THE NATIONAL TESTING LABORATORIES LIMITED

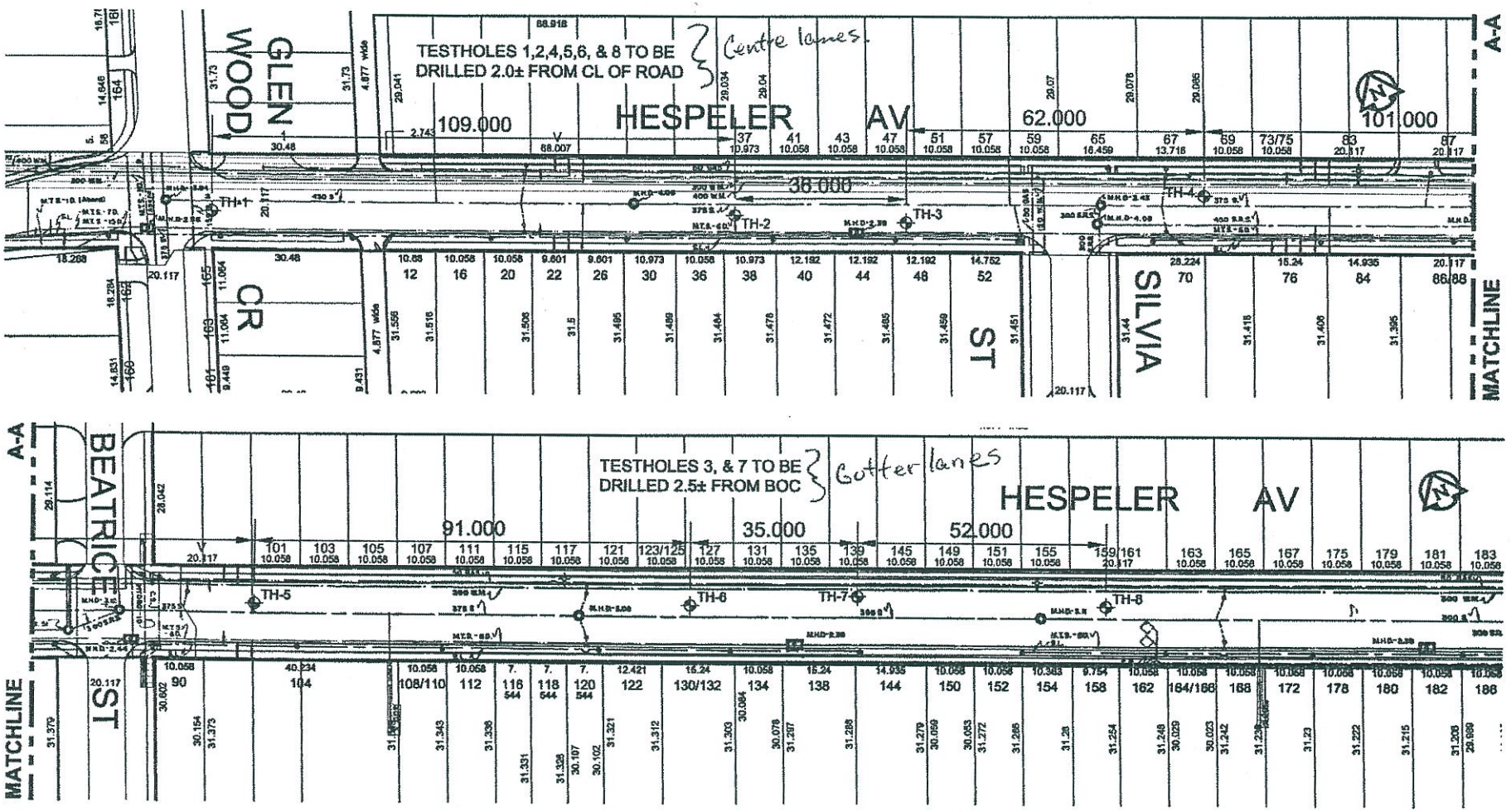
HESPELER AVENUE

GLENWOOD CRESCENT TO 175 WEST OF HENDERSON HWY

2006 STREET RENEWAL PROGRAM

GEOTECHNICAL INVESTIGATION

UMA FILE NAME: 0265-380-00_00-CTF001_RX.dwg Saved By: ddoszpod PLOT: 05/12/08 9:40:08 AM A SIZE 8.5" x 11" (215.9mm x 279.4mm)



The City of Winnipeg
Public Works Department-Engineering Division
2006 Regional Street Renewal Program

Hespeler Avenue-Testhole Locations
From Glenwood Crescent to 175m W/Henderson Highway

UMA | AECOM

Figure - H-TH1

Bid Opportunity No. 182-2006 Addendum 1

City of Winnipeg
2006 Street Renewal Program
Geotechnical Investigation

Testhole No.	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 Limit
1	Hespeler Avenue	Asphalt/Concrete	75/375	NA	0										
2	Hespeler Avenue	Asphalt/Concrete	100/475	NA	0										
3	Hespeler Avenue	Concrete	200	Granular	75	Clay	1.8	19.2	0.0	21.5	25.8	52.7	31	13	18
4	Hespeler Avenue	Asphalt/Concrete	100/225	NA	0										
5	Hespeler Avenue	Asphalt/Concrete	100/350	NA	0										
6	Hespeler Avenue	Asphalt/Concrete	100/375	Granular	305										
7	Hespeler Avenue	Concrete	245	Granular	50										
8	Hespeler Avenue	Asphalt/Concrete	130/220	Granular	255										

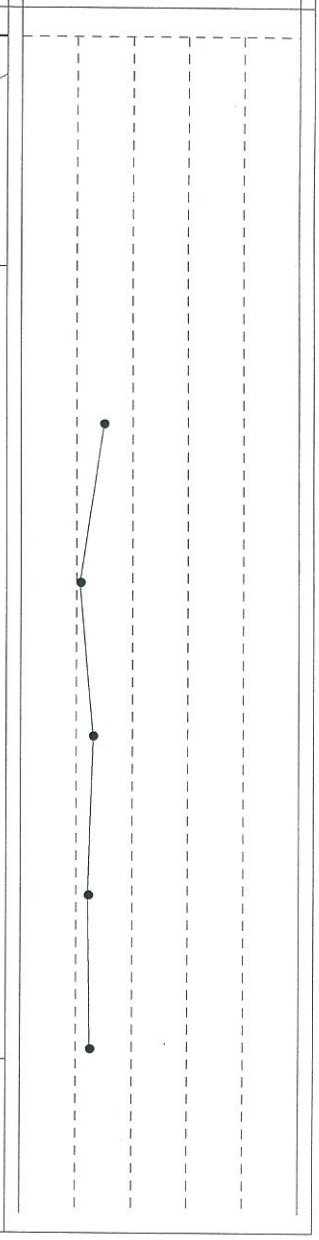
TESTHOLE TH1

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 165 Glenwood Cres., 8.7 m N, 11.0 m W of NW building corner

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Subsurface Profile			Laboratory Testing
Depth	Symbol	Description	Water Content (%) 0 20 40 60 80 100
0.0		Ground Surface	
		ASPHALT - 75 mm thick, good condition	
		CONCRETE - 375 mm thick, fractured	
0.5		**CLAY** - black, moist, firm, intermediate plasticity - brown, high plasticity below 0.8 m	
1.0			
1.5			
2.0		Frozen to a depth of 0.5 m below grade. End of testhole at 2.0 m below grade.	



TESTHOLE TH2

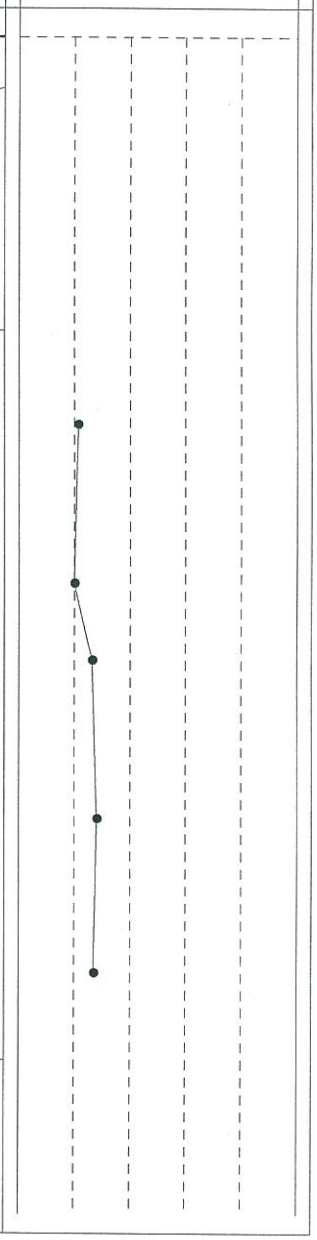
THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 38 Hespeler Ave., 1.7 m E of W building line, 1.5 m S of centreline

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Depth	Symbol	Description
		Subsurface Profile
0.0		Ground Surface
		ASPHALT - 100 mm thick, poor condition
		CONCRETE - 475 mm thick, fractured
0.5		**CLAY** - brown, moist, firm, intermediate plasticity, some fine grained gravel - some silt from 1.1 m to 1.5 m
1.0		
1.5		
2.0		Frozen to a depth 0.5 m below grade. End of testhole at 2.0 m below grade.

Laboratory Testing



TESTHOLE TH3

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 48 Hespeler Ave., 1.2 m E of west building line, 2 m N of curb

Date Drilled: January 16, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Subsurface Profile			Laboratory Testing				
Depth (m)	Symbol	Description	Moisture Content (%) PL ..... LL (0 25 50 75 100 125)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
0.0		Ground Surface					
		CONCRETE - 200 mm thick, good condition					
		GRANULAR BASE - 19 mm maximum particle size, brown, with clay					
0.5		**CLAY** - brown - moist, firm, intermediate plasticity, with silt below 0.8 m - some fine grained sand below 1.1 m					
1.0							
1.5							
				0.0	21.5	25.8	52.7
2.0		Frozen to a depth of 0.8 m below grade. End of testhole at 2.0 m below grade.					

TESTHOLE TH4

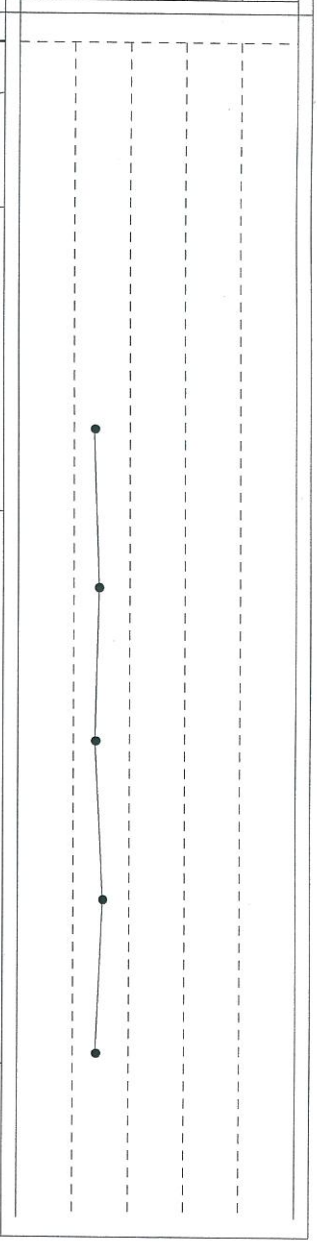
THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 69 Hespeler Ave., 1.5 m W of west building line, 1.5 m N of centreline

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Depth	Symbol	Description
		Ground Surface
0.0		**ASPHALT** - 100 mm thick, good condition
		CONCRETE - 225 mm thick, good condition
		CLAY FILL - brown, moist, firm, intermediate plasticity, some rubble
0.5		
1.0		**CLAY** - brown, moist, firm, intermediate plasticity - some silt below 1.5 m
1.5		
2.0		Frozen to a depth of 0.5 m below grade. End of testhole at 2.0 m below grade.

Laboratory Testing



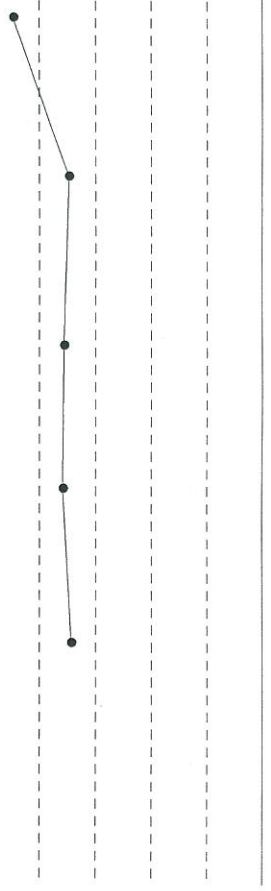
TESTHOLE TH5

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Group
Site: Hespeler Avenue
Testhole Location: 101 Hespeler Ave., 2.9 m W of west building line, 1.6 m N of centreline

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Subsurface Profile			Laboratory Testing
Depth	Symbol	Description	Water Content (%) 0 20 40 60 80 100
0.0		Ground Surface	
		ASPHALT - 100 mm thick, good condition	
		CONCRETE - 350 mm thick, good condition	
0.5		**CLAY FILL** - brown, moist, firm, high plasticity, with fine to coarse grained gravel	
1.0			
1.5		**CLAY** - brown, moist, firm, high plasticity	
2.0		Frozen to a depth of 0.5 m below grade. End of testhole at 2.0 m below grade.	



TESTHOLE TH6

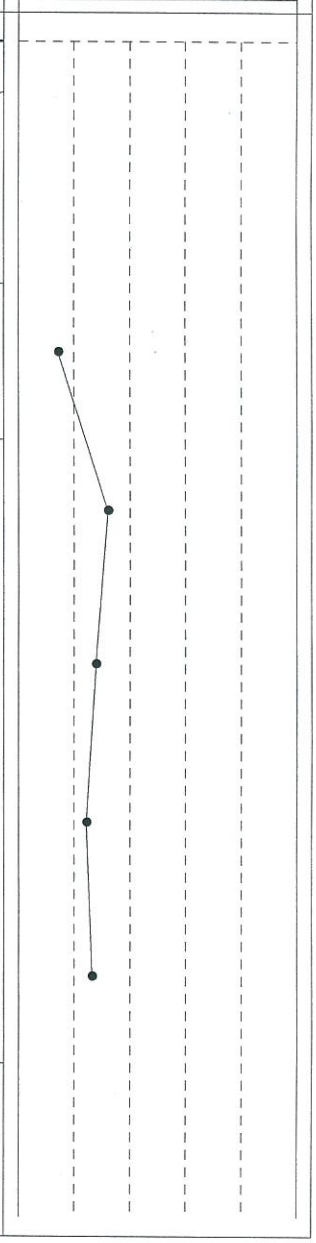
THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 127 Hespeler Ave., 1.6 m E of west building line, 1.4 m N of centreline

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Depth	Symbol	Description
		Subsurface Profile
0.0		Ground Surface
		ASPHALT - 100 mm thick, fractured
		CONCRETE - 375 mm thick, fractured
0.5		**GRANULAR BASE** - 19 mm maximum particle size, brown, moist, dense, with clay
		CLAY - brown, moist, firm, high plasticity - some silt below 1.8 m
1.0		
1.5		
2.0		Frozen to a depth of 0.5 m below grade. End of testhole at 2.0 m below grade.

Laboratory Testing



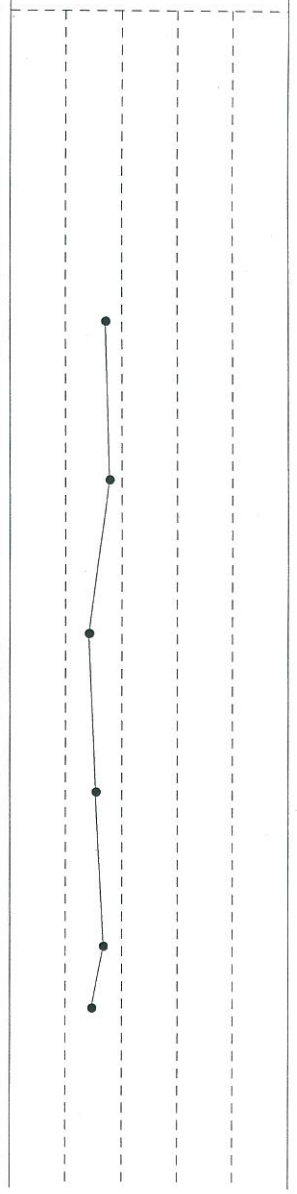
TESTHOLE TH7

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 138 Hespeler Ave., 0.3 m W of east building line, 2.0 m S of curb

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Subsurface Profile			Laboratory Testing
Depth	Symbol	Description	Water Content (%) 0 20 40 60 80 100
0.0		Ground Surface	
		CONCRETE - 245 mm thick, good condition	
		GRANULAR BASE - 19 mm maximum particle size, brown	
		CLAY - black - brown, moist, stiff, intermediate plasticity below 0.8 m - with silt, firm below 1.1 m	
0.5			
1.0			
1.5			
2.0		Frozen to a depth of 0.8 m below grade. End of testhole at 2.0 m below grade.	



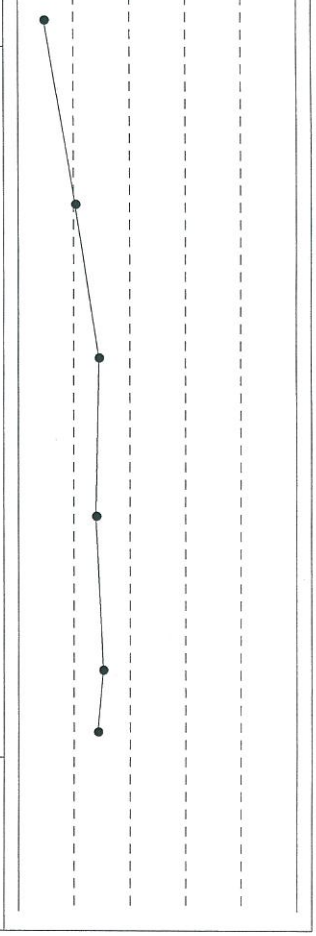
TESTHOLE TH8

THE NATIONAL TESTING LABORATORIES LIMITED
Established in 1923

Project Name: 2006 City of Winnipeg Streets Reconstruction
Client: UMA Engineering Ltd.
Site: Hespeler Avenue
Testhole Location: 159 Hespeler Ave., 7 m W of east building line, 1.6 m N of centreline

Date Drilled: January 17, 2006
Depth of Testhole: 2.0 m
Logged by: Robert Brown

Subsurface Profile			Laboratory Testing
Depth	Symbol	Description	Water Content (%) 0 20 40 60 80 100
0.0		Ground Surface	
		ASPHALT - 130 mm thick, good condition	
		CONCRETE - 200 mm thick, good condition	
		GRANULAR BASE - 19 mm maximum particle size, brown, moist, dense, with clay	
0.5		**CLAY** - brown, moist, firm, high plasticity	
1.0			
1.5			
2.0		Frozen to a depth of 0.5 m below grade. End of testhole at 2.0 m below grade.	



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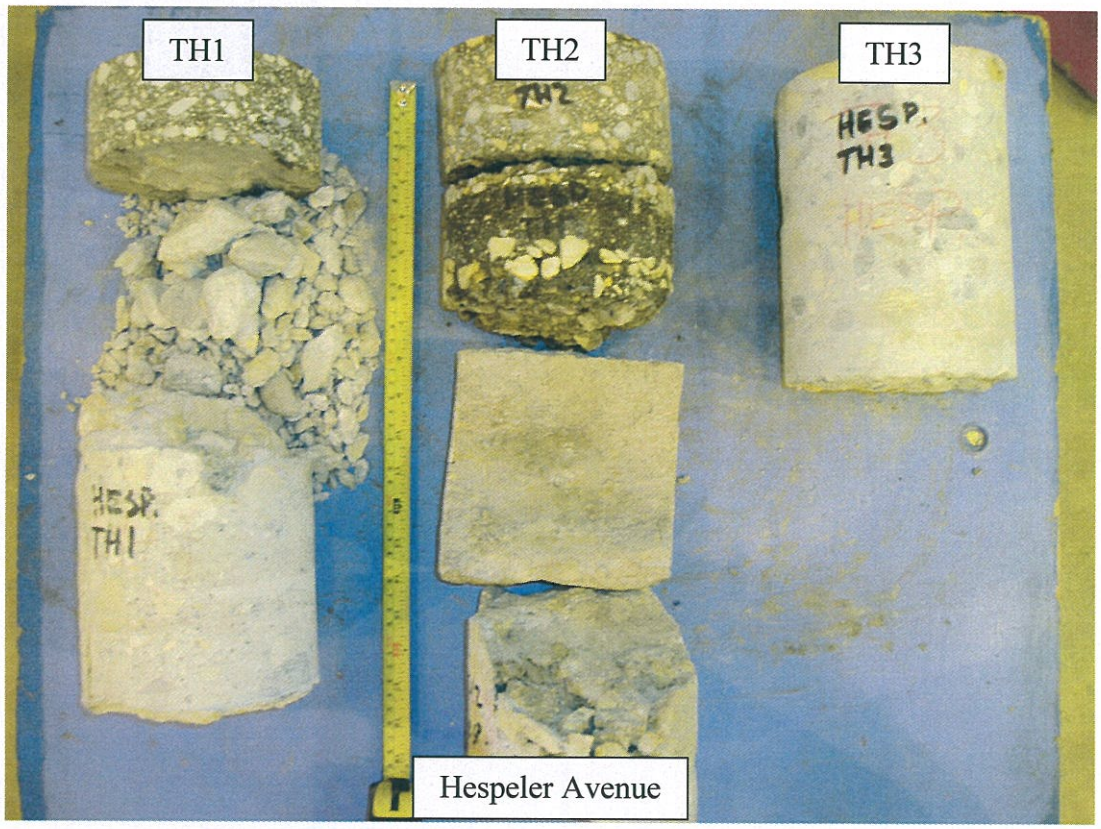

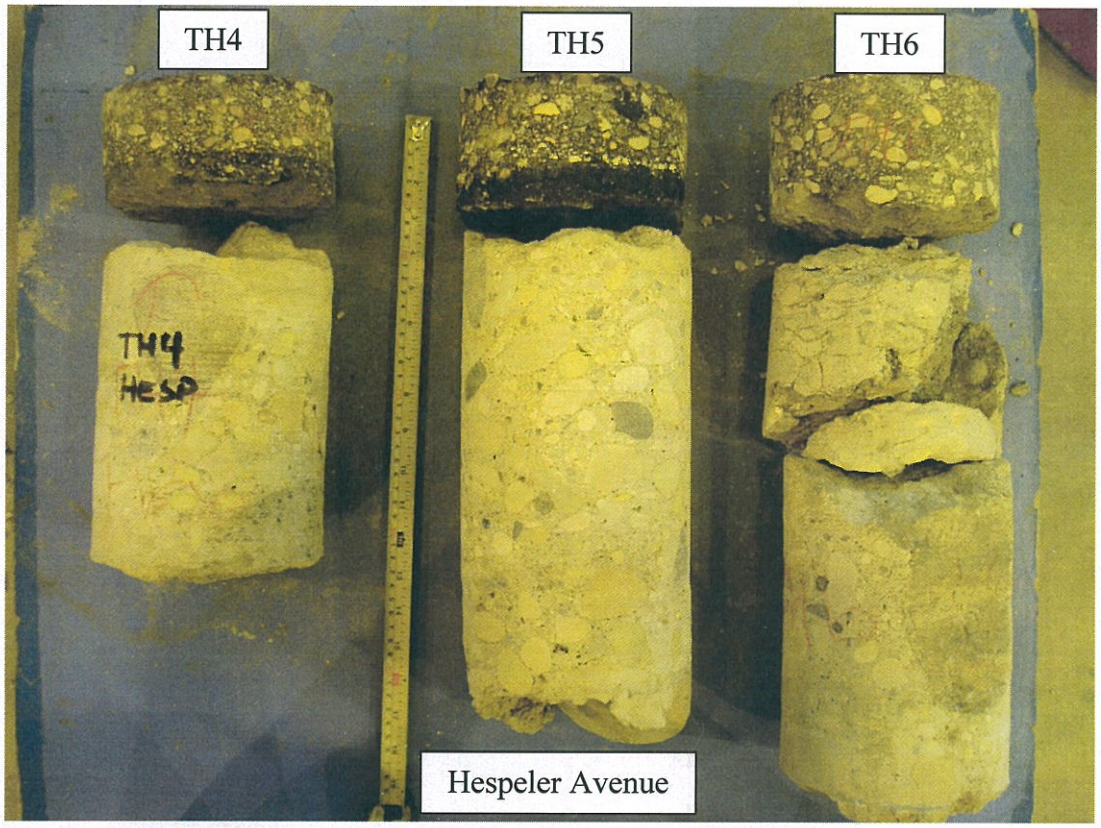

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