JORDAN POND DAM BRIDGE
Acadia National Park Roads & Bridges
Spanning Jordan Stream on Jordan Pond Carriage Road
Seal Harbor Vicinity
Hancock County
Maine

HAER NO. ME-33

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
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JORDAN POND DAM BRIDGE

HAER No. ME-33

LOCATION:	Spanning Jordan Stream on Sargent Mountain (Around the Mountain) carriage road loop, 1/10 mile NW of Jordan Pond House, Seal Harbor vicinity, Mount Desert Island, Hancock County, Maine Quad: Southwest Harbor, ME UTM: 19/559400/4907675
DATE OF CONSTRUCTION:	1920
ARCHITECT:	William Welles Bosworth, New York, after an existing structure in Central Park and Little Harbor Brook Bridge
ENGINEER:	Charles P. Simpson, for John D. Rockefeller, Jr.
CONTRACTOR:	B. W. Candage & Son, Seal Harbor, ME
STRUCTURE:	Stone-faced reinforced concrete filled spandrel arch bridge
FHwA NO.:	1700-0022S
OWNER:	Acadia National Park, National Park Service
SIGNIFICANCE:	Copied from a bridge in New York's Central Park, Chasm Bridge bears the Sargent Mountain carriage road loop across Jordan Stream on a shallow segmental arch. The bridge design was previously used for the Little Harbor Brook Bridge and later for two other structures on the system.
PROJECT INFORMATION:	Documentation of Jordan Pond Dam Bridge is part of the Acadia National Park Roads and Bridges Recording Project, conducted in 1994-95 by the Historic American Engineering Record of the National Park Service. This is one in a series of project reports. HAER No. ME-13, ROCKEFELLER CARRIAGE ROADS, contains more specific information on the park carriage road system.

Richard H. Quin, HAER Historian, 1994

This is one in a series of reports prepared for the 1994-95 Acadia National Park Roads and Bridges Recording Project. HAER No. ME-13, ROCKEFELLER CARRIAGE ROADS, is an overview history of the entire carriage road system.

HISTORY

As John D. Rockefeller, Jr. began extending his Mount Desert Island carriage roads beyond the boundaries of his Seal Harbor estate, he devised a new road to connect the popular Jordan Pond House with the Brown Mountain Road (now Maine Highway 198) near Northeast Harbor. His intent was to provide a connection with a bridle path system that was planned but never fully constructed by the Northeast Harbor Village Improvement Society. The VIS, which was extensively involved in the construction of a series of woodland paths and hiking trails, planned the bridle paths so horse riders would not use and damage the foot trails. However, opposition arose to the separate system, and the bridle paths were never constructed.[1] This did not deter Rockefeller from building his road, construction of which was underway by 1917.

Near the eastern end of the road, a bridge would be required to cross Jordan Stream, one of the two outlets of Jordan Pond. Rockefeller had just had a bridge constructed to the west over Little Harbor Brook (HAER No. ME-32), using a design based on a small structure in New York's Central Park. Plans for the Little Harbor Brook Bridge were drawn up by New York architect William Welles Bosworth, who had built Rockefeller's townhouse and did extensive work with the gardens at the family's Pocantico Hills estate. The structure was built by B. W. Candage & Son, a Seal Harbor construction firm which had done masonry work for Rockefeller's island estate. Well pleased with the Little Harbor Brook Bridge, Rockefeller determined to use the design again for the Jordan Stream crossing.

The location for the structure was determined by Charles P. Simpson, Rockefeller's carriage road engineer, and Welles Bosworth, the New York architect he engaged to design the plans for the bridge. They chose a spot just below the outlet of Jordan Pond, where the Seal Harbor Village Improvement Society constructed a small dam as part for the village water system.

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[1]Tom St. Germain and Jay Saunders, *Trails of History: The Story of Mount Desert Island's Paths from Norumbega to Acadia* (Bar Harbor, ME: Parkman Publications, 1993), 92-94.

The location would provide a splendid view across the full length of Jordan Pond, one of the most popular scenic attractions on the island.

Rockefeller again engaged the Candages for the work. In September 1919, Rockefeller told Sam Candage the new bridge below Jordan Pond was to be identical to the Little Harbor Brook Bridge which the Candages were then completing, except that split rather than weathered stone would be used in its construction. Rockefeller told Candage to continue using a variety in the size of the stones, and that he expected the bridge to have the same general appearance, "except as regards evidences of age," as the Little Harbor Brook Bridge.[2] "If you could make this bridge an exact duplicate of the Little Harbor Brook Bridge," he concluded, "in every respect except your inability to get the weathered color on the stone, I should regard it as most successful."[3]

Rockefeller told Candage he should be able to procure stone for the bridge from his nearby quarry and to reuse the formwork from the Little Harbor Brook Bridge. Rockefeller indicated he thought these measures should enable Candage to construct the bridge for "considerably less" than the contractor's estimated $2,716 cost for the Little Harbor Brook Bridge, suggesting the new span should cost no more than $2,500. In closing, he wrote he hoped the bridge would be completed before winter set in.[4]

The bridge work did not get underway as soon as Rockefeller had hoped. In December, he wrote Candage regarding the finished treatment of the stonework, warning him again that he desired a rustic appearance rather than a finely finished bridge.

I want to reiterate most strongly the importance of not

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[2]John D. Rockefeller, Jr., New York, to Sam Candage, Seal Harbor, ME, 12 September 1919. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 122 Folder 1235.

[3]Quoted in Vanasse Hangen Brustlin, Inc. and McGinley Hart & Associates, *Historic Bridge Reconnaissance Study, Carriage Road System, Acadia National Park*, draft edition (Boston, MA: National Park Service, North Atlantic Regional Office, September 1993), 39.

[4]Rockefeller to Candage, *op cit.*

> having the stonework on the bridge you are building near the Jordan Dam too well and sharply cut. It is highly desirable, to get as nearly as possible the effect of the Little Harbor Brook bridge, that some of the stones should be of irregular shapes and sizes, suggesting a natural rather than an artificial condition. Of this bridge were to be made as neat, true and fine a piece of stonework as the posts of the gates at my Jordan Pond entrance, it would be a failure. It must be much rougher and more natural. . . This, you see, necessarily involved irregularity in the shape of the stones and a lack of evenness in splitting the edges, so as to reproduce, in so far as possible, the character of the material used in the Little Harbor Brook bridge.[5]

Candage estimated the cost of the bridge at $2716, somewhat more than Rockefeller had suggested would be reasonable.[6] The construction work began late in the year and was completed in 1920. The final cost of the structure was $2,735.11. Although the figure exceeded Candage's estimate by $19.11 and Rockefeller's own estimate by $235.11, it would be the closest to estimated cost the Candages ever came in building bridges for Rockefeller. Cost overruns on future projects would ultimately convince Rockefeller to engage other contractors or use his own crews for the last bridges built on the system.

The bridge remains in continuous use, and is one of the most-visited on the system, as it is located close to the Jordan Pond House and is crossed by users of the Asticou-Jordan Pond and Sargent Mountain (Around the Mountain) carriage roads. A popular park interpretive program takes visitors to the bridge and along nearby stretches of the carriage road system. Many visitors travel down to the bridge to enjoy the spectacular view up Jordan Pond. The rise of the roadway over the stream enables visitors to look out over the adjacent dam and take in the vista.

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[5]Rockefeller to Candage, 18 December 1919. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 122 Folder 1235.

[6]"Bridges Built by B. W. Candage," MSS, 19 August 1927. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 121 Folder 1217.

After three-quarters of a century of use, the bridge is exhibiting some deterioration. A September 1993 study by Vanasse Hangen Brustlin, Inc., a Boston engineering firm, listed a number of problems, including cracking of the exposed inner curve or intados of the arch, calcium carbonate deposition on the underside of the voussoirs, mortar joint deterioration, and a wearing of the roadway surface. The study recommended waterproofing the structure to convey water off the roadway, repointing where necessary, removal of the efflorescence, and a "special roadway treatment" over the arch crown to deal with the wearing away of the roadbed.[7] This latter problem was partially dealt with in 1995 when a new gravel surface was applied to the road.

DESCRIPTION

One of four carriage road bridges based on the design of a bridge in New York's Central Park, the Jordan Pond Dam Bridge is a small reinforced concrete structure faced in the island's native granite. The 41'6" bridge spans Jordan Stream on a single shallow segmental arch with a clear span of 19'. The arch rises from concealed concrete footings to a height of 4'6" above the water line. Solid stone parapet walls flank the 16' roadway and roughly follow the curve of the arch to terminate in battered square end posts or curtails. The bridge's reinforced concrete substructure is clad in random ashlar granite except for the exposed concrete intrados of the arch. To either side of the arch are 10" diameter weep holes with projecting stone scuppers.[8]

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[7]Vanasse Hangen Brustlin and McGinley Hart, 39, 41.

[8]Ibid., 39.

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JET LOWE, PHOTOGRAPHER, SEPTEMBER 1994

ME-33-1	PERSPECTIVE VIEW FACING NE
ME-33-2	DECK VIEW FACING WEST


HAER NO. ME-82-2