# GEOTECHNICAL INVESTIGATION REPORT



# LOGAN AVENUE TRINITY STREET TO REITTA STREET

# 2004 STREET RENEWAL PROGRAM GEOTECHNICAL INVESTIGATION



# City of Winnipeg 2004 Street Renewal Program Geotechnical Investigation

		Pavement Surface	ırface	Pavement Stru	Pavement Structure Material		Sample Moisture	Moisture		Particle Size Analysis	e Analysis		At	Atterberg Limits	S
Testhole	Testhole		Thickness		Thickness	Sample	Depth	Content	Gravel	Sand	Silt	Clay	Liquid	Plastic	Plasticity
No.	Location	Type	(mm)	Type	(mm)	Description	(m)	(%)	(%)	(%)	(%)	(%)	Limit	Limit	Limit
1	Logan Ave.	Asphalt/Concrete	140/215	Limestone	545										
2	Logan Ave.	Asphalt/Concrete	140/210	Granular	100	Clayey silt	1.2	24.4	0.0	3.2	58.5	38.3	42	14	28
3	Logan Ave.	Asphalt/Concrete	90/150	Granular	09										
4	Logan Ave.	Asphalt/Concrete	140/140	Granular	180										
2	Logan Ave.	Asphalt/Concrete	150/110	Granular	200										
9	Logan Ave.	Asphalt/Concrete	180/130	Granular	02	Clay	1.8	28.6	0.0	4.5	27.4	68.1	69	17	42



Project Name: 2004 City of Winnipeg Street Renewal Program

Client: UMA Engineering Ltd.

Date Drilled: January 20, 2004
Depth of Testhole: 2.0 m

Site: Logan Avenue Logged by: Robert Hochkievich

Testhole Location: 2 m S of curb, in line with railroad sign at 823 Logan Ave.

		Subsurface Profile		Lab	orato	ry Te	sting
Depth (m)	Symbol	Description	0	<b>W</b> 20	(	Conte %) 60	ent 80 100
0.0-		Ground Surface	╨				
-		HOT MIX ASPHALT - 140 mm thick, good condition		     			
-		CONCRETE	1	-	1	 	1
-	0 00	- 215 mm thick, fair to poor condition	111		i		
0.5-	00000	20 mm LIMESTONE BASE - 555 mm thick			 	 	 
1.0-		CLAY FILL - dark brown, trace sand, trace sand				 	
1.5- -				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 	
2.0-			$\parallel$	į	i	i !	
- - -	-	Frozen to a depth of 0.9 m below grade. End of testhole at 2.0 m below grade.		       		 	 
2.5	-			       			
3.0-	-				 	! !	
-	_			         			
3.5-				 	 	 	 



Project Name: 2004 City of Winnipeg Street Renewal Program

Client: UMA Engineering Ltd.

Site: Logan Avenue

Testhole Location: 1.5 m N of curb, 10 m W of Dorothy St.

Date Drilled: January 16, 2004
Depth of Testhole: 3.5 m

Logged by: Robert Hochkievich

		Subsurface Profile	Laboratory Testing
Depth (m)	Symbol	Description	Noisture Content (%)   Sand (%)   Salt (%)
0.0-		Ground Surface HOT MIX ASPHALT - 140 mm thick, good condition	
0.5-	700 V	CONCRETE - 210 mm thick, poor condition  20 mm GRANULAR BASE - 100 mm thick, sand and gravel	
1.0- -		CLAY FILL - dark brown, trace sand, trace gravel CLAYEY SILT - tan, damp, loose, low plasticity, with clay	0.0 3.2 58.5 38.3
1.5- - -		CLAY - brown, moist, firm, high plasticity, trace silt inclusions	
2.0- - - -			
2.5- - - -			
3.0-			
3.5- - - -		Frozen to a depth of 0.9 m below grade. End of testhole at 3.5 m below grade.	



Project Name: 2004 City of Winnipeg Street Renewal Program

Client: UMA Engineering Ltd.

Date Drilled: January 20, 2004

Depth of Testhole: 3.5 m

Site: Logan Avenue Logged by: Robert Hochkievich

Testhole Location: 2 m S of curb, in line with west building line of 901A Logan Ave.

**Subsurface Profile Laboratory Testing Water Content** Depth **Symbol Description** (m) 40 60 80 100 20 **Ground Surface** 0.0 **HOT MIX ASPHALT** - 90 mm thick, poor condition **CONCRETE** - 150 mm thick, poor condition 0.5 20 mm GRANULAR BASE - 60 mm thick, sand and gravel **CLAY FILL** - dark brown, trace sand, trace gravel **SILT** - tan, damp, loose, low plasticity **CLAY** - brown, moist, firm, high plasticity, trace silt inclusions - some silt between 2.4 m and 2.6 m 1.5 2.0 2.5 3.0 3.5 Frozen to a depth of 0.9 m below grade. End of testhole at 3.5 m below grade.



Project Name: 2004 City of Winnipeg Street Renewal Program

Client: UMA Engineering Ltd.

Date Drilled: January 16, 2004 Depth of Testhole: 3.5 m

Site: Logan Avenue

Logged by: Robert Hochkievich

Testhole Location: 1.5 m N of curb, 0.5 m E of 819 Logan Ave. west building line

		Subsurface Profile		Labo	ratory	/ Tes	sting
Depth (m)	Symbol	Description	0 _	<b>W</b> a	ter Co (%)	)	ent 80 100
0.0-	2553	Ground Surface HOT MIX ASPHALT					,
0.5-	0000 0000 0000 0000 0000 0000 0000 0000 0000	- 140 mm thick, good condition  CONCRETE - 140 mm thick, poor condition  20 mm GRANULAR BASE - 180 mm thick, sand and gravel - with clay below 0.3 m  CLAY - dark brown, frozen  SILT - tan, damp, loose, low plasticity - moist below 1.0 m					
1.5-		CLAY - brown, moist, firm, high plasticity, trace silt inclusions - grey below 2.7 m, trace sulphates		1			
2.0- - - - - 2.5- -						•	
3.0-							
3.5-	-	Frozen to a depth of 0.9 m below grade. End of testhole at 3.5 m below grade.		 	 	 	1



Project Name: 2004 City of Winnipeg Street Renewal Program

Client: UMA Engineering Ltd.

Date Drilled: January 20, 2004 Depth of Testhole: 3.5 m

Site: Logan Avenue

Logged by: Robert Hochkievich

Testhole Location: 2 m S of curb, 3 m E of 799 Logan Ave. west building line

	1	Subsurface Profile		Laboratory Testing					
Depth (m)	Symbol	Description	0	<b>W</b> a	(%)				
0.0-		Ground Surface  HOT MIX ASPHALT  - 150 mm thick, good to fair condition		T - ! !	 	]			
0.5-	8000 8000	CONCRETE - 110 mm thick, poor condition  20 mm GRANULAR BASE - 200 mm thick, sand and gravel							
1.0- - - -	- - -	CLAY FILL - dark brown, trace gravel  SILT - tan, moist, soft, low plasticity			/				
1.5- - - -		CLAY	-						
2.0-		<ul> <li>brown, moist, firm, high plasticity, trace silt inclusions</li> <li>grey below 2.6 m, trace sulphates</li> </ul>							
2.5- - -				; ; ; ; ; ; ;					
3.0-									
3.5 - - - -		Frozen to a depth of 0.9 m below grade. End of testhole at 3.5 m below grade.	1	 	 				



Project Name: 2004 City of Winnipeg Street Renewal Program

Client: UMA Engineering Ltd.

Site: Logan Avenue

Testhole Location: 1.5 m N of curb, 15 m W of Reitta St.

Date Drilled: January 16, 2004
Depth of Testhole: 3.5 m

Logged by: Robert Hochkievich

		Subsurface Profile	Laboratory Testing
Depth (m)	Symbol	Description	Noisture Content (%)   Sand (%)
0.0-  0.5-  1.0-  1.5-  2.0-  2.5-	5-10-7-5	Ground Surface  HOT MIX ASPHALT - 180 mm thick, good condition  CONCRETE - 130 mm thick, poor condition  20 mm GRANULAR BASE - 70 mm thick, sand and gravel  CLAY FILL - dark brown, trace gravel  CLAY - brown, moist, firm, high plasticity  SILT - tan, moist, soft, low plasticity  CLAY - brown, moist, firm, high plasticity, trace silt inclusions - grey below 3.2 m	0.0 4.5 27.4 68.
3.0-		Frozen to a depth of 0.9 m below grade. End of testhole at 3.5 m below grade.	





