

NEW YORK STATE BARGE CANAL, LOCK O8
(Oswego Canal, Lock O8)
Canal View Drive
Oswego
Oswego County
New York

HAER NY-538
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

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HAER No. NY-538

Location: Canal View Drive, Oswego, Oswego County, New York

Lock O8 is located at latitude 43.456135916, longitude -76.508548324. The point represents the upstream lock gates and was obtained in summer 2009.

There is no restriction on its release to the public.

Significance: Lock O8, located on the Oswego Canal, is a component of the nationally significant New York State Barge Canal. Lock O8 is significant because it was built as a siphon lock, the only one on the canal and reported to be the first one in the United States.

Description: Lock O8 is located on the east side of the Oswego River near Lake Ontario and about ½ mile north of Lock O7.¹ The lock is accessed by an asphalt-covered driveway extending from Canal View Drive that leads to an asphalt parking area near the lockhouse. The lock site consists of the lock and associated structures, lockhouse, storage shed, and other auxiliary structures.

The lockhouse is a two-story concrete building with a concrete chimney that is centered on the east side of the lock chamber. The building sits on a concrete foundation. The hipped roof is covered with slate shingles. Two-over-two wood windows punctuate the building's walls. The entrance is a wood pane-and-panel door with transom. The living quarters for the operating crew were located on the second floor. The structure is in good condition.

A storage shed is near the lockhouse. The single-story frame building is on a concrete foundation. The side-gable roof is covered with asphalt shingles and has vertical-board paneled siding. The entrance is a wooden door. The building is in good condition.

Lock O8 has a 10.5' lift to the north with normal pool elevations of Lake Ontario at 245' below and 255.5' above. It was originally as a siphon lock, reportedly the first constructed in the United States and the largest ever. Professor Hotopp of Hanover, Germany, is credited with developing this type of lock, which held the advantage over the standard design of a valve and culvert system that watered and dewatered the lock chamber of being economical (since no machinery was required). The siphon lock operated using a tank with a valve attachment, 12" and 20" pipes, and the siphon, which was a pipe with an upward bend. By opening and closing the valves and admitting air into the pipes, the flow of water into the lock chamber could be controlled.² In 1968, electric valves were installed to replace the siphons. The lock chamber

¹ Description of current conditions is based on a site visit made by the HAER recording team in summer 2009.

² Department of the State Engineer and Surveyor of the State of New York, *Barge Canal Bulletin*, series III, no. 7 (July 1910), 309-316; Noble Whitford, *History of the Barge Canal of New York State* (Albany: J.B. Lyon Company Printers, 1922), 469-70.

walls have been faced with steel plate and coping. The operating machinery is hydraulic. The public access side of the lock is lined with post-and-rail fencing and pipe railing and is illuminated with modern light fixtures. A cable bridge spans the center of the lock. The lock and associated structures are in good condition.

Control stand shelters are located on the east side of the lock chamber at both the upstream and downstream ends. These are single-story frame structures on concrete foundations with horizontal wood siding and a pyramidal asphalt roof with vinyl sliding windows and a single-paned door. The shelters are in good condition.

The exposed west (river) lock wall consists of twenty-one arches and extends to the southwest guide wall, which is interrupted by a concrete spillway that appears to be in good condition although the guide wall itself shows signs of spalling and breaking. The southwest guide wall is lined with concrete-filled cast-iron bollards, pipe railing, and modern “street light” fixtures. The southeast guide wall is concrete and exhibits areas of major spalling and breaking. There are concrete-filled cast-iron bollards set away from the wall, as well as modern light fixtures.

Nearby are recreational structures, including a boat launch beneath the West Bridge Street bridge. The concrete boat launch is in good condition. A modern picnic pavilion is located at the downstream end of the lock and has modern reproduction lighting fixtures. It is non-contributing.

History: The original construction of Lock O8 was part of Contract No. 35, awarded in 1907 to Gilmour-Horton-Allen Company. The contract covered excavation of the canal, building locks O7 and O8, and other work. The contractor started work in October, but their “poor success with their coffer-dams and their failure on several occasions” resulted in months of delay. Despite the problems, Lock O8 had been completed by 1909, aside from the gates and the buffer-beam.³

The power plant was part of Contract 90, awarded to D’Olier Engineering Company in April 1910. There were various alterations made to the original contract, which was for furnishing and installing the equipment needed to operate and light the locks. Alteration 4 eliminated the incomplete work at locks O2, O7, and O8 (the concrete work had not yet been finished) and shifted the remainder of the work to Contract 90A. This was awarded in August 1912 to Lupfer & Remick who subcontracted much of the actual construction work. The specifications noted the contract was “for the furnishing and equipment of...electric capstans at locks Nos. 7 and 8 and transmission lines, arc light poles and arc lights between lock No. 8 and the power plant at lock No. 7.”⁴

³ *Annual Report of the State Engineer and Surveyor of the State of New York for the Fiscal Year ended in September 30, 1908, Vol. 1* (Albany: J.B. Lyon Company, 1909), quote from p. 228; *Annual Report of the State Engineer and Surveyor of the State of New York for the Fiscal Year ended in September 30, 1909, Vol. 1* (Albany: J.B. Lyon Company, 1910), 140.

⁴ *Annual Report, 1910*, 146; *Annual Report of the State Engineer and Surveyor of the State of New York for the Fiscal Year ended in September 30, 1912, Vol. 1* (Albany: J.B. Lyon Company, 1913), quote from p. 191, 230-231;

Repairs and alterations were made to the lock after its initial completion. In 1941, the gate machinery was rebuilt.⁵ Two years later, a vacuum pump was installed because high waters from Lake Ontario every spring prevented the gravity system from properly working. The 1943 *Annual Report* noted “a new vacuum line was laid along the west lock wall and a new vacuum pump was installed. The success of this new method warrants the abandonment of the gravity system as time of lockage has been greatly accelerated. A second pump will be installed at this location.”⁶ The cable bridge at the lock dates to 1949, when the *Annual Report* states that a new cable bridge was installed at the site to carry the power and control cables. New valves were also installed. In 1966, the lock was rehabilitated under Contract No. M66-6. By 1968, electric valves had been installed to replace the siphons. In 1975, new hydraulic gate operators were installed under Contract M75-5.⁷

Sources:

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⁵ State of New York, Department of Public Works, *Annual Report of the Superintendent for the Year 1941* (New York: Publishers Printing Co., 1942), 25.

⁶ State of New York, Department of Public Works, *Annual Report of the Superintendent for the Year 1943* (Albany: Williams Press, Inc., 1944), 51.

⁷ State of New York, Department of Public Works, *Annual Report of the Superintendent for the Year 1949* (Albany: s.n., 1950), 126; Maintenance Contracts, 1966; 1975.

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Historians: Laura S. Black and Jami Babb, summer 2009

Project Information: The Historic American Engineering Record (HAER) is a long-range program that documents and interprets historically significant engineering sites and structures throughout the United States. HAER is part of Heritage Documentation Programs (Richard O'Connor, Manager), a division of the National Park Service, United States Department of the Interior. The New York State Barge Canal Survey was undertaken in summer 2009 in cooperation with the Erie Canalway National Heritage Corridor (ERIE), Beth Sciumeca, Executive Director. Justine Christianson, HAER Historian, and Duncan Hay, ERIE, served as project leaders. The staff of the New York State Canal Corporation provided access to the sites. Craig Williams of the New York State Museum provided research materials and assistance. The HAER field team consisted of Jami Babb and Laura Black.

Appendix: Images of Current Conditions



Image 1: Overview of lock with the lockhouse and storage building to the right of the chamber. Field photograph taken by HAER recording team, summer 2009.



Image 2: View of spillway in the southwest guide wall. Field photograph taken by HAER recording team, summer 2009.