

# **APPENDIX 'A'**

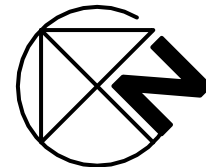
# **GEOTECHNICAL REPORT**

**2013 ALLEY PROGRAM**  
**ST. JOHN'S AVENUE & ANDERSON AVENUE ALLEY BETWEEN**  
**POWERS STREET & ANDREWS STREET**  
**GEOTECHNICAL INVESTIGATION**

Prepared for  
**KGS GROUP INC.**  
**3<sup>rd</sup> FLOOR - 865 WAVERLEY STREET**  
**WINNIPEG, MANITOBA**  
**R3T 5P4**

Prepared by  
**THE NATIONAL TESTING LABORATORIES LIMITED**  
**199 HENLOW BAY**  
**WINNIPEG, MANITOBA**  
**R3Y 1G4**

**May 7, 2013**



**THE  
NATIONAL  
TESTING  
LABORATORIES  
LIMITED**  
*Established in 1923*

Project No.KGS-1307

Drawn by: SB

Figure: 1

Testhole Location Plan

2013 Alley Program

St.Johns Ave & Anderson Ave Alley  
between Powers St & Andrews St

Date:May 6, 2013

Reviewed by:GL

Scale: NTS





# TESTHOLE TH1



Project Name: 2013 Alley Program

Project Location: St. Johns Ave & Anderson Ave Alley btw Powers St & Andrews St

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 6.3 m E from property lines 419 & 421 Andrews St, 3.0 m N from property line 421 Andrews St

Date Drilled: April 18, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	● Water Content (%)			
			25	50	75	100
		<b>Concrete</b>				
0.5		<b>Clay Fill</b> - black, firm, moist, high plasticity - trace organic material - trace fine to coarse sand - trace fine to coarse gravel - some silt below 0.3 m		●47		
				●37		
				●36		
1.0		<b>Silt</b> - tan, firm, moist, low plasticity - soft below 0.9 m - firm below 1.2 m - some clay		●31		
				●38		
1.5				●28		
				●29		
2.0		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>				

# TESTHOLE TH2



Project Name: 2013 Alley Program

Project Location: St. Johns Ave & Anderson Ave Alley btw Powers St & Andrews St

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 7.0 m E from property lines 409 & 411 Andrews St, 3.0 m N from property line 409 Andrews St

Date Drilled: April 18, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	● Water Content (%)			
			25	50	75	100
		<b>Concrete</b>				
		<b>Clay Fill</b> - black, firm, moist, high plasticity - trace organic material - trace silt - trace fine to medium sand - trace fine gravel				
0.5		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.5 m - some clay				
1.0						● 26
1.5						● 29
2.0						● 28
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>				

# TESTHOLE TH3



Project Name: 2013 Alley Program

Project Location: St. Johns Ave & Anderson Ave Alley btw Powers St & Andrews St

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.0 m W from property lines 507 & 517 St. Johns Ave, 0.5 m N from property line 517 St. Johns Ave

Date Drilled: April 18, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Particle Size Distribution				Water Content (%)	
			Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
0.0 - 0.1		<b>Concrete</b>						
0.1 - 0.3		<b>Clay Fill</b> - black, firm, moist, medium plasticity - trace organic material - some fine to coarse sand - trace fine gravel						● 55
0.3 - 1.0		<b>Silty Clay</b> - black, firm, moist, high plasticity - trace organic material - trace fine to coarse sand	0.0	3.2	32.5	64.3	—	● 42
1.0 - 2.0		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.6 m - some clay						● 34 ● 23 ● 24 ● 33
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>						

# TESTHOLE TH4



Project Name: 2013 Alley Program

Project Location: St. Johns Ave & Anderson Ave Alley btw Powers St & Andrews St

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 0.25 m E from property lines 487 & 489 St. Johns Ave, 0.25 m N from property line 487 St. Johns Ave

Date Drilled: April 18, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	● Water Content (%)			
			25	50	75	100
		<b>Concrete</b>				
		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel		●51		
0.5		<b>Silty Clay</b> - black, firm, moist, high plasticity			●42	
1.0		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.6 m - some clay		●30		
1.5					●31	
2.0				●24		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>				



# TESTHOLE TH5



Project Name: 2013 Alley Program

Project Location: St. Johns Ave & Anderson Ave Alley btw Powers St & Andrews St

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 3.0 m S from property lines 414 & 418 Powers St, 0.5 m W from property line 414 Powers St

Date Drilled: April 18, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Particle Size Distribution				Water Content (%)	
			Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
0.0 - 0.1		<b>Concrete</b>						
0.1 - 0.8		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel - some silt below 0.6 m						● 40 ● 30
0.8 - 2.0		<b>Silt</b> - tan, firm, moist, low plasticity - trace fine to medium sand - some clay						● 27 ● 25 ● 26 ● 29
• No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.0 m.								

# TESTHOLE TH6



Project Name: 2013 Alley Program

Project Location: St. Johns Ave & Anderson Ave Alley btw Powers St & Andrews St

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 2.0 m W from property lines 424 & 428 Powers St

Date Drilled: April 18, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	● Water Content (%)			
			25	50	75	100
		<b>Concrete</b>				
		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel		●34		
0.5		<b>Silty Clay</b> - black, firm, moist, high plasticity			●40	
1.0				●30		
		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.6 m - some clay			●29	
1.5				●22		
2.0					●31	
<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>						



**Core sample from TH1**



**Core sample from TH2**





**Core sample from TH3**



**Core sample from TH4**





**Core sample from TH5**



**Core sample from TH6**

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverly St.  
 Winnipeg, MB  
 R3T 5P4

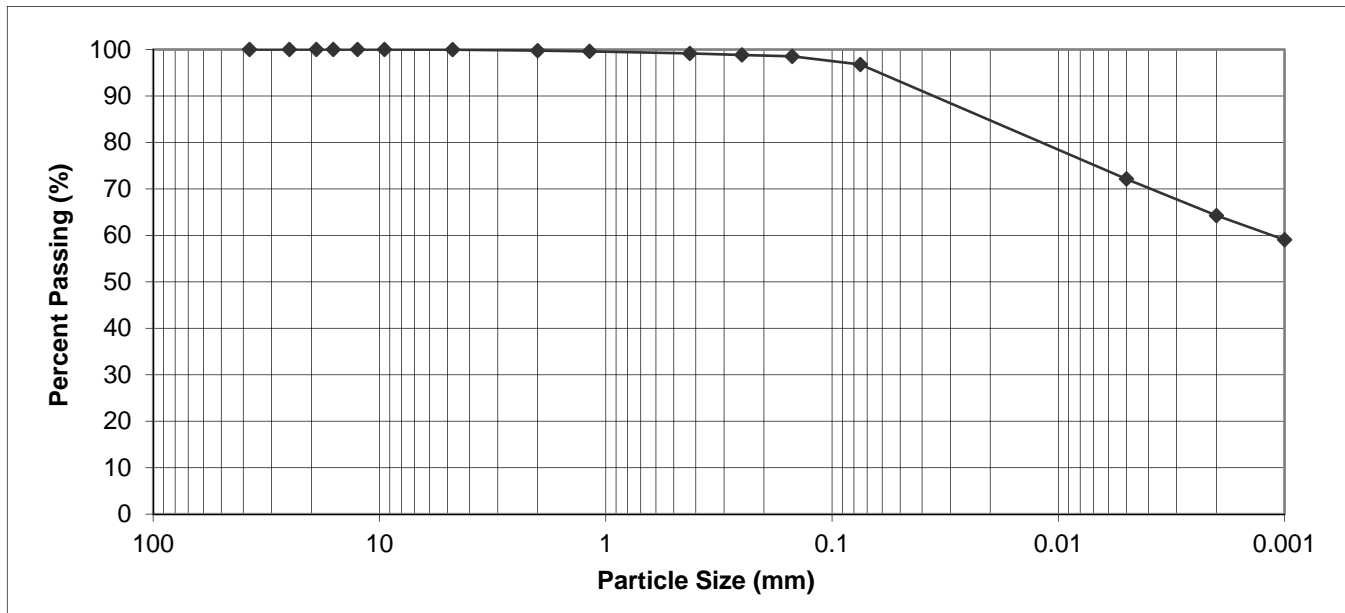
PROJECT: 2013 Alley Program  
 St. Johns Ave & Anderson Ave Alley  
 between Powers St & Andrews St

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH3 @ 0.6 m

DATE RECEIVED: April 18, 2013  
 TESTED BY: Farouk Fourar-Laidi



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	100.0
2.00 mm	99.7

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.6
0.425 mm	99.1
0.250 mm	98.8
0.150 mm	98.5
0.075 mm	96.8
0.005 mm	72.1
0.002 mm	64.3
0.001 mm	59.0

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.0	0.3	0.6	2.3	32.5	64.3	59.0

April 27, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverly St.  
 Winnipeg, MB  
 R3T 5P4

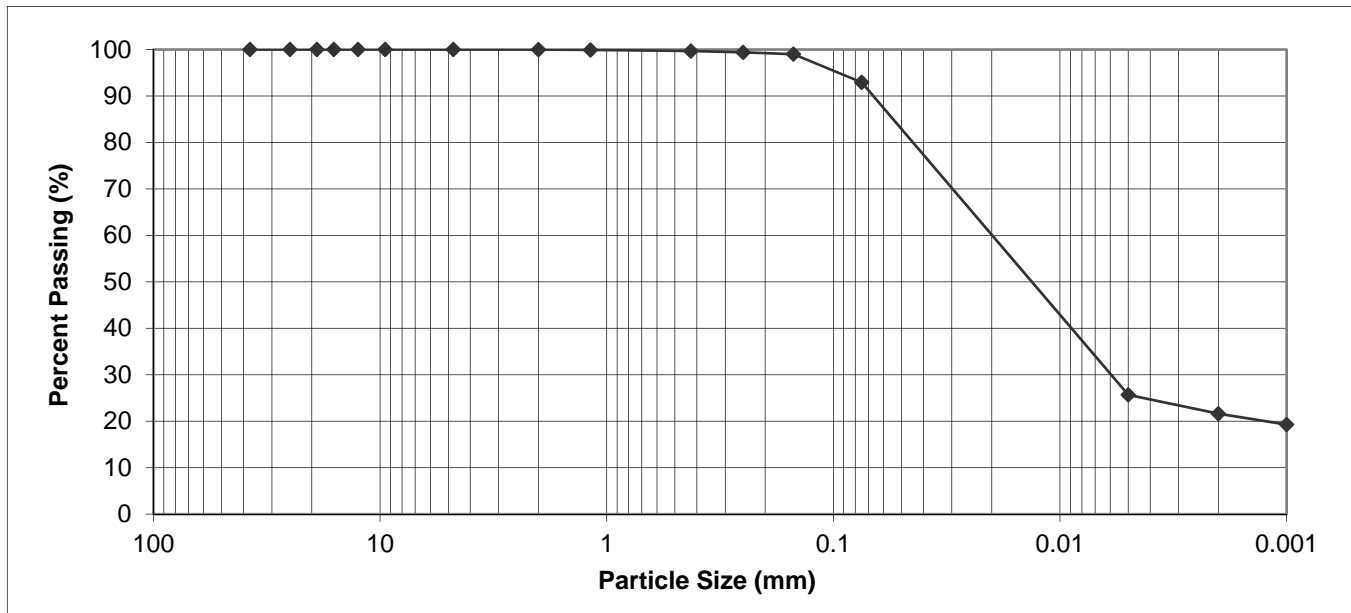
PROJECT: 2013 Alley Program  
 St. Johns Ave & Anderson Ave Alley  
 between Powers St & Andrews St

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH5 @ 1.2 m

DATE RECEIVED: April 18, 2013  
 TESTED BY: Farouk Fourar-Laidi



PARTICLE SIZE	PERCENT PASSING	PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0	1.18 mm	99.9
25.00 mm	100.0	0.425 mm	99.7
19.00 mm	100.0	0.250 mm	99.4
16.00 mm	100.0	0.150 mm	99.0
12.50 mm	100.0	0.075 mm	92.9
9.50 mm	100.0	0.005 mm	25.7
4.75 mm	100.0	0.002 mm	21.6
2.00 mm	100.0	0.001 mm	19.3

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.0	0.0	0.3	6.8	71.3	21.6	19.3

April 27, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

**2013 ALLEY PROGRAM**  
**MONTROSE STREET & ELM STREET ALLEY BETWEEN**  
**ACADEMY ROAD & WELLINGTON CRESCENT**  
**GEOTECHNICAL INVESTIGATION**

Prepared for  
**KGS GROUP INC.**  
**3<sup>rd</sup> FLOOR - 865 WAVERLEY STREET**  
**WINNIPEG, MANITOBA**  
**R3T 5P4**

Prepared by  
**THE NATIONAL TESTING LABORATORIES LIMITED**  
**199 HENLOW BAY**  
**WINNIPEG, MANITOBA**  
**R3Y 1G4**

**May 7, 2013**





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*Established in 1923*

Project No.KGS-1307

Drawn by: SB

Figure: 1

Date:May 7, 2013

Reviewed by:GL

Scale: NTS

Testhole Location Plan  
2013 Alley Program  
Montrose St & Elm St Alley between  
Academy Rd & Wellington Cres.



# TESTHOLE TH1



Project Name: 2013 Alley Program

Date Drilled: April 18, 2013

Project Location: Montrose St & Elm St Alley between Academy Rd & Wellington Cres. Depth of Testhole: 2.0 m

Client: KGS Group Inc.

Logged by: Sothea Bun

Drilling Contractor: Active Drilling and Piling

Reviewed by: German Leal

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 3.0 m S from property line 156 & 160 Elm St, 1.0 m E from property 160 Elm St

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)			
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL		LL	
								25	50	75	100
		<b>Concrete</b>									
		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel - some silt	BS								●12
			BS								●16
0.5			BS	0.4	36.3	36.3	27.0				●29
		<b>Clayey Silt</b> - brown, firm, moist, medium plasticity - stiff below 1.4 m	BS								●27
1.0			BS								●28
1.5			BS								●30
2.0			BS								●35
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>									

# TESTHOLE TH2



Project Name: 2013 Alley Program

Date Drilled: April 18, 2013

Project Location: Montrose St & Elm St Alley between Academy Rd & Wellington Cres. Depth of Testhole: 2.0 m

Client: KGS Group Inc.

Logged by: Sothea Bun

Drilling Contractor: Active Drilling and Piling

Reviewed by: German Leal

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 5.3 m S from property line 144 & 148 Elm St, 0.1 m E from property 148 Elm St

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
0.0 - 0.1		Concrete							
0.1 - 0.2		Clay Fill - black, firm, moist, medium plasticity - some fine to coarse sand - trace silt	BS						47
0.2 - 0.3		Clayey Silt - black, firm, moist, medium plasticity - brown below 0.5 m - trace fine gravel - trace fine to coarse sand - stiff below 1.8 m	BS						39
0.3 - 0.4			BS						40
0.4 - 0.5			BS	0.3	5.8	58.9	35.0		36
0.5 - 0.6			BS						38
0.6 - 0.7			BS						43
0.7 - 0.8			BS						43

- Moderate groundwater seepage was observed at a depth of 0.2 m.
- Groundwater level was observed at a depth of 0.6 m upon completion of drilling
- Soil sloughing observed in the clay fill at a depth of 0.2 m.
- Testhole terminated at a depth of 2.0 m.



# TESTHOLE TH3



Project Name: 2013 Alley Program

Date Drilled: April 18, 2013

Project Location: Montrose St & Elm St Alley between Academy Rd & Wellington Cres. Depth of Testhole: 2.0 m

Client: KGS Group Inc.

Logged by: Sothea Bun

Drilling Contractor: Active Drilling and Piling

Reviewed by: German Leal

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 1.0 m S from property line 124 & 130 Elm St, 1.0 m E from property 130 Elm St

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.2		<b>Clay Fill</b> - black, firm, moist, medium plasticity - trace organic material - trace silt - some fine to coarse sand	BS		●39		
0.2 - 0.3		<b>Clayey Silt</b> - brown, firm, moist, medium plasticity - trace organic material - stiff below 1.5 m	BS		●36		
0.3 - 0.4			BS		●29		
0.4 - 0.5			BS		●31		
0.5 - 0.6			BS		●33		
0.6 - 0.7			BS		●33		
0.7 - 0.8			BS		●33		
0.8 - 0.9			BS		●33		
0.9 - 1.0			BS		●33		
1.0 - 1.1			BS		●33		
1.1 - 1.2			BS		●33		
1.2 - 1.3			BS		●33		
1.3 - 1.4			BS		●33		
1.4 - 1.5			BS		●33		
1.5 - 1.6			BS		●33		
1.6 - 1.7			BS		●33		
1.7 - 1.8			BS		●33		
1.8 - 1.9			BS		●33		
1.9 - 2.0			BS		●33		
2.0 - 2.5		<ul style="list-style-type: none"> <li>Moderate groundwater seepage was observed at a depth of 0.2 m.</li> <li>Groundwater level was observed at a depth of 0.6 m upon completion of drilling</li> <li>Soil sloughing observed in the clay fill at a depth of 0.2 m.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH4



Project Name: 2013 Alley Program

Date Drilled: April 18, 2013

Project Location: Montrose St & Elm St Alley between Academy Rd & Wellington Cres. Depth of Testhole: 2.0 m

Client: KGS Group Inc.

Logged by: Sothea Bun

Drilling Contractor: Active Drilling and Piling

Reviewed by: German Leal

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 13.0 m SE from NW corner of property 124 Elm St, 2.0 m N from property 124 Elm St

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
		<b>Granular Fill</b> - 20 mm max size aggregate	BS				
		<b>Clay Fill</b> - black, firm, moist, medium plasticity - trace organic material - trace silt - some fine to coarse sand	BS				
0.5		<b>Clayey Silt</b> - black, firm, moist, medium plasticity - brown below 0.6 m	BS				
1.0			BS				
1.5			BS				
		<b>Silt</b> - tan, firm, moist, low plasticity - soft below 1.7 m	BS				
2.0			BS				
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					



**Core sample from TH1**



**Core sample from TH2**





**Core sample from TH3**



**Core sample from TH4**

## PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

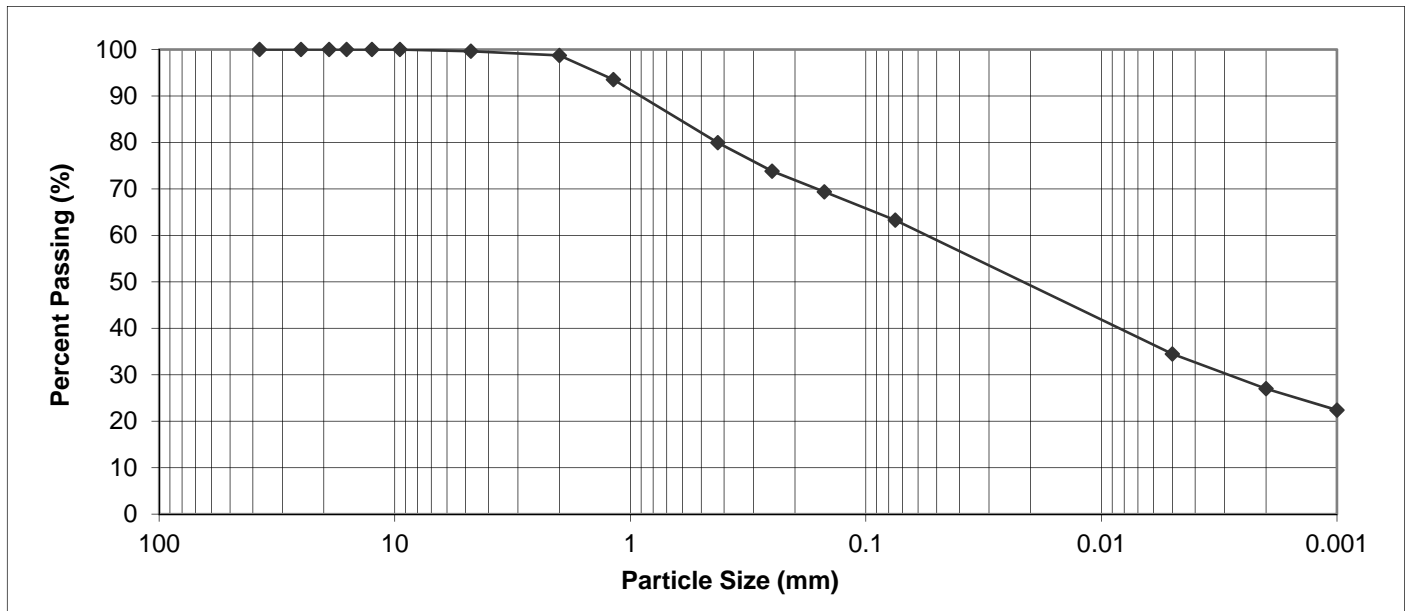
PROJECT: 2013 Alley Program  
 Montrose St & Elm St Alley btw  
 Academy Rd & Wellington Cres.

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH1 at 0.6 m.

DATE RECEIVED: April 18, 2013  
 TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	99.6
2.00 mm	98.7

PARTICLE SIZE	PERCENT PASSING
1.18 mm	93.5
0.425 mm	79.9
0.250 mm	73.8
0.150 mm	69.4
0.075 mm	63.3
0.005 mm	34.5
0.002 mm	27.0
0.001 mm	22.4

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.4	0.9	18.8	16.6	36.3	27.0	22.4

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
3rd Floor - 865 Waverley St.  
Winnipeg, Manitoba  
R3T 5P4

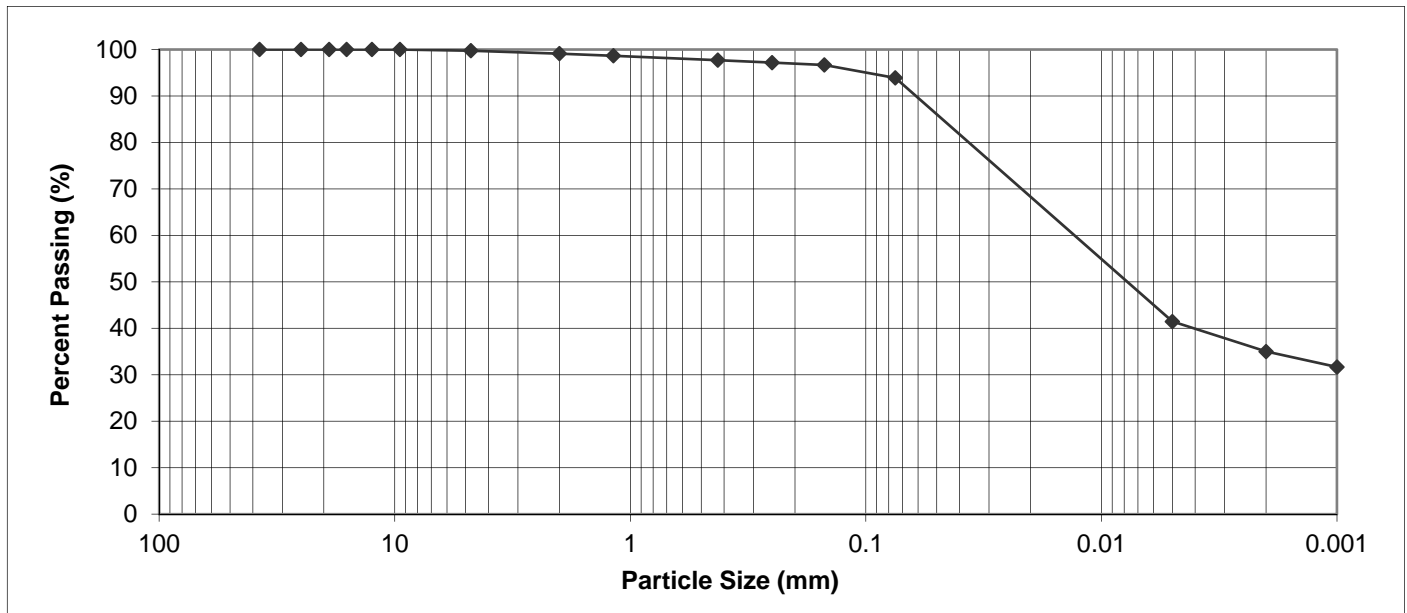
PROJECT: 2013 Alley Program  
Montrose St & Elm St Alley btw  
Academy Rd & Wellington Cres.

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
SAMPLE ID: TH2 at 0.9 m.

DATE RECEIVED: April 18, 2013  
TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	99.7
2.00 mm	99.1

PARTICLE SIZE	PERCENT PASSING
1.18 mm	98.6
0.425 mm	97.7
0.250 mm	97.2
0.150 mm	96.7
0.075 mm	93.9
0.005 mm	41.4
0.002 mm	35.0
0.001 mm	31.7

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.3	0.6	1.4	3.8	58.9	35.0	31.7

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

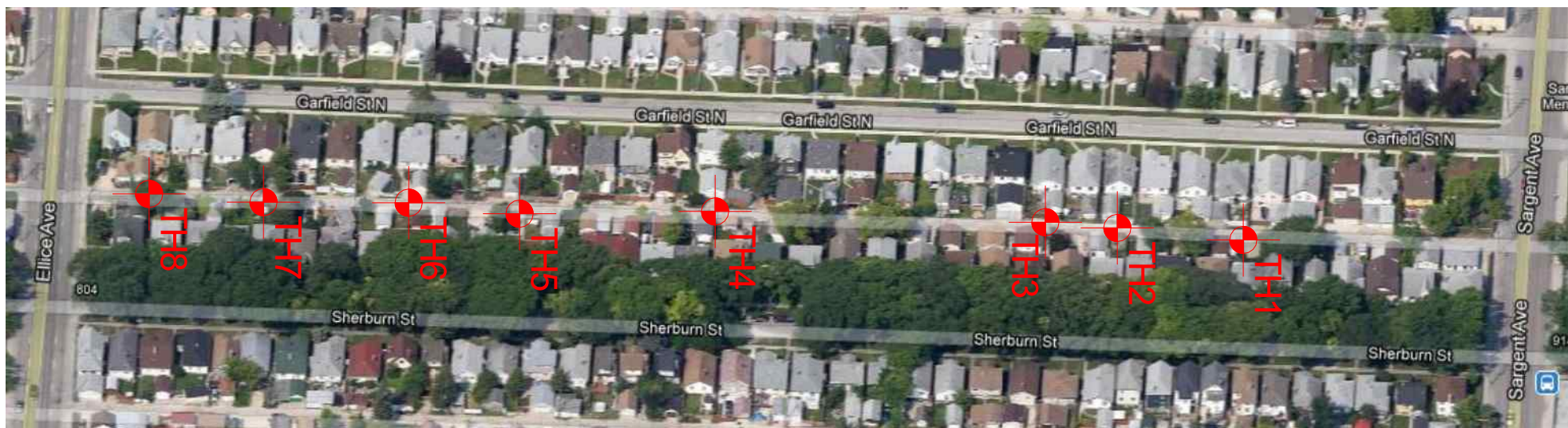
**2013 ALLEY PROGRAM**  
**SHERBURN STREET & GARFIELD STREET ALLEY BETWEEN**  
**ELLICE AVENUE & SARGENT AVENUE**  
**GEOTECHNICAL INVESTIGATION**

Prepared for  
**KGS GROUP INC.**  
**3<sup>rd</sup> FLOOR - 865 WAVERLEY STREET**  
**WINNIPEG, MANITOBA**  
**R3T 5P4**

Prepared by  
**THE NATIONAL TESTING LABORATORIES LIMITED**  
**199 HENLOW BAY**  
**WINNIPEG, MANITOBA**  
**R3Y 1G4**

**May 9, 2013**





**THE  
NATIONAL  
TESTING  
LABORATORIES  
LIMITED**  
*Established in 1923*

Project No.KGS-1307

Drawn by:SB

Figure: 1

Date:May 6, 2013

Reviewed by: GL

Scale: NTS

Testhole Location Plan  
2013 Alley Program  
Sherburn St & Garfield St Alley  
between Sargent Ave & Elice Ave



**TABLE 1  
2013 ALLEY PROGRAM  
SHERBURN STREET & GARFIELD STREET ALLEY BETWEEN ELLICE AVENUE & SARGENT AVENUE  
GEOTECHNICAL INVESTIGATION**

Testhole ID	Testhole Location	Pavement Surface		Pavement Structure Material		Sample Description	Sample Depth (m)	Moisture Content (%)	Particle Size Analysis				Atterberg Limits		
		Type	Thickness (mm)	Type	Thickness (mm)				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Plasticity Index
TH1	Sherburn Street & Garfield Street Alley 0.9 m South from property line 883 & 885 Garfield Street 0.3 m East from property 883 Garfield Street	Concrete	220	-	-	-	-	-	-	-	-	-	-	-	-
TH2	Sherburn Street & Garfield Street Alley 3.4 m South from property line 879 & 875 Garfield Street 0.9 m East from property 875 Garfield Street	Concrete	240	-	-	Silty Clay	0.9	45	0.0	3.5	44.7	51.8	63	26	37
TH3	Sherburn Street & Garfield Street Alley 2.1 m South from property line 865 & 869 Garfield Street 3.4 m East from property 865 Garfield Street	Asphalt	40	-	-	-	-	-	-	-	-	-	-	-	-
		Concrete	155												
TH4	Sherburn Street & Garfield Street Alley 2.7 m South from property line 835 & 841 Garfield Street 0.9 m East from property 835 Garfield Street	Concrete	260	-	-	-	-	-	-	-	-	-	-	-	-
TH5	Sherburn Street & Garfield Street Alley 4.6 m South from property line 807 & 805 Garfield Street 3.2 m East from property 805 Garfield Street	Concrete	180	-	-	Clay	0.9	38	0.3	3.8	29.7	66.2	73	21	52
TH6	Sherburn Street & Garfield Street Alley 4.0 m South from property line 799 & 801 Garfield Street 0.9 m East from property 799 Garfield Street	Concrete	150	Granular Fill	75	-	-	-	-	-	-	-	-	-	-
TH7	Sherburn Street & Garfield Street Alley 4.3 m South from property line 791 & 793 Garfield Street 3.4 m East from property 791 Garfield Street	Concrete	200	-	-	-	-	-	-	-	-	-	-	-	-
TH8	Sherburn Street & Garfield Street Alley 4.6 m North from property line 783 & 785 Garfield Street 1.1 m East from property 785 Garfield Street	Asphalt	20	-	-	Silt	0.9	25	1.0	8.0	72.5	18.5	26	17	9
		Concrete	230												

# TESTHOLE TH1



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 0.9 m South from property line 883 & 885 Garfield St, 0.3 m East from property 883 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand	BS			68	
0.5			BS			53	
		<b>Silt</b> - tan, soft, moist, low plasticity	BS			30	
1.0			BS			32	
		<b>Clay</b> - brown, firm, moist, high plasticity - stiff below 1.8 m	BS			37	
1.5			BS			37	
2.0			BS			37	
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH2



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 3.4 m South from property line 879 & 875 Garfield St, 0.9 m East from property 875 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
0.0 - 0.1		<b>Concrete</b>							
0.1 - 0.4		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand	BS						57
0.4 - 0.9		<b>Silty Clay</b> - brown, firm, moist, high plasticity - trace fine to coarse sand	BS						68
0.9 - 1.8		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.8 m	BS	0.0	3.5	44.7	51.8		5B
1.8 - 2.0			BS						28
2.0 - 2.5			BS						29
2.0 - 2.5			BS						25
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							

# TESTHOLE TH3



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

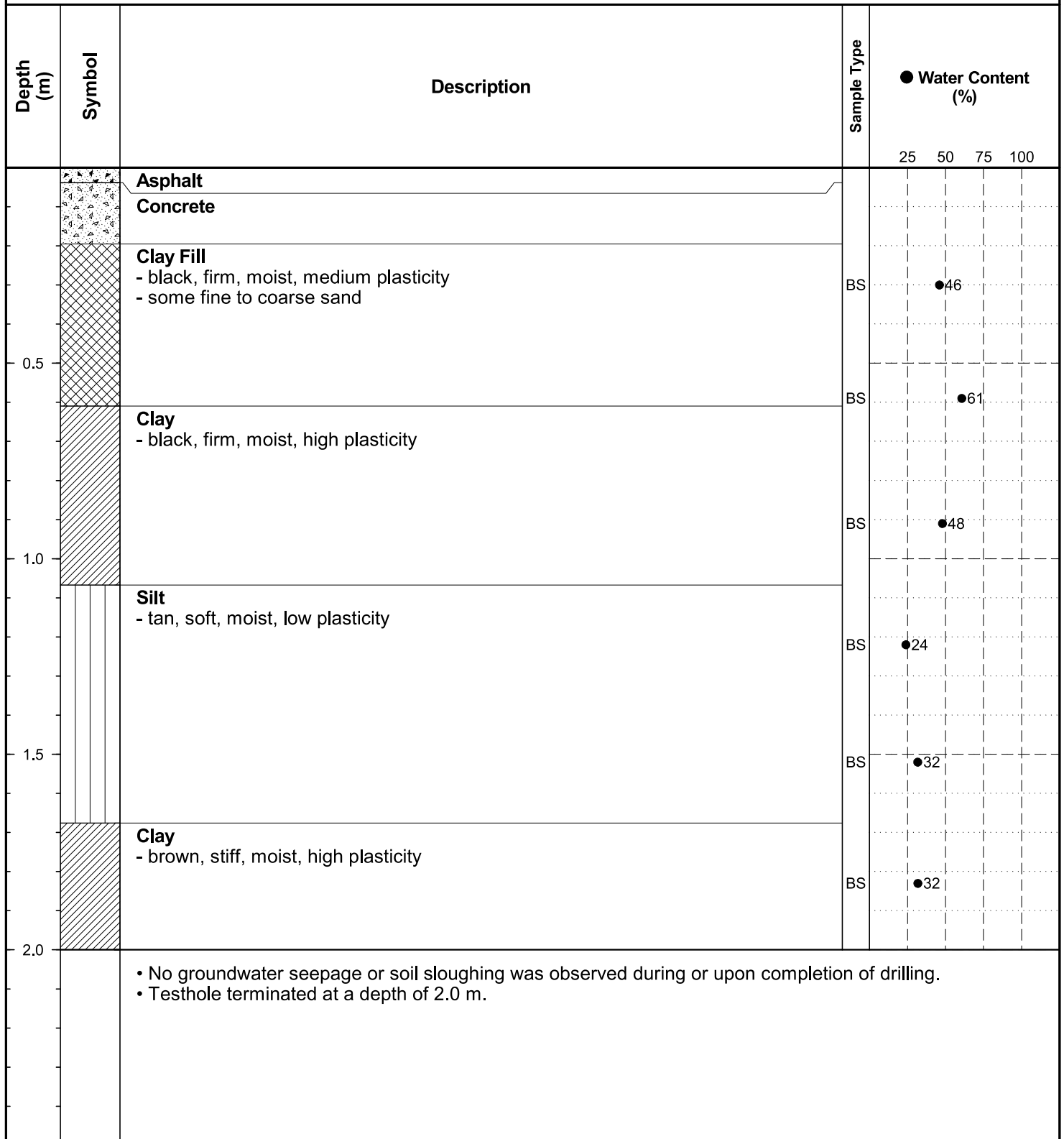
Testhole Location: 2.1 m South from property line 865 & 869 Garfield St, 3.4 m East from property 865 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal



# TESTHOLE TH4



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 2.7 m South from property line 835 & 841 Garfield St, 0.9 m East from property 835 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
0.5		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel	BS		●37		
			BS		●44		
1.0		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.8 m	BS		●29		
1.5			BS		●24		
			BS		●25		
2.0			BS		●24		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH5



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.6 m South from property line 807 & 805 Garfield St, 3.2 m East from property 805 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
0.0 - 0.1		<b>Concrete</b>							
0.1 - 0.4		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel	BS						40
0.4 - 1.2		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine gravel - trace fine to coarse sand - some silt	BS						35
1.2 - 1.4			BS	0.3	3.8	29.7	66.2		38
1.4 - 1.8		<b>Silt</b> - tan, soft, moist, low plasticity - firm below 1.8 m	BS						34
1.8 - 2.0			BS						25
2.0 - 2.5		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>	BS						23



# TESTHOLE TH6



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.0 m South from property line 799 & 801 Garfield St, 0.9 m East from property 799 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.2		<b>Granular Fill</b> - 20 mm max size aggregate					
0.2 - 0.5		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel - some silt	BS		●27		
0.5 - 0.8		<b>Silt</b> - tan, soft, moist, low plasticity	BS		●40		
0.8 - 1.0		<b>Clay</b> - brown, firm, moist, high plasticity - stiff below 1.8 m	BS		●30		
1.0 - 1.5			BS		●31		
1.5 - 2.0			BS		●34		
2.0 - 2.5			BS		●31		
<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							

# TESTHOLE TH7



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.3 m South from property line 791 & 793 Garfield St, 3.4 m East from property 791 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
0.5		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel	BS		●33		
		<b>Silt</b> - tan, soft, moist, low plasticity	BS		●25		
1.0		<b>Clay</b> - brown, firm, moist, high plasticity - stiff below 1.8 m	BS		●23		
1.5			BS		●26		
			BS		●32		
2.0			BS		●31		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH8



Project Name: 2013 Alley Program

Project Location: Sherburn St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.6 m North from property line 783 & 785 Garfield St, 1.1 m East from property 785 Garfield St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
		Asphalt Concrete							
0.5		Clay Fill - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel	BS						41
		Silt - tan, soft, moist, low plasticity - trace fine gravel - trace fine to coarse sand - some clay - firm below 1.5 m	BS						33
			BS						26
1.0			BS	1.0	8.0	72.5	18.5		25
			BS						22
1.5			BS						22
		Clay - brown, stiff, moist, high plasticity	BS						32
2.0		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							



**Core sample from TH1**



**Core sample from TH2**





**Core sample from TH3**



**Core sample from TH4**





**Core sample from TH5**



**Core sample from TH6**





**Core sample from TH7**



**Core sample from TH8**

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

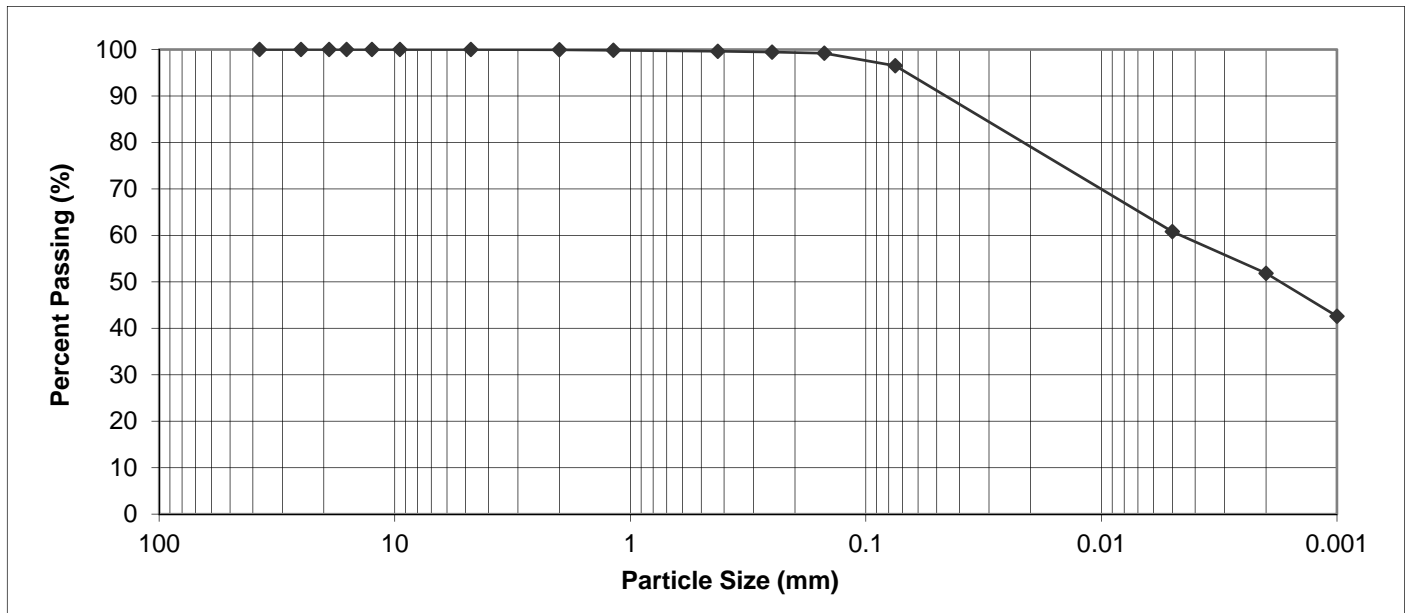
PROJECT: 2013 Alley Program  
 Sherburn St & Garfield St Alley  
 between Ellice & Sargent Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH2 at 0.9 m.

DATE RECEIVED: April 15, 2013  
 TESTED BY: Sothea Bun



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	100.0
2.00 mm	99.9

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.8
0.425 mm	99.6
0.250 mm	99.4
0.150 mm	99.2
0.075 mm	96.5
0.005 mm	60.8
0.002 mm	51.8
0.001 mm	42.6

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.0	0.1	0.3	3.1	44.7	51.8	42.6

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

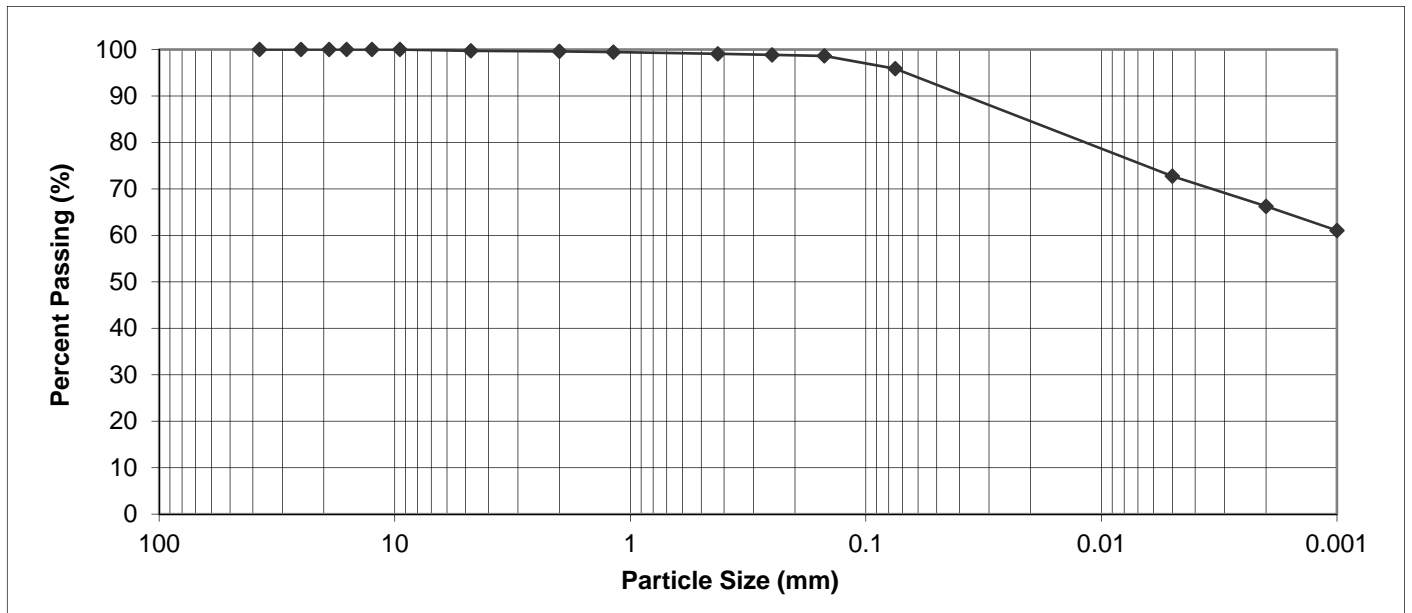
PROJECT: 2013 Alley Program  
 Sherburn St & Garfield St Alley  
 between Ellice & Sargent Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH5 at 0.9 m.

DATE RECEIVED: April 15, 2013  
 TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	99.7
2.00 mm	99.6

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.4
0.425 mm	99.1
0.250 mm	98.8
0.150 mm	98.6
0.075 mm	95.9
0.005 mm	72.7
0.002 mm	66.2
0.001 mm	61.0

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.3	0.1	0.5	3.2	29.7	66.2	61.0

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
3rd Floor - 865 Waverley St.  
Winnipeg, Manitoba  
R3T 5P4

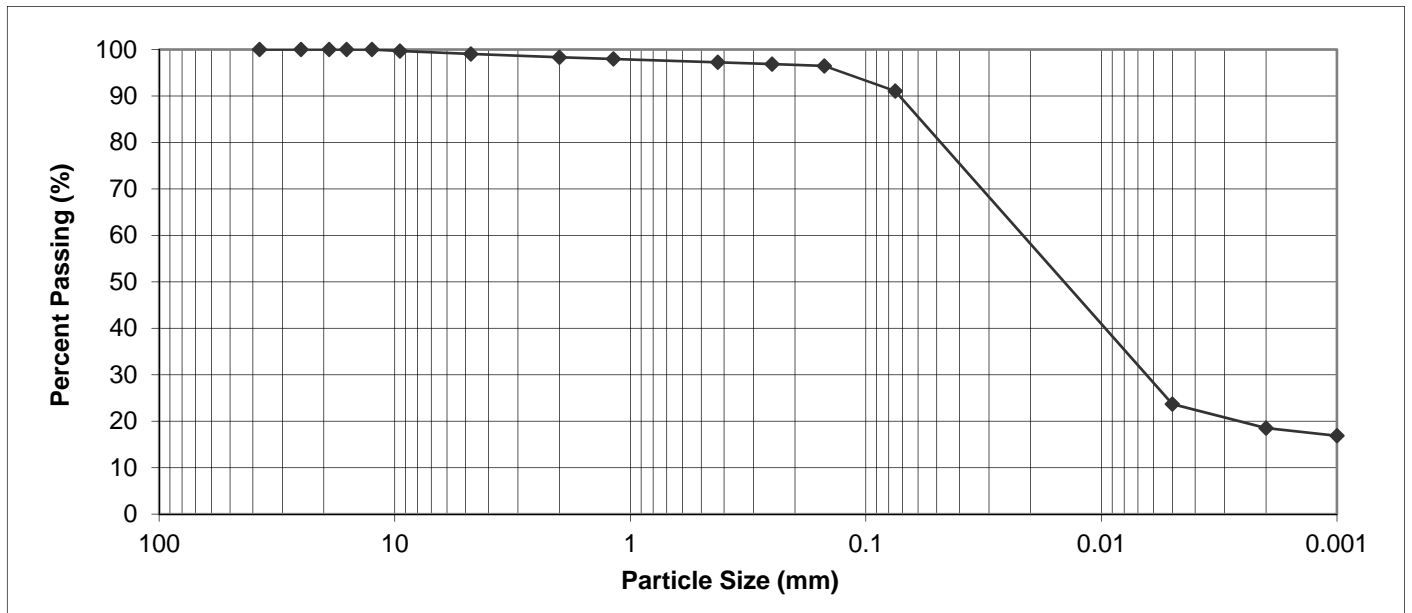
PROJECT: 2013 Alley Program  
Sherburn St & Garfield St Alley  
between Ellice & Sargent Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
SAMPLE ID: TH8 at 0.9 m.

DATE RECEIVED: April 15, 2013  
TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	99.7
4.75 mm	99.0
2.00 mm	98.3

PARTICLE SIZE	PERCENT PASSING
1.18 mm	98.0
0.425 mm	97.2
0.250 mm	96.8
0.150 mm	96.4
0.075 mm	91.0
0.005 mm	23.7
0.002 mm	18.5
0.001 mm	16.9

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
1.0	0.7	1.1	6.2	72.5	18.5	16.9

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

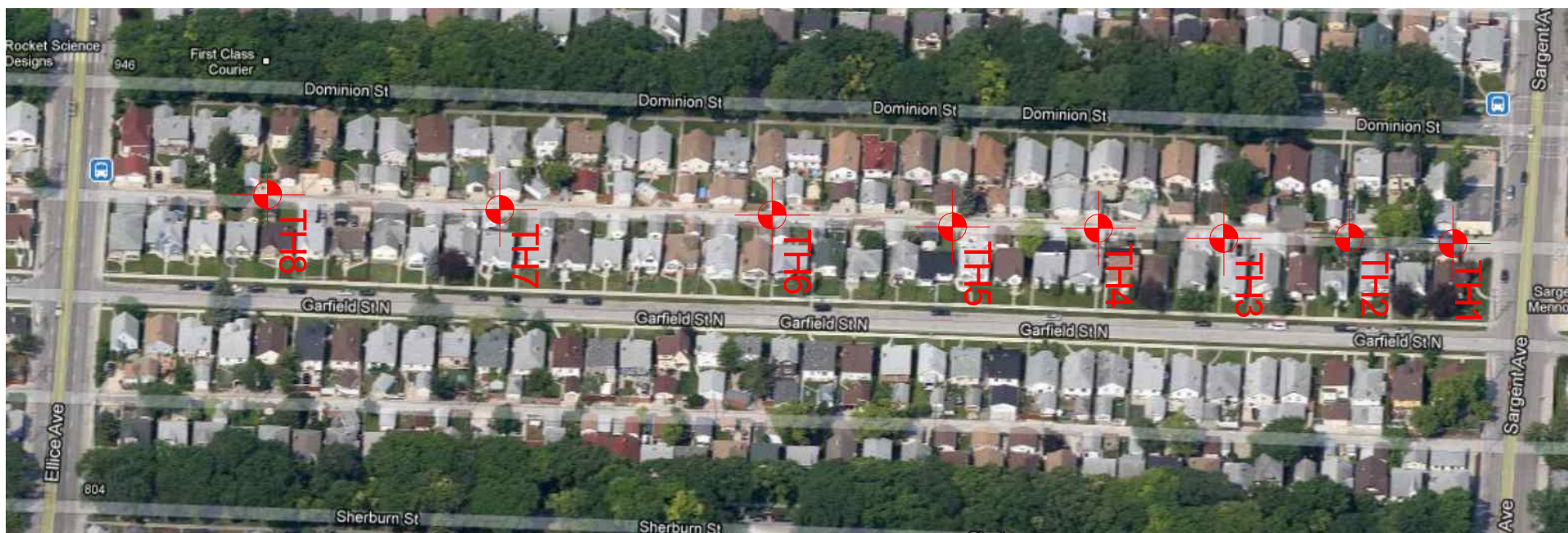
**2013 ALLEY PROGRAM  
DOMINION STREET & GARFIELD ST ALLEY BETWEEN  
ELLICE AVENUE & SARGENT AVENUE  
GEOTECHNICAL INVESTIGATION**

Prepared for  
**KGS GROUP INC.**  
**3<sup>rd</sup> FLOOR - 865 WAVERLEY STREET**  
**WINNIPEG, MANITOBA**  
**R3T 5P4**

Prepared by  
**THE NATIONAL TESTING LABORATORIES LIMITED**  
**199 HENLOW BAY**  
**WINNIPEG, MANITOBA**  
**R3Y 1G4**

**May 9, 2013**





**THE  
NATIONAL  
TESTING  
LABORATORIES  
LIMITED**  
*Established in 1923*

Project No.KGS-1307

Drawn by:SB

Figure: 1

Date:May 6, 2013

Reviewed by: GL

Scale: NTS

Testhole Location Plan  
2013 Alley Program  
Dominion St & Garfield St Alley  
between Ellice Ave & Sargent Ave





# TESTHOLE TH1



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 11.4 m South from Sargent Ave, 0.9 m West from property line 944 Sargent Ave

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.9		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel - some silt	BS		39		
0.9 - 1.6		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS		23		
1.6 - 1.8			BS		31		
1.8 - 2.0		<b>Clay</b> - brown, stiff, moist, high plasticity - some silt	BS		23		
2.0 - 2.1			BS		33		
2.1 - 2.2			BS		35		
<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							

# TESTHOLE TH2



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

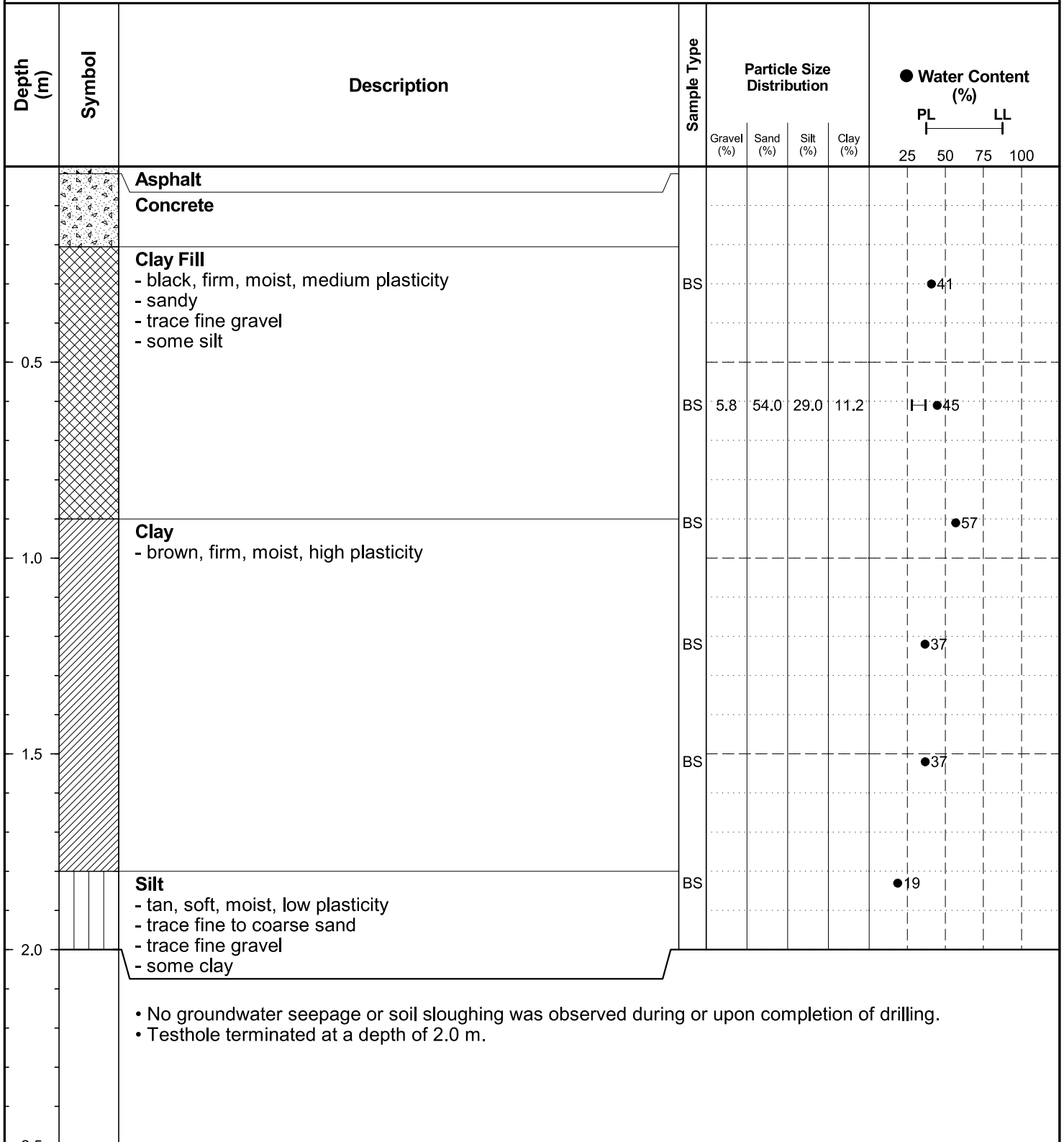
Testhole Location: 0.3 m North from property line 1027 & 1029 Dominion St, 0.7 m East from property 1029 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal



# TESTHOLE TH3



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 1.0 m South from property line 1021 & 1019 Dominion St, 3.8 m East from property 1019 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
0.5		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine to coarse gravel - some silt	BS		45		
			BS		44		
			BS		51		
1.0			BS		50		
			BS		49		
			BS		35		
1.5		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS		28		
		<b>Clay</b> - brown, stiff, moist, high plasticity - some silt	BS		30		
2.0		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH4



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 3.7 m South from property line 1015 & 1009 Dominion St, 1.4 m East from property 1009 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
		<b>Concrete</b>							
0.5		<b>Clay Fill</b> - black, firm, moist, medium plasticity - trace organic material - some fine to coarse sand - trace fine gravel - some silt	BS						●56
		<b>Clay</b> - brown, firm, moist, high plasticity - some fine sand - trace medium to coarse sand - trace fine gravel - some silt	BS	0.2	16.4	20.1	63.3		●491
1.0			BS						●48
			BS						●40
1.5		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS						●29
			BS						●26
2.0			BS						●25
		• No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Testhole terminated at a depth of 2.0 m.							

# TESTHOLE TH5



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

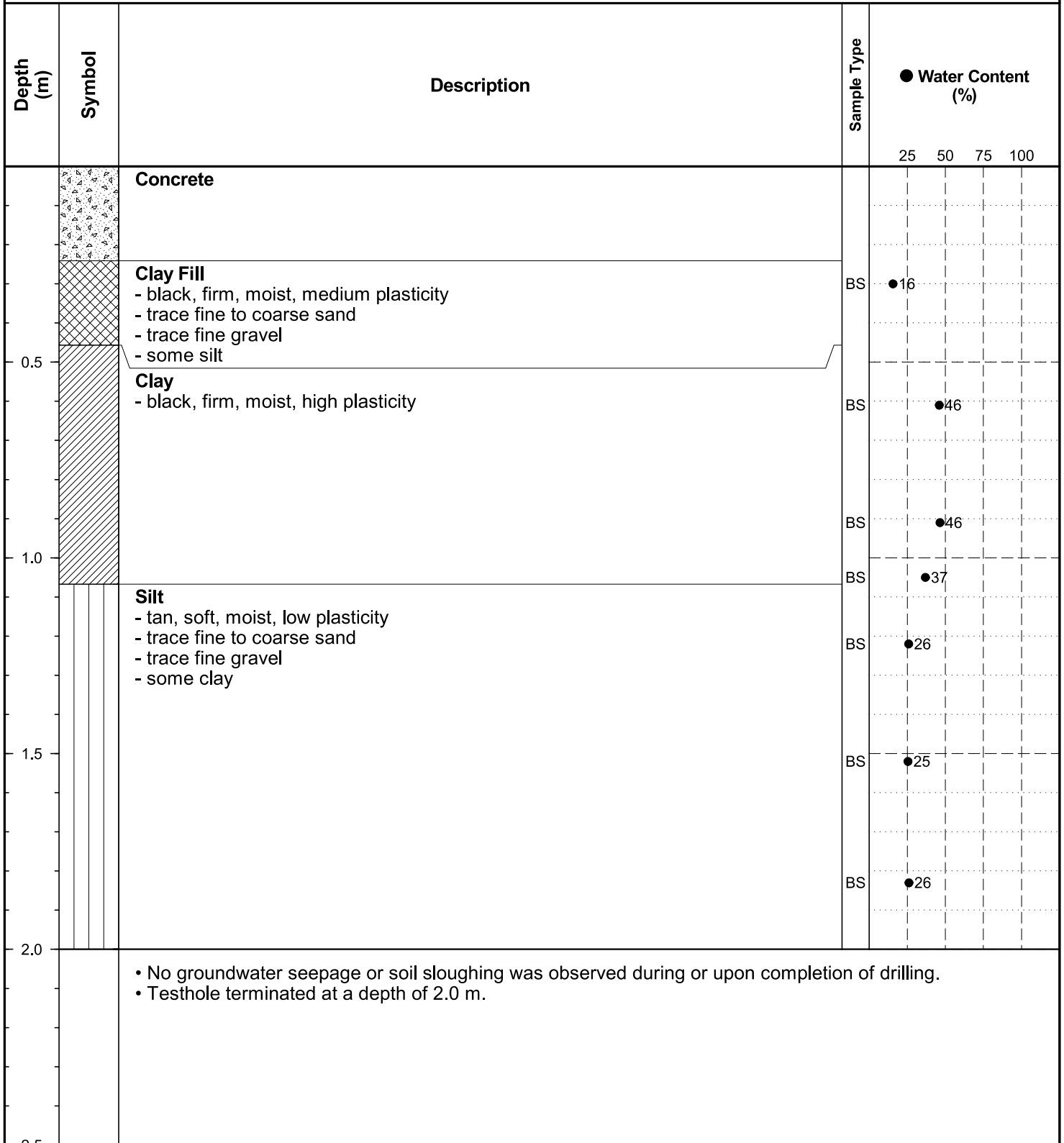
Testhole Location: 4.1 m South from property line 1001 & 999 Dominion St, 2.8 m East from property 999 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal



# TESTHOLE TH6



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.0 m South from property line 985 & 983 Dominion St, 0.9 m East from property 983 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.9		<b>Clay Fill</b> - black, firm, moist, high plasticity - some fine to coarse sand - trace fine gravel - some silt	BS		●36		
0.9 - 2.0		<b>Clay</b> - brown, firm, moist, high plasticity - some silt - stiff below 1.6 m	BS		●29		
			BS		●29		
			BS		●29		
			BS		●30		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					



# TESTHOLE TH7



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.0 m North from property line 965 & 967 Dominion St, 2.9 m East from property 967 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
		<b>Concrete</b>							
0.5		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel - some silt	BS						33
		<b>Clay</b> - brown, firm, moist, high plasticity - some silt	BS						61
1.0		<b>Clay</b> - brown, firm, moist, high plasticity - some silt	BS						39
		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS						31
1.5		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS	0.2	8.8	77.0	14.0		25
		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS						33
2.0		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS						24
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							

# TESTHOLE TH8



Project Name: 2013 Alley Program

Project Location: Dominion St & Garfield St Alley between Ellice Ave & Sargent Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.2 m North from property line 951 & 947 Dominion St, 1.0 m East from property 951 Dominion St

Date Drilled: April 11, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.8		<b>Clay Fill</b> - black, firm, moist, medium plasticity - some fine to coarse sand - trace fine gravel - some silt	BS		47		
0.8 - 1.0		<b>Clay</b> - black, firm, moist, high plasticity - some silt	BS		49		
1.0 - 1.7		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to coarse sand - trace fine gravel - some clay	BS		42		
1.7 - 2.0		<b>Clay</b> - brown, stiff, moist, high plasticity - some silt	BS		26		
2.0 - 2.1			BS		20		
2.1 - 2.2			BS		32		
<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							



**Core sample from TH1**



**Core sample from TH2**





**Core sample from TH3**



**Core sample from TH4**





**Core sample from TH5**



**Core sample from TH6**





**Core sample from TH7**



**Core sample from TH8**



# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
3rd Floor - 865 Waverley St.  
Winnipeg, Manitoba  
R3T 5P4

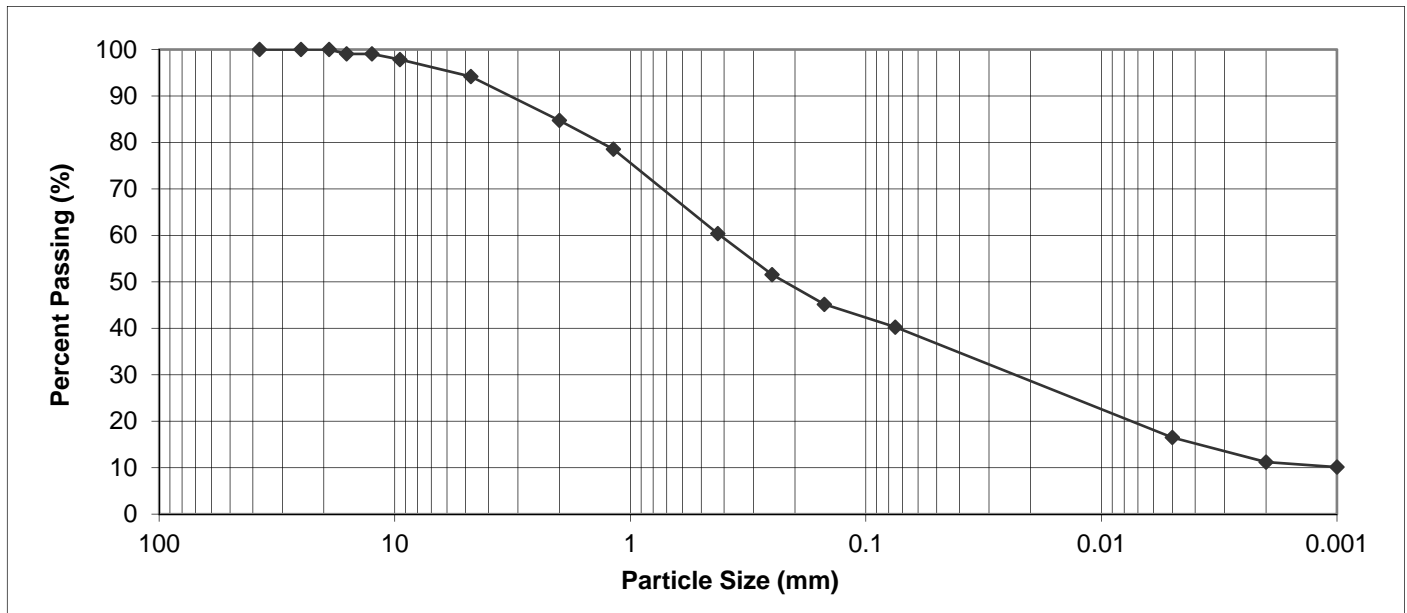
PROJECT: 2013 Alley Program  
Dominion St & Garfield St Alley  
between Ellice & Sargent Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
SAMPLE ID: TH2 at 0.6 m.

DATE RECEIVED: April 15, 2013  
TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	99.0
12.50 mm	99.0
9.50 mm	97.8
4.75 mm	94.2
2.00 mm	84.7

PARTICLE SIZE	PERCENT PASSING
1.18 mm	78.5
0.425 mm	60.4
0.250 mm	51.5
0.150 mm	45.1
0.075 mm	40.2
0.005 mm	16.5
0.002 mm	11.2
0.001 mm	10.1

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
5.8	9.5	24.3	20.2	29.0	11.2	10.1

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

## PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

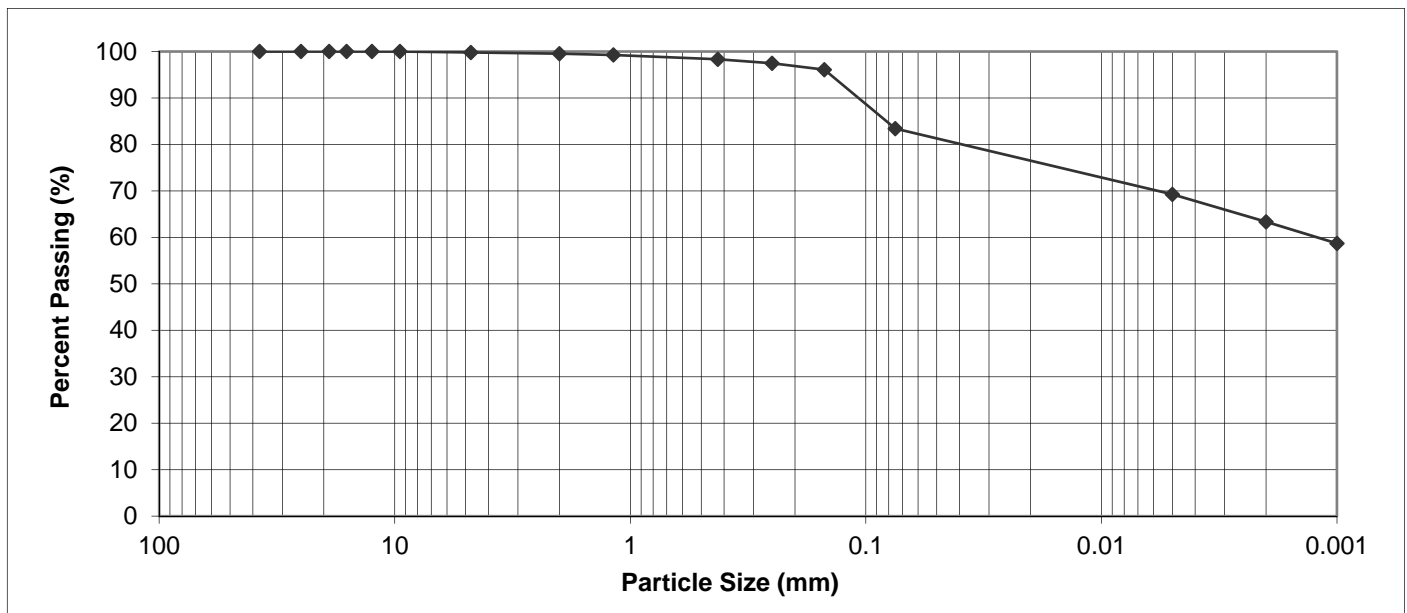
PROJECT: 2013 Alley Program  
 Dominion St & Garfield St Alley  
 between Ellice & Sargent Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH4 at 0.6 m.

DATE RECEIVED: April 15, 2013  
 TESTED BY: Sothea Bun



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	99.8
2.00 mm	99.5

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.3
0.425 mm	98.3
0.250 mm	97.4
0.150 mm	96.1
0.075 mm	83.4
0.005 mm	69.3
0.002 mm	63.3
0.001 mm	58.7

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.2	0.3	1.2	14.9	20.1	63.3	58.7

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

# PARTICLE SIZE ANALYSIS ASTM D422

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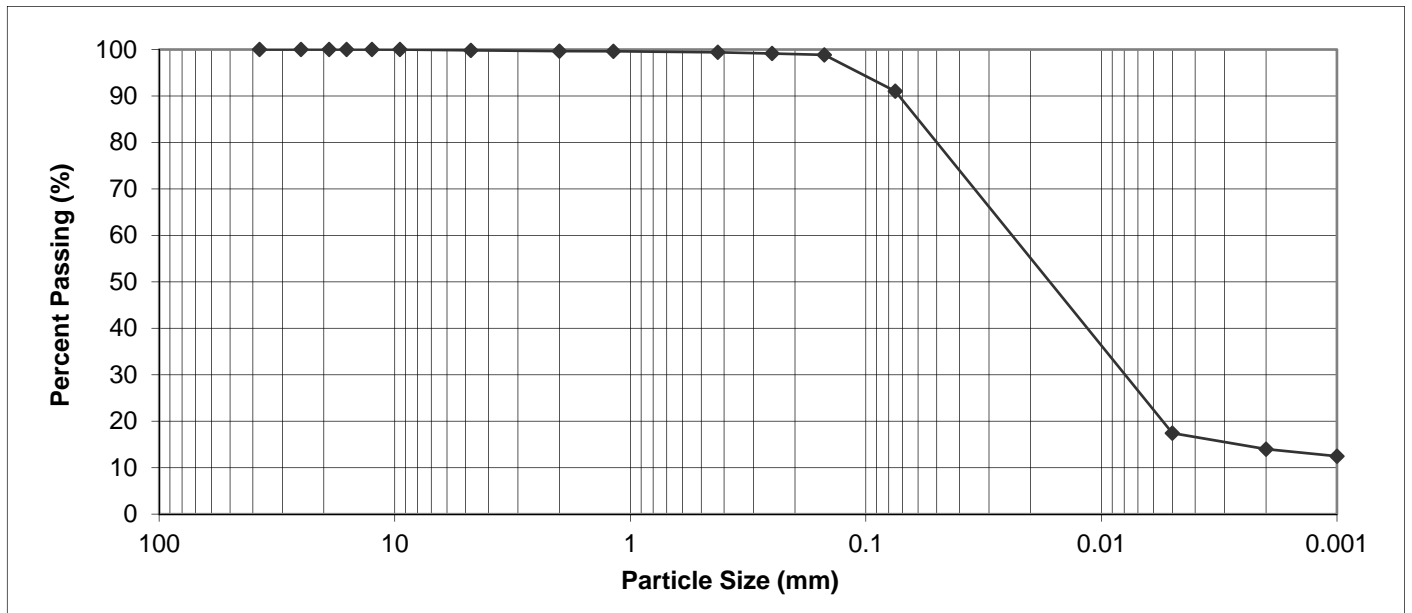
PROJECT: 2013 Alley Program  
 Dominion St & Garfield St Alley  
 between Ellice & Sargent Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH7 at 1.2 m.

DATE RECEIVED: April 15, 2013  
 TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	99.8
2.00 mm	99.6

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.6
0.425 mm	99.4
0.250 mm	99.1
0.150 mm	98.8
0.075 mm	91.0
0.005 mm	17.4
0.002 mm	14.0
0.001 mm	12.5

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.2	0.2	0.2	8.4	77.0	14.0	12.5

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

**2013 ALLEY PROGRAM**  
**SHERBURN STREET & INGERSOLL STREET ALLEY BETWEEN**  
**YARWOOD AVENUE & NOTRE DAME AVENUE**  
**GEOTECHNICAL INVESTIGATION**

Prepared for  
**KGS GROUP INC.**  
**3<sup>rd</sup> FLOOR - 865 WAVERLEY STREET**  
**WINNIPEG, MANITOBA**  
**R3T 5P4**

Prepared by  
**THE NATIONAL TESTING LABORATORIES LIMITED**  
**199 HENLOW BAY**  
**WINNIPEG, MANITOBA**  
**R3Y 1G4**

**May 9, 2013**



**THE  
NATIONAL  
TESTING  
LABORATORIES  
LIMITED**  
*Established in 1923*

Project No.KGS-1307

Drawn by: SB

Figure: 1

Testhole Location Plan  
2013 Alley Program  
Sherburn St & Ingersoll St Alley  
between Yarwood & Notre Dame Ave

Date:May 9, 2013

Reviewed by:GL

Scale: NTS



# TESTHOLE TH1



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 9.8 m W from property line 1070 & 1060 Notre Dame Ave, 3.0 m S from property 1070 Notre Dame Ave

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.4		<b>Clay Fill</b> - black, firm, moist, high plasticity - trace fine to coarse sand - trace fine gravel - some silt	BS		●36		
0.4 - 1.2		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS		●29		
1.2 - 1.4			BS		●30		
1.4 - 1.6			BS		●31		
1.6 - 1.8			BS		●22		
1.8 - 2.0			BS		●21		
2.0 - 2.5		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS		●21		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					



# TESTHOLE TH2



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.9 m W from property line 1060 & 1050 Notre Dame Ave, 3.0 m S from property 1060 Notre Dame Ave

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
0.0 - 0.1		<b>Concrete</b>							
0.1 - 0.4		<b>Clay Fill</b> - black, firm, moist, high plasticity - trace fine to coarse sand - trace fine gravel - some silt	BS						● 37
0.4 - 1.2		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS	0.1	2.0	28.2	69.7	—	● 29
1.2 - 1.7		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS						● 29
1.7 - 2.0			BS						● 36
2.0 - 2.1			BS						● 26
2.1 - 2.2			BS						● 20
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							

# TESTHOLE TH3



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 5.2 m S from property line 1187 & 1183 Sherburn St, 1.5 m E from property 1183 Sherburn St

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
0.0 - 0.1		<b>Concrete</b>					
0.1 - 0.4		<b>Clay Fill</b> - black, firm, moist, high plasticity - trace fine to coarse sand - trace fine gravel - some silt	BS		●37		
0.4 - 1.3		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS		●27		
1.3 - 1.4			BS		●26		
1.4 - 1.5			BS		●31		
1.5 - 1.6			BS		●36		
1.6 - 2.0		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS		●23		
2.0 - 2.5		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>	BS		●21		

# TESTHOLE TH4



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 1.4 m N from property line 1156 & 1154 Ingersoll St, 0.3 m W from property 1156 Ingersoll St

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
0.5		<b>Clay Fill</b> - black, firm, moist, high plasticity - some fine to coarse sand - trace fine gravel - some silt	BS		●28		
		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS		●36		
1.0			BS		●31		
		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS		●29		
1.5			BS		●22		
2.0			BS		●20		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH5



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 2.6 m S from property line 1153 & 1149 Sherburn St, 0.3 m E from property 1149 Sherburn St

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)	
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL
		<b>Concrete</b>							
0.5		<b>Clay Fill</b> - black, firm, moist, high plasticity - some fine to coarse sand - trace fine gravel - some silt	BS						●30
			BS	1.1	26.4	37.6	34.9		●39.1
1.0		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS						●26
			BS						●27
1.5			BS						●24
2.0		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS						●23
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>							

# TESTHOLE TH6



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 3.7 m N from property line 1120 & 1124 Ingersoll St, 0.5 m W from property 1120 Ingersoll St

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				Water Content (%)			
				Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL		LL	
								25	50	75	100
		<b>Concrete</b>									
0.5		<b>Clay Fill</b> - black, firm, moist, high plasticity - trace fine to coarse sand - trace fine gravel - some silt	BS								33
		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS								29
1.0			BS								35
		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS	0.0	2.6	79.1	18.3				26
1.5			BS								19
2.0			BS								17
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>									

# TESTHOLE TH7



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 4.2 m S from property line 1109 & 1107 Sherburn St, 0.3 m E from property 1107 Sherburn St

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
0.5		<b>Clay Fill</b> - black, firm, moist, high plasticity - some fine to coarse sand - trace fine gravel - some silt	BS	●25			
		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS	●26			
1.0		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS	●27			
1.5			BS	●24			
2.0			BS	●20			
			BS	●19			
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					

# TESTHOLE TH8



Project Name: 2013 Alley Program

Project Location: Sherburn & Ingersoll St Alley between Yarwood & Notre Dame Ave

Client: KGS Group Inc.

Drilling Contractor: Active Drilling and Piling

Drilling Method: 125 mm Solid Stem Auger

Testhole Location: 1.5 m S from property line 1090 & 1088 Ingersoll St, 0.6 m W from property 1088 Ingersoll St

Date Drilled: April 16, 2013

Depth of Testhole: 2.0 m

Logged by: Sothea Bun

Reviewed by: German Leal

Depth (m)	Symbol	Description	Sample Type	● Water Content (%)			
				25	50	75	100
		<b>Concrete</b>					
0.5		<b>Clay Fill</b> - black, firm, moist, high plasticity - some fine to coarse sand - trace fine gravel - some silt	BS		●39		
		<b>Clay</b> - brown, firm, moist, high plasticity - trace fine to medium sand - trace fine gravel - some silt	BS		●28		
1.0		<b>Silt</b> - tan, soft, moist, low plasticity - trace fine to medium sand - some clay	BS		●24		
1.5			BS		●30		
			BS		●22		
2.0			BS		●22		
		<ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>Testhole terminated at a depth of 2.0 m.</li> </ul>					





**Core sample from TH1**



**Core sample from TH2**



**Core sample from TH3**



**Core sample from TH4**





**Core sample from TH5**



**Core sample from TH6**





**Core sample from TH7**



**Core sample from TH8**

## PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

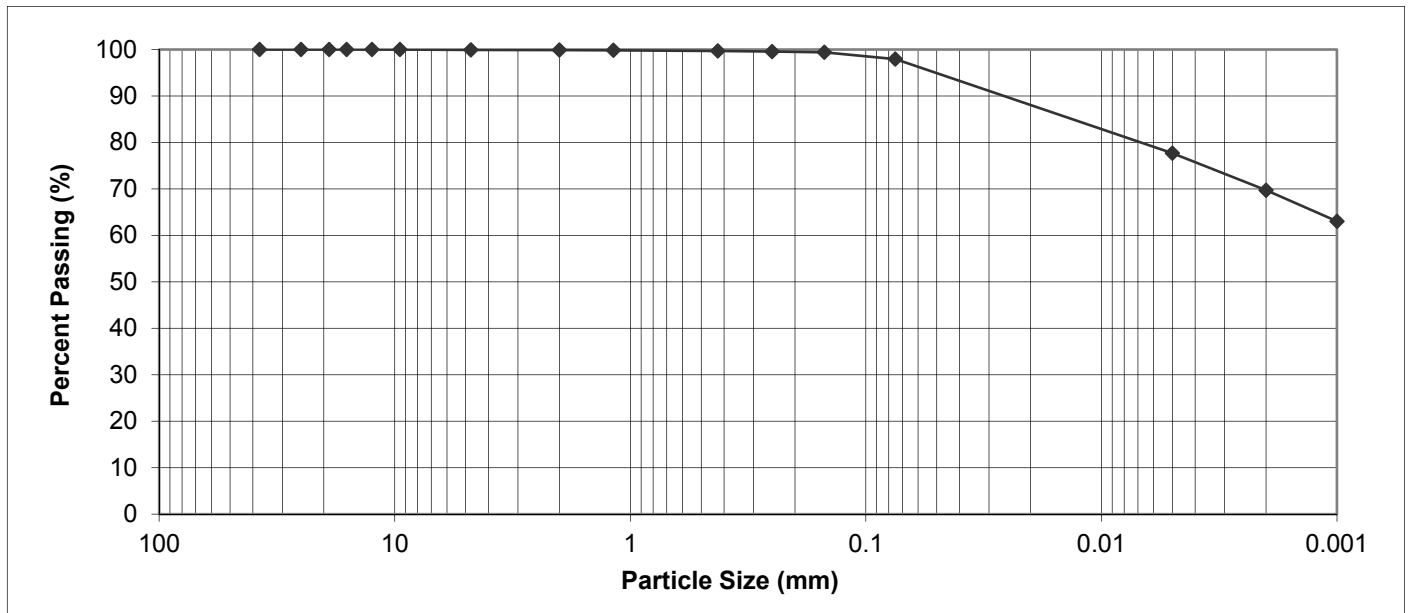
PROJECT: 2013 Alley Program  
 Sherburn St & Ingersoll St Alley  
 btw Yarwood & Notre Dame Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH2 at 0.6 m.

DATE RECEIVED: April 15, 2013  
 TESTED BY: Sothea Bun



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	99.9
2.00 mm	99.9

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.8
0.425 mm	99.7
0.250 mm	99.6
0.150 mm	99.4
0.075 mm	97.9
0.005 mm	77.7
0.002 mm	69.7
0.001 mm	63.0

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.1	0.0	0.2	1.8	28.2	69.7	63.0

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT

# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

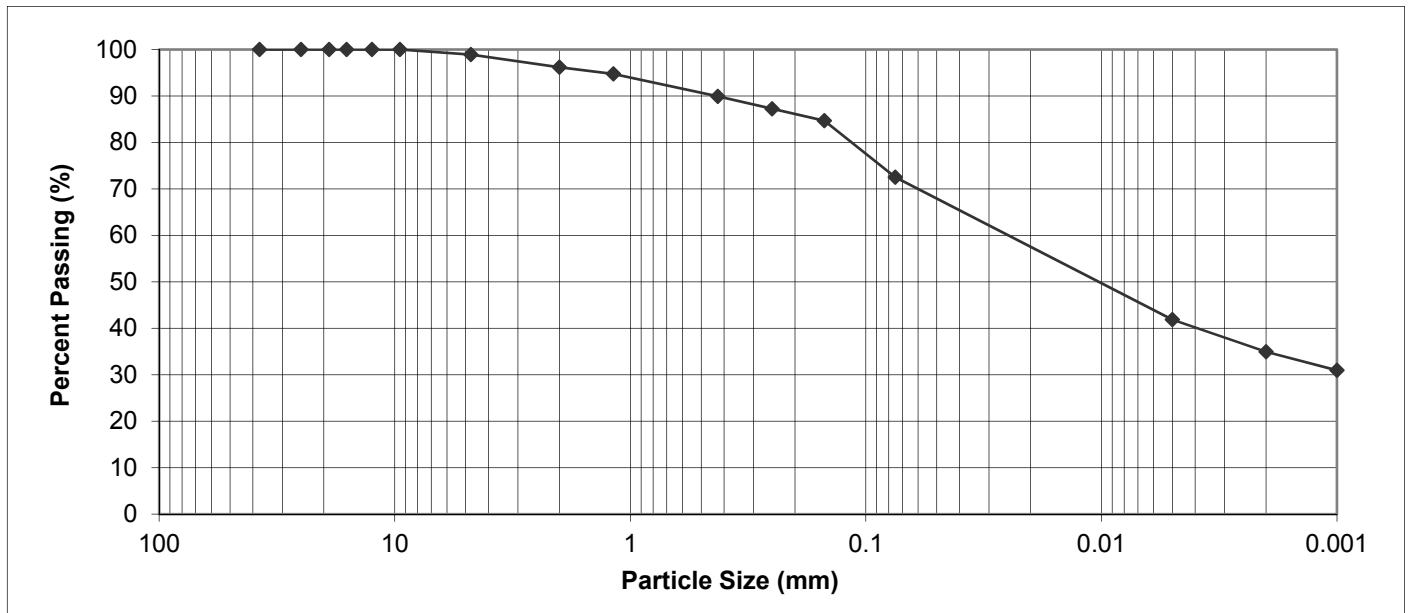
PROJECT: 2013 Alley Program  
 Sherburn St & Ingersoll St Alley  
 btw Yarwood & Notre Dame Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH5 at 0.6 m

DATE RECEIVED: April 16, 2013  
 TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	98.9
2.00 mm	96.2

PARTICLE SIZE	PERCENT PASSING
1.18 mm	94.7
0.425 mm	89.9
0.250 mm	87.2
0.150 mm	84.7
0.075 mm	72.5
0.005 mm	41.9
0.002 mm	34.9
0.001 mm	31.0

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
1.1	2.7	6.3	17.4	37.6	34.9	31.0

May 6, 2013

REVIEWED BY: German E. Leal, B.Sc., EIT



# PARTICLE SIZE ANALYSIS ASTM D422

KGS Group Inc.  
 3rd Floor - 865 Waverley St.  
 Winnipeg, Manitoba  
 R3T 5P4

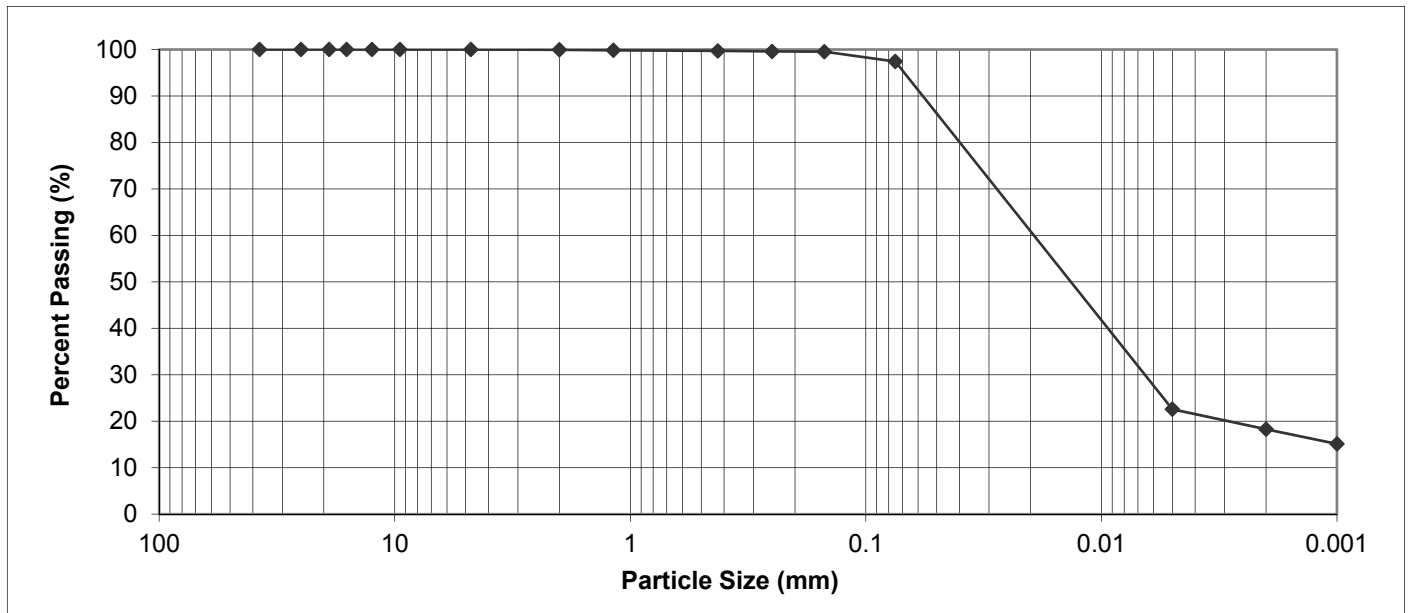
PROJECT: 2013 Alley Program  
 Sherburn St & Ingersoll St Alley  
 btw Yarwood & Notre Dame Ave

Attention: Michael Turko

PROJECT NO.: KGS-1307

SAMPLED BY: Sothea Bun  
 SAMPLE ID: TH6 at 1.2 m.

DATE RECEIVED: April 16, 2013  
 TESTED BY: Larry Presado



PARTICLE SIZE	PERCENT PASSING
37.50 mm	100.0
25.00 mm	100.0
19.00 mm	100.0
16.00 mm	100.0
12.50 mm	100.0
9.50 mm	100.0
4.75 mm	100.0
2.00 mm	99.9

PARTICLE SIZE	PERCENT PASSING
1.18 mm	99.8
0.425 mm	99.7
0.250 mm	99.6
0.150 mm	99.5
0.075 mm	97.4
0.005 mm	22.6
0.002 mm	18.3
0.001 mm	15.1

Gravel, % 75 to 4.75 mm	Sand, %			Silt, % <0.075 to 0.002 mm	Clay, % <0.002 mm	Colloids, % < 0.001 mm
	Coarse <4.75 to 2.0 mm	Medium <2.0 to 0.425 mm	Fine <0.425 to 0.075 mm			
0.0	0.1	0.2	2.3	79.1	18.3	15.1

May 6, 2013

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