

**XX-ROD-002 TH 40 Causeway and Highway Segment**

**Other Name:** Milan Crossing, LQP Narrows  
**Location:** TH 40 from 750' NE of LQP CSAH 33 to 650' SW of Chippewa CSAH 30  
**County:** Lac qui Parle, Chippewa  
**Township:** Hantho Twp, Kragero Twp  
**TRS:** 119N 42W, Sec 19; 119N 43W, Sec 24-25  
**Built:** 1934-1941  
**Designer:** Meyer, Norling, MN Dept Hwys  
**Builder:** WPA, MN Dept Hwys

The TH 40 Causeway and an associated highway segment were built in 1934-1941 as part of the Lac qui Parle Flood Control Project. (This was part of WPA Job No. 20.) The causeway's Bridge 5380 was also built as part of the project and was inventoried separately. (See Map 4; see Fig. 1.)

The causeway carries TH 40 over a widening in the Minnesota River called the Lac qui Parle Reservoir (River Mile 294). This location was also known as the Milan Crossing and the Lac qui Parle Narrows.

The TH 40 causeway is about 1,700' long. It is located within a 6,000'-long segment of TH 40 that was built by the WPA as part of the Lac qui Parle project (WPA "Report" 1939). About 2,600' of the original 6,000' segment remains intact. Both northern and southern ends of the 6,000' were altered when portions of TH 40 were realigned in 1948-1949. The intact 2,600' segment, which forms the limits of the property inventoried by Gemini Research, extends from 750' northeast of the junction of TH 40 and LQP CSAH 33 (on the southwest) to 650' southwest of the junction of TH 40 and Chippewa CSAH 30 (on the northeast). This segment, the causeway, and the bridge are generally well-preserved, with the exception of alterations cited herein.

The TH 40 Causeway is one of several road causeways built as part of the Lac qui Parle project. All are basically intact. The longest are the TH 40 Causeway over Lac qui Parle Reservoir, which measures about 1,700', and the CSAH 32 Causeway over the Watson Sag, which is about 1,800' long. The TH 119 Causeway across Marsh Lake Reservoir is technically longer at about 6,000', but was improved, rather than being built by the flood control project. Smaller causeways include the 500'-long causeway to Rosemoen Island on Chippewa Co. Rd. 33; the 350'-long causeway on the Sturm-Wilson Road; and smaller causeways under local roads in low-lying areas southwest of Appleton near the eastern end of the Marsh Lake Dam. (The Great Northern Railroad south of Marsh Lake Dam was also built on a causeway.)

At the northeastern end of the TH 40 Causeway are three properties that were also inventoried. They are Milan Beach, which is a small public swimming beach built in 1939 as part of the project and which is now Milan Beach South Public Water Access; Randalls' Milan Beach Resort, which is an altered ca. 1930 private resort; and another modern MnDNR boat access point, Milan Beach North Public Water Access. (See those properties.) Gemini Research did not determine in detail where these various property lines are located. For example, Gemini is unclear about who owns the narrow gravel road close to the water north of the causeway.)

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## DESCRIPTION OF INVENTORIED PROPERTIES

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### *Description*

The causeway was collaboratively designed by hydraulic engineers Adolph F. Meyer and Sven A. Norling working for the Minnesota Department of Conservation's Division of Drainage and Water, and the Minnesota Department of Highways (MHD). It was built in 1934-1941 by the WPA and the MHD.

The causeway is about 1,700' long and roughly 130' wide. Bridge 5380 is located near the causeway's northeastern end. The TH 40 roadway is aligned on top of the causeway. It has a 24'-wide bituminous driving surface and narrow bituminous shoulders. There are segments of modern steel rail and wooden post guardrail extending from each end of the bridge. (This likely replaces earlier post and cable guardrail.)

Both sides of the causeway, evidently for its entire length, are reinforced with hand-fit riprap that extends perhaps 15' up from the water's edge. The riprap, which is believed to be generally extant, is comprised of granite quarry waste rock. It is unmortared, but otherwise matches the hand-fit mortared riprap at the ends of the bridge. The hand-fit riprap on the causeway has been supplemented by a layer dumped granite riprap. Dumped riprap was last applied fairly recently. The original hand-fit rip is still visible along both sides of the causeway in a band at the water's edge.

Where the causeway meets the abutments of Bridge 5380, the causeway is curved and is protected by large areas of well-built, hand-fit, mortared granite riprap laid by the WPA. The mortared riprap is more extensive on the eastern end of the bridge. The pieces of granite are flat and come in various shades of gray, red, pink, and black. The rocks are closely-fit in a somewhat interlocking, random pattern so that the riprap forms an even, basically smooth surface. Many of the stones were intentionally placed to display quarry drill marks for aesthetic interest. The hand-fit riprap is in fair to good condition. The areas near the western end of the bridge have been covered by a thin layer of concrete that partly obscures the stones.

Seven structures in the Lac qui Parle Flood Control Project have similar WPA-built hand-fit riprap: Marsh Lake Dam, TH 40 Causeway, Lac qui Parle Dam, Lac qui Parle Dike and Emergency Spillway, Chippewa River Control Works, Watson Sag Weir, and the Chippewa River Diversion Underpass. Three of the properties – Marsh Lake Dam, the TH 40 Causeway, and Lac qui Parle Dike and Emergency Spillway – have very long stretches of riprap.

The hand-fit riprap near the bridge is one of the most elaborate extant examples in the Lac qui Parle Flood Control Project. At the northeastern corner of the bridge is a two-tiered area that resembles a small pedestrian concourse allowing visitors to approach the water and bridge. The lower tier is reached via a well-designed and well-built three-part closed-string stone staircase. The upper course, closest to the TH 40 shoulder, has five steps, the middle section has about seven steps, and the lower course has three steps. Aerial photos show that the lower run of steps is sometimes submerged in times of high water. Between the top and middle stair runs, which are perpendicular, is a gracefully curved stone landing. Stones for the stair treads were chosen to display quarry drill marks. The upper and middle sections of the staircase are about 8' wide and the treads have an exposure of about 12" and 18" for walking. (Note: the impressive hand-fit riprap at the eastern end of the bridge is being damaged by uncontrolled weed growth. It is recommended that Mn/DOT control the weeds at this location using chemicals and methods appropriate for this type of sensitive area (above a waterway) so that the stonework is not damaged.)

There is another closed-string stone staircase about 350' southwest of the bridge on the northern side of the causeway. It is about 18' long and about 9' wide and descends from the shoulder of the road to the water. It is very similar in style and craftsmanship to the steps at the end of the causeway. The staircase appears to be intact on a 2003 aerial photo. Sometime after 2003 it was covered with a layer of dumped riprap (placed during a riprapping of the entire causeway). The staircase appears to intact under the layer of stones. (Gemini Research recommends that the stones be lifted off the staircase to reveal it.)

The TH 40 Causeway's stone steps are the most elaborate and well-preserved stone steps remaining in the Lac qui Parle flood control project. Two other examples have survived: at the Watson Sag Weir and at the Chippewa River Control Works.

At the western end of the bridge's northwestern guardrail (on the northern side of the causeway) is a recent poured concrete stairway that descends to the water. It has about 11 steps and a pipe railing.

East of the causeway, on the northern side of TH 40, are three entrances: one close to Milan Beach North Public Water Access, one in front of Milan Beach Resort, and one in front of the resort owners' house. A 1938 aerial photo shows the western two entrances newly-built and suggests they are still basically intact today. The eastern does not appear on the aerial photo and was probably added 1960. The ditch west of the western entrance has a stone-paved floor, part of which remains exposed. The stone paving may have originally extended farther east along the ditch. One of the two western entrance roads retains a granite headwall for its culvert. The headwall is about 10' long (north-south).

At least three other examples of stone-paved ditches were encountered in the flood control project: along Chippewa CSAH 13 east of Lac qui Parle Dam, at Lac qui Parle Dam Recreation Area, and along the Lac qui Parle Dike and Emergency Spillway. The latter is the most extensive. (There may be a few other smaller areas missed by Gemini Research.)

There has been some change in the shoreline immediately north of the southwestern end of the TH 40 Causeway. Comparison of current aerial photos with an August 1938 photo shows that the mouth of Emily Creek has been modified so that the creek mouth or outlet is now wider than it was in 1938. This change may have occurred in 1948-1949 when TH 40 was realigned in this area. The change had been made by the time a 1958 USGS map was drawn.

A bituminous-paved bike path, about 10' wide, has been built recently along the northern side of TH 40 east of the reservoir.

In general the causeway and 2,600' of the inventoried road segment retain their 1930s-1940s character-defining features.

### ***Historical Background***

Prior to the Lac qui Parle Flood Control Project, there was a gravel road at this location that crossed a causeway that was significantly improved in 1923 following the river's devastating 1919 flood (*LQPFCP General Map* 1937). That causeway, which was located immediately northwest of the current causeway, had a bridge (Bridge X-173) that was built in 1923.

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## DESCRIPTION OF INVENTORIED PROPERTIES

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During planning for the Lac qui Parle Flood Control Project, engineer Adolph F. Meyer recommended that the TH 40 causeway, while fairly new, would not be able to withstand the hydraulic forces expected under the new dam and reservoir system and needed to be replaced, unlike the TH 119 Causeway five miles upstream, which was also built in 1923 but could be improved rather than replaced.

The road at this location became part of the state trunk highway system in 1934. In early December 1934 a crew of workers started preliminary work on one end of the TH 40 Causeway. They were men from local relief rolls hired with State Emergency Relief Administration (SERA) funds. The work was confined to land that was already state-owned, since the majority of land needed for the Lac qui Parle Flood Control Project was yet to be acquired, and was part of the first physical work associated with the Lac qui Parle project.

In May 1936 construction on the Lac qui Parle project began in earnest. In July 1936 there was "considerable" amount of construction on the southwest end of the causeway by workers also being paid with SERA funds (Moyer to Olson, July 18, 1936, Att. Gen., LQP Flood Control Files). After about August 1936 the SERA was phased out and workers were hired exclusively under the WPA.

Construction of the causeway was WPA Job No. 20, while construction of the bridge was WPA Job 19. According to one WPA progress report, both jobs were about 5% complete as of December 1, 1936 (*LQPFCP Progress 1937*).

One project application for a portion of WPA Job No. 20 (the raising of TH 40) estimated labor needs as 132 unskilled laborers, 9 dumpmen, 50 riprappers, 2 air compressor operators, 12 hand drill operators, 2 blasters, 3 stonecutters, 1 superintendent, 2 foremen, and 1 timekeeper. Equipment needs included 3 gasoline-powered shovels, 30 trucks, and 1.5 tons of dynamite. At the time of this application (which was dated August 2, 1937, and revised May 15, 1938) there were already 2,800 cubic yards of road gravel in place and 1,350 cubic yards of riprap in place (WPA Project Proposals).

A TH 40 right-of-way map indicates the State of Minnesota had access to large borrow pits at each end of the causeway, and probably used these as a source of building material. There were numerous borrow or gravel pits along the length of the Lac qui Parle project. (See the Volden Gravel Pit for an example.)

According to MHD construction logs, in 1937 TH 40 was graded to a width of 30'-44' with a 30'-wide gravel upper surface.

An August 1938 aerial photo still shows the new causeway and its Bridge 5380 in place. Also visible is the previous causeway, which had not yet been removed, although its bridge was gone. The August 1938 photo was taken before the Lac qui Parle Reservoir was first filled in the spring of 1939.

By the time of a January 1, 1939, WPA progress report, the bridge had been completed and the causeway was 86% complete. The report indicates 300 man-months remaining on the causeway and gives an estimated completion date of May 15, 1939. Construction of the causeway was the third most-costly among 42 WPA project tasks listed on January 1, 1939, cost estimates ("Record" 1939).

At the northeastern end of the TH 40 Causeway, a north-south road between the lakeshore and Milan Beach Resort predated the Lac qui Parle project. Project planners envisioned improving this lakeshore road as part of a scenic drive called "North Park Road." It was designed to be a companion to the "South Park Road" (now LQP CSAH 33). The northern shoreline scenic road was never built. Today there is still a narrow gravel along the shore north of the causeway.

In all, the WPA constructed a 6,000'-long, gravel-surfaced segment of TH 40 according to an October 31, 1939, report (WPA "Report" 1939). The new TH 40 and bridge were raised about 10' above their previous elevations ("LQPFCP Showing" 1939).

MHD construction logs indicate that in 1941 the highway department completed by the project by surfacing the road with bituminous to a width of 24' and 26'. The gravel shoulders were 2' to 3' wide.

In the spring of 1948, the *Watson Journal* reported that broken-up ice, driven by strong winds, was piled 7' high on the upstream side of the causeway ("Headwaters" 1948).

In 1948-1949, TH 40 was realigned on both sides of the Lac qui Parle Reservoir, not far from the ends of the new causeway. Southwest of the causeway, the realigned segment created a new route between the causeway and TH 119. Northeast of the causeway, the realigned segment shortened TH 40 by cutting across Section 19 (T119N, R42W) from present-day CSAH 30 (190th Ave.) to the northeastern corner of Section 19. Part of the earthwork from the pre-1948 alignment is still visible near the northwestern corner of the junction of TH 40 and CSAH 30.



**Fig. 151. XX-ROD-002.** TH 40 Causeway and Highway Segment, the intact WPA-built segment begins 650' toward the river from this junction (facing SW)

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**Fig. 152. XX-ROD-002.** TH 40 Causeway and Highway Segment with recent bike path on the north side of the highway (facing SW)



**Fig. 153. XX-ROD-002.** TH 40 Causeway and Highway Segment with recent bike path on the north side of the highway (facing NE)



**Fig. 154. XX-ROD-002. TH 40 Causeway and Bridge 5380 with Milan Beach at lower right (facing W)**



**Fig. 155. XX-ROD-002. TH 40 Causeway and Bridge 5380 (facing SW)**

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**DESCRIPTION OF INVENTORIED PROPERTIES**

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**Fig. 156. XX-ROD-002. TH 40 Causeway and Highway Segment, downstream side (facing W)**



**Fig. 157. XX-ROD-002. TH 40 Causeway and Highway Segment (facing SW)**



**Fig. 158. XX-ROD-002.** TH 40 Causeway and Highway Segment, upstream side (facing SW)



**Fig. 159. XX-ROD-002.** TH 40 Causeway and Highway Segment, being built near southwest end of causeway, ca. 1938 (MHS photo) (facing NE)

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DESCRIPTION OF INVENTORIED PROPERTIES

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Fig. 160. XX-ROD-002. TH 40 Causeway and Highway Segment, being built near southwest end of causeway, ca. 1938 (MHS photo) (facing NE)



Fig. 161. XX-ROD-002. TH 40 Causeway and Highway Segment (facing NE)



**Fig. 162. XX-ROD-002.** TH 40 Causeway, northeast shore of Lac qui Parle from TH 40 (with ice fishermen), Dec. 1937 (MHS photo) (facing N)



**Fig. 163. XX-ROD-002.** TH 40 Causeway, northeast shore of Lac qui Parle Reservoir from causeway, Milan Beach North Public Water Access dock (facing N)

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DESCRIPTION OF INVENTORIED PROPERTIES

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**Fig. 164. XX-ROD-002.** TH 40 Causeway, hand-fit riprap at the southeast corner of the bridge (facing NW)



**Fig. 165. XX-ROD-002.** TH 40 Causeway, small riprapped pedestrian concourse below the northeast corner of the bridge (facing NE)



**Fig. 166. XX-ROD-002.** TH 40 Causeway, hand-fit riprap at the northeast corner of the bridge (facing NE)



**Fig. 167. XX-ROD-002.** TH 40 Causeway, small riprapped pedestrian concourse at the northeast corner of the bridge (facing S)

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**DESCRIPTION OF INVENTORIED PROPERTIES**

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**Fig. 168. XX-ROD-002.** TH 40 Causeway, hand-fit riprap and stone staircase at the northeast corner of the bridge (facing NE)



**Fig. 169. XX-ROD-002.** TH 40 Causeway, upper run of stone steps at the northeast corner of the bridge (facing SW)



**Fig. 170. XX-ROD-002. TH 40 Causeway, upper run of steps at the northeast corner of the bridge (facing SE)**



**Fig. 171. XX-ROD-002. TH 40 Causeway, turn in stone staircase (facing NW)**



**Fig. 172. XX-ROD-002.** TH 40 Causeway, middle run of stone steps (after turn in staircase) (facing NE)



**Fig. 173. XX-ROD-002.** TH 40 Causeway, middle and lower runs of steps (facing SE)



**Fig. 174. XX-ROD-002.** TH 40 Causeway, recent concrete steps southwest of, and built to replace, the stone steps in the next photo (facing NW)



**Fig. 175. XX-ROD-002.** TH 40 Causeway, stone steps on northwest side of causeway covered with riprap, stringer and tread barely visible (facing SE)

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**Fig. 176. XX-ROD-002. TH 40 Causeway (railing of recent concrete steps in previous photo descends at left) (facing NE)**



**Fig. 177. XX-ROD-002. TH 40 Causeway, stone-paved ditch (has tall grasses and is parallel with pickup truck) (facing N)**



**Fig. 178. XX-ROD-002.** TH 40 Causeway, stone paving in the ditch identified in previous photo (facing E)



**Fig. 179. XX-ROD-002.** TH 40 Causeway, culvert with stone headwall at the ditch identified in photo above (facing NE)

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**DESCRIPTION OF INVENTORIED PROPERTIES**

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**XX-BRI-003 TH 40 Causeway: Bridge 5380**

**Other Name:** Milan Bridge, Blue Bridge  
**Location:** TH 40 at the Minnesota River  
**County:** Lac qui Parle, Chippewa  
**Township:** Hantho Twp, Kragero Twp  
**TRS:** 119N 42W, Sec 19  
**Built:** 1938  
**Designer:** MN Dept Hwys, MN Dept Conser  
**Builder:** Theodore Jensen Co.

Bridge 5380 was built in 1938 as part of the Lac qui Parle Flood Control Project. (This was part of WPA Job No. 19.) The causeway was inventoried separately. (See Map 4.)

The bridge has already been determined individually eligible for the National Register by the Mn/DOT Historic Bridge Study because of its associations with the Lac qui Parle Flood Control Project.

Bridge 5380 was the only truss bridge built as part of the Lac qui Parle Project. Today it is the project's most intact major bridge. Because of its height, the truss bridge is an important visual landmark, particularly when seen from out on the water.

(The other major project bridges were poured concrete structures built over dams or canal underpasses. The flood control project also built some smaller timber pile bridges and two railroad bridges. There were two pre-existing (1923) truss bridges on TH 119 that predated the flood control project. They were replaced in 1977.)

***Description***

Bridge 5380 is located near the northeastern end of the TH 40 Causeway, which also retains good historic integrity. The bridge spans the main channel of the Minnesota River at River Mile 294. The bridge is a single-span, riveted steel, 8-panel Parker through truss with concrete slab approach spans. The bridge is 220' long with a main span of 162'. There are two approach spans. The deck is 28.5' wide and built of bituminous over concrete which is supported by 11 rolled I-beam stringers riveted to floor beams (Hess ca. 1996; see Hess for more detailed description of the trusses from the Mn/DOT Historic Bridge Survey).

The bridge has poured concrete abutments with somewhat stylized classically-inspired detailing such as entablature-like molding, railing piers with recessed panels, and curving corbel-like forms that support the bridge approaches. The painted metal railings have closely-spaced verticals that are framed at intervals by square posts with classically-inspired caps, and supported at the ends of the bridge by thick poured concrete piers. A heavy metal ring is embedded in each of the four outermost piers, perhaps to support chains to close the bridge to traffic. The bridge has two 3'-wide walkways supported by triangular riveted brackets. The northeastern bridge plate reads "Federal Aid Project 11-A Minnesota 1938." The southwestern plate reads "Minnesota Highway Dept. Bridge No. 5380, 1938."

The causeway at each end of the bridge is protected by large areas of nicely-crafted, mortared, hand-fit granite riprap. See the TH 40 Causeway for more information.

According to the Mn/DOT Historic Bridge Study, in 1967 the MHD “raised and reconfigured [the bridge’s] portal bracing, replacing the original ‘6-X’ configuration of angle-section cross bracing with a sleek, boxed member consisting of a channel section, web plate, and laced angle sections. This alteration significantly altered the bridge’s appearance and compromised its historical integrity under [National Register] Criterion C” (Hess ca. 1996). The portals of the two truss bridges on the TH 119 Causeway were similarly altered at about the same time.

Bridge 5380 was painted in 1982 (and perhaps again in 1988). The bridge is known locally as the “Blue Bridge” because of its paint color

### ***Historical Background***

Bridge 5380 was built in 1938 by the Theodore Jensen Company of St. Cloud, working under contract for the MHD. The MHD designed the bridge in cooperation with the Minnesota Department of Conservation’s Division of Drainage and Water, the state agency in charge of technical details of the Lac qui Parle Flood Control Project. A MHD engineer noted in 1937 that the bridge was located at the “best fishing spot” on Lac qui Parle Lake, and hence was designed with walkways. The structural steel was supplied by Minneapolis Moline Company. A. F. Wagner Iron Works of Milwaukee fabricated the ornamental railings in May 1938 (Hess ca. 1996; Frellsen 1936).

See the TH 40 Causeway for more historical background information.



**Fig. 180. XX-BRI-003.** TH 40 Causeway: Bridge 5380 with the previous bridge (at a lower elevation), ca. 1938 (MHS photo) (facing W)

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**DESCRIPTION OF INVENTORIED PROPERTIES**

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**Fig. 181. XX-BRI-003. TH 40 Causeway: Bridge 5380, view from similar location as previous photo (facing W)**



**Fig. 182. XX-BRI-003. TH 40 Causeway: Bridge 5380 (facing W)**



Fig. 183. XX-BRI-003. TH 40 Causeway: Bridge 5380 with rebuilt truss portal (facing NE)



Fig. 184. XX-BRI-003. TH 40 Causeway: Bridge 5380, truss (facing NE)



Fig. 185. XX-BRI-003. TH 40 Causeway: Bridge 5380, truss (facing E)



Fig. 186. XX-BRI-003. TH 40 Causeway: Bridge 5380, downstream side with southwest abutment at left (facing NE)



**Fig. 187. XX-BRI-003. TH 40 Causeway: Bridge 5380, upstream side and southwest abutment (facing S)**



**Fig. 188. XX-BRI-003. TH 40 Causeway: Bridge 5380, downstream side, railing detail (facing W)**



**Fig. 189. XX-BRI-003.** TH 40 Causeway: Bridge 5380, downstream side, railing and hand-fit riprap at corner of bridge (facing W)