

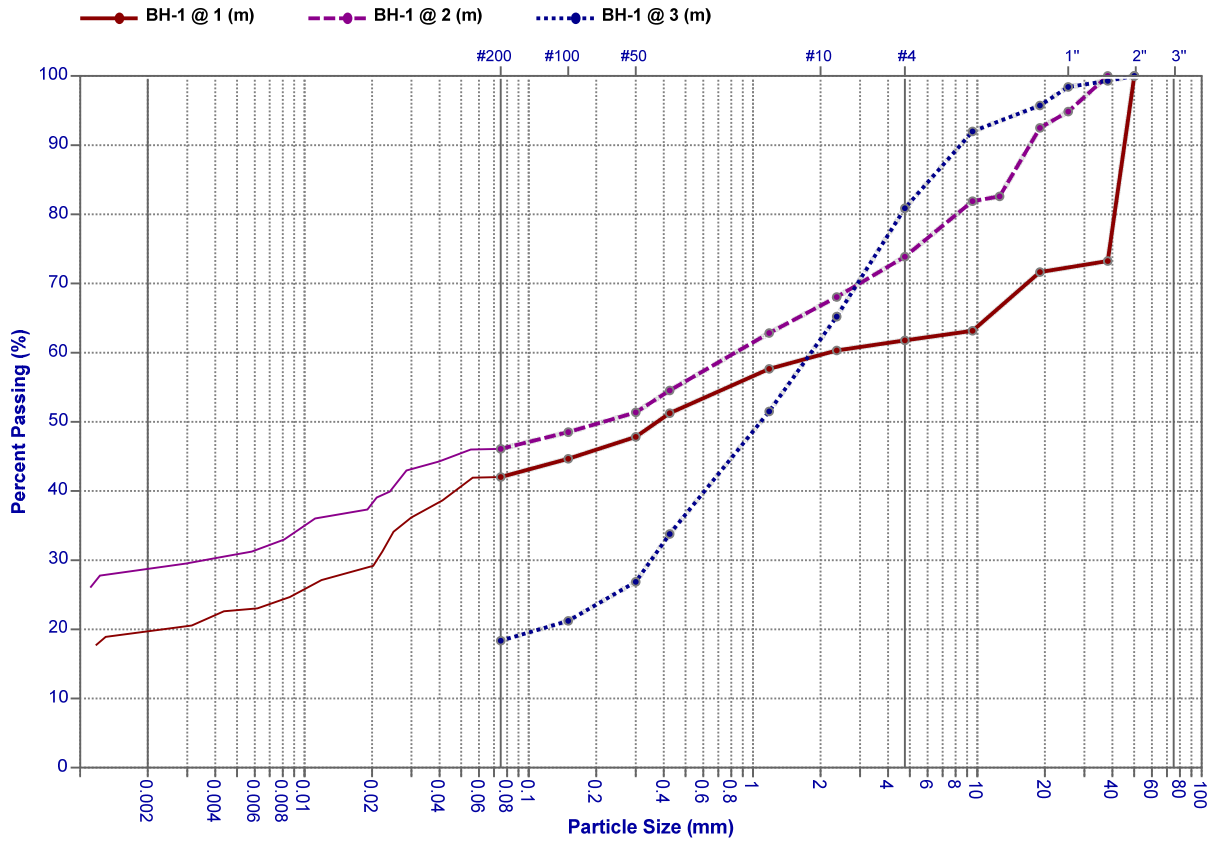
Sieve Analysis Test

Project : Example Project #1
 Client : ABC Construction Ltd
 Job No.: 2011-1
 Location : Burnaby

Kandoo Engineering LLC



ASTM C136



Particle Distribution (%)

Clay	Silt	Sand	Gravel	Cobble
19.7	22.3	19.8	38.2	-
28.7	17.4	27.8	26.1	-
-	18.4	62.5	19.1	-

Classification

Borehole	Sample Depth (m)	D10 (mm)	D30 (mm)	D50 (mm)	D60 (mm)	Cc	Cu	LL (%)	PI (%)	Disp. (%)	USCS	AASHTO
BH-1	1	0.001	0.021	0.375	2.174	0.203	2174	67.9	29	97.9	GM	A-7-5(8)
BH-1	2	0.001	0.004	0.215	0.832	0.019	832	36	5	97.9	SM	A-4(0)
BH-1	3	-	0.351	1.082	1.813	0.906	-	35	17	97.9	SC	A-2-6(0)

Sieve Analysis Test

Project : Example Project #1

Borehole : BH-2

Kandoo Engineering LLC

Client : ABC Construction Ltd

Sample Depth : 4.5 (m)



Job No.: 2011-1

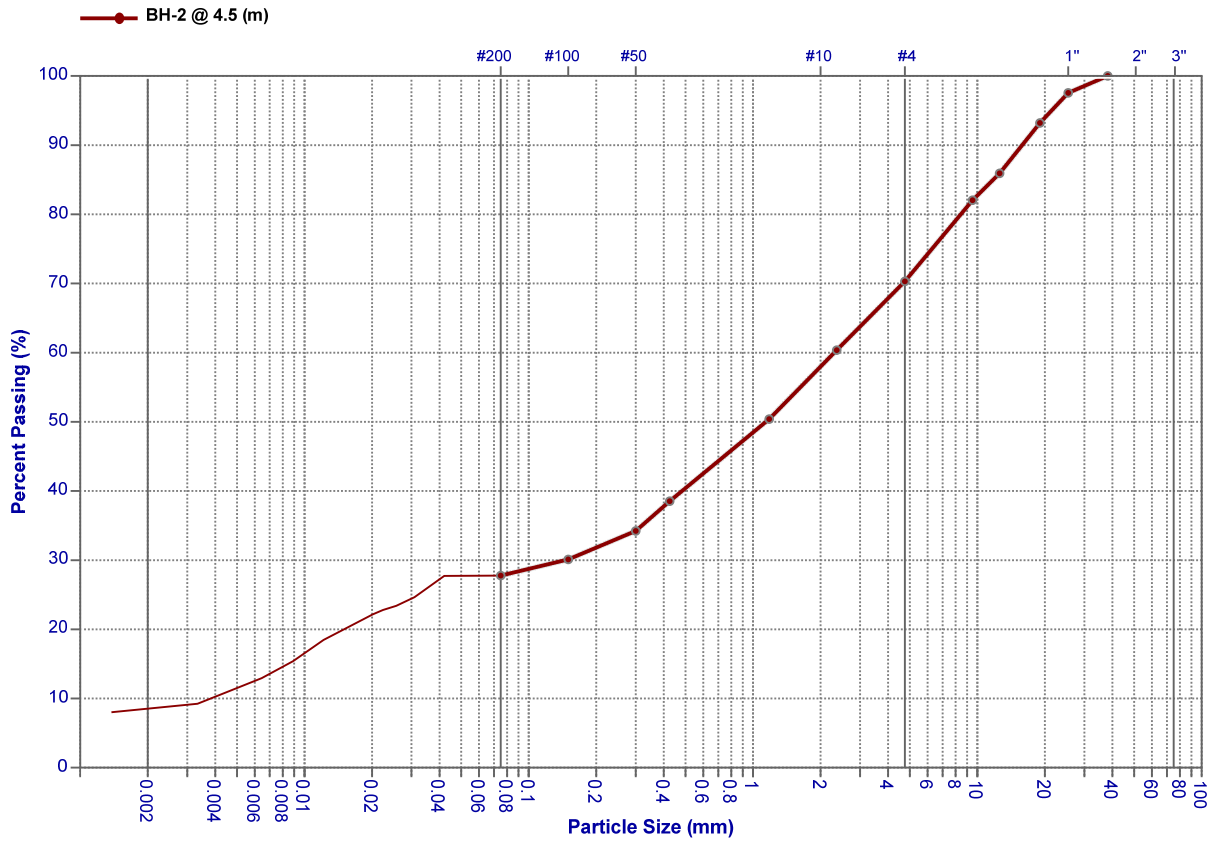
Classification : SC-SM | A-2-4(0)

COMPANY NAME
YOUR SAMPLE TEXT HERE

Location : Burnaby

Sample Type : Disturbed

ASTM C136



Particle Distribution (%)

Clay	Silt	Sand	Gravel	Cobble
8.5	19.2	42.5	29.7	-

Classification

Borehole	Sample Depth (m)	D10 (mm)	D30 (mm)	D50 (mm)	D60 (mm)	Cc	Cu	LL (%)	PI (%)	Disp. (%)	USCS	AASHTO
BH-2	4.5	0.004	0.146	1.14	2.301	2.316	575.25	24.2	6.3	97.9	SC-SM	A-2-4(0)

USCS Soil Description : Clayey - Silty Sand With Gravel
AASHTO Soil Description : Silty or clayey gravel and sand (0)

Tested By :

ATTERBERG LIMITS TEST

Project : Example Project #1

Borehole : BH-1

Kandoo Engineering

Client : ABC Construction Ltd

Sample Depth : 1 (m)

Job No.: 2011-1

Classification : GM | A-7-5(8)

Location : Burnaby

Sample Type : Undisturbed

ASTM D2216-90, D854

Liquid Limit

Cont. W (gr)	Cont. + Wet Soil W (gr)	Cont. + Dry Soil W (gr)	# of Blows	Moisture Content (%)
5	9.8	7.8	13	71.4
4	9.6	7.5	16	60
4.3	10.2	8.1	19	55.3
				-

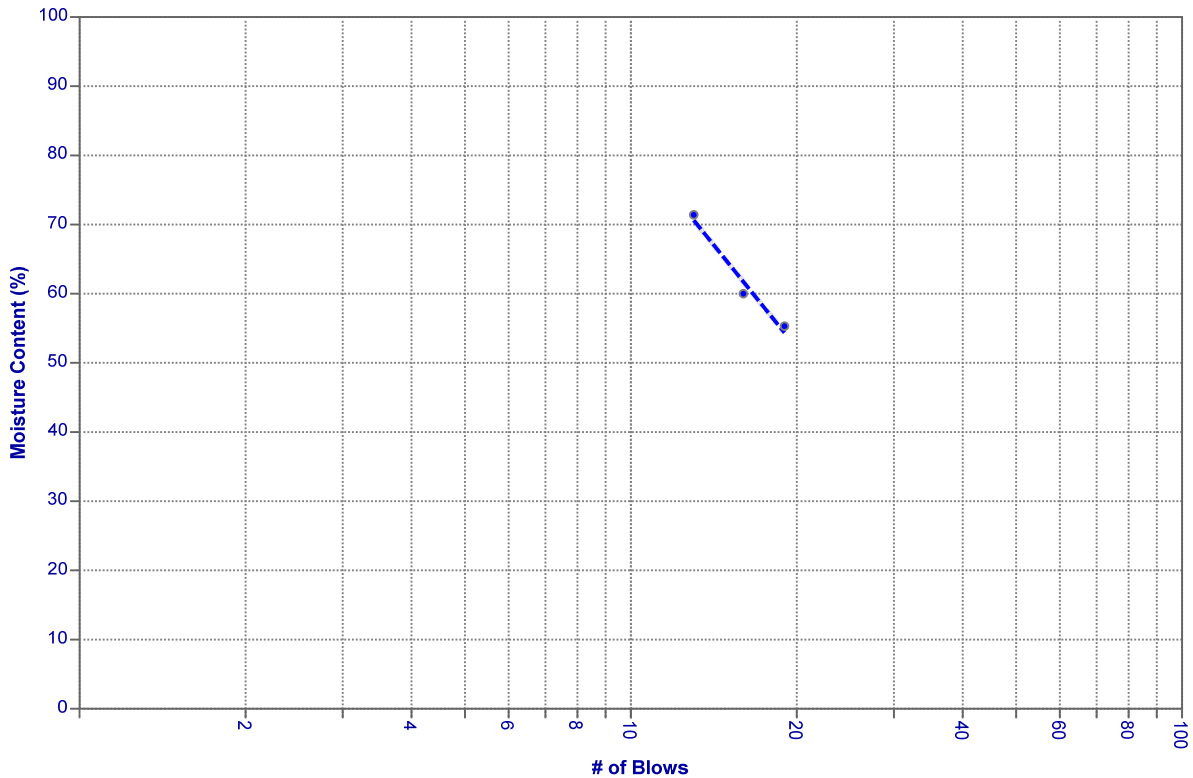
Plastic Limit

Cont. W (gr)	Cont. + Wet Soil W (gr)	Cont. + Dry Soil W (gr)	Moisture Content (%)
15	44.6	36	41
16	52.6	42.4	38.6
15.3	52.4	42.3	37.4

LL = 42.6 %

PL = 39 %

PI=3.6



USCS Soil Description : Silty Gravel With Sand
AASHTO Soil Description : Clayey soils (8)

Tested By :
Andrew

Field Density Test

Project : Example Project #1

Client : ABC Construction Ltd

Job No.: 2011-1

Location : Burnaby

Kandoo Engineering LLC



COMPANY NAME
YOUR SAMPLE TEXT HERE

ASTM D6938

Borehole	Sample Depth (m)	Sand Dry Density (gr/cm ³)	Wet Soil Wt. (gr)	Dry Soil Wt. (gr)	Apparatus Before (gr)	Apparatus After (gr)	Sand in Cone (gr)	Dry Density (gr/cm ³)	Moisture Content (%)
BH-1	1	1.53	216.5	200	856.5	750	253.2	2.09	7.6

Density & Moisture Test

Project : Example Project #1

Client : ABC Construction Ltd

Job No.: 2011-1

Location : Burnaby

Kandoo Engineering LLC



COMPANY NAME
YOUR SAMPLE TEXT HERE

ASTM D4643, D2216

Borehole	Sample Depth (m)	Moisture Content (%)	Dry Density (gr/cm3)	Wet Density (gr/cm3)
BH-2	1.5	15.2	1.96	2.26
BH-2	3.6	23.1	1.7	2.09

COMPACTION TEST

Project : Example Project #1

Borehole : BH-1

Kandoo Engineering LLC

Client : ABC Construction Ltd

Sample Depth : 1 (m)



Job No.: 2011-1

Classification : GM | A-7-5(8)

COMPANY NAME
YOUR SAMPLE TEXT HERE

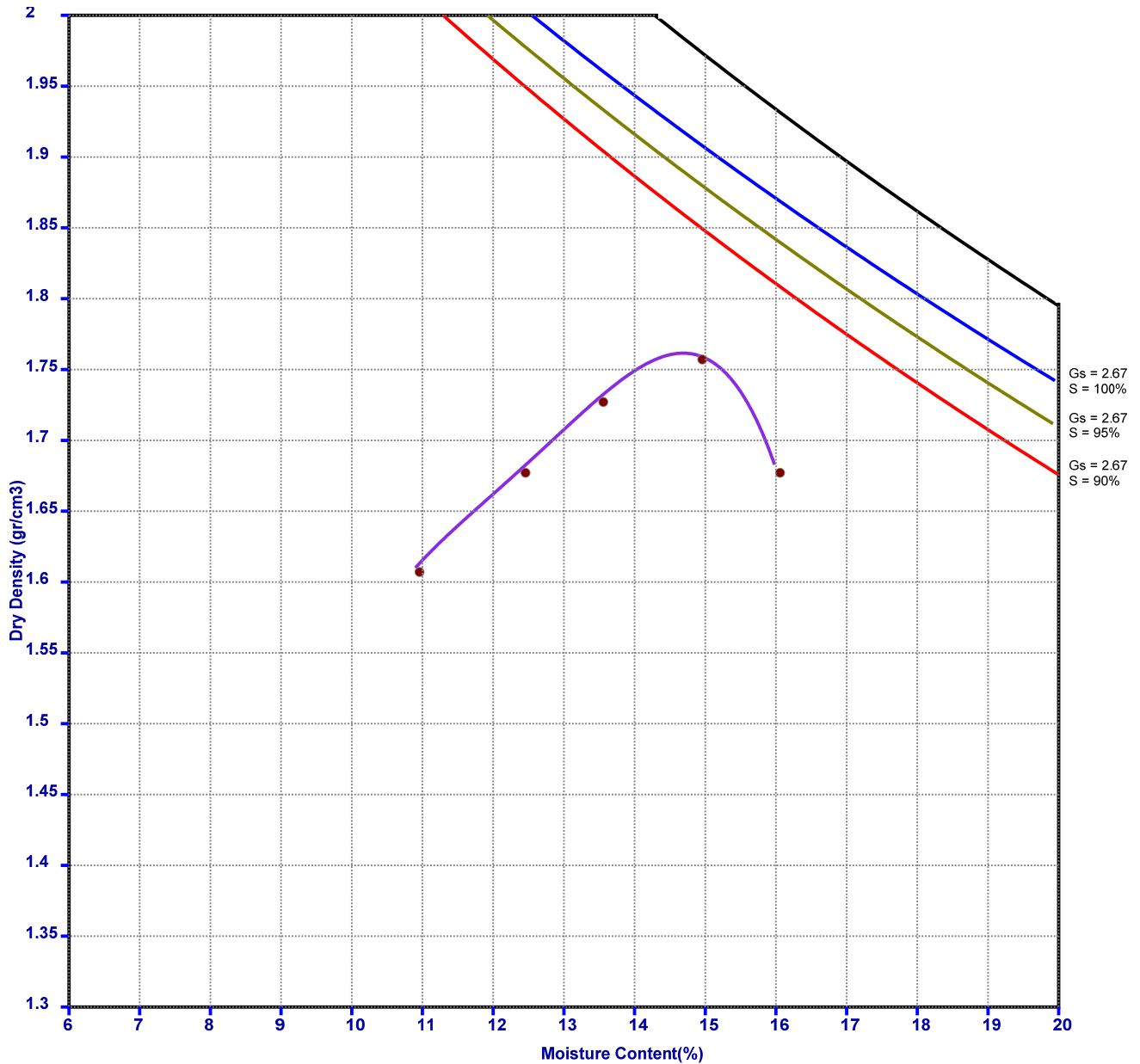
Location : Burnaby

Sample Type : Undisturbed

AASHTO T-99

Specifications & Results

Max. Dry Density (gr/cm ³)	Optimum Moisture	Test Type	Drop Height (cm)	Hammer Weight	Mould Volume (cm ³)	Blows/Layer
1.76	14.7	AASHTO Standard	30.48	2.5	944	3 / 25



USCS Soil Description : Silty Gravel With Sand
AASHTO Soil Description : Clayey soils (8)

Tested By :
Andrew Milani

Direct Shear Test

Project : Example Project #1

Borehole : BH-1

Kandoo Engineering LLC

Client : ABC Construction Ltd

Sample Depth : 1 (m)



Job No.: 2011-1

Classification : GM | A-7-5(8)

COMPANY NAME
YOUR SAMPLE TEXT HERE

Location : Burnaby

Sample Type : Undisturbed

ASTM D3080

Mechanical Properties

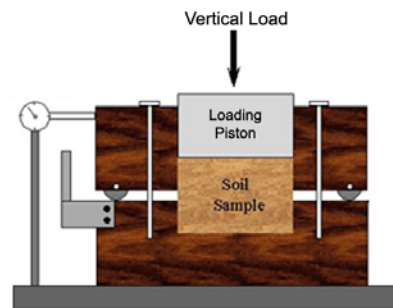
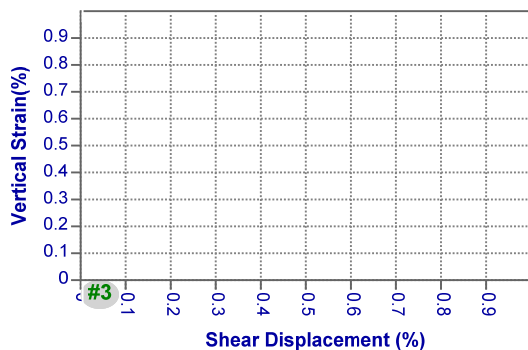
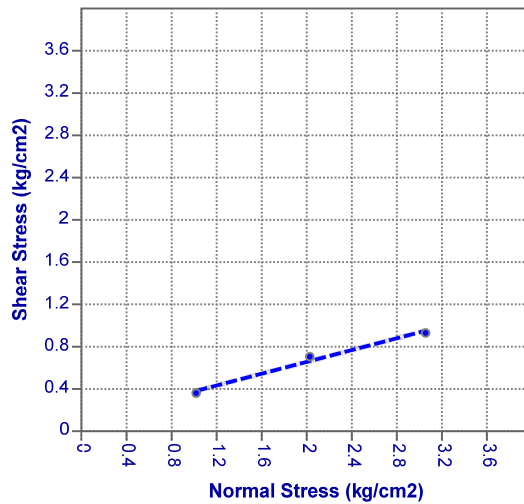
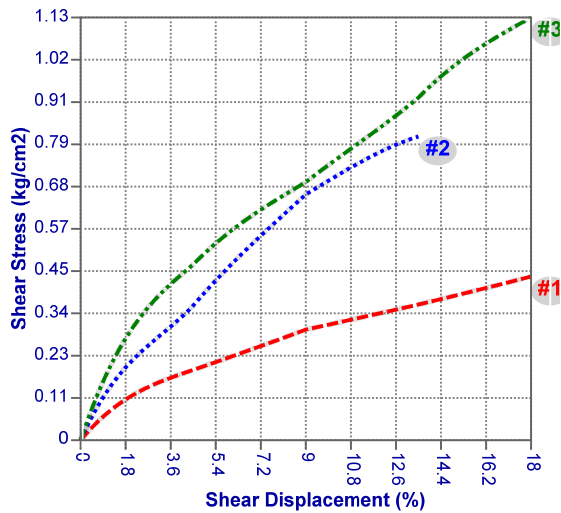
Gs	Type	Moisture Status	Φ (o)	C (kg/cm ²)	Shear Box (cm) ²
2.65	Slow	Saturated	15.6	0.1	Square 10 x 10 x 2

Sample Properties

#	Normal Stress (kg/cm ²)	Ring Factor (kgf/div)	Dry Density (gr/cm ³)	Moisture Before (%)	Moisture After (%)	Void Ratio	Saturation (%)
1	1.02 {1}	1.5	1.75	5.7	2.9	0.51	29.4
2	2.03 {2}	1.5	1.8	3.3	2.4	0.47	18.5
3	3.05 {3}	1.5	1.77	3.1	1.7	0.5	16.5

Strain Behavior

#	Shear Stress (kg/cm ²)	Shear Strain at Failure (%)	Vertical Strain (%)
1	0.36	1.8	
2	0.7	1.35	
3	0.93	1.8	



USCS Soil Description : Silty Gravel With Sand
AASHTO Soil Description : Clayey soils (8)

Tested By :

TRIAXIAL COMPRESSION TEST

Project : Example Project #1

Borehole : BH-1

Kandoo Engineering LLC

Client : ABC Construction Ltd

Sample Depth : 1 (m)



Job No.: 2011-1

Classification : GM | A-7-5(8)

COMPANY NAME
YOUR SAMPLE TEXT HERE

Location : Burnaby

Sample Type : Undisturbed

ASTM D4767

Test Results

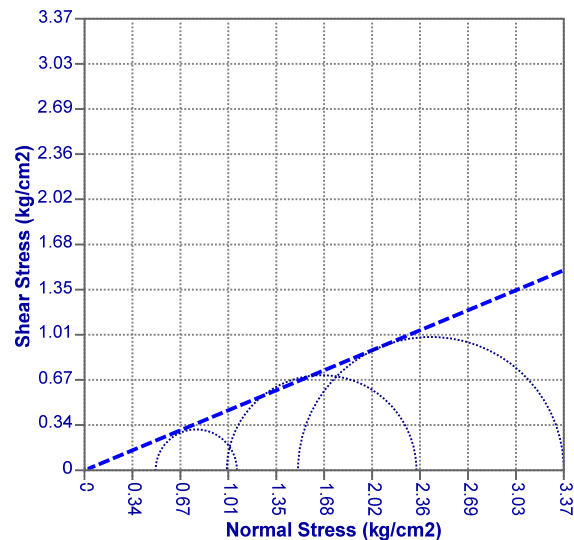
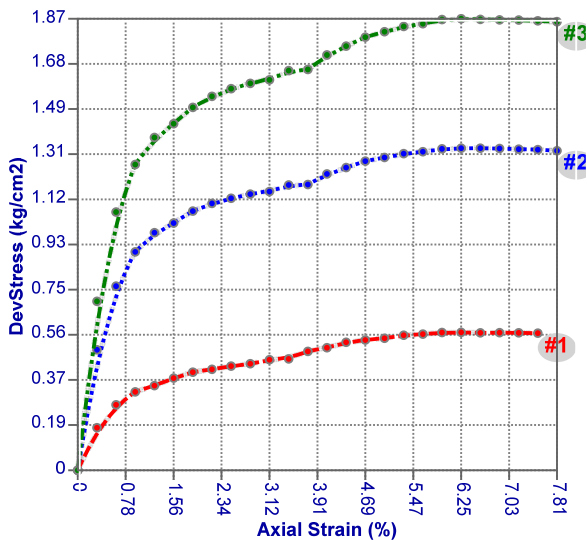
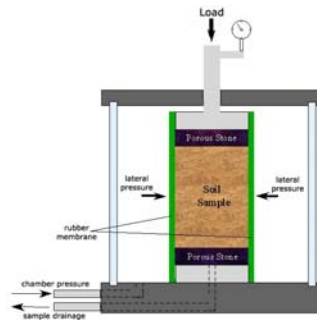
Gs	Type	Moisture Status	Phi (deg.)	C (kg/cm2)
2.7	CD	Saturated	22.6	0

Sample Properties

#	Cell Pressure (kg/cm2)	Diameter (cm)	Height (cm)	Dry Density (gr/cm3)	Moisture Before (%)	Moisture After (%)	Void Ratio	B (%)	Ring Factor (kg/dev)
1	0.5	3.8	8	1.65	10	8.7	0.64	100	1
2	1	3.8	8	1.71	14.3	6.4	0.58	100	1
3	1.5	3.8	8	1.71	14.3	6.4	0.58	100	1

Stress-Strain

#	Cell Pressure (kg/cm2)	Max. Deviator Stress (kg/cm2)	Shear Strain at Failure (%)	Pore Pressure at Failure (kg/cm2)
1	0.5	-	6.2	-
2	1	-	6.2	-
3	1.5	-	6.2	-



USCS Soil Description : Silty Gravel With Sand
AASHTO Soil Description : Clayey soils (8)

Tested By :
Heidari

1D Consolidation Test

Project : Example Project #1

Borehole : BH-1

Kandoo Engineering LLC

Client : ABC Construction Ltd

Sample Depth : 7 (m)



Job No.: 2011-1

Classification : SC-SM | A-2-4(0)

COMPANY NAME
YOUR SAMPLE TEXT HERE

Location : Burnaby

Sample Type : Disturbed

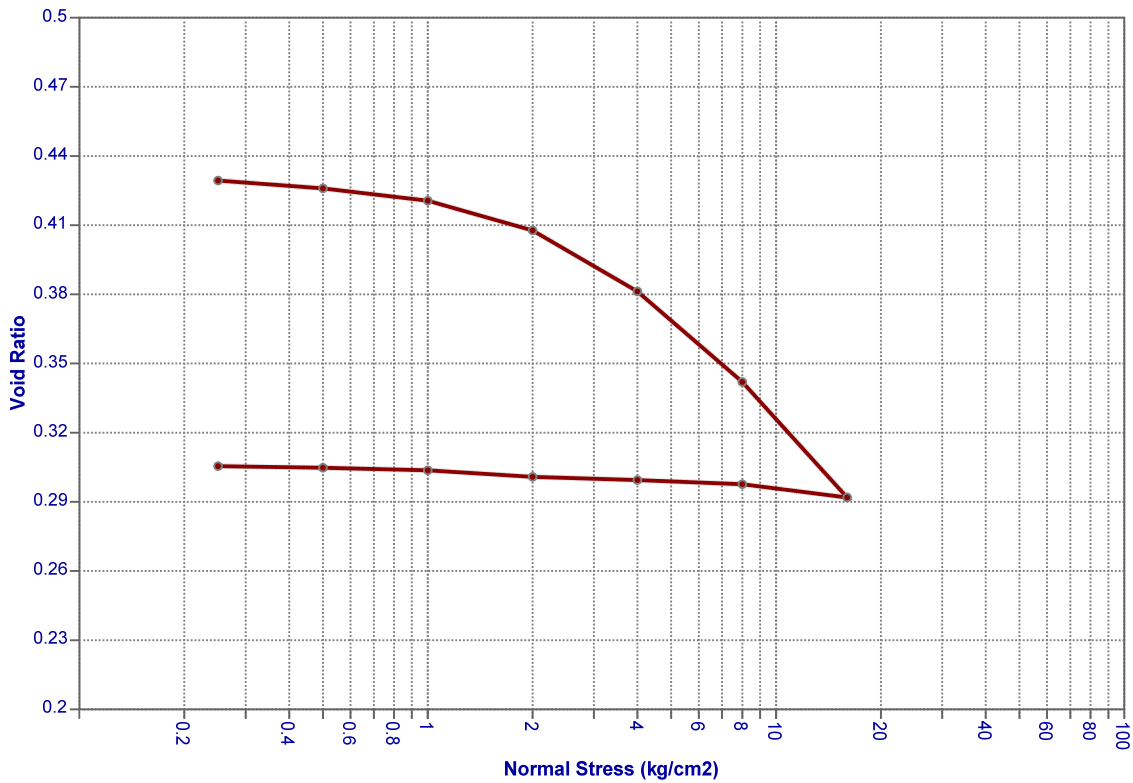
ASTM D2435

Sample Info

Diameter (cm)	Height (cm)	Dry Density (gr/cm ³)	Void Ratio	Gs
6.15	2	1.69	0.43	2.42

Compression Parameters

Cc	Cs	Pre-Consolidation Pressure (kg/cm ²)
0.18	0.01	4.31



Mv Values

P1 (kg/cm ²)	P2 (kg/cm ²)	e1	e2	Mv 1/ (kg/cm ²)
0	0.25	0.43	0.429	1.80E-003
0.25	0.5	0.429	0.426	9.50E-003
0.5	1	0.426	0.421	7.52E-003
1	2	0.421	0.408	9.06E-003
2	4	0.408	0.381	9.40E-003
4	8	0.381	0.342	7.12E-003
8	16	0.342	0.292	4.66E-003

USCS Soil Description : Clayey - Silty Sand With Gravel
AASHTO Soil Description : Silty or clayey gravel and sand (0)

Tested By :

Unconfined Compression Test

Project : Example #2 (US Customary)

Borehole : AH19-01

Kandoo Engineering LLC

Client : ABC Engineers

Sample Depth : 2 (ft)



Job No.: 2019-1

Classification : (N/A)

COMPANY NAME
YOUR SAMPLE TEXT HERE

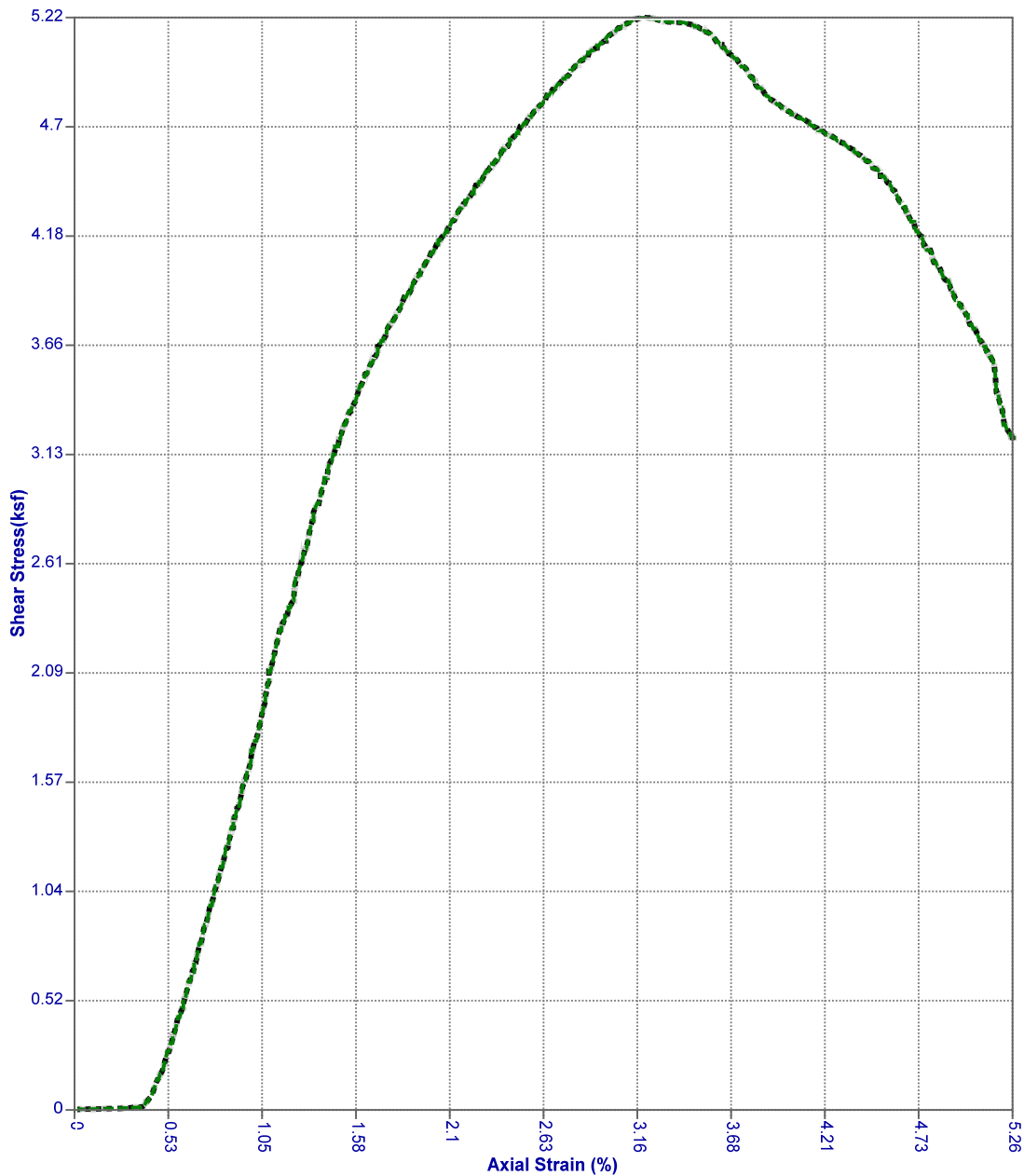
Location : Vancouver

Sample Type : Shelby / U4

ASTM D2166

Test Results

Diameter (in)	Height (in)	Loading rate (mm/min)	Moisture Status	Moisture Content (%)	Dry Density (pcf)	Unconfined Comp. Qu(ksf)	Su (ksf)
2.88	5.341	1	Moist	34	105.44	5.22	2.61



USCS Soil Description :
AASHTO Soil Description :

Tested By :

Chemical Test Results

Project : Example Project #1

Client : ABC Construction Ltd

Job No.: 2011-1

Location : Burnaby

Kandoo Engineering LLC



COMPANY NAME
YOUR SAMPLE TEXT HERE

ASTM D516, D512,
D1293

Borehole	Sample Depth (m)	Description	Value
BH-1	1	pH value	6.3
BH-1	3		6.7
BH-1	1	Solubale Sulphate Content	0.2
BH-1	3		0.16
BH-1	1	Gypsum Content (BS 1377)	2.5
BH-1	1	Chloride Content (ASTM D1411)	0.07
BH-1	3		0.005

Summary of Lab. Tests

Project : Example Project #1

Client : ABC Construction Ltd

Job No.: 2011-1

Location : Burnaby

Kandoo Engineering LLC



COMPANY NAME
YOUR SAMPLE TEXT HERE

Sieve Analysis Test

Borehole	Sample Depth (m)	Soil Class	D10 mm	D30 mm	D60 mm	Clay (%)	Silt (%)	Sand (%)	Gravel (%)	Cobble (%)	LL	PL
BH-1	1	GM A-7-5(8)	0.001	0.023	10.284	19.3	22.7	19.8	38.2		67.9	38.9
BH-1	2	SM A-4(0)	0.001	0.004	0.832	28.2	17.9	27.8	26.1		36	31
BH-1	3	SC A-2-6(0)		0.351	1.813		18.4	62.5	19.1		35	18
BH-1	4	SC A-2-6(1)	0.001	0.216	2.996	13.7	18.6	41.1	26.7		33.7	17.3
BH-1	5	SC A-2-6(0)	0.006	0.305	2.957	7.8	18.7	43.4	30.1		32.4	19.1
BH-1	6	SC A-2-4(0)	0.011	0.399	3.757	4.9	21.3	43.4	30.5		24.1	14.1
BH-1	7	SC-SM A-2-4(0)	0.009	0.41	4.068	8.4	19.4	42.5	29.7		24.2	17.9
BH-1	8	SC A-2-6(0)	0.232	0.647	2.571		13.1	61.5	25.4		33.6	17.3
BH-1	9	SW-SC A-2-6(0)	0.344	1.286	4.374		5.9	59.8	34.3		32.4	19.1
BH-1	10	CL A-4(3)	0.001	0.004	0.275	27.5	25.2	32.8	14.5		29.9	20.2
BH-1	12	ML A-7-6(8)	0.001	0.003	0.286	29.3	27.3	32.2	11.2		45.3	29
BH-2	1.5	SP A-2-7(0)	0.183	0.58	2.395	2.8	1.8	71.2	24.2		41	20
BH-2	2.4	ML A-7-6(8)	0.001	0.005	0.027	23.9	44.7	29.8	1.6		40.6	28
BH-2	3.6	GM A-7-5(8)	0.001	0.023	10.284	19.3	22.7	19.8	38.2		67.9	38.9
BH-2	4.5	SC-SM A-2-4(0)	0.009	0.41	4.068	8.4	19.4	42.5	29.7		24.2	17.9

ATTERBERG LIMITS TEST

Borehole	Sample Depth (m)	Soil Class	Liquid Limit (LL)	Plastic Limit (PL)
BH-1	1	GM A-7-5(8)		
BH-1	2	SM A-4(0)		

Density & Moisture Test

Borehole	Sample Depth (m)	Soil Class	Moisture Content (%)	Dry Density (gr/cm3)
BH-2	1.5	SP A-2-7(0)	15.2	1.96
BH-2	3.6	GM A-7-5(8)	23.1	1.7

Field Density Test

Borehole	Sample Depth (m)	Soil Class	Moisture Content (%)	Dry Density (gr/cm3)
BH-1	1	GM A-7-5(8)	7.6	2.09

Summary of Lab. Tests

Project : Example Project #1
 Client : ABC Construction Ltd
 Job No.: 2011-1
 Location : Burnaby

Kandoo Engineering LLC



COMPANY NAME
 YOUR SAMPLE TEXT HERE

Direct Shear Test

Borehole	Sample Depth (m)	Soil Class	Type	Box Width (cm)	C (kg/cm ²)	Phi (deg)
BH-1	1	GM A-7-5(8)	Slow	10	0.1	15.9
BH-1	6	SC A-2-4(0)	Slow	10	0.01	19

TRIAxIAL COMPRESSION TEST

Borehole	Sample Depth (m)	Soil Class	Type	C (kg/cm ²)	Phi (deg)	C' (kg/cm ²)	Phi' (deg)
BH-1	1	GM A-7-5(8)	CD	0	22.6		
BH-1	6	SC A-2-4(0)	CU	0.11	18.6	0	29.4

1D Consolidation Test

Borehole	Sample Depth (m)	Soil Class	Diameter (cm)	Height (cm)	Cc	Cs	Pc	e.
BH-1	7	SC-SM A-2-4(0)	6.15	2	0.18	0.01	4.31	0.43

COMPACTION TEST

Borehole	Sample Depth (m)	Soil Class	Mould Volume (cm ³)	Max. Dry Density (gr/cm ³)	Wo (%)	Type
BH-1	1	GM A-7-5(8)	944	1.76	14.7	

Chemical Test Results

Borehole	Sample Depth (m)	Soil Class	#	Value
BH-1	1	GM A-7-5(8)	7	2.5
BH-1	1	GM A-7-5(8)	9	0.07
BH-1	1	GM A-7-5(8)	6	0.2
BH-1	1	GM A-7-5(8)	2	6.3
BH-1	3	SC A-2-6(0)	9	0.005
BH-1	3	SC A-2-6(0)	6	0.16
BH-1	3	SC A-2-6(0)	2	6.7

Laboratory Tests Invoice

Project : Example Project #1

Client : ABC Construction Ltd

Job No.: 2011-1

Location : Burnaby

Kandoo Engineering LLC



COMPANY NAME
YOUR SAMPLE TEXT HERE

Description	Count	Unit Price
Sieve Analysis Test	15	
Aterberg	2	
Moisture Content	2	
Field Density	1	
TAX	2	
UnConfined	-	
SBT	2	
Consolidation	1	
Compaction	1	
PerConstant	-	
PerField	-	
PerFalling	-	
Chemical Tests	2	