

APPENDIX 'A'

GEOTECHNICAL REPORT

Pavement Investigation for The Local Street Renewal Program

2026 Local Streets (26-R-02)

Prepared for:

AECOM Canada ULC
99 Commerce Drive, Winnipeg
MB R3P 0Y7

July 30, 2026

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INTRODUCTION

H. Manalo Consulting Ltd. (HMCL) was authorized by Ryan Cunningham of AECOM Canada ULC to carry out a pavement investigation for the City of Winnipeg Local Street Renewal Program, Package 26-R-02. The purpose of the investigation was to assess the existing pavement structure and condition through pavement coring and laboratory testing to support the planned rehabilitation works.

The investigation included pavement coring, measurement of pavement layer thicknesses, photographic documentation of the recovered cores, and compressive strength testing of selected concrete cores. The locations included in this investigation are summarized in Table 1.

Table 1. Local Street Package 26-R-02

Local Street (Package 26-R-02)	Classification	Treatment
Arlington – Wolseley to Portage	Local	Rehabilitation
Burnett – Gateway to Brunswick	Local	Rehabilitation
Gateway – Sun Valley to McIvor	Local	Rehabilitation

FIELD WORK PROGRAM

Core locations were designated by AECOM Canada ULC. Pavement coring was carried out from July 23 to July 24, 2026, using a 160 mm diameter coring bit. Cores were obtained at joint and mid-slab locations to evaluate the existing pavement structure and condition. Following coring, all core holes were reinstated using aggregate and cold-mix asphalt, and the recovered cores were transported to the HMCL laboratory for testing and documentation

LABORATORY ANALYSIS AND REPORTING

Recovered core samples were transported to the HMCL laboratory for examination and documentation. Each core was visually inspected to identify the pavement composition, measure the thickness of the asphalt and concrete layers, and document the pavement profile through photographs. Detailed documentation is attached in Appendix A.

Concrete cores selected for compressive strength testing were cut to the required length and the bearing surfaces were end-ground to provide plane and parallel loading surfaces in accordance with CSA A23.2-14C. The prepared specimens were tested in wet condition then tested for compressive strength. A summary of the measured asphalt thicknesses, concrete thicknesses, and concrete compressive strengths for each street location is presented in Table 2. Individual core measurements and test results are included in the attached Appendix A.

Table 2. Summary of Pavement Thickness and Compressive Strength

Local Street (Package 26-R-02)	Asphalt Thickness (mm)	Concrete Thickness (mm)	Compressive Strength (MPa)
Arlington – Wolseley to Portage	30–54 (Avg. 44)	220–270 (Avg. 245)	23.75–49.31 (Avg. 31.87)
Burnett – Gateway to Brunswick	-	200–210 (Avg. 206)	30.34–40.63 (Avg. 35.50)
Gateway – Sun Valley to McIvor	40–65 (Avg. 52)	210–255 (Avg. 217)	41.02–49.19 (Avg. 45.11)

CLOSURE

We appreciate the opportunity to provide our services for this project. Should you have any questions regarding this report or require additional information, please do not hesitate to contact the undersigned.

Prepared by:



Mayumi Kawano, EIT
Geotechnical Engineer Intern
Field and Laboratory Supervisor

Reviewed by:



Paul Bevel
Manager, Field and Laboratory Services

APPENDIX A

Pavement Core Location

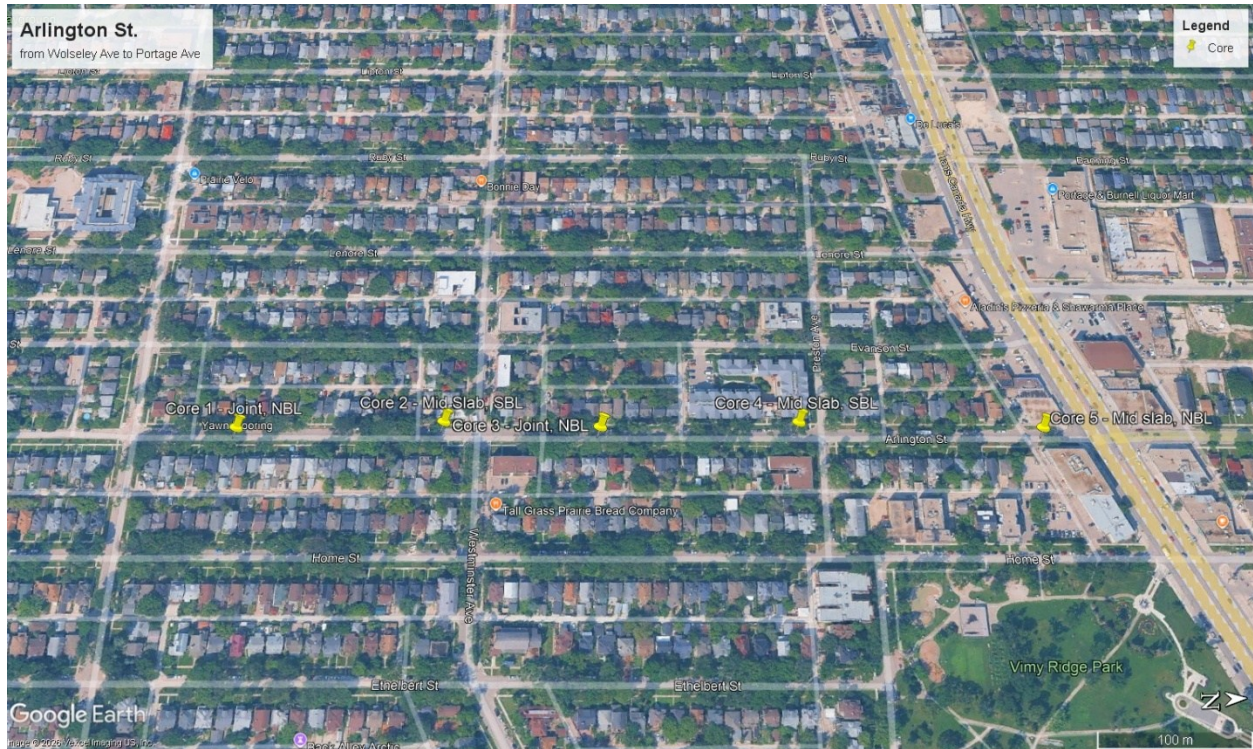
Pavement Measurements

Compressive Strength Testing

Core Photograph Documentation

Rehabilitation Sites

Core Location



Core Location



Rehabilitation Sites

Core Location



Rehabilitation Sites

Pavement Structure Measurement

CORE HOLE NO.	CORE HOLE LOCATION	PAVEMENT STRUCTURE	
		ASPHALT THICKNESS (mm)	CONCRETE THICKNESS (mm)
Arlington St. from Wolseley Ave to Portage Ave			
1	Joint; NBL Front of House #83 Arlington; 1.3m away from the curb 14 U, 631489 m E 5526900 m N	30 ^A	220 ^A
2	Mid Slab; SBL Front of House # 138 Arlington; 1.5m away from the curb 14 U, 631487 m E, 5527047 m N	53	265
3	Joint; NBL Front of House # 163 Arlington; 1.6m away from the curb 14 U, 631494 m E, 5527158 m N	30 ^A	200 ^A
4	Mid Slab; SBL Front of House # 205 Arlington; 1.2m away from the curb 14 U, 631493 m E, 5527300 m N	52	270
5	Mid Slab; NBL Front of Bus Stop 11100; 1.4m away from the curb 14 U, 631501 m E, 5527473 m N	54	270

Note:

^A - Thickness can not be identified due to deterioration of sample during coring

Rehabilitation Sites

Pavement Structure Measurement

CORE HOLE NO.	CORE HOLE LOCATION	PAVEMENT STRUCTURE	
		ASPHALT THICKNESS (mm)	CONCRETE THICKNESS (mm)
Burnett Ave from Gateway Rd to Brunswick St.			
6	Mid Slab; EBL Front of House #17 Burnett Ave; 2.3m away from the curb 14 U, 638834 m E, 5532895 m N	-	200
7	Joint; EBL Front of House #68 Burnett Ave; 1.6m away from the curb 14 U, 638980 m E, 5532820 m N	-	210
8	Mid Slab; WBL Front of House #151 Burnett Ave; 1.4m away from the curb 14 U, 639252 m E, 5532695 m N	-	209

Note:

^A - Thickness can not be identified due to deterioration of sample during coring

Rehabilitation Sites

Pavement Structure Measurement

CORE HOLE NO.	CORE HOLE LOCATION	PAVEMENT STRUCTURE	
		ASPHALT THICKNESS (mm)	CONCRETE THICKNESS (mm)
Gateway Rd from Sun Valley Dr to McIvor Ave			
9	Joint; SWBL STA 0+180; 1.35m away from the curb 14 U, 639572 m E, 5533989 m N	65	230 ^A
10	Mid Slab; NEBL STA 0+260; 1.1m away from the curb 14 U, 639621 m E, 5534046 m N	-	225
11	Mid Slab; NEBL STA 0+380; 1.3m away from the curb 14 U, 639707 m E, 5534154 m N	40	195 ^A

Note:

^A - Thickness can not be identified due to deterioration of sample during coring

CONCRETE CORE COMPRESSIVE STRENGTH TEST REPORT (CSA A23.2 14C)

CLIENT:	AECOM Canada ULC 99 Commerce Drive, Winnipeg MB R3P 0Y7	DATE:	29-Jul-26
ATTENTION:	Ryan Cunningham	FILE NO:	112-2608
PROJECT:	City of Winnipeg Project 26-R-02 Arlington St. / Burnett Ave / Gateway Rd	REPORT NO:	26-001
STRUCTURE:	Road Pavement	TECHNOLOGIST:	S. DG, D.A
		DATE CORES TAKEN:	July 23 - 24, 2026
		DOCUMENT NO:	26-1930 / 26- 1964
		DATE RECEIVED IN LAB:	July 23 - 24, 2026

Core Location	Length as Drilled (mm)	Core Diameter (mm)	Tested Core Length (mm)	Length / Diameter	Correction Factor	Mass (kg)	Age at Break (days)	Date of Break	Type of Fracture	Comp. Strength as Calculated (MPa)	Comp. Strength as Corrected (MPa)
Arlington St. from Wolseley Ave to Portage Ave											
Core 1 - 83 Arlington, NBL	220	95.5	119	1.25	0.93	1.95	-	28-Jul-26	2	29.32	27.27
Core 2 - 138 Arlington, Mid Slab, SBL	265	95.5	128	1.34	0.94	2.11	-	28-Jul-26	2	25.27	23.75
Core 4 - 205 Arlington, Mid Slab, SBL	270	95.5	191	2.00	1	3.34	-	28-Jul-26	2	49.31	49.31
Core 5 - Bus Stop 11100 Arlington, Mid slab, NBL	270	95.5	130	1.36	0.94	2.05	-	28-Jul-26	3	28.89	27.16
Burnett Ave from Gateway Rd to Brunswick St.											
Core 6 - 17 Burnett Ave, Mid slab, EBL	200	95.5	182	1.91	0.99	3.10	-	28-Jul-26	2	40.96	40.63
Core 8 - 151 Burnett Ave, Mid slab, WBL	209	95.5	181	1.90	0.99	3.11	-	28-Jul-26	2	30.61	30.37

CONCRETE CORE COMPRESSIVE STRENGTH TEST REPORT (CSA A23.2 14C)

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Gateway Rd from Sun Valley Dr to Mclvor Ave											
Core 10 - STA 0+260 Gateway, Mid slab, NEBL	225	95.5	191	2.00	1	3.38	-	28-Jul-26	3	49.19	49.19
Core 11 - STA 0+380 Gateway, Mid Slab, NEBL	195	95.5	190	1.99	1	3.28	-	28-Jul-26	1	41.02	41.02

Remarks:

The core samples were tested in wet condition in accordance with CSA A23.2-14C.

Reviewed by:

Mayumi Kawano, Supervisor
Field & Lab Testing Services

Approved by:

Paul Bevel, Manager
Field & Lab Testing Services

Rehabilitation Sites

Core Photograph Documentation

Arlington St. Wolseley Ave to Portage



Core 1 - Joint



Core 1 - Site Photo



Core 2 - Mid Slab



Core 2 - Site Photo

Rehabilitation Sites

Core Photograph Documentation

Arlington St. Wolseley Ave to Portage



Core 3 - Joint (Deteriorated)



Core 3 - Site Photo



Core 4 - Mid Slab



Core 4 - Site Photo

Rehabilitation Sites

Core Photograph Documentation

Arlington St. Wolseley Ave to Portage



Core 5 - Mid Slab



Core 5 - Site Photo

Rehabilitation Sites

Core Photograph Documentation

Burnett Ave Gateway Rd to Brunswick St.



Core 6 - Mid Slab



Core 6 - Site Photo



Core 7 - Joint



Core 7 - Site Photo

Rehabilitation Sites

Core Photograph Documentation

**Burnett Ave
Gateway Rd to Brunswick St.**



Core 8 - Mid Slab



Core 8 - Site Photo

Rehabilitation Sites

Core Photograph Documentation

Gateway Rd Sun Valley Dr to McIvor Ave



Core 9 - Joint



Core 9 - Site Photo



Core 10 - Mid Slab



Core 10 - Site Photo

Rehabilitation Sites

Core Photograph Documentation

Gateway Rd Sun Valley Dr to McIvor Ave



Core 11 - Mid Slab



Core 11 - Site Photo