





ARCHAEOLOGY AT UNEARTHING THE INVISIBLE THE RIVERFRONT

SCOTT F. ANFINSON

IN 1971, WHEN THE 800-ACRE ST. ANTHONY FALLS Historic District was added to the National Register of Historic Places, 15 buildings, 2 bridges, 2 natural features, and 1 park were noted as important properties. Obvious major assets included St. Anthony Falls itself, the Washburn A and Pillsbury A Mills, and the Stone Arch Bridge. Giving a verbal snapshot of the district, the nomination form stated: “Today this area contains many warehouses, neglected buildings, and industrial facilities.”¹

Twenty years later when the Minnesota State Historic Preservation Office (SHPO) updated the National Reg-

ister listing for the historic district, the office provided detailed descriptions of an additional 46 buildings, 17 structures, and 38 archaeological sites that it considered significant. Most notably, the 1991 documentation included archaeological sites for the first time.²

In 2001, two major parks featuring archaeological remains were dedicated: Mill Ruins Park and First Bridge Park. Not only included in reports, archaeological sites are now uncovered for everyone to see. What has changed since 1971?

A 1966 federal law and two 1980s road projects are

ABOVE: Minneapolis's riverfront, an industrial scene where working structures stand atop demolished buildings, about 1912. LEFT: Archaeologists exposing the foundations of North Star Iron Works, about 1994, before construction of the Federal Reserve Bank

responsible for the recognition of archaeological sites at the falls. The law is the National Historic Preservation Act, which requires federal agencies to consider the impact on historic properties of projects they fund or license. The two road projects were West River Parkway and the Hennepin Avenue Bridge.

In 1981 I was the municipal-county highway archaeologist for the Minnesota Historical Society (MHS). My job was to review city and county road projects to determine if they would harm archaeological sites. West River Parkway in Minneapolis landed on my desk, but I didn't pay much attention that year because I assumed that the road had little potential to disturb significant archaeological sites. Any Indian or early historical sites would surely have been destroyed by 150 years of intensive urbanization. Furthermore, a cursory search of written documents produced no information regarding fur posts or Indian burial mounds, artifacts, or ancient villages along this stretch of the river.

As I undertook more detailed research on the history of the St. Anthony Falls district, I gradually became aware of the area's great archaeological potential. I learned that the U.S. government had established a sawmill and a grist mill on the west side of the falls in the 1820s to supply lumber and flour to Fort Snelling. I learned that the east side had been opened first to white settlement but that the west-side city rapidly became more powerful. By 1870 a major industrial center dominated the falls. The legacy of that industrial development is the city of Minneapolis, business giants like General Mills and Pillsbury, and a plethora of once important individuals whom most people today know only as street names.³

I also became aware that significant archaeological sites might have survived—sites not destroyed by industrialization and urbanization but created and buried by these processes. The area's existing historic warehouses, mills, bridges, commercial buildings, and residences represented only a small fraction of what had once stood there.

Beneath the abandoned railroad grades, gravel piles, and parking lots lurked the ruins of the city that had been—the city of Charles A. Pillsbury and William D.

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The first wooden suspension bridge linking St. Anthony and Minneapolis, about 1868, cost 5 cents for pedestrians and 25 cents for wagons to cross.

Washburn, the flour and sawmilling capital of the world. The ruins were a physical manifestation of the city's early history, and the artifacts around and between these ruins held the potential for insights not recorded in documents or photographs.⁴

In 1983, in order to assess what archaeological sites had survived on the west-side riverfront, the Minneapolis Park and Recreation Board hired MHS archaeologists to conduct test excavations along the parkway route. As municipal highway archaeologist, I remained the project coordinator. Utilizing a framework developed by historian Jeffrey Hess, we divided the parkway into five segments: Bassett's Creek, Gateway, Mill District, Gasworks Bluff, and Brewery Flats. Each area had a different early history,

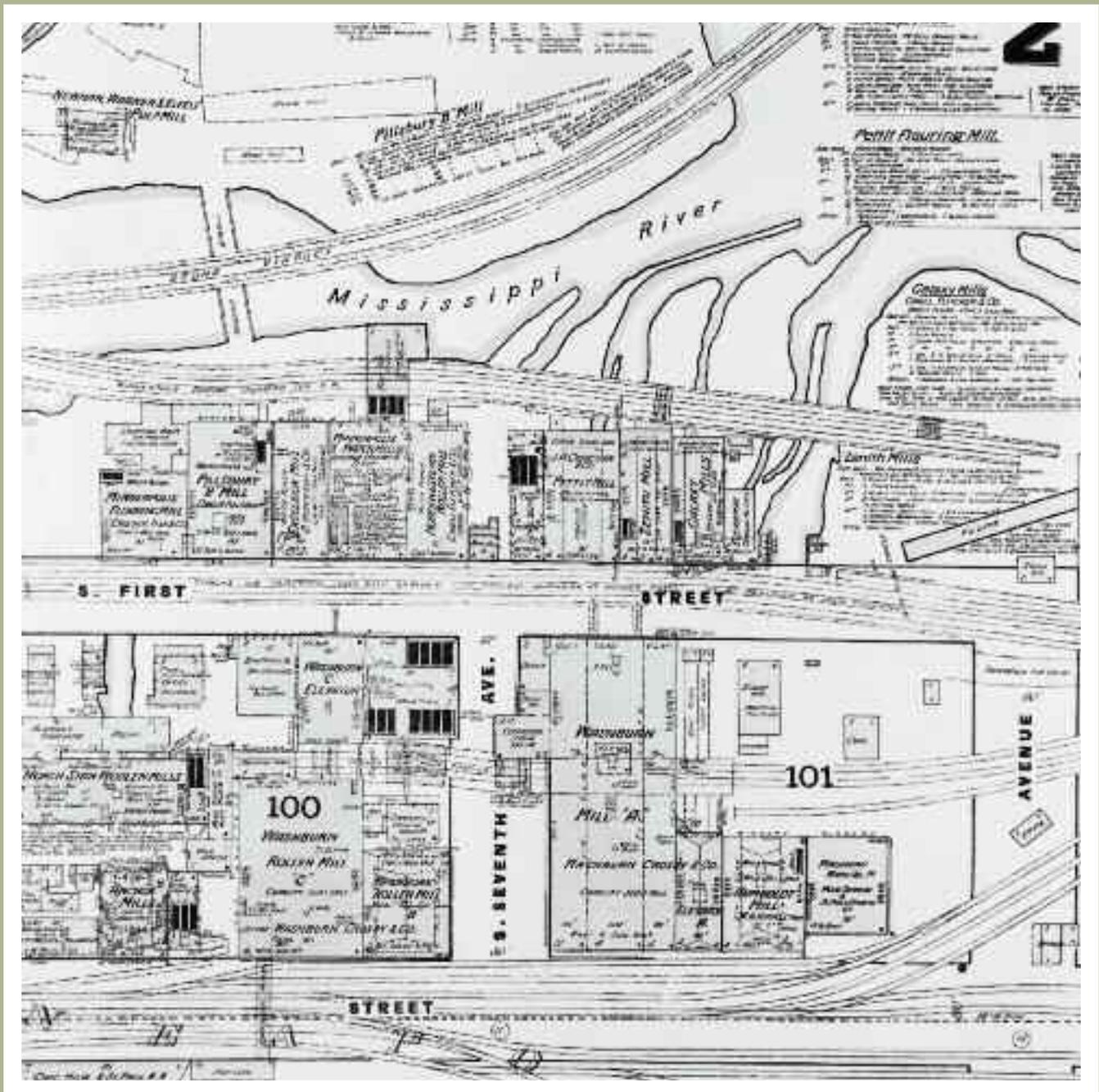
and each posed different archaeological challenges based on its history and subsequent development.

This initial riverfront archaeology was not only new to me but new to the MHS archaeologists who were used to the careful digging at Fort Snelling. At St. Anthony Falls, shovels and trowels were displaced by the backhoe as the principal tool, making the nonarchaeologist backhoe operator the chief excavator. Test units had to be gerrymandered between power poles, streets, and buildings. Underground utility lines had to be care-

fully marked and avoided. OSHA (Occupational Safety and Health Administration) and MPCA (Minnesota Pollution Control Agency) rules had to be considered. Analysis and curatorial decisions had to address thousands of small artifacts and individual pieces that might weigh more than a ton. We learned rapidly that our research plan had to be flexible enough to account for each day's revelations.

The West River Parkway excavations in 1983 demonstrated that the central Minneapolis riverfront held an

Sanborn Fire Insurance map, 1885, a detailed snapshot with clues to long-gone structures



exceptional array of archaeological sites and materials.⁵ In the Bassett's Creek area, we found a late-nineteenth-century dump rich in artifacts, the remains of a railroad roundhouse (1891–1920), heavy machine footings from the North Star Sawmill (1878–86), an unfilled basement from the West Side Power Company (1884–95), and extensive foundations of the Pacific Sawmill (1866–87). In the Gateway area, we found a Great Northern Railroad dump from the 1920s, an artifact scatter associated with the residences that grew up next to the original location of the John Stevens house, the footings of James J. Hill's Union Depot (1885–1914), and the tower bases of the first (1854–76) and second (1876–90) Hennepin Avenue suspension bridges. In the Brewery Flats area, we discovered the foundations of the Heinrich Brewery (1866–1900).

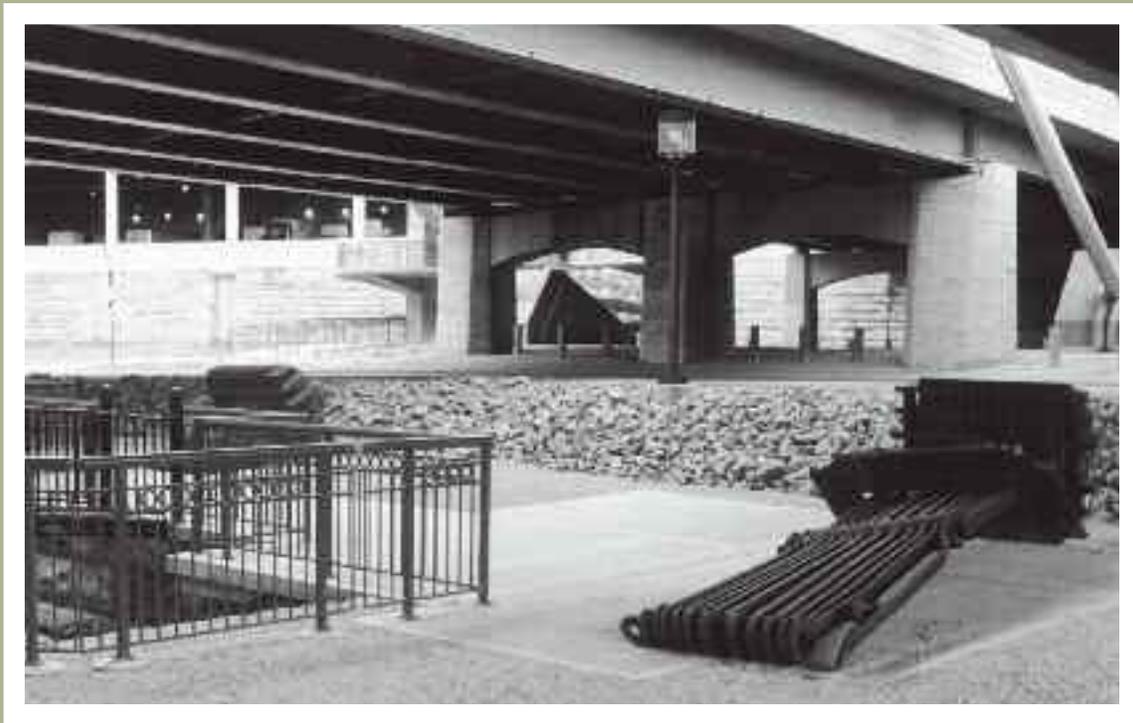
Although existing utilities, streets, gravel piles, and complex land ownerships limited our 1983 testing, sur-

face surveys and a reconstruction of the land-use history suggested that extensive foundation remains of the mills and waterpower system still existed in the Mill District. At Gasworks Bluff, we uncovered a dump dating to the late-nineteenth century eroding from the hillside. To our surprise we found natural prairie soil five feet below the modern surface.

A second major roadway-construction project brought me back to the Minneapolis riverfront in 1985—the proposed replacement of the Hennepin Avenue Bridge. Once again, MHS archaeologists were hired to undertake test excavations within the construction zone.⁶ The original bridge, built in 1854, had been the earliest to span the Mississippi River anywhere along its entire length from Lake Itasca to the Gulf of Mexico. Clearly it was a significant structure, and earlier, in the 1983 excavation, we had found its west-side tower bases. Now, in addition, we found the tower bases from the 1876 sus-

BELOW AND RIGHT: Archaeologists found tower bases, anchors, and link bars from the second Hennepin Avenue stone-towered suspension bridge, built in 1876 and photographed in about 1888; they are now preserved in the pocket park underneath the newest bridge.





pension bridge and the unfilled tunnel used to place the massive iron anchors for the bridge cables. We even unearthed the bridge anchors and portions of their link bars that attached the supporting cables to the anchors. East-side excavations had to wait for the removal of the deep fill of the existing approach road to the Hennepin Avenue Bridge during construction in 1988. Archaeological monitoring on the east side revealed even more extensive remains of the two early bridges.

Our work on West River Parkway and the Hennepin Avenue Bridge demonstrated the rich archaeological potential of the Minneapolis riverfront. Over the last 15 years, we have returned again and again.⁷

WHILE THE WORLD'S BEST-KNOWN SITES ARE surface ruins—Old World pyramids and temples, for instance—many others are invisible because they are buried. In Minnesota, where early Indian peoples built structures of wood and earth, obvious remains did not survive either above or below the surface. Later Euro-American masonry construction created durable structures that often left visible remnants even after disasters and abandonment.

Masonry ruins remain for centuries if left alone, and the Minnesota countryside is dotted with the remnants of flour mills. Cities do not leave their ruins alone, however. Land is valuable, and exposed ruins are hazards.

City officials call them “attractive nuisances” because they attract children, vandals, and vagrants. They are usually considered dangerous and unsightly.

The ruins of old Minneapolis are numerous, but in the 1980s they were, for the most part, hidden. When I first toured the St. Anthony Falls district in 1982, I found only a few places where ruins peeked through the fabric of the modern city. Along the entire length of West River Parkway from the Plymouth Avenue bridge to the Franklin Avenue bridge, the only visible ruins were in the Mill District. Between Fourth and Fifth Avenues on First Street, Fuji-Ya restaurant was built into the ruins of two flour mills and a sawmill. The low-wall ruins of several early flour mills were visible in a small trapezoidal area between Fifth and Portland Avenues along First Street. As Portland plunged beneath the Stone Arch Bridge, two trestle supports for a railroad were easy to spot on the south, as was the back of the basement ruins of the Empire Mill. Gravel piles covered the rest of the major mill ruins east of First Street to the south of Portland Avenue.

On the islands and east-side riverfront at St. Anthony Falls in the 1980s, surface ruins of the Mill City were even more scarce. Early masonry segments of the main dam peeked out of the concrete at scattered locations. The foundations of the Pillsbury A Mill's 1903 steam plant were visible in the woods along the riverbank, as

were tailraces where water diverted for milling flowed back into the river. The University of Minnesota's Hydro Lab had partially reused the foundations of the 1857 Hennepin Island Paper Mill. The eastern abutment of the 1874 Tenth Avenue South bridge was still apparent, as were the eastern abutments of the first Northern Pacific Railroad bridge (1887) and the first Washington Avenue bridge (1884) near the University of Minnesota.

In the 1980s we knew that the ruins of old Minneapolis had great potential for public interpretation. The purpose of our road-related archaeological work was not to make them visible, however. It was to save them from destruction and assess their potential to answer questions about life in the past. And so we uncovered ruins, documented them, and then reburied them. We saved the ruins of the first two Hennepin Avenue bridges as well as the massive control gates of the west-side waterpower canal from destruction. West River Parkway now curves around each of these sites.

In the 1990s archaeology on the Minneapolis riverfront moved beyond environmental-impact assessment. We started exposing ruins for their interpretive value. We wanted to make them assets for commercial development, education, and tourism. We wanted to make them visible to the public.

MHS archaeologists had first examined the west-side mill ruins in 1986. Ten years later, additional exploration allowed us to assess the interpretive potential and practical problems that would be involved with their permanent exposure.⁸

Finally, in 1998, excavation for Mill Ruins Park began, and it continued until 2001. MHS archaeologists supervised the removal of fill, exposing tailraces and structures just south of Portland Avenue. In addition, the remnants left after the 1991 Washburn A Mill fire were saved. They have become part of MHS's new Mill City Museum, where they contribute to visitors' impressions of this once major industrial site.

WALKING TOUR

If you tour the developing Minneapolis riverfront at St. Anthony Falls, look down as well as up. Under your feet are the archaeological remnants of the Mill City. Traveling with the river down West River Parkway from Plymouth Avenue, there's not much old to see until you approach Hennepin Avenue. Under the bridge, the fourth in that same location, is First Bridge Park (1). Here you can see the tower bases of the first two Hen-

nepin Avenue suspension bridges, as well as two large anchors from the 1876 bridge.

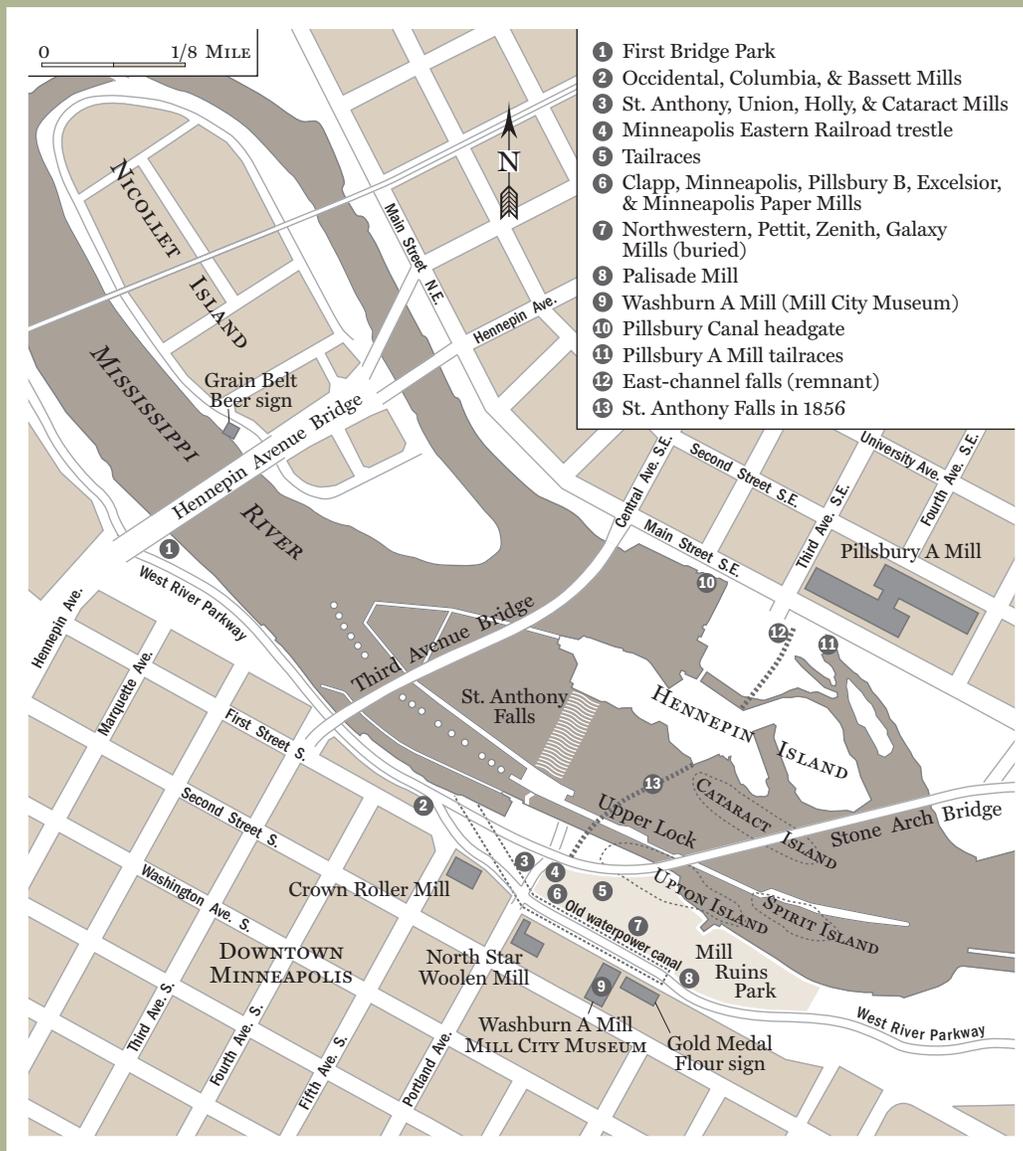
As you continue down the parkway, the first major set of mill ruins can be seen between the high-rise apartment building on First Street South and West River Parkway (2) near the restored Crown Roller Mill. From north to south were the Occidental Flour Mill (1883), Columbia Flour Mill (1882), and Bassett Sawmill (1870), the latter two partially incorporated into the foundations of the former Fuji-Ya restaurant. Minneapolis lumberman Joel Bassett owned all three mills, the northernmost water-powered facilities on the river's west side. They are a mute testament to the flow of time as well as water.

As the parkway curves over the former First Street (beyond a small parking area), the low-wall ruins of four small flour mills (3) can be seen on the left near the beginning of the Stone Arch Bridge. The St. Anthony (1866), Union (1863), Holly (1867), and Cataract (1859) mills were some of the earliest in the district. The Holly, named for the maker of the first city water pumps, was also the site of the first waterworks. The Cataract at the south end was the first commercially built flour mill at St. Anthony Falls. On the low wall of the Cataract is a mill stone placed there in the 1960s. The limestone used in this structure was mined from the 50-foot-wide waterpower canal that flowed immediately in front of it under First Street. These mills may be more fully uncovered in the next phase of Mill Ruins Park.

At Portland Avenue, turn left toward the Upper Lock and Dam. As you descend the steep grade, on your right are two stone piers (4) that once held the trestle of the Minneapolis Eastern Railroad, giving it direct access to the flour mills along the east side of the First Street waterpower canal. As you look downstream along the recently exposed tailraces in Mill Ruins Park, note several iron-girder piers that also held the trestle.

After passing under the Stone Arch Bridge, turn right and follow the new Mill Ruins Park roadway downstream. On your right are the tailraces (5) that carried the spent water from the water turbines under the mills. All of the mills upstream from Portland Avenue emptied their water into these three large tailrace openings at the far right. The mills below Portland used the smaller tailrace openings that are spaced along the main tailrace canal.

A set of low mill ruins (6) is visible just below Portland Avenue along the steep riverside bank of West River Parkway. The northernmost ruin is a complicated



St. Anthony Falls and Mississippi riverfront

feature that includes the remains of the Clapp Woolen Mill, the Empire Flour Mill, and the Pillsbury B Elevator. C. A. Pillsbury and Company purchased the 1866 woolen mill in 1872 and converted it into a flour mill. This and the three adjacent mills burned in a major fire in 1881. Pillsbury built a brick grain elevator on the site in 1888. It was abandoned in 1962 and burned in 1969, the last building to survive on this side of the waterpower canal. An unusual, horizontally mounted waterpower turbine is visible in the middle of the ruin.

The next ruin in this set is the Minneapolis Flour Mill. Built in 1865 by Frazee, Murphy, and Company, it, too, was destroyed in the 1881 fire. Immediately rebuilt and purchased by Washburn-Crosby Company in 1893, it became the D Mill, torn down in 1931.

Abutting the downstream side of the Minneapolis Flour Mill ruin are the remains of a structure built in 1866 as the Alaska Mill. Charles Pillsbury and a partner bought it in 1870, and it became the company's first home. The mill burned in 1881, just as the massive Pillsbury A Mill on the east side of the falls was being completed. Rebuilt a year later, the new west-side structure became the Pillsbury B Mill, torn down in 1931.

The next mill in the complex also has a complicated history. In 1868 the firm of Gordon and Sutton built a four-story linseed-oil mill on the site. Dorilus Morrison purchased it in 1870 and converted it into a cotton mill for the manufacture of bags and other textiles. In the mid-1870s it became the Excelsior flour mill. The mill burned in 1881 and was immediately rebuilt. By the

mid-1890s, it was the G Mill of the Minneapolis Flour Manufacturing Company, but the flour-milling machinery was removed about 10 years later. Its waterpower turbines were used to generate electricity from 1932 to 1960 as Unit 2 of Northern State Power's (NSP) Consolidated Hydro Plant. The building was torn down in 1961.

You can only see a small portion of the last exposed ruin in the contiguous set, the two-story Minneapolis Paper Mill built in 1867. Pillsbury-Washburn Company bought the building in the early 1890s, tore it down, and replaced it with a five-story warehouse. The warehouse was razed in 1931, but the turbines in the basement levels became Unit 7 of NSP's Consolidated Hydro Plant until 1960. The lower-level remains of this structure and the adjacent mill ruins were covered with gravel piles in the mid-1960s by the J. L. Shiely Company.

The ruins of the next four mills (7)—the Northwestern, Pettit, Zenith, and Galaxy—on the east side of the First Street canal are still buried by gravel and grass,

perhaps to be exposed in future expansions of Mill Ruins Park. At the park's south end, a small portion of the Palisade (8) flour mill is visible. Leonard Day and Company built it in 1872 and named it for the steep ravine that it bordered. William Washburn, one of the founders of the Washburn-Crosby Company, purchased the mill and doubled its size in 1882. He eventually became a director of the Pillsbury Company, and the Palisade was owned by Pillsbury when it was dismantled in 1932. The last standing remnant burned in 1940.

Farther south along West River Parkway is the Washburn A Mill (9), built in 1880 after a disastrous mill explosion on the site in 1878. The stabilized ruins house the MHS's soon-to-open Mill City Museum, where visitors can learn about milling in the St. Anthony Falls Historic District. Directly south of the large grain elevators and below the General Mills Gold Medal flour sign is the proposed site of the Guthrie Theater. Recent testing here has found few archaeological remains.

BELOW AND RIGHT: Workers reconstructing the mill tailraces, about 1900, and the tailraces uncovered by archaeologists during recent excavations





ON THE EAST SIDE OF THE MISSISSIPPI RIVER, visible archaeological remnants of Minneapolis's past are scarce. Most redevelopment here was privately funded, requiring little assessment of its impact on historic features. The major exception was the extensive work on the remains of the first two suspension bridges found in our 1988 excavations on the east side of the Hennepin Avenue Bridge. Today, however, no visible traces of the early bridges remain there.⁹

The most extensive east-side archaeological remains are in the vicinity of the handsome, limestone Pillsbury A Mill designed by LeRoy Buffington. Just upstream from the old Main Street Power Station is the plugged headgate for the Pillsbury waterpower canal (10) built in 1881 in a tunnel beneath Main Street. The impressive Pillsbury A tailraces (11) are clearly visible in front of the mill in the lower wooded area, as is a remnant of the east-channel waterfall (12). The overgrown limestone ledge looks very much as it did in the midnineteenth century; it just doesn't have any water flowing over it. Below the ledge are tailrace openings that allowed water to flow under the waterfall. They served the upstream

platform sawmills and later hydropower facilities that were built in the east channel.

THE EXPOSURE OF RUINS AT ST. ANTHONY FALLS is a mixed blessing. Visible remains bring Minneapolis history to life by making the past real. Rather than hearing "Here once stood the first bridge built across the Mississippi River," visitors can see its remains. They can touch the ruins of that first bridge and the mills that made Minneapolis a world-renowned city.

But uncovering ruins brings problems as well. Once exposed to the elements, especially Minnesota's freeze-thaw cycle, ruins can rapidly degrade if they are not carefully treated. Treatment, however, can change their appearance. They can also become targets for vandalism.

Mixing history, recreation, and development were the goals when I began my archaeological investigations at St. Anthony Falls in the 1980s. The changes witnessed in 20 years are stunning. What was a skid row has become a gold coast. The riverfront is now a place to go, not a place to avoid. It is a place that has rediscovered the beauty and history of the river. But riverfront

redevelopment has not been without cost to history and archaeology. Many of the sites preserved from destruction by the West River Parkway survey have been subsequently destroyed by private development.

Care must be given to avoid introducing too much that is new and “charming” into the St. Anthony Falls Historic District. Historic industrial places can be attractive without modern shrub plantings and cute streetlights; it’s difficult to be historic with them. As a colleague is fond of stating: “It’s not the National Register of Pretty Places.”

As redevelopment of the historic area accelerates, we

must remember why the city of Minneapolis started at St. Anthony Falls. Although the view was beautiful, that’s not why the city was founded there. The waterpower of the falls created the largest direct-drive, hydro-powered industrial complex the world has ever seen. It created corporate giants like General Mills and Pillsbury. It created the Mill City whose lumber built the Midwest and whose flour fed the world. By preserving and uncovering the archaeological remnants of these activities, we bring the story out of history books and make the Mill District a rare place to see and touch the past. ❖

Reconstructing and deepening the First Street waterpower canal, looking southeast, 1885. The mills at left are the Minneapolis, Pillsbury B, Excelsior, Minneapolis Paper (two stories), Northwestern, Pettit, Zenith, and Galaxy. At the far end is the Palisade, and on the right are the Washburn A and the Washburn C elevator. A plank road and elevated rail tracks later covered the canal.



Notes

1. Donn Coddington, St. Anthony Falls Historic District, National Register of Historic Places Inventory, nomination form, 1971, n. p., State Historic Preservation Office (SHPO), Minnesota Historical Society (MHS), St. Paul.

2. Jeffrey Hess and Scott Anfinson, St. Anthony Falls Historic District, National Register of Historic Places Inventory, nomination continuation form, 1991, SHPO.

3. See Lucile M. Kane, *The Falls of St. Anthony: The Waterfall That Built Minneapolis* (1966; rev. ed., St. Paul: MHS, 1987), 98–113. In 2001 Minneapolis-based General Mills acquired Pillsbury from the British firm Diageo, whose predecessor had acquired Pillsbury in 1989.

4. For the culmination of years of research in the district, see Scott F. Anfinson, *Archaeology of the Central Minneapolis Riverfront*, pts. 1 and 2, *Minnesota Archaeologist* 48 (1989) and 49 (1990).

5. See Jeffrey Tordoff, *A Phase I Archaeological Survey of the West River Parkway, Minneapolis, Hennepin County, Minnesota* (St. Paul: MHS, 1984); Anfinson, *Archaeology of the Riverfront* 49.

6. See Jeffrey Tordoff and Robert Clouse, *The Hennepin Avenue Bridge Archaeology Project* (St. Paul: MHS, 1985); Anfinson, *Archaeology of the Riverfront* 49: 80–85.

7. Archaeologists have further excavated sites along West River Parkway and examined the locations of the new Federal Reserve Bank, the 1850 Orth Brewery at the Grain Belt Brewery, and the proposed Guthrie Theater. See Hemisphere Field Services 2001 reports no. 647, 648, 660, and 673, SHPO.

8. Jeffrey Tordoff, *Phase I Archaeologi-*

cal Testing of the Fuji-Ya Parking Lot and Palisade Mill Sites (St. Paul: MHS, 1986); Anfinson, *Archaeology of the Riverfront* 49: 85–87; Robert A. Clouse, “Industrial

Archaeology at Mill Ruins Park—1996” (St. Paul: MHS, 1996), SHPO.

9. Anfinson, *Archaeology of the Riverfront* 49: 109–14.

Map by Matt Kania. Opening 1912 photos by Sweet; first bridge by Beal’s Art Gallery; second bridge by W. H. Jacoby and Son; canal by Farr. All illustrations are from the MHS collections.



The east side’s Pillsbury A Mill, fronted by railroad cars, a sluceway, and the east falls, about 1900

FOR FURTHER READING

The most complete history of the St. Anthony Falls district is Lucile M. Kane’s *The Falls of St. Anthony: The Waterfall that Built Minneapolis* (1987). Other good sources on specific topics include:

Archaeology of the Central Minneapolis Riverfront, by Scott F. Anfinson, *Minnesota Archaeologist* 48 (1989) and 49 (1990)

Down and Out: The Life and Death of Minneapolis’s Skid Row (2002), essay by Joseph Hart, photographs by Edwin C. Hirschhoff

Mill City: A Visual History of the Minneapolis Mill District (2003), Shannon M. Pennfeather, editor

Minnesota: A History (1998), by William E. Lass

The Other Minneapolis: Or, The Rise and Fall of the Gateway (1978), by David L. Rosheim

“Rivalry for a River: The Twin Cities and the Mississippi,” by Lucile M. Kane, *Minnesota History*, December 1961

The River We Have Wrought: A History of the Upper Mississippi (2003) by John O. Anfinson

“The Secret History of the Mississippi’s Earliest Locks and Dams,” by John O. Anfinson, *Minnesota History*, Summer 1995

“The Technology That Launched a City: Scientific and Technological Innovations in Flour Milling During the 1870s in Minneapolis,” by Alison Watts, *Minnesota History*, Summer 2000



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