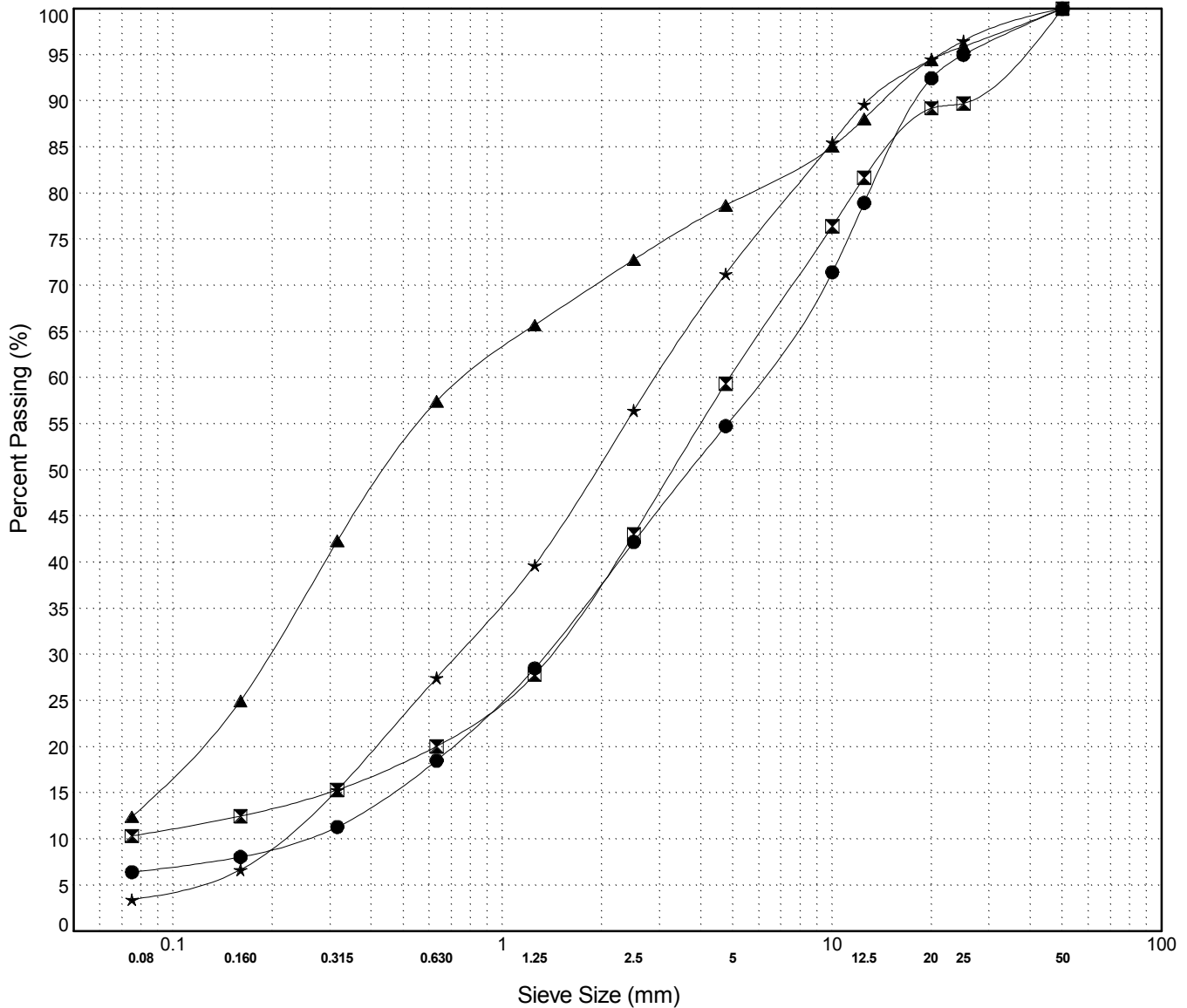
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 159	2013-422	0.5	WELL-GRADED SAND with SILT and GRAVEL(SW-SM)	2.8	NP	NP	NP	1.3	25.1
☒ 160	2013-423	1.7	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	3.9	NP	NP	NP	5.9	73.5
▲ 161	2013-424	3.3	SILTY SAND with GRAVEL(SM)	4.3	NP	NP	NP	0.8	12.0
★ 162	2013-425	4.2	POORLY GRADED SAND with GRAVEL(SP)	2.7	NP	NP	NP	0.9	14.0

Field #	Lab #	% PASSING	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
● 159	2013-422	100.0	100.0	100.0	95.0	92.5	79.0	71.4	54.8	42.2	28.5	18.5	11.3	8.1	6.4	45.2	48.3	6.4		
☒ 160	2013-423	100.0	100.0	100.0	89.7	89.2	81.7	76.4	59.4	43.0	27.8	20.1	15.3	12.5	10.3	40.6	49.0	10.3		
▲ 161	2013-424	100.0	100.0	100.0	95.9	94.4	88.0	85.0	78.7	72.8	65.7	57.4	42.3	25.0	12.4	21.3	66.3	12.4		
★ 162	2013-425	100.0	100.0	100.0	96.5	94.5	89.6	85.5	71.2	56.4	39.7	27.5	15.3	6.7	3.4	28.8	67.8	3.4		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4463
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates:Z8V N646303.34m E6665303.47m	ELEVATION: m

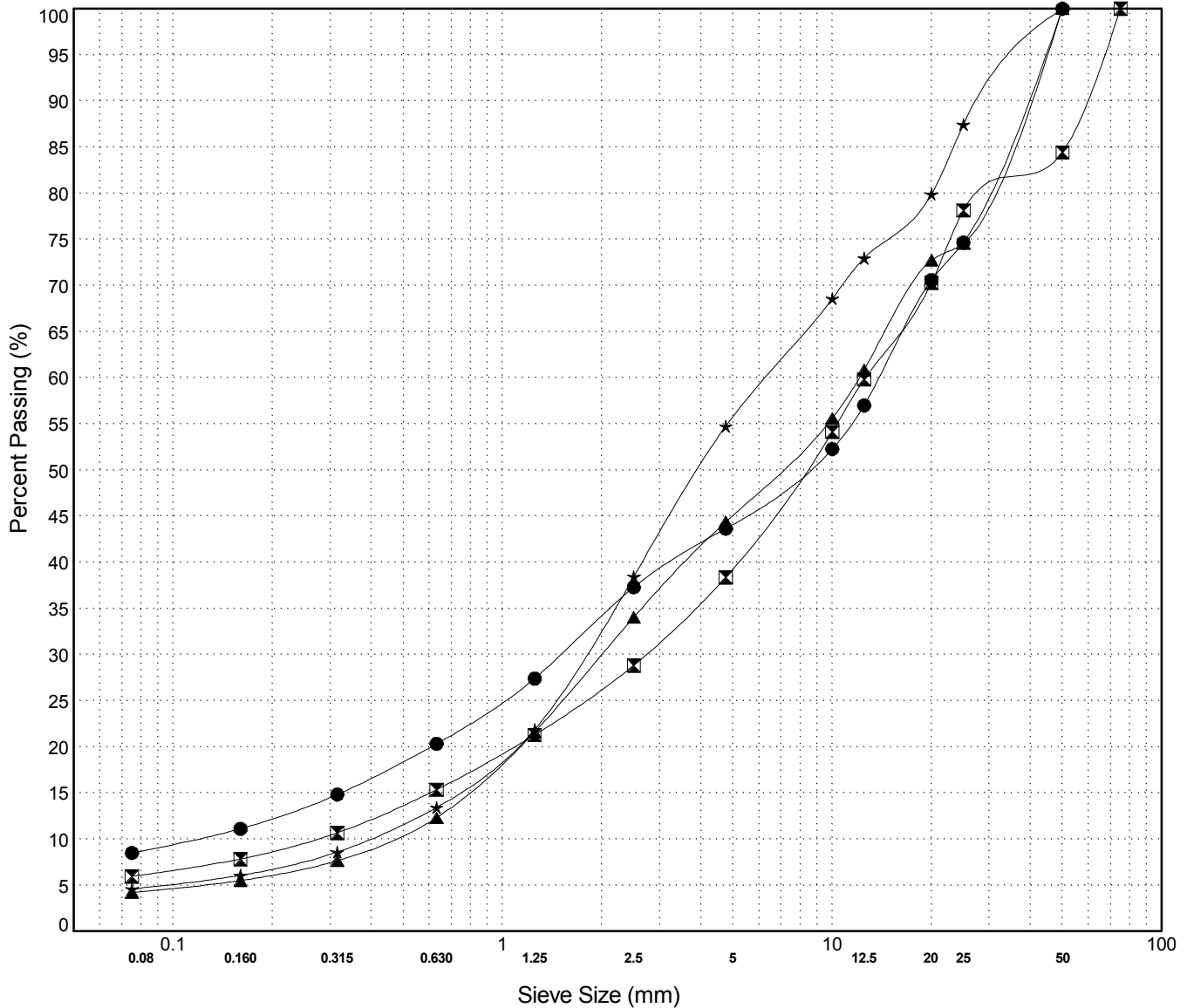
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 163	2013-426	0.5	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	5.2	NP	NP	NP	1.4	119.9
☒ 164	2013-427	1.5	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.3	NP	NP	NP	2.2	47.1
▲ 165	2013-428	3.0	POORLY GRADED GRAVEL with SAND(GP)	2.5	NP	NP	NP	0.7	27.0
★ 166	2013-429	4.2	WELL-GRADED SAND with GRAVEL(SW)	2.9	NP	NP	NP	1.3	16.4

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
● 163	2013-426	100.0	100.0	100.0	74.7	70.6	57.0	52.3	43.6	37.3	27.4	20.3	14.8	11.1	8.5	56.4	35.1	8.5
☒ 164	2013-427	100.0	100.0	84.4	78.1	70.3	59.8	54.1	38.4	28.8	21.3	15.4	10.7	7.8	6.0	61.6	32.4	6.0
▲ 165	2013-428	100.0	100.0	100.0	74.6	72.7	60.8	55.6	44.4	34.1	21.6	12.3	7.7	5.5	4.2	55.6	40.1	4.2
★ 166	2013-429	100.0	100.0	100.0	87.4	79.9	73.0	68.6	54.7	38.4	21.9	13.4	8.6	6.1	4.6	45.3	50.2	4.6

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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GRAIN SIZE ANALYSIS	Hayes Crk RHS	SOURCE/TP#: 803-4464
Deadman	Alaska Hwy, Km 1223 LHS	PROJECT NO: 552-202101-1001-1-1
Volvo Excavator 210BLC	Coordinates: Z8V N646392.61m E6665319.41m	ELEVATION: m

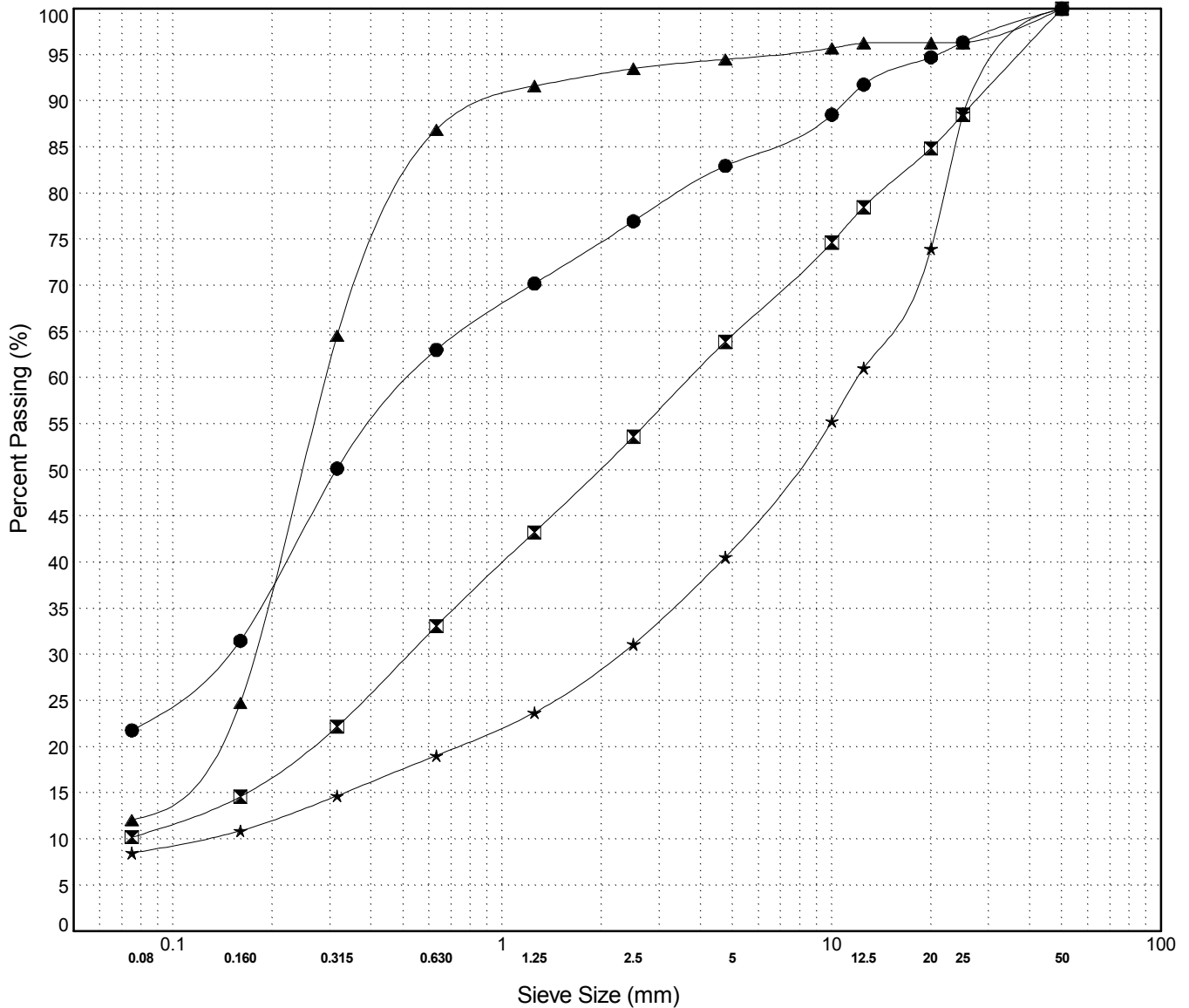
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Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 167	2013-430	0.7	SILTY SAND with GRAVEL(SM)	5.3	NP	NP	NP		
☒ 168	2013-431	1.8	POORLY GRADED SAND with SILT and GRAVEL(SP-SM)	4.0	NP	NP	NP	1.0	51.5
▲ 169	2013-432	3.0	SILTY SAND(SM)	5.8	NP	NP	NP	1.6	4.4
★ 170	2013-433	4.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.2	NP	NP	NP	3.5	99.7

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
● 167	2013-430	100.0	100.0	100.0	100.0	96.3	94.7	91.8	88.5	83.0	77.0	70.2	63.0	50.2	31.5	21.8	17.0	61.2	21.8	
☒ 168	2013-431	100.0	100.0	100.0	88.5	84.9	78.5	74.7	63.9	53.6	43.3	33.1	22.2	14.6	10.2	36.1	53.7	10.2		
▲ 169	2013-432	100.0	100.0	100.0	96.3	96.3	96.3	95.7	94.5	93.5	91.6	86.9	64.6	24.8	12.1	5.5	82.4	12.1		
★ 170	2013-433	100.0	100.0	100.0	88.6	74.0	61.0	55.3	40.5	31.1	23.7	19.1	14.7	10.9	8.5	59.5	32.0	8.5		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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