A1 – 841x594

2013-11-21

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B01
LOCATION: Plessis East Abutment, N: 5527998.982 E: 641863.577 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 233.54
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
0	SAND and GRAVEL (Fill) - some silt, some clay - brown, moist, compact					233
1			G14			232
2	CLAY - trace gravel - brown, moist , firm - high plasticity		G15			231
3	SILT - trace gravel - grey, moist, soft - low to intermediate plasticity					230
4	CLAY - trace gravel - brown, moist , firm - high plasticity		G16			229
5	- greyish brown, silt inclusions below 4.6 m					228
6			G17			227
7	- grey, soft below 7.0 m					226
8			G18			225
9			G19			224
10						223
11			G20			222
12			G21			221
13						220
14			G22			219
15			G23			218
16			G24			217
17	- gravelly below 16.8 m					216
18						

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 24.69 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 7/30/13
PROJECT ENGINEER: Zeyad Shukri | Page 1 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B01
LOCATION: Plessis East Abutment, N: 5527998.982 E: 641863.577 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 233.54
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
18	LIMESTONE (Bedrock) - light grey to white, core angle: 90 degrees - fine to medium grained, no foliation - close to moderately close spacing, rough undulating joints, unaltered joints - R2 to R3 (weak to medium strong) - fossiliferous - fractured to 20.1 m (Elev. 213.4) below ground surface - competent rock (RQD > 70%) below 20.1 m		C25			
19			C1		C1 RQD: 22%Core Recovery: 64%	215
20			C2		C2 RQD: 51%Core Recovery: 88%	214
21			C3		C3 RQD: 79%Core Recovery: 92%	213
22						212
23			C4		C4 RQD: 79%Core Recovery: 94%	211
24			C5		C5 RQD: 93%Core Recovery: 98%	210
25	END OF TEST HOLE AT 24.69 m IN BEDROCK Notes: 1. Power auger refusal at 18.05 m below ground surface on BEDROCK. 2. HQ coring below 18.05 m. 3. Test hole sealed with bentonite up to 3.05 m and grouted from 3.05 to ground surface.					209
26						208
27						207
28						206
29						205
30						204
31						203
32						202
33						201
34						200
35						199
36						198

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 24.69 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 7/30/13
PROJECT ENGINEER: Zeyad Shukri | Page 2 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B02
LOCATION: Plessis North Pier, N: 5528000.864 E: 641834.106 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 232.96
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
0	ASPHALT (300 mm)					
1	SAND and GRAVEL (Base) - light brown, dry, compact - medium to coarse grained					232
2	CLAY (Fill) - some gravel, some sand, trace organics - brown, moist, firm - intermediate plasticity		G1			231
3			G2			230
4	ORGANICS - wood chips - brown to black, moist to wet - hydrocarbon (diesel fuel)		G3			229
5			G4			228
6	CLAY - greyish brown, moist, firm - high plasticity		G5			227
7						226
8	- grey, trace silt inclusions, soft below 7.62 m		G6			225
9			G7			224
10						223
11	- trace gravel below 11 m		G8			222
12			G9			221
13						220
14			G10			219
15			G11			218
16			G12			217
17						216
18	- silty, wet, some gravel		G13			

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 26.21 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 7/31/13
PROJECT ENGINEER: Zeyad Shukri | Page 1 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B02
LOCATION: Plessis North Pier, N: 5528000.864 E: 641834.106 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 232.96
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
18	- cobbly, some boulders below 17.7 m					
19	LIMESTONE (Bedrock) - light grey, core angle: 90 degrees - fine to medium grained, no foliation - close to moderately close spacing, rough undulating joints, unaltered joints - R2 to R3 (weak to medium strong) - fossiliferous, vuggy to 21.6 m - fractured to 21.6 m (Elev. 211.4) below ground surface					214
20			C1		C1 RQD: 40%Core Recovery: 70%	213
21			C2		C2 RQD: 48%Core Recovery: 93%	212
22	- competent rock (RQD > 70%) below 21.6 m - mottled yellow to 21.95 m					211
23			C3		C3 RQD: 75%Core Recovery: 92%	210
24			C4		C4 RQD: 81%Core Recovery: 90%	209
25			C5		C5 RQD: 85%Core Recovery: 96%	208
26	END OF TEST HOLE AT 26.21 m IN BEDROCK Notes: 1. Power auger refusal at 18.5 m below ground surface on BEDROCK. 2. HQ coring below 18.5 m. 3. Seepage observed at 17.5 m below ground surface. 4. Test hole grouted up to 18.3 m and sealed with bentonite to ground surface.					207
27						206
28						205
29						204
30						203
31						202
32						201
33						200
34						199
35						198
36						

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 26.21 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 7/31/13
PROJECT ENGINEER: Zeyad Shukri | Page 2 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B03
LOCATION: Plessis South Pier, N: 5527980.853 E: 641831.171 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 233.64
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
0	ASPHALT (381 mm)					
1	SAND and GRAVEL (Base) - brown, moist to dry, compact					233
2	CLAY (Fill) - some silt, some sand, trace gravel, trace organics - brown, moist, soft to firm		G26			232
3	CLAY - silty - brown, dry, soft to firm - high plasticity, silt inclusions		G27			231
4						230
5	- greyish brown below 4.6 m		G28			229
6	- grey, soft, trace gravel below 6.1 m		G29			228
7						227
8			G30			226
9						225
10						224
11			G31			223
12			G32			222
13						221
14			G33			220
15			G34			219
16						218
17	- wet below 16.8 m		G35			217
18						216

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 24.69 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 8/1/13
PROJECT ENGINEER: Zeyad Shukri | Page 1 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B03
LOCATION: Plessis South Pier, N: 5527980.853 E: 641831.171 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 233.64
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
18			G36			
19			G37			
20	LIMESTONE (Bedrock) - light grey to white, core angle: 90 degrees - fine to medium grained, no foliation - close to moderately close spacing, rough undulating joints, unaltered joints - R2 to R3 (weak to medium strong) - fossiliferous, vuggy - fractured to 21.6 m (Elev. 212.0) below ground surface - competent rock (RQD > 70%) below 21.6 m					
21			C1		C1 RQD: 15%Core Recovery: 45%	215
22			C2		C2 RQD: 62%Core Recovery: 97%	214
23			C3		C3 RQD: 78%Core Recovery: 89%	213
24			C4		C4 RQD: 83%Core Recovery: 97%	212
25	END OF TEST HOLE AT 24.69 m IN BEDROCK Notes: 1. Power auger refusal at 19.2 m below ground surface on BEDROCK. 2. HQ coring below 19.2 m. 3. Seepage observed at 16.8 m below ground surface. 4. Test hole sealed with bentonite up to 19.8 m and grouted from 19.8 m to ground surface.					211
26						210
27						209
28						208
29						207
30						206
31						205
32						204
33						203
34						202
35						201
36						200

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 24.69 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 8/1/13
PROJECT ENGINEER: Zeyad Shukri | Page 2 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B04
LOCATION: Plessis West Abutment, N: 5527981.963 E: 641811.861 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 233.00
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
0	SAND and GRAVEL (Fill) - trace organics - brown, dry to moist, compact					
1	CLAY (Fill) - some sand, some gravel, trace organics - dark brown to brown, moist, firm - intermediate plasticity		G38			232
2	SILT - light brown, moist, soft - low to intermediate plasticity					231
3	CLAY - brown, moist, firm - high plasticity - silty to 3.4 m		G39			230
4						229
5	- greyish brown below 4.6 m		G40			228
6	- grey below 5.2 m		G41			227
7						226
8			G42			225
9						224
10	- silt inclusions, moist to wet below 9.1 m		G43			223
11						222
12	- moist below 10.7 m		G44			221
13			G45			220
14						219
15	- moist to wet below 13.7 m		G46			218
16			G47			217
17			G48			216
18			G49			
19			G50			

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 30.78 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 8/2/13
PROJECT ENGINEER: Zeyad Shukri | Page 1 of 2

AECOM

PROJECT: Plessis Road Underpass | CLIENT: City of Winnipeg | TESTHOLE NO: TH13-B04
LOCATION: Plessis West Abutment, N: 5527981.963 E: 641811.861 | PROJECT NO.: 60273041
CONTRACTOR: Paddock Drilling Ltd. | METHOD: Track Mounted Acker SS 3, 125 mm SSA | ELEVATION (m): 233.00
SAMPLE TYPE: GRAB, SHELBY TUBE, SPLIT SPOON, BULK, NO RECOVERY, CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	SPT (N)	COMMENTS	ELEVATION
18						
19	LIMESTONE (Bedrock) - light grey to white, core angle: 90 degrees - fine to medium grained, no foliation - close to moderately close spacing, rough undulating joints, unaltered joints - R2 to R3 (weak to medium strong) - fossiliferous - fractured to 20.1 m (Elev. 212.9) below ground surface - competent rock below 20.1 m - mottled yellow to 21.8 m		G51			
20			C1		C1 RQD: 56%Core Recovery: 75%	214
21			C2		C2 RQD: 82%Core Recovery: 96%	213
22			C3		C3 RQD: 92%Core Recovery: 98%	212
23			C4		C4 RQD: 78%Core Recovery: 95%	211
24			C5		C5 RQD: 64%Core Recovery: 75%	210
25	- ripple marks to 26.4 m					209
26			C6		C6 RQD: 80%Core Recovery: 98%	208
27			C7		C7 RQD: 81%Core Recovery: 99%	207
28			C8		C8 RQD: 94%Core Recovery: 99%	206
29	END OF TEST HOLE AT 30.78 m IN BEDROCK Notes: 1. Power auger refusal at 18.9 m below ground surface on BEDROCK. 2. HQ coring below 18.9 m. 3. Seepage observed at 15.24 m below ground surface. 4. sloughing observed at 19.8 m below ground surface in rock. 5. Test hole grouted up to 19.8 m and sealed with bentonite from 19.8 m to ground surface.					205
30						204
31						203
32						202
33						201
34						200
35						199
36						198

LOGGED BY: Sam Oshati | COMPLETION DEPTH: 30.78 m
REVIEWED BY: Zeyad Shukri | COMPLETION DATE: 8/2/13
PROJECT ENGINEER: Zeyad Shukri | Page 2 of 2

AECOM

NOTES:

1. FOR GENERAL NOTES SEE SHEET CS-0001.
2. FOR GEOTECHNICAL NOTES SEE SHEET CS-0001.
3. A TILL LAYER MAY OR MAY NOT EXIST ABOVE THE BEDROCK AT SOME LOCATIONS.

BID OPPORTUNITY NO. 712-2013

APEGM
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 2013/11/21

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE | DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M.
ELEV.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	2013/11/21	KC

AECOM

DESIGNED BY	SO	CHECKED BY	ZS
DRAWN BY	DJH	APPROVED BY	PC
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION BY:	
VERTICAL:	AS NOTED		
DATE	2013-06-04	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
P. C. CHANG
Member
93683
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
60273041-01-CS-009

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION
CONTRACT 3

BORE HOLE LOGS - SHEET 2

CITY DRAWING NUMBER: U238-2014-2009
SHEET 09 OF 37

CS-0009

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