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January 4, 2023

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Project Name:	Proposed Riverside South Elementary School, 836 Solarium Avenue, Ottawa, Ontario
EXP Project Number:	OTT-22012013-A0
Subject:	Geotechnical Response to First Round of Comments from City of Ottawa City of Ottawa File No. D07-12-22-0145

EXP Services Inc. (EXP) is pleased to present the geotechnical response to the City of Ottawa first round of comments dated December 14, 2022 regarding the geotechnical investigation report dated September 21,2022 for the above noted site address (EXP Project No. OTT-22012013-A0).

The City of Ottawa first round of comments are presented in regular font and EXP responses are in italics.

City of Ottawa Comment 1.26: Please append the results of the Atterberg limit laboratory testing.

EXP Response to Comment 1.26: *The Atterberg limit test results (liquid limit and plastic limit) and the determination of the plasticity index values of the clayey silt and clay soils are provided in Table IV (page: 9) of the final geotechnical report dated September 21,2022 and shown below. The soil plasticity chart is shown in the attached Figure 1.*

Table IV: Summary of Results from Grain-Size Analysis and Atterberg Limit Determination of Clayey Silt /Clay Samples

Borehole No. (BH) – Sample No. (SS)	Depth (m)	Grain-Size Analysis (%)				Atterberg Limits (%)				Soil Classification (USCS)
		Gravel	Sand	Silt	Clay	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	
BH 1-SS2	0.8-1.4	0	41	33	26	29	29	18	11	Sandy Clayey Silt of Low Plasticity (CL)
BH2-SS7	4.6-5.2	0	3	54	43	39	38	20	18	Silty Clay of Low Plasticity (CL)
BH3-SS2	0.8-1.4	2	30	47	21	28	28	16	13	Sandy Clayey Silt of Low Plasticity (CL)
BH4-ST8	6.1-6.7	0	2	49	49	51	46	21	26	Silty Clay of Low Plasticity (CL)

BH6-SS4	*2.3-2.9*	*0*	*2*	*41*	*57*	*43*	*58*	*25*	*33*	*Clay of High Plasticity (CH)*
BH7-ST5	*3.0-3.6*	*0*	*0*	*42*	*58*	*63*	*56*	*24*	*32*	*Clay of High Plasticity (CH)*
BH8-SS6	*3.8-4.4*	*0*	*23*	*51*	*26*	*36*	*24*	*15*	*9*	*Clayey Silt with Sand of Low Plasticity (CL)*
BH10- SS6	*3.8-4.4*	*0*	*2*	*65*	*33*	*40*	*35*	*20*	*15*	*Clayey Silt of Low Plasticity (CL)*

City of Ottawa Comment 1.27: Section 5 – Please provide discussion on the soil sensitivity, per the Canadian Foundation Engineering Manual (CFEM).

EXP Response to Comment 1.27: *The sensitivity of the clayey soils ranges from 3.5 to 8.0. Based on the Errata dated April 1,2018 of the 2006 Canadian Foundation Engineering Manual (CFEM), the clayey soils are medium sensitive to sensitive.*

City of Ottawa Comment 1.28: Section 16 – Please provide further specificity regarding the tree planting restrictions for the subject site.

EXP Response to Comment 1.28: *The site is underlain by marine clay. The laboratory test results of the clayey soils were compared with the document titled, Tree Planting in Sensitive Marine Clay Soils – 2017 City of Ottawa Guidelines (2017 Guidelines) and indicate the clayey soils have a low/medium potential for soil volume change. For soils that have a low/medium potential for soil volume change, the 2017 Guidelines indicate that the tree to foundation setback distance and tree planting restrictions should be in accordance with the 2017 guidelines.*

A landscape architect should be consulted to ensure the setbacks and tree planting restrictions are in accordance with the 2017 Guidelines.

We trust that the information contained in this letter is satisfactory for your purposes. Should you have any questions, please contact this office.

Yours sincerely,

EXP Services Inc.

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Geotechnical Services
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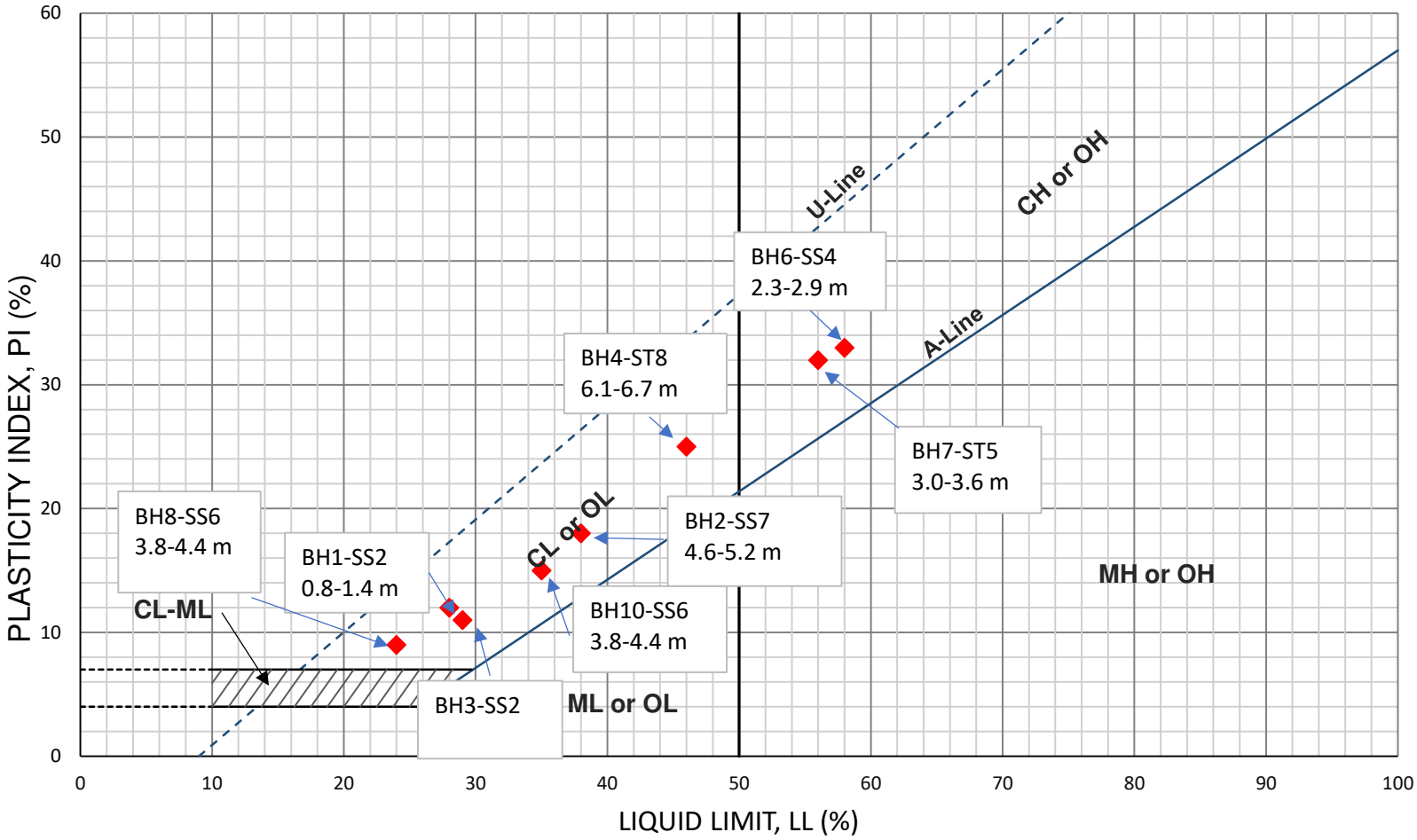
Attachments:

Figure 1 – Soil Plasticity Chart

SOIL PLASTICITY CHART



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scale: N.T.S.	TITLE: Soil Plasticity Chart		project no. OTT-22012013-A0
date: January 2023			
drawn by: SMP	PROJECT: Proposed Riverside South Elementary School, 836 Solarium Avenue, Ottawa, Ontario		FIG. 1