



Terraprobe

*Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing*

March 30, 2010

File No. 1-08-3220
Brampton Office

G. Merulla Inc.
c/o Beacon Planning Services
3464 Semenyk Court, Unit 213
Mississauga, Ontario
L5C 4P8

Attention: Mr. Dirk Blyleven

**RE: ADDENDUM-
GEOTECHNICAL INVESTIGATION
2935 & 2955 MISSISSAUGA ROAD
MISSISSAUGA, ONTARIO**

Dear Mr. Blyleven:

This addendum letter summarizes the additional work/investigation carried out for the above noted property subsequent to the completion of our original Slope Stability and Streambank Erosion study in 2008.

BACKGROUND

Terraprobe Limited was retained by G. Merulla Inc. c/o Beacon Planning Services in 2008 to conduct a detailed slope stability and streambank erosion study for the subject property located in the southeast quadrant of the intersection of Mississauga Road and Dundas Street West, in the City of Mississauga, Ontario (Figure 1). The property consists of two adjoining land parcels (2935 - 2955 Mississauga Road). The property is currently vacant, however, includes remnants of previous development (abandoned swimming pool, concrete pad and a portion of the concrete foundation of a former dwelling) located on the south parcel (2935 Mississauga Road).

Terraprobe Inc.

Greater Toronto
10 Bram Court
Brampton, Ontario L6W 3R6
(905) 796-2650 Fax 796-2250
brampton@terraprobe.ca

Hamilton - Niagara
903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
(905) 643-7560 Fax 643-7559
stoneycreek@terraprobe.ca

Central Ontario
220 Bayview Drive, Unit 25
Barrie, Ontario L4N 4Y8
(705) 739-8355 Fax 739-8369
barrie@terraprobe.ca

Northern Ontario
1012 Kelly Lake Rd.
Sudbury, Ontario P3E 5P4
(705) 670-0460 Fax 670-0558
sudbury@terraprobe.ca

www.terraprobe.ca

The field investigation for the original study (2008) was conducted on August 14, 2008, and consisted of drilling and sampling a total of four (4) exploratory boreholes extending to depths varying from about 7.4 m (Boreholes 2 and 4) to 9.2 m (Boreholes 1 and 3) below existing ground surface. A detailed slope stability and streambank erosion analysis was carried out utilizing site specific subsurface information obtained from these borehole and topographic survey information prepared by an Ontario Land Surveyor (Tarasick MacMillan Kubicki Limited, File No. 4871-08-T).

The location of the long-term stable slope crest was determined and delineated based on the applicable stability and toe erosion setbacks in accordance with Credit Valley Conservation Policy Guidelines. The results of the investigation were presented in our report (Geotechnical Investigation, Slope Stability and Streambank Erosion Analysis, 2935 & 2955 Mississauga Road, Mississauga, Ontario, dated September 4, 2008). Figure 3 and Figures 5A and 5B of this report presented the location of the Long-term Stable Slope Crest in plan and sections. These figures delineated the location of the Long-term Stable Slope Crest where it was located beyond/behind the Physical Top of Bank (inland, towards the tableland), including for both east and south slopes. In other areas (including slope along north property boundary), it was concluded that the existing slope (Section 6, slope inclination 3 horz. to 1 vert.) is stable in the long-term, and the physical Top of Bank location in this area is considered to be the long-term stable slope crest location.

Subsequently, additional survey was carried out for the property by Tarasick MacMillan Kubicki (November 17, 2009) and the Topography Plan was updated. The updated plan included the Regional Flood Line (Elev. 98.0 m) staked at the south/southwest portion of the property (in areas where there is no significant and well defined slope present), as well as the surveyed Top of Bank for the sloping ground located at the north property boundary.

Terraprobe was contacted to conduct additional work/investigation for the property which included advancing additional shallow boreholes staked out by Tarasick MacMillan Kubicki along the surveyed 98.0m Elevation line located on the east/north side of the drainage ditch situated primarily within the southwest portion of the property, and a visual inspection of the site.

FIELD PROCEDURE

The number and locations of the boreholes were finalized by the client, as noted on Figure 3A. The boreholes were advanced to depths varying from about 1.2 to 2.1 m depth below grade. This supplementary subsurface soil investigation was conducted on March 17, 2010. The borehole ground surface elevations were provided by the surveyor. It should be noted that the borehole surface elevations are for the purpose of relating borehole soil stratigraphy and should not be used or relied on for other purposes.

The test holes were advanced by a specialist subcontractor with continuous soil sampling using a portable manual equipment. The in-situ penetration resistance testing was conducted manually by advancing a 51 mm diameter O. D. split spoon sampler with a 31.8 kg hammer, dropping a height of 762 mm. It should be noted that the weight of hammer utilized for advancing the split spoon sampler was half the weight of the normal drop hammer used in the Standard Penetration Test (ASTM D 1586) to measure the “N” values (blows/305mm of sampling spoon penetration), and therefore, the field “N” values were corrected accordingly.

Representative soil samples from the test holes were collected using the split spoon sampler during the performance of in-situ penetration tests. The field work (drilling, sampling, testing) was observed and recorded by a member of our engineering staff, who also transported the samples to our geotechnical testing laboratory.

The soil samples were visually examined, sealed into plastic jars, and transported to our laboratory where the samples were re-examined (tactile) in detail, and classified according to visual and index properties. Laboratory testing consisted of water content determination on all samples; and sieve and hydrometer analysis on selected soil samples (Borehole 1603, Sample 2; Borehole 1605, Sample 2; Borehole 1607, Sample 2; Borehole 1608, Sample 2; and Borehole 1611, Sample 1). Atterberg Limits tests were also conducted on selected soil samples (Borehole 1603, Sample 2; Borehole 1605, Sample 2; Borehole 1607, Sample 2; and Borehole 1611, Sample 1). The measured natural water content of the individual samples are plotted on the enclosed borehole logs at respective sampling depths, and the results of the sieve and hydrometer analysis as well as Atterberg Limits tests are appended.

Ground water levels were monitored in open boreholes upon completion of drilling and are recorded on the borehole logs.

SUBSURFACE CONDITIONS

The results of the individual boreholes are summarized below and recorded on the accompanying Borehole Logs. This summary is intended to correlate this data to assist in the interpretation of the subsurface conditions. Please refer to enclosed borehole logs for borehole and stratigraphic details.

It should be noted that the soil conditions are confirmed at the borehole locations only and may vary between and beyond the boreholes. The stratigraphic boundaries as shown on the logs represent an inferred transition between various strata, rather than a precise plane of geologic change.

Topsoil

A topsoil layer, varying in thickness from about 150 mm (Borehole 1608) to 200 mm (Borehole 1604) was encountered at the ground surface in Boreholes 1603, 1604, 1605, 1606, 1607 and 1608. A distinct topsoil layer was not encountered at the ground surface at the remaining boreholes (Boreholes 1609, 1610, 1611 and 1612) except for a presence of minor surficial organics/rootlets. However, presence of topsoil/organics (about 300 mm thick zone) was noted in these boreholes (Boreholes 1609, 1610, 1611 and 1612) at a depth of about 1 m below ground surface. The topsoil was dark brown to black in colour and predominantly consisted of a silt matrix. It must be noted that the topsoil thickness is estimated from the boreholes, and may vary between and beyond the boreholes.

Earth Fill

A layer of earth fill materials (about 1.0 m thick) was encountered at the ground surface in Boreholes 1609, 1610, 1611 and 1612. The earth fill materials predominantly consisted of clayey to sandy silt, silty sand, with trace to some gravel, and trace amounts of organics as well as rock/shale fragments. As noted above, the earth fill materials at these boreholes were underlain by topsoil/organic (about 300 mm thick) zone.

The Standard Penetration Test result ('N' Value) obtained from the earth fill generally varied from 3 to 11 blows per 300 mm of penetration, indicating typically a very loose to loose relative density (cohesionless soils) and firm consistency (cohesive soils). Measured moisture content of the earth fill samples varied from 12 to 21 percent by weight, indicating a typically moist condition.

Native Soils

Native soils were encountered beneath the surficial topsoil layer in Boreholes 1603, 1604, 1605, 1606, 1607 and 1608, and beneath the earth fill and embedded topsoil/organic layer at Boreholes 1609, 1610, 1611 and 1612. The native soils predominantly consisted of clayey to sandy silt, to sand and silt to silty sand till, with trace to some gravel to gravelly, and included sporadic presence of shale fragments in some boreholes. Weathered shale was encountered in Boreholes 1603, 1604, 1607 and 1612 beneath the native soil deposit at depths varying from about 1.2 to 2.0 m below grade.

The Standard Penetration Test results ('N' Values) obtained from the native soils generally varied from 5 to 16 blows per 300 mm of penetration, indicating a loose to compact relative density (cohesive soils) and firm to very stiff consistency (cohesive soils). Measured moisture contents of the native soil samples typically varied from 13 to 24 percent by weight, indicating a moist to very moist/locally wet condition.

Ground Water

Observations pertaining to the depth of water level and borehole caving were made in the open boreholes immediately after completion of drilling, and are noted on the enclosed borehole logs. A summary of these measurements is provided below.

Borehole No.	Test Hole Depth	Depth to Cave	Unstabilized Water Level Depth
1603	1.3 m BG	0.6 m BG	0.5 m BG
1604	1.2 m BG	1.1 m BG	0.9 m BG
1605	1.2 m BG	minor caving	1.0 m BG
1606	1.2 m BG	open	1.0 m BG
1607	1.8 m BG	1.2 m BG	1.1 m BG
1608	1.2 m BG	open	dry
1609	1.8 m BG	open	dry
1610	1.8 m BG	open	dry
1611	1.8 m BG	open	dry
1612	2.1 m BG	1.5 m BG	dry

BG = Below Grade

It should be noted that the ground water levels indicated above may fluctuate seasonally depending on the amount of precipitation and surface runoff.

SITE INSPECTION AND REVIEW

The site was visited on March 25, 2010 to conduct a visual inspection to assess general physical site conditions. Our original site investigation and study was carried out in 2008, therefore, the visual site inspection was carried out to establish if there has been any significant changes (regrading) of the site areas which may have an implication of our previous findings and recommendations.

As noted before, an updated topographic plan was provided (prepared by Tarasick MacMillan Kubicki) which included location of the Regional Flood Line (Elev. 98.0 m) staked at the south/southwest portion of the property (in areas where there is no significant and well defined slope present), as well as the surveyed Top of Bank for the sloping ground located at the north property boundary.

A review of the updated plan and site inspection indicated that there has been no significant changes to the general physical condition of the site particularly with respect to site grades. There was no conspicuous indication of any further cut/fill of the site or significant grade alterations which may have implications on our previous (2008) findings and recommendations.

Similar to the conditions noted during our previous site investigation in 2008, the majority of the grade alteration ('relatively recent' cut and fill) was limited to the area located approximately within the northerly two-third portion of the site and was contained within the silt fenced area. The southerly one-third portion of the site (located approximately to the south of the northerly line of the remnant of the in-ground concrete pool and circumferenced by the silt fence) does not appear to have experienced any 'recent' grade alterations (cut/fill), which is also evident from the presence of patchy surficial vegetation in this area which is not present in the northerly two-third ('recent cut/fill') portion of the site (Photos A, B and C).

As previously indicated, the updated plan includes the location of the Regional Flood Line (Elev. 98.0 m) staked at the south/southwest portion of the property (in areas where there is no significant and well defined slope present). Our slope and erosion study (2008) delineated the location of the Long-term Stable Slope Crest (LTSSC) where it was located beyond/behind the Physical Top of Bank (inland, towards the tableland), including for both east and south slopes as noted in Figure 3 of our original report. There is currently, a generally wooded area, located to the south and between the southerly end of our LTSSC line (close to Borehole 4) established for the east slope (along Credit River) and the easterly extremity of the LTSSC line drawn for the southerly ridge (Sections 5 and 6), which does not include a well defined slope. Although there is no well defined slope located in this area and the ground inclination is relatively very gentle (about 4 to 6 horz. to 1 vert., or flatter), we recommend that the LTSSC line for this area be established by joining the previously established southerly end of the LTSSC line for the easterly slope, and the easterly extremity of the LTSSC line drawn for the southerly ridge area. Although, a very conservative approach, the LTSSC line obtained in this manner, for this areas, will ensure that it is located well above the Regional Flood Line elevation as well as it is located outside of any slope/valley feature(s) which may be present in this area. The location of the Long-Term Stable Slope Crest for all site slopes is presented on Figure 3A.

We trust the foregoing information is sufficient for your present requirements. If you have any questions, or if we can be of further assistance, please do not hesitate to contact us.

Yours truly,

Terraprobe Limited

B. Singh, M.A.Sc. P. Eng.
Associate



A handwritten signature in black ink that reads "Michael Tanos".

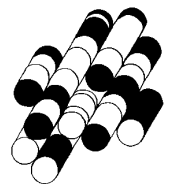
Michael Tanos, P. Eng.
Principal

encl. Abbreviations, Terminology and General Information
Borehole Logs
Sieve and Hydrometer Analysis
Atterberg Limits Test Results
Figure 1 - Site Location Plan
Figure 2 - Aerial Photograph (2006)
Figure 3A - Topographic Plan (Revised March 2010)
PHOTOGRAPHS



ENCLOSURES

TERRAPROBE INC.

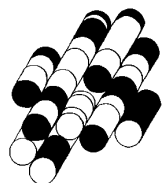


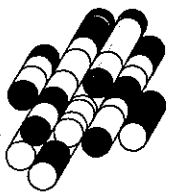
BOREHOLE LOGS

SAMPLING METHOD		PENETRATION RESISTANCE		
SS	split spoon	Standard Penetration Test (SPT) resistance ('N' values) is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a standard 50 mm (2 in.) diameter split spoon sampler for a distance of 0.3 m (12 in.).		
ST	Shelby tube			
AS	auger sample			
WS	wash sample			
RC	rock core			
WH	weight of hammer	Dynamic Cone Test (DCT) resistance is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a conical steel point of 50 mm (2 in.) diameter and with 60° sides on 'A' size drill rods for a distance of 0.3 m (12 in.).		
PH	pressure, hydraulic			
SOIL DESCRIPTION - COHESIONLESS SOILS		SOIL DESCRIPTION - COHESIVE SOILS		
Relative Density	'N' value	Consistency	Undrained Shear Strength, kPa	'N' value
very loose	< 4	very soft	< 12	< 2
loose	4 - 10	soft	12 - 25	2 - 4
compact	10 - 30	firm	25 - 50	4 - 8
dense	30 - 50	stiff	50 - 100	8 - 15
very dense	> 50	very stiff	100 - 200	15 - 30
		hard	> 200	> 30
SOIL COMPOSITION		TESTS, SYMBOLS		
	% by weight	MH	mechanical sieve and hydrometer analysis	
		w, w _c	water content	
		w _l	liquid limit	
		w _p	plastic limit	
		I _p	plasticity index	
		k	coefficient of permeability	
		Y	soil unit weight, bulk	
		ϕ'	angle of internal friction	
		c'	cohesion shear strength	
		C _c	compression index	
GENERAL INFORMATION, LIMITATIONS				
The conclusions and recommendations provided in this report are based on the factual information obtained from the boreholes and/or test pits. Subsurface conditions between the test holes may vary.				
The engineering interpretation and report recommendations are given only for the specific project detailed within, and only for the original client. Any third party decision, reliance, or use of this report is the sole and exclusive responsibility of such third party. The number and siting of boreholes and/or test pits may not be sufficient to determine all factors required for different purposes.				
It is recommended Terraprobe be retained to review the project final design and to provide construction inspection and testing.				

BOREHOLE LOGS

TERRAPROBE INC.





Terraprobe

LOG OF BOREHOLE 1603

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

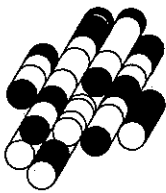
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa						
98.1	Ground Surface						20 40 60 80 100						
0.0	180mm TOPSOIL												
97.9													
0.2	trace organic/rootlets in upper ± 0.2m		1	SS	3								
	soft												
	SAND AND SILT TO SILTY SAND gravelly, some clay (slightly plastic), trace shale fragments, compact/stiff, greyish brown, very moist to wet (TILL)		2	SS	15								
96.9													
1.2	WEATHERED SHALE		3	SS	50/5cm								
96.8	(Georgian Bay Formation)												
1.3	End of Borehole												

NOTES:

Borehole was caving at 0.6m (Elev. 97.5m) and unstabilized water level at 0.5m (Elev. 97.6m) upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1604

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

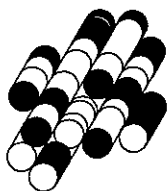
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa						
98.1	Ground Surface					20	40	60	80	100			
0.0	200mm TOPSOIL												
97.9													
0.2	trace organic/rootlets in upper ± 0.2m		1	SS	3								
	soft												
	CLAYEY TO SANDY SILT												
	gravelly, trace shale fragments,		2	SS	12								
	stiff, greyish brown, very moist to wet												
	(TILL)												
96.9													
1.2	WEATHERED SHALE												
96.9	(Georgian Bay Formation)												
1.2	End of Borehole												

NOTES:

Borehole was caving at 1.1m (Elev. 97.0m) and unstabilized water level at 0.9m (Elev. 97.2m) upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1605

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

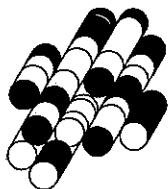
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT					PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa									
							○ UNCONFINED + FIELD VANE ● POCKET PEN. × LAB VANE									
98.1	Ground Surface					20	40	60	80	100						
0.0	180mm TOPSOIL					98										
97.9																
0.2	trace organic/rootlets in upper ± 0.2m		1	SS	2											
	soft															
	CLAYEY TO SANDY SILT															
	some gravel,		2	SS	5											
	firm, brown, very moist to wet															
	(TILL)					97										
96.9																
1.2	End of Borehole															

NOTES:

Borehole was caving at 1.2m (Elev. 96.9m) and unstabilized water level at 1.0m (Elev. 97.1m) upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1606

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

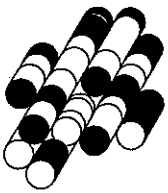
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT					PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa									
							20 40 60 80 100									
98.1	Ground Surface															
0.0	180mm TOPSOIL					98										
97.9																
0.2	trace organic/rootlets in upper ± 0.2m		1	SS	3											
	soft															
	CLAYEY TO SANDY SILT															
	trace to some gravel,															
	firm, brown, very moist to wet		2	SS	5											
	(TILL)					97										
96.9																
1.2	End of Borehole															

NOTES:

Borehole was open and unstabilized water level at 1.0m (Elev. 97.1m) upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1607

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

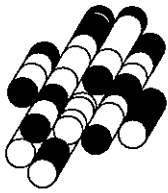
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS	
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa							
							○ UNCONFINED ● POCKET PEN.	+ FIELD VANE × LAB VANE						
98.0	Ground Surface					20	40	60	80	100	10	20	30	
0.0	180mm TOPSOIL													
97.9														
0.2	trace organic/rootlets in upper ± 0.2m		1	SS	3									
	soft													
	SAND AND SILT TO SILTY SAND some clay, trace to some gravel (slightly plastic), loose/firm, brown, very moist to wet (TILL)		2	SS	6									
	Clayey Silt with shale fragments, very stiff, moist		3	SS	16									
96.3														
1.8	WEATHERED SHALE													
96.2	(Georgian Bay Formation)													
1.8	End of Borehole													

NOTES:

Borehole was caving at 1.2m (Elev. 96.8m) and unstabilized water level at 1.1m (Elev. 96.9m) upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1608

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

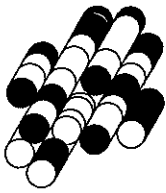
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT					PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa									
97.9	Ground Surface						20	40	60	80	100					
0.0 97.8	150mm TOPSOIL						20	40	60	80	100					
0.2	trace organic/rootlets in upper ± 0.2m		1	SS	6											
	SAND AND SILT TO SILTY SAND some clay, trace to some gravel (slightly plastic), trace shale fragments, loose/firm, brown, moist (TILL)		2	SS	6	97										
96.7	sand lens, very moist															
1.2	End of Borehole															

NOTES:

Borehole was open and dry upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1609

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010





LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

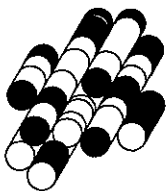
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa						
98.1	Ground Surface						20 40 60 80 100		10 20 30				
0.0	Surficial organic/rootlets presence		1	SS	4								
	FILL - Sandy Silt, some gravel, trace clay, with rock/shale fragments, topsoil/organic inclusions, loose, brown/grey, moist		2	SS	4								
97.1													
1.0	TOPSOIL					97							
96.8	decayed wood/rootlet inclusions, dark brown to black												
1.3	CLAYEY TO SANDY SILT trace to some gravel, firm, brown, moist to very moist (TILL)		3	SS	5								
96.3													
1.8	End of Borehole												

NOTES:

Borehole was open and dry upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1610

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

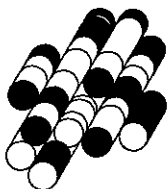
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa						
98.0	Ground Surface					20	40	60	80	100			
0.0	Surficial organic/rootlets presence												
	FILL - Clayey Silt, some sand to sandy, some gravel, with rock/shale fragments, topsoil/organic inclusions, firm, brown, moist		1	SS	6								
97.1			2	SS	4								
0.9	TOPSOIL												
96.8	decayed wood/rootlet inclusions, dark brown to black												
1.2	CLAYEY TO SANDY SILT trace to some gravel, firm, brown, moist to very moist (TILL)		3	SS	5								
96.2													
1.8	End of Borehole												

NOTES:

Borehole was open and dry upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1611

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010

LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

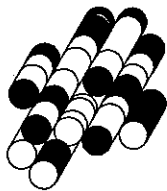
ELEVATION DATUM: Geodetic

FILE: 1-08-3220

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa						
98.1	Ground Surface						20 40 60 80 100						
0.0	Surficial organic/rootlets presence		1	SS	4	98							
	FILL - Sandy Silt to Silty Sand, some gravel to gravelly, some clay, trace rock/shale fragments, topsoil/organic inclusions, loose, brown/grey, moist												
97.1			2	SS	7								
1.0	TOPSOIL					97							
96.8	decayed wood/rootlet inclusions, dark brown to black												
1.3	CLAYEY TO SANDY SILT		3	SS	7								
96.3	trace to some gravel, firm, brown, moist (TILL)												
1.8	End of Borehole												

NOTES:

Borehole was open and dry upon completion of drilling.



Terraprobe

LOG OF BOREHOLE 1612

PROJECT: 2935 & 2955 Mississauga Road

DATE: March 17, 2010


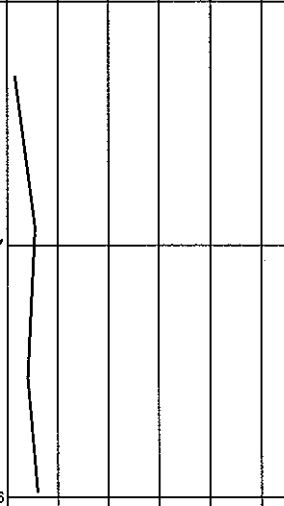




LOCATION: Mississauga, Ontario

EQUIPMENT: Manual SPT

CLIENT: Mr. Merulla

ELEVATION DATUM: Geodetic

FILE: 1-08-3220

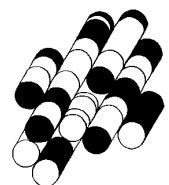
SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT		PLASTIC LIMIT W _P	NATURAL MOISTURE CONTENT W	LIQUID LIMIT W _L	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES		SHEAR STRENGTH kPa						
98.0	Ground Surface												
0.0	Surficial organic/rootlets presence		1	SS	3								
	FILL - Clayey to Sandy Silt, some gravel, with rock/shale fragments, topsoil/organic inclusions, obstruction at 0.8m, very loose, brown, moist compact		2	SS	11								
96.9													
1.1	TOPSOIL												
96.5	decayed wood/rootlet inclusions, dark brown to black												
1.4	CLAYEY TO SANDY SILT		3	SS	8								
	trace to some gravel, stiff, brown, moist to very moist												
	(TILL)		4	SS	12								
95.9													
2.1	WEATHERED SHALE												
95.9	(Georgian Bay Formation)												
2.1	End of Borehole												

NOTES:

Borehole was caving at 1.5m (Elev. 96.5m) and dry upon completion of drilling.

SIEVE AND HYDROMETER ANALYSIS

TERRAPROBE INC.





Terraprobe

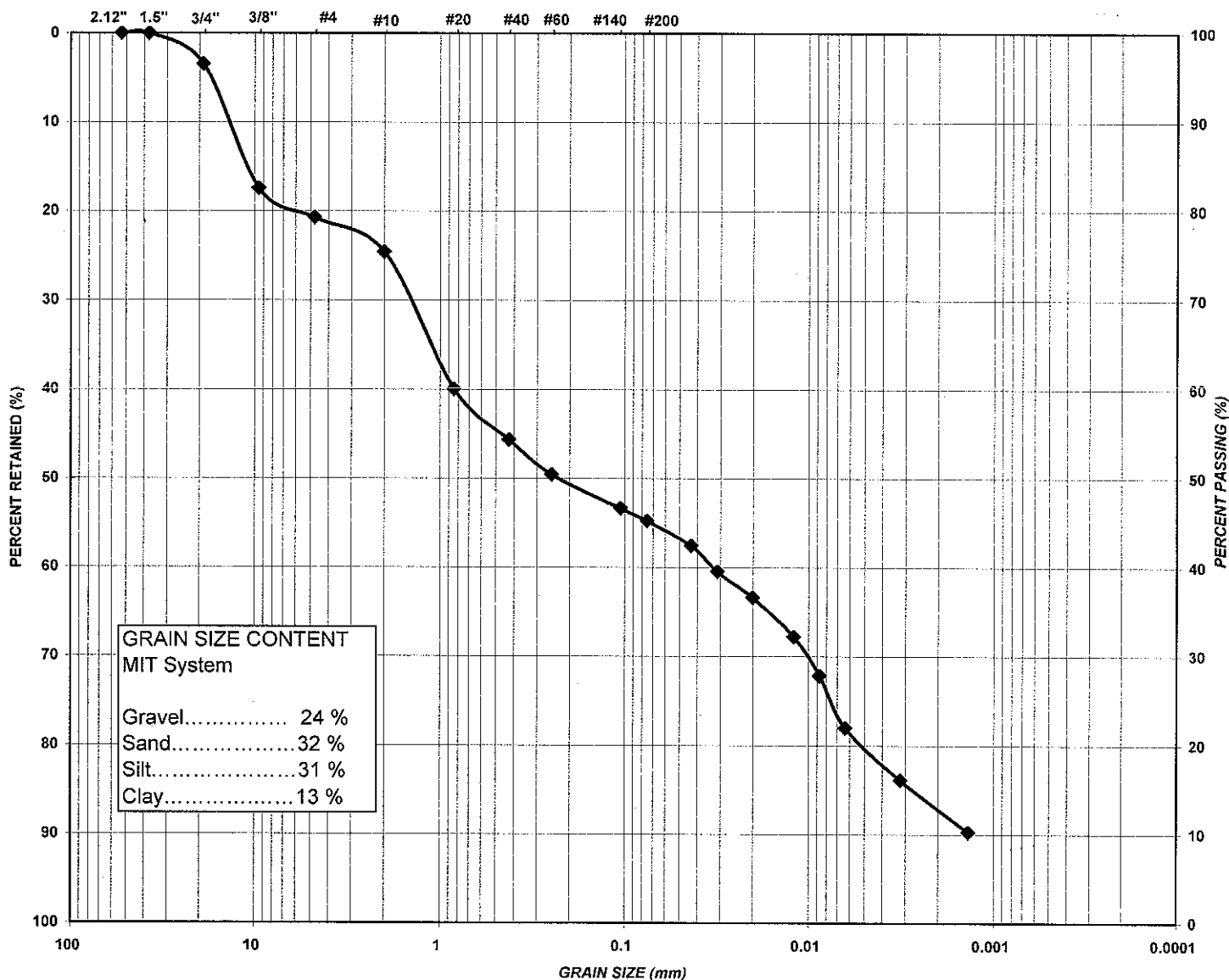
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: 2935 & 2955 Mississauga Road
LOCATION: Mississauga, Ontario
CLIENT: Mr. Merulla
BOREHOLE NUMBER: 1603
SAMPLE NUMBER: 2
SAMPLE DEPTH: 0.6 - 1.2 m
SAMPLE DESCRIPTION: SAND AND SILT, gravelly, some clay (TILL)

FILE NO.: 1-08-3220
LAB NO.: 1049A
SAMPLE DATE: March 17, 2010
SAMPLED BY: AW / JS

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL			COARSE	MEDIUM	FINE	SILT	CLAY
				SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY		
	GRAVEL		SAND					



Terraprobe

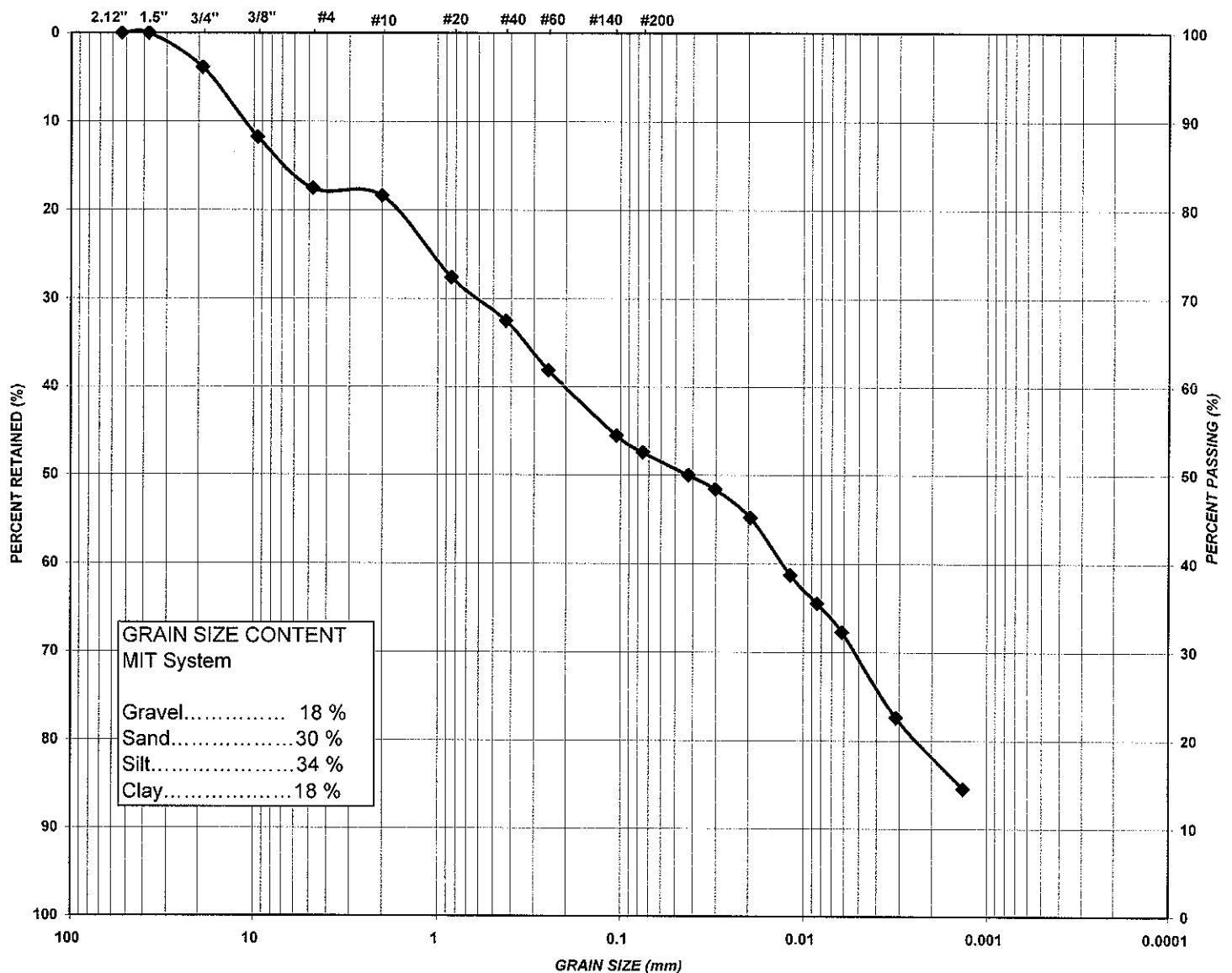
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: 2935 & 2955 Mississauga Road
LOCATION: Mississauga, Ontario
CLIENT: Mr. Merulla
BOREHOLE NUMBER: 1605
SAMPLE NUMBER: 2
SAMPLE DEPTH: 0.6 - 1.2 m
SAMPLE DESCRIPTION: SANDY SILT, some clay, some gravel (TILL)

FILE NO.: 1-08-3220
LAB NO.: 1049B
SAMPLE DATE: March 17, 2010
SAMPLED BY: AW / JS

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY	
	GRAVEL		SAND				



Terraprobe

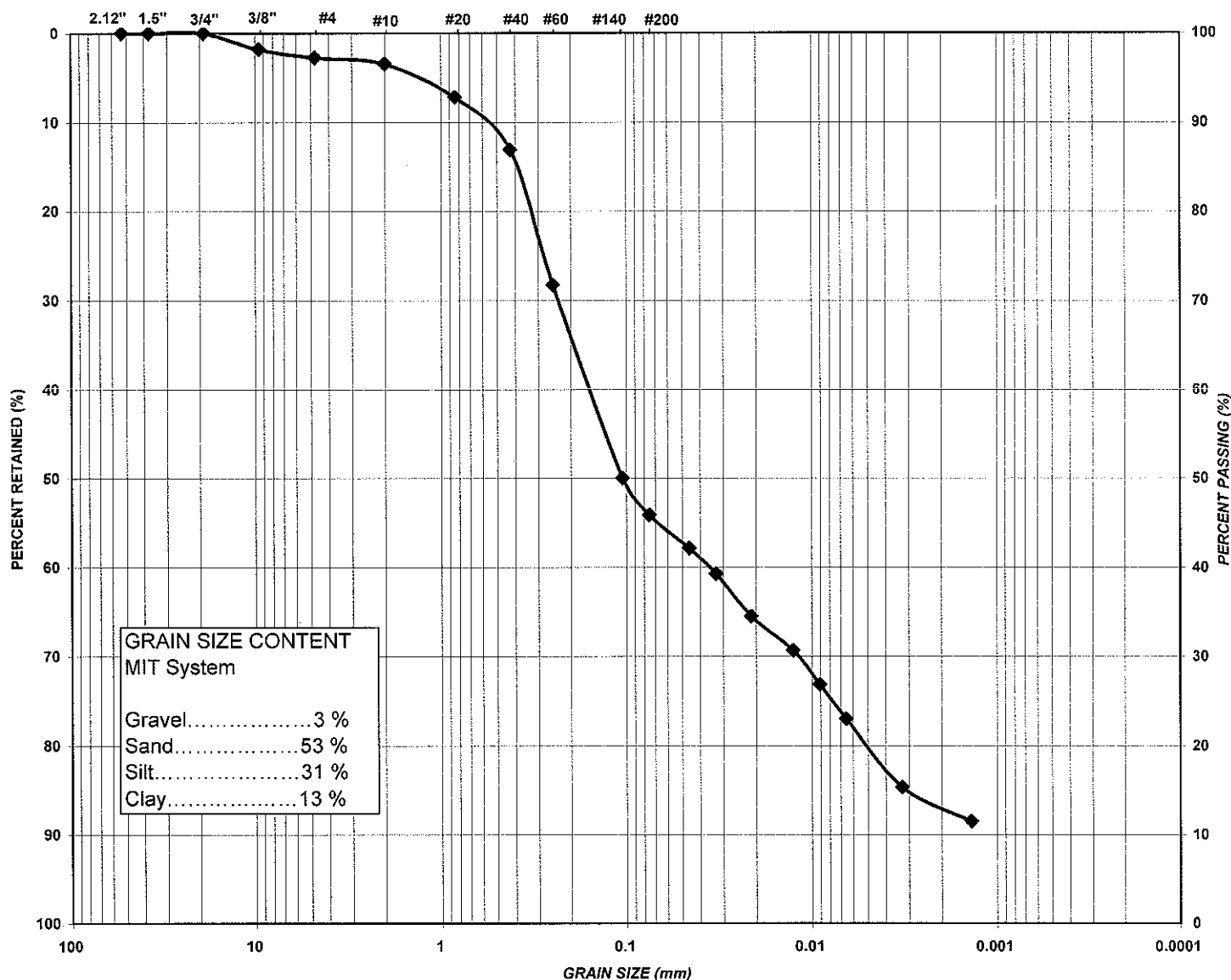
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: 2935 & 2955 Mississauga Road
LOCATION: Mississauga, Ontario
CLIENT: Mr. Merulla
BOREHOLE NUMBER: 1607
SAMPLE NUMBER: 2
SAMPLE DEPTH: 0.6 - 1.2 m
SAMPLE DESCRIPTION: SILTY SAND, some clay, trace gravel (TILL)

FILE NO.: 1-08-3220
LAB NO.: 1049C
SAMPLE DATE: March 17, 2010
SAMPLED BY: AW / JS

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY	
	GRAVEL		SAND				



Terraprobe

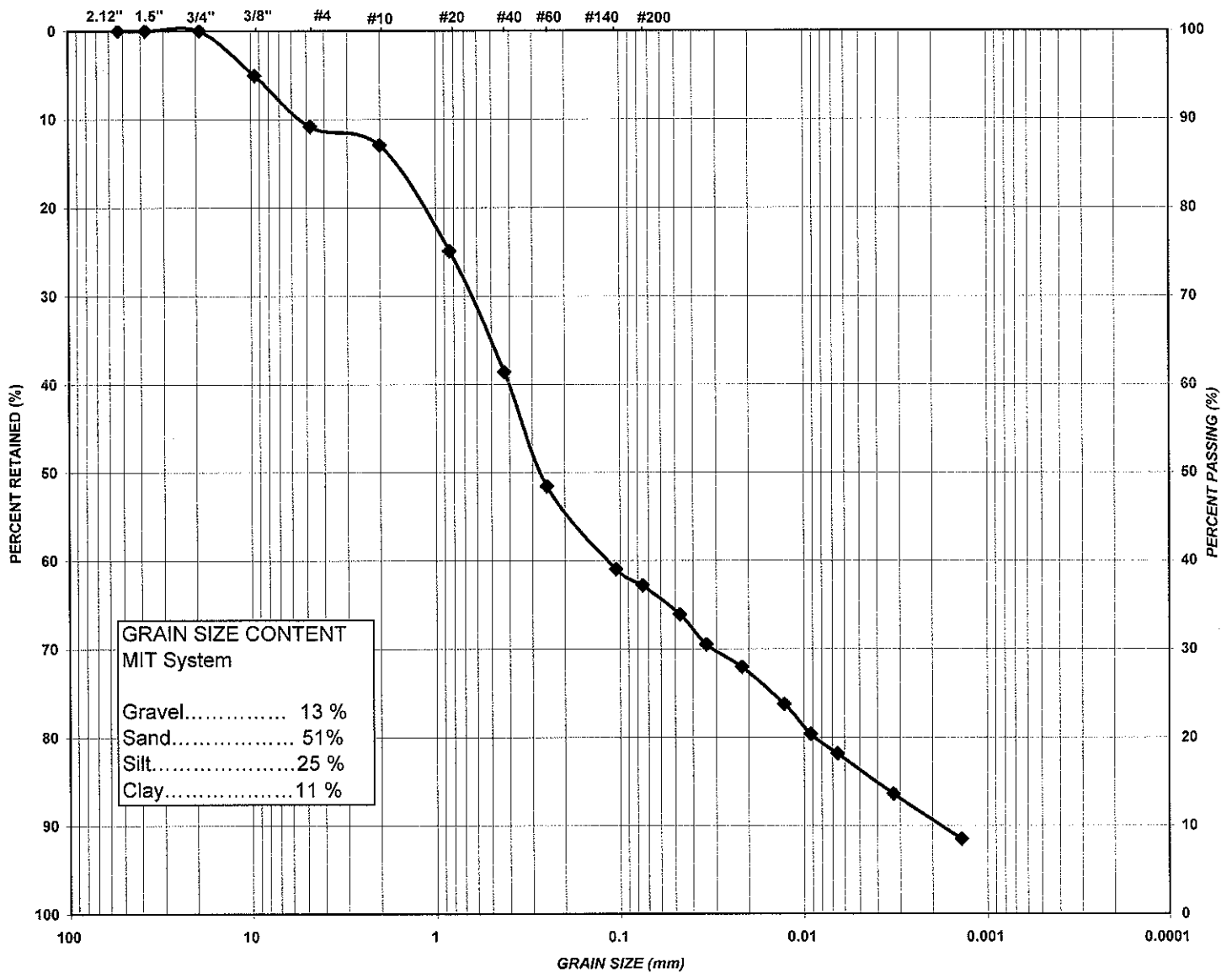
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: 2935 & 2955 Mississauga Road
LOCATION: Mississauga, Ontario
CLIENT: Mr. Merulla
BOREHOLE NUMBER: 1608
SAMPLE NUMBER: 2
SAMPLE DEPTH: 0.6 - 1.2 m
SAMPLE DESCRIPTION: SILTY SAND, some gravel, some clay (TILL)

FILE NO.: 1-08-3220
LAB NO.: 1049D
SAMPLE DATE: March 17, 2010
SAMPLED BY: AW / JS

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY	
	GRAVEL		SAND				



Terraprobe

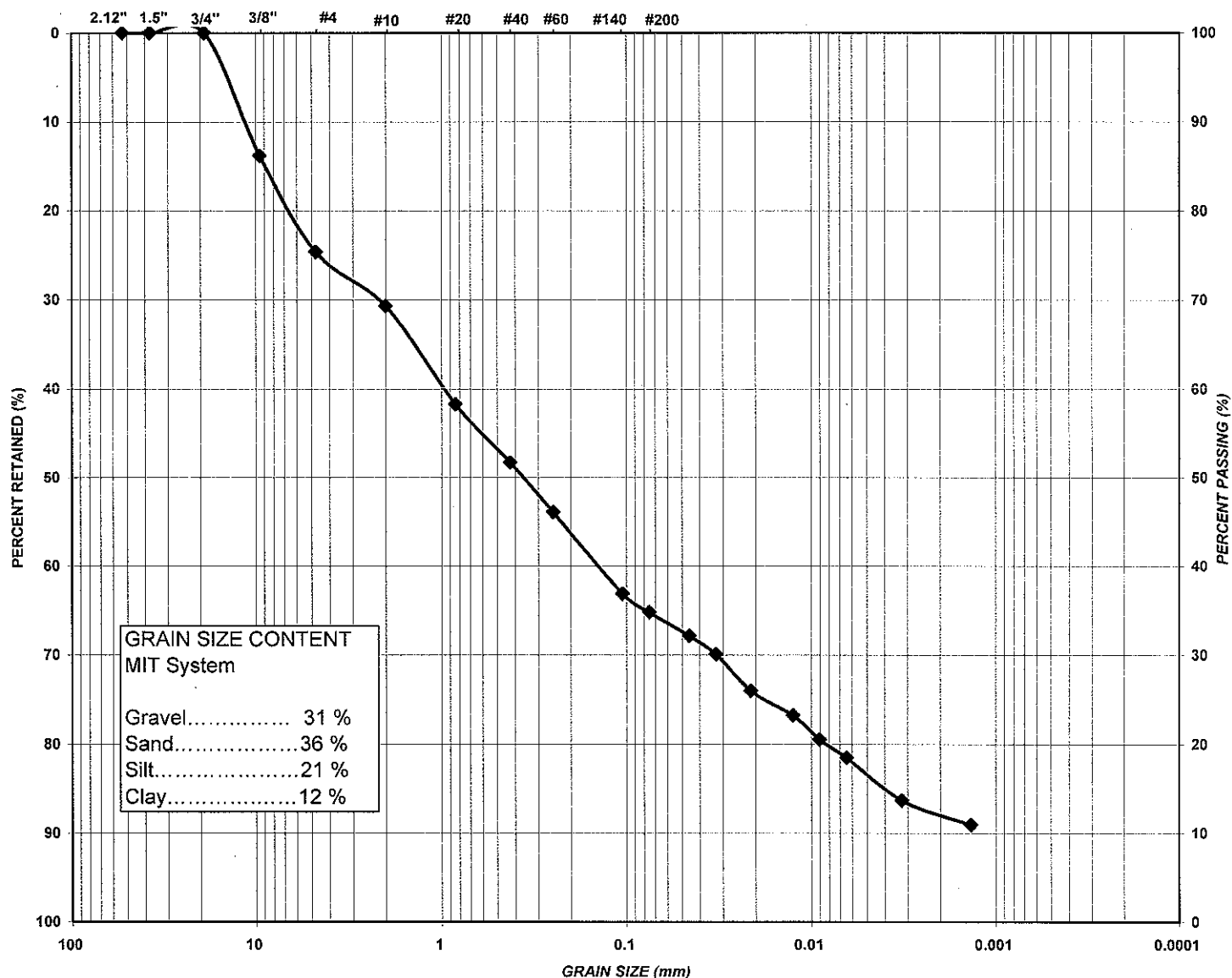
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: 2935 & 2955 Mississauga Road
LOCATION: Mississauga, Ontario
CLIENT: Mr. Merulla
BOREHOLE NUMBER: 1611
SAMPLE NUMBER: 1
SAMPLE DEPTH: 0.0 - 0.6 m
SAMPLE DESCRIPTION: GRAVELLY SAND, silty, some clay

FILE NO.: 1-08-3220
LAB NO.: 1049E
SAMPLE DATE: March 17, 2010
SAMPLED BY: AW / JS

GRAIN SIZE DISTRIBUTION

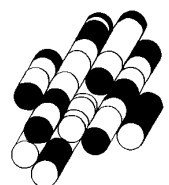
U.S. STANDARD SIEVE SIZES

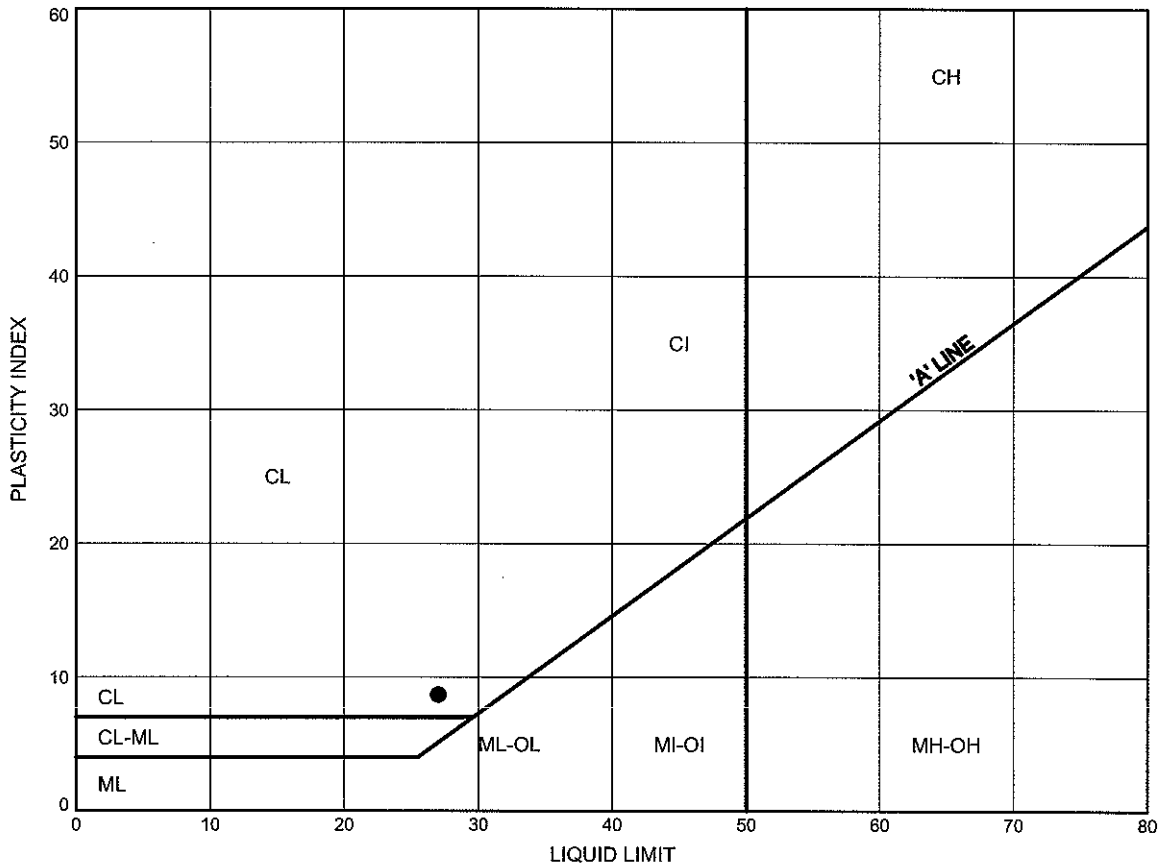


MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY	
	GRAVEL		SAND				

ATTERBERG LIMITS TEST RESULTS

TERRAPROBE INC.





SYMBOL	BOREHOLE	DEPTH (m)	ELEVATION (m)
●	1603	0.9	97.2

Liquid Limit (WL) = 27.0
 Plastic Limit (WP) = 18.3
 Plasticity Index (IP) = 8.7
 Natural Water Content (WN) = 16

Soil Classification:
 Slightly plastic, slight or low compressibility



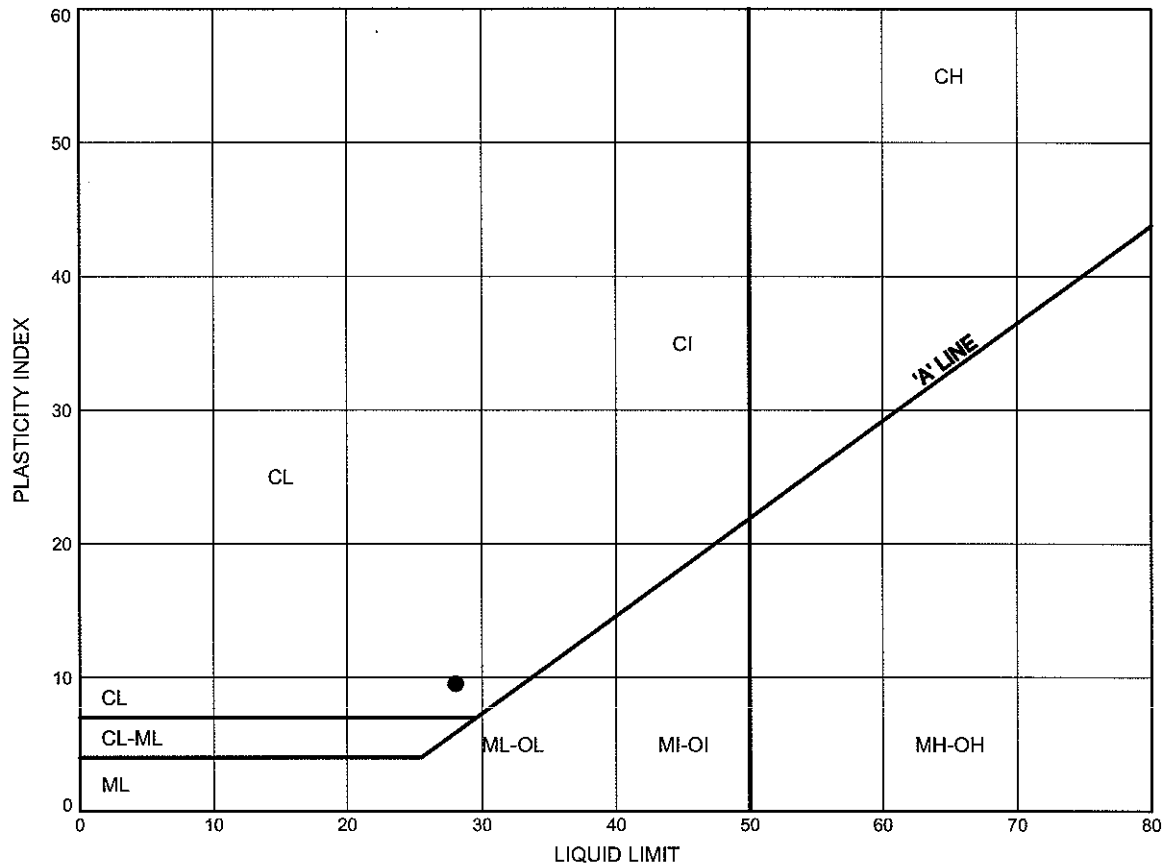
Date March 2010

Project 1-08-3220

Prep'd J.S.

Chkd. B.S.

ATTERBERG LIMITS TEST RESULTS



SYMBOL	BOREHOLE	DEPTH (m)	ELEVATION (m)
●	1605	0.9	97.2

Liquid Limit (WL) = 28.0
 Plastic Limit (WP) = 18.5
 Plasticity Index (IP) = 9.5
 Natural Water Content (WN) = 16

Soil Classification:
 Slightly plastic, slight or low compressibility

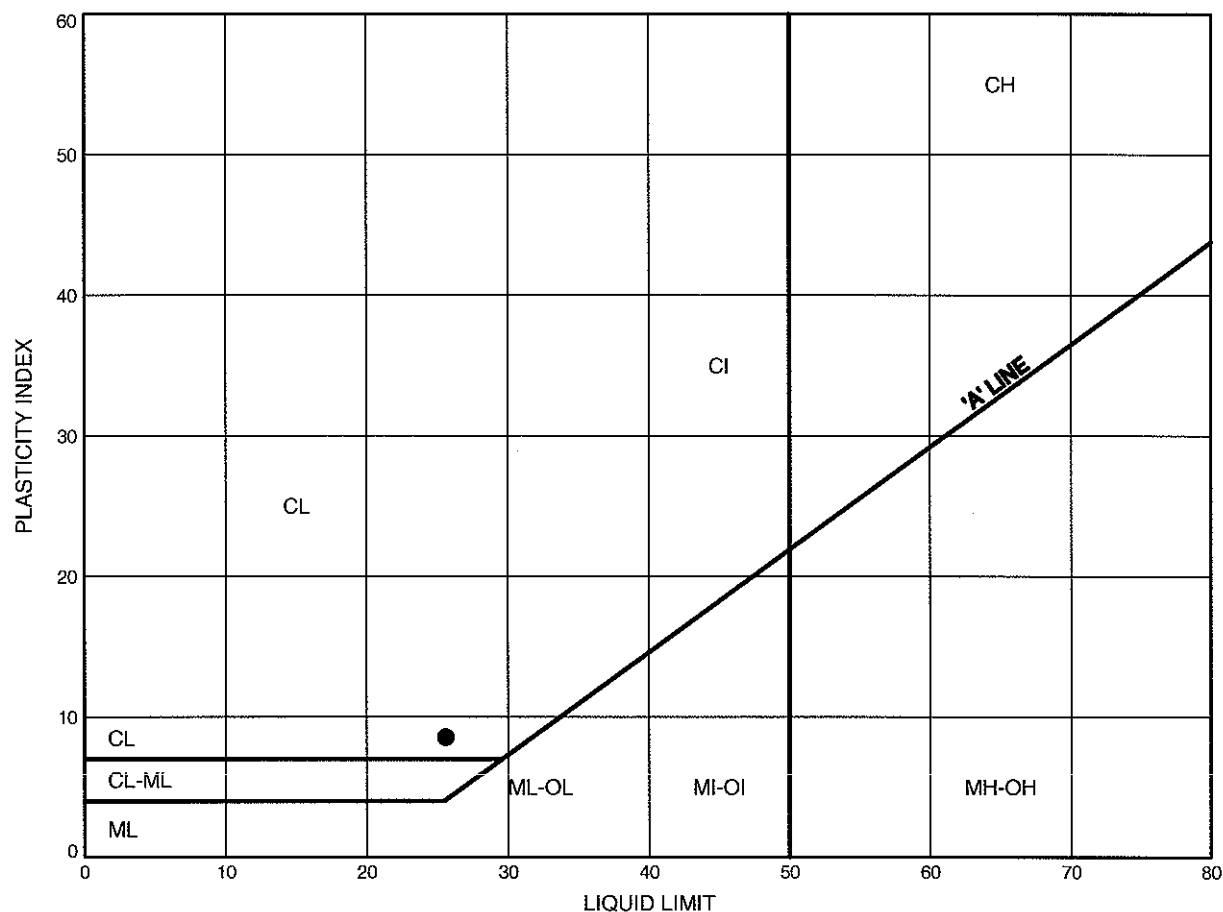
ALTR 1-08-3220 MISSISSAUGA RD.GPJ 3/26/10

Date March 2010
 Project 1-08-3220



Prep'd J.S.
 Chkd. B.S.

ATTERBERG LIMITS TEST RESULTS

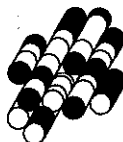


SYMBOL	BOREHOLE	DEPTH (m)	ELEVATION (m)
●	1607	0.9	97.1

Liquid Limit (WL) = 25.6
 Plastic Limit (WP) = 17.1
 Plasticity Index (IP) = 8.5
 Natural Water Content (WN) = 16

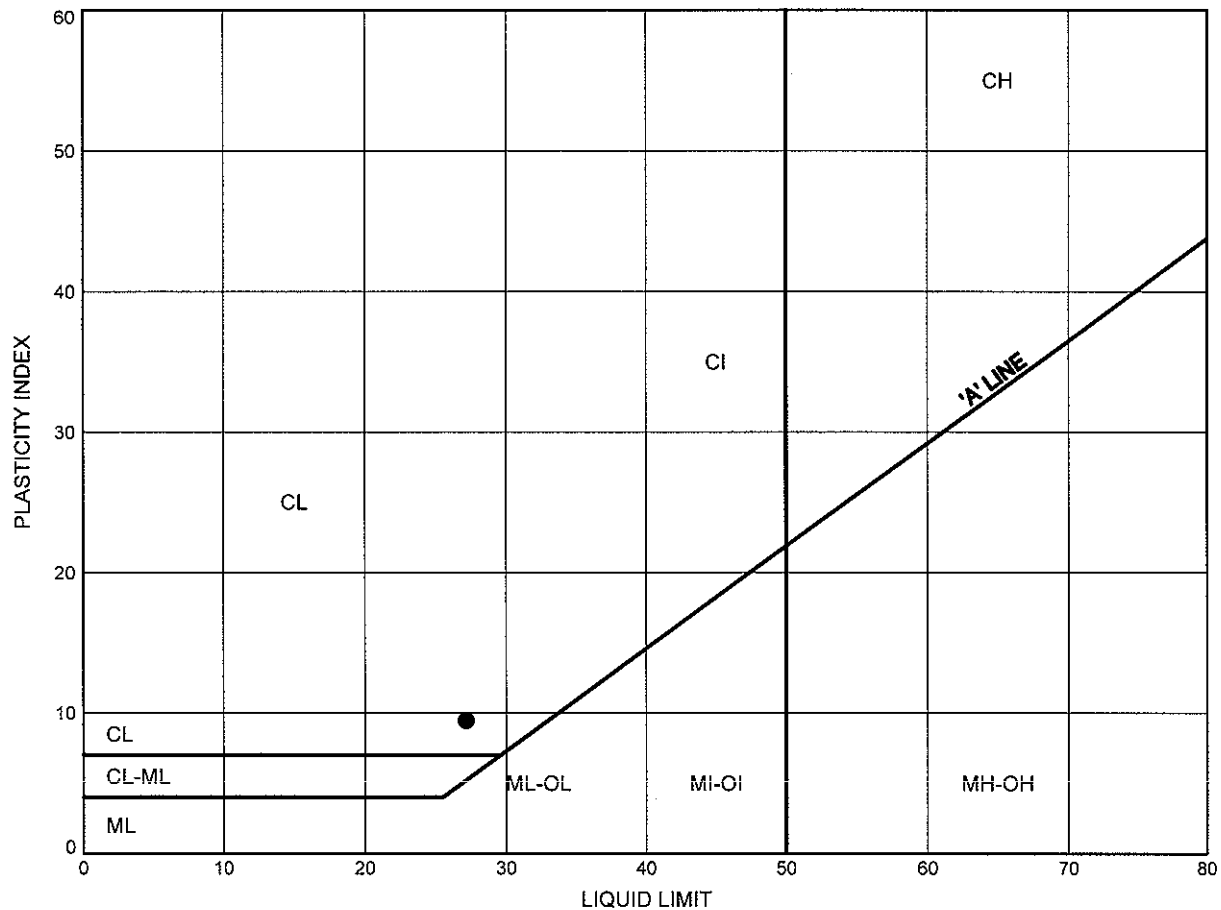
Soil Classification:
 Slightly plastic, slight or low compressibility

Date March 2010
 Project ..1-08-3220....



Prep'd J.S.
 Chkd. B.S.

ATTERBERG LIMITS TEST RESULTS



SYMBOL	BOREHOLE	DEPTH (m)	ELEVATION (m)
●	1611	0.3	97.8

Liquid Limit (WL) = 27.1
 Plastic Limit (WP) = 17.7
 Plasticity Index (IP) = 9.4
 Natural Water Content (WN) = 13

Soil Classification:
 Slightly plastic, slight or low compressibility

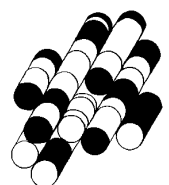


Date March 2010
 Project 1-08-3220

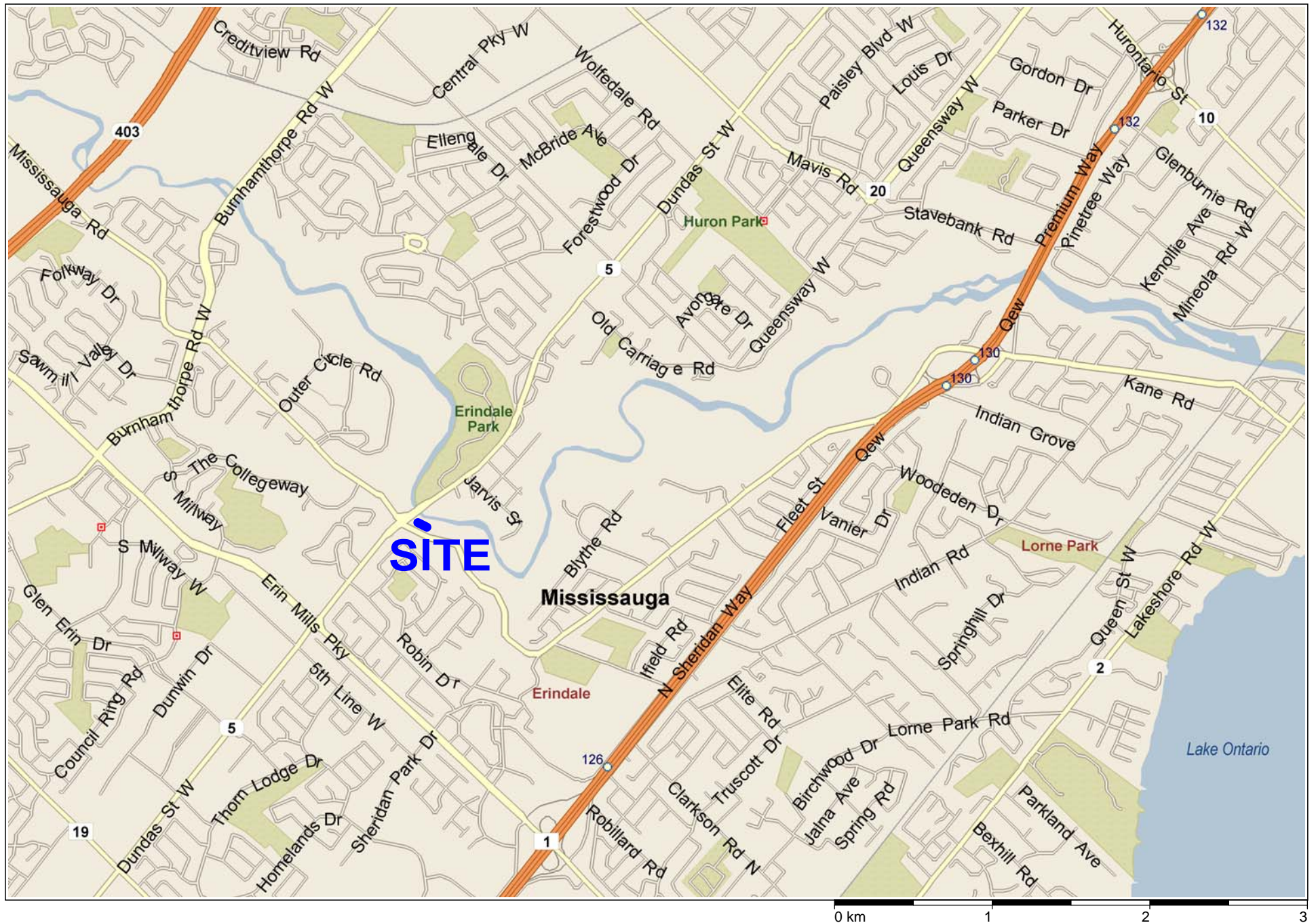
Prep'd J.S.
 Chkd B.S.

FIGURES

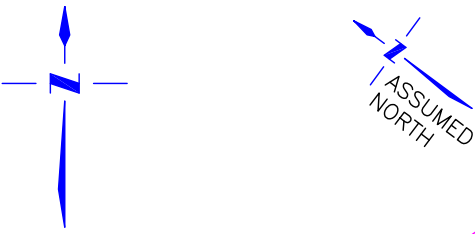
TERRAPROBE INC.



2935 & 2955 MISSISSAUGA ROAD, MISSISSAUGA



SITE LOCATION PLAN



PLAN OF TOPOGRAPHY OF
PART OF LOTS 3 AND 4,
RANGE 1,
SOUTH OF DUNDAS STREET
RACEY TRACT
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL



TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS

METRIC
DISTANCES SHOWN ON THIS PLAN ARE
IN METRES AND CAN BE CONVERTED
TO FEET BY DIVIDING BY 0.3048

ELEVATION NOTE
ELEVATIONS ARE REFERRED TO CITY OF MISSISSAUGA DATUM AND WERE
DERIVED FROM CITY OF MISSISSAUGA BENCHMARK No. 58, HAVING A
PUBLISHED ELEVATION OF 108.283 metres.
CAUTION: TO OBTAIN GEODETIC ELEVATIONS (1978 RE-ADJUSTMENT),
SUBTRACT 0.12 m FROM THE VALUES SHOWN HEREON.

BEARING NOTE
BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTHWESTERLY
LIMIT OF SURVEY BY RADY-PENTEK & EDWARD SURVEYING LTD, DATED
NOV. 1, 1999, HAVING A BEARING OF N39°10'45"E.

- LEGEND
- BOREHOLE, August 2008
 - BOREHOLE, March 2010
 - SLOPE SECTIONS
 - PHOTOGRAPH LOCATION AND DIRECTION (2008)
 - PHOTOGRAPH LOCATION AND DIRECTION (March 2010)
 - LONG TERM STABLE SLOPE CREST LOCATION (LTSSC)

- LEGEND
- DENOTES SURVEY MONUMENT FOUND
 - DENOTES IRON BAR
 - DENOTES STANDING IRON BAR
 - DENOTES SHORT STANDING IRON BAR
 - DENOTES TOP OF CURB
 - DENOTES BOTTOM OF CURB
 - DENOTES CURB CUT
 - DENOTES MANHOLE
 - DENOTES CATCH BASIN
 - DENOTES WOOD UTILITY POLE
 - DENOTES WATER VALVE
 - DENOTES WIRE
 - DENOTES BELL BOX
 - DENOTES PLAN 7332445
 - DENOTES PLAN BY RADY-PENTEK & EDWARD SURVEYING LTD, DATED NOV. 1, 1999
 - DENOTES DEODOROUS TREE
 - DENOTES CONIFEROUS TREE
 - TREE CANOPIES ARE DRAWN TO SCALE.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THE FIELD SURVEY REPRESENTED ON THIS PLAN WAS COMPLETED
ON AUGUST 1, 2008.

Revised March 26, 2010

FIGURE 3A

FILE No. 1-08-3220



10 Bram Court - Brampton Ontario L6W 3R6 (905) 796-2650

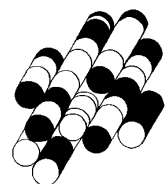
TARASICK McMILLAN KUBICKI LIMITED
ONTARIO LAND SURVEYORS

4181 SLADEVIEW CRESCENT, UNIT 42, MISSISSAUGA, ONTARIO L5L 5R2
TEL: (905) 569-5849 FAX: (905) 569-3160
E-MAIL: tmm@tmm.ca

DRAWN BY: Z. H. / A. W. FILE No. 4871-08-7

PHOTOGRAPHS

TERRAPROBE INC.



2935 - 2955 Mississauga Road, Mississauga, Ontario



Photograph A: Looking from west side of the fence towards the site. Relatively 'recent' graded fill located on the east side of the fence.

2935 - 2955 Mississauga Road, Mississauga, Ontario



Photograph B: Another view (looking north) of the relatively 'recent' fill area, no significant vegetation cover / growth.

2935 - 2955 Mississauga Road, Mississauga, Ontario



Photograph C: A view of southern portion of the site (inside the silt fence). This area includes patchy vegetation growth, and does not appear to include 'recent' fill.