

# BOWSER-MORNER, INC.

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## REPORT ON TESTS OF MASONRY VENEER

**Report To:** Reading Rock, Inc.  
Attn: David Zawada  
4600 Devitt Drive  
Cincinnati, OH 45246

**Report Date:** 09/18/19  
**Job No.:** 191824  
**Report No.:** 114999A  
**No. of Pages:** 2

**Date Made:** Unknown  
**Date(s) of Performance:** 08/20/19 thru 08/27/19

**Date Received:** 08/20/19

**Test Specification:** ASTM C 90

**Test Methods:** ASTM C 140, C 426

**Unit Description:** Caliza Stone

**Technician(s) Performing Tests:** B. Kushmaul

**Condition of Samples:** Intact in good condition

COMPRESSIVE STRENGTH					SPECIFICATIONS	
Specimen No.	3D	3E	3F	Average	Individual	Average
Length in Inches	7.53	7.57	7.56			
Width in Inches	2.04	2.06	2.05	2.05		
Height in Inches	3.55	3.54	3.57			
Total Load in lbs.	56,220	53,550	50,600			
Gross Area, Sq. In.	15.4	15.6	15.5			
Gross Unit Load, psi	3660	3430	3260	3450		
Gross Volume, Cu. Ft.	0.0316	0.0319	0.0320	0.0318		
Net Unit Load, psi	<b>3670</b>	<b>3490</b>	<b>3300</b>	<b>3490</b>	1800 Min.	2000 Min.
ABSORPTION					SPECIFICATIONS	
Specimen No.	3A	3B	3C	Average	Individual	Average
Wt. As Received, lbs.	3.91	3.86	3.89			
Suspended Wt., lbs.	2.03	1.98	2.00			
Wet Wt., lbs.	4.00	3.94	3.97			
Dry Wt., lbs.	3.82	3.78	3.79			
Absorption, lbs./Cu.Ft.	5.7	5.1	5.7	<b>5.5</b>	17 Max.	15 Max.
Absorption, % of Dry Wt.	4.7	4.2	4.7	4.6		
% Moisture, % Absorption	50.0	50.0	55.6			
Net Vol., Cu. Ft.	0.032	0.031	0.032	0.032		
Net Area, Sq. In.	15.4	15.3	15.3	15.3		
Dry Den, lbs./Cu.Ft.	121.0	120.3	120.0	120.5		
LINEAR SHRINKAGE						
Linear Shrinkage @ Equilibrium, %:	<b>0.035</b>		ASTM C 90, section 5.2 Specification, % Max: 0.065			

Note: Architectural Cast Stone Units are usually specified to comply with ASTM C1364. This report compares the test results to ASTM C 90, "Loadbearing Concrete Masonry Units"

Should you have any questions, or if we may be of further service, please contact me at (937) 236-8805, ext. 322.

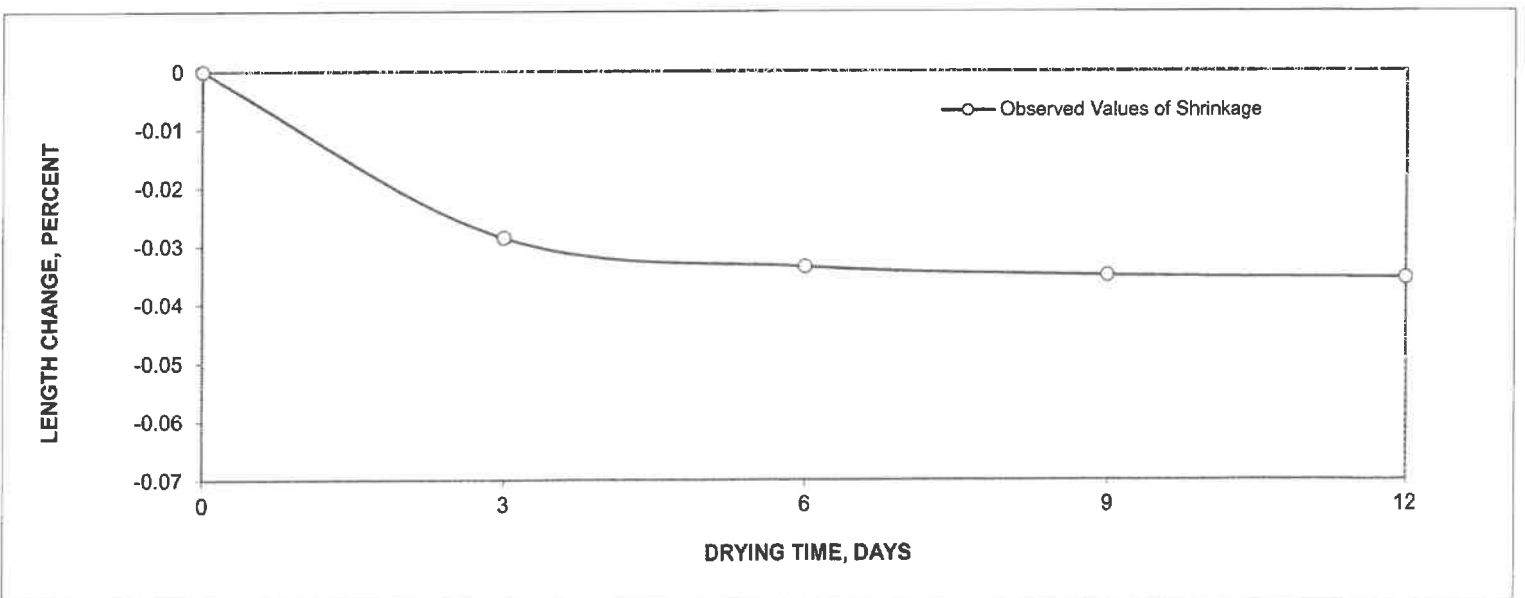
Karl A. Fletcher, Manager  
Construction Materials and  
Geotechnical Laboratories

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**Report To:** Reading Rock, Inc.  
**Methods:** ASTM C 140, C 426  
**Specs:** ASTM C 90-02, Section 5.2  
**Unit ID:** Caliza Stone

**Job No.:** 191824  
**Report No.:** 114999A  
**Date Submitted:** 8/20/2019  
**Ref. Rod Length:** 15.368004

Day of Reading	Specimen ID	Reference Rod, inch	Specimen Readings, inch	Length inch	Length Change, %	Weight, lbs.	Weight Change, %	Avg Weight Change, %	Avg Length Change, %
0 9/6/2019	3G	0.0000	0.0664	15.4344	n/a	9.1200	n/a	0	0
	3H	0.0000	0.0541	15.4221	n/a	9.0500	n/a		
	3I	0.0000	0.0164	15.3844	n/a	8.9300	n/a		
3 9/9/2019	3G	0.0000	0.0623	15.4303	-0.0266	8.6200	-5.4825	-4.8685	-0.0286
	3H	0.0000	0.0499	15.4179	-0.0272	8.6500	-4.4199		
	3I	0.0000	0.0115	15.3795	-0.0319	8.5100	-4.7032		
6 9/12/2019	3G	0.0000	0.0616	15.4296	-0.0311	8.6000	-5.7018	-5.0526	-0.0335
	3H	0.0000	0.0491	15.4171	-0.0324	8.6300	-4.6409		
	3I	0.0000	0.0107	15.3787	-0.0371	8.5000	-4.8152		
9 9/15/2019	3G	0.0000	0.0613	15.4293	-0.0331	8.6000	-5.7018	-5.0526	-0.0350
	3H	0.0000	0.0489	15.4169	-0.0337	8.6300	-4.6409		
	3I	0.0000	0.0105	15.3785	-0.0384	8.5000	-4.8152		
12 9/18/2019	3G	0.0000	0.0613	15.4293	-0.0331	8.6000	-5.7018	-5.0526	-0.0355
	3H	0.0000	0.0488	15.4168	-0.0344	8.6300	-4.6409		
	3I	0.0000	0.0104	15.3784	-0.0390	8.5000	-4.8152		



**Linear Shrinkage @ Equilibrium, %:** 0.035      **ASTM C 90-02, section 5.2 Specification, % Max:** 0.065

The units submitted meet specifications for linear shrinkage.