

WABASH & ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
8 miles east of Fort Wayne, adjacent to U.S. 24
New Haven vicinity
Allen County
Indiana

HAER No. IN-74 HAER
IND
2-NEHA.V,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Northeast Field Area
Chesapeake/Allegheny System Support Office
National Park Service
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

HISTORIC AMERICAN ENGINEERING RECORD

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)

HAER
IND
2-NEHA.V;
1-

HAER NO. IN-74

LOCATION: Adjacent to U. S. 24,
Approximately 8 miles east of Fort Wayne,
New Haven vicinity,
Allen County, Indiana
UTM: 16. 669700.454884.
Quad: Maples, Indiana Quadrangle, Scale: 1:24,000.

DATE OF CONSTRUCTION: Original construction between 1837 and 1843;
rebuilt 1849 (and possibly several other times).

PRESENT OWNER: State of Indiana

PRESENT USE: Part of right-of-way for U.S. Highway 24.

SIGNIFICANCE: Lock No. 2 is an example of a wood lock, many of which once existed along the original line of the Wabash and Erie Canal. More fragile than those supported by dressed stone, locks which were constructed on either the timber frame or crib plan were subject to greater wear, deterioration and rot. Lock No. 2 provides an example of nineteenth century wooden lock technology. Engineered to provide a seven-foot lift, Lock No. 2 was one of three similar locks between Fort Wayne and the Ohio/Indiana state line. It was originally constructed between 1837-43 as a Timber Frame Lock, (according to the engineer's report of 1837) and in 1849 it was rebuilt as a Timber Crib Lock, the latter being a sturdier type of wood lock construction. At least one additional major repair and/or reconstruction occurred.

Lock No. 2 is locally known by the name of its former lockkeeper, Joseph Gronauer and his family. Their farm and store were located adjacent to the lock on the north side, throughout the years of its operation. The family farmhouse remained intact at the site until its demolition between 1942 and 1945.

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 2

The 20-mile section of the canal within which Lock No. 2 is located, once formed a link between the Fort Wayne -Lafayette portion of the Wabash and Erie Canal to the west and the Miami and Erie Canal in Ohio, to the east. When it was finally completed in 1843, travel and commerce to the Great Lakes and the eastern seaboard, via Toledo, Ohio became possible for the citizens of Indiana.

PROJECT INFORMATION:

Lock No. 2 was recorded in the summer of 1992 by The Westerly Group, Inc., of Farmersburg, Indiana, Thomas W. Salmon II, ASLA and Camille B. Fife, principals, for the Indiana Department of Transportation and the Federal Highway Administration. The documentation was prepared in accordance with a Memorandum of Agreement among the Advisory Council on Historic Preservation, the Indiana State Historic Preservation Officer, the Federal Highway Administration (FHWA) and the Indiana Department of Transportation and a Schedule of Documentation provided by the National Park Service, Mid-Atlantic Region, dated April 1, 1992.

DESCRIPTION:

Lock No. 2 on the Wabash & Erie Canal (Gronauer Lock) is located east of the town of New Haven in northeast Indiana and is associated with the Maumee River, which runs approximately parallel to the canal to the North/Northwest from Fort Wayne, Indiana to Toledo, Ohio. Specifically, it is located in Jefferson Township, Allen County, Section 6, Township 30 North, Range 14 East. U. S. Highway 24 runs parallel and adjacent to the lock and the canal bed for much of the distance from New Haven to the eastern state line, approximately 12 miles. Although probably filled in during the period of canal decay which began in the mid-to late 1870s, Lock No. 2 was partially demolished and filled in to accommodate the needs of highway expansion during the early and mid-twentieth century.

One of three locks built between the Ohio state line and Fort Wayne, Lock No. 2 and its counterparts were kept watered by several feeder canals

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 3

which tied in with nearby rivers. The nearest such feeder in Indiana was west of Fort Wayne and brought water from the St. Joseph's river. (The St. Joseph, Maumee and St. Mary's rivers converge at Fort Wayne.) In addition to the feeder canal from the St. Joseph River, the canal was served by Aqueduct No. 1, over the St. Mary's River also at Fort Wayne. The alignment of the canal in the area east of Fort Wayne and as it continues eastward into Ohio, was roughly parallel with the Maumee River. On the Ohio side, the canal was more closely associated with this river than it was on the Indiana side.

Lock No. 2, along with the other two locks east of Fort Wayne combined to create an approximate 20 foot lift from the state line to the summit which began, with Lock No. 3 at Fort Wayne and continued for 17 and 3/4 miles to Lock No. 4 at Roanoke. The canal elevation at this summit was approximately 770 feet above sea level. At the point where the feeder line from the St. Joseph River entered the canal, the water flowed east toward the Ohio state line and west toward Lock No. 4. Thus, the direction of the flow of the water through Lock No. 2 was from west to east. (See Meek, Thomas, *Profile of the Wabash & Erie Canal*, Fort Wayne, 1984)

The rural area in which Lock No. 2 is located was once dotted with active farms. During the last two decades of the 20th century the region has been slowly evolving into a suburban milieu. A few miles east of the lock, adjacent to the canal route, a medium-sized factory has been built. Throughout the area, homes for commuters are slowly replacing silos, cribs and barns.

Lock No. 2 is 101 feet 3 inches long, from back of gate recess to back of gate recess, and approximately 15 feet wide. The lock, in its original configuration, could have been eight to eleven feet deep, to accommodate its known seven foot lift. The description which follows, is based upon the evidence uncovered through archaeological investigations during the months of May and June, 1992. The portion of the lock which remains includes the foundation timbers, presumably intact; two sets of floor and one of wall planking (2" white oak) in the lock chamber; portions of cribs, including ties, rear walls, buttressing and in many cases, rock fill.

The chamber walls, as they remain, have a median height of approximately 3 feet, and the existing wing walls (on the east entrance) approximately 2 feet. These are constructed of oak timbers, approximately 12" square, faced on the chamber side with a layer of 2" planking. The timbers which form the walls are joined with mortise and tenon joints.

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 4

The axis of the canal lays in a northeast to southwest direction. However, for ease of description, for architectural elevations, sections, and so forth, the long side of the canal which parallels U.S. 24 has been designated as the north side. Therefore, the two gates will be referred to as the east gate and the west gate.

Beginning at the west, or upper gate, are partially revealed breast walls, extending approximately 15 feet from the lock wall, ninety degrees in a southerly direction. The breast walls are of squared timbers approximately 16" x 16". They are faced with 2" planking. A sill has been placed atop the lock floor planking, fixed to the breast wall. The floor planks under the sill at the west end are cut randomly and there is presently no evidence of wing walls at this, the upper entrance to the lock. Two references in 19th century wood lock specifications ("Specification for re-building the Wooden Locks east of Fort Wayne", n.d., c. 1849) indicate that wing walls could have been expected. Nonetheless, there is no evidence of their presence, indicating that either no such walls existed or that they were eliminated in the 1849 rebuilding or at a later date. The evidence which presently exists is inconclusive.

Portions of what may be the only remaining lock gate, in splintered timbers, are located within the first bay west of the west mitre gate sill. The bottoms of all hollow quoin posts remain, as do three out of four of the metal pivots, upon which the gate posts turned.

During the period of lock operation, the facility provided changes in canal water elevation for river craft travelling east or west, or west to east, one boat at a time. Evidence of this can be demonstrated in the mitre sills of the lock and the pockets or recesses in the lock walls to receive the lock gates. Gate operation must be deduced from this floor level evidence, since the top of the original lock has been lost and no intact lock gate has been found.

Based on typical practice along this part of the Wabash and Erie Canal, manually-operated lock gates would have been employed in Lock No.2. Portions of such gates, found within the first bay also confirm this thought. These gates followed designs whose basic engineering dates back to the Renaissance architect, Leonardo da Vinci. The gates, judging from the depth of the gate recess, would have been approximately 1 foot to 1 foot 2 inches thick. The mitre gate sills are not similar, the west sill has been recessed on its upper side by approximately 4". The east sill is flat. The dimensions of

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 5

the east and west lock gates were also slightly different: judging from the dimensions of the existing gate pockets (or recesses), the west gates would have measured approximately 10 feet in length while the east gates would have been approximately 9 feet. These differences may be the result of partial rebuilding of the lock, either in 1849 or later. When open, the gates swung back into these recesses, flush with the walls of the lock chamber.

The gate at the east end, as previously mentioned, is considerably different from the one at the west end of the lock. Immediately past the gate sill, is a floored and walled bay, fifteen feet in length, which is similar in construction to the lock chamber. At the west end of this section, a sill timber appears to be missing. Beyond, the lock splays outward, forming an irregular polygonal maneuvering bay. This is demarcated by timbers, one to two feet in height which form the wing walls and by four one and one-half foot sills. The floor of this area is comprised of timbers, (or other boards) approximately one foot wide, butted against each other. The thickness of these members is impossible to assess at this time, although they may be squared timbers of from 12" to 16" on a side, laid against each other directly on the puddle. (Puddling, which was normally installed prior to laying foundation timbers, was a mixture of wet clay of the region with light gravel and coarse sand. Timbers (or floor joists) were laid in the mixture and tapped with a sledge or glut until level.

As stated earlier, what was left of the lower 2 - 4 feet of the lock chamber, when fully excavated, revealed the presence of 2" planking, which formed the floor boards of the lock. These varied in length from 13' to 18' or 20'. The planks were not staggered at the butt ends and the distinctive spike or nail patterns clearly identify the presence of foundation timbers below the floor level. For the most part, the floor of the lock chamber is intact, except for a damaged section, approximately 50' east of the upper mitre sill. Here, evidence of damage can be seen, the result of a telephone company intrusion with heavy digging equipment in the early spring of 1992. For reasons which are still somewhat unknown, the company operated in this area without adequate identification of or protection to the resource. Portions of the oak timber chamber walls were shredded as the equipment burrowed through and the floor planking was demolished, tearing a trench across the width of the lock.

The extensive system designed to support the lateral pressure of water in the lock chamber included a series of cribs which paralleled the axis of the lock and which were originally built to the full height of the lock. These cribs, built upon the foundation timbers of the lock, are present to

approximately a height of four feet and are visible, where archaeological exploration has revealed them. In a sample unit, the cribs appear to have been constructed of logs, at least 12" in diameter, dove-tailed or mortised into the chamber wall and placed at intervals to create a square or rectangular room-like space approximately nine to ten feet on each side. Within these cribs, an occasional brace, 12" x 12" squared, was laid. These were tied into the rear of the chamber wall at the lower corner, near the floor, and angled upward, buttress-fashion, toward the upper portion of the crib, to lend additional support. The lock in its present condition, does not contain any complete timber braces, all have been destroyed above a height of a few feet.

The cribs were filled with a mix of boulders and thick, viscous clay. The boulders recovered from the sample cribs ranged from 6" inches in diameter to more than two feet and were of various types, including a distinctive rose granite, as well as conglomerates, common buff limestone and sandstone. Many reused timbers were employed in the construction of the cribs, thus bolstering evidence for the rebuilding activity. Previously hewn mortises are evident at random locations. The cribs also provide persuasive demonstration of the "timber crib" construction method, as timbers which are hewn on only one side, or not at all, and which retain their original bark are everywhere evident. Typically, the timbers which tied into the back wall of the chamber were joined by a mortise and tenon which carried through to the inner side of the wall timbers, to be covered by the inner planking. However, half dove-tail joints can also be observed.

The north cribbing, which is assumed to mirror the cribbing on the south side of the lock, was not fully visible for this documentation. However, a few elements were easy to ascertain: regular buttress braces, boulder fill, and some joint work into the back wall of the north side of the lock chamber. This part of the lock could not be excavated because of the steep bank and the extremely close proximity of active traffic on U. S. 24.

The general condition of the upper portions of the extant lock and cribbing walls is poor. It is obvious that previous efforts at demolition, including extensive burning have taken their toll. Much of the wood displays charring and other deterioration. Nonetheless, the portions of the lock which remain will add new information to our knowledge of 19th century lock technology, especially as it was practiced in the mid-west. The sheer scope of manual work which the construction of such a lock presented is impressive. In addition, details of the craftsmanship which was employed, especially in the intricate joinery, remind us of the high quality of

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 7

workmanship. Lock No. 2, even by contemporary standards, was a modest venture. Much of what is visible today was the result of rebuilding during a time of waning canal fortunes, yet the evidence indicates that skill and quality materials were employed.

HISTORICAL INFORMATION

Indiana was a mere infant when canal fever burst upon the nation. In 1817, less than a year after Hoosier statehood had been achieved, ground was broken at Rome, New York on the famous Erie Canal. This pioneer waterway, which wended its way across 362 miles from Buffalo to Albany, was to become known as the most profitable canal in America. Residents of the western territories made note of Governor De Witt Clinton's "ditch" with an eye toward their own prosperity. ¹

Actually, the notion of an Indiana canal had been put forward earlier, at the beginning of the nineteenth century, with the formation of the Indiana Canal Company in the southern part of the state. This venture was the brainchild of New York State's General Benjamin Hovey and the notorious Aaron Burr, along with several other speculators. What they proposed was a two-mile canal in the heel of southern Indiana, to bypass the "Falls of the Ohio" at New Albany, the only natural barrier to navigation along the great river which crosses the heartland of the midwest from Pittsburgh to the Mississippi and which forms much of the southern Indiana border. Although ambitious, the plan faltered under the less than efficient handling of its managers, leaving the construction of a canal at that crucial spot to the state of Kentucky, which finally completed the project, in 1831, under the auspices of the Louisville and Portland Canal Company. ²

Perhaps it was the presence of an ancient trade route in the northeast quarter of the state that provided local incentive for canal enthusiasm on a grand scale. Although the largest population settlement had occurred in the south, along the Ohio river, northeast Indiana was endowed with natural blessings which had given birth to small early settlements during the eighteenth century at Fort Wayne and other areas. The historic trade route ran southwest from the Indiana/Ohio border and connected the Maumee and the Little Wabash rivers via a short 7-8 mile portage near Fort Wayne. From there, the Wabash River carried goods and materials west and south to the toe of the state, where it joined the Ohio. This natural trade highway made the parallel development of the 468-mile long Wabash & Erie Canal seem almost inevitable. The extensive waterway would also connect the vast new western territories to eastern markets via Ohio's canals, the Great Lakes and the Erie Canal. ³

A preliminary federal survey along the portage route between the Wabash and Maumee Rivers had been accomplished as early as 1819, meanwhile, enthusiastic entrepreneurs petitioned the Indiana legislature for a

state engineering study of a longer canal route in the northern sector of the state. They were rejected, on the grounds that it was "premature", a determination which was surely correct. The area around Fort Wayne was a wilderness and much of the state north and west of the small settlement was reserved to the Miami and Potawatomi Indians.⁴ A map of 1826 also shows that a Miami Indian Reserve bordered, and extended southward from the Little Miami river. Any canal built along this route would necessarily travel through Indian lands.⁵

By 1822, canal plans were beginning to look hopeful. The following year, a favorable bill was reported in the U. S. Congress, largely due to the efforts of Fort Wayne's Judge Samuel Hanna, and others. They were further gladdened in 1824 by Congressional authorization of a survey for a canal route through public lands, to connect the two rivers in the northeast. The task proved daunting. Two of the three Army Corps of Engineers surveyors assigned to the job were felled by malaria before it could be completed.⁶

Hope for the authorization of the Wabash & Erie canal accelerated with the passage, in 1826, of an act granting land to Indiana for the "purpose of aiding the said state in opening a canal...". The land consisted of one half of five sections in width on either side of the canal, one alternate section on each side of the canal to remain for the United States. The act stated that a Board of three Commissioners should be elected, to serve two years. In the winter of 1827-28, Samuel Hanna of Fort Wayne, David Burr of nearby Jackson County and Robert John of Franklin County were selected.⁷

Indian title to the reservations which lay in the path of the proposed canal had been transferred, late in 1826, through negotiations conducted by a commission consisting of Indiana's Governor Ray, General Lewis Cass and the Hoosier politician and speculator, John Tipton. Following several days of speechmaking during which untold amounts of whiskey and a reputed \$60,000 worth of trinkets were distributed, the Miamis and the Potowatomis relinquished about a million acres on Lake Michigan and along the Wabash River and agreed to allow the state to build a road or canal through their property. The Indians received, in return, increases in annuities from the government, about \$41,000 worth of goods, plus cattle and hogs, a grist mill and for each Miami Chief, a wagon, oxen and a \$600 house.⁸

Although the way was now clear for the passage of the canal route, matters concerning the state's remaining native Americans were by no means settled. Ultimately, all of the tribes were relocated to lands beyond the Mississippi. Only a few individuals would remain, primarily tribal chiefs and

family members of Frances Slocum, the white woman who had been abducted as a child from her Pennsylvania home and raised by Indians. As a grown woman she had become the wife (and widow) of two important Indiana chiefs. During the summer of 1838, in a tragic and unnecessarily cruel act, more than 850 people, the last members of the Potawatomi tribe were forcibly marched out of the state. Many who succumbed to the heat were left by the roadside. Babies died, still strapped to their mothers' backs as the pitiful passing moved westward through the state.⁹ Even before the canal was complete, the drive for "progress" had stacked up an incalculable debt in human lives.

Between 1826, when Congress authorized the sale of land and 1832, political wrangles at the statehouse, delayed the onset of canal work. By 1830, Indiana had set up an Internal Improvements Commission, to deal with roads and canals as well as railroads. This entity, through a Board of Internal Improvements, would operate for about 10 years as the major governing body for canal development. Three additional canal routes had been investigated for Indiana, two located in the central part of the state were planned to connect with the Wabash & Erie, a third, the Whitewater Canal would connect portions of the east section of the state with the Ohio river and points in Ohio. Only portions of these canals would ever be built.

The Hoosier state's enthusiastic canal building plans were part of a national "spirit of improvement" which was underway during the early part of the 19th century. During the quarter-century between 1815 and 1840, 3,000 canal miles were built in the United States; another 1,000 miles would be completed during the following decade. Unfortunately, not all of this enthusiasm was merited. By 1868, Henry V. Poor, a noted transportation authority, found that only three canals in the country, the Chesapeake & Delaware, the Erie and the Delaware & Raritan were commercially successful. All were located in the populous east.¹⁰

In the years 1834-1836, momentum for Indiana's canal system began to build. In 1836 Governor Noah Noble signed into law a bill providing for mammoth internal improvements in the state. Eight turnpike, canal and railroad projects were planned and an appropriation of \$10 million was authorized, one-third of it for the Wabash & Erie canal. Of course, the act merely empowered borrowing. Cash was a scarce commodity in the coffers of the young state, but canal advocates predicted swift repayment of these loans from canal tolls. The bill also called for simultaneous action on all of the projects at once, creating a frenzy of construction activity and a corresponding surge of borrowing at excessive rates.¹¹

Canal Building

Jesse L. Williams had been appointed an engineer for the Indiana canals in 1832 and had surveyed routes for both the Wabash & Ene and Whitewater Canals in Indiana. By 1836 he was named the chief canal engineer for the state. Born in North Carolina in 1807 of Quaker parentage, he had gained his canal experience on the Ohio system where he had eventually supervised an entire section. He relocated to Fort Wayne in 1832 with his young wife, as an enthusiastic 24-year old, ready to begin a new and challenging adventure.¹²

Selecting February 22nd, the birth date of George Washington (who had reputedly been the first to recommend a canal joining the Wabash and the Maumee rivers), Fort Wayne celebrated the onset of preliminary planning in 1832 with a gala ground breaking ceremony. By June contracts were let but only for the first 15 miles and in the fall, a meager four additional miles were underway (only a fraction of this work would be finished in the first year).¹³

Although initial construction had been slow, funds were finally authorized and thousands of men went to work, completing the first section of the Wabash & Erie Canal, from the summit at Fort Wayne west to Lagro in 1837. A year later the work progressed further westward toward Logansport.¹⁴ In 1836, the Board of Internal Improvements had authorized 180 miles of canal to be put under contract. By the end of 1837, the chief engineer's report to the General Assembly recalled that 128 miles were let, the section between Fort Wayne and Huntington was complete and had operated successfully during the year.¹⁵

In the same year, the section of the canal between Fort Wayne and the Ohio state line which would include Lock No. 2, was reported "under construction". The engineer anticipated that the neighboring state would complete its portion in a timely matter, but questions of coordination arose.

In order to accommodate the anticipated traffic, Indiana had widened and deepened the standard canal prism, in this section, to as much as sixty feet wide by six feet deep, anticipating that Ohio would do the same. Unfortunately, Indiana's sister state did not evidence similar plans for the portion of the Wabash & Erie which lay within her boundaries (about 16 miles), thus creating a potential deterrent to Indiana's trade benefit.¹⁶ Relations between the states became a bit strained. Earlier, in 1829, Indiana had ceded to Ohio lands in that state, along the canal route, which she had been granted by Congress for the purpose of building the canal. In return,

Ohio would build the section within her own state, and grant Hoosiers the same rights along the Miami canal (in Ohio) as were given to her own citizens.¹⁷

Economic Hazards

Indiana's major canal building boom occurred just as economic crises were looming in the nation and in Europe. Indiana was not alone in her enthusiasm for internal improvements and she would not be alone in suffering the economic consequences of over-optimistic planning. In nineteenth century dollars, considerable sums were at stake. An estimated \$188 million was invested in U. S. canal construction before 1861 - of that amount, \$137 million was provided by state and municipal governments. Of this latter amount, more than 90% or \$127 million had been raised through loans. An additional amount of estimated loans made on behalf of privately financed canals, increased the reliance upon borrowed money for such improvements to a whopping \$150 million. At least three-quarters of these funds were obtained through the sale of state government bonds to bankers, insurance companies and brokerage houses and nearly a third of the total construction funds were provided through bond sales to foreign banking houses (primarily Great Britain). Most of the foreign loans were concentrated during the peak period of Indiana's early canal building, between 1835 and 1840.¹⁸

This considerable amount of borrowing occurred during an era when such lending institutions were fraught with instability. The stark realities of economic life in the early nineteenth century meant that money could abruptly dry up in the face of political or business disturbances. Such a cyclical contraction occurred in the 1836-38 era (sometimes called the Panic of 1837). A more severe downturn, in 1839-40 succeeded in stopping the flow of foreign capital for improvements. The collapse of a major New York investment bank in 1839, slowed progress to a near halt in Indiana. By the fall of that year, the situation had grown progressively worse. Defaults by Indiana, Pennsylvania, Maryland, and Illinois on foreign-held canal debts made it virtually impossible to obtain further loans.¹⁸

The portion of the canal, between Fort Wayne and the Ohio State line, which was begun in 1837 fell victim to the slowed pace of construction caused by uncertain financial times. Lock No. 2 was the second of three locks which would be built along the 19 ½ mile stretch. A notice to contractors in the *Fort Wayne Sentinel* of April 22, 1837 from Samuel Lewis, Acting Commissioner, requested sealed bids to be submitted for the work on the canal, its locks and culverts, by June 1st. However, progress must have

been slow, because the first payment to a contractor for work on Lock No. 2 only appears in Lewis' ledger for the period December through February, 1838-39 when Henry Lotz was paid \$540 for work estimated at \$600. Several other entries show payments to Mr. Lotz for work on this lock through the quarter which included August of 1839.²⁰

A 19th century account recalled the celebration of the opening of the canal, from Toledo, Ohio, to a point on the Wabash below Lafayette, Indiana, on the 4th of July, 1843. General Lewis Cass, who it may be recalled, was instrumental in clearing the way for the canal through Indian Lands, provided the oration: "We come here to ... witness the union of the Lakes and of the Mississippi, to survey one of the noblest works of man in the improvement of that great highway of nature, extending from New York to New Orleans, whose full moral effects it were vain to seek even to conjecture. ..."²¹

In the meanwhile, aided by "Blue Dog", non-interest-bearing state scrip issued in five-dollar notes, work continued southward along the balance of the Wabash & Erie canal route to Evansville and the Ohio River. It would be another ten years before a complete trip could be enjoyed along the line. Work on the Whitewater Canal, which had been halted because of financial problems, moved forward, thanks to the formation of a privately held company which financed its continuation. The Central Canal, after a brief spate of building activity, remained unfinished until it was auctioned to private owners in 1850, for a fraction of the cost of its construction.²²

The Indiana legislature of 1841-42 abolished the Board of Improvements, and allowed continuation of work only on the Wabash and Erie Canal, which operated as a separate Board using receipts from tolls and a series of useless scrip to pay contractors. Indiana, along with several other midwestern states had gone broke, under the weight of her mammoth improvements programs.²³

Operations Along The Eastern Division

Once the eastern division of the canal was finally opened, receipts began to flow. In 1843 tolls brought in \$45,620.98, by 1845, they had risen to \$95, 473 - a respectable sum, but still far below expectations.²⁴ Repairs and rebuilding were already becoming necessary. The engineer's estimation of conditions along the canal in 1847 indicated that lock No. 1 would need renewal in three years and that lock No. 2, whose gates were in need of rebuilding, would only last for three to four years. All of the locks east of Fort Wayne were of wood. Both lock No. 1 and No. 2 were originally built on the "frame" plan, a less durable type of construction than the "crib" plan which was later employed.²⁵

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 14

A contract was issued in August of 1849, by the Board of Trustees of the Wabash & Erie Canal, to P. Hoagland and B. W. Tower, for the "rebuilding of Lock No. 2, 8 miles East of Fort Wayne, upon the wooden crib plan." This job was to be completed no later than March of the following year. Pliny Hoagland of Fort Wayne, a businessman, associate of Samuel Hanna and local entre-preneur, would continue to be connected with this section of the canal, as part of consortium of private citizens who contracted with the state in 1859 to maintain the faltering waterway.

Lock No. 2, (or at least portions of it) was rebuilt again in 1861-2. The chief engineer's report for the year 1861 (published in 1862) contains the following comment: "Two lift locks of wood east of Fort Wayne ...[Along with other structures-Ed.] are the principal renewals of wooden structures to be made this winter." ²⁶ The following year, in a more optimistic vein, the chief engineer reported an expenditure of \$10,439.57 for rebuilding of wooden locks, dams, abutments and etc. and commented: "The rebuilding of some of the deferred wooden structures is now in progress ..." ²⁷ The expense ledger of the Wabash & Erie Canal Company, which held responsibility for repairs along the eastern division during this era, lists payments to James W. Kiplinger and Martin Bell for timber and other materials for Locks No. 1 & 2 in January and February of 1862. James W. Bratton, supervisor for Division One also recorded extra costs for repairs and other work during this time.

Lock No. 2, like many others along the Wabash & Erie was locally known by the name of its lockkeeper. In this case, Joseph Gronauer (1804-1872) and his family, whose farm was adjacent to the lock on the north side, served in this capacity. Mr. Gronauer was born in Baden, Germany in 1804 and emigrated to the United States in 1828. He moved to Indiana c. 1834 and settled on the property with his first wife. Twice widowed, he married Ursula Swinley, (c.1819-1896), also a widow and a native of Germany, in 1848. Together they operated the lock and a store at the site for many years.²⁸ Their son George (1851-1928) is also said to have served as lockkeeper, probably during the latter years of its operation. Some indication of the social life which revolved around the lock can be found in this comment which was published in 1896, upon Mrs. Gronauer's death: "She was highly respected by all and her long residence at the old lock during the time the canal was in operation gave her a very large acquaintance. ..." ¹²⁸

The Decline

By mid-century, railroad competition was taking its toll. Canal receipts at Fort Wayne (for a section of the eastern division) peaked at \$66,357 in

1851, then declined to \$15,859 by 1858. Results at Lafayette and other junctures along the line were similar. Early in 1859, the beleaguered state board had signed a maintenance contract with local citizens for the eastern division, from the state line west to Terre Haute. Pliny Hoagland and Alfred P. Edgerton of Fort Wayne were among the public-spirited and canal-minded investors who were trustees of this company. The contract which they signed in April of 1859 and which continued through 1863, (renewed in 1861 for an additional ten years, to 1873) allowed the company to take timber from Wabash & Erie lands, and to collect the tolls and revenues from this portion of the canal (with certain expenses excepted) for their work. All repair work was to be accomplished under the general supervision and with the approval of the chief engineer.³⁰

Before Edgerton's second maintenance contract expired, devastating floods in 1866 and 1867 had again threatened the eastern division which, by now, was the only remaining portion of the Wabash & Erie Canal still operating. Once again, local citizens came to the rescue and raised a subscription to manage repairs. The contract with Edgerton, Hoagland and others was replaced by one which would accommodate the new investors.³¹ By 1874, the contract system had to be abandoned and responsibility for canal maintenance was divided among many local groups and individuals, including Allen County. Costs for repairs during that year exceeded toll income. Even under these trying circumstances, the Superintendent of the eastern division felt compelled to call the attention of the Board to the bad condition of the locks and the bottom of the canal, saying: "... without a single exception, every lock on the entire line, from the State line of Ohio to Terre Haute, is in bad condition, ..."³²

In 1875 short trips were still being made along partial sections of the canal, but the waterway was no longer navigable to Toledo. Canal trustees had relinquished their posts and submitted their 28th and final report. Trips within the eastern division, especially near Lafayette continued into the early 1880s, but otherwise for the next decade, the canal was only used by frogs, fish and an occasional farmer. A financial failure, it had nonetheless encouraged the development of the northern and central sections of the state, where the population had increased five times since 1830.³³

The canal bed, from the state line to Lagro was sold in 1881, to the New York, Chicago and St. Louis Railroad (known as the Nickel Plate).³⁴ However, east of the town of New Haven, the site of Lock No. 2 lay quiescent, since the railroad line veered south of the canal route as it passed through the town toward Ohio.³⁵ In the 1920s a new highway, now known

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 16

as US 24, was built east of New Haven along the right-of-way of the old canal, a portion of the bed serving as the legal drainage for the road. During this era, according to a former resident, portions of the lock timbers were removed, to allow for this construction. The Gronauer house and its associated outbuildings remained north of the highway.³⁶

Many of the people associated with the canal and Lock No. 2 had also changed with the times. Prior to his death in 1928, the one-time lockkeeper, George F. Gronauer (Joseph's son) had been a "road supervisor" in Allen County for 15 years.³⁷ As early as President Lincoln's administration, Indiana's canal engineer, Jesse Williams, had begun serving as a government director for the Union Pacific Railroad, the first U. S. transcontinental line.³⁸

Additional widening of U.S. 24 in the 1940s removed the last surface vestige of the lock as well as the lockkeeper's residence. According to local witnesses, the Gronauer home was demolished and additional timbers were removed from the lock.³⁹ It is likely that attempts to burn the remains of the lock structure also occurred at this time. In any case, the remnants were covered over, leaving only a gentle swale as a reminder, until 1991 when construction work on an interchange at I-469 and U.S. 24 revealed the presence of the lock remains and evidence of the Gronauer residence.⁴⁰

Following this discovery, Archaeological Field Reconnaissance efforts were completed by Archaeological Resources Management Service of Ball State University and a report issued on June 21, 1991, whose goals were to locate any remains of the reported Gronauer house. An Archaeological Intensive Assessment Test Excavation was completed and a report issued on July 17, 1991 by the same organization and a third effort and report was issued (also by the same organization) on August 16, 1991. During the summer of 1992, excavations at the lock were completed by Archaeological Resources Management Service. An interim report was issued on August 27, 1992 and a final report in August of 1994.

NOTES

1. Paul Fatout, *Indiana Canals*, W. Lafayette, IN, Purdue University Studies, 1972, p.12.
2. Ibid., P. 6-20.
3. Ronald E. Shaw, *Canals for a Nation: The Canal Era in the United States 1790-1860*, Lexington, KY, Univ. Press of Kentucky, 1990, p. 135.
4. Fatout, Paul, p. 25.
5. Ibid., p.13
6. B. J. Griswold, *The Pictorial History of Fort Wayne, Indiana*, Chicago, Robert Law Co., 1917, p. 281-282.
7. Thomas B. Helm, *History of Allen County, Indiana with illustrations and biographical sketches of some of its prominent men and pioneers to which is appended maps of its several townships and villages*. Chicago, Kingman Brothers, 1880, p. 56-7.
8. Fatout, pp. 35-37.
9. Madiline Sadler Waggoner, *The Long Haul West; the great canal era 1817-1850*, New York, G. P. Putnam & sons, 1958, p. 240-241.
10. Ralph D. Gray, *The National Waterway, A History of the Chesapeake and Delaware Canal, 1769-1985*, 2nd Ed., Urbana, Univ. of Illinois Press, 1989, pp. xvi, 152, 109
11. Shaw, pp. 137-138.
12. Bessie Keenan Roberts, *Fort Wayne's Family Album*, Ft. Wayne, Indiana, Cummins Printing Co., 1960, pp. 51-53.
13. Griswold, pp. 305-6.
14. Shaw, p. 139.
15. *Board of Internal Improvements, Annual Report to the Senate and House of Representatives of the General Assembly of Indiana*, 1837, pp. 2-7.
16. Ibid., p. 5
17. Wyllys Silliman, esq. and J. Sullivan, *Communication from the Governor of Ohio to both Houses of the General Assembly Respecting the Indiana Lands*, Columbus, Ohio, Olmsted & Bailhache printers, December 18, 1829.
18. Carter Goodrich, Ed., *Canals and American Economic Development*, New York/London, Columbia Univ. Press, 1961, pp. 179-80
19. Ibid., p. 183, 197-8.

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 18

20. Samuel Lewis, *Board of Internal Improvements, Quarterly Report of Samuel Lewis*, Ledgers for Dec.-Feb., 1838-39; Apr.- May, 1839; July-August, 1839.
21. Helm, p. 57.
22. Fatout, pp. 108-9;143-147.
23. Fatout, pp. 106-7.
24. Fatout, pp. 111; 115.
25. *Annual Report of the Board of Trustees of the Wabash & Erie Canal for the Year 1847 to the Governor, Indianapolis*, p. 210. (Hereinafter referred to as "Annual Report...for the Year ___")
26. *Annual Report ... for the year 1861*, Indianapolis. 1862, Barry R. Sulgrave, pp. 383-84.
27. *Annual Report ... for the Year 1862*, Indianapolis, Barry R. Sulgrove, 1863, P. 466-67.
28. Robert F. Schmidt, "Gronauer Lock #2, Wabash and Erie Canal", Report, June 4, 1991, Canal Society of Indiana (Informal report)
29. *New Haven News*, January 2, 1896, p.5.
30. *Annual Report ... for the Year 1860*, pp. 294-301 (for text of contract and amounts of investment. The investors purchased shares, at \$100 per share, in amounts ranging from \$1,000 to \$5,000 each. The initial total investment was \$35,500.
31. *Annual Report....for the year 1866*, p. 6
32. *Annual Report....for the year 1874*,
33. Fatout, p. 175.
34. *The Fort Wayne Daily Mail*, Thursday, June 22, 1882, p. 1.
35. *Standard Atlas of Allen County, Indiana*, 1898, Reprinted by Unigraphic, Inc., Evansville Indiana.
36. Cochran, Donald R. & Zoll, Mitch, *Archaeological Field Reconnaissance, Fort Wayne Bypass: Canal Lock, Allen County, Indiana*, June 21, 1991, pp. 1, 15.; Cochran, Donald R., *Archaeological Intensive Assessment, Test Excavation at the Gronauer House, Allen County, Indiana*, July 17, 1991, p. 3; Zoll and Cochran, *Archaeological Intensive Assessment, Test Excavation of the Gronauer Lock, Allen County, Indiana*, August 16, 1991, p. 1 (All published: Muncie, Archaeological Resources Management Service, Ball State Univ., 1991).
37. *Fort Wayne Journal-Gazette*, December 29, 1928 (obit. notices)

38. Fatout, p. 180.
39. Zoll & Cochran, August 16, 1991, p. 1.
40. Indiana Department of Transportation, *Case Study Report for Indiana Department of Transportation, Project MAF-F-170-2(8), A 1.6 mile segment of ST 469, a bypass of Fort Wayne, Indiana*, Indianapolis, 1992, p. 2.

BIBLIOGRAPHY

- Cottman, George S., *Centennial History and Handbook of Indiana*, Indianapolis, Max R. Hyman, 1915.
- DeLong, George E., *Canalling on the Wabash and Erie 1832-1875*, Lafayette Indiana, Tippecanoe Historical Society, 1970.
- Drago, Harry Sinclair, *Canals Days in America*,
- Fatout, Paul, *Indiana Canals*, W. Lafayette, Indiana, Purdue Univ. Studies, 1972
- Gray, Ralph D., *The National Waterway, A History of the Chesapeake and Delaware Canal, 1769-1985*, Second Edition, Urbana, University of Illinois Press, 1989.
- Griswald, B. J., *The Pictorial History of Fort Wayne, Indiana*, Chicago, Robert Law Co., 1917.
- Hahn, Thomas F., *Chesapeake and Ohio Canal Old Picture Album*, Shepherdstown, WV, The American Canal & Transportation Center
- Harris, Robert, *Canals and their Architecture*, New York, Frederick A. Praeger, 1969
- Helm, Thomas B., *History of Allen County, Indiana, with illustrations and biographical sketches of some of its prominent men and pioneers to which is appended maps of its several townships and villages.*, Chicago, Kingman Brothers, 1880.
- Meek, Thomas, *Profile of the Wabash & Erie Canal: Showing Lock, Aqueducts, Major Feeders, Flood-Gates and Waste-Weirs*, Fort Wayne, Indiana, T. Meek, 1984
- Payne, Robert, *The Canal Builders; The Story of Canal Engineers Through the Ages*, New York, Macmillan, 1959.

Poinsatte, Charles R., *Fort Wayne During the canal era 1828-1855, A study of a Western Community in the Middle Period of American History*, Indiana Historical Bureau, 1969.

Roberts, Bessie Keenan, *Fort Wayne's Family Album*, Ft. Wayne, IN, Cummins Printing Company, 1960.

Scheiber, Harry N., *Ohio Canal Era: a Case Study of Government and the Economy 1820-1861* Athens, Ohio, the Ohio University Press, 1969.

Shank, William H., *Towpaths to Tugboats, A History of American Canal Engineering*, York, Pa, American Canal and Transportation Center, 1992.

Shaw, Ronald E., *Canals for a Nation: The Canal Era in the United States 1790-1860*, Lexington, KY, The Univ. Press of Kentucky, 1990.

Swanson, Leslie C., *Canals of Mid-America*, Moline, IL, Swanson, c.1984

Tunis, Edwin, *Frontier Living*, Cleveland, World Publishing Co., 1961

Waggoner, Madiline Sadler, *The Long Haul West; the great canal era 1817-1850*, New York, G. P. Putnam & Sons, 1958.

Primary Materials

The following materials can be found in the collections of the Indiana State Archives, Indiana Commission on Public Records and the Indiana State Library, Indianapolis, Indiana. We are very grateful for the kind assistance of Robert Horton, Research Archivist and Mr. James Glass, Director, Indiana Division of Historic Preservation and Archaeology.

Lewis, Samuel, *Board of Internal Improvements Quarterly Report of Samuel Lewis*, These ledgers, list payments made to contractors for various periods, under the aegis of the Board of Internal Improvements. The documents are in fragile condition and cannot be copied or otherwise handled.

Standard Contract Agreement for work on the Wabash & Erie Canal

Specification for building a Crib Lock

Agreement between P. Hoagland and B. W. Tower and the Board of Trustees of the Wabash and Erie Canal, August 10, 1849

WABASH AND ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
HAER NO. IN-74, Page 21

Bills of Timber for Lock Gates and Mitre Sills; Bill of Iron for Lock Gates of 7 ft Lift These do not specify which locks were concerned, but served as standards for gauging the work at Lock No. 2.

Minutes of the meetings of the Trustees of the Board of Internal Improvements, 1837- These are available on microfilm, but were only consulted for a limited time.

Annual Reports of the Trustees of the Board of Internal Improvements These reports, beginning with the year 1836 can be found in the Indiana State Library as part of the "Documentary Journal". As previously mentioned, in the 1840s, these become the *Annual Reports of the Board of Trustees of the Wabash & Erie Canal*, and continue through the 28th report.

Additional primary materials, including newspapers and other documents were located through the assistance of Mr. Robert Schmidt, Indiana Canal Society, Mr. Craig Leonard and Ms. Cindy Parish of Ball State University and Mr. Walter Font, Curator, Fort Wayne-Allen County Historical Society (for the records of the Wabash & Erie Canal Company, April 1859-June 1866, A. P. Edgerton Collection).

ADDENDUM TO:
WABASH & ERIE CANAL, LOCK NO. 2
(Gronauer Lock)
8 miles east of Fort Wayne, adjacent to U.S. Route 24
New Haven vicinity
Allen County
Indiana

HAER No. IN-74

HAER
IND
2-NEHA-V
1-

REDUCED COPIES OF MEASURED DRAWINGS

HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
200 Chestnut Street
Philadelphia, PA 19106