S&ME

Materials Test Report

Client:	Rocky Ridge Stone Company	Material:	Dimension Stone Slabs / Pieces
Project:	Dimension Stone Testing	Quantity:	10 pieces
S&ME Project No.:	1439-09-094	Date Received :	March 23, 2009

Compressive Strength of Dimension Stone (Perpendicular to Bedding / Dry)
ASTM C 170-90 (Reapproved 1994)

Specimen ID	Core Diameter (in)	Area (in^2)	Core Height (in)	Height to Diameter Ratio	Compressive Load (lbs)	Cp (psi)	Cc (psi)
1	3.22	8.14	3.68	1.14	231,530	28,400	28,400
2	3.22	8.14	3.88	1.20	220,950	27,100	27,100
3	3.22	8.14	4.29	1.33	145,710	17,900	18,900
4	3.22	8.14	4.25	1.32	188,760	23,200	24,500
5	3.22	8.14	5.01	1.56	223,870	27,500	29,900
Average	---	---	---	---	---	24,800	25,800

Cp = Compressive Strength of the specimen having a height greater than the diameter or lateral dimension
Cc = Compressive Strength of an equivalent cubical specimen (only necessary when height to diameter differs from unity by 25% or more)

Compressive Strength of Dimension Stone (Parallel to Bedding / Dry)
ASTM C 170-90 (Reapproved 1994)

Specimen ID	Core Diameter (in)	Area (in^2)	Core Height (in)	Height to Diameter Ratio	Compressive Load (lbs)	Cp (psi)	Cc (psi)
1	3.21	8.09	3.82	1.19	242,480	30,000	30,000
2	3.21	8.09	3.61	1.12	228,180	28,200	28,200
3	3.21	8.09	3.63	1.13	235,430	29,100	29,100
4	3.20	8.04	4.14	1.29	222,270	27,600	29,100
5	3.21	8.09	4.08	1.27	232,100	28,700	30,100
Average	---	---	---	---	---	28,700	29,300

Cp = Compressive Strength of the specimen having a height greater than the diameter or lateral dimension
Cc = Compressive Strength of an equivalent cubical specimen (only necessary when height to diameter differs from unity by 25% or more)

ASTM C 616-08 Standard Specification for Quartz-Based Dimension Stone
Table 1 Physical Requirements (Compressive Strength)

Property	Test Requirements	Classifications	Test Method (s)
Compressive strength, min, psi	4,000	I Sandstone	C 170
	10,000	II Quartzitic Sandstone	
	20,000	III Quartzite	

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Materials Test Report

Client:	Rocky Ridge Stone Company	Material:	Dimension Stone Crushed Fragments
Project:	Dimension Stone Testing	Quantity:	3 buckets
S&ME Project No.:	1439-09-094	Date Received :	March 23, 2009

AASHTO T-104-99 (2007) Soundness of Aggregate by Use of Sodium Sulfate
Section 5.2.2 - Testing Large Rock (broken stone, cobbles, and boulders for use as rip-rap)

Sieve Size	Test Size (grams)	Pre-test Fraction (grams)	Sieve to determine loss	Post-test fraction (grams)	Percentage Loss (%)	Weighted Percentage Loss (%)
2-1/2" to 2"	3000 +/- 300	3044.6	1-1/4"	2813.7	8.1	6
2" to 1-1/2"	2000 +/- 200	2009.4		1832.9		
1-1/2" to 1"	1000 +/- 50	1008.0	5/8"	962.3	4.2	
1" to 3/4"	500 +/- 30	503.2		485.1		

TDOT Section 709.02 Requirement

Property	Test Requirement
Sodium Sulfate Soundness (five alternations)	Shall not have a weighted percentage of loss of more than 12

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