



National
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September 24, 2021

Jim Grubaugh
Indiana Cast Stone
650 W. Market Street
Spencer, IN 47460

NCMA Project Number: 21-412A
Sample Description: 18x18x5 in. Dry-Cast Cast Stone Sample

Please find enclosed the test report conducted in accordance with ASTM C1194-19, *Standard Test Method for Compressive Strength of Architectural Cast Stone* and ASTM C1195-19a, *Standard Test Method for Absorption of Architectural Cast Stone*, that we performed at your request on the sample of architectural cast stone that you supplied to the NCMA Research and Development Laboratory. Please note that the contents of this report are not to be reproduced, except in full, without the written approval of the NCMA Research and Development Laboratory.

The National Concrete Masonry Association Research and Development Laboratory is dedicated to the scientific testing and research of manufactured concrete products and systems and we are constantly working to improve our services. We take pride in meeting your product evaluation requirements and look forward to continuing to service your testing needs for years to come. Thank you for choosing NCMA's Research and Development Laboratory. Please feel free to contact me directly with any comments or questions at: 571-224-0924 or tjones@ncma.org.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Jones", written over a horizontal line.

Timothy Jones
Manager, Research and Development Laboratory

ASTM C1194-19 and ASTM C1195-19a Test Report
Compressive Strength and Absorption of Architectural Cast Stone

NCMA Project Number: 21-412A
Report Date: September 24, 2021

Client: Indiana Cast Stone
Address: 650 W. Market Street
Spencer, IN 47460

Testing Agency: National Concrete Masonry Association
Research and Development Laboratory
Address: 13750 Sunrise Valley Drive
Herndon, VA 20171-4662

Standard Specification: ASTM C1364-19
Sample Description: 18x18x5 in. Dry-Cast Cast Stone Sample

Sampling Party: Indiana Cast Stone
Date Samples Received: September 15, 2021
Date Samples Produced: August 26, 2021

The client delivered a single sample of architectural cast stone for testing. The following test specimens were saw-cut from the submitted sample: (3) - 2 x 2 x 2 inch specimens for absorption evaluation and (3) - 2 x 2 x 2 inch specimens for compressive strength evaluation. The individual and average results of these tests are provided below.

Summary of Test Results:

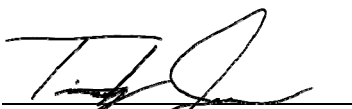
	<u>Tested Values</u>	<u>Required Values</u>
Average Measured Compressive Strength =	8,010 psi	6,500 psi minimum
Average Measured Absorption =	4.7 %	6.0 % maximum


Absorption Specimens: Absorption values are determined in accordance with ASTM C1195-19a.

Age of Specimens at start of testing:		Saturated							
27 days		Average	Average	Average	Received	Oven-Dry	Surface-Dry	Absorption	Oven-Dry
Dates Tested:		Length (in.)	Width (in.)	Height (in.)	Weight (g)	Weight (g)	Weight (g)	%	Density (pcf)
9/22/2021	Specimen 1A	2.03	1.99	2.04	300.6	284.1	296.2	4.3	130.8
to	Specimen 2A	1.99	2.04	2.06	302.1	283.8	298.4	5.1	129.1
9/24/2021	Specimen 3A	1.99	2.03	2.07	290.7	286.4	300.2	4.8	131.1
	Average	2.01	2.02	2.06	297.8	284.8	298.3	4.7	130.4

Compression Specimens: Compressive strength values are determined in accordance with ASTM C1194-19.

Age of Specimens at testing:		Average	Average	Average	Received	Oven-Dry	Compressive	Compressive
28 days		Length (in.)	Width (in.)	Height (in.)	Weight (g)	Weight (g)	Load (lb)	Strength (psi)
9/23/2021	Specimen 1B	1.99	2.03	2.04	290.9	286.3	36,010	8,910
	Specimen 2B	1.99	2.04	2.05	293.7	283.8	31,270	7,690
	Specimen 3B	2.00	2.02	2.03	288.1	278.4	29,910	7,420
	Average	1.99	2.03	2.04	290.9	282.8	32,397	8,010


Timothy Jones
Manager, Research and Development Laboratory


Jason Thompson
Vice President of Engineering