RVT
Engineering Resources, Testing Solutions

REPORT OF ABSORPTION AND BULK SPECIFIC GRAVITY TESTING

1060 Breezewood Lane, Suite 102
Neenah, WI 54956
ph 920-886-1406
fax 920-886-1409
www.rvtcorp.com

Project: **DIMENSIONED STONE TESTING NORTHEAST WISCONSIN**

Copies:

Client: Mr. Peter Roehrig
Valders Stone and Marble, Inc.
318 West Washington Street
Valders, WI 54245

Date: December 11, 2006

RVT File No: N06-394

GENERAL:

Scope of Work: Determine absorption and bulk specific gravity of the submitted samples.

Sample Shaped By: VSM Personnel
Date Received in Lab: 9/19/06
Field Data Submitted By: VSM Personnel
Date of Tests: 11/30/06

Sample Location: Delivered
As-Tested Finish of Specimens: Sawcut

SAMPLE IDENTIFICATION:

Specimen Type: 2" x 2" x 2" cubes
Name and Location of Quarry: Eden Quarry; Eden, Wisconsin
Name and Position of Ledge: Eden Dolomite

ASTM C616 Specifications:	Sandstone	Quartzitic Sandstone	Quartzite
Absorption By Weight (%):	8.0 Max	3.0 Max	1.0 Max
Minimum Dry Density (pcf):	125	150	160

ASTM C568 Specifications:	Type I* Limestone	Type II* Limestone	Type III* Limestone
Absorption By Weight (%):	12.0 Max	7.5 Max	3.0 Max
Minimum Dry Density (pcf):	110	135	160

ABSORPTION TEST RESULTS: (ASTM C97, C568, and C616)

Set Number	Control Number	Weight of Dry Specimen (g)	Weight of As-Received Specimen (g)	Weight Surface Dry (g)	Weight Suspended (g)	Bulk Specific Gravity	Dry Density (pcf)	Absorption (%)
E1	3499A	368.9	369.0	370.2	236.2	2.75	172.1	0.35
	3499B	372.1	372.2	373.2	238.8	2.77	173.3	0.30
	3499C	373.1	373.2	374.5	239.2	2.76	172.7	0.38
	3499D	373.1	373.2	374.4	239.1	2.76	172.7	0.35
	3499E	374.2	374.2	375.1	241.0	2.79	174.6	0.24
					Average:	2.77	173.1	0.32

COMMENTS: * Type I Limestone-Low Density, Type II-Medium Density, Type III-High Density

The remaining portions of the samples were discarded after testing.

Respectfully Submitted,
River Valley Testing Corp.

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REPORT OF MODULUS OF RUPTURE OF DIMENSIONED STONE

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Client: Mr. Peter Roehrig
Valders Stone and Marble, Inc.
318 West Washington Street
Valders, WI 54245

Date: December 12, 2006

RVT File No: N06-394

GENERAL:

Scope of Work: Determine the modulus of rupture of delivered dimensioned stone.

Sample Shaped By:	VSM Personnel	Specified Strength:	1000 psi
Date Received in Lab:	9/19/06	Sample Location:	Delivered
Field Data Submitted By:	VSM Personnel	As-Tested Finish of Specimens:	Honed

SAMPLE IDENTIFICATION:

Specimen Type: 8" Long x 4" Wide x 2¼" Deep
Name and Location of Quarry: Eden Quarry; Eden, Wisconsin
Name and Position of Ledge: Eden Dolomite
Direction of Loading: Perpendicular to rift
Moisture Condition of Specimens: Dry

COMPRESSION TEST RESULTS: (ASTM C99-87)

Set Number	Control Number	Load (lbs)	Modulus of Rupture (psi)
E2	3510A	11,630	6,100
	3510B	10,220	5,360
	3510C	11,360	5,960
	3510D	10,710	5,620
	3510E	11,070	5,810
		Average:	5,770

COMMENTS:

1. Specimen meets project specifications for compressive strength.
2. Specimen does not meet project specifications for compressive strength.
3. Specimens were made by: a) RVT, b) contractor or c) architects representative.
4. Specimens were: a) picked up by RVT or b) delivered to RVT laboratory.

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Sample Shaped By:	VSM Personnel	Specified Strength:	1000 psi
Date Received in Lab:	9/19/06	Sample Location:	Delivered
Field Data Submitted By:	VSM Personnel	As-Tested Finish of Specimens:	Honed

SAMPLE IDENTIFICATION:

Specimen Type: 8" Long x 4" Wide x 2¼" Deep
Name and Location of Quarry: Eden Quarry; Eden, Wisconsin
Name and Position of Ledge: Eden Dolomite
Direction of Loading: Perpendicular to rift
Moisture Condition of Specimens: Wet

COMPRESSION TEST RESULTS: (ASTM C99)

Set Number	Control Number	Load (lbs)	Modulus of Rupture (psi)
E2	3511A	5,100	2,670
	3511B	5,960	3,130
	3511C	5,570	2,920
	3511D	5,960	3,130
	3511E	5,260	2,760
		Average:	2,920

COMMENTS:

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Date Received in Lab: 9/19/06
Field Data Submitted By: VSM Personnel

Specified Strength: 1000 psi
Sample Location: Delivered
As-Tested Finish of Specimens: Honed

SAMPLE IDENTIFICATION:

Specimen Type: 8" Long x 4" Wide x 2¼" Deep
Name and Location of Quarry: Eden Quarry; Eden, Wisconsin
Name and Position of Ledge: Eden Dolomite
Direction of Loading: Parallel to rift
Moisture Condition of Specimens: Dry

COMPRESSION TEST RESULTS: (ASTM C99) – Test Procedure Modified

Set Number	Control Number	Load (lbs)	Modulus of Rupture (psi)
E2C	3522A	12,960	1,410
	3522B	14,440	1,580
	3522C	16,830	1,840
	3522D	11,760	1,280
	3522E	15,280	1,670
		Average:	1,560

COMMENTS:

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Name and Position of Ledge: Eden Dolomite
Direction of Loading: Parallel to rift
Moisture Condition of Specimens: Wet

COMPRESSION TEST RESULTS: (ASTM C99) – Test Procedure Modified

Set Number	Control Number	Load (lbs)	Modulus of Rupture (psi)
E2C	3523A	12,930	1,420
	3523B	11,730	1,290
	3523C	9,650	1,060
	3523D	8,510	940
	3523E	9,570	1,050
		Average:	1,150

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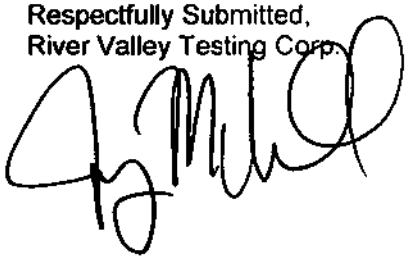


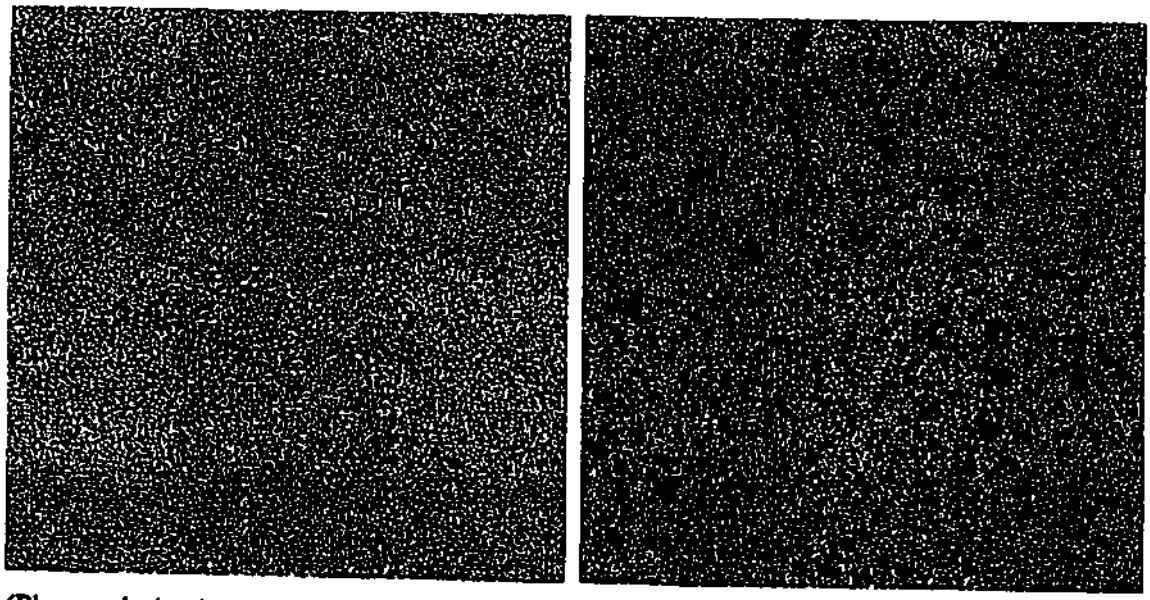
Sample Name: T-8 Edew

Rock name: Marble (Dolomite-marble)

X-ray diffraction (XRD) pattern shows that the rock contains mineral of dolomite ($CaMg(CO_3)_2$) only. The size of the dolomite crystal range from 0.01 mm to 0.05 mm, that is smaller than that in any of the previous samples. See the microscopic images below for detail texture.

Graphic items: Optical microscopic images from the sample T-8;

XRD pattern of the sample T-8.



(Plane polarizer) (Cross polarizer)

UW-Madison Dept of Geology & Geophysics