NPS Form 10-900
(Rev. 8/86)
Wisconsin Word Processor Format (1331D)
(Approved 3/87)

OMB No. 1024-0018

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OCT 25 1993

NATIONAL REGISTER

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries. Use letter quality printer in 12 pitch, using an 85 space line and a 10 space left margin. Use only archival paper (20 pound, acid free paper with a 2% alkaline reserve).

1. Name of Property

historic name Kaukauna Locks Historic District

other names/site number N/A

2. Location

street & number Fox River at Canal Street N/A not for publication

city, town Kaukauna N/A vicinity

state Wisconsin code WI county Outagamie code 087 zip code 54130

3. Classification

Ownership of Property	Category of Property	No. of Resources within Property	
		contributing	noncontributing
___ private	___ building(s)		
___ public-local	_X_ district	8	2 buildings
___ public-State	___ site	___	___ sites
_X_ public-Federal	___ structure	9	1 structures
	___ object	___	___ objects
		17	3 Total

Name of related multiple property listing:

Waterway Resources of the Lower Fox River

No. of contributing resources previously listed in the National Register N/A

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, 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. ___See continuation sheet.

Dr. William L. Klesh — 14 Oct '93

Signature of certifying official — Date

Corps of Engineers

State or Federal agency and bureau

In my opinion, the property X meets ___does not meet the National Register criteria. ___See continuation sheet.

X _____ — 8/21/92

Signature of commenting or other official — Date

State Historic Preservation Officer-WI

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

✓ entered in the National Register
___ See continuation sheet — Beth Boland — 10/7/93

___ determined eligible for the National Register. ___ See continuation sheet

___ determined not eligible for the National Register.

___ removed from the National Register.

___ other, (explain:) _____

Signature of the Keeper — Date

6. Functions or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
Transportation/water related	Transportation/water related
Domestic/single dwelling	Domestic/single dwelling (vacant)

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)
	foundation Stone
Other: Lock	walls Stone
Other: Concrete Dam	wood
Late 19th & Early 20th Century American Movements	roof Asphalt
	other Concrete

Describe present and historic physical appearance.

This district encompasses the entire Kaukauna Canal and associated structures and buildings. Virtually the entire length of the canal's south side is occupied by the Thilmany Paper Company. The west half of the north side, however, is rather closely tied to the City of Kaukauna through the positioning of Lawe Street and Canal Street; the former crossing the canal and the latter paralleling it. The eastern segment of the canal's north side generally parallels Augustine Street. Consequently, there is a more rural, park like setting evident there. Lock #1 is positioned at the 23.6 mile marker on the river, and Lock #5 is at the 22.8 marker. The remaining three locks are positioned in between. The district contains eighteen elements -- ten structures and eight buildings. Structures include the five locks, a dry dock, a railroad bridge, a guard lock and the canal. All but the dry dock are contributing members within the district. The buildings consist of a lockkeeper's house, in addition to several lockshacks, sheds and a garage. The garage is the only non-contributing building in the district.

Kaukauna Guard Lock (Contributing): 1891

Unlike the Little Chute Guard Lock which was a complete chamber later converted to guard lock duty, this lock was designed as a guard lock. As such, it is found at the upriver end of the Kaukauna Canal (oriented on a WNW/ESE axis) and consists only of two quarried limestone abutments and two miter gates. The gates are constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. They are believed to be operated with the same crank and spar system used on all the locks in the system. The lock is thought to have butterfly valves either built into the floor under the gates or in the gates themselves.[2] Although a guard lock is designed to protect a lock or canal from a surge of water, they are also used to close a canal off at winter time, thus facilitating the canal's drainage. Gate valves in a guard lock, therefore, are necessary to reflood the canal in the spring. In this particular case, however, the Guard Lock has fallen into disuse and

[2]A close inspection of this lock was logistically difficult to make, thus the question about gates.

X See continuation sheet

is not even thought to be operable. Kaukauna Lock #1 is now the point at which the canal is closed off.

Details about the lock, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

1924 Lock's walls raised.[3]

1951 New timber gates installed.[4]

Kaukauna Lock # 1 (Contributing):

The present lock, which is oriented on an WSW/ENE axis was built in 1882 to replace one of composite construction. The 144.4 by 35.1 foot lock chamber and wing walls are comprised of quarried limestone blocks, the sides of which are capped with concrete coping and a pipe railing. Each of the four lock gates is constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. Adjacent to each gate is a concrete platform that contains a tripod. A vertical shaft extends the height of the tripod. A handle is fixed to the top of the shaft, while the bottom of the shaft contains a gear that drives a horizontally placed spar, the end of which is attached to a lock gate. (It is a horizontal rack and pinion system.) Depending on which way the handle is turned, the spar is either taken in, thus opening the lock gate, or it is pushed out, in which case the gate closes. The chamber is flooded by six butterfly valves that are set in the floor of the lock, immediately upstream from the structure. As the valves are opened, water passes down into a culvert with a 90 degree turn, which then directs it under the upstream sill and straight into the chamber. Each valve is adjusted by a geared mechanism that sits on the lock's coping. A metal shaft connects the valve to the adjusting mechanism, all five of which are placed in line adjacent to the right, upstream corner of the lock. The chamber is discharged through six small butterfly valves found at the

[3] Annual Report of the Chief of Engineers, 1924: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1925), 1380.

[4] Annual Report of the Chief of Engineers, 1951: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1951), 1745.

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bottom of the two downstream gates. There are three valves per gate. These valves are operated by the levers atop each gate. The gates contain a cat-walk that facilitates moving from one side of the lock to the other. The lock provides 10.3 feet of lift as it moves crafts from the 652.76 feet above sea level upper pool to the 642.50 foot above sea level lower pool. It can be filled in three minutes and forty-six seconds, and can be discharged in two minutes and twenty-eight seconds.

Details about the lock's construction, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

1873 Report noted that lock had been worked on since 1866, but more work needed.[5]

1878 Four new gates installed, as were two new sills and four new hollow quoins. Lock walls also replanked as needed.[6]

1880 Lock walls replanked as necessary.[7]

1882 Lock totally rebuilt. "Navigation through the lock was suspended on 19 October 1881, and the water drawn off from the levels. A coffer-dam above the head of the lock was built, and the old lock taken out, requiring the

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[5] Annual Report Upon the Improvement of the Harbors on Lake Superior East of Keweenaw Point, and Harbors on the West and South Shores of Lake Michigan, Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.: Being Appendix B of the Annual Report of the Chief of Engineers for 1873 (Washington, D.C.; Government Printing Office, 1873), 49.

[6] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1878 (Washington, D.C.: Government Printing Office, 1878), 1180.

[7] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, and Waukegan, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix DD of the Annual Report of the Chief of Engineers for 1880 (Washington, D.C.; Government Printing Office, 1880), 1970.

X See continuation sheet

removal of 2,300 cubic yards of clay and 3,328 cubic yards of stone; 250 cubic yards of rock were excavated for foundations, and the foundations to the south wall laid up to the level of the lower miter sill.... The walls were laid up to level of bottom of coping and pointed, and the lock, except the coping completed." Boats again passed through lock on 5 June 1882. Rebuilding lock used 745 yards of dressed stone, 1,643 cubic yards of backing stone and 610 yards of rubble stone foundation, all set in mortar. 327 cubic yards of dry stone laid in upper and lower wings. All dressed stone and about one half backing stone came from Kaukauna quarry. Further, project used 2,175 barrels of cement; 762 cubic yards of sand; 5,298 pounds of bar iron; 408 pounds of steel; 218 pounds of bolts, nuts and washers; 5,931 pounds of iron valves; 256 pounds of miter-sill castings; 1,055 pounds of nails; 600 pounds of spikes; and 39 pounds of lead.[8]

1902 Lock chamber walls repointed with Portland cement.[9]

1904 Gates fitted with new steel gate spars and gas pipe hand rails. Use of steel spars on upper right gate necessitated permanently closing one fill valve. Lock also received three concrete tripod platforms.[10]

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[8] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix EE of the Annual Report of the Chief of Engineers for 1882 (Washington, D.C.: Government Printing Office, 1882), 2180.

[9] Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1902 (Washington, D.C.: Government Printing Office, 1902), 2084.

[10] Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1904 (Washington, D.C.: Government Printing Office, 1904), 2855.

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1907 Fill valves bulkhead replaced.[11]

1908 Ratchets and dogs installed on filling valves.[12]

1909 Lock walls repointed with portland cement.[13]

1910 Gates above water rebuilt and given "modern heel-post caps instead of the old suspension columns."[14]

1946 Lock's lower gates rebuilt.[15]

Kaukauna Lock #2 (Contributing):

The present lock, which is oriented on an WSW/ENE axis was built in 1903 to replace one of composite construction. The 144 by 35 foot lock chamber and wing walls are comprised of quarried limestone blocks, the sides of which are capped with quarried limestone coping and a pipe railing. Each of the four lock gates is constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. Adjacent to each gate is a concrete platform that contains a tripod. A vertical shaft extends the height of the tripod. A handle is fixed to the top of the shaft, while the bottom of the shaft contains a gear that drives a horizontally placed spar, the end of which is attached to a lock gate. (It is a horizontal rack and

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[11] Annual Report of the chief of Engineers, U.S. Army, 1907 Part III) Washington, D.C.: Government Printing Office, 1907), 1910.

[12] Annual Report of the Chief of Engineers, U.S. Army, 1907 Part II (Washington, D.C.: Government Printing Office, 1908), 1979.

[13] Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

[14] Annual Report of the Chief of Engineers, U.S. Army, 1910 Part II (Washington, D.C.: Government Printing Office, 1910), 2140.

[15] Annual Report of the Chief of Engineers, 1946: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1946), 1881.

X See continuation sheet

pinion system.) Depending on which way the handle is turned, the spar is either taken in, thus opening the lock gate, or it is pushed out, in which case the gate closes. The chamber is flooded by four butterfly valves that are set in the floor of the lock, immediately upstream from the structure. As the valves are opened, water passes down into a culvert with a 90 degree turn, which then directs it under the upstream sill and straight into the chamber. Each valve is adjusted by a geared mechanism that sits on the lock's coping. A metal shaft connects the valve to the adjusting mechanism, three of which are placed adjacent to each of the upstream corners of the lock. The chamber is discharged through six small butterfly valves found at the bottom of the two downstream gates. There are three valves per gate. These valves are operated by the levers atop each gate. The gates contain a cat-walk that facilitates moving from one side of the lock to the other. The lock provides 9.6 feet of lift as it moves crafts from the 642.50 feet above sea level upper pool to the 632.90 feet above sea level lower pool. It can be filled in four minutes and seven seconds, while it can be discharged in two minutes and twenty-one seconds.

Details about the lock's construction, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

1873 Report noted lock repaired since 1866, but more work needed.[16]

1878 Four new gates, two new sills and four new hollow quoins installed. Chamber replanked as needed.[17]

[16] Annual Report Upon the Improvement of the Harbors on Lake Superior East of Keweenaw Point, and Harbors on the West and South Shores of Lake Michigan, Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix B of the Annual Report of the Chief of Engineers for 1873 (Washington, D.C.; Government Printing Office, 1873), 48.

[17] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1878 (Washington, D.C.: Government Printing Office, 1878), 1180.

X See continuation sheet

1880 Lock walls replanked as needed.[18]

1884 Extensive repairs on lock. Gates fixed, two new capstan platforms built, other two repaired, and two new capstans and snubbing posts installed. Work utilized "... 664 linear feet of pine coping, seventy four posts and fifty three cross-ties framed, placed and bolted; 7740 feet, B.M., of old pine plank were removed and replaced by new, and 1,500 superficial feet of plank respiked; 55 cubic yards of dry stone wall were laid and 65 cubic yards built on lower wing-walls."[19]

1890 New upper wing walls built, miter sills removed, bedrock foundation hammer dressed, and new sills installed. Also, new gates hung, new capstan platforms built and walls replanked with double pine boards. Materials used included: 35,204 feet, B.M., of oak and 50,328 feet of pine lumber; 1,492 pounds of bolts, etc; 5,238 pounds of tie rods; 2,800 pounds of spikes; 30 pounds of steel; 50 pounds of Aetna powder; 150 blasting-caps; and 182 barrels of cement.[20]

1903 [Original lock, built in 1854, rebuilt in 1889-1890. It was a dry rubble and plank lock.] Old lock removed and lengthened by 9.6 feet, thus increasing the chamber to 170 feet. New lock constructed of cut stone,

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[18] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, and Waukegan, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix DD of the Annual Report of the Chief of Engineers for 1880 (Washington, D.C.; Government Printing Office, 1880), 1970.

[19] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan, Lake Michigan and Improvement of the Fox and Wisconsin Rivers in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix GG of the Annual Report of the Chief of Engineers for 1884 (Washington, D.C.: Government Printing Office, 1884), 1875.

[20] Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in charge of Chas. E.L.B. Davis, Major of Engineers, U.S.A.; Being Appendix II of the Annual Report of the Chief of Engineers for 1890 (Washington, D.C.: Government Printing Office, 1890), 2370-2371.

X See continuation sheet

and included new timber gates "...with gas pipe hand rails and wrought-steel emptying valves." Steel spars on gates "...operated on a tripod system." Construction started on 26 November 1902. Material delivered on a C&NW railroad spur built for the purpose. Bottom of lock uneven bedrock. Evened off with Louisville cement laid 3 to 28 inches thick. This was done in January. Insulated concrete with boards and 6 inches of manure, thus allowing cement to set in 6-8 days. Stone for lock came from Duck Creek quarry of Gillen Stone Company, Velp, Wisconsin. Stone courses were 2'8" and 1'8", alternating. They were 13.5" to 22" thick. Coping pieces were 17.5" thick and 4'6" wide. Wall backing of rubblestone was 9' wide at bottom and 4'6" wide at top. Valves operated by gearing on lock wall and had butterfly valves. New gates constructed of Oregon fir. Steel spans and gas pipe hand rails installed on the gates. Lock reflooded on 25 April 1903. Cost of rebuilding was $24,312.77. [Materials were $13,569.73; labor and transportation costs were $10,743.04].[21]

1908 Concrete tripod platforms replaced three old wooden ones. Lower gate valves also refitted.[22]

1909 Upper wing walls and lockwalls repointed with Portland cement.[23]

1916 Lock gates repaired.[24]

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[21] Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix LL of the Annual Report of the Chief of Engineers for 1903 (Washington, D.C.: Government Printing Office, 1903), 1873-1874, 1878.

[22] Annual Report of the Chief of Engineers, U.S. Army, 1907 Part II (Washington, D.C.: Government Printing Office, 1908), 1979.

[23] Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

[24] Annual Report of the Chief of Engineers, 1916: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1916), 2976.

X See continuation sheet

1930 Lower lock gates rebuilt and a new valve platform installed.[25]

1950 Steel valves and frames replaced in lower gate. Valve mechanism overhauled.[26]

1951 Bad timbers in upper gates "renewed."[27]

Kaukauna Lock #3 (Contributing):

The present lock, which is oriented on an WSW/ENE axis was built in 1878 to replace one of composite construction. The 144 by 36.6 foot lock chamber and wing walls are comprised of quarried limestone blocks, the sides of which are capped with quarried limestone coping and a pipe railing. Each of the four lock gates is constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. Adjacent to each gate is a concrete platform that contains a tripod. A vertical shaft extends the height of the tripod. A handle is fixed to the top of the shaft, while the bottom of the shaft contains a gear that drives a horizontally placed spar, the end of which is attached to a lock gate. (It is a horizontal rack and pinion system.) Depending on which way the handle is turned, the spar is either taken in, thus opening the lock gate, or it is pushed out, in which case the gate closes. The chamber is flooded by four butterfly valves that are set in the floor of the lock, immediately upstream from the structure. As the valves are opened, water passes down into a culvert with a 90 degree turn, which then directs it under the upstream sill and straight into the chamber. Each valve is adjusted by a geared mechanism that sits on the lock's coping. A metal shaft connects the valve to the adjusting mechanism, three of which are placed adjacent to each of the upstream corners of the lock. The

[25] Annual Report of the Chief of Engineers, 1930: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1930), 1454.

[26] Annual Report of the Chief of Engineers, 1950: Extract - Report upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1951), 2013.

[27] Annual Report of the Chief of Engineers, 1951: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1951), 1745.

X See continuation sheet

chamber is discharged through six small butterfly valves found at the bottom of the two downstream gates. There are three valves per gate. These valves are operated by the levers atop each gate. The gates contain a cat-walk that facilitates moving from one side of the lock to the other. The lock provides 10.2 feet of lift as it moves crafts from the 632.90 feet above sea level upper pool to the 622.70 foot above sea level lower pool. It can be filled in four minutes and nineteen seconds, while it can be discharged in two minutes and fifty-three seconds.

Details about the lock's construction, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

1873 Report notes repairs made since 1866, but more needed.[28]

1876 L.J. and L. Call and T.W. Call got contract to remove old lock and build new one. Job abandoned 20 November after creditors seized contractor's assets. Contract voided on 8 February 1876, after old lock torn out and nothing else done.[29]

1877 Lock reconstruction continued with walls, less the coping, being completed by 7 October. Lock reopened to navigation in November. New foundation set on bedrock. Walls 17.53' high and 8' thick at the base. Lock needed 5,576 cubic yards of excavation; 16,547 feet, B.M., of timber for the platforms and miter-sills; 7,034 feet, B.M., of plank in the platforms; 1,798.5 cubic yards of masonry in the walls; and 1,239 pounds of iron. Work remaining includes installation of the coping, construction of the

[28] Annual Report Upon the Improvement of the Harbors on Lake Superior East of Keweenaw Point, and Harbors on the West and South Shores of Lake Michigan, Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix B of the Annual Report of the Chief of Engineers for 1873 (Washington, D.C.; Government Printing Office, 1873), 48.

[29] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix X of the Annual Report of the Chief of Engineers for 1876 (Washington, D.C.; Government Printing Office, 1876), 34.

X See continuation sheet

wing walls, and installation of the permanent gate hangers.[30]

1878 Work on lock completed with installation of coping and two sets of step stones at lower end. Upper and lower wing walls also completed, and new top arms installed on gates. New capstan platform also built. This additional work utilized 1,944 cubic yards of earth embankment; 504 linear feet of coping; 14 cubic yards of stone masonry; and 152 cubic yards of masonry in the wing walls.[31]

1879 Hand rails installed on upper gates.[32]

1890 New gates built and installed on lock.[33]

1902 Gates received new steel spars and gas pipe hand rails. Lock chamber

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[30] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix 2 of the Annual Report of the Chief of Engineers for 1877 (Washington, D.C.; Government Printing Office, 1877), 883-884.

[31] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1878 (Washington, D.C.: Government Printing Office, 1878), 1180.

[32] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1879 (Washington, D.C.; Government Printing Office, 1879), 1545.

[33] Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in charge of Chas. E.L.B. Davis, Major of Engineers, U.S.A.; Being Appendix II of the Annual Report of the Chief of Engineers for 1890 (Washington, D.C.: Government Printing Office, 1890), 2370.

X See continuation sheet

joints also repointed with Portland cement.[34]

1905 New concrete tripod platforms with steel cover plates built.[35]

1906 Lower gates received new steel valves.[36]

1907 Lumber in valve platform replaced.[37]

1908 Valve platform's wooden supports replaced with gas pipe stanchions.[38]

1909 Lower gates rebuilt and sill repaired. Lock walls also repointed with Portland cement.[39]

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[34] Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1902 (Washington, D.C.: Government Printing Office, 1902), 2084.

[35] Annual Report Upon the Improvement of Rivers and Harbors on the Northern and Western Shores of Lake Michigan, In the Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1905 (Washington, D.C.: Government Printing Office, 1905), 2057.

[36] Annual Report Upon the Improvement of Rivers and Harbors on the Northern and Western Shores of Lake Michigan, In the Charge of W.V. Judson, Major, Corps of Engineers, U.S.A.; Being Appendix KK of the Annual Report of the Chief of Engineers for 1906 (Washington, D.C.: Government Printing Office, 1906), 1765.

[37] Annual Report of the chief of Engineers, U.S. Army, 1907 Part III) Washington, D.C.: Government Printing Office, 1907), 1910.

[38] Annual Report of the Chief of Engineers, U.S. Army, 1907 Part II (Washington, D.C.: Government Printing Office, 1908), 1979.

[39] Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

X See continuation sheet

1913 Upper gates above water rebuilt.[40]

1927 New valve platform installed.[41]

1931 Lock received new lower gates.[42]

1951 Bad timbers in upper gates "renewed."[43]

Kaukauna Lock #4 (Contributing):

The present lock, which is oriented on an WSW/ENE axis was built in 1878 to replace one of composite construction. The 144 by 35.6 foot lock chamber and wing walls are comprised of quarried limestone blocks, the sides of which are capped with quarried limestone coping and a pipe railing. Each of the four lock gates is constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. Adjacent to each gate is a concrete platform that contains a tripod. A vertical shaft extends the height of the tripod. A handle is fixed to the top of the shaft, while the bottom of the shaft contains a gear that drives a horizontally placed spar, the end of which is attached to a lock gate. (It is a horizontal rack and pinion system.) Depending on which way the handle is turned, the spar is either taken in, thus opening the lock gate, or it is pushed out, in which case the gate closes. The chamber is flooded by four butterfly valves that are set in the floor of the lock,

[40] Annual Report of the chief of engineers, 1913: Appendix JJ -Report Upon the Improvement of Rivers & Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1913), 2797.

[41] Annual Report of the Chief of Engineers, 1927: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1927), 1302.

[42] Annual Report of the Chief of Engineers, 1931: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1931), 1472.

[43] Annual Report of the Chief of Engineers, 1951: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1951), 1745.

X See continuation sheet

immediately upstream from the structure. As the valves are opened, water passes down into a culvert with a 90 degree turn, which then directs it under the upstream sill and straight into the chamber. Each valve is adjusted by a geared mechanism that sits on the lock's coping. A metal shaft connects the valve to the adjusting mechanism, three of which are placed adjacent to each of the upstream corners of the lock. The chamber is discharged through six small butterfly valves found at the bottom of the two downstream gates. There are three valves per gate. These valves are operated by the levers atop each gate. The gates contain a cat-walk that facilitates moving from one side of the lock to the other. The lock provides 10.2 feet of lift as it moves crafts from the 622.70 feet above sea level upper pool to the 612.50 feet above sea level lower pool. It can be filled in three minutes and thirty-three seconds, while it can be discharged in two minutes and forty-four seconds.

Details about the lock's construction, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

1873 Report noted lock had received attention since 1866, but more needed.[44]

1876 L.J. and J. Day and T.W. Call received contract to remove old lock and build new one. Job abandoned on 20 November after creditors seized contractor's assets. Contract voided on 8 February 1876. Old lock torn out and stone taken from nearby Grignon Quarry for new lock. Work started again about 15 June. By end of fiscal year lock walls built up to about 3.25.'[45]

1877 Lock walls completed on 16 September 1876, with exception of coping. Lock reopened to navigation in November, 1876. Lock construction used 6,051.46

[44] Annual Report Upon the Improvement of the Harbors on Lake Superior East of Keweenaw Point, and Harbors on the West and South Shores of Lake Michigan, Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix B of the Annual Report of the Chief of Engineers for 1873 (Washington, D.C.; Government Printing Office, 1873), 48.

[45] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix X of the Annual Report of the Chief of Engineers for 1876 (Washington, D.C.; Government Printing Office, 1876), 34.

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cubic yards of excavation; 15,961 feet, B.M., of timber in platform; 6,324 feet, B.M. of plank in platform; 1,963.06 cubic yards of masonry in walls; and 1,212 pounds of iron. Installation of coping and permanent gate hangers remained for completion.[46]

1878 Work on lock completed with installation of coping and two sets of step stones at lower end. Also upper and lower wing walls completed, new top arms on gates installed, and new capstan platforms built. Additional material used in completing lock included 4,806 cubic yards of earth embankment; 504 linear feet of coping; 17.5 cubic feet of stone masonry and 180 cubic yards of stone masonry in wing walls.[47]

1879 Hand rails installed on lock's upper gates.[48]

1889 One lower gate removed and repaired.[49]

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[46] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix 2 of the Annual Report of the Chief of Engineers for 1877 (Washington, D.C.; Government Printing Office, 1877), 884.

[47] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1878 (Washington, D.C.: Government Printing Office, 1878), 1180.

[48] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1879 (Washington, D.C.; Government Printing Office, 1879), 1545.

[49] Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in Charge of Chas. E.L.B. Davis, Major of Engineers, U.S.A.; Being Appendix II of the Annual Report of the Chief of Engineers for 1889 (Washington: Government Printing Office, 1889), 2089.

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1890 New gates constructed and installed.[50]

1902 Steel spars and gas pipe hand rails installed on gates. Lock chamber joints repointed with Portland cement.[51]

1905 Lock received new concrete tripod platforms with steel cover plates.[52]

1907 Bad lumber in valve platform replaced.[53]

1908 Valve platform's wooden supports replaced with gas pipe stanchions.[54]

1909 Lower gates rebuilt, and miter sill repaired. Chamber walls repointed with Portland cement.[55]

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[50] Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in charge of Chas. E.L.B. Davis, Major of Engineers, U.S.A.; Being Appendix II of the Annual Report of the Chief of Engineers for 1890 (Washington, D.C.: Government Printing Office, 1890), 2370.

[51] Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1902 (Washington, D.C.: Government Printing Office, 1902), 2084.

[52] Annual Report Upon the Improvement of Rivers and Harbors on the Northern and Western Shores of Lake Michigan, In the Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1905 (Washington, D.C.: Government Printing Office, 1905), 2057.

[53] Annual Report of the chief of Engineers, U.S. Army, 1907 Part III) Washington, D.C.: Government Printing Office, 1907), 1910.

[54] Annual Report of the Chief of Engineers, U.S. Army, 1907 Part II (Washington, D.C.: Government Printing Office, 1908), 1979.

[55] Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

X See continuation sheet

1910 Lower wing walls above water level relaid in cement.[56]

1913 Upper gates rebuilt above water level.[57]

1928 New valve platform installed.[58]

1931 New lower gates installed.[59]

1942 New upper lock gates installed.[60]

1946 Lower gates rebuilt.[61]

Kaukauna Lock #5 (Contributing):

The present lock, which is oriented on an WSW/ENE axis was built in the 1850s. The 144 by 35.6 foot lock chamber is comprised of dry rubblestone and lined with timber

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[56] Annual Report of the Chief of Engineers, U.S. Army, 1910 Part II (Washington, D.C.: Government Printing Office, 1910), 2139.

[57] Annual Report of the chief of engineers, 1913: Appendix JJ -Report Upon the Improvement of Rivers & Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1913), 2797.

[58] Annual Report of the Chief of Engineers, 1928: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1928), 1352.

[59] Annual Report of the Chief of Engineers, 1931: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1931), 1472.

[60] Annual Report of the Chief of Engineers, U.S. Army, 1942 Part I, Volume II (Washington, D.C.: Government Printing Office, 1942), 1365.

[61] Annual Report of the Chief of Engineers, 1946: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1946), 1881.

X See continuation sheet

planking, the sides of which are capped with concrete coping and a pipe railing. The lock's wingwalls, however, are built of quarried limestone blocks. Each of the four lock gates is constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. Adjacent to each gate is a concrete platform that contains a tripod. A vertical shaft extends the height of the tripod. A handle is fixed to the top of the shaft, while the bottom of the shaft contains a gear that drives a horizontally placed spar, the end of which is attached to a lock gate. (It is a horizontal rack and pinion system.) Depending on which way the handle is turned, the spar is either taken in, thus opening the lock gate, or it is pushed out, in which case the gate closes. The chamber is flooded by four butterfly valves that are set in the floor of the lock, immediately upstream from the structure. As the valves are opened, water passes down into a culvert with a 90 degree turn, which then directs it under the upstream sill and straight into the chamber. Each valve is adjusted by a geared mechanism that sits on the lock's coping. A metal shaft connects the valve to the adjusting mechanism, three of which are placed adjacent to each of the upstream corners of the lock. The chamber is discharged through six small butterfly valves found at the bottom of the two downstream gates. There are three valves per gate. These valves are operated by the levers atop each gate. The gates contain a cat-walk that facilitates moving from one side of the lock to the other. The lock provides 10.4 feet of lift as it moves crafts from the 612.50 feet above sea level upper pool to the 602.15 foot above sea level lower pool. It can be filled in three minutes and thirty-one seconds and discharged in two minutes and fifty-eight seconds.

Details about the lock's construction, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

1873 Report noted some work completed since 1866, but more needed.[62]

1878 One upper gate and one lower gate replaced. Chamber walls repaired, new bottom sill installed, upper sill rebolted, and four new hollow quoins

[62] Annual Report Upon the Improvement of the Harbors on Lake Superior East of Keweenaw Point, and Harbors on the West and South Shores of Lake Michigan, Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix B of the Annual Report of the Chief of Engineers for 1873 (Washington, D.C.; Government Printing Office, 1873), 48.

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installed.[63]

1879 New gate installed.[64]

1884 Extensive repairs made. Used: "...560 linear feet of pine coping timber; sixty nine posts; fifty two cross ties; 3,920 feet, B.M. of plank; 149 cubic yards of dry stone walls were laid; four capstan platforms were rebuilt; three new snubbing posts were installed; one new diamond block was replaced and bolted; and the gates were repaired."[65]

1885 New gates built and installed at lock's lower end.[66]

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[63] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1878 (Washington, D.C.: Government Printing Office, 1878), 1180.

[64] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1879 (Washington, D.C.; Government Printing Office, 1879), 1545.

[65] Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan, Lake Michigan and Improvement of the Fox and Wisconsin Rivers in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix GG of the Annual Report of the Chief of Engineers for 1884 (Washington, D.C.: Government Printing Office, 1884), 1875.

[66] Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in Charge of W.L. Marshall, Captain of Engineers, U.S.A.; Being Appendix II of the Annual Report of the Chief of Engineers for 1885 (Washington: Government Printing Office, 1885), 2034.

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1886 Headwalls partially rebuilt of masonry.[67]

1909 Dimension stone used to raise lower left wing wall 2', and right wall 1.' Lock repointed with Portland cement.[68]

1910 Lock received new reinforced concrete tripod platforms. Upper right retaining wall also repointed.[69]

1930 Lock totally relined, and gates and hollow quoins rebuilt.[70]

1943 Lock walls, hollow quoins, and upper valve platform all rebuilt.[71]

1945 Lower gates repaired.[72]

1946 Report noted lock "... is in very poor condition and should be rebuilt in

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[67] Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in Charge of W.L. Marshall, Captain of Engineers, U.S.A.; Being Appendix GG of the Annual Report of the Chief of Engineers for 1886 (Washington: Government Printing Office, 1886), 1696.

[68] Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

[69] Annual Report of the Chief of Engineers, U.S. Army, 1910 Part II (Washington, D.C.: Government Printing Office, 1910), 2139.

[70] Annual Report of the Chief of Engineers, 1930: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1930), 1454.

[71] Annual Report of the Chief of Engineers, U.S. Army, 1943 Part 1, Volume 2 (Washington, D.C.: Government Printing Office, 1943), 1296.

[72] Annual Report of the Chief of Engineers, 1945: Extract - Report upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1946), 1716.

X See continuation sheet

concrete." Recommended first half be done in 1948.[73]

1948 Discussion of rebuilding lock 5 "in combination" with lock 4.[74]

1950 Lock rehabilitated by "... replacing all decayed or damaged planking, wall backing, miter sill and valve platform timbers and gate timbers, providing concrete hollow quoins and [a] steel and concrete lower miter sill, relaying dry wall, removing and replacing backfill for lock walls and placing drain tile in fill behind the lock walls, rebuilding all tripod platforms in concrete and providing concrete cap on lock walls, installing steel valves and frames in lower lock gates and steel valves and frames in timber valve platform, and overhauling all gates, upper valves, valve operating gear and gate operating mechanisms at [Kaukauna 5]."[75]

Dam (Contributing):

This dam is a concrete structure with an overall length of 603 feet. Built in 1931-32,[76] it is located immediately to the south of the Guard Lock. The dam creates the pool that floods the canal in which the Kaukauna locks are located. It is generally oriented on an NE/SW axis.

Anchored to the river's rock bottom, the dam consists of three sections. The northern

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[73] Annual Report of the Chief of Engineers, 1946: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1946), 1882.

[74] Annual Report of the Chief of Engineers, 1948: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1948), 2180.

[75] Annual Report of the Chief of Engineers, 1950: Extract - Report upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1951), 2013.

[76] Annual Report of the Chief of Engineers, 1932: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1932), 1373.

X See continuation sheet

section, which is 199 feet, and the southern section, which is also 199 feet, are spillways. The spillways are twenty four feet wide, and fix the maximum level of the pool the dam creates at 652.76 feet above sea level (it maintains about a ten foot head). The middle portion of the dam is 205 feet, and contains eight concrete sluiceways, each of which contains a fourteen by twenty foot, steel Tainter gate. The gates are operated by a "crab," a small electrically operated mechanism that moves from gate to gate on a track. The "crab" contains a wench, to which the chain on each end of the gate is attached. As the wench is activated, the chain is taken in or let out, and the height of the gate is adjusted accordingly. A steel catwalk, which facilitates inspections and maintenance, extends the length of the dam.

Placed atop the dam is a single story front gabled shed that was erected to shelter the electric "crab." Spanning the abutments adjacent to the northernmost gate, the lift house is reached by the catwalk. It is clad with drop siding, roofed with asphalt shingles, and has walls bounded with pilaster strips. The single window in each side wall and the panelled door at the right of the lockside endwall have simple surrounds. A pair of heavy wooden doors in the opposite endwall swing out to allow passage of the "crab" to whichever gate must be adjusted.

No structural changes are thought to have been made to this structure since its construction.

Canal (Contributing): Circa 1850s

The approximately 7,000 foot Kaukauna Canal is located within this district. Generally running West Southwest to East North east throughout its length, the canal's depth does not exceed six feet. Its width generally varies between 100 and 250 feet, a feature which allows boats to easily pass each other at given points. There are no special embankment features along the canal, which has been dredged periodically throughout its history. It should be noted that a small concrete waste weir is located immediately to the north of Locks #2 and #4, and immediately to the south of Locks #3 and #5. The waste weirs are that portion of the canal that carries water discharged from an upstream lock around the lock(s) immediately below it.

X See continuation sheet

Railroad Bridge (Contributing): Circa 1903[77]

This Pony Truss swing bridge utilizes the Warren Truss with vertical design. Anchored to a cut stone foundation immediately down river from Lock 2, the bridge pivots, or swings, at its center. Its ability to turn is facilitated by a large circular gear to which the bridge is attached. Structural members include "I" beams, as well as members that are built of channels and latticework. All connections are riveted. The major variation between this railroad swing bridge Warren Truss, and a conventional highway Warren Truss, is that the top chord taper slightly down at each end. That reduces the weight at each end of the bridge, and promotes the structure's ability to swing. Due to its need to carry extremely heavy loads, the structural members seem disproportionately massive for the size of the bridge.

The swing mechanism is electrically operated.

This is a contributing element due only to its location in the district, and the fact that it crosses the canal. It is not identified as a property type in Section F, Associated Property Types, because it is a rare element in the districts.

Dry Dock (Non-contributing):

The dry dock is approximately 120 by 250 feet. Located adjacent to Lock #3, the dry dock has a recently poured concrete (certainly post-war) foundation and floor. Short concrete pillars have been poured into the floor, some with "V"s in them. The operating principal is such that the dock is flooded, after which a craft is run into the dock and positioned above the pillars. The lock is then drained, leaving the boat position on the pillars and in the "V"s. The dock has two miter gates comprised of squared timbers laid on top of each other and secured with structural ties. Each gate has one lever operated valve that consists of a slide door positioned over an opening in the gate. When the slide is raised, the dock floods. The lock drains downriver.

Lockkeeper's House - Lock #1 (Contributing): Circa 1890

This gabled el structure is built on a stone foundation. It has a 1.5 story main

[77]Judging from the cut stone base upon which this bridge sets, and that stone's similarity with that from which the lock is built, it is logical to assume that the bridge was built at the same time as the lock.

X See continuation sheet

block and a one story gabled side wing to the right. Sheathed with asbestos shingles and roofed with asphalt singles, it has a full-width, hipped-roof porch across the front gable. The doors and windows throughout are covered with plywood panels and have plain surrounds. The downstream sidewall of the main block has four windows on the main floor and two short, horizontal windows just below the eaves.

The following work is known to have taken place at the house:

1909 Lockkeeper's House: Pantry and bedroom received new hardwood floors. Wood shed and cow stable also built.[78]

1910 Lockkeeper's House: Front porch rebuilt to a 6' width. Supported by stone pillars.[79]

Boathouse - Lock #1 (Contributing): Circa 1900

This is a 1.5 story gabled building. It has cement walls, bounded by pilaster strips, that were cast with projecting door and window sills and lintels. The overhanging roof has a plain cornice and is roofed with asphalt shingles. Round vent hoods at ends of the roof ridges are complemented by louvered vent panels in the upper gables. The lockside endwall has a pair of metal doors which close around a projecting hoist beam. The metal-framed sidewall windows and those flanking the endwall doors are mostly obscured by plywood panels.

Stable - Lock #1 (Contributing): Circa 1900

Clad with drop siding and roofed with asphalt shingles, this 1.5 story, gabled structure is clad with drop siding and roofed with asphalt shingles. Its walls are bounded by pilaster strips. The downstream endwall has a four-panelled overhead door inserted to the left of a panel-covered entry door. The lockend sidewall has a gabled dormer with a hayloft door. The building's wooden sills rest on the ground.

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[78] Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

[79] Annual Report of the Chief of Engineers, U.S. Army, 1910 Part II (Washington, D.C.: Government Printing Office, 1910), 2140.

X See continuation sheet

Lockshack - Lock #1 (Contributing): Circa 1917

A single story, rectangular, front gabled shed, this structure is used as the locktender's station. It is built on a cement foundation, and is located off-center to the west, on the north side of the lock. Clad with drop siding and roofed with asphalt shingles, it has walls bounded by pilaster strips. A centered, panelled front door and a single window in each side wall have plain surrounds. The roof cornice has a crown molding.

Lockshack - Lock #2 (Contributing) Circa 1917

This is a single story, front gabled shed is used as the locktender's station. It is built on a cement foundation set into the lock embankment. Clad with drop siding and roofed with asphalt shingles, it has walls bounded by pilaster strips. A centered, panelled front door and a single window in each side wall have plain surrounds. The roof cornice has a crown molding. A metal smokestack protrudes from the downstream roof slope.

Lockshack - Lock #3 (Contributing) Circa 1917

A single story, front gabled structure, this shed is used as the locktender's station. It is built on a cement block foundation that is set into the lock embankment. Clad with drop siding and roofed with asphalt shingles, it has walls bounded by pilaster strips. A centered, panelled front door and a single window in each side wall have plain surrounds. Signboards above the door identify the lock location and number. The roof cornice has a crown molding. A metal liner projects from a masonry chimney in the downstream slope.

Lockshack - Lock #4 (Contributing): Circa 1917

A single story, rectangular, front gabled shed, this structure is used as the locktender's station. It is built on a cement foundation that is set into the lock embankment. Clad with drop siding and roofed with asphalt shingles, it has walls bounded by pilaster strips. A centered, panelled front door and a single window in each side wall have plain surrounds. The roof cornice has a crown molding. A metal smokestack protrudes from the downstream roof slope.

X See continuation sheet

Lockshack - Lock #5 (Contributing): Circa 1917

This single story, rectangular, front gabled frame shed is used as the locktender's station. It has been relocated to a cement house foundation built into the lock embankment. Clad with drop siding and roofed with asphalt shingles, it has walls bounded by pilaster stripes. A centered, panelled front door and a single window in each sidewall have plain surrounds. The roof has plain gable cornices. A metal smokestack protrudes from the upstream slope. There is no passage between the single room of the lock shack and the foundation's basement chamber.

Shed - Lock #1 (Non-contributing):

Situated adjacent to the northeast corner of the lock, this is a modern, metal shed.

Garage - Lock #5 (Non-contributing):

Badly deteriorated and built on a cement slab, this single story, front gabled structure is clad with drop siding and roofed with asphalt shingles. It has walls bounded by pilaster strips and a sidewall door and window with plain surrounds. The main entry is a four-panel overhead door.

___ See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties: ___nationally X statewide ___locally

Applicable National Register Criteria X A ___B X C ___D

Criteria Considerations (Exceptions) ___A ___B ___C ___D ___E ___F ___G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Transportation	Circa 1850 - 1941	1878[1] 1882[2]
Engineering		1903[3] 1932[4]
		Circa 1850[5]

Cultural Affiliation
N/A

Significant Person
N/A

Architect/Builder
N/A

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

[1]Annual Report Upon the Improvement of the Harbors of Milwaukee, Racing and Kenosha, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers, in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix AA of the Annual Report of the Chief of Engineers for 1878 (Washington, D.C.: Government Printing Office, 1878), 1180. The 1878 date, as well as the citation, are applicable to both Lock #3 and Lock #4.

[2]Annual Report Upon the Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan, Lake Michigan, and Improvement of the Fox and Wisconsin Rivers in Charge of D.C. Houston, Major of Engineers, Bvt. Colonel, U.S.A.; Being Appendix EE of the Annual Report of the Chief of Engineers for 1882 (Washington, D.C.: Government Printing Office, 1882), 2180.

[3]Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix LL of the Annual Report of the Chief of Engineers for 1903 (Washington, D.C.: Government Printing Office, 1903), 1873-1874, 1878.

[4]Annual Report of the Chief of Engineers, 1932: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1932), 1373.

[5]Lock #5 has been extensively repaired several times, however, the lock was never totally gutted and rebuilt. Because the timber lining represents the type of lining installed in the lock chambers when the system was originally built in the 1850s, it is assumed that the construction of this lock dates to that period of time.

X See continuation sheet

Statement of Significance:

The Kaukauna Locks, the Kaukauna Dam, as well as a lockkeepers' house and associated sheds are significant components in the Lower Fox River Waterway System, a system which, as discussed in Cultural Resource Management in Wisconsin, was initially envisioned as part of the larger Fox-Wisconsin Waterway.[6] Originally constructed by private interests between 1850 and about 1860, and rebuilt by the US Army Corps of Engineers between 1872 and 1941, the Lower Fox River system operated between Lake Winnebago and Green Bay. It is historically significant as a complete and operable mid-nineteenth century example of a river/canal, slack water transportation system, the technology of which was so well suited that it works effectively today. It is the only such system extant in Wisconsin. The system is also significant for its role in the evolution of Wisconsin's nineteenth century political and constitutional history. Further, it is an interesting chapter in the transportation history of the state.

History:

The Kaukauna Dam was responsible for creating the pool that flooded the canal in which Locks 1-5 were located. It was this arrangement of dam and locks that enabled water craft to navigate an otherwise unnavigable stretch of the river that dropped about fifty feet in little more than a mile.

The Kaukauna Locks Historic District consists of historic locks, a dam, a canal, a bridge, a lockkeeper's house, a boathouse, a stable, and lockshacks, built between circa 1950-1941, that meet the registration requirements set forth in Waterway Resources of the Lower Fox River multiple property form. The resources possess integrity of location, design and materials, and are property types significant to the operation of the waterway.

[6]Barbara Wyatt, ed., Cultural Resource Management in Wisconsin (Madison: State Historical Society, Historic Preservation Division, 1986), Transportation 2/2.

___ See continuation sheet

9. Major Bibliographical References

United States Army Corps of Engineers. Annual Reports. Washington, D.C.: Government Printing Office, 1872-1951.

Previous documentation of file (NPS): ___ See continuation sheet

___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 #_____

Primary location of additional data:
_X_State Historic Preservation Office
___Other State agency
___Federal agency
___Local government
___University
___Other
Specify repository:
_____

10. Geographical Data

Acreage of Property 48.5

UTM References:

	Zone	Easting	Northing		Zone	Easting	Northing
A	1/6	3/9/8/5/1/0	4/9/0/3/6/2/0	B	1/6	3/9/8/6/4/0	4/9/0/3/7/4/0
C	1/6	3/9/8/9/8/0	4/9/0/3/6/0/0	D	1/6	3/9/9/3/2/0	4/9/0/3/8/0/0

_X_ See Continuation Sheet

Verbal Boundary Description

See continuation sheet

_X_ See Continuation Sheet

Boundary Justification

This boundary encompasses an appropriate setting, and includes that area immediately adjacent to, and historically associated with the subject property.

___ See Continuation Sheet

11. Form Prepared By

name/title John N. Vogel
organization J.N. Vogel. Ph.D. Consulting Hist. date 01 october 1991
street & number 301 North 73rd Street telephone (414) 258-6598
city or town Milwaukee state Wisconsin zip code 53213

UTM REFERENCES (cont.)

E 16/399670/4903830
F 16/400640/4904320

*The property boundary descriptions given have not been audited or verified. They are not, at any time, to be used for any legal boundary descriptions. They are used here only for the purpose of describing the approximate property location.

___ See continuation sheet

VERBAL BOUNDARY DESCRIPTION:
Kaukauna Locks, Dam & Canal Segments:

[Note that Parcels are identified according to official legal description maps that are retained in, and on file at the Detroit District of the US Army Corps of Engineers] *see note page 1 of Section 10

PARCEL J: That part of Government Lots 5 and 6 of fractional Section 22, Township 21 North, Range 18 East of the Fourth Principal Meridian, lying South of the Fox River, in Outagamie County, Wisconsin, described as beginning at a U.S. stone monument within said Government Lot 5 recorded as lying 279.8 feet East of the West line of said Lot 5 and bearing South 49 degrees 51 minutes 50 seconds East 3538.23 feet from the Southwest corner of the Southeast quarter of Section 14, Township 21 North, Range 18 East as recorded per certified land corner no. 33; thence North 61 degrees 54 minutes 29 seconds West (measured), North 61 degrees 51 minutes West (recorded) 140 feet to a 5/8" rebar with an allied cap stamped "USAED DETROIT BOUNDARY MARK"; thence North 34 degrees 23 minutes 49 seconds West (calculated), North 34 degrees 20 minutes 20 seconds West (recorded) 325.22 feet; thence North 67 degrees 24 minutes 39 seconds West (calculated), North 67 degrees 21 minutes 10 seconds West (recorded) 65.78 feet; thence North 68 degrees 12 minutes 39 seconds West (calculated), North 68 degrees 09 minutes 10 seconds West (recorded) 173.32 feet to an allied cap stamped as before; thence North 74 degrees 40 minutes 49 seconds West (measured), North 74 degrees 37 minutes 20 seconds West (recorded) 44.16 feet to an allied cap stamped as before; thence South 86 degrees 53 minutes 41 seconds West (measured), South 86 degrees 57 minutes 10 seconds West (recorded) 133.96 feet to an allied cap stamped as before; thence South 79 degrees 48 minutes 31 seconds West (measured), South 79 degrees 52 minutes West (recorded) 198.79 feet to an allied cap stamped as before; thence South 77 degrees 27 minutes 21 seconds West (measured), South 77 degrees 30 minutes 50 seconds West (recorded) 106.51 feet to an allied cap stamped as before; thence South 72 degrees 20 minutes 11 seconds West (measured), South 72 degrees 23 minutes 40 seconds West (recorded) 244.96 feet to an allied cap stamped as before; thence North 18 degrees 49 minutes 29 seconds West (measured), North 18 degrees 46 minutes West (recorded) 27.7 feet to the right shoreline of the Fox River; thence Easterly, downstream, along the meanders of the said right shoreline and across the mouth of the Kaukauna Water Power Canal and continuing downstream along the said right shoreline and along the face of the right abutment of the U.S. Dam, and continuing downstream along the face of the retaining wall to a point on the face of the said wall that bears North 85 degrees 19 minutes 57 seconds East 311.01 feet from the Point of

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Beginning; thence South 52 degrees 02 minutes 19 seconds East 69.27 feet to an allied cap stamped as before set for the computed position of the shoreline of the Fox River as it existed in 1899; thence South 05 degrees 02 minutes 58 seconds East 49.84 feet to an allied cap stamped as before and set for the computed position of the shoreline of the Fox River as it existed in 1899; thence South 52 degrees 54 minutes 10 seconds West 38.63 feet to an allied cap stamped as before; thence North 75 degrees 03 minutes 29 seconds West (measured), North 75 degrees West (recorded) 350 feet along a line that passes through a United States stone monument that is 283.8 feet from the Point of Beginning, to the U.S. stone at the Point of Beginning, and containing 2.95 acres, more or less. Bearings are based on reestablishment of 1899 survey information recorded as true by Polaris Observation.

PARCEL H: That part of fractional Section 24, Township 21 North, Range 18 East of the Fourth Principal Meridian, lying North of the Fox River, Kaukauna, Outagamie County, Wisconsin, described as beginning at a point on the common line between fractional Sectin 24 and Private Claim 1 that bears South 40 degrees 00 minutes 10 seconds East 2197.18 feet (recorded) from the intersection of said Southwesterly line of Private Claim 1 with the West line of said fractional Section 24, and also bearing South 64 degrees 16 minutes 56 seconds East 4520.29 feet from the Southwest corner of the Southeast quarter of Section 14, Township 21 North, Range 18 East as recorded per certified land corner no. 33; thence South 40 degrees 00 minutes 10 seconds East 396 feet along the common line between fractional Section 24 and Private Claim 1 to the computed position of the toe of the Fox River revetment wall as it existed in 1899; thence South 73 degrees 45 minutes 36 seconds West 66.40 feet along the computed position of the toe of the revetment wall as it existed in 1899 to the toe of the revetment wall as it currently exists; thence North 86 degrees 24 minutes 28 seconds West 49.76 feet along said toe; thence North 79 degrees 55 minutes 25 seconds West 50.26 feet along said toe; thence North 76 degrees 33 minutes 08 seconds West 75.55 feet along said toe; thence North 66 degrees 50 minutes 21 seconds West 175.44 feet along said toe; thence North 61 degrees 46 minutes 46 seconds West 75.39 feet along said toe; thence North 59 degrees 25 minutes 27 seconds West 24.48 feet along said toe; thence North 61 degrees 14 minutes 04 seconds West 99.97 feet along said toe; thence North 62 degrees 12 minutes 15 seconds West 99.58 feet along said toe; thence North 62 degrees 35 minutes 17 seconds West 99.82 feet along said toe; thence North 58 degrees 47 minutes 34 seconds West 50.30 feet along said toe; thence North 61 degrees 23 minutes 02 seconds West 249.27 feet along said toe; thence North 42 degrees 48 minutes 29 seconds West 27.87 feet along said toe to the face of the left abutment of the United States Dam; thence North 62 degrees 47 minutes 25 seconds West 32.94 feet

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along the said face; thence Westerly, upstream, along the meanders of the left shoreline of the Fox River, a total distance of 135 feet, more or less, to the intersection of the said left shoreline with the right shoreline of the U.S. Canal, said point bearing North 77 degrees 13 minutes 09 seconds West 946.39 feet from the Point of Beginning; thence North 12 degrees 20 minutes 33 seconds West 162.2 feet across the mouth of the U.S. Canal to the intersection of the left shoreline of the Fox River with the left shoreline of the U.S. Canal, said point bearing North 68 degrees 59 minutes 17 seconds West 1025.83 feet from the Point of Beginning; thence Northwesterly, upstream, along the meanders of the left shoreline of the Fox River, 91 feet, more or less, to a point on said shoreline that bears North 66 degrees 44 minutes 55 seconds West 1106.40 feet from the Point of Beginning; thence North 79 degrees 51 minutes East 137.78 feet (measured), North 79 degrees 50 minutes 30 seconds East 132 feet (recorded) to a 5/8" rebar with an allied cap stamped "USAED DETROIT BOUNDARY MARK"; thence South 62 degrees 30 minutes 23 seconds East 955.70 feet (measured), South 62 degrees 30 minutes East 956.28 feet (recorded) to an allied cap stamped as before; thence South 59 degrees 04 minutes 52 seconds East (measured), South 59 degrees 05 minutes 30 seconds East (recorded) 38.64 feet to the Point of Beginning, and containing 7.24 acres, more or less. Bearings are based on reestablishment of 1899 survey information recorded as true by Polaris Observation.

PARCEL G: That part of Private Claim 1, Kaukauna, Outagamie County, Wisconsin, described as beginning at a point on the common line between fractional Section 24, Township 21 North, Range 18 East of the Fourth Principal Meridian and Private Claim 1 that bears South 40 degrees 00 minutes 10 seconds East 2197.18 feet (recorded) from the intersection of said Southwesterly line with the West line of said Section 24, and also bearing South 64 degrees 16 minutes 56 seconds East 4520.29 feet from the Southwest corner of the Southeast quarter of Section 14, Township 21 North, Range 18 East per certified land corner no. 33; thence South 59 degrees 04 minutes 52 seconds East 78.34 feet (measured), South 59 degrees 05 minutes 30 seconds East 78.46 feet (recorded) to a 5/8" rebar with an allied cap stamped "USAED DETROIT BOUNDARY MARK"; thence South 58 degrees 48 minutes 00 seconds East (calculated), South 58 degrees 47 minutes 10 seconds East (recorded) 95.42 feet; thence North 80 degrees 39 minutes 59 seconds East 87.99 feet (calculated), North 80 degrees 41 minutes East 88.02 feet (recorded); thence North 56 degrees 45 minutes 14 seconds East 230.06 feet (calculated), North 56 degrees 47 minutes 20 seconds East 230.07 feet (recorded); thence North 52 degrees 48 minutes 44 seconds East 606.97 feet (calculated), North 52 degrees 50 minutes 30 seconds East 605.88 feet (recorded) to a 3" iron pipe; thence North 64 degrees 21 minutes 30 seconds East 145.52 feet (measured), North 64 degrees

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01 minutes 20 seconds East 145.18 feet (recorded) to a 1½" iron pipe; thence North 70 degrees 51 minutes 49 seconds East 188.91 feet (measured), North 70 degrees 37 minutes 30 seconds East 189.06 feet (recorded) to an iron rod; thence North 61 degrees 11 minutes 37 seconds East 13.58 feet (measured), North 61 degrees 20 minutes 20 seconds East 17.69 feet (recorded) to an allied cap stamped as before on the Northeasterly line of said Private Claim 1 that bears South 40 degrees 02 minutes 09 seconds East 983.11 feet (calculated), South 40 degrees 03 minutes 30 seconds East 981.47 feet (recorded) from the intersection of said Northeasterly line with the centerline of Lawe Street; thence South 40 degrees 02 minutes 09 seconds East 244.45 feet (measured), South 40 degrees 03 minutes 30 seconds East 246.34 feet (recorded) along said Northeasterly line and across the U.S. Canal to a brass monument set in concrete stamped "TP&P56"; thence South 82 degrees 27 minutes 20 seconds West 102.64 feet to an allied cap stamped as before; thence South 77 degrees 05 minutes 21 seconds West 189.26 feet (measured), South 77 degrees West 189.12 feet (recorded) to a 5" capped pipe; thence South 48 degrees 22 minutes 27 seconds West 73.07 feet (measured), South 48 degrees 22 minutes 30 seconds West 73.36 feet (recorded) to an 8" pipe; thence South 64 degrees 21 minutes 22 seconds West 114.22 feet (measured), South 64 degrees 02 minutes 20 seconds West 114.19 feet (recorded) to a 6" iron pipe; thence South 50 degrees 35 minutes 24 seconds West 399.98 feet (measured), South 50 degrees 17 minutes 30 seconds West 400.05 feet (recorded) to a brass cap set in concrete stamped "TP&P56"; thence South 53 degrees 40 minutes 57 seconds West 200.18 feet (measured), south 53 degrees 23 minutes West 200.08 feet (recorded) to a brass cap stamped "TP&P56"; thence South 57 degrees 29 minutes 47 seconds West (measured), South 57 degrees 11 minutes 50 seconds West (recorded) 200.00 feet to an allied cap stamped as before; thence South 32 degrees 45 minutes East 8.0 feet to the computed position of the toe of the Fox River revetment wall as it existed in 1899; thence South 66 degrees 37 minutes 48 seconds West 62.49 feet (calculated) along the computed position of the toe of the revetment wall as it existed in 1899 to the Southwesterly line of said Private Claim 1; thence North 40 degrees 00 minutes 10 seconds West 396 feet (calculated) along the Southwesterly line of said Private Claim 1 and across the U.S. Canal to the Point of Beginning, and containing 6.25 acres, more or less. Bearings are based on reestablishment of 1899 survey information recorded as true by Polaris Observation.

PARCEL C: that part of Private Claim 35, Outagamie County, Wisconsin, described as beginning at a 5/8" rebar with an allied cap stamped "USAED DETROIT BOUNDARY MARK" on the North line of certified survey map #275 that bears South 40 degrees 02 minutes 09 seconds East 983.11 feet (measured), South 40 degrees 03 minutes 30 seconds East

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981.74 feet (recorded) from the intersection of the Southwesterly line of said Private Claim 35 with the centerline of Lawe Street, and also bearing South 75 degrees 05 minutes 32 seconds East 5490.48 feet from the Southwest corner of the Southeast quarter of Section 14, Township 21 North, Range 18 East of the Fourth Principal Meridian as recorded per certified land corner no. 33; thence North 61 degrees 11 minutes 37 seconds East 196.72 feet (measured), North 61 degrees 20 minutes 20 seconds East 195.76 feet (recorded) along the North line of certified survey map no. 275 to a 3/4" pipe; thence North 83 degrees 34 minutes 20 seconds East 356.88 feet (measured), North 82 degrees 55 minutes 30 seconds East 357.74 feet (recorded) along said North line to a 3" pipe; thence South 83 degrees 22 minutes 04 seconds East 157.19 feet (measured), South 82 degrees 33 minutes 40 seconds East 158.27 feet (recorded) along said North line to a 3" pipe; thence South 86 degrees 12 minutes 46 seconds East 238.16 feet (measured), South 86 degrees 20 minutes 50 seconds 237.03 feet (recorded) along said North line to a 3" pipe; thence North 73 degrees 42 minutes 14 seconds East 252.09 feet (measured), North 74 degrees 03 minutes East 251.93 feet (recorded) along said North line to a 2½" pipe; thence North 45 degrees 21 minutes 46 seconds East 122.01 feet (measured), North 46 degrees 03 minutes 10 seconds East 123.23 feet (recorded) to an allied cap stamped as before; thence North 77 degrees 39 minutes 40 seconds East 285.34 feet to an allied cap stamped as before; thence North 58 degrees 48 minutes 40 seconds East 393.09 feet to an allied cap stamped as before; thence North 62 degrees 19 minutes 55 seconds East (measured), North 62 degrees 08 minutes 50 seconds East (recorded) 228 feet to an allied cap stamped as before on the Northeasterly line of said Private Claim 35 that bears South 40 degrees 10 minutes 30 seconds 2343.28 feet (measured), South 40 degrees 13 minutes 40 seconds East 2342.67 feet (recorded) from the intersection of said Northeasterly line with the centerline of Lawe Street; thence South 40 degrees 10 minutes 30 seconds East 329.29 feet (measured), South 40 degrees 13 minutes 40 seconds East 329.60 feet (recorded) across the United States Canal and along the Northeasterly line of said Private Claim 35; thence South 64 degrees 30 minutes 19 seconds West 352.34 feet (measured), South 64 degrees 24 minutes 30 seconds West 351.62 feet (recorded) to a 4½" capped iron pipe; thence South 49 degrees 17 minutes 25 seconds West (measured), South 49 degrees 15 minutes 10 seconds West (recorded) 405.89 feet to an allied cap stamped as before; thence South 62 degrees 26 minutes 15 seconds West (measured), South 62 degrees 24 minutes West (recorded) 247.11 feet to an allied cap stamped as before; thence South 87 degrees 52 minutes 45 seconds West (measured), South 87 degrees 52 minutes 30 seconds West (recorded) 624.61 feet to an allied cap stamped as before; thence North 84 degrees 24 minutes 22 seconds West 201.04 feet (measured), North 84 degrees 00 minutes 50 seconds West 202.17 feet (recorded) to a brass cap set in concrete stamped

X See continuation sheet

"TP&P56"; thence North 88 degrees 41 minutes 08 seconds West 194.98 feet (measured), North 89 degrees 11 minutes 40 seconds West 193.97 feet (recorded) to an allied cap stamped as before; thence South 82 degrees 35 minutes 23 seconds West 259.93 feet (measured), South 82 degrees 27 minutes 20 seconds West 261.54 feet (recorded) to a brass cap set in concrete stamped "TP&P56" on the Southwesterly line of said Private Claim 35; thence North 40 degrees 02 minutes 09 seconds West 244.46 feet (measured), North 40 degrees 03 minutes 30 seconds West 246.34 feet (recorded) across U.S. Canal and along the Southwesterly line of said Private Claim 35 to the Point of Beginning, and containing 16.39 acres, more or less. Bearings are based on reestablishment of 1899 survey information recorded as true by Polaris Observation.

PARCEL B: that part of Private Claim 34, Kaukauna, Outagamie County, Wisconsin, described as beginning at a 5/8" rebar with an allied cap stamped "USAED DETROIT BOUNDARY MARK" on the Southwesterly line of said Private Claim 34 that bears South 40 degrees 10 minutes 30 seconds East, 2343.28 feet (measured), South 40 degrees 13 minutes 40 seconds East, 2342.67 feet (recorded), from the intersection of said Southwesterly line with the centerline of Lawe Street, and also bearing South 83 degrees 55 minutes 26 seconds East 7413.86 feet from the Southwest corner of the Southeast quarter of Section 14, Township 21 North, Range 18 East of the Fourth Principal Meridian as recorded per certified land corner no. 33; thence North 62 degrees 19 minutes 55 seconds East (measured), North 62 degrees 08 minutes 50 seconds East (recorded) 177.73 feet to an allied cap stamped as before; thence North 63 degrees 50 minutes 50 seconds East (measured), North 63 degrees 50 minutes 40 seconds East (recorded) 147.69 feet to an allied cap stamped as before; thence South 26 degrees 10 minutes 50 seconds East 16.00 feet to an allied cap stamped as before; thence North 69 degrees 16 minutes 34 seconds East 315.85 feet (measured), North 69 degrees 48 minutes East 317.80 feet (recorded) to a United States stone monument; thence North 63 degrees 27 minutes 21 seconds East 137.99 feet (measured), North 63 degrees 28 minutes 40 seconds East 154.55 feet (recorded) to an allied cap stamped as before on the Northeasterly line of said Private Claim 34; thence South 40 degrees 18 minutes 57 seconds East 245.41 feet (measured), South 40 degrees 17 minutes 20 seconds East 245.92 feet (recorded) along the said Northeasterly line and across the U.S. Canal to an allied cap stamped as before; thence South 63 degrees 51 minutes 20 seconds West 181.17 feet (measured), 197.56 feet (recorded) to an allied cap stamped as before; thence South 58 degrees 22 minutes 30 seconds West 448.87 feet to an allied cap stamped as before; thence South 64 degrees 30 minutes 19 seconds West 130.04 feet (measured), South 64 degrees 24 minutes 30 seconds West 132.39 feet (recorded) to the Southwesterly line of said Private Claim 34; thence North 40 degrees 10 minutes 30

X See continuation sheet

seconds West 329.29 feet (measured), North 40 degrees 13 minutes 40 seconds West 329.60 feet (recorded) along the said Southwesterly line and across the U.S. Canal to the Point of Beginning, containing 4.97 acres, more or less. Bearings are based on reestablishment of 1899 survey information recorded as true by Polaris Observation.

PARCEL A: that part of Private Claim 33, Kaukauna, Outagamie County, Wisconsin, described as beginning at a 5/8" rebar with an allied cap stamped "USAED DETROIT BOUNDARY MARK" on the Southwesterly line of said Private Claim 33 that bears South 40 degrees 25 minutes 30 seconds East 2758.16 feet (measured), South 40 degrees 17 minutes 20 seconds East 2769.70 feet (recorded) from the intersection of the said Southwesterly line with the centerline of Lawe Street, and also bearing South 86 degrees 37 minutes 02 seconds East 8102.20 feet from the Southwest corner of the Southeast quarter of Section 14, Township 21 North, Range 18 East of the Fourth Principal Meridian as recorded per certified land corner no. 33; thence North 63 degrees 27 minutes 21 seconds East 1123.62 feet (measured), North 63 degrees 28 minutes 40 seconds East 1107.43 feet (recorded); thence North 65 degrees 18 minutes 30 seconds East 135.22 feet; thence North 26 degrees 10 minutes 50 seconds West 40.00 feet to a 7/8" iron bar; thence North 63 degrees 56 minutes 30 seconds East 147.40 feet to an allied cap stamped as before; thence South 26 degrees 10 minutes 50 seconds East 35.25 feet; thence North 63 degrees 45 minutes 00 seconds East 288.15 feet; thence North 72 degrees 59 minutes 10 seconds East 273 feet, more or less, to the left shoreline of the Fox River; thence South 15 degrees 00 minutes 28 seconds East 208.14 feet, across the U.S. Canal to the intersection of the right shoreline of said canal with the left shoreline of the Fox River as it existed in 1899; thence Southwesterly, upstream, along the meanders of the left shoreline of the Fox River as it existed in 1899 a total distance of 469 feet, more or less, to a point that bears North 75 degrees 26 minutes 31 seconds East 1402.19 feet from the Point of Beginning; thence North 26 degrees 10 minutes 50 seconds West 70 feet; thence South 58 degrees 10 minutes 50 seconds West 253.40 feet to an allied cap stamped as before; thence South 63 degrees 37 minutes 00 seconds West 302.37 feet to an allied cap stamped as before; thence South 63 degrees 51 minutes 20 seconds West 758.97 feet (measured), 742.58 feet (recorded) to an allied cap stamped as before on the Southwesterly line of said Private Claim 33; thence North 40 degrees 18 minutes 57 seconds West 245.41 feet (measured), North 40 degrees 17 minutes 20 seconds West 245.92 feet (recorded), along said Southwesterly line and across the U.S. Canal to the Point of Beginning, and containing 10.72 acres, more or less. Bearings are based on reestablishment of 1899 survey information recorded as true by Polaris Observation.

___ See continuation sheet

KAUKAUNA LOCKS HISTORIC DISTRICT (Dam)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to North
Photo #1 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Guard lock)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to North Northwest
Photo #2 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 1 boat house)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northwest
Photo #3 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 1)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northeast
Photo #4 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 1 stable)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northeast
Photo #5 of 17

X See continuation sheet

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 1 lockkeeper's house)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northeast
Photo #6 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 2)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to East
Photo #7 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 2 lockshack)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to North
Photo #8 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Railroad swing bridge)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northeast
Photo #9 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 3)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to North Northeast
Photo #10 of 17

X See continuation sheet

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 3 lockshack)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northwest
Photo #11 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Dry dock)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Southwest
Photo #12 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 4)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northeast
Photo #13 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 4 lockshack)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to West Northwest
Photo #14 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 5)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to East
Photo #15 of 17

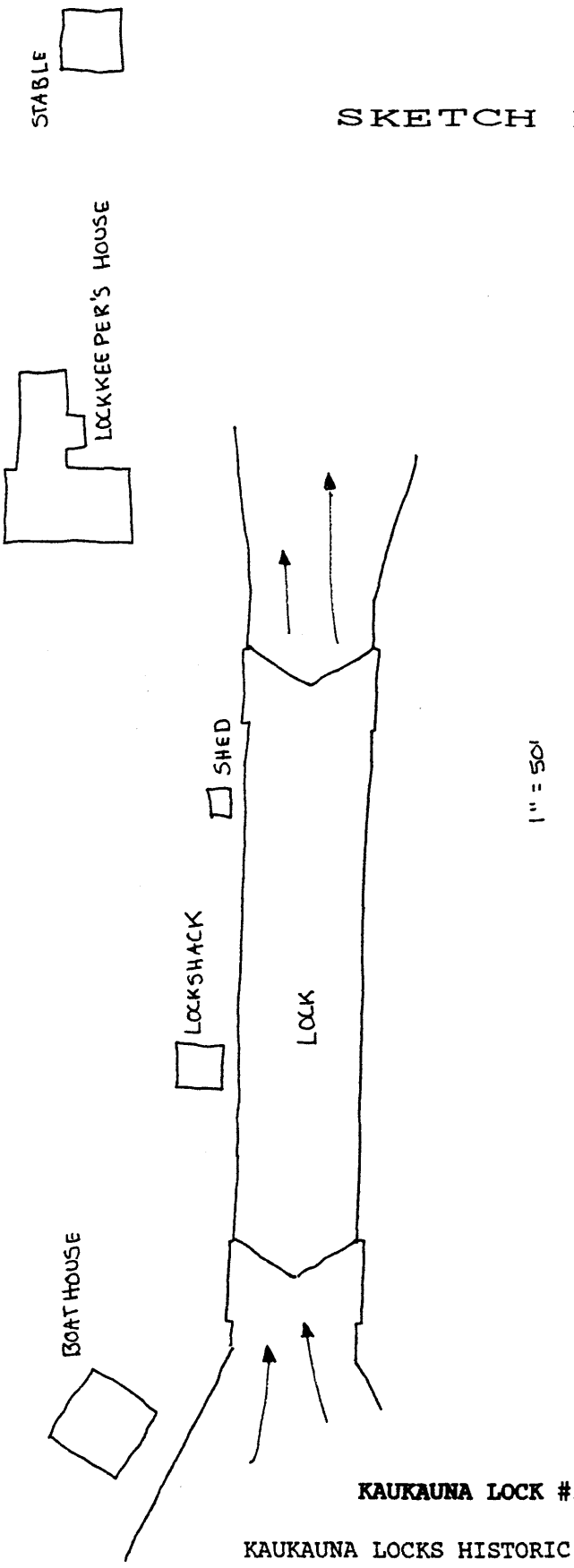
X See continuation sheet

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 5 lockshack)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northwest
Photo #16 of 17

KAUKAUNA LOCKS HISTORIC DISTRICT (Lock 5 garage)
Fox River at Canal Street
Kaukauna, Outagamie County
Photo by Bill O'Brien
October 1988
View to Northwest
Photo #17 of 17

___ See continuation sheet

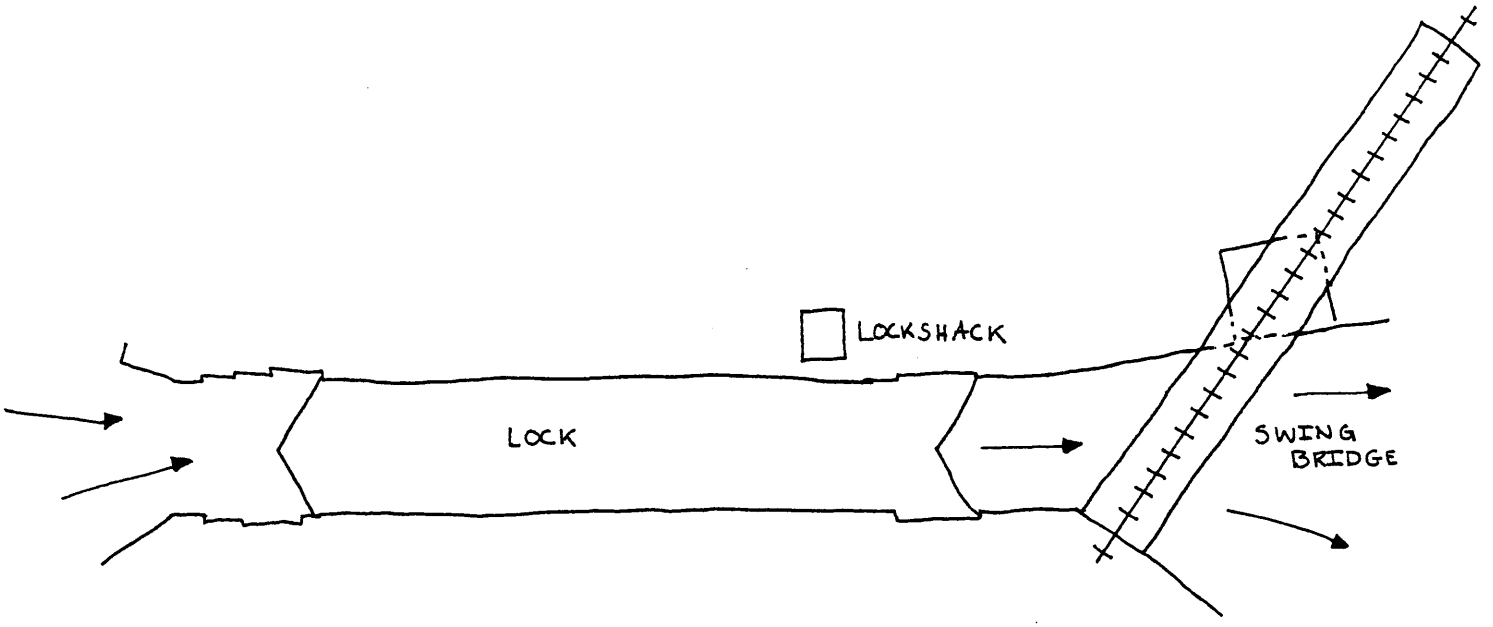
SKETCH MAP



KAUKAUNA LOCK #1

KAUKAUNA LOCKS HISTORIC DISTRICT
Waterway Resources of the Lower Fox River

SKETCH MAP



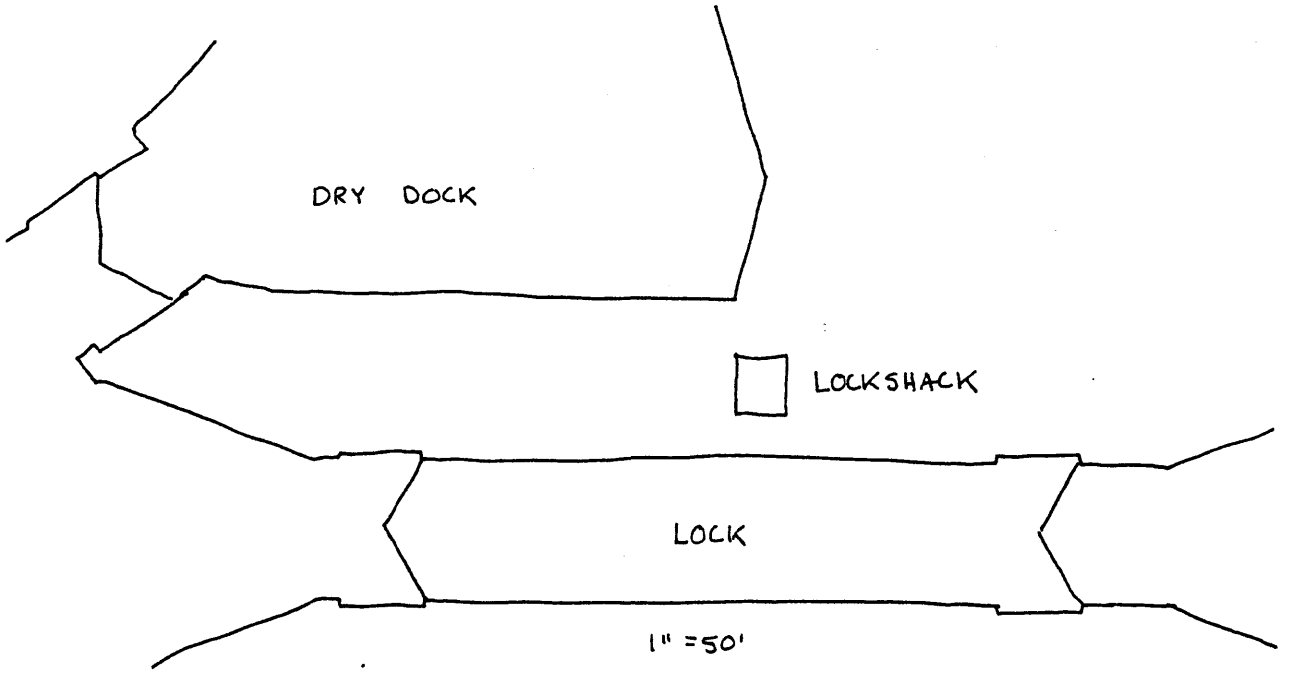
1" = 50'

KAUKAUNA LOCK #2

KAUKAUNA LOCKS HISTORIC DISTRICT

Waterway Resources of the Lower Fox River

SKETCH MAP

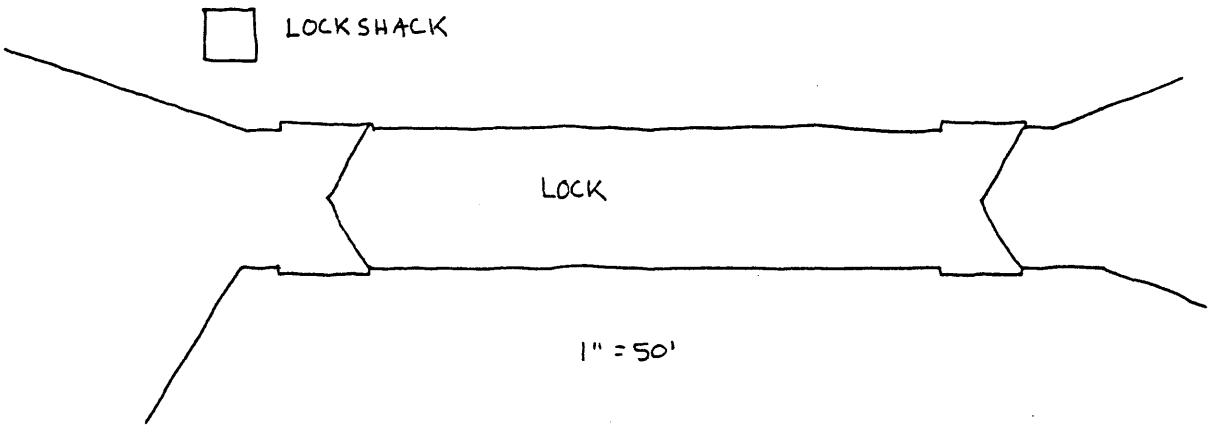


KAUKAUNA LOCK #3

KAUKAUNA LOCKS HISTORIC DISTRICT

Waterway Resources of the Lower Fox River

SKETCH MAP

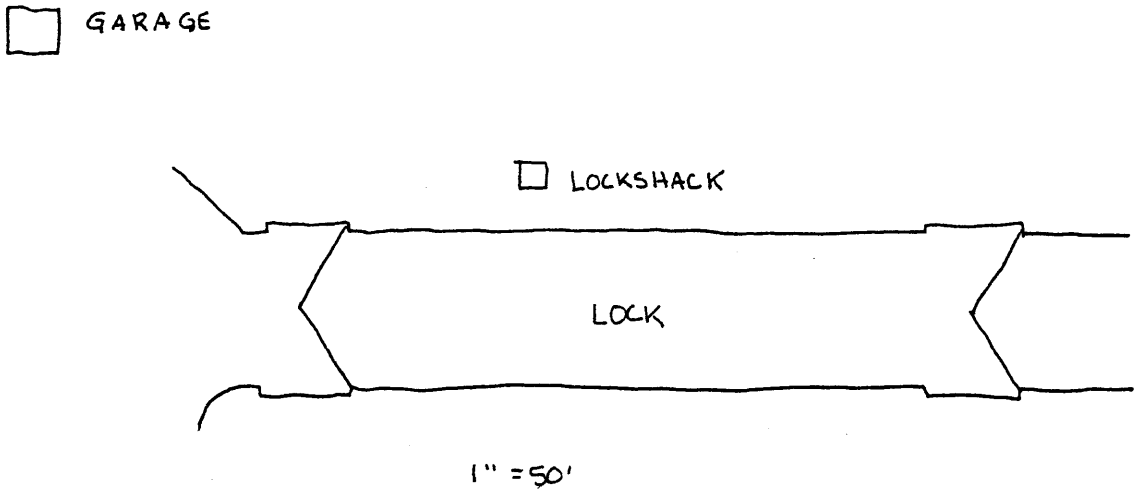


KAUKAUNA LOCK #4

KAUKAUNA LOCKS HISTORIC DISTRICT

Waterway Resources of the Lower Fox River

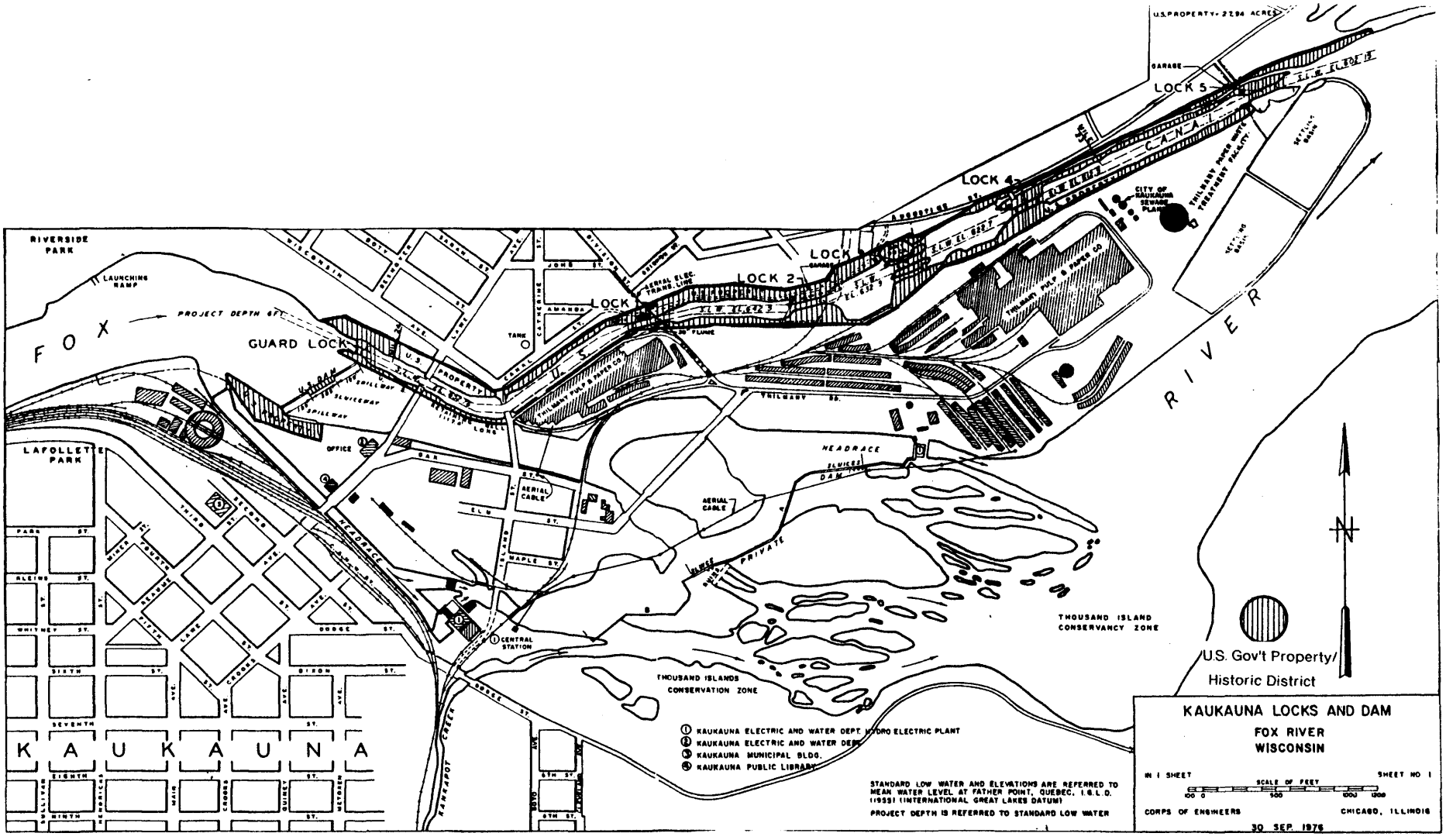
SKETCH MAP



KAUKAUNA LOCK #5

KAUKAUNA LOCKS HISTORIC DISTRICT

Waterway Resources of the Lower Fox River


U.S. PROPERTY- 22.94 ACRES
GARAGE
LOCK 5
LOCK 4
LOCK 3
LOCK 2
LOCK 1
C A N A L
RIVERSIDE PARK
LAUNCHING RAMP
FOX
PROJECT DEPTH 6FT
GUARD LOCK
U.S. PROPERTY
LAFOLLETTE PARK
OFFICE
DAM
HEADRACE
SLUICES
AERIAL CABLE
THILMANY RD.
THILMANY PULP & PAPER CO.
CITY OF KAUKAUNA SEWAGE PLANT
THILMANY PAPER MILL TREATMENT FACILITY
RIVER
PRIVATE
THOUSAND ISLAND CONSERVANCY ZONE
THOUSAND ISLANDS CONSERVATION ZONE
CENTRAL STATION
K A U K A U N A
KAUKAUNA ELECTRIC AND WATER DEPT. HYDRO ELECTRIC PLANT
KAUKAUNA ELECTRIC AND WATER DEPT.
KAUKAUNA MUNICIPAL BLDG.
KAUKAUNA PUBLIC LIBRARY
STANDARD LOW WATER AND ELEVATIONS ARE REFERRED TO MEAN WATER LEVEL AT FATHER POINT, QUEBEC, I.G.L.D. (1955) (INTERNATIONAL GREAT LAKES DATUM)
PROJECT DEPTH IS REFERRED TO STANDARD LOW WATER
U.S. Gov't Property/
Historic District
KAUKAUNA LOCKS AND DAM
FOX RIVER
WISCONSIN
IN 1 SHEET
SHEET NO 1
SCALE OF FEET
CORPS OF ENGINEERS
CHICAGO, ILLINOIS
30 SEP 1976