United States Department of the Interior
National Park Service

158

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Bridge No. L7075

Other names/site number: Hartford Stone Bridge

Name of related multiple listing:
"Iron & Steel Bridges in MN, 1873-1945"

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

Street & number: 290th Street over Turtle Creek, 0.1 miles east of CSAH 25 in Hartford Township

City or town: Browerville State: MN County: Todd

Not for publication: N/A Vicinity: X

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _X_ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property _X_ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ **national** ___ **statewide** _X_ **local**

Applicable National Register Criteria:

___ **A** ___ **B** _X_ **C** ___ **D**

Barbara Howard February 23, 2016
Signature of certifying official/Title Barbara Mitchell Howard, Deputy SHPO, MNHS Date

State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title: State or Federal agency/bureau or Tribal Government

Bridge No. L7075
Name of Property

Todd County, Minnesota
County and State

4. National Park Certification

I, hereby, certify that this property is:

X entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper

4/12/16
Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply)

Private	☐
Public - Local	X
Public - State	☐
Public - Federal	☐

Category of Property
(Check only **one** box)

Building(s)	☐
District	☐
Site	☐
Structure	X

Bridge No. L7075
Name of Property

Todd County, Minnesota
County and State

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		objects
1		Total

Number of contributing resources previously listed in the National Register N/A

6. Function or Use

Historic Functions
(Enter categories from instructions.)
TRANSPORTATION/road-related (vehicular)

Current Functions
(Enter categories from instructions.)
TRANSPORTATION/road-related (vehicular)

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: Multi Plate arch

Materials: (Enter categories from instructions.)

Principal exterior materials of the property: METAL: Steel

STONE: Granite

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

Bridge No. L7075, also known as the Hartford Stone Bridge, is a three-span, Multi Plate arch bridge that is faced with granite fieldstone. The bridge has an overall structure length of approximately 68.0 feet, an approximate width of 42.33 feet, and three 14.5-foot long spans.[1] The structure was constructed by the Works Projects Administration (WPA) circa 1940 and carries Township Road 411, also known as 290th Street, over Turtle Creek in Hartford Township, Todd County, Minnesota. Originally a two-span structure, the western arch was added to the bridge circa 1942. The character defining features of the bridge are the three Multi Plate arches; its Rustic style masonry-faced headwalls, wingwalls, and railings; and Classical Revival detailing, as embodied in the pilasters that frame the arch openings, the arch voussoirs, and in the railing details.

[1] Minnesota Department of Transportation [MnDOT], "Mn/DOT Structure Inventory Report," MnDOT, 2011; LHB Corp, "Bridge L7075 Field Survey," field survey notes, on file at the MnDOT, 2013.

Narrative Description

Bridge No. L7075 is a three-span, Multi Plate arch bridge with an approximate structure length of 68.0 feet and an approximate out-and-out width of 42.33 feet. The bridge has an approximate height of 13.75 feet.[2] The structure is located in Hartford Township, Todd County, Minnesota, approximately 2.0 miles south and east of Browerville. Oriented on an east-west axis, the bridge carries a narrow, two-lane paved rural road, Township Road 411, also known as 290th Street, over Turtle Creek, 0.1 miles east of County State Aid Highway (CSAH) 25. Bridge No. L7075 is situated in a rural, agricultural setting and is surrounded by farm fields. The banks of the creek are lined with wetland grasses.

The bridge superstructure consists of three 14.5 foot long Multi Plate arches.[3] The arches are constructed of Armco Multi Plate corrugated steel plates that are bolted together, and to the piers. The bridge also features masonry headwalls, wingwalls, and railings. The masonry is split, granite, fieldstone rubblework, except for certain architectural accents that employ squared fieldstone in a raised course.[4] The bridge was designed in the Rustic style, as embodied in its rubblework exterior, but it also exhibits Classical Revival detailing in its railings, arches, and the pilasters that frame the arches. The three identical segmental arches are ringed by stone voussoirs.[5] The rectangular voussoirs are applied vertically around the arch and feature an elongated keystone. Approximately 2.4 feet wide pilasters frame the arches.[6] The headwalls extend above the bridge deck to form the railing.[7] Extending the length of the structure, the Classical Revival style railing is approximately 2.25 feet in height above the roadway and 2.0 feet wide with a 0.75 foot tall overhanging masonry coping course.[8] A 0.75 foot tall stringcourse delineates the railings from the headwalls on the outer elevations.[9] The pilasters, arch ringstones, the stringcourse, and capstone are comprised of squared fieldstone. There is earthen fill above the arches that is held in place by the arches and headwalls, upon which there is a bituminous wearing surface. Concrete has also been poured over the westernmost arch, under the earthen fill to address some settling.

Integrity

Bridge No. L7075 retains excellent integrity of location and setting. Bridge No. L7075 has spanned Turtle Creek in Hartford Township since its construction circa 1940 and it continues to be located in a rural, agricultural setting that has changed little since the third arch was added. The township road that the bridge was built to carry still retains its characteristics as a narrow rural road. When the bridge was constructed, the road was gravel, but is now bituminous paving. The structure was lengthened approximately two years after it was constructed, when the westernmost Multi Plate arch was constructed in response to the failure of the creek's bank. The third arch is an integral part of the overall structure. The third arch seamlessly blends with the original arches and detailing on the bridge and matches the original structure in design, materials, and workmanship. In 2013, concrete was added above the Multi Plate arch for stability, replacing some earthen fill. While the concrete may carry a portion of the load on the westernmost arch, this is a minor, non-visible alteration that does not substantially affect the integrity of the design, materials, or workmanship of the Multi Plate arches or the masonry elements of the structure. As such, the bridge retains excellent integrity of materials, design, workmanship, feeling, and association.

---

[2] LHB Corp, "Bridge L7075 Field Survey."
[3] MnDOT, "Mn/DOT Structure Inventory Report."
[4] Jeffery Hess, "Bridge L7075 Minnesota Historic Bridge Inventory," Minnesota Historic Preservation Office Inventory Form. Available in Bridge L7075 folder, Todd County, History/Architecture Inventory files, Minnesota Historic Preservation Office, Minnesota Historical Society, St. Paul, Minnesota.
[5] Hess, "Bridge L7075 Minnesota Historic Bridge Inventory."
[6] LHB Corp, "Bridge L7075 Field Survey."
[7] Hess, "Bridge L7075 Minnesota Historic Bridge Inventory."
[8] LHB Corp, "Bridge L7075 Field Survey."
[9] Ibid.

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [ ] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B. Property is associated with the lives of persons significant in our past.
- [X] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply)

- [ ] A. Owned by a religious institution or used for religious purposes.
- [ ] B. Removed from its original location.
- [ ] C. A birthplace or grave.
- [ ] D. A cemetery.
- [ ] E. A reconstructed building, object, or structure.
- [ ] F. A commemorative property.
- [ ] G. Less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions)
ENGINEERING

Period of Significance
c. 1940
c. 1942

Significant Dates
c. 1940
c. 1942

Significant Person
(Complete only if Criterion B is marked above)
N/A

Cultural Affiliation
N/A

Architect/Builder
Builder: Works Projects Administration
Designer: Todd County Highway Department

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

Bridge No. L7075 is locally significant under National Register of Historic Places (NRHP) Criterion C in the area of Engineering, within the historic context "Iron and Steel Bridges in Minnesota, 1873-1945," for its embodiment of modular, corrugated-metal Multi Plate arch design, which is a unique engineering achievement that provided owners with a more economical and easier to construct alternative to other more traditional types of spans. The bridge is also significant for its outstanding aesthetics and workmanship as manifested in its WPA Rustic style design with Classical Revival detailing. Bridge No. L7075 is a rare and distinct example of a Multi Plate arch bridge in Minnesota with three spans. The bridge has two periods of significance: circa 1940, the year in which it was constructed, and circa 1942, the year in which the third arch was added to the structure.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Bridge No. L7075 was designed and constructed by the WPA circa 1940. While no records have been found to confirm the designer, builder, and exact construction date of Bridge No. L7075, according to a long-time local resident who was employed by the WPA on work crews in the area during the period, the bridge was constructed by the WPA as part of a work-relief project.[10] The age, style, and span type of the bridge support this account as do WPA files for other projects in Todd County. During the late 1930s and early 1940s, the WPA was active in Todd County. The WPA undertook a wide range of projects in the county, including a county-wide roadway improvement project.[11] As part of this larger, county-wide project the WPA constructed or improved a number of bridges. This included the construction of several steel I-beam bridges, at least two Multi Plate arch bridges, and at least one timber stringer bridge.[12] In 1940 alone, the WPA constructed a total of 18 new bridges and viaducts in Todd County.[13] Among the bridges constructed that year was another Multi Plate arch bridge, Bridge No. L7069, that is located approximately nine miles north of Bridge No. L7075.[14] While no conclusive information was found to provide an exact build date, the stated circa date of 1940 was given to the bridge based on the construction date of nearby Bridge No. L7069, which is similar to Bridge No. L7075 in type, design, and method of construction.[15] This date is also supported by historical aerial photographs from 1939 and 1953, which confirm that a narrower bridge and roadway was in place in September 1939 compared the bridge (Bridge No. L7075) and road that were present in 1953.[16]

The westernmost arch was added to the structure circa 1942, after a flood washed away the west bank of the creek.[17] Since the cause of the failed bank is not recorded in the historic record, it is unknown if the washout

[10] Hess, "Bridge L7075 Minnesota Historic Bridge Inventory."
[11] WPA, *Accomplishment Report, 1940: Todd County*, 1941. On file at the Minnesota Historical Society, St. Paul, Minnesota; Minnesota Historic Preservation Office, "Bridge L7069 Folder;" Todd County Highway Department, "Bridge Folder L7069," on file at the Todd County Highway Department, Long Prairie, Minnesota.
[12] Minnesota Highway Department, Bridge Division, "WPA Bridge Correspondence and Plans," on file at the Minnesota Historical Society, St. Paul, Minnesota.
[13] WPA, *Accomplishment Report, 1940: Todd County*.
[14] Todd County Highway Department, "Bridge Folder L7069."
[15] Correspondence between the WPA, Minnesota State Highway Department, and the Todd County Engineer related to the design and construction of Bridge L7069 provide a clear record that Bridge L7069 was designed and constructed by the WPA.
[16] Minnesota Department of Natural Resources, "BYH-3-48" and "BYH-3M-54," Historical Aerial photos, on file at the Minnesota Department of Natural Resources, St. Paul, Minnesota.
[17] Todd County Highway Department, "Bridge L7075 Folder."

was due to an instable bank or an insufficient hydraulic opening under the recently constructed bridge. However, the cause may, in part, be explained by the approach used by the WPA to design bridges. Minnesota WPA policy required proposals for bridges costing $7,500 or more to be prepared by the WPA State Office, but proposals for bridges costing less than $7,500 could be prepared by either the State Office or the area offices.[18] A small, economical structure such as Bridge No. L7075 could have been designed by the area office. While the State Office employed a registered engineer, the supervisors of the area offices served as the area engineers. The area supervisors had varying qualifications. "Where possible, men were selected with an architectural, engineering, or construction background, but in some cases men with little or no previous engineering or construction experience" were appointed to these positions.[19] However, the plans for all bridges constructed by the WPA had to be reviewed by a qualified engineer as Minnesota law required that "no plans or specifications for public construction work may be prepared by other than registered architects, engineers, or land surveyors. There was the further requirement that the clearance of these plans be made with all state or federal agencies concerned. For example…the plan for a bridge was cleared with the State Highway Department."[20] Bridges designed by the WPA area offices were submitted to the WPA State Office for review, and then submitted to the State Highway Department and other agencies for review.

Correspondence related to the design of Bridge No. L7069, which is even smaller than Bridge No. L7075, and was likely designed by the WPA Area Office in Little Falls, Minnesota, indicate that its designer may have been more versed in architecture than engineering. While Bridge No. L7069 has a fine aesthetic design, during their review of the initial plans for the bridge the State Highway Department and Todd County Highway Engineer raised some objections related to its sufficiency from an engineering perspective. Specifically, the initial plans prepared by the WPA did not adequately account for the results of sounding tests related to soil conditions, the sufficiency of the footing design, the adequacy of the hydraulic opening under the bridge, and the minimal width requirements of the State Highway Department, all of which were addressed before the plans were approved.[21] The review process for Bridge L7075 likely followed a similar path. Since reviewers at the WPA's State Office and the State Highway Department were based in St. Paul and had to rely on the area office to determine the minimal clear opening required, a poor understanding of Turtle Creek's hydraulics in the area office could have been the precipice of the creek bank failure. Regardless of whether the washout was precipitated by unstable soils or an insufficient hydraulic opening under the bridge, the review of the bridge plans by the State Highway Department ensured that the structural design of the bridge was largely sufficient to withstand the loads placed against it during flooding, which allowed for it to be put back into service after the aforementioned flood, with an added span, rather than replaced.

Since 1942, Bridge No. L7075 has experienced little change. Over time, the western end of the bridge experienced settling, and in June 2013 a portion of the bituminous pavement and fill at the west end of the bridge, over the western span, was removed by Hartford Township personnel to inspect the Multi Plate arch and potential water seepage issues. Concrete was poured on top of the Multi Plate arch to address the settling and the earthen fill and asphalt paving were replaced. There is no indication that Bridge No. L7075 has undergone any other alterations.[22]

---

[18] Minnesota Works Projects Administration, "Field Letter No. 198," July 24, 1940, on file at the Minnesota Historical Society, St. Paul, Minnesota.
[19] Sidney L. Stolte, "Final Report of the Minnesota Work Projects Administration" 1943-71. TS, Minnesota Work Projects Administration Materials, 1935-43, Minnesota Historical Society, St. Paul, Minnesota.
[20] Stolte, "Final Report of the Minnesota Work Projects Administration," 87.
[21] Todd County Highway Department, "Bridge L7069 Folder."
[22] Ibid.

Multi Plate Arch Bridges

Bridge No. L7075 is an example of a Multi Plate arch bridge. Introduced in 1931 by the Armco Culvert Manufacturer's Association, Multi Plate arch bridges represent "a unique engineering type that frequently incorporated notable aesthetic qualities of local masonry design and workmanship."[23] Multi Plate arch bridges are comprised of galvanized, corrugated, heavy-gauge steel plates that are manufactured in curved segments, which are bolted together in the field to create an arch or circle.[24] According to the Lyle Culvert & Pipe Co., Multi Plate arches were constructed with "plates [that] have corrugations 6 inches in width and 1½ inches deep. These giant corrugations take advantage of the tremendous strength of the arch principle and combined with thick plates, makes [sic] a tough and enormously strong bridge."[25] Multi Plate arches are typically anchored to concrete abutments to prevent undermining and shifting of the structure.[26]

Multi Plate arch bridges were popular during the 1930s as "a viable alternative to reinforced-concrete slab-and-girder construction for short-span bridges."[27] Additionally their modular design was, "more economical than either cast iron pipe or reinforced concrete pipe for small waterways."[28] The prefabrication of the Multi Plate arch made these types of spans popular with New Deal agencies, as the arch was easy to assemble by unskilled laborers. Reflecting this fact, arch bridges constructed between 1933 and 1942 by New Deal federal relief programs, such as the Civilian Conservation Corps (CCC) and the WPA, were almost exclusively Multi Plate. The simplicity of the design made the Multi Plate arch compatible with using local materials (for non-arch elements) and labor. "Armco shrewdly emphasized these points in its advertising: Multi Plate Arches ... Designed to fit any local conditions - Can use local labor on Work Relief Projects. Use of stone end-walls not only makes attractive structure, but employs local material and labor."[29] When stone is used for the headwalls on Multi Plate arch bridges, as is the case with Bridge No. L7075, the bridge takes on the appearance of a masonry-arch bridge.[30] The use of stone masonry in conjunction with the Multi Plate arch also reflected "the New Deal agenda of promoting highway beautification, local craft skills, and labor-intensive public works projects."[31] "Instead of eliminating labor costs as in traditional building economics, [the use of stone masonry] was an explicit attempt to make construction projects labor-intensive, thus creating more work."[32] Bridge No. L7075 embodies the WPA philosophy of providing employment through unskilled, but labor-intensive work, as the bridge features easy-to-construct Multi Plate arches paired with labor-intensive fieldstone granite headwalls.

As noted, Multi Plate arch bridges were an economical choice compared to other types of short-length spans. The plates used in the arch construction were shipped in a nesting position, which reduced freight costs. Additionally, the ease of construction and the use of local materials for non-arch elements, such as the headwalls, kept construction costs reasonable. Thus from a materials cost perspective, the economic benefits of

[23] Fredric L. Quivik and Dale L. Martin, "Iron and Steel Bridges in Minnesota," July 1988, National Register of Historic Places Multiple Property Documentation Form, F-10.
[24] Lyle Culvert & Pipe Co., "Prospective Multi Plate Bridge For Village of Edina, Minn.," on file at the City of Edina Public Works Department, Edina, Minnesota.
[25] Ibid.
[26] Quivik and Martin, "Iron and Steel Bridges in Minnesota," E-20.
[27] Ibid, F-10.
[28] Ibid, E-19.
[29] Ibid, E-20.
[30] Ibid, F-10.
[31] Ibid, F-10.
[32] Robert Frame, "Reinforced-Concrete Highway Bridges in Minnesota," 1989, National Register of Historic Places Multiple Property Documentation Form, E-15.

the Multi Plate arch solidified its popularity with federal-relief programs. As of 1988, there were 35 surviving Multi Plate arch bridges from the New Deal period in Minnesota.[33] Based on a statewide bridge survey completed in 2014, Multi Plate arches are a rapidly disappearing resource in Minnesota, as there are now less than ten extant Multi Plate arch bridges in the entire state, of which even fewer represent federal-relief construction.[34] Bridge No. L7075 is one of only two extant Multi Plate arch bridges in Todd County, both of which were constructed by the WPA and embody its legacy in the county. As such, Bridge No. L7075 not only is a rare example among the remaining Multi Plate arch bridges in Minnesota, the bridge also stands out as a distinct example of the property type, as it is the only one that has three Multi Plate arches.

Works Progress Administration

During the New Deal era, several federal programs were created, including the WPA, in hopes of providing work for the unemployed. The Works Progress Administration, renamed the Works Projects Administration in 1939, was established in 1935 by President Franklin D. Roosevelt. The first function of the WPA was to "operate a nation-wide program of small useful projects designed to provide employment for needy employable workers."[35] Secondly, "it was responsible for coordinating the various activities of the 'Works Program' as a whole."[36] Under the direction of Harry L. Hopkins, the WPA operated from 1935 to 1943 and employed millions in a nationwide effort to offer employment to the unemployed by channeling federal funds to a wide range of public works projects, including construction of public buildings, roads, bridges, and parks. The WPA was also responsible for the construction of swimming pools, auditoriums, airports, post offices, playgrounds, park buildings and other such public facilities nationwide.[37] Projects undertaken by the WPA were intended to be labor-intensive and utilize locally available materials and construction methods. During its entire existence in Minnesota, the WPA employed 65,713 people.[38]

While the primary purpose of New Deal programs was to put people back to work, programs such as the WPA were also influential in Minnesota bridge design and construction. The WPA did not necessarily create new engineering methods, but it did influence the architectural treatment of bridges it funded, requiring that they incorporate Rustic, Classical Revival, or Art Deco style elements.[39] During the WPA's existence, "it built some 78,000 bridges nationally, and built or improved 1,400 bridges in Minnesota."[40] Bridge No. L7075 is a well-preserved example of a Multi Plate arch bridge that exemplifies the types of projects undertaken by the WPA in Minnesota and it represents the long-lasting impact of New Deal public works programs on Todd County. Bridge No. L7075 conveys its significance through its Multi Plate arch design, use of natural materials, and overall aesthetic that reflects the highway beautification and local craftsmanship promoted by New Deal policies.

[33] Quivik and Martin, "Iron and Steel Bridges in Minnesota," E-20.
[34] Mead & Hunt, and Olson & Nesvold Engineers, "Phase I Results: Minnesota Local Historic Bridge Study," Minnesota Department of Transportation, St. Paul, 2012, Appendix B.
[35] Rolf T. Anderson, "Federal Relief Construction in Minnesota, 1933-1941," 1993, National Register of Historic Places Multiple Property Documentation Form, E-48.
[36] Anderson, "Federal Relief Construction in Minnesota," E-48.
[37] Ibid.
[38] Iric Nathanson, "The WPA in Minnesota: Economic Stimulus during the Great Depression," *MINNPOST,* January 7, 2009, accessed January 31, 2014, http://www.minnpost.com/politics-policy/2009/01/wpa-minnesota-economic-stimulus-during-great-depression.
[39] Frame, "Reinforced-Concrete Highway Bridges in Minnesota," F-6.
[40] Ibid, E-15.

Rustic and Classical Revival Styles

With its handsome granite fieldstone masonry, Bridge No. L7075 exemplifies the Rustic style design aesthetic as well as the Classical Revival style in its detailing, both of which were utilized and promoted by federal-relief programs, including the WPA. The Rustic style is a style of architecture that was developed by the National Park Service in the early and middle 20th century. Rustic style buildings and structures were designed to harmonize with the natural environment, not stand out. Features of buildings and structures constructed in the Rustic style are that they were built with locally available materials, utilized labor-intensive building methods, and often had a hand-crafted appearance.[41] "The National Park Service and the U.S. Forest Service considered rustic architecture the appropriate style for construction in state and national parks and forests" and thus most of the buildings and structures erected by the WPA are Rustic style in design.[42] As such, Rustic style resources in Minnesota "are the legacy of the Depression-era work groups, whose efforts helped preserve vast areas of wilderness and created remarkable buildings and structures … throughout the United States."[43] Rustic style resources in Minnesota reflect the diverse resources of its lands. "Log construction took place in the northern portions of the state, where timber was plentiful. Stone buildings were more typical in the south and northwest. A combination of log and stone is common in the center section of the state."[44] The headwalls, wingwalls, and railings of Bridge No. L7075 are constructed of local fieldstone, reflecting a common practice of the WPA in constructing Rustic style resources in Minnesota. The use of a locally available material for the construction of Bridge No. L7075 integrates and emphasizes the bridge's relationship with its surrounding environment. The harmony between Bridge No. L7075 and its natural surroundings make it an excellent manifestation of the Rustic style. The more refined classical detailing found in the pilasters and the square-cut arch voussoirs, as well as in the railings, makes the aesthetic of Bridge No. L7075 even more appealing.

The registration requirements for Multi Plate arch bridges within the "Iron and Steel Bridges in Minnesota" Multiple Property Documentation Form, state that Multi Plate arch bridges can be eligible for the NRHP if their modular corrugated-metal construction and stone headwalls and spandrels, which are the most notable features of such bridges, are clearly visible and relatively unaltered.[45] Additionally, the registration requirements state that since Multi Plate arch bridges were most prominently associated with the "New Deal's encouragement of roadside beautification, the bridge's workmanship and design should be on the original site, harmonious with the general setting, of high aesthetic quality, and of New Deal vintage."[46] Bridge No. L7075 remains in its original location and retains its modular corrugated metal construction, as well as its handsome stone headwalls, wingwalls, and railings.

Bridge No. L7075 represent a unique engineering achievement; the modular, corrugated-metal Multi Plate arch was a creative engineering solution invented in 1931 to address the demands of bridge owners for a more economical and easier to construct alternative to other more traditional types of spans, such as reinforced-concrete slab-and-girder construction, for short spans.[47] As the only extant three-span example of a Multi Plate arch bridge in Minnesota, Bridge No. L7075 is also the best manifestation of the design flexibility of the Multi Plate. Its third (westernmost) span was added to the bridge in 1942, the year the riverbank failed due to flooding. The bridge did not need to be replaced, for merely adding a third span solved the dilemma.

[41] Anderson "Federal Relief Construction in Minnesota," F-24; Minnesota Historical Society, "Rustic Style Resources in Minnesota," *Minnesota Historical Society,* March 28, 2014, http://www.mnhs.org/places/nationalregister/stateparks/.
[42] Anderson, "Federal Relief Construction in Minnesota," F-24.
[43] Minnesota Historical Society, "Rustic Style Resources in Minnesota."
[44] Ibid.
[45] Quivik and Martin, "Iron and Steel Bridges in Minnesota," F-11.
[46] Ibid
[47] Ibid.

This flexibility of design reflected the philosophy of the machine age, which was popular in the 1930s and early 1940s. This philosophy emphasized concepts such as modularity and interchangeable parts, both of which were hallmarks of the Multi Plate arch. It is the flexibility of the Multi Plate arch design that allowed Bridge L7075 to be expanded to meet the new conditions so it could be reused rather than replaced. This is in contrast to competing popular simple span bridge types of the period that include steel girder spans and concrete slab spans, which were more rigid in their designs and would have required replacement or extensive modifications, especially to their substructures, to allow an additional span to be added.

Finally, the bridge is an outstanding example of a modular, corrugated-metal Multi Plate arch bridge constructed by the WPA, and embodies the aesthetics and workmanship of the Rustic and Classical Revival styles, which were the most popular styles used by the WPA for its construction projects in Minnesota.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Unpublished

Anderson, Rolf T. "Federal Relief Construction in Minnesota, 1933-1941." August 1994. National Register of Historic Places Multiple Property Documentation Form. On file at the Minnesota Historic Preservation Office, Minnesota Historical Society, St. Paul, Minnesota.

Frame, Robert. "Reinforced-Concrete Highway Bridges in Minnesota." September 1989. National Register of Historic Places Multiple Property Documentation Form. On file at the Minnesota Historic Preservation Office, Minnesota Historical Society, St. Paul, Minnesota.

Hess, Jeffery. "Bridge L7075 Minnesota Historic Bridge Inventory." Minnesota Historic Preservation Office Inventory Form. Available in Bridge L7075 folder, Todd County. History/Architecture Inventory Files. On file at the Minnesota Historic Preservation Office, Minnesota Historical Society, St. Paul, Minnesota.

LHB Corp. "Bridge L7075 Field Survey." Field Survey Notes. On file at the Minnesota Department of Transportation, St. Paul, 2013.

Lyle Culvert & Pipe Co. "Prospective Multi Plate Bridge For Village of Edina, Minn." Proposal Material, Minneapolis, Minnesota, 1937. On file at the City of Edina Public Works Department, Edina, Minnesota.

Mead & Hunt and Olson & Nesvold Engineers, P.S.C. "Phase I Results: Minnesota Local Historic Bridge Study." Minnesota Department of Transportation, St. Paul, November 2012.

Minnesota Department of Natural Resources. *BYH-5-48*. September 16, 1939. Historical Airphotos, Minnesota Department of Natural Resources, St. Paul, Minnesota.

———. *BYH-3M-54*. October 10, 1953. Historical Airphotos, Minnesota Department of Natural Resources, St. Paul, Minnesota.

Minnesota Department of Transportation."Mn/DOT Structure Inventory Report." Minnesota Bridge Inventory Database (2011). Minnesota Department of Transportation Bridge Office, St. Paul, Minnesota.

Minnesota Highway Department, Bridge Division. "WPA Bridge Correspondence and Plans," on file at the Minnesota Historical Society, St. Paul, Minnesota.

Minnesota Historic Preservation Office. "Bridge L7069 Folder." Todd County. History/Architecture Inventory Files. On file at the Minnesota Historic Preservation Office, Minnesota Historical Society, St. Paul, Minnesota.

Quivik, Fredric L., and Dale L. Martin. "Iron and Steel Bridges in Minnesota." July 1988. National Register of Historic Places Multiple Property Documentation Form. On file at the Minnesota Historic Preservation Office, Minnesota Historical Society, St. Paul, Minnesota.

Stolte, Sidney L. "Final Report of the Minnesota Work Projects Administration." 1943. TS, Minnesota Work Projects Administration Materials, 1935-43, Minnesota Historical Society, St. Paul, Minnesota.

Todd County Highway Department. "Bridge L7069 Folder." On file at the Todd County Highway Department, Long Prairie, Minnesota.

———. "Bridge L7075 Folder." On file at the Todd County Highway Department, Long Prairie, Minnesota.

Works Projects Administration. *Accomplishment Report, 1940: Todd County.* St. Paul, Minnesota, Works Projects Administration, 1941. On file at the Minnesota Historical Society, St. Paul, Minnesota.

Online

Minnesota Historical Society. "Rustic Style Resources in Minnesota." *Minnesota Historical Society,* March 28, 2014. http://www.mnhs.org/places/nationalregister/stateparks/.

Nathanson, Iric. "The WPA in Minnesota: Economic Stimulus during the Great Depression." *MINNPOST*, January 7, 2009. Accessed January 31, 2014. http://www.minnpost.com/politics-policy/2009/01/wpa-minnesota-economic-stimulus-during-great-depression.

Previous documentation on file (NPS):

_____ preliminary determination of individual listing (36 CFR 67) has been requested
_____ previously listed in the National Register
_____ previously determined eligible by the National Register
_____ designated a National Historic Landmark
_____ recorded by Historic American Buildings Survey # _____
_____ recorded by Historic American Engineering Record # _____
_____ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

__X__ State Historic Preservation Office
_____ Other State agency
_____ Federal agency
_____ Local government
_____ University
_____ Other
_____ Name of repository: _____

Historic Resources Survey Number (if assigned): TO-HAR-009

10. Geographical Data

Acreage of Property 0.07

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates
Datum if other than WGS84:_____
(enter coordinates to 6 decimal places)

1. Latitude: Longitude:

2. Latitude: Longitude:

3. Latitude: Longitude:

4. Latitude: Longitude:

Or
UTM References
Datum (indicated on USGS map):

☐ NAD 1927 or ☒ NAD 1983

1. Zone: 15N	Easting: 359752.1	Northing: 51011100.7
2. Zone:	Easting:	Northing:
3. Zone:	Easting:	Northing:
4. Zone:	Easting:	Northing:

Verbal Boundary Description (describe the boundaries of the property)
The nominated property consists of a rectangle measuring 68.0 feet long by 42.33 feet wide, with a center axis that coincides with the centerline of the bridge. These boundaries encompass the entire bridge, with the corners aligning with the outside edges of the bridge wingwalls.

Boundary Justification (explain why the boundaries were selected)
The boundary encompasses the entirety of the bridge, including the superstructure, substructure, wingwalls, and approaches.

11. Form Prepared By

name/title: Gregory R. Mathis, Historian, and Kathryn A. Ohland, Historian
organization: Minnesota Dept. of Transportation The 106 Group Ltd.
street & number: 395 John Ireland Blvd. 370 Selby Ave.
city or town: St. Paul St. Paul State: MN zip code: 55102
email: greg.mathis@state.mn.us katieohland@106group.com,
telephone: (651) 366-4292 (651) 290-0977
date: May 2014, January 2016

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Bridge No. L7075

City or Vicinity: Browerville

County: Todd State: Minnesota

Date Photographed: June 26, 2013

Description of Photograph(s) and number, include description of view indicating direction of camera:

Photo 1 of 9
MN_ToddCounty_BridgeNo.L7075_0001
Bridge No. L7075, North elevation. Facing Southeast.
Photographer: Tim Smith, Mead & Hunt

Photo 2 of 9
MN_ToddCounty_BridgeNo.L7075_0002
Bridge No. L7075, South elevation. Facing Northeast.
Photographer: Tim Smith, Mead & Hunt

Photo 3 of 9
MN_ToddCounty_BridgeNo.L7075_0003
Bridge No. L7075, Oblique of south elevation. Facing West.
Photographer: Tim Smith, Mead & Hunt

Photo 4 of 9
MN_ToddCounty_BridgeNo.L7075_0004
Bridge No. L7075, Oblique of north elevation. Facing West.
Photographer: Tim Smith, Mead & Hunt

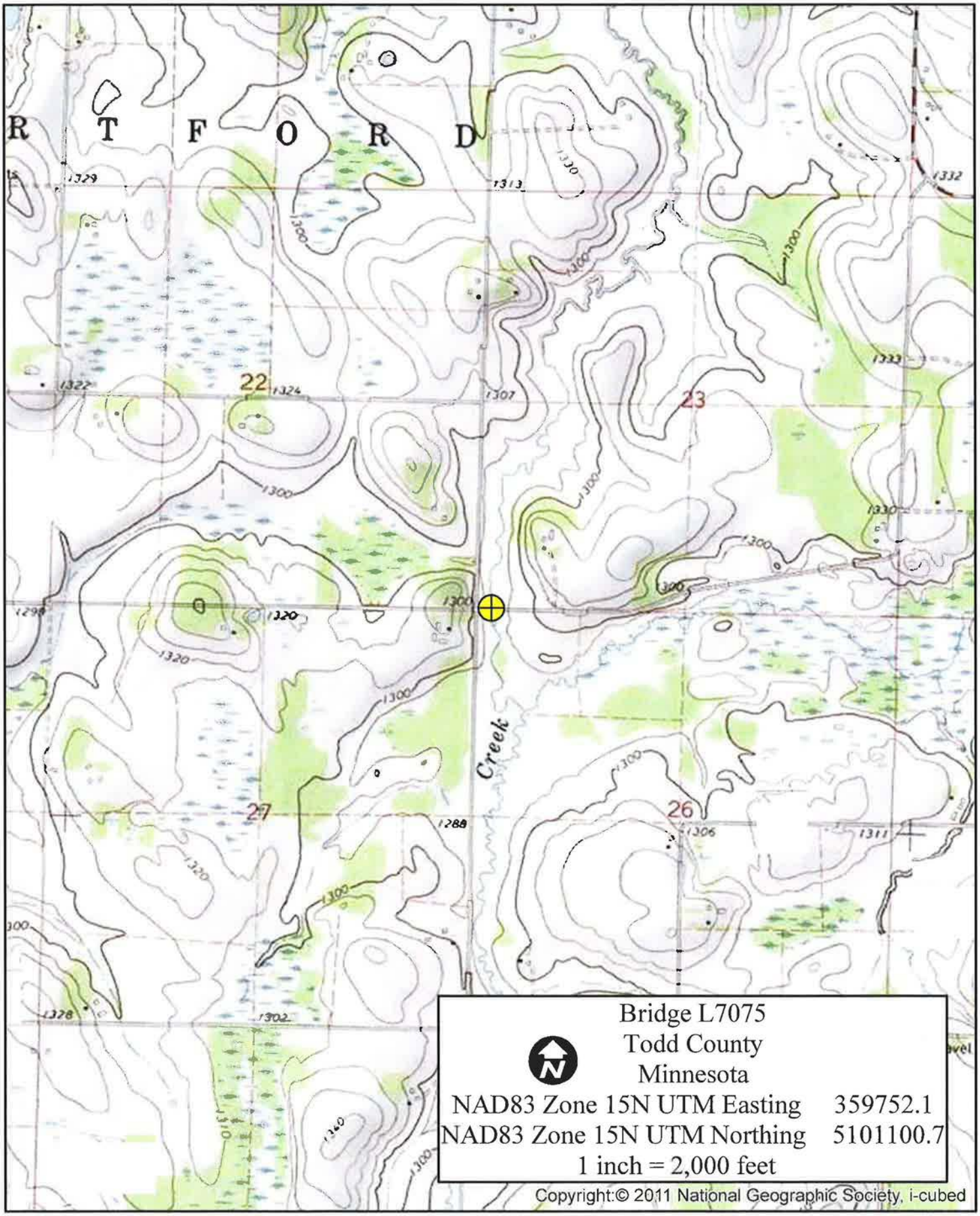
Photo 5 of 9
MN_ToddCounty_BridgeNo.L7075_0005
Bridge No. L7075, Approach and deck. Facing West.
Photographer: Joe Litman, LHB Corp.

Photo 6 of 9
MN_ToddCounty_BridgeNo.L7075_0006
Bridge No. L7075, North parapet. Facing Northwest.
Photographer: Tim Smith, Mead & Hunt

Photo 7 of 9
MN_ToddCounty_BridgeNo.L7075_0007
Bridge No. L7075, South parapet. Facing Southwest.
Photographer: Tim Smith, Mead & Hunt

Photo 8 of 9
MN_ToddCounty_BridgeNo.L7075_0008
Bridge No. L7075, Multi Plate arch, headwall, and pilasters. Facing Southeast.
Photographer: Tim Smith, Mead & Hunt

Photo 9 of 9
MN_ToddCounty_BridgeNo.L7075_0009
Bridge No. L7075, Northeast wingwall. Facing Southeast.
Photographer: Tim Smith, Mead & Hunt



Bridge L7075
Todd County
Minnesota

NAD83 Zone 15N UTM Easting	359752.1
NAD83 Zone 15N UTM Northing	5101100.7

1 inch = 2,000 feet


Turtle Creek
Township Road 411 aka 290th Street
Bridge L7075
Todd County
Minnesota
1 inch = 50 feet
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


1
8
9
4
7
5
6
3
2
Bridge L7075
Todd County
Minnesota
1 inch = 60 feet
N
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


STOP

&a20CUNITED STATES DEPARTMENT OF THE INTERIOR
&a30CNATIONAL PARK SERVICE

&a22CNATIONAL REGISTER OF HISTORIC PLACES
&a29CEVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Bridge No. L7075

MULTIPLE NAME:

STATE & COUNTY: MINNESOTA, Todd

DATE RECEIVED: 2/26/16 &pW DATE OF PENDING LIST: 3/28/16
DATE OF 16TH DAY: 4/12/16 &pW DATE OF 45TH DAY: 4/12/16
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 16000158

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT WAIVER: N

X ACCEPT ___RETURN ___REJECT 4/12/16 DATE

ABSTRACT/SUMMARY COMMENTS:

&a4L

RECOM./CRITERIA_____

REVIEWER_____ DISCIPLINE_____

TELEPHONE_____ DATE_____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

Minnesota Historical Society
State Historic Preservation Office
345 Kellogg Blvd West, St. Paul, Minnesota 55102
651-259-3451

TO: Stephanie Toothman, Keeper
National Register of Historic Places

FROM: Denis Gardner

DATE: February 23, 2016

NAME OF PROPERTY: Bridge No. L7075

COUNTY AND STATE: Todd County, Minnesota

SUBJECT: National Register:

- ☒ Nomination
- ☐ Multiple Property Documentation Form
- ☐ Request for determination of eligibility
- ☐ Request for removal (Reference No.)
- ☐ Nomination resubmission
- ☐ Boundary increase/decrease (Reference No.)
- ☐ Additional documentation (Reference No.)

DOCUMENTATION:

- ☒ Original National Register of Historic Places Registration Form
- ☐ Multiple Property Documentation Form
- ☐ Continuation Sheets
- ☐ Removal Documentation
- ☒ Photographs
- ☒ CD w/ image files
- ☒ Computer generated Map
- ☐ Sketch map(s)
- ☐ Correspondence
  - ☐ Owner Objection

    The enclosed owner objections

    Do☐ Do not ☐ constitute a majority of property owners

STAFF COMMENTS: