

REPORT OF ARIZONA SANDSTONE

Client: Cleveland Marble, LP
Mr. Ronnie Perez
219 East Bristol Lane
Orange CA 92865-2715

Report No.: 902102
Project No.: 0511068
Date of Service: 11/25/2005
Report Date: 12/16/2005

Project: Westlake Landmark
Buildings I & II
ASTM Stone Testing

Services: Perform required tests on Arizona Sandstone.

Report of Tests

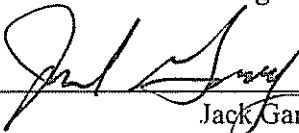
On this date, a representative of Rone Engineering Services, Ltd. perform physical properties tests on Arizona Sandstone submitted by Cleveland Marble LP. These tests included:

- 1) Absorption and Bulk Specific Gravity (ASTM C 97)
- 2) Flexural Strength (ASTM C 880)
- 3) Bent Bolt Anchor Pullout (ASTM C 1354)
- 4) Edge Kerf Clip (ASTM C 1354)

Results of these tests are given on the following pages.

Technician: Jack Gary
Report Distribution:
(1) Cleveland Marble, LP

Rone Engineering



Jack Gary
Special Testing



Report of Absorption and Bulk Specific Gravity of Dimension Stone

| | | | |
|---------------------|--|-------------------------|---------------|
| Client: | Cleveland Marble LP | Report No.: | 902102 |
| Project: | Westlake Landmark | Project No.: | 0511068 |
| Page: | 2 of 8 | Date of Service: | Nov. 25, 2005 |
| Material: | Arizona Sandstone | | |
| Test Method: | ASTM C97, Absorption and Bulk Specific Gravity of Dimension Stone | | |
| Calculation: | Absorption-((SSD Weight-Oven Dry Weight)/Oven Dry Weight) x 100 | | |
| | Bulk Specific Gravity-(Oven Dry Weight)/(SSD Weight-In Water Weight) | | |
| | Density-Bulk Specific Gravity x 62.4 | | |

| Sample Number | Oven Dry Weight (grams) | SSD Weight (grams) | In Water Weight (grams) | Absorption (%) | Density (lbs/cu. ft.) |
|-----------------|-------------------------|--------------------|-------------------------|----------------|-----------------------|
| 1 | 400.7 | 414.2 | 240.5 | 3.37 | 143.9 |
| 2 | 414.2 | 428.2 | 248.8 | 3.38 | 144.1 |
| 3 | 407.3 | 421.2 | 244.6 | 3.41 | 143.9 |
| Average: | | | | 3.39 | 144.0 |

LIMITATIONS: The test results presented herein were prepared based upon the specific samples provided for testing. We assume no responsibility for variation in quality (composition appearance, performance, etc.) or any other feature of similar subject matter provided by persons or conditions over which we have no control. Our letters and reports are for the exclusive use of the clients to whom they are addressed and shall not be reproduced except in full without the written approval of Rone Engineering Services, Ltd.



Report of Flexural Strength

| | | | |
|----------------------------|---|-------------------------|---------------|
| Client: | Cleveland Marble LP | Report No.: | 902102 |
| Project: | Westlake Landmark | Project No.: | 0511068 |
| Page: | 3 of 8 | Date of Service: | Nov. 25, 2005 |
| Material: | Arizona Sandstone | | |
| Test Method: | ASTM C880, Test Method for Flexural Strength of Dimensional Stone | | |
| Calculation: | $(3 \times \text{the failure load} \times \text{the span}) / (4 \times \text{width} \times \text{thickness squared})$ | | |
| Loading: | Applied quarter point with the finished face in tension at 600 psi per minute. | | |
| Nominal Dimensions: | | | |

| Span (inches) | Width (inches) | Thickness (inches) |
|------------------|-------------------|-----------------------|
| 12.5 | 4 | 1.7 |

Conditioning: Wet: 48 hours immersion in water at 69F (+/-3F)
Finish: Split
Rift Direction: Perpendicular

| Sample Number | Block Number | Dimensions | | | Failure Load (lbs) | Test Results (psi) |
|--|--------------|------------------|-------------------|-----------------------|-----------------------|-----------------------|
| | | Span (inches) | Width (inches) | Thickness (inches) | | |
| 1 | N/A | 12.50 | 4.04 | 1.67 | 541 | 450 |
| 2 | N/A | 12.50 | 4.15 | 1.68 | 628 | 503 |
| 3 | N/A | 12.50 | 4.00 | 1.70 | 773 | 627 |
| 4 | N/A | 12.50 | 4.01 | 1.66 | 626 | 531 |
| 5 | N/A | 12.50 | 4.02 | 1.64 | 660 | 572 |
| 6 | N/A | 12.50 | 4.02 | 1.74 | 852 | 656 |
| 7 | N/A | 12.50 | 4.01 | 1.73 | 742 | 580 |
| 8 | N/A | 12.50 | 4.05 | 1.58 | 624 | 579 |
| Average wet perpendicular mode: | | | | | | 562 |
| Standard deviation: | | | | | | 66 |
| Variance: | | | | | | 11.74 % |

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Report of Flexural Strength

| | | | |
|----------------------------|---|-------------------------|---------------|
| Client: | Cleveland Marble LP | Report No.: | 902102 |
| Project: | Westlake Landmark | Project No.: | 0511068 |
| Page: | 4 of 8 | Date of Service: | Nov. 25, 2005 |
| Material: | Arizona Sandstone | | |
| Test Method: | ASTM C880, Test Method for Flexural Strength of Dimensional Stone | | |
| Calculation: | $(3 \times \text{the failure load} \times \text{the span}) / (4 \times \text{width} \times \text{thickness squared})$ | | |
| Loading: | Applied quarter point with the finished face in tension at 600 psi per minute. | | |
| Nominal Dimensions: | | | |

| Span (inches) | Width (inches) | Thickness (inches) |
|------------------|-------------------|-----------------------|
| 12.5 | 4 | 1.7 |

Conditioning: Dry: 24 hours in a heated, ventilated, chamber at 122F (+/-4F)
Finish: Split
Rift Direction: Perpendicular

| Sample Number | Block Number | Dimensions | | | Failure Load (lbs) | Test Results (psi) |
|--|--------------|------------------|-------------------|-----------------------|-----------------------|-----------------------|
| | | Span (inches) | Width (inches) | Thickness (inches) | | |
| 1 | N/A | 12.50 | 4.01 | 1.67 | 1,071 | 898 |
| 2 | N/A | 12.50 | 4.12 | 1.60 | 1,085 | 964 |
| 3 | N/A | 12.50 | 3.98 | 1.81 | 943 | 678 |
| 4 | N/A | 12.50 | 4.02 | 1.79 | 1,319 | 960 |
| 5 | N/A | 12.50 | 4.03 | 1.69 | 1,061 | 864 |
| 6 | N/A | 12.50 | 4.10 | 1.65 | 1,224 | 1,028 |
| 7 | N/A | 12.50 | 3.96 | 1.73 | 1,010 | 799 |
| 8 | N/A | 12.50 | 4.14 | 1.74 | 1,019 | 762 |
| Average wet perpendicular mode: | | | | | | 869 |
| Standard deviation: | | | | | | 117 |
| Variance: | | | | | | 13.46 % |

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Report of Bent Bolt Anchor Pullout Test

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|---------------------|--|-------------------------|---------------|
| Client: | Cleveland Marble LP | Report No.: | 902102 |
| Project: | Westlake Landmark | Project No.: | 0511068 |
| Page: | 5 of 8 | Date of Service: | Nov. 25, 2005 |
| Material: | Arizona Sandstone | | |
| Test Method: | ASTM C 1354, Standard Test Method for Strength of Individual Stone Anchorages in Dimension Stone | | |
| Calculation: | Anchorage system load = Test machine load | | |
| Loading: | Constant rate of loading at 100 - 120 lbs./minute until failure | | |

Anchor Description: 1/4" dia. bent threaded rod installed in 5/16" dia. hole x 1" deep utilizing Bonstone epoxy system (Detail T1)

Nominal Dimensions:

| Length (inches) | Width (inches) | Thickness (inches) |
|--------------------|-------------------|-----------------------|
| 12 | 12 | 1.7 |

Conditioning: Wet: 48 hours immersion in water at 69° F. (+/-3)

Finish: Split

| Sample Number | Failure Mode | Anchorage System Load (lbf.) |
|---|-------------------------------|------------------------------|
| 1 | Stone fracture through anchor | 885 |
| 2 | Stone fracture through anchor | 506 |
| 3 | Stone fracture through anchor | 610 |
| 4 | Stone fracture through anchor | 483 |
| 5 | Stone fracture through anchor | 767 |
| 6 | Stone fracture through anchor | 707 |
| 7 | Stone fracture through anchor | 465 |
| 8 | Stone fracture through anchor | 585 |
| 9 | Stone fracture through anchor | 615 |
| 10 | 3" Cone | 443 |
| Average Wet Bent Bolt System Load: | | 607 |
| Standard Deviation: | | 97 |
| Variance (percent): | | 15.99 |



Report of Bent Bolt Anchor Pullout Test

| | | | |
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Anchor Description: 1/4" dia. bent threaded rod installed in 5/16" dia. hole x 1" deep utilizing Bonstone epoxy system (Detail T1)

Nominal Dimensions:

| Length (inches) | Width (inches) | Thickness (inches) |
|--------------------|-------------------|-----------------------|
| 12 | 12 | 1.7 |

Conditioning: Dry: 24 hours in a heated ventilated oven at 122 F (+/- 3F)

Finish: Split

| Sample Number | Failure Mode | Anchorage System Load (lbf.) |
|---|-------------------------------|------------------------------|
| 1 | Stone fracture through anchor | 1,075 |
| 2 | Stone fracture through anchor | 833 |
| 3 | Stone fracture through anchor | 1,095 |
| 4 | Stone fracture through anchor | 1,185 |
| 5 | Stone fracture through anchor | 1,109 |
| 6 | Stone fracture through anchor | 1,104 |
| 7 | Stone fracture through anchor | 1,104 |
| 8 | 5" Cone | 1,328 |
| 9 | 4" Cone | 1,248 |
| 10 | Stone fracture through anchor | 1,423 |
| Average Wet Bent Bolt System Load: | | 1,150 |
| Standard Deviation: | | 153 |
| Variance (percent): | | 13.30 |

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