

# **APPENDIX 'A'**

# **GEOTECHNICAL REPORT**

## APPENDIX 'A' - GEOTECHNICAL REPORT

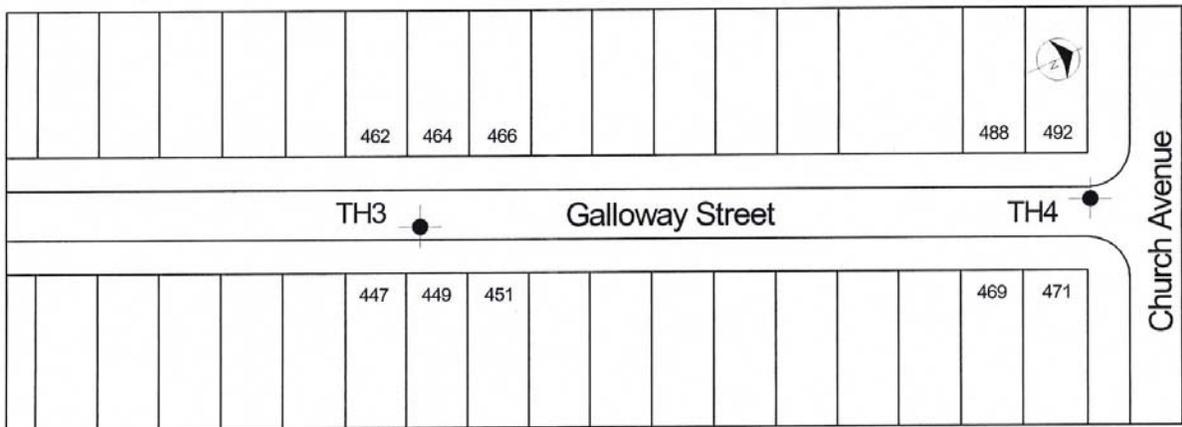
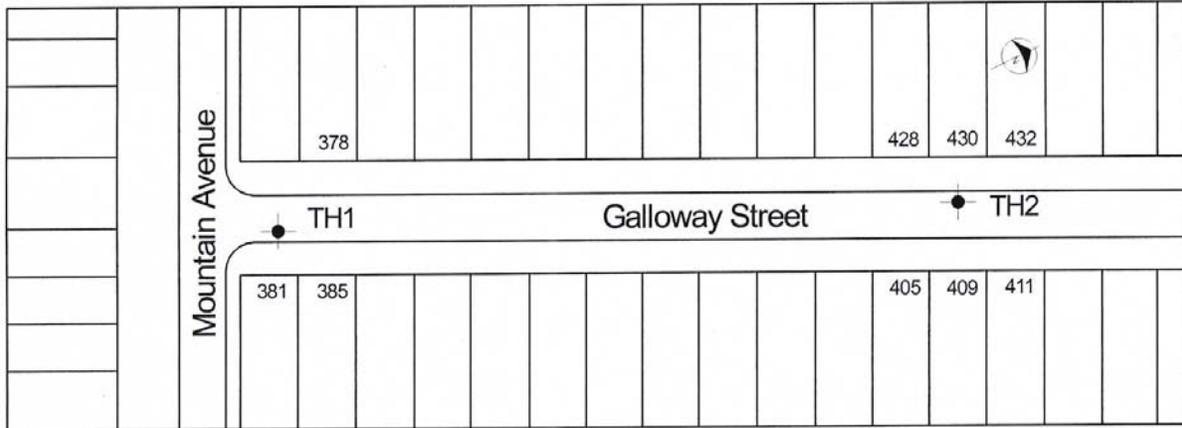
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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

### Geotechnical Report for Galloway Street

#### Test Hole Locations



## Summary of Core Samples

**2007 City of Winnipeg  
Residential Street Renewal  
Geotechnical Investigation  
Galloway Street  
Mountain Avenue to Church Avenue**

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	3.4 m S of the N property line of lot 381, northbound lane, 1.35 m W of E curb	Asphalt/Concrete	20/180	N/A	-	Clayey Silt	0.9	21.2	0.0	6.3	59.7	34.0	27	18	9
TH2	5.2 m N of S property line of lot 430, southbound lane, 1.65 m E of W curb	Asphalt/Concrete	25/155	N/A	-	N/A	-	-	-	-	-	-	-	-	-
TH3	2.3 m N of the S property line of lot 449, northbound lane, 1.5 m W of E curb	Asphalt/Concrete	25/155	N/A	-	N/A	-	-	-	-	-	-	-	-	-
TH4	0.5 m N of S property line of lot 492, southbound lane, 2.0 m E of W curb	Concrete	205	N/A	-	Clay	1.8	37.9	0.0	0.7	8.3	91.0	83	25	58

**Test Hole Log for Test Hole #1**

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Moisture Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
		<b>ASPHALT CONCRETE</b>						
		<b>CLAY</b> - black to grey, stiff, moist, high plasticity, trace silt pockets						
0.5		<b>CLAYEY SILT</b> - tan, firm to soft, moist, low plasticity, trace fine grained sand						
1.0					0.0	6.3	59.7	34.0
1.5		<b>CLAY</b> - brown, stiff, moist, high plasticity - 50 mm silt layer at 2.0 m						
2.0								
2.5		<ul style="list-style-type: none"> <li>• End of testhole at 2.2 m below grade.</li> <li>• No water seepage or sloughing were observed during or after completion of drilling.</li> </ul>						

**TESTHOLE TH1**



**Project Name:** 2007 Residential Street Renewal

**Date Drilled:** November 23, 2006

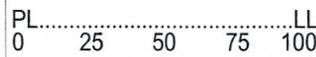
**Client:** ND Lea Inc.

**Depth of Testhole:** 2.2 m

**Site:** Galloway Street, Mountain Ave. to Church Ave.

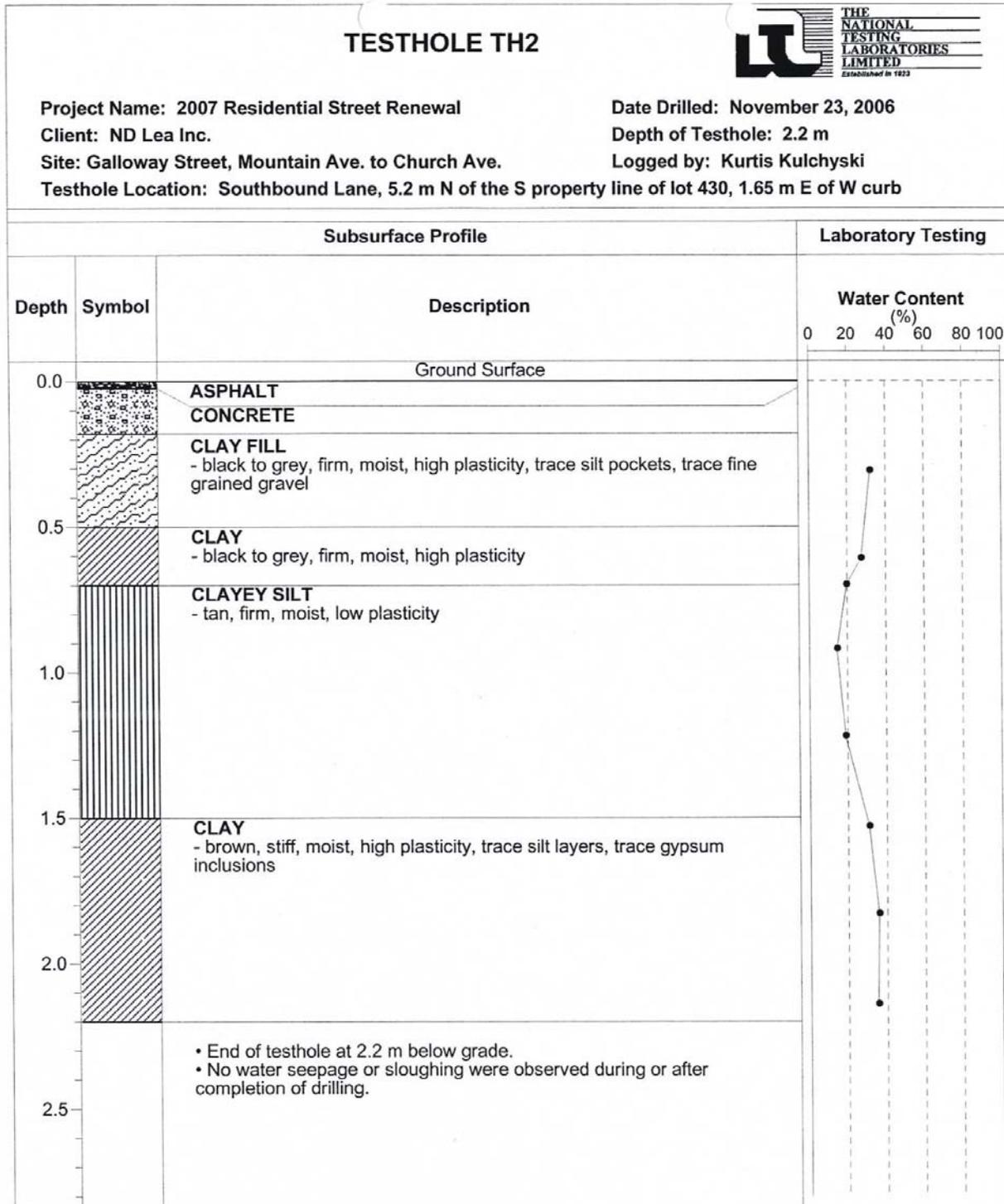
**Logged by:** Kurtis Kulchyski

**Testhole Location:** Northbound Lane, 3.4 m S of the N property line of lot 381, 1.35 m W of E Curb

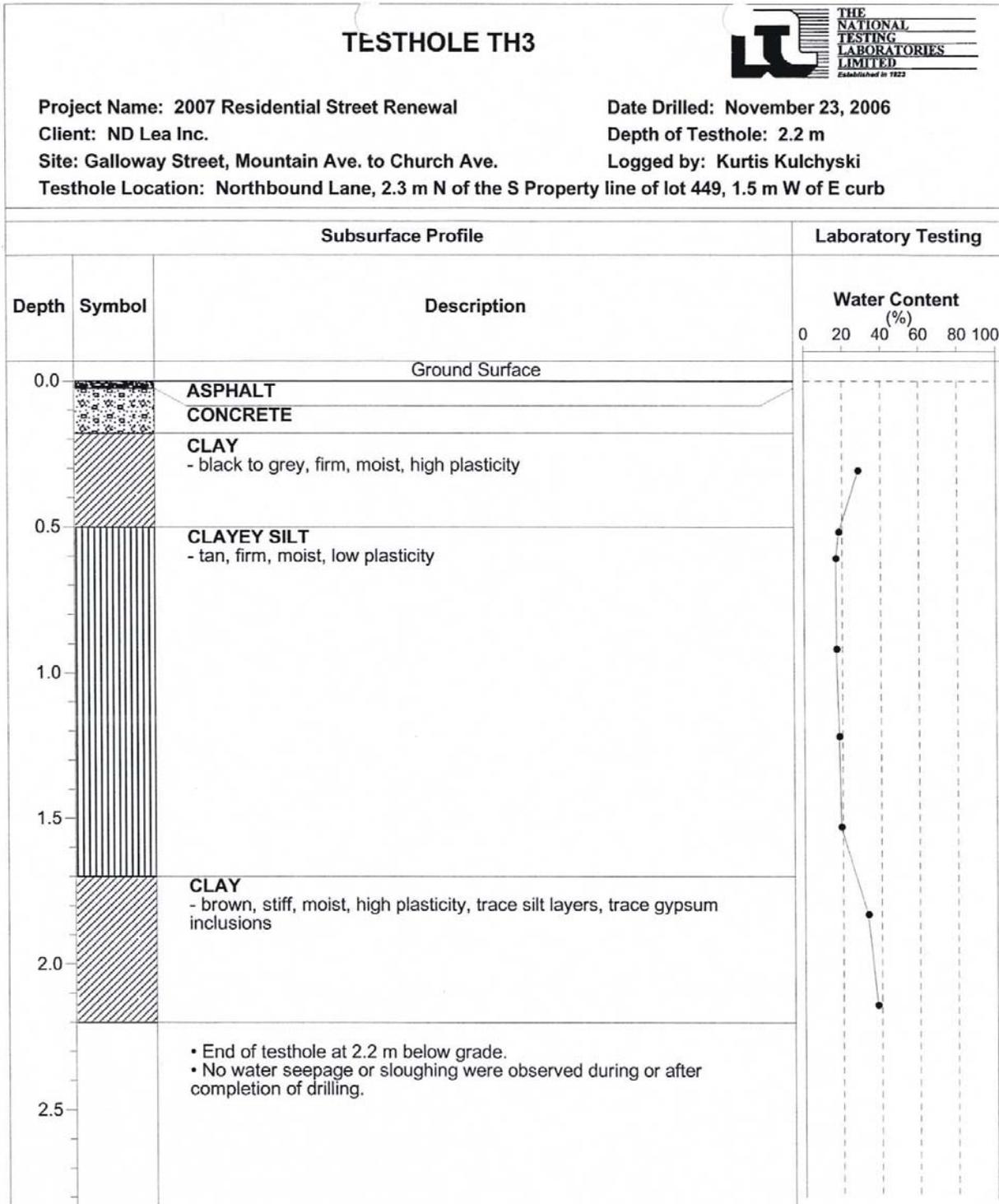


Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0	6.3	59.7	34.0

**Test Hole Log for Test Hole #2**



**Test Hole Log for Test Hole #3**



**Test Hole Log for Test Hole #4**

**TESTHOLE TH4**

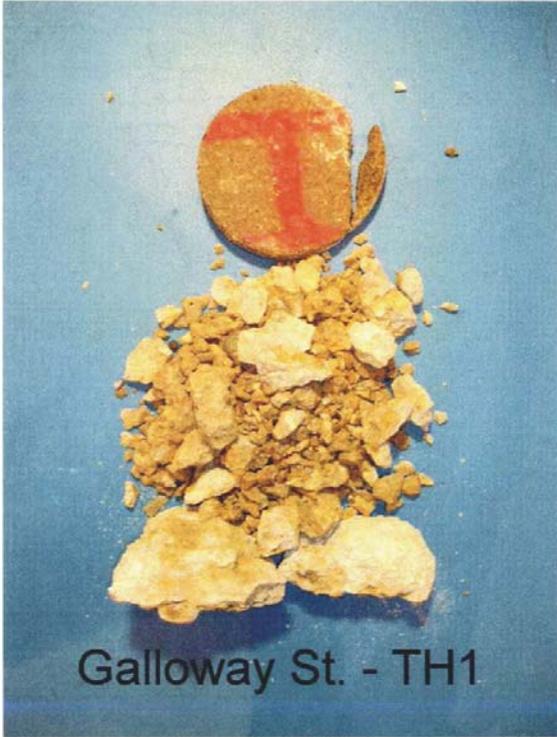


**Project Name:** 2007 Residential Street Renewal  
**Client:** ND Lea Inc.  
**Site:** Galloway Street, Mountain Ave. to Church Ave.  
**Testhole Location:** Southbound Lane, 0.5 m N of the S property line of lot 492, 2.0 m E of W curb

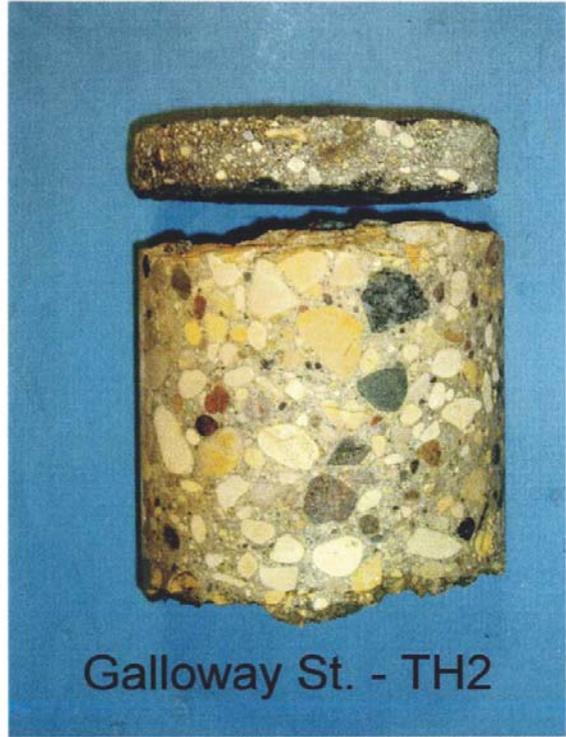
**Date Drilled:** November 23, 2006  
**Depth of Testhole:** 2.2 m  
**Logged by:** Kurtis Kulchyski

Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Moisture Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
0.0		Ground Surface						
0.0 - 0.2		<b>CONCRETE</b>						
0.2 - 1.0		<b>CLAY</b> - black to grey, firm, moist, high plasticity						
1.0 - 1.6		<b>CLAYEY SILT</b> - tan, firm, moist, low plasticity						
1.6 - 2.2		<b>CLAY</b> - brown, stiff, moist, high plasticity			0.0	0.7	8.3	91.0
2.2 - 2.5		<ul style="list-style-type: none"> <li>• End of testhole at 2.2 m below grade.</li> <li>• No water seepage or sloughing were observed during or after completion of drilling.</li> </ul>						

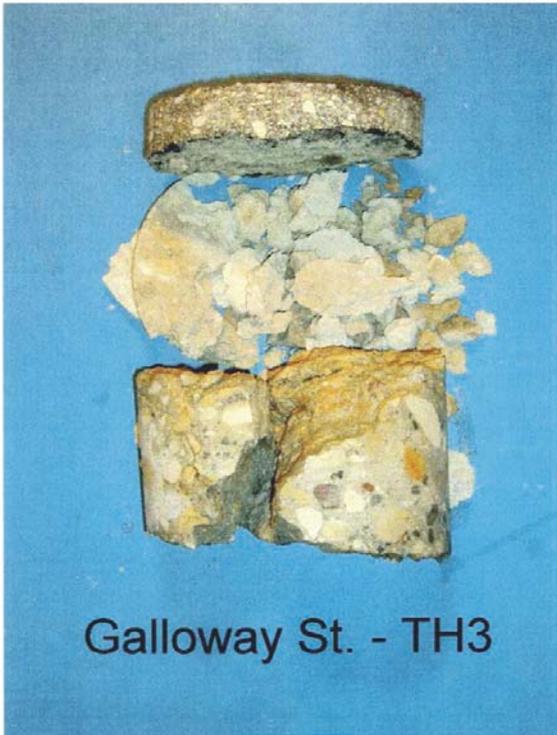
**Pavement Core Photos**



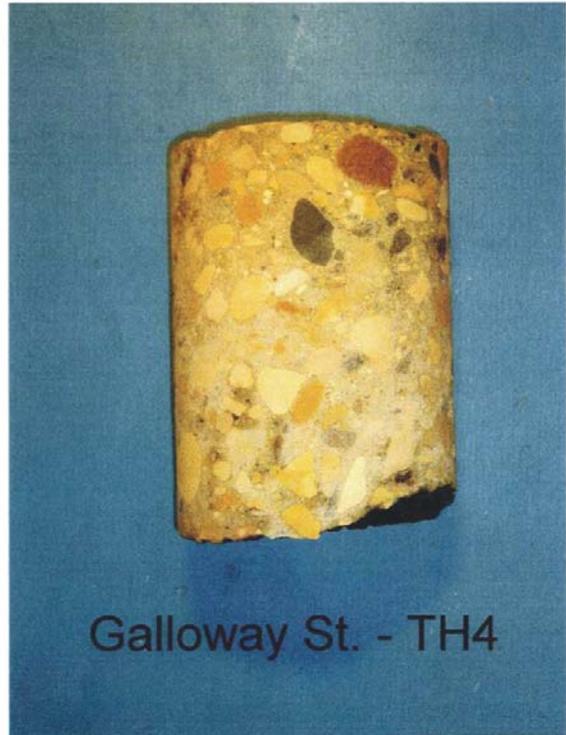
Galloway St. - TH1



Galloway St. - TH2



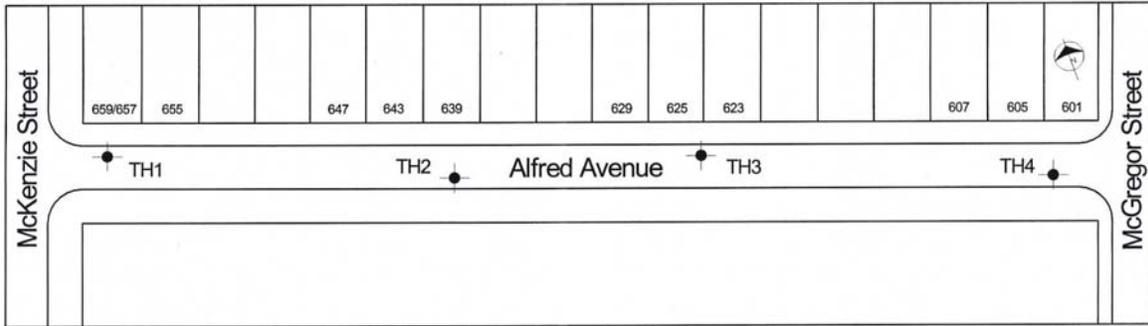
Galloway St. - TH3



Galloway St. - TH4

### Geotechnical Report for Alfred Avenue

#### Test Hole Locations



## Summary of Core Samples

**2007 City of Winnipeg  
Residential Street Renewal  
Geotechnical Investigation  
Alfred Avenue  
McGregor Street to McKenzie Street**

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	6.9 m E of the W property line of lot 657, westbound lane, 1.7 m S of N curb	Asphalt/Concrete	75/75	N/A	-	Clayey Silt	1.2	19.3	0.0	3.8	64.9	31.3	30	17	13
TH2	4.9 m W of the W property line of lot 639, eastbound lane, 1.4 m N of S curb	Asphalt/Concrete	60/90	N/A	-	N/A	-	-	-	-	-	-	-	-	-
TH3	In line with the E property line of lot 625, westbound lane, 1.3 m S of N curb	Asphalt/Concrete	90/80	N/A	-	N/A	-	-	-	-	-	-	-	-	-
TH4	8.6 m W of the E property line of lot 601, eastbound lane, 1.7 m N of S curb	Asphalt/Concrete	40/120	N/A	-	Clay	1.2	30.2	0.0	0.9	9.0	90.1	76	23	53

**Test Hole Log for Test Hole #1**

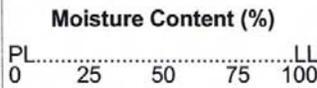
Subsurface Profile			Laboratory Testing					
Depth (m)	Symbol	Description	Moisture Content (%)		Gravel (%)	Sand (%)	Silt (%)	Clay (%)
			PL	LL				
Ground Surface								
0.0		<b>ASPHALT</b>						
		<b>CONCRETE</b>						
		<b>CLAY</b> - black to grey, stiff, moist, high plasticity - brown below 0.5 m - thinly varved with silt below 0.8 m						
0.5								
1.0								
		<b>CLAYEY SILT</b> - tan, firm, moist, low plasticity - trace fine grained sand below 1.4 m			0.0	3.8	64.9	31.3
1.5								
2.0								
2.5		<ul style="list-style-type: none"> <li>• End of testhole at 2.2 m below grade.</li> <li>• No water seepage or sloughing were observed during or after completion of drilling.</li> </ul>						

**TESTHOLE TH1**



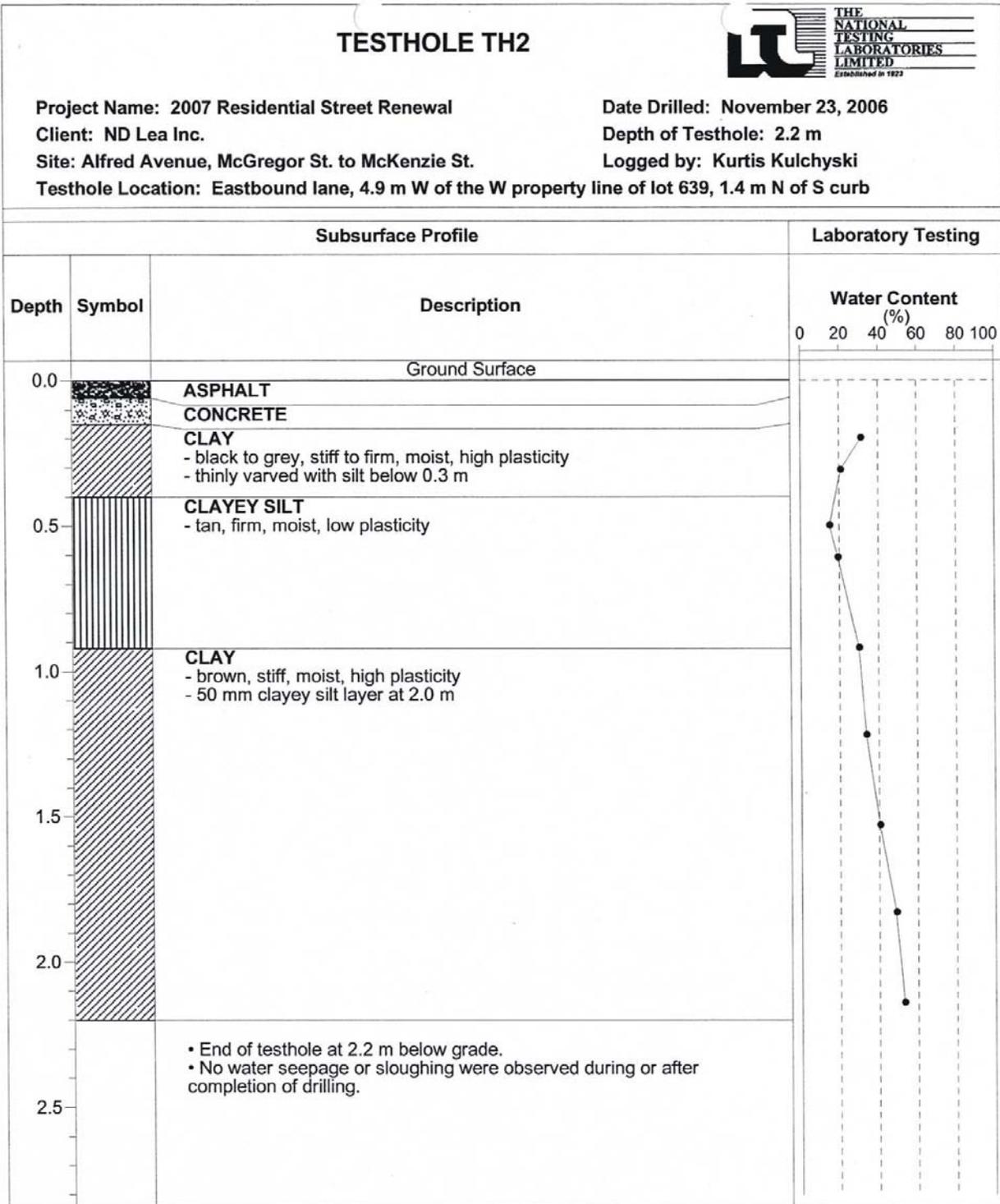
**Project Name:** 2007 Residential Street Renewal  
**Client:** ND Lea Inc.  
**Site:** Alfred Avenue, McGregor St. to McKenzie St.  
**Testhole Location:** Westbound lane, 6.9 m E of the W property line of lot 657, 1.7 m S of N curb

**Date Drilled:** November 23, 2006  
**Depth of Testhole:** 2.2 m  
**Logged by:** Kurtis Kulchyski

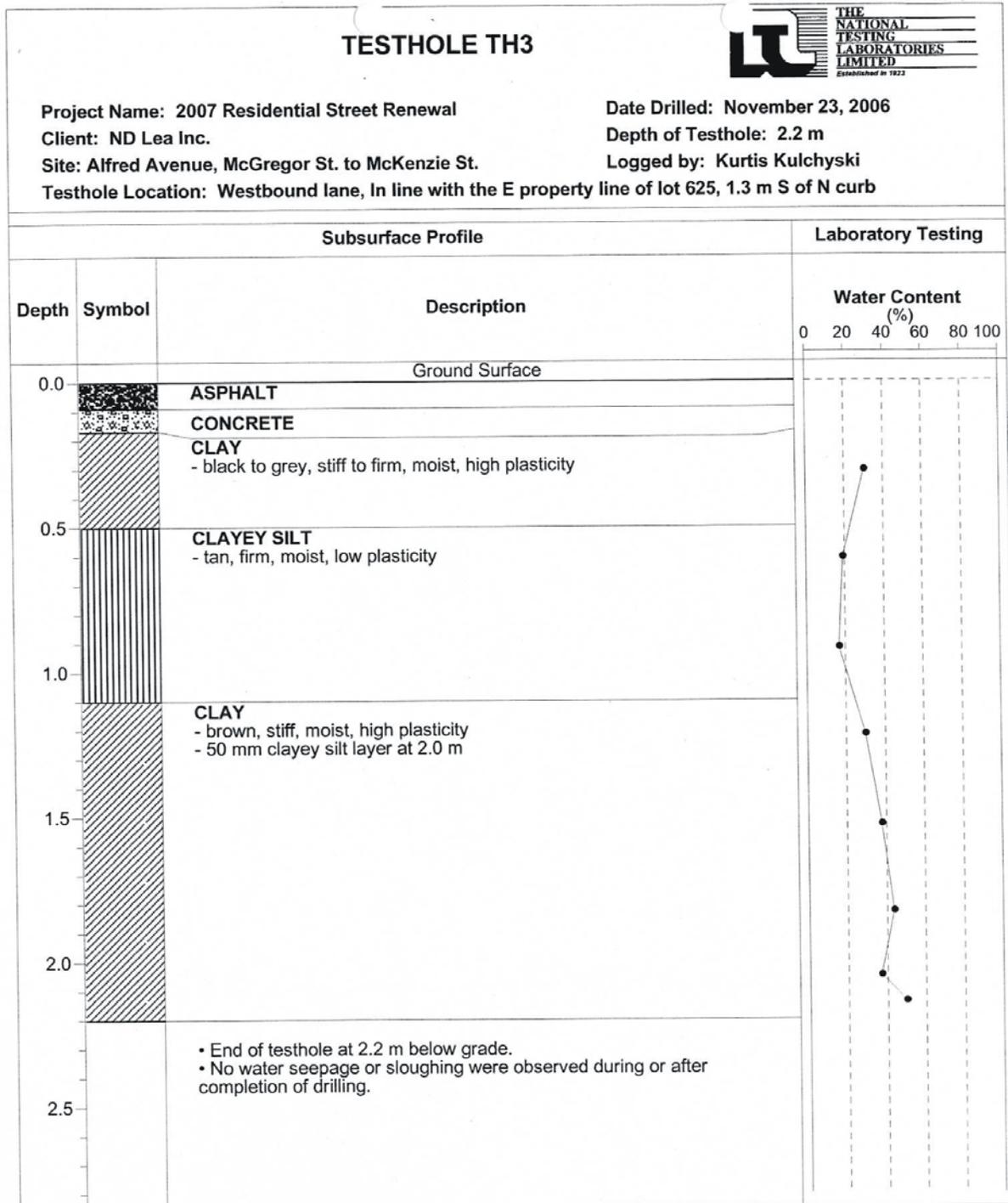


Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0	3.8	64.9	31.3

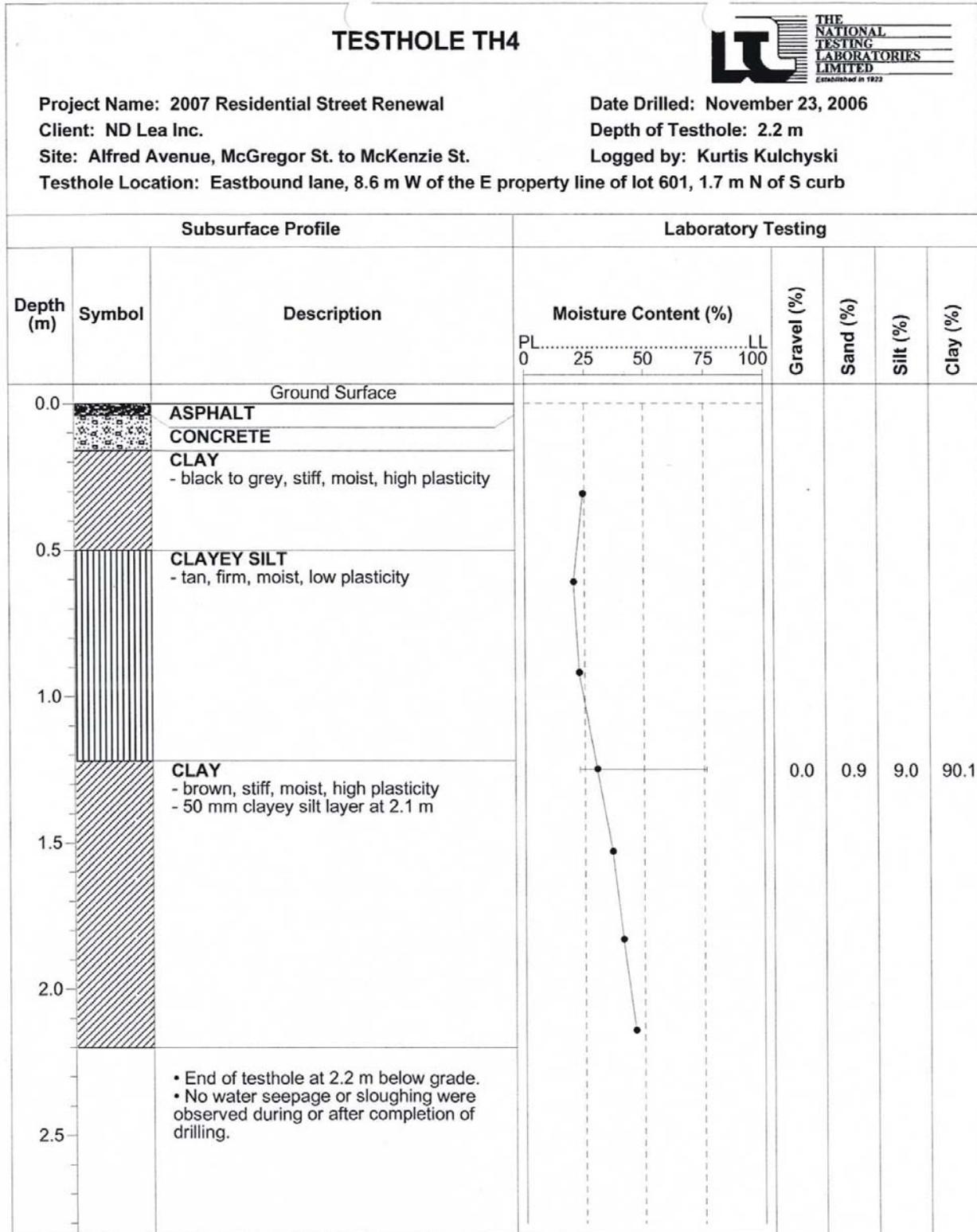
**Test Hole Log for Test Hole #2**



**Test Hole Log for Test Hole #3**



**Test Hole Log for Test Hole #4**



**Pavement Core Photos**

