SUMMIT GEOENGINEERING SERVICES 640 Main Street Lewiston, Maine 04240	TEST PIT LOG	Test Pit # TP-26
	Project: Geotechnical Investigation Eben Hill and Ocean East Condominiums, Portland, ME	Project # 7278 Groundwater: 9.8 ft BGS

Contractor:	R.J. Grondin & Sons, Inc.	Ground Surface Elevation:	36.4 feet (NGVD)		
Equipment:	Caterpillar 320L Excavator	Reference:	Coffin Engineering & Surveying point data		
Summit Staff:	Erik J. Wiberg, P.E.	Date:	10/17/01	Weather:	PC, 60's

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown, fine SAND with some silt and trace to little organics, roots, moist, SM	TOPSOIL
2	Olive, SILT with some clay and trace fine sand, friable, moist, ML	0.7 GLACIAL MARINE
3		
4		Qu = 4.5 tsf at 3.0 ft. (see note)
5		
6	Olive to olive-brown, SILT with some clay to CLAY with some silt, firm, moist, CL/ML	Qu = 3.5 tsf at 6.0 ft
7		
8		Qu = 2.5 tsf at 7.5 ft
9		Slow seepage observed at 9.8 ft. 2 hours after exc.
10		Slow seepage observed at 10.2 ft. 2 hours after exc. Test Pit open to 13.7 ft.
11		
12	Blue-gray, clayey SILT, very soft, wet, ML	
13		
14		
15	Refusal encountered at 14.0 ft. Bottom of exploration at 14.0 ft.	14.0 BEDROCK
16		
17		
18		Note: Unconfined compressive strengths measured by hand penetrometer on excavation sidewall.
19		
20		

SUMMIT GEOENGINEERING SERVICES 640 Main Street Lewiston, Maine 04240	TEST PIT LOG Project: Geotechnical Investigation Eben Hill and Ocean East Condominiums, Portland, ME	Test Pit # TP-27 Project # 7278 Groundwater: 7.0 ft BGS

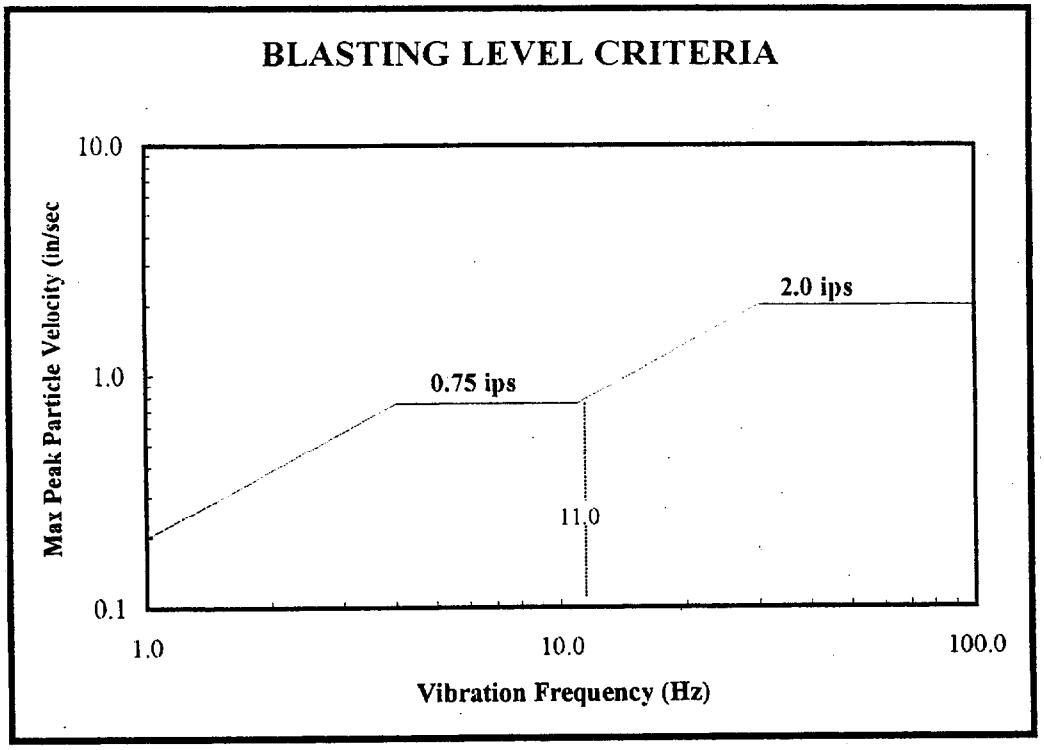
Contractor:	R.J. Grondin & Sons, Inc.	Ground Surface Elevation:	Approx. 30 feet (NGVD)		
Equipment:	John Deere 595D Excavator	Reference:	Coffin Engineering & Surveying topographic map		
Summit Staff:	Erik J. Wiberg, P.E.	Date:	10/17/01	Weather:	PC, 60's

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown, SILT with little fine SAND and little organics, moist, ML	TOPSOIL
2	Olive to brown, mottled, SILT with some clay, moist, ML	1.1 GLACIAL MARINE
3	Brown to gray-brown, mottled, SILT with some clay, friable, moist, ML	Qu = 4.5 tsf at 2.5 ft. (see note)
4		Qu = 4.5 tsf at 3.0 ft
5		
6	Olive to gray, SILT with some clay to CLAY with some silt, firm, moist, CL/ML	Qu = 3.75 tsf at 5.5 ft
7		Qu = 2.75 tsf at 6.5 ft
8		Moisture increases at 7.0 ft.
9		Very slow seepage observed at 10.5 ft. 6 hours after excavation. Test pit open to 11.5 ft.
10		
11	Blue-gray, clayey SILT, very soft, wet, ML	Qu < 0.25 tsf from excavated sample
12		11.5
13	Bottom of exploration at 11.0 ft.	Bedrock not encountered
14		
15		
16		
17		
18		Note: Unconfined compressive strengths measured by hand penetrometer on excavation sidewall. unless otherwise noted.
19		
20		

SUMMIT GEOENGINEERING SERVICES 640 Main Street Lewiston, Maine 04240	TEST PIT LOG Project: Geotechnical Investigation Eben Hill and Ocean East Condominiums, Portland, ME	Test Pit # TP-28 Project # 7278 Groundwater: 6.0 ft BGS

Contractor:	R.J. Grondin & Sons, Inc.	Ground Surface Elevation:	Approx. 35 feet (NGVD)		
Equipment:	Caterpillar 320L Excavator	Reference:	Coffin Engineering & Surveying topographic map		
Summit Staff:	Erik J. Wiberg, P.E.	Date:	10/17/01	Weather:	PC, 60's

Depth (ft)	DESCRIPTION	
	ENGINEERING	GEOLOGIC/GENERAL
1	Brown, SILT with little fine SAND and little organics, moist, ML	TOPSOIL
2	Olive to gray-brown, mottled, SILT with some some clay, friable, moist, ML	1.0 GLACIAL MARINE
3		Qu = 2.5 tsf at 3.0 ft. (see note)
4		
5		Qu = 3.5 tsf at 5.0 ft
6	Olive to gray, SILT with some clay to CLAY with some silt, firm, moist, CL/ML	Moisture increases at 6.0 ft. Very slow seepage observed at 6.0 ft.
7		
8		Qu varies from 1.5 tsf to 2.25 tsf at 7.0 ft.
9		
10		
11	Blue-gray, silty CLAY, very soft, wet, ML	
12		
13	Bottom of exploration at 12.0 ft.	12.0 Bedrock not encountered
14		
15		
16		
17		
18		Note: Unconfined compressive strengths measured by hand penetrometer on excavation sidewall. unless otherwise noted.
19		
20		



REFERENCE: OSM alternative blasting criteria (Modified from figure B-1. Bureau of Mines, RI 8507)

The Blasting Contractor shall provide a seismographic record to Realty Resources, LLC for each blast event at the nearest off-site structure. The record shall include the date and time of the blast, peak and resultant particle velocities and associated frequencies, and the airblast overpressure.

Flyrock

Blasting mats shall be used to cover the area which will be blasted, such that flyrock traveling along the ground or in the air shall not be cast more than one-half the distance to the nearest structure or beyond the property line, whichever is less.

APPENDIX C

BLASTING RECOMMENDATIONS

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BLASTING RECOMMENDATIONS

Introduction

Blasting operations will be performed in general accordance with the applicable U.S. Department of the Interior Rules, the recommendations provided below, and a normal standard of care.

Blast Design

The blasting contractor shall submit a blasting plan to the Owner for approval prior to blasting operations. The blasting plan shall include a schedule, sketches of the drill patterns (hole spacing and depth), type and amount of explosives, number and sequence of delays, methods for minimizing flyrock, and any other information pertinent to demonstrating compliance with the applicable U.S. Department of the Interior Rules and the recommendations provided below.

Notification

Oral notification to the abutters within one-half mile of the blast area shall be provided prior to blasting. Warning and all clear signals of different character or pattern that are audible within one-half mile from the point of the blast shall be given. The meaning of the signals shall be conveyed to the abutters at the time they are notified.

Pre-blast Surveys

All blasting operations are the direct responsibility of the Blasting Contractor. Reports of damage to structures caused by blasting operations are the sole responsibility of the Blasting Contractor. Therefore, it is incumbent upon the Blasting Contractor to perform pre-blast surveys as they deem necessary.

Airblast Limits

Airblast overpressure shall not exceed 136 dB (0.018 psi) at the nearest structure.

Ground Vibration Limits

The maximum ground vibration at any structure shall not exceed the limits presented in the following chart: