Form 10-300 (Dec. 1968)

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY - NOMINATION FORM

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DESCRIBE THE PRESENT AND ORIGINAL (if known) PHYSICAL APPEARANCE

The Duluth Aerial Lift Bridge is located on Lake Avenue and spans the Duluth Ship Canal, reconnecting the main body of the City of Duluth with Minnesota Point. Minnesota Point is a natural land formation separating Lake Superior from St. Louis Bay, now the Duluth Harbor.

Present?

After the 1929 modification, the steel towers were lengthened at the top and the original truss was raised to a new height of 172 feet. An elevating, counterweighted roadway was added to replace the transversing platform. To carry the additional weight, a new steel structural support was incorporated within the confines of the old towers.

The roadway can be raised within sixty seconds to provide a 138 foot clearance at full raised height. It is powered by electric storage batteries, and a gasoline engine is used for emergency stand-by power. During the busy shipping season the bridge is operated approximately twenty-five times per day.

Past:

The original aerial bridge had vertical riveted steel trussed towers constructed on concrete piers on each side of the canal, with a bridging truss across the top. The structure stood 186 feet high at the apex of the truss and was thirty-four feet wide allowing 135 feet clearance overall. This clearance was demanded by the Lake Carriers Association and allowed for the passage of the highest masted ships of the day.

Suspended by an inverted steel tower from the underside of the truss, and transversing for the clear span distance of 393.75 feet was the gondola car. It was capable of carrying 125,000 pounds, measured 34 by 50 feet with space provided for one streetcar, two wagons, and 350 persons in two enclosed cabins. The car traveled at all times at a height of six feet above the top level of the concrete piers. A round trip in the car took about ten minutes and the car could make twelve complete round trips per hour during peak periods. The car was powered by electric batteries, but provisions were made for manual operation in case of an emergency.



SIGNIFICANCE					
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15th Century		17th Centur	у 🗆	19th Century [
SPECIFIC DATE(S) (If A	pplical	ble and Known) 19	05 (original structu	ure)/1929 (modified)
AREAS OF SIGNIFICANC	E (Ch	eck One or More as	Approp	oriate)	
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STATEMENT OF SIGNIFICANCE (Include Personages, Dates, Events, Etc.)

The Aerial Bridge was designed by Thomas F. McGibray in 1899 for the City of Duluth and was modeled after a similar bridge in Rouen, France, the only other example of this type of bridge in the world. After design approval, required by the United States War Department, construction began in 1901 on the concrete piers. The Modern Steel Structural Company of Waukesha, Wisconsin provided the steel framework and gondola car although construction on this phase did not begin until 1904. The total cost of construction when completed in 1905 was \$108,000.

In 1929, the bridge was modified for permanent automobile use according to a design submitted by C. P. A. Furner, nationally noted structural engineer of Chicago, Illinois. His design incorporated an elevating "lift" bridge to replace the transversing gondola car. This necessitated raising the height of the bridge and incorporating new structural support within the confines of the old towers to carry the counterweight roadway. Modification costs totaled \$400,000. The bridge has remained unchanged to the present.

The Aerial Lift Bridge stands as the western gateway to the Great Lakes - St. Laurence Seaway System. It is the unofficial symbol for the City of Duluth, representing its position as the world's largest fresh water port. Each year more than 500,000 people visit the harbor to watch ships from all over the world enter and deport beneath the Aerial Lift Bridge.

The Aerial Lift Bridge in conjunction with the Duluth Ship Canal is presently listed on the Minnesota State Register of Historic Sites.



9. MAJOR BIBLIOGRAPHICAL REFERENCES Files of St. Louis County Historical Society Van Brunt, Walter, A History of Duluth and St. Louis County Woodbridge, Dwight E., and Pardee, John S., History of Duluth and St. Louis County - Past and Present, Vol II. Young, Frank A., "The Duluth Ship Canal - One Hundred Years of History", The Duluthian, Aug.-Sept., 1971. 10. GEOGRAPHICAL DATA LATITUDE AND LONGITUDE COORDINATES LATITUDE AND LONGITUDE COORDINATES 0 DEFINING THE CENTER POINT OF A PROPERTY DEFINING A RECTANGLE LOCATING THE PROPERTY OF LESS THAN ONE ACRE UTM CORNER LONGITUDE LATITUDE LONGITUDE LATITUDE Degrees Minutes Seconds Degrees Minutes Seconds Degrees. Seconds Degrees Seconds Minutes Minutes 46 ° NW 92° 32" 46 ' 05 ΝE ٥ SE LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OF Ш CODE COUNTY ·CODE П STATE: CODE COUNTY: CODE STATE: CODE COUNTY: CODE S STATE: CODE COUNTY: CODE 20 11. FORM PREPARED BY NAME AND TITLE: \mathbf{C} Charles Nelson (Approved: Tom Lutz, Survey and Planning ORGANIZATION Minnesota Historical Society March 7, 1973 STREET AND NUMBER: Building 25, Fort Snelling Z CITY OR TOWN: STATE CODE St. Paul Minnesota 23 12. STATE LIAISON OFFICER CERTIFICATION NATIONAL REGISTER VERIFICATION As the designated State Liaison Officer for the Na-I hereby certify that this property is included in the tional Historic Preservation Act of 1966 (Public Law National Register. 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended Chief, Office of Archeology and Hastoric Preservation level of significance of this nomination is: National X State Date ATTEST:

ational Register

Title Director, Minnesota Historical Society

Date