

NEW YORK STATE BARGE CANAL, KNOWLESVILLE ROAD LIFT  
BRIDGE  
(Erie Canal, Knowlesville Road Lift Bridge)  
Knowlesville Road  
Ridgeway  
Orleans County  
New York

HAER NY-494  
*HAER NY-494*

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

## HISTORIC AMERICAN ENGINEERING RECORD

### NEW YORK STATE BARGE CANAL, KNOWLESVILLE ROAD LIFT BRIDGE (Erie Canal, Knowlesville Road Lift Bridge)

HAER No. NY-494

**Location:** Knowlesville Road, Ridgeway, Orleans County, New York

Knowlesville Road Lift Bridge is located at latitude: 43.2424883, longitude: -78.3105148. The point represents the control building and was obtained in 2009. There is no restriction on its release to the public.

**Significance:** Knowlesville Road Lift Bridge, located on the Erie Canal, is a component of the nationally significant New York State Barge Canal. It is one of sixteen such bridges constructed between Fairport and Lockport.

**Description:** The sixteen vertical-lift bridges on the Erie Canal are Warren pony trusses raised by an electrically-driven system of cables, counterweights, and sheaves. As described in the New York State Barge Canal National Register nomination, “the moveable truss is supported by vertical lifting frames at either end. When the bridge is ‘down’ the lifting frames retract into the pits” located behind the bridge abutments. “The bridge is raised by cables that run from fixed anchor points at the top of the pits, down around sheaves at the bottom of the lifting frame, back up to sheaves at the top of the pit, and down to cast concrete counterweights. When the counterweights sink into the pits...the cables pull the lifting frames upward by the sheaves at their lower corners.” Each bridge has a control tower, with the motors and gearing generally located in the pit nearest to the tower.<sup>1</sup>

The vertical-lift bridge carries Knowlesville Road over the Erie Canal.<sup>2</sup> The steel Warren pony truss with decorative end posts sits on concrete abutments. It is 145' long and 19' between curbs. The bridge has an open-grate deck, and the pedestrian walkways are lined with steel lattice. Steel stairways at either end of the west side of the bridge have cross-hatch treads and are lined with steel lattice. Machinery pits behind the abutments are covered with cross-hatch plates. The bridge is in good condition.

A steel lattice truss is located on the east side of the lift bridge. This structure was erected in 1964 to carry a gas pipeline across the canal.

The control building is located on the east side of the bridge at the south end. It is a replacement structure, so it is not a tower, as is typical elsewhere on the canal, but a one-story brick building on a concrete foundation. The control building has an asphalt-shingled hipped roof. There are three-light steel casement windows and a double steel door. It is in good condition.

---

<sup>1</sup> Duncan Hay, “New York State Barge Canal,” National Register of Historic Places Registration Form, 2014, Section 7, Pages 21-22.

<sup>2</sup> Description of current conditions is based on a site visit made by the HAER recording team in summer 2009.

A spalled concrete terminal wall is located on the south bank of the canal west of the bridge. Concrete-filled cast-iron bollards line the wall, which is in fair condition.

**History:** The Knowlesville Road Lift Bridge was built as part of Contract 9, which covered widening the Erie Canal and building bridges and culverts. Thomas Crimmins Contracting Company of New York City won the contract. Alteration 7, approved on December 23, 1909, provided for erection of a lift bridge at this location to meet local demands. The operating machinery for the bridge was installed in 1910.<sup>3</sup>

The bridge was rehabilitated in 1975 under Contract M75-1, which included construction of a new control building. The electrical equipment was rehabilitated in 1985 as part of Contract D251493.<sup>4</sup>

**Sources:**

*Annual Report of the State Engineer and Surveyor of the State of New York for the Fiscal Year ended in September 30, 1911, Vol. 1.* Albany: J.B. Lyon Company, 1912.

Hay, Duncan. "New York State Barge Canal." National Register of Historic Places Registration Form, 2014.

Maintenance Contracts 1975; 1985.

Series B1762, New York State Archives, Albany, New York. "Western Division, Erie Canal, Section 10, Sta. 4755 to Sta. 4786." Approved December 3, 1924, 161.

**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.

---

<sup>3</sup> *Annual Report of the State Engineer and Surveyor of the State of New York for the Fiscal Year ended in September 30, 1911, Vol. 1* (Albany: J.B. Lyon Company, 1912), 197-98;

<sup>4</sup> Maintenance Contracts 1975 and 1985.

**Appendix: Image of Current Conditions**



**Image:** Knowlesville Road Lift Bridge and control building. Field photograph taken by HAER recording team, summer 2009.