HYDROGEOLOGY

SITE EVALUATIONS

155 GRAY ROAD

FALMOUTH, MAINE 04105

(207) 797-2110

FAX (207) 878-2364

SOIL BEARING CAPACITY INVESTIGATION

DATE:

May 23, 2007

TO:

Rumen Shopov

OWNER:

Rumen Shopov

21 School Street, Apt. 5 Portland, ME 04102

LOCATION:

This property is located at 72 Walnut Street, Portland.

DATE OF INVESTIGATION:

May 14, 2007.

PURPOSE OF INVESTIGATION:

The purpose is to determine the bearing capacity of the

soils on-site for building construction.

METHOD OF INVESTIGATION:

Backhoe.

RESULTS OF <u>INVESTIGATION</u>:

The site is situated on the steeply sloping southeastern side of Munjoy Hill. The existing slopes in the center of the site are relatively flat, with overland drainage towards Walnut Street. A retaining wall exists on the northeastern (uphill) edge of the site. The recently installed portion of the retaining wall consisting of boulders appears to be stable, however, the older flagstone/concrete section of the retaining wall is clearly unstable and leaning downhill. The southwest (downhill) edge of the site is supported by a steeply sloping lawn on the abutter's property. The enclosed site plan depicts the abovementioned site features.

Four test pits were dug to determine the variability of the surficial material on-site. The location of the test pits are shown on the enclosed site plan. Test pit logs are enclosed. The ground surface elevations for each test pit are based on the 130 foot topographic contour shown on the southwestern corner of the property, as depicted on the site survey plan provided by Planning/Design Associates. All elevations presented in this report have an approximate error of 1 ft.

Rumen Shopov
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Date of Investigation: 5/14/07

Test pit TP-1 revealed 20 inches of fill overlying native glacial till (fine sandy loam). The till becomes extremely firm at a depth of 48 inches. Test pit TP-2 revealed 20 inches of gravelly loamy sand overlying fine sandy loam to loamy sand. The soils becomes extremely firm at a depth of 40 inches below the ground surface. Test pit TP-3 reveals 96 inches of sand and gravel overlying extremely firm fine sandy loam. Test pit TP-4 reveals 68 inches of sand and gravel overlying extremely firm fine sandy loam.

The load bearing capacity of the various surficial materials on-site were measured with a pocket penetrometer. The load bearing capacity of the fine sandy loam to medium sand cover material ranged from less than 0.5 tons per square foot (tons/ft²) to 1.0 tons/ft². The load bearing capacity of the extremely firm glacial till exceeds 4.5 tons/ft². The proposed elevation for the based of the four corners of the foundation wall are shown on the attached site plan.

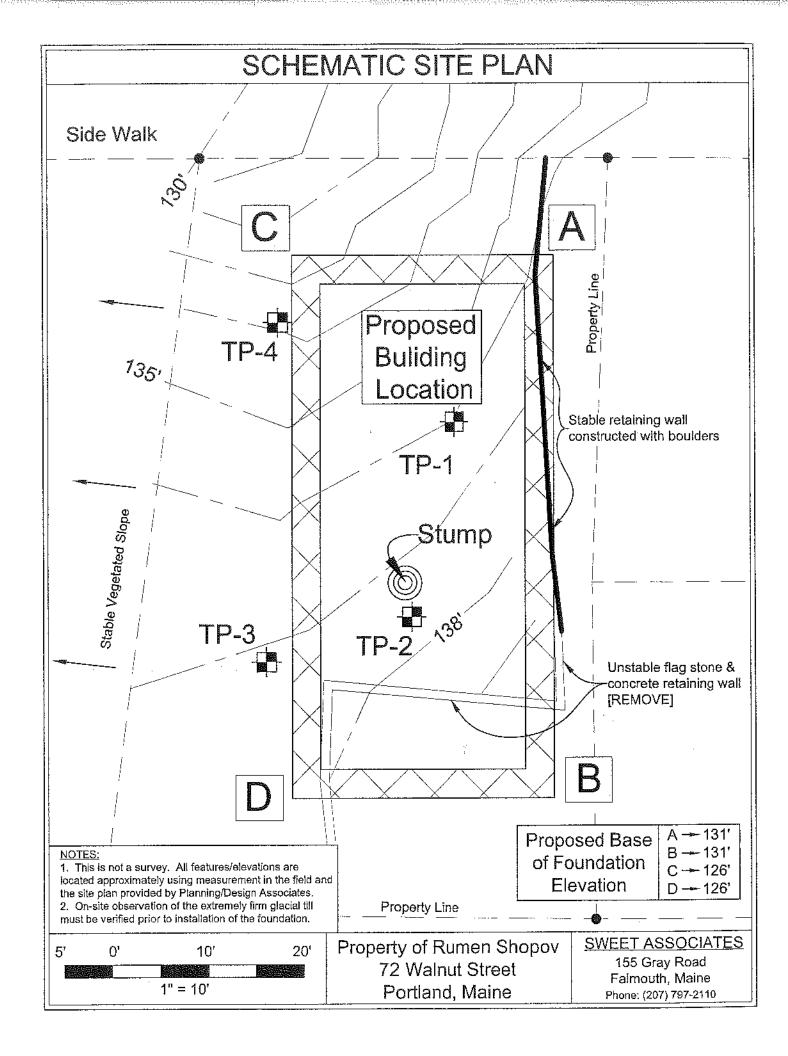
CONCLUSIONS AND RECCOMMENDATIONS:

It should be assumed that groundwater will run along the top of the extremely firm glacial till during wet times of year. The footings or pilings used to support the proposed building should be installed in the extremely firm glacial till. No structural engineering was done as part of this study and it is recommended for foundation and retaining wall engineering. On-site observation of the extremely firm glacial till must be verified prior to installation of the foundation.

Steve Marcotte
Project Geologist

SM/smh

Richard A. Sweet Certified Geologist #100



SOII	L PROFILE / C	LASSIFICA	SI	weet Associa	tes 155 Gray Road - Falmouth, Maine (207) 797-2110 - Fax (207) 878-2364			
	: Name: falnut Street		Applicant Name: Rumen Shopov			Project Location (municipality): Portland		
Exploration Symbol: TP-1			☐ Test Pit ☐ Boring			Comments		
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		ESTIGATOR	INFORMATION	ON AND SIGN	ATU	RE	TITLE	
Signat		_0/X		Dat	e:	-14-07	☐ Licensed Site Evaluator	
Name	Printed/typed: Ri	chard A. S		Reg.# 100	☐ Certified Geologist ☐ Certified Soil Scientist			

SOII	L PROFILE / C	LASSIFIC	CATION INFO	DRMAT	ION (Sw	eet Associa	tes 155 Gray Road (207) 797-2110	Falmouth, Maine Fax (207) 878-2364
Project Name: Applicant Name: 72 Walnut Street Rumen Shopov						Project Location (municipality): Portland			
Exploration Symbol: TP-2			☐ Test Pit ☐ Boring				Comments		
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Signat		LESTIOATE	LINDRING MAIL	ON AND	Date:			i ·	ite Evaluator
Name	Name Printed/typed: Richard A. Sweet Cert/L						5-14-07 Lic/Reg.# 100 Licensed Site Evaluation Certified Geologist Certified Soil Scientist Other:		

SOII	L PROFILE / C	LASSIFICATI	ON INFOR	MATIO	ON SI	veet Associa	155 Gray Road - Falmouth, Maine (207) 797-2110 - Fax (207) 878-2364
	Name: falnut Street		plicant Name: men Shopov			Project Location (r Portland	municipality):
	Exploration Symbol:	TP-3	X Test Pit		Boring	С	omments
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		ESTIGATOR IN	FORMATIO	N AND S		RE	TITLE
Signat	ture:	mel Of	meet	•	Date:	-14-07	☐ Licensed Site Evaluator ☑ Certified Geologist
Name	Printed/typed: Ri	chard A. Sw	eet		Cert/Lic/	Reg.# [100]	☐ Certified Soil Scientist ☐ Other:

SOII	PROFILE /	CLASSIFIC	CATION INFO	ON S	Sweet Associates 155 Gray Road - Falmouth, Maine (207) 797-2110 - Fax (207) 878-2364				
Project Name: Applicant Name: 72 Walnut Street Rumen Shopov						Project Location (municipality): Portland			
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				Reviewed By: Ri	Richard A. Sweet, CG 100				
Profi	le Condition	Percent	Depth	☐ Pit Dep		Date of Investigation:	May 14	1, 2007	
INVESTIGATOR INFORMATION AND SIGNATURE TITLE									
Signature:						ate: ☐ Licensed Site Evaluate ☐ Certified Geologist			
Name Printed/typed: Richard A. Sweet						t/Lic/Reg.# 100 Certified Geologist Other:			

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