

COBBLESTONE BRIDGE

Acadia National Park Roads & Bridges

Spanning Jordan Stream on Gardiner-Mitchell Hill-Jordan Stream Road

Seal Harbor Vicinity

Hancock County

Maine

HAER NO. ME-31

HAER
ME
5-SEH.A.V.
3-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service

Department of the Interior

P.O. Box 37127

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HISTORIC AMERICAN ENGINEERING RECORD

COBBLESTONE BRIDGE

HAER No. ME-31

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LOCATION: Spanning Jordan Stream on Gardiner-Mitchell Hill-Jordan Stream Carriage Road at post 24, David Rockefeller property, 1 mile northwest of Seal Harbor, Mount Desert Island, Hancock County, Maine

Quad: Southwest Harbor, ME
UTM: 19/559100/4906700

DATE OF CONSTRUCTION: 1917

ARCHITECT: William Welles Bosworth, New York

ENGINEER: Charles P. Simpson, Sullivan Harbor, Maine

CONTRACTOR: B. W. Candage & Son, Seal Harbor, Maine

STRUCTURE TYPE: Reinforced concrete filled spandrel arch bridge faced in stone cobbles.

FHWA STRUCTURE NO.: 1700-034S

ORIGINAL OWNER: John D. Rockefeller, Jr.

PRESENT OWNER: David Rockefeller

SIGNIFICANCE: The first of the Rockefeller carriage road bridges on Mount Desert Island, Cobblestone Bridge is unique in being faced with small rounded stones or "cobbles." No other bridge on the system shares this design.

PROJECT
INFORMATION:

Documentation of Cobblestone Bridge is part of the Acadia National Park Roads and Bridges Recording Project, conducted in 1994-95 by the Historic American Engineering Record

Richard H. Quin, Historian, 1994

This is one in a series of reports prepared for the Acadia National Park Roads and Bridges Recording Project. HAER No. ME-13, ROCKEFELLER CARRIAGE ROADS, includes more specific information on the carriage road network.

HISTORY

The first major bridge constructed on the Rockefeller carriage road system on Mount Desert Island, Cobblestone Bridge is distinguished by the smooth stone cobbles which conceal its reinforced concrete substructure. The use of the cobble facing is an anomaly; all the other major bridges on the system are faced in quarried granite.

The bridge was constructed to carry the Gardiner-Mitchell Hill-Jordan Stream carriage road, which connected the Rockefeller estate at Seal Harbor with the Jordan Pond House, across Jordan Stream, a strong perennial stream. Seal Harbor contractor Alanson E. Clement, a neighbor to Rockefeller's estate and contractor for most of the early road work, constructed the road and the bridge. Charles P. Simpson, a Sullivan Harbor engineer Rockefeller had engaged to direct his road work, oversaw the project.

Rockefeller originally intended for the structure to be a reinforced concrete arch faced in the island's native granite. His architect, William Welles Bosworth of New York, prepared an elevation and a half section for a stone-faced bridge in June 1916. The plan, now in the Rockefeller Archives Center, shows a semicircular arch structure of random ashlar construction utilizing large granite blocks and heavy voussoirs. It featured half circular viewing platforms, a feature incorporated on a number of the subsequent bridges.¹

Rockefeller made plans to proceed with the construction of the coursed stone bridge as planned by Bosworth, but Charles Simpson

¹William Welles Bosworth, "Highway Bridge over Jordan Stream for Mr. John D. Rockefeller, Jr., Esq., Seal Harbor, ME," construction drawing, 2 June 1916. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group II, Homes (Seal Harbor), Box 118 Folder 1192, Map 163.

convinced him to use "natural moss-faced rocks" taken from the nearby streambed for the stone facing; such a design, said Simpson, would make the bridge look less artificial.²

Cobblestone Bridge clearly departs from the dictum of "truth in architecture" holding that the appearance of a structure should reflect its construction. Obviously, no bridge could be constructed of cobbles piled up, so their use is purely surface decoration. However, cobblestone bridges had recently been employed elsewhere on private estates. A fine example from the same decade can still be seen at the Frederick Vanderbilt estate at Hyde Park, New York, now part of Roosevelt-Vanderbilt National Historic Site.

Clement evidently began work on the bridge in summer 1916. At the end of October, Simpson reported that the work was "progressing fairly well." Crews had erected the form of the arch and were ready to set the reinforcing rods in place. They also completed a wall around a point of rocks at the east end and had nearly finished rock blasting and filling around the site.³ All work was completed early the following year and the date "1917" was later carved into the keystone on the north or upstream side of the arch. Total cost of the structure was \$3,500.

No other bridge on the system was constructed with cobblestone facing. According to a modern account, Rockefeller's masons stated they could not do a good job with cut granite.⁴ Apparently, the real reason was that uniform cobbles could not be obtained in sufficient quantities for the construction of the

²Vanasse Hangen Brustlin, Inc. and McGinley Hart & Associates, *Historic Bridge Reconnaissance Survey, Carriage Road System, Acadia National Park*, draft edition (Boston, MA: National Park Service, North Atlantic Regional Office, September 1993), 31.

³Charles P. Simpson, Sullivan Harbor, ME, to John D. Rockefeller, Jr., New York City, 29 October 1916. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 109 Folder 1080.

⁴Victor J. Layton, "Mt. Desert Island's Granite Heritage," unidentified magazine clipping, 75. Acadia National Park Library vertical files.

numerous planned bridges. All of the later major bridges utilized cut stone for the surface cladding. Cobblestone Bridge did introduce some elements which were copied on some of the subsequent bridges, including the stone coping atop the parapet walls and the semicircular "turrets" or viewing platforms.

Many observers found the bridge interesting, but it had its critics as well, including park superintendent George Dorr, who thought it inappropriate. In 1924, seven years after its completion, Dorr was still expressing his disdain for the bridge, stating in a letter to Park Service Assistant Director Arno B. Cammerer that "all have agreed in regretting it from the artistic standpoint," but pointed out that vegetation was closing in around it and that it would soon be "little noticeable."⁵

Dorr's criticism would be easily refuted today, as the bridge is a popular destination for day-hikes from the Jordan Pond House. Never transferred to the national park, the bridge is still a part of the Rockefeller estate and access to the site is restricted to hikers and horse and carriage riders.

The bridge was inspected by the Federal Highway Administration in June 1990 and determined structurally sound. The FHWA inspectors recommended some minor maintenance work, including repair of minor scour at the base of one abutment, repointing some joints between the cut stone voussoirs, and removal of vegetation from the parapet. They estimated the cost of the work at \$1,200. The inspectors also estimated the bridge's carrying capacity as H-15, meaning the structure should be able to bear the load of a two-axle truck weighing fifteen tons.⁶

⁵George B. Dorr, Superintendent, Lafayette National Park, to Arno B. Cammerer, Assistant Director, National Park Service, 10 January 1924, in "Papers Relating to Road Hearing Before Secretary Work, March 26, 1924," Acadia National Park Library.

⁶U.S. Department of Transportation, Federal Highway Administration, "Bridge Safety Inspection Report, Carriage Road over Jordan Stream, Acadia National Park Str. No. 1700-034S" (Sterling, VA: Federal Highway Administration, Eastern Direct Federal Program, 22 June 1990), 2, 5.

DESCRIPTION

Cobblestone Bridge carries the Gardiner-Mitchell Hill-Jordan Stream carriage road over Jordan Stream on the northern edge of the Rockefeller estate, about a mile southwest of Jordan Pond House. The bridge is a filled reinforced concrete arch structure, faced with uniform cobbles or rounded stones taken from the nearby streambed; these average about 7" in diameter. The structure is 140' long and spans the stream on a single arch with a clear span of 28'. Asymmetrical in design, the bridge is longer on its south end, where the wing walls extend about 50' longer than on the north. Quarried granite arch ring stones or voussoirs outline the arch, and other cut stone forms the coping for the parapet walls; only the cobble facing is visible on other surfaces. Semicircular viewing platforms on battered bases flank the arch on each side and allow visitors to enjoy a close view of the deeply wooded stream valley. The bridge is located at the intersection of the Gardiner-Mitchell Hill-Jordan Stream and Barr Hill carriage roads, and the parapet walls on the east side flare slightly to follow the line of the intersecting road. The broken stone roadway was resurfaced in 1994.

II. BIBLIOGRAPHY

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JET LOWE, PHOTOGRAPHER, SEPTEMBER 1994

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|---------|---|
| ME-31-1 | NORTH ARCH, FACING SOUTH DOWN THE STREAM |
| ME-31-2 | NORTH ARCH, "1917" DATES TONE AND EAST SIDE OF ARCH |
| ME-31-3 | SOUTH ARCH, FACING EAST TO TURRET |
| ME-31-4 | ROADWAY FACING EST FROM HILL ABOVE WEST APPROACH |

HAER A 172



HAER No ME-31.1

LOWE A 73
HAER

1917

HAER No. ME. 31.2





HAER No. ME. 31.3

HAER No ME. 31.4

